

**FINAL REPORT OF
THE JOINT SUBCOMMITTEE STUDYING**

**The Needs of the Manufacturing
Sector and the Future of
Manufacturing in Virginia**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



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Delegate Harry R. "Bob" Purkey, Vice Chair
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Senator Martin E. Williams
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EXECUTIVE SUMMARY

Senate Joint Resolution No. 64 of the 2004 Session of the General Assembly, patroned by Senator Frank Wagner, established an eight-member joint subcommittee to study manufacturing needs and the future of manufacturing in Virginia. The joint subcommittee was directed to (i) assess the current state of the manufacturing sector of Virginia's economy; (ii) determine how the sector's needs may most speedily, efficiently, and cost-effectively be addressed; (iii) consider both local and state tax policies affecting the manufacturing sector and regulatory compliance and costs; and (iv) consider what role state and local governments should properly play in this endeavor. The study was continued for a second year pursuant to Senate Joint Resolution No. 361 of the 2005 Session.

Senator Frank Wagner chaired the joint subcommittee and Delegate Bob Purkey served as its vice chair. Also appointed to the joint subcommittee were Senator Martin Williams, Senator John Watkins, Delegate Samuel Nixon, Delegate Daniel Marshall, Delegate Chris Saxman, and Delegate Watkins Abbitt. Information about the joint subcommittee is available at its web site: <http://dls.state.va.us/SJR361.htm>.

The Commonwealth's manufacturing sector faces several obstacles. Rising costs and foreign competition make it increasingly difficult to operate manufacturing facilities in a manner that generates margins that make Virginia's manufacturers competitive in the world. The troubles facing the sector are evident in the loss of over 67,000 manufacturing jobs between 2000 and 2004. The loss of comparatively high-paying manufacturing jobs in many areas of the Commonwealth has caused difficulties. Nevertheless, manufacturing remains a vital element of Virginia's diversified economy. The joint subcommittee recognizes the importance of retaining and expanding Virginia's manufacturing base.

In order to prevail in the globally competitive market for manufacturing sites, Virginia should focus its attention on steps to encourage advanced manufacturing sectors, which will require investments in both human capital and physical infrastructure. The General Assembly and Governor should ensure that Virginia's policies foster an environment that remains attractive to manufacturing.

2004 Activities

The joint subcommittee met three times in its first year. The focus of the first meeting on August 17, 2004, was on the current state of the Commonwealth's manufacturing sector. The relative size of the manufacturing sector in Virginia's economy, measured by jobs, has been in decline for several years. Since peaking at 432,500 in 1989, Virginia's manufacturing employment had fallen to 296,600 by June 2004. Over 67,000 manufacturing jobs in the state have been lost in the past four years. Manufacturing's share of nonagricultural employment, which was 28.6% in 1949, reached 8.7% by 2004.

At its initial meeting, the joint subcommittee decided to focus its attention on four of the 12 priority areas of concern that the Virginia Manufacturing Association (VMA) identified in its Virginia Strategy for Growth and Manufacturing Renewal: taxation, research and development, regulation, and health care costs. Other issues identified by the joint subcommittee as needing study included the ownership by Virginia's public universities of intellectual property developed at the institutions through research sponsored by private entities, energy costs, and federal and state requirements for analyses of the impact of proposed regulations on small businesses.

The joint subcommittee's second meeting was held on November 17, 2004, at the Georgia Pacific mill in Big Island. Presentations were made by:

- Matthew Erskine, Deputy Secretary of Commerce and Trade, on the results of the Governor's Working Summit on Advancing Manufacturing in Virginia;
- Robert Cline of Ernst & Young, on the preliminary results of the VMA-commissioned study of the comparative state and local tax burden on Virginia's manufacturing sector;
- Chris McGill of the American Gas Association, and Diane Leopold of Dominion Resources, who discussed the energy outlook for Virginia's manufacturing sector;
- Brett Vassey, President of the VMA, who outlined proposals to address the rising costs of employer-provided health insurance; and
- Staff, which addressed the federal Small Business Administration's model act for small business regulatory reforms and the issue of the ownership of intellectual property resulting from privately funded research at Virginia public universities.

The third meeting of the joint subcommittee was held on January 11, 2005, to review possible legislative initiatives for the 2005 Session of the General Assembly. The joint subcommittee endorsed the following proposals:

- Resolution continuing the joint subcommittee for a second year;
- Bill requiring the Virginia Liaison Office to work to ease the federal moratorium that prohibits offshore exploration of potential natural gas reserves;
- Resolution requesting JLARC to study the comparative burden of regulatory compliance on Virginia's manufacturing sector;
- Bill requiring analyses of the burden of proposed regulations on small businesses; and
- Bill revising the rules regarding the ownership of intellectual property developed at state universities through privately sponsored research, though Senator Watkins voiced concerns about the scope of the proposal.

The joint subcommittee recognized that a healthy and prosperous manufacturing sector is essential if Virginia is to have a sound, well-balanced economy. Its work in 2004 was slowed by the extension of the legislative session, which delayed its ability to start meeting. In its second year, it anticipated that Ernst & Young will have completed additional work on its analysis comparing the burden of Virginia's state and local taxation of the manufacturing sector with other economic sectors in Virginia, and comparing the tax burden on Virginia's manufacturing sector with the corresponding burden on manufacturing in five other states.

2005 Activities

The joint subcommittee met five times in the 2005-2006 interim. The first meeting was convened on April 5, 2005, at Wyeth Pharmaceuticals' Darbytown Road facility near Richmond. The meeting focused on two topics: natural gas availability and the machinery and tools tax. The chairman observed that a successful future for manufacturing in Virginia will require increasing productivity, which in turn is dependent upon investment in equipment. The joint subcommittee agreed to examine the issue of the local variations in assessment procedures and ratios, and whether increasing standardization among local machinery and tools assessment practices is appropriate.

The second meeting was held on June 7, 2005, at Barr Laboratories' Forest facility. The members continued their study of the machinery and tools tax. Staff presented a report outlining previous legislative studies of the machinery and tools tax and legislative attempts to revise this tax. The joint subcommittee's interest in energy issues continued with presentations on landfill gas, the siting of liquefied natural gas (LNG) import terminals, and offshore gas drilling provisions in pending federal energy legislation.

The joint subcommittee's third meeting was held on August 25, 2005, at the Volvo Truck plant in Dublin. While taxation issues continued to be the focus of the meeting, other topics addressed included economic development services, rail service, and motor freight transportation efficiency. With respect to taxes, Ernst & Young LLP presented its report, commissioned by the Virginia Manufacturers Association in 2004, comparing the tax burden imposed by state and local taxes on Virginia's manufacturers to the burden on other sectors of the Commonwealth's economy and to the manufacturing sectors of five other states. The study found that manufacturers in the Commonwealth paid \$1.2 billion in state and local taxes in fiscal year 2003. Of this sum, \$755 million (63.7%) was property taxes, including taxes on real property, personal property, and machinery and tools. Ernst & Young also concluded that Virginia's manufacturing sector has the highest overall state and local business tax rate (3.8%) compared to the burden on other sectors of Virginia's economy.

The other major tax issue addressed at the meeting was Virginia's formula for apportioning the income of corporations that operate in multiple states. Until 2000, Virginia divided a corporation's income among the states in which it conducted business according to a three-factor formula that gave equal weight to its property, payroll and sales factors in each of the states. In 2000, Virginia began giving double weight to the sales factor. If Virginia adopted a single (sales) factor formula, it would likely have a negative net impact on corporate income tax revenue. Based on a sample of 293 corporate tax returns for taxable year 2003, which accounted for 72% of Virginia's total corporate income tax receipts for that year, adopting a single (sales) factor formula would reduce tax revenue by \$37.5 million. While 145 of the corporations of the sampled corporations would have paid less corporate income tax under this proposed formula, 114 would pay more and 34 would pay the same amount.

On November 30, 2005, the joint subcommittee met at the Kingsmill Resort in Williamsburg. After receiving reports on combined workers' compensation and employee health insurance "24-Hour" coverage and additional information on the apportionment of corporate

income, the joint subcommittee reviewed several proposals for possible legislative action, including Senator Wagner's proposal for a state energy plan; industry's rights to own intellectual property developed via sponsored research at state universities; a uniform assessment methodology for the machinery and tools tax; the use of a single (sales) factor in apportioning corporate income; the elimination of the machinery and tools tax; revisions to the manufacturing sales tax exemptions and property tax assessment provisions to recognized integrated manufacturing processes; advocacy of federal Association Health Plans legislation; and making the joint subcommittee a permanent legislative commission.

The fifth meeting of the joint subcommittee was held in Richmond on January 10, 2006, to review possible legislative initiatives for the 2006 Session. The joint subcommittee considered and endorsed the following proposals:

- The Joint Commission on Technology and Science's proposed legislation revamping the rules regarding the ownership of intellectual property developed at state universities through privately-sponsored research.
- A Virginia Energy Plan proposal, which had been revised to incorporate many suggestions offered by interested persons as the measure was vetted by the Coal and Energy Commission's special subcommittee on energy policy, chaired by Senator Watkins.
- A requirement that new machinery and tools to be assessed based on the owner's depreciated book value for federal income taxation purposes, with a requirement that the assessment of such property that is currently in use would be valued by a blending of the values under the old and new methods, phased in over five years.
- A proposal to classify machinery and tools as intangible personal property, which has the effect of excluding it from local taxation.
- The Manufacturing Technology Act, which, among other things, would expand the sales and use tax exemption for machinery, tools, and equipment to include those used in the integrated process of processing, manufacturing, refining, recycling, mining, or converting products for sale or resale.
- A proposal to make the joint subcommittee a permanent legislative commission.

The joint subcommittee is proud of the legislative initiatives it has sponsored in its two years of existence. However, it recognizes that the task of identifying how the manufacturing sector's needs may most speedily, efficiently, and cost-effectively be addressed is not completed and that much work remains to be done. The joint subcommittee is pleased by the enactment of legislation creating a statutory commission that it hopes will continue its efforts.

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**REPORT OF THE
JOINT SUBCOMMITTEE STUDYING THE
NEEDS OF THE MANUFACTURING SECTOR AND THE
FUTURE OF MANUFACTURING IN VIRGINIA**

To: The Honorable Timothy Kaine, Governor of Virginia
and
The General Assembly of Virginia

Richmond, Virginia
May 2006

I. INTRODUCTION

The 2004 Session of the General Assembly established a joint subcommittee pursuant to Senate Joint Resolution 64 (Appendix A) to study manufacturing needs and the future of manufacturing in Virginia. The resolution recites that even before the present economic slump, the manufacturing sector of Virginia's economy was in decline; that while the decline in manufacturing industries and the disappearance of manufacturing jobs may be most pronounced in south-central Virginia, it is nevertheless a statewide phenomenon; that a healthy and prosperous manufacturing sector is essential if Virginia is to have a sound, well-balanced economy; and that the needs of the manufacturing sector in the economy of the Commonwealth deserve careful, thoughtful consideration.

The joint subcommittee was specifically directed to (i) assess the current state of the manufacturing sector of Virginia's economy; (ii) determine how the sector's needs may most speedily, efficiently, and cost-effectively be addressed; (iii) consider both local and state tax policies affecting the manufacturing sector and regulatory compliance and costs; (iv) consider what role state and local governments should properly play in this endeavor; and (v) make legislative recommendations for the 2005 Regular Session of the General Assembly.

The eight-member joint subcommittee was chaired by Senator Frank W. Wagner of Virginia Beach, and Delegate Harry R. "Bob" Purkey of Virginia Beach served as vice-chairman. The other members appointed to the joint subcommittee were Senator John C. Watkins of Powhatan County, Senator Martin E. Williams of Newport News, Delegate Watkins M. Abbitt, Jr. of Appomattox, Delegate Daniel W. Marshall, III of Danville, Delegate Samuel A. Nixon, Jr. of Chesterfield County, and Delegate Christopher B. Saxman of Staunton.

A related resolution of the 2004 General Assembly Session addressed several of the issues pertaining to the establishment of this joint subcommittee. House Joint Resolution 261 provides that the General Assembly expresses its support of the Virginia Manufacturers

Association's Strategy for Growth and Manufacturing Renewal and recites that in order to further refine and clarify the issues and to create broader public awareness of the centrality of manufacturing to Virginia's economic well-being, Virginia should create a blue-ribbon interdisciplinary and interdepartmental commission to analyze the situation and propose a strategy and plan of action for the state government to complement private sector actions to effectively sustain Virginia's leadership in global competition.

The joint subcommittee concluded that the complexity of the issues and the delay in its ability to convene meetings, which was attributed in part to the extension of the 2004 legislative session, necessitated a one-year continuation of the joint subcommittee. Pursuant to Senate Joint Resolution 361 of the 2005 Session, the study was continued for a second year. A copy of SJR 361 is attached as Appendix B. The resolution directed that the joint subcommittee complete its meetings by November 30, 2005.

The chairman submitted executive summaries of the joint subcommittee's findings and recommendations from each year to the Division of Legislative Automated Systems. The executive summary for SJR 64, covering its work in the 2004 interim, is Senate Document 7 (2005) and the executive summary for SJR 361, covering its work in the 2005 interim, is Senate Document 12 (2006). These summaries are accessible through the Division of Legislative Automated System's website at <http://leg2.state.va.us/dls/h&sdocs.nsf>.

This report consists of four substantive parts:

- Part II provides an overview of the activities of the joint subcommittee at its eight meetings spanning the period from the summer of 2004 through January 2006.
- Part III addresses the status of the manufacturing sector of the Commonwealth's economy.
- Part IV includes information regarding four topics examined in depth by the joint subcommittee: tax issues important to Virginia's manufacturers, including local taxation of machinery and tools; energy resources; the cost of regulatory compliance on small businesses; and the ownership of intellectual property developed at state universities through privately sponsored research.
- Part V recounts the recommendations developed by the joint subcommittee. This part includes an overview of legislative proposals in the 2005 and 2006 Sessions of the General Assembly that were developed through the work of the joint subcommittee and the outcome of these proposals.

The members of the joint subcommittee acknowledge that their work has not been completed within the period mandated by SJR 64 and SJR 361. However, the enactment of legislation establishing the Manufacturing Development Commission as a statutory commission is anticipated to provide a forum for the continuation of the work of the joint subcommittee in assessing manufacturing needs and formulating legislative and regulatory remedies to ensure a healthy future for the manufacturing sector in Virginia.

II. JOINT SUBCOMMITTEE ACTIVITIES

A. MEETINGS DURING 2004

The joint subcommittee was authorized by SJR 64 to hold four meetings in the 2004 interim. The resolution directed the joint subcommittee to complete its meetings by November 30, 2004, and to submit an executive summary of its findings and recommendations no later than the first day of the 2005 Session of the General Assembly. The joint subcommittee met three times during its first year.

1. August 17, 2004

The first meeting of the joint subcommittee was convened on August 17, 2004, in the General Assembly Building. After electing Senator Frank Wagner as chair and Delegate Bob Purkey as vice chair, the members received a briefing from staff on the status of the manufacturing sector of the Commonwealth's economy. The background information provided to the joint subcommittee is set forth in Part III of this report.

The meeting also featured presentations focusing on the cost pressures facing manufacturers and various strategies to ensure the vitality of this sector. Dr. Thomas J. Deusterberg, president of Manufacturers Alliance/MAPI, advised the joint subcommittee that while the nation's manufacturing sector is in a recovery phase, many challenges remain. The purpose of manufacturing is evolving from making products to providing "solutions" that incorporate such services as product design, engineering, marketing, and organization. Technological improvements are critical to maintaining competitiveness and productivity growth. The manufacturing sector is leading in innovation and productivity, as 70% of business sector research and development comes from the manufacturing sector.

Competition from foreign manufacturers has limited the ability of U.S. manufacturers to pass on increasing costs to consumers. Manufacturers Alliance/MAPI has quantified the effect on manufacturing's raw costs for firms in the U.S. and its nine largest trading partners of policies regarding corporate taxation, employee benefits, tort costs, natural gas costs, and pollution abatement costs. In 2002, the effect of these "overhead" costs produced an effective cost index of \$24.20 per hour for the U.S., which is \$8.28 more than the \$16.02 per hour average for the nine trading partners. The U.S. effective cost index is exceeded only by those for Germany (\$29.27) and France (\$25.77). The leading trade partners with the lowest effective cost indices are China (\$3.50) and Mexico (\$6.19).

In addition, the strong dollar has imposed a 0.8% burden on U.S. manufacturing's raw cost competitiveness relative to its nine largest trading partners from 1990-2003. Dr. Deusterberg's recommendations include allowing currencies to seek optimal values, reducing regulatory and tort litigation costs, increasing oil and gas exploration in North America, reducing the corporate tax burden, attacking increasing health care costs, increasing access to foreign markets, and improving the climate for innovation and technology development.

Dr. Deusterberg's ranking of Virginia's business tax climate as the 21st best state prompted substantial interest. He responded that, according to the Tax Foundation and Federation of Tax Administrators, Virginia's tax system ranked below average with respect to its individual income tax component (rank of 31 of 50 states) and the conformity of its tax base to the federal base (rank of 29). A copy of Dr. Deusterberg's presentation is available on the joint subcommittee's website at <http://dls.state.va.us/groups/SJR361/MEETINGS/081704/MAPI.pdf>.

Richard Kelly, vice president of purchasing at Philip Morris USA, reported that a strong manufacturing sector benefits many other economic sectors. In the case of Philip Morris, its supply chain includes 1,100 suppliers of products and services and over 1,600 tobacco growers in Virginia. In 2003, Philip Morris spent \$850 million on goods and services from firms with establishments in Virginia and \$300 million on tobacco-related purchases in Virginia. In 2002, the corporation exported \$1 billion in goods, primarily through Virginia ports, while importing \$320 million of supplies through Virginia ports.

The length and breadth of the supply chain benefits many economic sectors, including transportation, finance and insurance, and retail and wholesale trade. A map provided by Mr. Kelly illustrating the geographic reach of Philip Morris' purchases of tobacco and other goods and services in Virginia is attached as Appendix C. Strengthening the manufacturing sector, per Mr. Kelly, would raise the overall economic tide in Virginia. A copy of Mr. Kelly's presentation may be viewed at <http://dls.state.va.us/groups/SJR361/MEETINGS/081704/phillipmorris.pdf>.

Sarah Butzen of Regional Technology Strategies, Inc. (RTS) provided the joint subcommittee with the results of its 2001 report on the performance of Virginia's technology-intensive manufacturing community. The report, prepared for Virginia's Center for Innovative Technology, also identified public policy directions and actions that would advance the competitiveness and growth of Virginia's existing technology-intensive manufacturing community and make Virginia more attractive to such firms.

RTS found that much of the decline in manufacturing employment is due to increased productivity, as manufacturers need fewer employees to produce a given increase in output. Similarly, manufacturing's share of the gross domestic product is declining as a result of increasing efficiency in production, which allows manufactured goods to be sold at increasingly lower costs. As a result, consumers spend less on manufactured goods relative to the amounts spent on services.

Ms. Butzen noted that research and development (R&D) is the single strongest predictor of economic growth. Manufacturing accounts for 80% of all industrial R&D and 60% of total R&D. Manufacturing innovation drives innovation and growth in other sectors of the economy. The services sector benefits from R&D performed by Virginia's manufacturing industries. The benefits of R&D are spread through technology diffusion, through which firms acquire, adapt, and apply the technological advances created in other firms and other industries. Manufacturing innovations are particularly conducive to technology diffusion because of the close supply linkage among many manufacturing industries.

RTS reported that the clustering of technology-intensive manufacturing firms in geographic locations fosters technology diffusion and knowledge "spillovers," thereby benefiting the entire region. In making location decisions, manufacturers with significant R&D activity tend to locate at sites that are adequate for the manufacturing processes while simultaneously attracting and retaining the necessary scientists, engineers and technicians. Virginia's technology-intensive manufacturing industries have made significant gains in output and productivity. However, Ms. Butzen reported that Virginia has a smaller percentage of its workforce engaged in technology-intensive manufacturing than the national average.

RTS identified four policy recommendations. First, Virginia should craft and implement a separate statewide development strategy to advance the technology-intensive manufacturing community. Second, private sector R&D should be encouraged through tax credits customized to motivate and support R&D expansions for technology-intensive manufacturers and by the establishment of a single gateway for information and access to government resources. Third, the State should focus on recruiting and retaining technology-intensive manufacturers in order to boost R&D activities. Finally, strategic partnerships or alliances, including research relationships between technology-intensive manufacturers and state universities, should be encouraged. A copy of Ms. Butzen's presentation is available on the joint subcommittee's website at <http://dls.state.va.us/groups/SJR361/MEETINGS/081704/RTS.pdf>.

The Virginia Manufacturing Association (VMA) developed the Virginia Strategy for Growth and Manufacturing Renewal, which identified 12 priority areas of concern to manufacturers. VMA president Brett Vassey presented the Strategy to the joint subcommittee. He urged Virginia to focus on developing rules and legislation to the growth of technology-intensive manufacturing. From the 12 points identified in the Strategy, Mr. Vassey asked the joint subcommittee to focus on six threats to manufacturing competitiveness: taxation, health care costs, research and development, regulation, education, and transportation. A copy of the Strategy for Growth and Renewal is attached as Appendix D.

2. November 17, 2004

The joint subcommittee's second meeting was held at the Georgia Pacific mill in Big Island on November 17, 2004. Deputy Secretary of Commerce and Trade Matt Erskine reported the results of Governor Warner's Working Summit on Advancing Manufacturing in Virginia, held in Roanoke on October 13 and 14, 2004. Participants from manufacturers, higher education, state agencies, and other sectors identified concerns relating to the anchor issues of workforce development, structural costs and infrastructure, and technology development and deployment. Summit participants proposed specific recommendations and actions for each of the anchor issues. One recommendation identified for each of the anchor issues was making university resources and expertise available through a central information source. Other recommendations included:

- Increase awareness of manufacturing as a viable and desirable career option.
- Develop partnerships between manufacturers and community colleges.

- Establish a Manufacturing Day, Week or Month to promote manufacturing and provide information.
- Develop an approach to alleviate the impact of the machinery and tools tax without harming revenue streams for local governments.
- Propose a statewide summit on health care costs.
- Develop a long-term strategic plan for manufacturing in Virginia.
- Align state incentives to reward technology investment.

Mr. Erskine stressed that Virginia's manufacturers must be competitive on high value-added products and services in order for the manufacturing sector to have sustainable growth and profitability. Rather than being a one-time event, it is intended that summit participants will continue to stay engaged in order to sustain momentum. A copy of Mr. Erskine's presentation is on the SJR 361 website at <http://dls.state.va.us/groups/SJR361/MEETINGS/111704/Erskine.pdf>.

Delegate Danny Marshall initiated a discussion of the impact that rising health insurance costs is having on manufacturers. He noted that he introduced House Bill 935 in the 2004 Session, which would have authorized the offering of health insurance plans that provide some, but not all, of the coverages that current law mandates be included in a health insurance policy. The legislation would have permitted insurers offering accident or sickness insurance policies or plans to offer Consumer Choice Benefits Plans that do not offer or provide all of the existing state-mandated health benefits. He also introduced House Bill 1362, which would have placed a five-year moratorium on new health insurance mandates. The bills were directed to the Special Advisory Commission on Mandated Health Insurance Benefits for analysis.

Brett Vassey, president and CEO of the VMA, gave a report on action items addressed at his organization's Healthcare Summit convened in January 2004. The manufacturing sector is concerned with escalating health care costs because of its perceived need to offer health insurance benefits in order to attract and retain employees. Issues of primary concern included mandated health insurance benefits and long term care. As the workforce ages, its usage of the health care system is expected to rise, which will drive up health care costs. He advocated an incentive for the growth of long term care insurance in Virginia, on grounds that it is cheaper for employers to allow retirees to protect their assets under long term care policies than to provide full health care coverage. Copies of the VMA's health care proposals and a report on the VMA's healthcare summit in July 2003, may be accessed through the joint subcommittee's website at <http://dls.state.va.us/groups/SJR361/MEETINGS/111704/materials.htm>.

The meeting also featured presentations on the following issues:

- Robert Cline and Andrew Phillips of Ernst & Young presented the joint subcommittee with preliminary findings of a study commissioned by the VMA to compare the burden of Virginia's state and local taxation of the manufacturing sector with other economic sectors in Virginia, as well as with the burdens on such sectors in several other states. A copy of Ernst & Young's presentation is on the SJR 361 website at http://dls.state.va.us/groups/SJR361/MEETINGS/111704/VMA_ppt.pdf. The joint subcommittee's examination of the issue of the tax burden on Virginia's manufacturing sector is examined in Part IV A of this report.

- Christopher McGill of the American Gas Association and Diane Leopold, Vice-President - Business Planning and Market Analysis at Dominion Resources, provided information regarding the energy outlook for Virginia's manufacturing sector. Copies of the presentations of Mr. McGill and Ms. Leopold are available on the joint subcommittee's website at <http://dls.state.va.us/groups/SJR361/MEETINGS/111704/AGA.pdf> and at <http://dls.state.va.us/groups/SJR361/MEETINGS/111704/Dominion.pdf>, respectively. The joint subcommittee's examination of energy issues effecting Virginia's manufacturing sector is examined in Part IV B of this report.
- In response to the chair's request at the previous meeting, staff provided the joint subcommittee with information on federal and state legislation addressing the burden of regulations affecting small businesses. A copy of staff's presentation is on the SJR 361 website at <http://dls.state.va.us/groups/SJR361/MEETINGS/111704/Laws.pdf>. The joint subcommittee's examination of the issue of quantifying the impact of regulations on small businesses is examined in Part IV C of this report.
- Staff provided a summary of research regarding the issue of ownership of patents and other intellectual property developed at state universities through privately sponsored research. Draft legislation addressing concerns raised by manufacturers frustrated by the current system was distributed at the meeting. The draft legislation is on the joint subcommittee's website at <http://dls.state.va.us/groups/SJR64/MEETINGS/4112D.htm>, and a copy of staff's background paper on the issue has been posted to the website at http://dls.state.va.us/groups/SJR64/MEETINGS/IP_pres.htm. The joint subcommittee's examination of the issue of quantifying the impact of regulations on small businesses is examined in Part IV D of this report.
- A Georgia Pacific representative noted that the company was a member of the Old Dominion Committee for Fair Utility Rates, a coalition of large industrial customers of Appalachian Power, and recommended that Virginia's planned deregulation of its electric utility industry be reconsidered.

3. January 11, 2005

The joint subcommittee's third meeting of its first year was convened on the afternoon of January 11, 2005, in the General Assembly Building. The purpose of the meeting was to review, and give interested persons the opportunity to comment on, its legislative recommendations for the 2005 Session.

The following five legislative proposals were considered:

- Resolution continuing the joint subcommittee for a second year.
- Resolution directing the Joint Legislative Audit and Review Commission to evaluate (i) the total cost of compliance by Virginia manufacturers with state and federal environmental, economic, workplace, and tax regulations; (ii) how the cost of regulatory compliance borne by Virginia manufacturers compares to the regulatory compliance costs borne by firms in other major sectors of Virginia's economy, in the aggregate, on a per-employee basis, based on the sectors' contributions to gross state product, and other relevant bases; and (iii) how the cost of regulatory compliance borne by Virginia

manufacturers compares to the regulatory compliance costs borne by manufacturers in other mid-Atlantic and Southern states.

- A bill requiring regulatory agencies to consider, as part of the process by which regulations are promulgated, the impact of proposed regulatory action on small businesses.
- A bill requiring the Virginia Liaison Office to work with the Congressional delegation and executive agencies to ease the moratorium that currently prohibits offshore exploration of potential natural gas reserves.
- A bill revising the rules regarding the ownership of intellectual property developed at state universities through privately sponsored research, in the form presented to the joint subcommittee at its November 17, 2004, meeting.

The joint subcommittee's consideration of these proposals is addressed in Part V A of this report.

With the exception of Senator Watkins' concerns about the scope of the proposal to revamp the rules regarding the ownership of intellectual property developed at state universities through privately sponsored research, the members unanimously endorsed each proposal.

At the close of the meeting, the chairman approved the executive summary of the joint subcommittee's first year, and deferred the preparation of a formal report on the group's work until completion of the study's second year.

B. MEETINGS DURING 2005

The joint subcommittee was authorized by SJR 361 to hold four meetings in the 2005 interim. The resolution directed the joint subcommittee to complete its meetings by November 30, 2005, and to submit an executive summary of its findings and recommendations no later than the first day of the 2006 Session of the General Assembly. The joint subcommittee held five meetings pursuant to SJR 361.

1. April 5, 2005

The initial meeting of the joint subcommittee's second year was held at Wyeth Pharmaceuticals' Darbytown Road facility near Richmond on the eve of the reconvened legislative session to address the Governor's vetoes and proposed amendments to bills. After reviewing the fate of the joint subcommittee's legislative initiatives in the 2005 Session, the meeting's presentations focused on two issues that it had begun to examine in its first year: natural gas and taxation.

The chairman reiterated the urgency of addressing the Virginia's manufacturing sector's needs for natural gas. He provided a map prepared by the American Chemistry Council, showing natural gas costs around the world, a copy of which is attached as Appendix E. Per the

map, the U.S. has the highest natural gas prices (6.30 per million BTUs) of any of the nations listed.

The chairman also observed that a successful future for manufacturing in Virginia will require increasing productivity, which in turn is dependent upon investment in equipment in plants. The state, therefore, should look at ways to create incentives for firms to buy machinery and tools. During the course of the meeting, some questioned whether the current system of local taxation of machinery and tools is at odds with this goal.

Presentations were made to the joint subcommittee by:

- Keith Togna of Honeywell Corporation, who told the joint subcommittee that natural gas prices, which have jumped from \$2.77 per decatherm (Dth) in 1998 to \$7.22/Dth in 2005, are directly affecting Honeywell's nylon business. Over the past three years, natural gas has increased \$3.26/Dth, costing the company \$72 million. Over that period, Virginia operations have experienced a 25% workforce reduction, which was attributed to rising energy costs and foreign competition. In an attempt to address this issue, Honeywell has completed a project whereby it purchases natural gas produced from the decomposition of waste at the Waverly landfill. The landfill methane project required construction of a 23 mile pipeline, which is the longest landfill gas pipeline in the nation. The project, implemented in January 2004, currently displaces 4% of the Honeywell plant's natural gas requirement and is expected to displace up to 20% over the next 50 to 70 years. Honeywell's project, which has received an award from the Environmental Protection Agency, is expected to allow the firm to obtain gas at a price that is about one half of the market cost. A copy of Mr. Togna's report is attached as Appendix F.
- Brett Vassey of the VMA presented interim findings from Ernst & Young's comparative study of tax burdens in Virginia and five other states: Alabama, Georgia, Kentucky, North Carolina, and South Carolina. The joint subcommittee's examination of the issue of the tax burden on Virginia's manufacturing sector is discussed in Part IV A of this report.
- Brad Gilks of Smurfit-Stone Container Corporation in West Point reported that from 1991 to 2004 the facility's local machinery and tools tax bill has jumped from \$1.3 million to over \$3.5 million. Much of the increase in tax liability was attributed to changes made by localities in the assessment ratio and depreciation rates. As Smurfit-Stone Container reportedly accounts for 98% of the machinery and tools tax paid to King William County, concern was expressed that its changes in assessment rates were aimed at increasing the amount of tax liability on this firm. The joint subcommittee's examination of this issue is discussed in Part IV A of this report.
- Staff provided an overview of Virginia's statutes relating to the assessment of the local machinery and tools tax.

The joint subcommittee indicated that it would examine the issues of the local variations in assessment procedures and ratios and of the discretion of local officials in determining whether an object is part of the manufacturing process. Senator Watkins noted that the advisability of increasing standardization of assessment procedures among localities should be

examined. The chairman reiterated the importance of fair and consistent policies to firms that are considering investing in expensive manufacturing machinery in Virginia.

2. June 7, 2005

The second meeting of the joint subcommittee was held at Barr Laboratories' Forest facility on June 7, 2005. After Delegate Lacey Putney welcomed the members to the Lynchburg region, Catherine Higgins of Barr Labs gave the members an overview of the company's operations. She noted that the recruitment and retention of qualified workers is critically important to pharmaceutical firms. Barr Labs invests over \$10,000 per employee in recruitment and training during the first 45 days of employment. Issues of concern to Barr Labs' human resources department include the increasing cost of health care benefits and possible amendments in the federal Family and Medical Leave Act.

As at the preceding meeting, the topics of taxation and energy costs dominated the joint subcommittee's meeting. The joint subcommittee received presentations by:

- Rocco Rositano, Senior Director of Taxation at Barr Labs, who recommended that future tax legislation foster an atmosphere that encourages the growth of manufacturing in Virginia. He suggested that states use their corporate income tax laws to benefit manufacturers. He praised the use of a single-factor formula to apportion a corporation's income among all states in which it does business, as preferable to formulas used in most states that include property and payroll, as well as sales, components in their apportionment formulas. A copy of Mr. Rositano's presentation is on the study's web site at <http://dls.state.va.us/groups/SJR361/MEETINGS/060705/BarrLabs.pdf>. The issue of apportionment of corporate income is addressed in detail in Part IV A of this report.
- Staff provided a summary of bills and legislative studies from the prior decade that pertain to the local machinery and tools tax. A copy of the presentation is on the study's web site at <http://dls.state.va.us/groups/SJR361/MEETINGS/060705/TaxIssues.pdf>.
- Senator Wagner reported on the federal Energy Policy Act under debate in Congress.
- William Brinker of North Carolina-based Enerdyne Power Systems provided an overview of issues relating to landfill gas projects in Virginia. A copy of Mr. Brinker's presentation is attached as Appendix G. Landfill gas is discussed further in Part IV B of this report.
- Paul Ruppert of Dominion Resources addressed the siting of liquefied natural gas (LNG) import terminals. A copy of Mr. Ruppert's presentation is posted to the study's web site at <http://dls.state.va.us/groups/SJR361/MEETINGS/060705/dominion.pdf>. The issue of LNG terminals is addressed in detail in Part IV B of this report.

3. August 25, 2005

The third meeting of the joint subcommittee was convened at the Volvo Trucks assembly plant in Pulaski County. Delegates David Nutter and Benny Keister welcomed the joint subcommittee members. In addition to the tax and energy issues that had dominated the previous

meetings, the members heard from manufacturers on issues of transportation and economic development services.

The joint subcommittee received the following briefings:

- John P. Josephs, Jr., Senior Tax Policy Analyst at the Department of Taxation, provided estimates of the fiscal impact of several proposals to revise Virginia's formula for apportioning the income of corporations that operate in multiple states. A copy of his presentation is attached as Appendix H.
- Robert Cline of Ernst & Young LLP presented the results of its analysis, commissioned by the VMA, comparing the tax burden imposed by state and local taxes on Virginia's manufacturers to the burden on other sectors of the Commonwealth's economy and to the manufacturing sectors of other states. Additional information regarding the Ernst & Young report is set out in Part IV A of this report.
- Bob Whelen, economic development officer for Volvo Trucks and Mack Trucks in North America, urged Virginia to pursue economic development initiatives being used in other states, including government taking an interest in the success of the businesses in which public funds have been invested. Specifically, he recommended giving Volvo access to discussions when vehicle specifications are being developed. Whelen identified workforce training as an area where government and business share a common objective, and praised Virginia's Workforce Services program, Worker Training Tax Credit, and Community College System. He urged General Assembly funding for the worker training "Center of Excellence" at the Volvo Truck facility. Volvo's economic development incentive agreement negotiated with the Virginia Economic Development Partnership in 1999 included \$5 million for the construction of the Center, which was seen as the cornerstone in developing a highly trained workforce in the region. Funding for the Center has not been appropriated. With the success of budget reform in Virginia, Whelen urged the state to use surplus dollars to meet this commitment. A copy of Mr. Whelen's remarks on economic development are attached as Appendix I.
- Jim Frantz of SPP, which provides components used in assembling trucks at Volvo's facility, urged legislators to provide government support to manufacturers such as is being done in China. The quality of the workforce is a major issue to firms that supply products to anchor manufacturers. Frantz contended that funding the Commonwealth's commitment to develop the workforce training Center of Excellence would help young people discover manufacturing employment as a viable career alternative to attending college. He observed that infrastructure is vital to the region, and stated his opposition to proposals that trucks be required to pay tolls to fund improvements to Interstate 81.
- Dale Bennett of the Virginia Trucking Association stated his opposition to tolling existing infrastructure that has already been paid for. Trucks transport 90% of the manufactured freight moved in and out of the Commonwealth. As a result, the issue of how Virginia will finance highway improvements affects the competitiveness of the Commonwealth's manufacturing sector. Tolling new roads may be proper if a free alternate route is available and a user can decide whether to pay a premium or surcharge to use the new route. Tolling existing roads may put areas of the state at a competitive disadvantage. For example, tolling Interstate 81 would balkanize the Commonwealth by making areas served by Interstates 85 or 95 more attractive for economic development.

He suggested that a fair alternative would be to toll all roads or none, and make all users throughout Virginia share the costs. While other businesses would be able to avoid or minimize their use of Interstate 81, the firms currently located on the route are bound to use the highway and pay the higher costs.

- Delegate Danny Marshall noted that the Speaker of the House has asked members to examine how the existing transportation network can be used more efficiently. Allowing longer and heavier trailers would reduce the number of vehicles on Virginia's highways. Longer trailers would reduce traffic volume in part because transporters often "cube out," or fill trailers with cargo, before they "weigh out," or reach the maximum allowable weight. A 2000 study indicating that increasing the national restriction on truck weights to 97,000 pounds would reduce truck loads by 11%.
- Ken Jennings of the Department of Motor Vehicles' Motor Carrier section provided information on regulations governing the maximum weight and length of vehicles. Many of the restrictions on the size of trucks are dictated by the federal government, which regulates the vehicles that can be operated on the Interstate highway system. Except in the states that allowed larger trucks when limits were imposed in 1956, trucks on interstates are limited to 20,000 pounds for a single axle, 34,000 pounds for tandem axles, and 80,000 pounds gross vehicle weight rating. DMV is allowed to issue permits for larger irreducible loads on Interstate highways and for some reducible loads on other roads.
- Bob Whelen expressed concern about the impact of traffic congestion on Volvo's business and its customers' businesses. With respect to proposals to increase vehicle weight limits, he asked the members to consider whether the increased weight could be handled by existing and planned primary, secondary and local roads and bridges, and whether an increased weight rating would actually result in more freight being moved by fewer trucks. If so, increasing weight limits could be a viable component of a balanced long-range plan to reduce roadway congestion. Whelen observed that relying on new or expanded roads to relieve congestion often leads to a vicious cycle of construction, congestion, delays, and accidents. He suggested that while infrastructure improvements are part of the solution to congestion, they should be balanced with, among other things, Intelligent Transportation Systems (ITS). Two types of ITS recognized by the U.S. Department of Transportation are Intelligent Infrastructure and Intelligent Vehicles. Increasing the deployment of electronic weight and vehicle safety screening would reduce congestion by allowing enforcement agencies to electronically pre-select trucks to bypass weighing stations based on vehicle history and status. Jennings noted that eight weighing stations in Virginia currently use electronic weighing technologies. Another new ITS, being developed by Volvo, the University of Tennessee, and the National Transportation Research Center, is an on-board safety monitoring system to relay information to fixed or mobile monitors. ITS has proven effective in reducing congestion in this country and in certain European nations. Whelen urged the Commonwealth to fund research, development and deployment of ITS solutions in balance with funds for new construction projects. A copy of Mr. Whelen's remarks on transportation are attached as Appendix J.
- Randy Thompson of Roanoke Cement, a subsidiary of Titan Industries, expressed concerns with the long-term viability of rail freight service. His firm cannot divert truck traffic to rail because railroads do not have the capacity.

- Frank Owens of MeadWestvaco in Covington observed that management of the paper mill's supply of wood is critical to its success. The mill requires 3 million tons of wood annually. Plans to send wood from chip mills in Gold Hill and Cascade have been thwarted by chip hopper car shortages and fuel surcharges. Plans to ship the plant's production by rail have been adversely affected by shortages of rail cars, which have resulted in putting more trucks on the highways. The speaker voiced frustration with the lack of rail cars and with rail system congestion. Speakers acknowledged that rail companies are currently investing in system upgrades. The hope was expressed that any funds invested in the Commonwealth's rail infrastructure be spent to improve freight carrying capacity.

The chairman also discussed his proposed energy policy legislation, which addresses the need for a statewide energy plan while including measures addressing topics that had been identified during the joint subcommittee's work, such as siting LNG terminals, encouraging the development of offshore natural gas resources, and creating incentives for landfill gas projects.

4. November 30, 2005

The joint subcommittee met at Kingsmill Resort in Williamsburg on November 30, 2005, at which time it received the following presentations:

- Commissioner Lawrence W. Tarr, chairman of the Virginia's Workers' Compensation Commission, briefed the members on "24-hour coverage," which is a benefits program that coordinates or integrates the medical care and wage replacement benefits available through workers' compensation with other health insurance and disability programs. The premise of 24-hour coverage is that replacing multiple payment systems with a single payer mechanism that does not distinguish based on whether a disability was caused by an employment-related injury, would reduce costs by eliminating a duplication of programs. Provisions for such programs were enacted in the 1990s in about ten states. However, the programs did not prove successful and have been repealed or limited to pilot programs in most of these states. Systemic barriers served to limit the adoption of 24-hour coverage systems, including the distinction that while workers' compensation coverage is mandatory, other health or disability insurance is not. Moreover, workers' compensation generally provides the employee's exclusive remedy for work-related injuries. A copy of Commissioner Tarr's presentation is attached as Appendix K.
- John P. Josephs, Jr., Senior Tax Policy Analyst at the Department of Taxation, provided supplemental data regarding the cost of options for amending the corporate income apportionment formula to provide a single sales factor formula only for manufacturers. He noted that under the NAICS code, a business could legitimately use a manufacturing NAICS code even though it would not qualify as a manufacturer under the common law definition. Josephs also addressed the possible cost of a proposal to give corporations the option to apportion their taxable income based on a single (sales) factor formula. The revenue loss under this proposal would exceed the \$37.5 million loss previously reported. A copy of Mr. Josephs' presentation is attached as Appendix L.

The balance of the meeting was used to review possible legislative proposals for the 2006 Session. The proposals reviewed:

- Revise the process regarding the ownership of intellectual property developed through sponsored research at state universities, based on a recommendation developed by a subcommittee of the Joint Commission on Technology and Science;
- Establish a state energy policy;
- Establish a uniform assessment methodology for the local machinery and tools tax;
- Implement a single factor (sales) as the basis of apportioning taxable corporate income;
- Phase out the local machinery and tools tax through the Virginia Industry Investment Act;
- Enact the Virginia Manufacturing Technology Act, which would amend Code sections regarding sales and use tax exemptions, separate taxable property classes and real property assessments in order to reflect integrated plant theory, ensure the fair market value assessment of obsolete and aged machinery and tools, and reflect government mandates on industry for pollution control equipment;
- Endorse federal legislation authorizing Association Health Plans; and
- Establish a permanent statutory commission to continue the efforts of the joint subcommittee.

The joint subcommittee did not take action on any of the proposals at this meeting due to the shortage of time allowed for review of the proposals by interested persons. An account of the joint subcommittee's deliberations with respect to these proposals is set out in Part V of this report. The members agreed to meet again prior to the convening of the 2006 Session to receive comments and make their recommendations.

5. January 10, 2006

The joint subcommittee held its final meeting in the General Assembly Building on the afternoon preceding the convening of the 2006 Session. The following six bills were considered and endorsed unanimously:

- Revising the process regarding the ownership of intellectual property developed through sponsored research at state universities, which was presented by Lisa Wallmeyer, Director of the Joint Commission on Technology and Science.
- Establishing a state energy policy, which had been revised to incorporate many suggestions offered by interested persons as the measure was vetted by the Coal and

Energy Commission's special subcommittee on energy policy, chaired by Senator Watkins;

- Establishing a uniform assessment methodology for purposes of the local machinery and tools tax, by requiring new machinery and tools to be assessed based on the owner's depreciated book value for federal income taxation purposes, with a requirement that the assessment of such property that is currently in use would be valued by a blending of the values under the old and new methods, phased in over five years;
- Classifying machinery and tools as intangible personal property, which has the effect of excluding it from local taxation;
- Enacting the Manufacturing Technology Act, which, among other things, expands the sales and use tax exemption for machinery, tools, and equipment to include those used in the integrated process of processing, manufacturing, refining, recycling, mining, or converting products for sale or resale; and
- Establishing a statutory Commission on Manufacturing.

The joint subcommittee's consideration of these proposals is addressed in Part V of this report. The agenda did not address the proposal raised at the November 30, 2005, meeting regarding federal Association Health Plan legislation, though the chair observed that it is an important issue that should be examined at the state level to ensure implementation if federal legislation is enacted. The members also did not consider the previously reviewed proposals to amend the formula for apportioning taxable corporate income.

At the close of the meeting, the chairman approved the executive summary of the joint subcommittee's second year.

III. STATUS OF VIRGINIA'S MANUFACTURING SECTOR

A. BACKGROUND

The joint subcommittee was specifically charged in SJR 64 with assessing the current state of the manufacturing sector of Virginia's economy. At the joint subcommittee's first meeting in August 2004, staff provided members with the Overview of Manufacturing in Virginia, prepared by the Virginia Department of Business Assistance (DBA), revised through November 2001. A copy of the DBA's Overview is attached as Appendix M.

The DBA's Overview was prepared by Jay Reuhrmund, who was unable to update the report since being called to active duty in the Air Force through October 2004. In addition, Rebecca Rowland, who assisted Reuhrmund on the project, advised that a future update was unlikely because the Small Business Research Center, which had responsibility for preparation of the Overview, was eliminated as of July 1, 2004.

In addition to the Overview, members were provided with brief reports prepared by the DBA, dated November 2001, that provide detailed information regarding the status of 15 specific manufacturing categories: apparel and textiles; chemicals and allied products; electrical and electronic equipment; fabricated metal products; furniture and fixtures; industrial machinery; instruments and related products; lumber and wood products; miscellaneous manufacturing industries; paper and allied products; rubber and plastic products; stone, clay, and glass products; textile mill products; tobacco products; and transportation products. Copies of the 15 sector reports may be accessed through the DBA's internet site at http://www.dba.virginia.gov/virginia/center/default.asp?SECTION_ID=114.

B. ASSESSMENT OF MANUFACTURING SECTOR

1. Overview

Though the relative size of the manufacturing sector in Virginia's economy has been in decline for several years, it remains important to the Commonwealth's economy. Since peaking at 432,500 in 1989, Virginia's manufacturing employment had fallen to 296,600 by June 2004. Over 67,000 manufacturing jobs in the Commonwealth were eliminated between 2000 and 2004. Manufacturing's share of nonagricultural employment, which was 28.6% in 1949, currently stands at 8.7%.

Other indicators of the health of the Commonwealth's manufacturing sector are not as bleak. Virginia's average weekly earning for production workers has risen from \$435 in 1992 (which was 93% of the national average) to \$622 in 2002, which exceeded the national average by \$3. Average annual wages for Virginia's manufacturing sector, at \$39,089, exceed the average of \$36,750 for all private employment sectors in this state. Since 1989, manufacturers have been producing more with fewer employees. The amount of value added by Virginia manufacturing increased from \$43.6 billion in 1997 to \$53 billion in 2001. Despite the declining numbers of manufacturing establishments and employees in the Commonwealth, the sector remains important. The aggregated personal income in the manufacturing sector exceeded \$16

billion in 2002. Manufacturing's share of the state's economy was 12% in 2001, and its contribution to the state's economy topped \$32 billion.

2. Status of the Manufacturing Sector in 2000

Though the data in the DBA's Overview was two and one half years old when presented to the joint subcommittee, it provides valuable historical perspective by tracking the state of the sector over the preceding 50 years. The Overview reveals several important trends:

- The relevant importance of specific manufacturing sectors is not static. In 1949, the three largest manufacturing industries were textiles, chemicals, and lumber and wood products; in 2000, these industries were ranked seventh, tenth, and fifth, respectively, and the top three manufacturing sectors were transportation, food and kindred products, and printing and publishing.
- Between 1949 and 2000, employment in durable goods manufacturing (including industrial machinery, electrical and electronic equipment, and transportation equipment) increased from 32.7% to 52.4% of manufacturing employment, while nondurable goods manufacturing (including textiles, apparel, chemicals, and tobacco) declined from 67.3% to 47.6% of manufacturing employment.
- Between 1969 and 2000, employment in manufacturing fared substantially better in Virginia (increasing by 17,800 jobs) than in the nation as a whole (declining by over 1.7 million jobs).
- Since 1989, manufacturing employment in the Commonwealth has declined at an average annual rate of 0.9%, while nondurable goods manufacturing employment declined at an average annual rate of 1.7%.
- Virginia's manufacturing establishments tend to be larger (57 employees) than the national average (45 employees).
- Virginia's manufacturing employees earned on average 85.3% of the wages paid to manufacturing employees nationally, though for several subsectors (including paper and allied products, rubber and plastics, and fabricated metal products), payroll for Virginia's employees exceeded the U.S. average.
- While tobacco products constitute Virginia's largest manufacturing export and account for almost 30% of the Commonwealth's exports of manufactured goods, they declined by nearly 15% between 1995 and 2000.
- Over the past 50 years, manufacturing's share of nonagricultural employment has been shrinking steadily in both Virginia (from nearly 35% to 14%) and in the U.S. (from about 29% to 12%). The DBA attributed manufacturing's declining share to the faster growth in nonmanufacturing employment until 1989, and thereafter to the absolute decline in manufacturing employment.
- From 1949 to 2000, employment increased more rapidly in Virginia than in the U.S. in both the nonmanufacturing sector (3.5% vs. 2.7%) and the manufacturing sector (1.1% vs. 0.5%).
- Between 1987 and 2000, the gap between Virginia's share of U.S. population and its share of manufacturing employment has increased from 8% to 19%, as its share of manufacturing employment declined but its share of national nonagricultural employment continued to increase.

3. Replacing the SIC with the NAICS

In order to provide the joint subcommittee with more recent data on the state of the manufacturing sector, staff prepared a supplemental report using data compiled with the assistance of Jackie Hudson at the Virginia Employment Commission and the Philadelphia Office of the U.S. Bureau of Labor Statistics. Updating the 2000 data on which the DBA's Overview was based proved difficult because the U.S. Department of Labor converted in May 2003 from the four-digit Standard Industrial Classification (SIC) system to the 6-digit North American Industry Classification System (NAICS).

Under the NAICS definition, the manufacturing sector consists of establishments (not firms) primarily engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The shift from the SIC to NAICS changes the categorization of numerous types of businesses. Under NAICS, establishments are grouped according to their production processes, while under the SIC system, firms were grouped in accordance with various characteristics such as types of inputs or customers. For example, under the SIC, retail bakeries were grouped under retail trade, while under NAICS they are grouped with commercial bakeries in the manufacturing sector. The NAICS also adds new classifications that recognize the development since 1987 of emerging high-technology industries, such as Internet service providers, semiconductor manufacturers, and web search portals.

Changes to the "manufacturing" sector under the NAICS include the addition of subsectors for computer and electronic products and shifts to this sector of dental laboratories from the health services sector, of custom slaughtering from the agricultural services sector, of processed boxed beef from wholesale trade sector, and of software and video reproduction, tire retreading, and armature remanufacturing from the services sector. Under the NAICS the manufacturing sector loses several activities that had been included under the SIC, including publishing (shifted to the information sector), logging activities (shifted to the natural resources sector), record companies (shifted to the information sector), and boat repair (shifted to the services sector). In addition, the NAICS sector for professional and business services picked up establishments that perform computer systems design, computer facilities management, scientific research, and education.

As a result of these shifts or recategorizations of jobs, "manufacturing" does not have the same meaning today under the NAICS that it had prior to 2003 under the SIC system. Some pre-2003 data has been re-sorted and "translated" based on the change from the SIC system to the NAICS, but only at the sector level and for selected subsectors.

Table 1 shows the effect on national manufacturing employment numbers that has resulted from the change from SIC divisions to NAICS subsectors.

Table 1. Distribution of Employment from SIC Divisions to NAIC Supersectors (1Qtr 2001)

NAICS	Supersectors	SIC Divisions			
		Manufacturing	Wholesale Trade	Retail Trade	Services
Natural Resources and Mining	Employment	75,136			
	Percent	12.7			
Manufacturing	Employment	16,502,531	31,444	147,887	128,670
	Percent	98.2	0.2	0.9	0.8
Trade, Transportation, and Utilities	Employment	70,766	6,592,520	14,381,315	125,292
	Percent	0.3	25.8	56.3	0.5
Information	Employment	751,927		1,224	1,262,674
	Percent	20.3		0.0	34.2
Professional and Business Services	Employment	613,021	155,520	373,538	14,172,829
	Percent	3.7	0.9	2.3	86.0
Education and Health Services	Employment	4,421			14,602,041
	Percent	0.0			99.3
Other Services	Employment	12,805		6,207	3,614,016
	Percent	0.3		0.2	96.5

Department of Labor, Bureau of Labor Statistics, Current Employment Statistics Survey (National)

Of the 16.8 million U.S. manufacturing jobs under NAICS, 16.5 million were also classified as manufacturing jobs under the SIC. Of the 18 million jobs under the SIC definition of manufacturing, over 750,000 were shifted to the information sector as a result of the re-categorization of publishing, and 613,000 were shifted to professional and business services sector, which is a result of categorizing establishments (such as back-office operations) based on the activities occurring there rather than based on the principal business of the firm. The net result of the reallocation is a decline of nearly 1.2 million "manufacturing" sector jobs, from 18,030,607 to 16,810,532. This substantial change illustrates the impossibility of comparing 2000 data (based on SIC categorizations) with current employment data that classifies by sectors based on the NAICS.

4. Updated Manufacturing Sector Data

According to the VEC, from June 2003 to June 2004 Virginia experienced a gain of 81,100 jobs, which translates to a 2.3% increase in employment. In the one month from May 2004, the Virginia economy gained 24,200 nonfarm jobs. Over the preceding year, Virginia added nonfarm jobs at over twice the national annual rate of 1.1%. The Virginia nonagricultural employment level of 3,617,600 is an all-time record.

In spite of these overall job gains, Table 2 shows that between June 2003 and June 2004 employment shrank in Virginia's manufacturing sector by 8,900, or 2.9%, to 296,600. The June 2004 level includes a decline of 200 manufacturing jobs from May 2004. The manufacturing sector employment decreases during June 2003 to June 2004 included 6,500 (4.7%) in nondurable goods and 2,400 (1.4%) in durable goods. Textile mills had the biggest subsector

loss (1,100, or 7.9%). The biggest gain in manufacturing was in the motor vehicles and vehicle parts subsector, with a gain of 1,000 jobs, or 2.6%.

By metropolitan area, manufacturing sector employment from June 2003 to June 2004 increased by 200 in Northern Virginia; decreased by 200 in Hampton Roads; decreased by 200 in Danville; decreased by 200 in Lynchburg; decreased by 1,400 in Richmond; decreased by 200 in Charlottesville; decreased by 200 in Bristol; and decreased by 200 in Roanoke.

Table 2. Virginia Nonfarm Employment, All Sectors
(NAICS Categories)

Industry	June 2004	June 2003	Change (Number)	Change (Percent)
Total Nonfarm Jobs	3,617,600	3,536,500	+81,100	+2.3
Mining	10,400	10,200	+200	+2.0
Construction	234,100	220,300	+13,800	+6.3
Manufacturing	296,600	305,500	-8,900	-2.9
Trade	533,800	514,500	+19,300	+3.8
Transportation, Warehousing & Utilities	117,900	118,800	-900	-0.8
Information	101,500	101,800	-300	-0.3
Finance, Insurance and Real Estate	194,300	189,000	+5,300	+2.8
Professional & Business Services	580,200	549,500	+30,700	+5.6
Private Education & Health Services	377,600	371,400	+6,200	+1.7
Leisure & Hospitality Services	332,500	328,700	+3,800	+1.2
Miscellaneous Services	187,200	182,800	+4,400	+2.4
Total Government	651,500	644,000	+7,500	+1.2

Source: William F. Metzger, Chief Economist, VEC, Press Release, August 9, 2004

The DBA's report on Virginia Economic Conditions dated March 2003 noted:

- State manufacturing employment peaked at 432,500 employees in September 1989. By December 2002, manufacturing employment had declined 17.5% in Virginia and 15.4% nationally. Of the 75,800 Virginia jobs lost by that date, 44,000 were in textiles and apparel.
- Manufacturing job losses fall disproportionately on nonmetropolitan communities. Although such communities account for 22% of the state's population, they represent 36% of manufacturing employment.

- Virginia's percentage decline in manufacturing employment between December 2001 and December 2002 of 1.5% was less than the percentage losses in all neighboring states except Kentucky.
- Although some of the loss in manufacturing jobs is due to overall weakness in the economy, long-term trends are at work. Electronic equipment has declined steadily since 1985 due largely to the impact of foreign competition, losing 12,600 jobs (37.5%). Furniture is also affected by foreign competition, losing 6,100 jobs (26.9%) since 1985.
- Industrial machinery has gained 5,400 jobs since July 1990, by successfully exporting to foreign markets and experiencing productivity increases.
- Tobacco, rubber and plastics, and printing were the only nondurable goods subsectors to gain jobs over this period.
- Textiles, apparel and paper lost a total of 4,400 jobs between December 2001 and December 2002. Textiles and apparel have lost approximately 60,000 jobs since the early 1970s, of which 40,000 have been lost since 1990.
- Virginia's chemical industry peaked at 47,300 jobs in 1968. Since then, it has been in long-term decline, losing 28,300 jobs, of which 10,500 jobs have been lost since 1990.

Table 3. Employment Changes, Selected Manufacturing Subsectors, 2001-2002

Durable Goods	-1,300
Industrial machinery	+1,200
Transportation equipment	+200
Furniture	-900
Stone, clay and glass	-800
Fabricated metals	-600
Electronic equipment	-500
Nondurable goods	-4,200
Tobacco products	1,100
Rubber/plastic	300
Textiles	-2,800
Food products	-1,000
Paper	-900
Apparel	-700
Chemicals	-200

Department of Business Assistance, "Economic Conditions -- March 2003"

Tables 4, 5, and 6 rank the 21 manufacturing subsectors according to fourth quarter 2003 data on employment, number of establishments, and average weekly wage. Quarterly Employment and Wage data provided by the VEC's ALICE system based on employer's quarterly wage reports reveals that in the one year from 2002 to 2003, manufacturing employment declined by over 17,000 jobs, or 5.5%. The biggest percentage decline in manufacturing employment between 2002 and 2003 was in apparel subsector (22.8%); the biggest drop in number of employees was in the computer and electronics subsector (3,700 jobs).

Table 4. Change in Virginia Manufacturing Employment, 2002-2003

	4th Quarter 2003	4th Quarter 2002	Percent change
All Manufacturing	300,614	318,075	-5.5
Transportation equipment mfg	39,308	39,680	-0.9
Food manufacturing	34,231	34,341	-0.3
Plastic & rubber products	21,677	22,538	-3.8
Fabricated metal products	19,675	20,161	-2.4
Furniture & related products mfg	19,353	20,393	-5.1
Wood products	19,203	19,369	-0.9
Machinery manufacturing	18,451	18,890	-2.3
Chemical manufacturing	17,932	18,629	-3.7
Computer & electronics	16,313	20,056	-18.7
Printing & related activities	16,266	17,308	-6.0
Paper mfg	12,329	13,010	-5.2
Textile mills	12,217	14,849	-17.7
Nonmetal Mineral Product mfg	11,284	11,609	-2.8
Beverage/Tobacco Production	10,542	12,132	-13.1
Electrical equipment/ appliances	7,789	8,467	-8.0
Miscellaneous	7,675	8,284	-6.9
Primary metal manufacturing	6,373	7,167	-11.1
Textile product mills	4,492	4,348	+3.3
Apparel manufacturing	4,370	5,662	-22.8
Petroleum/ coal products mfg	722	718	+0.6
Leather/ allied products mfg	411	465	-11.6

Quarterly Employment and Wage Data by Size Code, VEC ALICE

Over that same year, the number of manufacturing establishments declined by 20, or 0.3%. The number of Virginia's computer and electronics establishments increased by 5.1% while the number of employees at such establishments declined 18.7%.

Table 5. Change in Number of Virginia Manufacturing Establishments, 2002-2003

	4th Quarter 2003	4th Quarter 2002	Percent change
All Manufacturing	6,086	6,106	-0.3
Printing & related activities	811	820	-1.1
Fabricated metal products	762	772	-1.3
Furniture & related products mfg	561	561	0
Wood products	558	568	-1.8
Food manufacturing	418	434	-3.7
Nonmetal Mineral Product Mfg	389	366	+6.3
Machinery manufacturing	353	361	-2.2
Computer & electronics	290	276	+5.1
Transportation equipment mfg	247	250	-1.2
Chemical manufacturing	212	207	+2.4
Plastic & rubber products	186	186	0
Textile product mills	169	172	-1.7
Paper mfg	124	123	+0.8
Apparel manufacturing	116	126	-7.9
Beverage/Tobacco Production	112	96	+16.7
Electrical equipment/ appliances	107	106	+0.9
Textile Mills	85	89	-4.5
Primary metal manufacturing	63	66	-4.5
Petroleum/ coal products mfg	21	23	-8.7
Leather/ allied products mfg	15	14	+7.1

Quarterly Employment and Wage Data by Size Code, VEC ALICE

Data in table 6 adds grist to the debate on whether the manufacturing jobs being lost in Virginia are all the lower-paying jobs. The apparel subsector had the lowest average weekly wages (\$463) of the 21 manufacturing subsectors, and lost the greatest percentage (22.8%) of its jobs between 2002 and 2003. In the same period, however, the two subsectors with the highest average weekly wages lost jobs. The computer and electronics subsector had both the highest average weekly wage (\$1,285) and the most jobs lost (3,700), while the beverage/tobacco production subsector has the second-highest average weekly wage (\$1,174) and lost employees at the fourth highest rate (13.1%).

Table 6. Change in Average Weekly Wage for Virginia Manufacturing Establishments, 2002-2003

	4th Quarter 2003 (\$)	4th Quarter 2002 (\$)	Percent change
All Manufacturing	830	777	+6.8
Computer & electronics	1,285	1,079	+19.1
Beverage/Tobacco Production	1,174	972	+20.8
Chemical manufacturing	1,099	1,038	+5.9
Petroleum/ coal products mfg	1,089	1,094	-0.5
Paper mfg	986	912	+8.1
Transportation equipment mfg	968	952	+1.7
Machinery manufacturing	903	837	+7.9
Electrical equipment/ appliances	887	824	+7.6
Primary metal manufacturing	880	788	+11.7
Fabricated metal products	874	829	+5.4
Plastic & rubber products	823	756	+8.9
Nonmetal mineral Product Mfg	754	707	+6.6
Printing & related activities	746	721	+3.5
Wood products	615	587	+4.8
Food manufacturing	599	583	+2.7
Furniture & related products mfg	588	545	+7.9
Textile Mills	552	541	+2.0
Textile product mills	537	519	+3.5
Leather/ allied products mfg	505	555	-9.0
Apparel manufacturing	463	467	-0.9

Quarterly Employment and Wage Data by Size Code, VEC ALICE

Over the four years from 2000 to 2004 during which the federal Bureau of Labor Statistics was transitioning from the SIC to the NAICS, the SIC data for some manufacturing subsectors was re-sorted to the NAICS definition. The results are set out in Table 7, which shows trends in employment in these subsectors based on monthly survey data, which is generally less reliable than employer's quarterly reports. The data indicates that between 2000 and June 2004, nonfarm employment in Virginia increased by 100,000, while manufacturing employment decreased by 67,000. Two areas of manufacturing growth are transportation equipment manufacturing and ship and boat building, both of which have increased every year since 2001.

Table 7. Virginia Manufacturing Employment, Selected Subsectors, 2000 -- 2004 (thousands)*

Sector	June 2004	2003 Average Annual	2002 Average Annual	2001 Average Annual	2000 Average Annual
Total Nonfarm	3,617.6	3,500.3	3,494.1	3,516.5	3,516.5
All Manufacturing 300	296.6	304.9	320.0	341.2	363.5
All Durable Goods 310	165.4	167.5	175.9	188.2	203.3
Transportation equipment mfg 360	39.8	39.1	38.7	38.5	41.5
Ship and boat building 366	21.4	21.1	20.2	19.6	20.8
Furniture & related products mfg 370	19.2	19.6	21.0	23.7	26.9
Non-durable goods 320	131.2	137.4	144.1	153.0	160.1
Textile Mills 323	12.8	13.9	15.4	17.1	18.9

*Monthly Current Employment Statistics Survey, not seasonally adjusted, U.S. Dept. of Labor, BLS

Table 8 illustrates that durable goods manufacturing employment increased in each of the months from January to June 2004, and that overall manufacturing employment rose during the same period (from 295,100 to 296,600). While the gains are modest, they offer some hope that the trend of declining employment in some manufacturing sectors may be ending.

Table 8. 2004 Virginia Manufacturing Monthly Employment 2004 (thousands)*

Sector	June 2004	May 2004	April 2004	March 2004	February 2004	January 2004
All Manufacturing 300	296.6	296.8	296.1	296.3	294.7	295.1
All Durable Goods 310	165.4	164.7	164.5	164.0	162.1	161.6
Transportation equipment mfg 360	39.8	40.0	39.5	39.3	38.9	38.4
Ship and boat building 366	21.4	21.6	21.8	21.6	21.4	21.0
Furniture & related products mfg 370	19.2	19.5	19.5	19.5	19.7	19.8
Non-durable goods 320	131.2	132.1	131.6	132.3	132.6	133.5
Textile Mills 323	12.8	12.9	13.0	13.0	13.0	13.1

*Monthly Current Employment Statistics Survey, not seasonally adjusted, U.S. Dept. of Labor, BLS

Tables 9, 10, and 11 illustrate trends in the size of Virginia's manufacturing enterprises. Table 9 shows that while nearly 80% of Virginia's manufacturers have fewer than 100 employees, over half of Virginia's manufacturing employment is with firms that have at least 2,500 employees.

Table 9. Virginia Manufacturing by Employment Size of Enterprise (2001)

Employment size of enterprise	Firms	Establishments	Paid employees	Annual payroll (\$1,000)
All firms	5,307	5,804	343,849	12,574,142
Firms with no employees (as of March 12)	312	312	0	20,465
Firms with 1 to 4 employees	1,546	1,549	3,541	92,435
Firms with 5 to 9 employees	928	930	6,181	158,507
Firms with 10 to 19 employees	747	752	10,252	290,825
Firms with 20 to 99 employees	959	1,006	37,482	1,198,733
Firms with 100 to 499 employees	372	463	47,639	1,520,339
Firms with 500 employees or more	443	792	238,754	9,292,838
Firms with 500 to 999 employees	82	106	17,093	523,131
Firms with 1,000 to 1,499 employees	47	64	14,919	512,671
Firms with 1,500 to 2,499 employees	58	97	21,092	694,468
Firms with 2,500 employees or more	256	525	185,650	7,562,568

Statistics of U.S. Businesses: 2001, U.S. Census Bureau, last modified November 25, 2003 (<http://www.census.gov/epcd/susb/2001/va/VA31.HTM>)

In 2001, the average number of employees per manufacturing enterprise was 144, while the median number of employees per manufacturing enterprise was 50. Table 10 indicates that the number of manufacturing enterprises declined steadily between 1998 and 2001. Table 11 breaks down the 2001 data by manufacturing subsector, and illustrates that four subsectors (beverage and tobacco product manufacturing, textile mills, chemical manufacturing, and transportation equipment manufacturing) had 85% or more of their employees in establishments of over 500 employees.

Table 10. Size of Virginia Manufacturing Enterprise by Year (1998-2001)

Year	Firms by employment size of enterprise				Paid employees by employment size of enterprise			
	Total	20 +	100 +	500 +	Total	20 +	100 +	500 +
2001	5,307	33.4%	15.4%	8.3%	343,849	94.2%	83.3%	69.4%
2000	5,336	33.8%	15.8%	8.7%	360,237	94.5%	83.9%	70.4%
1999	5,423	33.6%	15.9%	8.6%	366,360	94.5%	84.0%	70.3%
1998	5,493	33.8%	15.5%	8.6%	368,397	94.5%	83.7%	69.8%

Statistics of U.S. Businesses: 2001, U.S. Census Bureau, last modified November 25, 2003 (<http://www.census.gov/epcd/susb/2001/va/VA31.HTM>)

Table 11. Virginia Manufacturing by Subsector by Employment Size of Enterprise (2001)

NAICS code	Industry title	Firms by employment size of enterprise				Paid employees by employment size of enterprise			
		Total	20 +	100 +	500 +	Total	20 +	100 +	500 +
31-33	Manufacturing	5,307	33.4%	15.4%	8.3%	343,849	94.2%	83.3%	69.4%
311	Food mfg	346	35.0%	19.1%	11.0%	32,533	95.8%	89.7%	79.7%
312	Beverage & tobacco product mfg	68	44.1%	29.4%	23.5%	9,863	98.0%	94.2%	88.2%
313	Textile mills	74	55.4%	45.9%	27.0%	17,031	D	97.8%	84.6%
314	Textile product mills	133	20.3%	7.5%	5.3%	4,600	89.2%	76.4%	67.5%
315	Apparel mfg	163	29.4%	11.0%	4.3%	9,965	96.2%	82.3%	62.7%
316	Leather & allied product mfg	9	33.3%	22.2%	0.0%	309	D	D	0.0%
321	Wood product mfg	509	40.1%	13.2%	7.1%	20,206	89.5%	61.7%	39.4%
322	Paper mfg	83	78.3%	54.2%	31.3%	13,805	99.1%	93.6%	78.7%
323	Printing & related support activities	767	21.1%	6.9%	3.0%	19,771	82.5%	60.4%	42.5%
324	Petroleum & coal products mfg	19	47.4%	26.3%	21.1%	562	D	D	60.0%
325	Chemical mfg	169	55.0%	40.8%	28.4%	20,489	97.7%	93.4%	86.9%
326	Plastics & rubber products mfg	177	59.3%	41.8%	26.0%	23,329	98.2%	92.6%	77.9%
327	Nonmetallic mineral product mfg	249	44.6%	19.7%	10.8%	12,227	92.9%	72.3%	47.4%
331	Primary metal mfg	55	63.6%	47.3%	25.5%	8,395	98.1%	93.7%	76.5%
332	Fabricated metal product mfg	748	31.0%	9.9%	5.9%	22,552	85.0%	57.4%	45.5%
333	Machinery mfg	323	40.2%	21.1%	9.6%	17,926	92.7%	79.2%	51.0%
334	Computer & electronic product mfg	249	48.6%	26.5%	15.7%	31,562	97.6%	90.4%	79.5%
335	Electrical equipment, appliance, & component mfg	107	47.7%	27.1%	18.7%	10,963	97.7%	91.1%	79.3%
336	Transportation equipment mfg	188	45.2%	28.2%	17.0%	37,346	98.6%	95.5%	86.8%
337	Furniture & related product mfg	444	20.5%	8.3%	4.7%	20,396	91.4%	81.7%	71.8%
339	Miscellaneous mfg	511	18.4%	6.1%	2.9%	10,019	83.4%	62.3%	43.5%

Statistics of U.S. Businesses: 2001, U.S. Census Bureau, last modified November 25, 2003 (<http://www.census.gov/epcd/susb/2001/va/VA31.HTM>)

Tables 12, 13, and 14 provide comparisons between the manufacturing sectors of Virginia and adjacent states. Of these jurisdictions, manufacturing provided the most employment and contributed the largest amount to the state's employment in North Carolina. The diversity of Virginia's economy is illustrated by the fact that manufacturing's share of Virginia's economy (12%) was the second smallest of the six states.

Table 12. Contributions of the Manufacturing Sector, Virginia and Adjacent States

	Manufacturing Contribution to State Economy (\$ billion)	Manufacturing Share of State Economy (%) (2001)	Manufacturing Employment (Thousands) (2001)
Virginia	\$32	12%	343
Maryland	\$14	8%	168
North Carolina	\$62	23%	704
Tennessee	\$35	20%	453
Kentucky	\$31	26%	293
West Virginia	\$6	14%	72

Source: National Association of Manufacturers "Manufacturing in the United States, 2004"

Table 13 shows that average weekly hours for manufacturing production workers has fallen more sharply over the period 1992 to 2002 in Virginia (0.9 hours) than in the U.S., but not as sharply as in Maryland and North Carolina. While declining in Virginia and three neighboring states, average weekly hours for manufacturing production workers increased in Kentucky and West Virginia, and the averages for both of these states surpassed Virginia's average by 2002.

Table 13. Average Weekly Hours for Manufacturing Production Workers for the U.S., Virginia and Adjacent States, 1992-2002

	Average Weekly Hours			
	2002	2001	1997	1992
United States	40.3	40.5	42.0	41.1
Virginia	40.1	40.8	42.2	41.0
Maryland	39.0	40.0	41.6	40.8
North Carolina	39.4	40.2	41.2	40.7
Tennessee	38.9	40.1	41.2	40.3
Kentucky	41.5	42.2	41.8	40.3
West Virginia	41.1	41.4	41.7	40.6

Department of Labor, Bureau of Labor Statistics (<http://www.bls.gov/sae/home.htm#tables>) October 21, 2003

The average weekly wages for Virginia's manufacturing employees in 2002 exceeded the U.S. average in 2002. As shown in Table 14, Virginia's manufacturing average weekly wage exceeded that of all of its neighbors except Kentucky and West Virginia.

Table 14. Average Weekly Earnings for Manufacturing Production Workers for the U.S., Virginia and Adjacent States, 1992-2002

	2002	2001	1997	1992
United States	\$619	\$595	\$553	\$470
Virginia	622	581	528	435
Maryland	608	568	585	510
North Carolina	530	505	470	386
Tennessee	527	501	482	408
Kentucky	664	641	551	455
West Virginia	638	608	549	492

Department of Labor, Bureau of Labor Statistics (<http://www.bls.gov/sae/home.htm#tables>) October 21, 2003

Tables 15 and 16 set out data from the Census Bureau's annual survey of manufacturers for 2001. The beverage and tobacco products manufacturing group provided over \$17 billion, or one third, of the value added by manufacturing in the Commonwealth. This figure is remarkable when compared to the data in Table 16 indicating that this added value was provided by 7,000 employees. Overall, the value added per manufacturing employee in Virginia has increased from approximately \$70,100 in 1997 to \$155,000 in 2001.

Table 15. Manufacturing Summary Statistics by Major Industry Groups, Virginia: 2001

NAICS Code	Group	Value Added by Manufacture (\$ millions)	Value of Shipments (\$ millions)
	All Industries	53,043	92,874
311	Food mfg	3,566	8,300
312	Beverage & tobacco product mfg	17,312	20,186
313	Textile mills	937	2,259
314	Textile product mills	254	692
315	Apparel mfg	677	1,597
321	Wood product mfg	1,405	3,635
322	Paper mfg	2,067	4,348
323	Printing & related support activities	1,467	2,479
325	Chemical mfg	6,247	9,970
326	Plastics & rubber products mfg	2,363	4,507
327	Nonmetallic mineral product mfg	1,189	2,059
331	Primary metal mfg	737	1,794
332	Fabricated metal product mfg	1,608	3,535
333	Machinery mfg	1,430	3,209
334	Computer & electronic product mfg	4,305	8,723
335	Electrical equipment, appliance, & component mfg	1,417	2,394
336	Transportation equipment mfg	3,677	8,752
337	Furniture & related product mfg	1,274	2,197
339	Miscellaneous mfg	920	1,473

The largest manufacturing industry sectors in Virginia in 2001 based on wages and hours worked, according to the data in Table 16, were food manufacturing and transportation equipment manufacturing.

Table 16. Manufacturing Summary Statistics by Major Industry Groups, Virginia: 2001
PRODUCTION WORKERS

NAICS Code	Group	Number (thousands)	Hours (millions)	Wages (\$ millions)
	All Industries	245.9	487.4	7,075.1
311	Food mfg	25.4	52.8	608.0
312	Beverage & tobacco product mfg	7.0	13.4	309.4
313	Textile mills	14.6	27.1	325.6
314	Textile product mills	4.5	8.1	84.0
315	Apparel mfg	9.2	17.3	158.9
321	Wood product mfg	13.6	25.5	365.8
322	Paper mfg	11.2	23.1	414.8
323	Printing & related support activities	14.4	28.5	424.4
325	Chemical mfg	12.8	24.7	491.7
326	Plastics & rubber products mfg	18.9	36.7	534.5
327	Nonmetallic mineral product mfg	10.0	21.2	274.8
331	Primary metal mfg	6.0	13.4	209.6
332	Fabricated metal product mfg	17.4	34.1	468.0
333	Machinery mfg	11.8	23.8	336.2
334	Computer & electronic product mfg	12.2	27.3	314.5
335	Electrical equipment, appliance, & component mfg	6.7	12.7	195.0
336	Transportation equipment mfg	25.8	51.9	1,030.6
337	Furniture & related product mfg	17.2	32.2	349.7
339	Miscellaneous mfg	6.6	12.7	164.1

U.S. Bureau of the Census, Annual Survey of Manufacturers: Geographic Area Statistics, October 21, 2003

Wages in Virginia's manufacturing sector (\$39,089 in 2002) exceed average annual wages for all Virginia private employment and all U.S. private employment, as illustrated in Table 17. However, U.S. manufacturing wages (\$44,097) exceeded Virginia manufacturing wages.

Table 17. Change in Manufacturing Sector Annual Wages, 2001 -- 2002

	Average annual wages 2002	Average annual wages 2001	Percent change
U.S., All Private	\$36,539	\$36,157	1.1
Virginia, All Private	36,750	36,525	0.6
United States Manufacturing	44,097	42,969	2.6
Virginia Manufacturing	39,089	38,021	2.8

Bureau of Labor Statistics, Document No. 9625 (March 9, 2004)

Table 18 reveals that despite the increase in average annual wages in the manufacturing sector between 2001 and 2002, the total personal income for this sector in Virginia declined by 2.4%. The drop was sharper for durable goods manufacturing (4.3%) than for nondurable goods (0.2%). This probably results from sharp declines in the computer and electronic product and electrical equipment and appliance subsectors, in which personal income fell off by 15.4% and 8.9% respectively.

Table 18. Personal Income by Industry -- Virginia (\$ thousands)

	2002	2001	% change
Total Personal Income - Virginia			
Manufacturing	16,081,575	16,478,905	-2.4
Durable Goods Manufacturing	9,141,441	9,553,200	-4.3
Wood product mfg	715,796	690,638	3.6
Nonmetallic mineral product mfg	529,634	524,462	1.0
Primary metal mfg	423,289	439,301	-3.6
Fabricated metal product mfg	1,033,137	1,028,688	0.4
Machinery mfg	1,021,330	1,009,463	1.2
Computer & electronic product mfg	1,376,163	1,626,106	-15.4
Electrical equipment & appliance mfg	470,729	516,830	-8.9
Motor vehicle mfg	(D)	(D)	
Transportation equipment mfg excluding automobiles	(D)	(D)	
Furniture & related product mfg	695,470	732,712	-5.1
Miscellaneous mfg	401,990	398,711	0.8
Nondurable Goods Manufacturing	6,940,134	6,925,705	0.2
Food mfg	1,242,022	1,191,096	4.3
Beverage & tobacco product mfg	806,867	767,460	5.1
Textile mills	507,882	521,953	-2.7
Textile product mills	137,898	124,786	10.5
Apparel mfg	178,751	194,247	-8.0
Leather & allied product mfg	14,095	10,980	28.4
Paper	836,570	857,424	-2.4
Printing & related support activities	802,980	838,655	-4.3
Petroleum & coal products mfg	75,860	72,239	5.0
Chemical mfg	1,278,280	1,302,399	-1.9
Plastics & rubber products mfg	1,058,929	1,044,466	1.4

(D) Not shown to avoid disclosure of confidential information

Department of the Census, Bureau of Economic Analysis (<http://www.bea.gov/bea/regional/reis/action.cfm>)

IV. ISSUES EXAMINED BY JOINT SUBCOMMITTEE

Over the course of the study's eight meetings in two years, the joint subcommittee examined many issues that pertain to addressing the needs of the manufacturing sector. The number of these issues and their complexity prevented the members from addressing all with the thoroughness they merit. The joint subcommittee hopes that analyses of several issues brought to its attention, including the cost of health care, transportation, economic development incentives, and the availability of a trained workforce, will be continued by the new statutory Manufacturing Commission.

Four topics garnered the bulk of the joint subcommittee's attention: tax policy, energy resources, consideration of the burden of regulatory compliance on small businesses, and the ownership of intellectual property developed at state universities through sponsored research. This part of the report summarizes the work of the joint subcommittee on these four topics.

A. TAXATION OF THE MANUFACTURING SECTOR

1. Tax Burden on the Manufacturing Sector

The VMA commissioned a study by Ernst & Young to compare the burden of Virginia's state and local taxation of the manufacturing sector with other economic sectors in Virginia, as well as with the burdens on the sector in several other states. On November 17, 2004, Robert Cline and Andrew Phillips of Ernst & Young presented the joint subcommittee with their preliminary findings. They reported that in 2003 all businesses in Virginia paid \$8 billion in state and local taxes, which is 37% of all taxes paid. Mr. Cline observed that compared to other states, Virginia demonstrates a relatively higher reliance on property taxes. Property taxes account for 44% of state and local business taxes, while corporate income taxes account for 5%. While businesses paid 37% of taxes, they paid 48% of the increases in state and local taxes imposed between fiscal years 2000 and 2003. Of the \$8 billion in state and local taxes paid by all businesses in 2003, Virginia's manufacturers reportedly paid \$877 million. Of this sum, 51%, or \$446 million, was paid by manufacturers in the form of property taxes.

In April 2005, Brett Vassey of the VMA presented interim findings from Ernst & Young's comparative study of tax burdens in Virginia and the five other Southeastern states. In measuring the effective property tax rates on business property in these six states, revenue from real and personal property tax collections was divided by the equivalent real and personal property tax base in each state. Virginia's effective state and local property tax rate of 1.18% of the value of business property was second highest among the states examined, exceeded only by South Carolina's 1.46%. Alabama, Kentucky, and North Carolina were reported to have the lowest effective business property tax rates of 0.65%, 0.69%, and 0.72%, respectively.

The final report of Ernst & Young's study was presented at the joint subcommittee's August 25, 2005, meeting. A copy of the report is attached as Appendix N. The report concludes that the combined state and local taxes on manufacturers in Virginia, when compared to selected industries in Virginia and across the six comparison states, are relatively high.

Updating the estimate of \$877 million in state and local taxes paid by Virginia's manufacturers that Mr. Cline reported in the previous year, he advised that manufacturers in the Commonwealth paid \$1.2 billion in state and local taxes in fiscal year 2003. Of this sum, \$755 million (63.7%) was property taxes, including taxes on real property, personal property, and machinery and tools. The corporate income tax accounted for less than 4% of the total (\$44 million). To put the manufacturing sector's tax liability of \$1.2 billion in perspective, all Virginia businesses paid \$7.1 billion in state and local taxes in this period.

Ernst & Young reported that Virginia's effective manufacturing tax rate, which is the ratio of state and local business taxes paid by manufacturers to property income (consisting of proprietor's income and capital charges) generated in the manufacturing sector, is 11.6%. This is 43% higher than the weighted average manufacturing rate of 8.1% in the five states with which Virginia was compared (Alabama, Georgia, Kentucky, North Carolina, and South Carolina). Virginia's comparatively high manufacturing tax rate was attributed to high effective business property tax rates, which in Virginia were the second highest of the six states studied, and utility taxes, which were also the second highest among these states.

The tax burden on Virginia's manufacturing sector was compared to the burden on four other industry sectors: agriculture, forestry and fishing; retail; professional services; and information, data and computer services. For each sector, total state and local taxes were divided by the value added by the industry. Cline reported that the manufacturing sector has the highest overall state and local business tax rate (3.8%). This rate exceeds the private sector average of 3.22% by 17%. The relatively high effective tax rates on manufacturing activities were attributed to disproportionately high rates on machinery, tools and other property, on electric utility services, and growing payroll taxes.

Ernst & Young's report calculated the effective tax rates on purchases of electric utility services by manufacturers by dividing (i) the estimated electric utility taxes paid by manufacturers by (ii) all state and local taxes imposed on electricity sales. The calculation assumes that state and local gross receipts and excise taxes that are imposed on electric utilities are passed forward to manufacturers and other businesses and household consumers. Ernst & Young calculated that the effective tax rates on electric utility services used by manufacturers in 2003 in these six states ranged from 1.76% in Alabama to 0.01% in South Carolina, with Virginia having the second-highest effective rate at 1.61%.

2. Machinery and Tools Tax

Ernst & Young's conclusion that Virginia's relatively high property tax rates can have a significant impact on Virginia's competitiveness prompted the joint subcommittee to focus on the local machinery and tools tax. According to preliminary data from the Auditor of Public Accounts, counties, cities and towns collected over \$189 million from the machinery and tools tax in fiscal year 2004. (See Appendix O)

Specific concerns were directed at localities' wide discretion in setting assessment ratio and depreciation rates. Brad Gilks of Smurfit-Stone Container Corporation in West Point reported that from 1991 to 2004 the facility's machinery and tools tax bill has jumped from \$1.3

million to over \$3.5 million, and that much of the increase in tax liability was due to changes in assessment ratio and depreciation rates. From 1991 through 1996, assets were taxed at 10% of original cost; from 1997 through 2001, assets were taxed at 80% of cost in their first year and thereafter at percentages that declined by 20% each year until the fifth and subsequent years, when they were taxed at 10% of original cost; and in 2002 assets were assessed at 25% of the original cost of assets. As Smurfit-Stone Container reportedly accounts for 98% of the machinery and tools tax paid to King William County, concern was expressed that the locality's changes in assessment rates were aimed at increasing the tax liability of one taxpayer.

Machinery and tools, with certain exceptions, are a separate class of tangible personal property that, pursuant to Article X, Section 4 of the Constitution of Virginia, is subject to local taxation. Exercising the authority granted it by Article X, § 1 to "define and classify taxable subjects," the General Assembly has enacted § 58.1-3507, which provides that machinery and tools, except machinery and equipment used by farm wineries, used in a manufacturing, mining, water well drilling, processing or reprocessing, radio or television broadcasting, dairy, dry cleaning or laundry business, is class of tangible personal property that is subject to tax at a rate that shall not exceed the rate imposed upon the general class of tangible personal property.

Subsection B of § 58.1-3507 provides that machinery and tools segregated for local taxation, other than energy conservation equipment of manufacturers, shall be valued by means of depreciated cost or a percentage or percentages of original total capitalized cost excluding capitalized interest. In practice, localities use the original cost, fair market value or book value as a basis for the assessment. In addition to setting the nominal tax rate, localities use an assessment ratio which need not be 100%. The assessment ratio, multiplied by the nominal rate, is the effective rate paid. Typically the percentage of the basis for the assessment declines over a fixed number of years.

The Weldon Cooper Center for Public Service's 2004 compilation of local tax rates illustrates the variety in assessment ratios and assessment methodologies. The excerpt from the Center's 2004 compilation of local tax rates for Virginia local governments attached as Appendix P provides the following information on the machinery and tools tax for all cities, the 94 counties (all but Rappahannock County) that impose the tax, and 101 towns that impose the tax:

1. The basis for the assessment (original cost, fair market value or book value);
2. Assessment type (in-house, contracted out, etc.);
3. Nominal tax rate per \$100;
4. Assessment ratio (typically the percentage of the basis for the assessment declines over a fixed number of years); and
5. Effective tax rate (nominal tax rate multiplied by assessment ratio; useful for comparisons only if the same basis of assessment was used)

For those cities that use the original cost as the basis for assessment, the unweighted mean effective rate for cities, in the equipment's first year was \$1.36 per \$100, and the median effective rate was \$1.05. For counties, the mean effective rate was \$1.04 and the median was \$0.90.

The use to which the machinery and tools are put will determine whether they are taxable as machinery and tools, as tangible personal property, or as capital. A commissioner of the revenue, in determining whether equipment qualifies as "machinery and tools used in a manufacturing business," first must determine whether the property in question constitutes "machinery and tools," and then must determine its actual use. The phrase "machinery and tools used in a manufacturing business" is not limited to those items actually used directly in the manufacturing process. In City of Winchester v. American Woodmark Corp., 250 Va. 451, 464 SE2d 148 (1995), the Virginia Supreme Court adopted a definition of machinery and tools that includes machinery that is "used in the actual process of manufacturing" or is "necessary in the particular manufacturing business and which is used in connection with the operation of machinery which is actually and directly used in the manufacturing process."

The term "manufacturing" is not defined by Virginia law for local taxation purposes. The Virginia Supreme Court has defined the term "manufacturing" as the transformation of new material into an article or a product of substantially different character. Three elements are necessary for a process to be considered manufacturing:

- The original material referred to as raw material;
- A process whereby the raw material is changed; and
- A resulting product which is different from the original raw material.

When taxation of machinery and tools under § 58.1-3507 and subdivision A 2 of § 58.1-1101(A)(2) is at issue, the subtle distinction between "manufacturing" and "processing" becomes important. It is the use to which the machinery and tools are put that will determine whether they are taxable as machinery and tools, as tangible personal property, or as capital. If equipment is not "machinery and tools," then, although it is tangible in fact, it properly is classified as intangible personal property under § 58.1-1101. Intangible personal property has been segregated for state taxation only, and Article X, Section 1 expressly reserves to the General Assembly the power to define and classify taxable subjects.

The Supreme Court of Virginia has upheld the legislature's authority to define certain property, tangible in fact, as intangible personal property and to exclude the property from local taxation in § 58.1-1101. Pursuant to this authority, tangible-in-fact equipment used in manufacturing, including furniture, fixtures, office equipment and computer equipment used in corporate headquarters, mining, water well drilling, radio or television broadcasting, dairy, dry cleaning or laundry businesses, has been defined by the General Assembly as capital, which as intangible personal property is segregated for state taxation only. As the state does not impose an intangible personal property tax, such items of manufacturing-related equipment are exempt from property taxation altogether.

The General Assembly's power to classify subjects of taxation has been held to operate in conjunction with its power to define the subjects. As noted in an Attorney General's opinion:

The power of the General Assembly to define and classify tangible personal property is very broad. For example, the Supreme Court of Virginia has upheld the legislature's authority to define certain property, tangible in fact, as intangible

personal property and to exclude the property from local taxation. Thus, the General Assembly has defined as tax-exempt intangible property such tangible items as certain "inventory"; "furniture, fixtures, office equipment and computer equipment used in corporate headquarters," and other "capital which is personal property, tangible in fact, used in manufacturing, ... mining, radio or television broadcasting, dairy, dry cleaning or laundry businesses"; or "cable television businesses"; and "all imported and exported foreign merchandise or domestic merchandise scheduled for export while in inventory located in a foreign trade zone within the Commonwealth."

Opinion of Richard Cullen, Attorney General, to Delegate Callahan, 1997 Va. AG LEXIS 55; 1997 Op. Va. Atty Gen. 40.

As a result, machinery and tools used in manufacturing are subject to local taxation as tangible personal property, but other equipment used in manufacturing is exempt from taxation. For example, business equipment (such as copiers, computers, fax machines and telephones), while tangible in fact, is intangible personal property when it is used in a manufacturing business, and thus is exempt from taxation. However, machinery and tools used in a manufacturing business are subject to local machinery and tools taxation. See City of Martinsville v. Tultex Corporation, 238 Va. 59, 381 S.E.2d 6 (1989).

The General Assembly has enacted several provisions capping the machinery and tools tax rates that may be assessed on certain categories of machinery and tools. For example, § 58.1-3508 provides that machinery or tools used directly in the harvesting of forest products for sale constitute a separate class that cannot be taxed at a rate that exceeds the rate applicable generally to machinery and tools. Similarly, § 58.1-3508.1 provides that machinery and tools used in semiconductor manufacturing constitutes a separate class of machinery and tools that cannot be taxed at a nominal rate or assessment rate that exceeds that applicable generally to machinery and tools.

The machinery and tools tax has been the object of several bills and studies considered by the General Assembly. The bill that most directly addressed the lack of uniformity of assessment ratios was House Bill 2502 (1999), which would have established a statewide uniform schedule for valuation of machinery and tools used in the coal mining industry. The uniform schedule would have been based on a declining percentage of the original cost.

Of the numerous legislative studies that have examined Virginia's tax system, the most germane was the Tax Department's study, pursuant to House Joint Resolution 527 of the 1993 Session. The Department was charged with studying the benefits of defining "manufacturer" for purposes of the Taxation Title of the Virginia Code as a business engaged in any of the activities listed in Standard Industrial Classification (SIC) codes 20 through 39. The Department's report sets out the implications of adopting such a uniform definition of a manufacturer, and concludes that while using an SIC-based definition will increase uniformity in classification among all localities, other issues, such as whether equipment is "machinery and tools" used in manufacturing, will not be resolved by a uniform definition of "manufacturer." The Department stated that a recommendation for or against adoption of an SIC-based classification is premature.

A study conducted pursuant to the second enactment clause of House Bill 2085 (1999) by Virginia Municipal League, Virginia Association of Counties, Commissioners of Revenue Association, Virginia Chamber of Commerce, and Virginia Manufacturers Association sought recommendations to address uniform methods of valuation, rate classification and associated local revenue impacts for local business taxes to the House Finance and Senate Finance Committees. The group reported to the Chairmen of the House and Senate Finance Committees that:

After careful thought and deliberation, it was determined that a statewide uniform method of valuation was not in anyone's best interest -- neither the taxpayers' nor the localities'. Therefore, the interested parties' recommendation is to leave alone the current method of valuation with regard to local business taxes.

3. Formula for Apportioning Taxable Corporate Income

Rocco Rositano, Senior Director of Taxation at Barr Labs, recommended that the joint subcommittee adopt a single-factor formula for the apportionment of corporate income among all states in which it does business. Illinois, Connecticut, Nebraska, Iowa, Maryland and Texas were reported to have adopted the single factor (sales) formula, which benefits manufacturers because they have a disproportionate share of property and payroll in states where their manufacturing facilities are located. He suggested that any decrease in corporate income taxes paid by in-state manufacturers is usually offset by increases in taxes paid by other corporations that do not maintain significant facilities in the state.

Prompted by Mr. Rositano's suggestion, the joint subcommittee requested the Tax Department to analyze the implications of adopting a single factor (sales) formula. Until 2000, the Commonwealth's apportionment formula divided a corporation's income among the states according to a three-factor formula that gave equal weight to its property, payroll and sales in each of the states. In 2000, Virginia began giving double weight to the sales factor.

Recently several states have adopted apportionment formulas based only on sales, either for all multistate corporations or for selected industries. For example, Maryland has enacted a single (sales) factor formula applicable only to manufacturers. John Josephs reported that the Commonwealth's adoption of a single (sales) factor formula would likely have a negative net impact on corporate income tax revenue. Based on a sample of 293 corporate tax returns for taxable year 2003, which accounted for 72% of Virginia's total corporate income tax receipts for that year, adopting a single (sales) factor formula would reduce tax revenue by \$37.5 million. While 145 of the corporations would have paid less corporate income tax under this proposed formula, 114 would pay more and 34 would pay the same amount.

Using an alternate formula that increased the weight accorded to sales from 50% to 60% by triple-weighting the sales factor, based on the same sample, would decrease corporate income tax revenue by \$8.3 million for taxable year 2003. Under this formula, the number of corporations paying less of this tax rises to 147, while 112 would pay more.

A corporation whose percentages of property and payroll in Virginia are greater than the double-weighted percentage of its sales in the Commonwealth would pay less in corporate income tax as the weight of the sales factor increases. Any type of business that has a greater percentage of its facilities in Virginia than its sales in Virginia stands to be a "winner." Manufacturers may benefit from a state's increasing the weight given to sales if they have production facilities in that state. A single sales factor may be a favorable factor to a manufacturer considering locating a new or expanded facility in Virginia because increases in the property and payroll factors in this state would not be considered in calculating its Virginia corporate income tax liability.

While increasing the weight of the sales factor may have economic development implications, such a change is not being urged for tax policy reasons. For example, the adoption of different apportionment methods by different states allows corporations to take advantage of the lack of uniformity to create income that is not apportioned to any state for taxation. Some corporations have therefore supported a single (sales) factor in states where their production facilities are located but opposed its adoption in other states. Re-instituting a "throwback rule" that attributes sales to the state from which goods are shipped when the corporation is not taxable in the destination state would limit the creation of such "nowhere" income.

Connecticut, Massachusetts and Maryland use an apportionment formula that uses a single (sales) factor for manufacturers. In response to a request for supplemental information regarding the implications of a single sales factor formula that was limited to manufacturers, Mr. Josephs reported that it would not be possible to estimate the revenue impact of changes in the apportionment formula. He noted that the revenue loss from a proposal to allow taxpayers to elect to use a single sales factor would exceed the \$37.5 million loss previously reported, perhaps by as much as \$10 million. One concern may be that information on corporate tax returns does not allow reliable classification of taxpayers among industry groups. The self-assignment of NAICS codes by corporate taxpayers may not be representative of large corporations that are engaged in several categories of business. The industry sector in which a corporation is engaged has little impact on its apportionment. Holding companies with subsidiaries engaged in different industries are able to structure their holdings and operations for maximum tax advantage.

B. ENERGY RESOURCES

1. Energy Outlook for the Manufacturing Sector

The joint subcommittee recognized the negative effect that rising natural gas prices have had on Virginia's manufacturers, as gas is both an energy resource and a raw material used in the production of chemicals, fertilizer, and other goods. For example, Honeywell Nylon LLC in Hopewell is the largest industrial user of natural gas east of the Mississippi, consuming 57 million cubic feet of natural gas daily. One third of the gas consumed is used as fuel, and the balance is used as the raw material or feedstock for ammonia, which is used to make caprolactum, used in the production of nylon, and fertilizer. The cost of natural gas comprises 30% of the final product price. Rising natural gas prices, which have jumped from \$2.77 per

decatherm (Dth) in 1998 to \$7.22/Dth in 2005, have directly affected Honeywell's nylon business. Over the past three years, natural gas has increased \$3.26/Dth, costing the company \$72 million. Over that period, Virginia operations have experienced a 25% workforce reduction, which was attributed to rising energy costs and foreign competition.

Christopher McGill of the American Gas Association cautioned the joint subcommittee that the supply and demand balance in North America's natural gas market is and will remain tight. Natural gas spot prices rose from under \$2/tcf in early 1999 to nearly \$6/tcf in November 2004. He projected that gas consumption will grow, gas prices will remain relatively high, and high levels of price volatility will continue. Much of the increase in gas consumption is expected to be for electric power generation. Rising gas prices have produced an increase in drilling activity, but the increase in the number of drilling rigs has produced only a modest increase in gas production.

Mr. McGill stated that major portions of the nation's gas resource base, including areas off the Atlantic and Pacific coasts and in the Rockies, are not accessible for development. While new supply may come from arctic areas in Canada, from imported liquefied natural gas (LNG), the Rockies, and from deep wells in the Gulf of Mexico, it will only come at a price that supports development. LNG is economically viable at \$3.50/tcf, which was less than the then-current spot market price. LNG could provide 15% to 20% of consumption, but other nations, including China, could compete with this country for available supply. Some are concerned that increasing LNG imports will result in reliance on another foreign fuel.

Short-term options identified by Mr. McGill include encouraging natural gas storage, promoting energy efficiency and conservation, and encouraging diversified gas supply portfolios and hedged and fixed-price purchases. In the longer term, options include encouraging a balance between economic and environmental values, and encouraging Alaskan and LNG supply. He also discussed the pending federal State Enhanced Authority for Coastal Offshore Resources (SEACOR) bill, which would allow offshore drilling and distribute royalties among states.

Diane Leopold of Dominion Resources provided a summary of her company's assistance to Virginia's manufacturers. As a fully integrated energy company, its activities encompass oil and gas development, gas storage and pipeline transmission, LNG terminal operations, energy trading, electricity generation from coal, gas, nuclear, oil and hydro, and retail gas and electric power distribution. Dominion assists manufacturers in Virginia by providing reliable and affordable energy and supporting economic development rates, as well as by assigning account representatives to large customers and maintaining an economic development team.

With demand for natural gas increasing and the North American supply base struggling to remain stable, Ms. Leopold stated that the need exists to maintain access to domestic supply and increase the nation's ability to import LNG. Of the approximately 40 new LNG projects announced for North America, 8 have been cancelled. One major LNG facility in operation is Dominion's Cove Point terminal in Maryland, which when its planned expansion is completed will have a storage capacity of 14.6 Bcf and a peak sendout capacity of 1.8 Bcf/day.

2. Landfill Gas

Using landfill gas offers an opportunity to avoid flaring or releasing the odiferous substance into the atmosphere while concurrently allowing users to avoid burning fuels, such as coal, that create more environmental pollution, and thus save money on fuel costs. However, because landfill gas has a lower percentage of methane than natural gas, and thus a lower BTU rating, it does not directly compete with conventional natural gas. Nationwide there are 320 landfill gas projects. Currently there are 10 landfill gas projects developed in Virginia, and there are over 30 landfills with development potential. The development of a landfill gas project can be difficult and take a long time, in part because landfill gas developers do not have the right to exercise the power of eminent domain to acquire rights-of-way. An industry advocate suggested that landfill gas projects could be encouraged by creating income tax credits for industries that use landfill gas and by creating industry awareness of local landfill gas utilization opportunities.

In an attempt to address its need for affordable natural gas, Honeywell has completed a project whereby it purchases natural gas produced from the decomposition of waste at the Waverly landfill. The landfill methane project required construction of a 23 mile pipeline, which is the longest landfill gas pipeline in the nation. The project, implemented in January 2004, currently displaces 4% of the Honeywell plant's natural gas requirement and is expected to displace up to 20% over the next 50 to 70 years.

3. Liquefied Natural Gas

LNG is natural gas that is cooled to minus 263 degrees Fahrenheit, at which temperature the gas displaces 1/600th of its room temperature volume. In its condensed state, the gas can be transported economically by specially-designed vessels. Considerations for siting a marine terminal, where the LNG can be offloaded from vessels and vaporized, include a water depth of at least 40 feet, tanker access, sufficient acreage to ensure safety and security, and proximity to the existing gas transmission pipeline grid. The process for obtaining LNG terminal permits from federal, state and local governments and completing a terminal may take 5 to 6 years. The Federal Energy Bill provides for federal preemption of the role of state regulators in siting LNG terminals.

Currently there are four active marine import terminals in this country. Approximately 30 terminal projects (including both on-shore and offshore vaporizing facilities) have been proposed. It was suggested that the facilities with the best prospects for completion are those involving the expansion of an existing terminal, projects in the West Gulf Coast area, and projects in Mexico and Canada. Not all LNG sites are marine terminals; there are several LNG facilities in the United States, including three in Virginia, where gas is stored in a liquefied state to supplement storage capacity or distribution facilities.

None of the proposed LNG marine terminals are in Virginia. The absence of Virginia sites was attributed in part to the absence of large transmission pipelines that could transport gas from the coast to markets. This situation was contrasted to Dominion's Cove Point LNG facility, which is located in close proximity to major existing pipeline systems. The joint subcommittee

was advised that the potential does exist for the development of LNG and pipeline facilities in Virginia, and that further investigation is needed.

C. COSTS OF REGULATORY COMPLIANCE ON SMALL BUSINESSES

Both federal and state governments have enacted legislation addressing the burden imposed on small businesses by regulatory action. At the federal level, the Regulatory Flexibility Act of 1980 (RFA) is a significant mechanism for influencing the development of federal regulations. It requires agencies to take steps to collect input from small entities on regulations and to determine whether a rule is expected to have a significant economic impact on a substantial number of small entities. Moreover, federal agencies are required to identify alternative regulatory approaches for small businesses, small governmental jurisdictions and nonprofit organizations.

The Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA) amended and expanded the RFA to give small businesses more influence over the development of regulations, additional compliance assistance for federal rules, and new mechanisms for addressing enforcement actions by agencies. The SBREFA amended the RFA to allow judicial review of agencies' compliance with RFA, which did not have any enforcement mechanism. The following issues are subject to judicial review under the SBREFA:

- The final regulatory flexibility analysis including the agency's efforts to evaluate alternative regulatory approaches and reasons for rejecting or accepting them;
- The agency's effort to collect comments from small entities through a variety of mechanisms;
- The agency's decision to certify that a rule will not have a significant impact on a substantial number of small entities, and the factual basis for the certification; and
- The agency's compliance with a requirement for periodic reviews at the 10-year anniversary of every rule or the enactment of the 1980 law, whichever is first.

Other provisions of the RFA, as amended by the SBREFA, update the requirements of a final regulatory flexibility analysis, including a description of the steps an agency has taken to minimize the significant economic impact on small businesses, require that the EPA and OSHA receive input from affected small business through the SBA's Office of Advocacy before proposed rules are published, and provide for congressional review of federal agencies' regulations. Before any rule goes into effect, agencies are required to forward the rule to Congress for review. Major rules with a \$100 million impact on the economy or a major impact on an industry, government or consumers, or those affecting competition, productivity or international trade cannot go into effect until congressional review is complete.

In December 2002, the Small Business Administration's Office of Advocacy released model "regulatory flexibility" for adoption by states. The legislation is intended to strengthen regulatory flexibility for small business in the states. The model legislation includes five "critical" elements: (i) A small business definition that includes most small businesses (less than 500 employees or gross annual sales of less than \$6 million), (ii) require state agencies to perform

an economic impact analysis before they regulate, (iii) require state agencies to consider less burdensome alternatives that still meet regulatory goals, (iv) authorize small businesses to obtain judicial review of compliance with the act, and (v) require state government to periodically review its regulations.

Colorado, North Dakota, South Dakota, Kentucky, Wisconsin, and Rhode Island have enacted the model legislation. In the 2004 legislative session, small business regulatory flexibility legislation was introduced in 13 states. In addition, the Governors of Massachusetts, Missouri, and West Virginia have signed Executive Orders that are intended to give small businesses a voice in their state's regulatory process.

The model legislation is intended to compel regulatory agencies to consider small businesses when regulations are developed and particularly consider the disproportionate impact those regulations might have. The SBA's Office of Advocacy acknowledges that many states have some form of regulatory flexibility laws, but many do not contain each of the five critical elements.

D. INTELLECTUAL PROPERTY DEVELOPED AT STATE UNIVERSITIES

1. Introduction

Technology transfer and the commercialization of intellectual property (IP) developed at state universities have been recognized as important contributors to economic vitality. Representatives of Virginia manufacturers informed joint subcommittee members of their dissatisfaction with current rules regarding the ownership of intellectual property that is developed at state universities through research sponsored by private firms. Manufacturers complained that current statutes impede the commercialization of intellectual property by allowing firms that sponsor research at state universities to obtain licenses to use, but not own, the patents or other intellectual property developed through the research. The joint subcommittee is the latest of several groups in Virginia that have grappled with the complex issue of who should have the right to own IP that is developed at a state university through industry-sponsored research: The university that provided facilities and faculty talent? Or the private firm that provided funding for the research project?

A report of the Secretary of Technology, the Center for Innovative Technology (CIT), and the Virginia Research and Technology Advisory Commission (VRTAC) (House Document 25 of 2003, at p. 7) summarizes interpretations of applicable law:

University inventions made using state funds ("substantial state resources") are the property of the Commonwealth, with ownership lodged in the universities. Under existing law, title to such inventions can be transferred only to the [CIT], to a nonprofit foundation established for the benefit of the university, or to other entities upon the personal approval of the Governor. Title, therefore, cannot be assigned to private entities. Furthermore, even if the research leading to the invention is made using private funds granted to the university, the

Commonwealth treats such funds, when expended, as state funds, so title to such inventions can only be assigned under the conditions named above.

Typical technology transfer steps include:

1. A faculty member, graduate student or staff of a university submits an invention disclosure to the university's office of technology licensing (OTL).
2. The inventors in effect assign the rights to their intellectual property to the university.
3. The OTL evaluates the invention's economic prospects and decides whether to protect the IP by securing a patent, copyright or trademark or by keeping the invention a trade secret. Patenting is often done concurrently with the publication of the research results.
4. A company secures a license to commercialize the technology, which does not grant the right to use or sell the invention.

Typically the results of a sponsored research arrangement are owned by the university and industrial sponsors are granted an exclusive option to license patents arising from the research. Universities policies commonly state that the university owns all patents developed using university facilities under a sponsored research agreement.¹

Per a 2000 survey by the Association of University Technology Managers:

- Sponsored research expenditures totaled \$29.5 billion, of which \$18.1 billion came from the federal government and \$2.7 billion from industry (which was up from \$236 million in 1980 and \$1.3 billion in 1992).
- Respondents disclosed more than 13,000 inventions from sponsored research, about 6,400 new U.S. patent applications filed, about 4,300 new licenses and options executed (two-thirds with start-ups and small businesses (fewer than 500 employees) and one-third with large businesses).
- Respondents had about 21,000 active licenses and options, of which about 9,000 yielded income (such as license fees, milestone payments and royalties) totaling about \$1.26 billion.

Nationally, industry support for research and development at universities represents less than 7% of the total funding of university-based research. While small compared to the 60% provided by federal agencies, this private investment in the creativity of universities, including professors, students and staff, drives a form of technology transfer that is increasingly important to industry.

In House Document 25 (2003), VRTAC reported:

- It is important to the growth of technology-based industry in Virginia that the Commonwealth's universities have a well-functioning system for making patents available for use by industry under licenses to existing firms or through active participation in building new firms around those patents.

¹ November 30, 1993 - Council on Governmental Relations (association of research universities)
University Technology Transfer - Questions and Answers (see Vol. 4 of 1999 CIT report)

- There is a widespread belief that Virginia's universities could provide substantially greater impetus to economic development and growth in the Commonwealth by growing and strengthening their research programs, by better focusing their research in fields with potential industrial application, and by accelerating the commercialization of the results of the research that they perform.
- The complexity of the system of research universities in Virginia is a factor in technology transfer. Since no one of the institutions dominates or is especially large, and since each institution operates as an independent agency of the Commonwealth with its own statements of policies and procedures, its own organizational structure, and relatively limited statewide oversight and strategic direction, it is very difficult for industry to access the research capabilities and results that do exist.
- Virginia "must do a better job commercializing university and federal lab originated intellectual property." Less than 1% of Virginia's technology start-ups spin out from the technology developed at Virginia's state university labs.

Licensing revenue at the University of Virginia and Virginia Tech has been increasing in recent years. The UVA Patent Foundation reported that for fiscal year 2001, it executed 52 licenses, options, and other agreements, and had \$7.5 million in royalty income. VTIP's revenue from licensing IP increased from \$1.5 million in fiscal year 2000 to \$2.3 million in 2003. For comparison, note that in fiscal year 1997 Stanford University earned \$52 million and MIT earned \$21.1 million in license income. Senate Document 32 of 2001 reported:

- Virginia ranks 17th among the states and the District of Columbia in R&D expenditures at doctoral-granting universities in 1998, with spending of \$482 million.
- Federal funding accounted for nearly 60% of R&D funding at these institutions, while industry accounted for 9.5%.

Table 19. Intellectual Property-related Activities at Three Virginia Universities (FY 1999)

	UVA Patent Foundation	Virginia Commonwealth University	Virginia Tech Intellectual Properties, Inc.
Disclosures received	154	91	74
Licenses executed	20	14	41
Gross license income received	\$4,185,446	\$112,000	\$1,328,343
Sponsored research expenditures	\$197,046,500	\$105,000,000	Not available

Source: Senate Document 25 (2000), Table 4, p. 35.

Table 20. Comparison of Virginia IP Activities to U.S. Totals

	US	Virginia*	Virginia Percentage
Invention disclosures	15,573	502	3
Patents filed	7,741	352	4.5
New licenses	4,673	96	2
Total revenues	\$1 billion	\$8.9 million	0.9

* Excludes W&M, ODU, and JMU

Source: Academic Licensing Community of Virginia Presentation to VRTAC, May 18, 2004

Though summarizing the concerns and positions of industry and universities risks overgeneralizations and simplifications, the following six concerns of industry, and the corresponding position of some in the university community, were presented to the joint subcommittee:

1. Businesses want the ability own the IP they have paid for by funding research.

Ownership is not really an issue to the firms that develop the IP; they can obtain the functional equivalent in the form of exclusive long-term license agreements; it is only an issue to firms that have an exit strategy of being bought out or seek to sell bundled patents to third parties. The results of the research funded by corporate sponsors is available to them for commercial exploitation through license agreements, the scope of which may range from a nonexclusive, royalty-free right to use the results for internal purposes to an exclusive royalty-bearing license for commercial applications. Assigning ownership of IP to private entities may trigger repercussions under federal tax law.

2. Investors want the companies to own the IP. For small high-tech start-ups, the IP is a company's only real asset, and firms need to be able to leverage the IP in order to raise capital.

IP resulting from sponsored research can be used in financial markets if the companies have a license - not only if the IP is owned.

3. Universities don't have the resources or strong desire to actively enforce IP rights against infringement.

License agreements can address who can sue for infringement. In an exclusive license agreement, give the licensee the first option to sue for enforcement.

4. Licensing fees are unreasonably high, particularly regarding charges for overhead.

Royalty rates are dependent upon market factors and determined through negotiation. While defining an “average” royalty rate will not reflect the true value of an invention, one study cites an average royalty at approximately 2% of the revenues generated by a licensee-company from its sales of products or services under the license.

As alternative to requiring payment of license fees, university foundations are taking equity positions in start-ups. Percentage ranges from 5-10 % plus royalty payments down the road, to 20-50 % with no royalty payments.

5. Companies have been told assignment is prohibited, but believe that universities have always had the capability to transfer ownership to the companies that pay for the research - but they do not want to do it.

Under interpretations of current state statutes and guidelines, state universities operated under the principle that they are unable to assign the IP's title to the companies without the consent of the Governor.

6. Firms sense that the process is unreasonably difficult, and not worth dealing with. Businesses are very frustrated with universities whose policies discourage private sponsored research. Each university has separate policies and offices; the lack of uniformity creates confusion.

The pact between university and the public demands accountability for use of resources provided at public expense, and imposes an obligation upon universities to ensure that the public receives a benefit from its investment. By maintaining control of IP, universities allow commercial use while keeping the ability to continue research in the area and to disseminate knowledge to students and the public. If IP is assigned to a sponsor, it gives up all rights to use the IP for further research or in teaching.

By retaining title, universities can require licensees to make diligent efforts toward commercializing. Through licensing, universities ensure diligent efforts toward commercialization by the licensee, or require the license to be returned to the university to be issued to a more serious commercial partner.

Manufacturers note that no university has ever requested the Governor for permission to transfer IP to a private firm. Manufacturers also assert that some universities have claimed ownership of "background" IP.

The following general principles of IP law illustrate the complexity of the issue:

- Ownership of inventions is generally governed by the U.S. rules for inventorship of patents (in other words, ownership follows the inventors named in the patent application).²

² "Special Contractual and Intellectual Property Rights Considerations: Sponsored Research Agreements University and Government Licensing Clinical Trial Agreements," Jeffrey P. Somers, Morse, Barnes-Brown & Pendleton, P.C.

- Patents are granted only to the true inventor, who may sell all or part of his interest in the patent application or patent to anyone by a properly worded assignment.
- Title by occupancy that an inventor acquires when he invents is not affected by the fact that the inventor is at the time in the employ of another; persons employed are entitled to their own independent inventions.
- If an employee is hired specifically to engage in R&D work or to discover and develop a specific invention, even without a written employment agreement, an employer may own rights to an employee-created invention under the "employed-to-invent" doctrine.
- Typically, employee-inventors who invent something in the course of their employment are bound by employment agreements that automatically assign all rights in the invention to the employer.
- An employer may acquire a limited right, known as a "shop right," to use the employee's innovation without paying the employee-inventor, but does not acquire ownership of the patent or trade secret. A shop right arises where the employee-inventor uses the employer's resources (materials, supplies, time) to create an invention.

2. Federal and State Statutes and Guidelines

The debate over the issue is also influenced by the federal Bayh-Dole Act of 1980, which spurred interest in the transfer of new technology from university laboratories to the private sector. The Bayh-Dole Act was enacted to address concerns that federal agencies were reluctant to permit ownership of inventions to vest in universities and other recipients of federal grants. Prior to Bayh-Dole, the government retained title and made these inventions available through non-exclusive licenses to anyone who wanted to use them. Because competitors could also acquire licenses and then manufacture and sell the same products, companies were reluctant to invest in and develop new products.

The Bayh-Dole legislation provided incentives for the university and the individual scientist to protect and commercialize intellectual property. It allowed universities to take title to inventions made with federal funds, but provides that the title to such inventions may not be assigned to private entities. The Act permits exclusive licensing when combined with diligent development and transfer of an invention to the marketplace for the public good. With the passage of the Bayh-Dole Act, colleges and universities began to develop the expertise needed to effectively engage in the patenting and licensing of inventions. Growing numbers of universities have formed technology transfer programs that have licensed inventions made with federal support to commercial partners.

The Bayh-Dole Act directly affects the issue of ownership of IP. Universities generally are prohibited from assigning IP developed from federally funded research to private entities. Much more research is sponsored by federal government than by private industry, so institutions

may be more comfortable dealing with the issue of IP ownership in the same manner for all sponsors.

Virginia law addresses the issue in a manner that is less than a model of clarity. Virginia Code § 2.2-2822 provides:

Patents, copyrights or materials that were potentially patentable or copyrightable developed by a state employee during working hours or within the scope of his employment or when using state-owned or state-controlled facilities shall be the property of the Commonwealth. The Governor shall set such policies as he deems necessary to implement this section.

This section specifically does not apply to employees of public institutions of higher education who are subject to the patent and copyright policies of the institution employing them. As all of Virginia's research institutions of higher education have a patent and copyright policy, § 2.2-2822 does not apply to them.

Virginia Code § 23-4.3 requires state universities to adopt patent and copyright policies consistent with the policy guidelines promulgated by the State Council of Higher Education (SCHEV) pursuant to § 23-9.10:4. Pursuant to Virginia Code § 23-9.10:4, SCHEV is required to promulgate and, from time to time, revise patent and copyright policy guidelines for state-supported institutions of higher education. Employees of state institutions of higher education are bound by the policies. Anyone using facilities of a state-supported institution that has not otherwise entered into a written contract with the institution concerning such use shall be subject to the policies if the use constitutes a "significant use of the institution's facilities."

Subsection A of Virginia Code § 23-4.4 authorizes the Board of Visitors of a state institution to transfer any interest in patents and copyrights, but the Governor's prior written approval shall be required for transfers of such property if developed "wholly or significantly through the use of state general funds" and either (i) such property was developed by an employee of the institution acting "within the scope of his assigned duties," or (ii) such property is to be transferred to an entity other than the Innovative Technology Authority, an entity whose purpose is to manage intellectual properties on behalf of nonprofit organizations, colleges and universities, or an entity whose purpose is to benefit the respective institutions. The Governor may attach conditions to these transfers as he deems necessary.

SCHEV is required to adopt a uniform statement defining (i) the conditions under which a "significant use of general funds" occurs and (ii) the circumstances constituting an "assigned duty." The terms are defined in the SCHEV guidelines. Most institutions interpret "significant use of general funds" as meaning any amount in excess of the \$10,000 limit per year established in the Conflicts of Interest Act. If a principal investigator's salary is used in this analysis, for all practical purposes the ownership of the intellectual property will always reside with the institution of higher education and may not be transferred to the industry sponsor without the Governor's approval.

Subsection B of Virginia Code § 23-4.4 was added in 2003 pursuant to House Bill 2285, which was introduced by then-Delegate Devolites. This bill enacted recommendation #5 of the VRTAC's Intellectual Property Committee in House Document 25 (2003) that university boards of visitors be authorized to assign title to university-owned inventions to industrial firms under limited circumstances. The measure provides that the Governor's approval is not required to transfer patents or copyrights to a private entity if:

- (i) the interest was developed without the use of federal funds,
- (ii) such entity makes a clear and convincing case to the relevant board that its ownership of the interest is critical to its ability to commercialize that interest, and
- (iii) the institution receives, at a minimum, compensation equal to the anticipated revenue stream of licensing the interest.

Then-Delegate Devolites also patroned House Bill 2283 in the 2003 Session. This bill amended § 2.2-3106 to authorize the board of visitors of any public institution of higher education in Virginia or the Eastern Virginia Medical School to delegate to the president of the institution its authority to grant waivers to the conflict of interests statute for contracts between a business in which the employee has a personal interest and the institution for a contract for research and development or commercialization of intellectual property. This implemented the recommendation in the report by VRTAC's Intellectual Property Committee in response to House Bill 530 and House Joint Resolution 88 for measures to facilitate conflict of interest waivers for research and technology commercialization.

Pursuant to the directive of § 23-9.10:4, SCHEV adopted guidelines for the development of patent and copyright policies and procedures by state-supported of higher education on June 3, 1987. The guidelines include definitions of:

Intellectual property -- Anything developed by anyone covered by an institution's intellectual property policy that fits one or more of the following categories:

- a potentially patentable machine, article of manufacture, composition of matter, process, or improvement in any of those; or
- an issued patent; or
- a legal right that inheres in a patent; or
- anything that is copyrightable (in legal terms, this means anything that is an original work of authorship, fixed in a tangible medium of expression).

Significant use of general funds -- This phrase, and the phrase "developed wholly or significantly through the use of general funds," means that general funds provided \$10,000 or more of the identifiable resources used to develop a particular intellectual property. A reasonable cost should be assigned to those resources for which a cost figure is not readily available, such as salary, support staff, and other equipment and resources dedicated to the creator's efforts. Resources such as libraries that are available to employees generally should not be counted in the assessment of the use of general funds.

Guideline 3.2 addresses ownership if intellectual property:

"Each institution should specify the types of intellectual property in which it will claim an interest and specify the procedures for claiming or disclaiming the interest."

The commentary recognizes that "those employees who are not hired to invent own the right to apply for and hold patents to their inventions. If an institution wants to change that outcome, it must do so either in a contractual agreement reached before the employee accepts employment, or by a notice to employees that applies to all inventions conceived after the date of the notice."

Guideline 4 addresses transfers of intellectual property:

"Except when the Governor's prior written consent is required, an institution's governing board . . . may transfer any intellectual property in which an institution claims an interest."

"Institutions need not claim an interest in all intellectual property in which they might legally be able to assert an interest."

3. Previous Studies of Related Issues

Senate Joint Resolution 502 (1999), patroned by Senator Couric, requested the Secretary of Technology, in consultation with institutions of higher education and others, to study and develop a coordinated research and development policy for the Commonwealth. The Secretary's findings and recommendations were directed to include the identification of any barriers and obstacles for greater collaboration and a review of the intellectual property policies and procedures of the institutions of higher education and federal laboratories, incentives to participate in joint ventures, and best practices by which intellectual resources can be linked to commercialization to benefit the economy of Virginia.

The results of the study directed by SJR 502 were presented in three reports:

- An Assessment of the Intellectual Property Policies and Practices in Virginia's Public Universities and Federal Laboratories, presented as an interim report by the Secretary of Technology (Senate Document 25 of 2000).
- An Industrial Cluster Analysis of the Virginia Economy, presented as an interim report by the Secretary of Technology (Senate Document 26 of 2000).
- Developing Virginia's Research & Development Strategy and Improving the Intellectual Property Policies of our Universities and Federal Labs (Senate Document 32 of 2001).

An Assessment of the Intellectual Property Policies and Practices in Virginia's Public Universities and Federal Laboratories (Senate Document 25 of 2000) identified five issues related to the transfer of intellectual property to the private sector:

1. The apparent conflict of interest between the role of the university and the commercialization of intellectual property.
2. The communication of technical expertise and intellectual property available.
3. Streamlining the sponsored research and licensing processes.
4. Ownership of intellectual property generated by Virginia's public universities.
5. Enhancing the relationship between the university and corporations.

The report states that the tension between the role of the university and the commercialization of intellectual property lies at the heart of many of the difficulties that are encountered during the process of commercializing ideas. The issue involves whether the educational role of the university, which includes the assumption that a professor's autonomy and control applies to the laboratory as well as to the classroom, necessarily and inherently conflicts with its role as a licensor of intellectual property, which implies to some degree that what a professor does in the laboratory is for sale.

This conflict gives rise to disagreement over who should own intellectual property: the professor who generated it, the university that employs the professor, or in the case of industry-sponsored research, the company that paid for it. As stated in the report (at p. 18):

"The viewpoint that corporate money and directed research subvert the educational goals of Virginia universities is inconsistent with the preferred concept of some business owners that the university serve as a contract research laboratory. This issue is one that requires education on both sides."

An ancillary issue identified in the report is the business community's concern that the up-front costs, including overhead rates on sponsored research, are too high. Some of this cost is attributed to the need of the university's technology transfer officials to cover the costs of running the office. Businesses feel that they should not have to pay for the transfer office or the university's facilities because their tax dollars already support these things. University officials indicate a sentiment that since the commercialization of intellectual property is not the primary mission of a university, it should not be supported by tuition revenue but should be separately funded. Universities are accustomed to the federal government paying overhead rates on sponsored research contracts. Indirect costs are set by the federal government on an annual basis, and at the time of the report the rate was 48%. Universities have attempted to utilize the same overhead rate structure on sponsored research contracts with businesses, sometimes regardless of the company's size or ability to pay. One way to reduce the overhead costs that has been identified by the business community is to identify funding sources for licensing offices, such as general funds, so that the offices would not feel pressured to recover their costs when negotiating with businesses.

Institutions outside Virginia that are regarded as having best practices argued strongly that the state should never give up ownership of IP and that business leaders should be better

educated that the bundle of rights they can negotiate under a license agreement can give them "about 95% of the rights of ownership." The ownership of intellectual property generated by sponsored research developed through privately funded research at Virginia's public universities is identified as a critical issue.

Some institutions were reported as taking the position that they cannot assign intellectual property to any third party other than the 501(c)(3) foundations that manage the IP. This seems to be generated by the lack of clarity regarding the phrase in § 23-4.4 that requires the Governor's approval of assignments of IP developed "wholly or significantly through the use of state general funds." This position may also be based on interpretations of the Bayh-Dole Act and federal tax laws, including the Federal Tax Free Bond Act of 1986, which imposed a 10% limit on the amount of tax-free bonds that may be used for "private use." Under one view, the sponsorship of research by a private firm in a facility funded with the proceeds of these tax-free bonds would count towards the 10% cap if it received the benefits of the research without paying fair market value for the IP.

The report noted that corporations are reportedly frustrated by the unwillingness of universities to address their need for ownership of the IP. Many high-tech start-ups and spin-offs rely on ownership of IP to obtain financing. Companies are also concerned that if they are not the owners of IP, they will not be able to use the fact of ownership as a barrier against their competition. Specifically, some may fear that a university may not be able to afford ensuing enforcement litigation or will not have the same goals as the company.

The report also acknowledged that there is disagreement over whether the Commonwealth is and should be interested in every piece of IP developed with general funds. The authors suggest that the existing paradigm should shift from one where the Commonwealth's primary goal is to enable dissemination of the IP rather than to control it. The authors noted that this could be accomplished in part by creating a system where there is a presumption that IP may be assigned to a private entity as long as there is no strong public policy reason for not doing so, which would effectively flip the presumption in § 23-4.4.

The report identifies several models of different contexts of IP ownership and possible resolutions of the ownership issue.

- IP developed with no significant use of general funds, or with a significant use of general funds but there is no strong Commonwealth interest in the IP such as health, safety or welfare, could be assigned.
- IP developed with private funding or through other unidentified funds could be assigned if there was no strong Commonwealth interest.

A related issue is the need to streamline the sponsored research and licensing process. The course of negotiating a research deal can involve negotiations with the principal investigator, the sponsored research office (responsible for the submission and oversight of contracts for sponsored research, and the licensing office (responsible for technology dissemination under licensing agreements). As of the date of the report, at the University of Virginia, Virginia Tech,

and Virginia Commonwealth University, these entities are legally distinct bodies that cooperate with each other, while at George Mason University they were combined in one office. Corporations would prefer one technology transfer procedure that is implemented identically at each public university. The authors of the report state that this is not feasible given the tradition of institutional autonomy within the Commonwealth and the need to develop policies and procedures that are efficient in a specific campus context. Alternative solutions include (i) identifying one contact person at each university whose role would be to communicate with a company during the licensing process, funded by the Commonwealth, to facilitate the successful technology transfer between universities and private corporations; and (ii) horizontally integrating the roles of sponsored research office and licensing office, to reduce the number of negotiations that are required and to speed up the process.

In response to one of the several charges in SJR 502 (1999), the Secretary of Technology prepared its Industrial Cluster Analysis of the Virginia Economy. The analysis is published as Senate Document 26 of 2000. A major strategic research and technology policy goal identified by the Secretary of Technology was to improve the environment and opportunities in Virginia universities for creating innovative start-up companies that will drive new growth. Virginia's research universities were found to be conducting significant research in fields of importance to existing and emerging industries. Strong linkages and effective cooperation between this research base and the industries that can convert research results into products, jobs and revenue are essential to the Commonwealth fully benefiting from its outstanding universities.

The second year of study under SJR 502 (1999) generated a two-part report, published as Senate Document 32 of 2001. The first part, prepared by the VRTAC and CIT, recommends a statewide R&D strategy for the Commonwealth. It includes an analysis identifying high-tech growth opportunities in Virginia prepared by Chmura Economics & Analytics. The second part consists of recommendations for improving the intellectual property policies and practices in Virginia's public universities and federal laboratories.

The recommended R&D strategy for Virginia recognizes that Virginia's future economic competitiveness will depend on developing the highest quality intellectual property and human capital, and that the major avenues for developing them are by performing research and developing products in federal, university/nonprofit or industrial installations.

One of the report's five recommendations is to change existing state IP transfer law to simplify and streamline university-industry interactions, including the transfer of patent ownership. The authors assert that the most important change Virginia universities could make is to develop a simple, statewide framework for the transfer or licensing of IP to companies. They recommended that statutes be amended to allow university board of visitors to transfer patents to companies on a case-by-case basis rather than requiring the approval of the Governor.

The second recommendation of VRTAC's Intellectual Property Subcommittee provided:

To simplify regulation and to speed up the development of industry/university partnerships, the Virginia legislature should delete all sentences beyond the first in § 23-4.4 of the Virginia Code, allowing the Universities' Boards of Visitors the

ability to assign companies the ownership of Intellectual Property developed at the Universities.

The authors cited the appearance of "significant confusion between industry and universities on whether IP generated either collaboratively with industry or solely at the university can be assigned to private industry." Several universities interpret § 23-4.4 for the position that they cannot assign IP to any third party other than the tax-exempt foundations that manage the IP. While many larger firms are willing to accept exclusive licenses of IP, "IP can be a major asset of many high-tech start-ups and spin-offs who rely on its ownership as a means of leveraging financing."

House Bill 530 (2002) directed VRTAC, in conjunction with CIT, the Office of the Attorney General and the research universities of the Commonwealth, to develop a statewide policy and uniform standard for the commercialization of intellectual property developed through university research. House Joint Resolution 88 (2002) requested the Secretary of Technology, in cooperation with the CIT and VRTAC, to recommend incentives necessary to encourage the commercialization of university research and development.

The report, entitled "Accelerating the Commercialization of Virginia University Research Results through Improved Management of Intellectual Property," (House Document 25 of 2003) includes two recommendations specifically addressing the topic of ownership and dissemination of intellectual property developed through joint research projects:

- (i) Require Virginia's research universities to agree on, adopt, and promulgate a uniform statement of policy regarding technology transfer to industry.

The 7 public doctoral research universities in the Commonwealth, along with their associated intellectual property foundations, should agree on, adopt and promulgate publicly a uniform statement of their key policies that influence the terms and conditions under which they can (1) conduct research sponsored financially by industry and (2) transfer inventions made at the university to industry.

All of the Commonwealth's institutions of higher education conduct their technology transfer and commercialization activities under the same array of state and federal laws. However, each has adopted internal policies and procedures at different times and in different circumstances, and each has arrived at final wording and presentation of its policies as a result of different local resolutions of competing interests and preferences of faculty, administrators, boards, and external advisors. The result is that, to companies considering supporting research at Virginia institutions or considering taking a license to a university invention, it appears that the universities do not follow uniform standards and policies.

The universities, working with ALCOVE and the intellectual property foundation officials, should develop a common statement of basic terms and conditions for

the transfer of intellectual property, should promulgate that statement in a common form and format at each university, and make that statement widely available to industry, local leaders and the General Assembly no later than October 1, 2003.

(ii) Authorize university boards of visitors to assign title to university-owned inventions.

With respect to the recommendation that university boards of visitors be authorized to assign title to university-owned inventions, the VRTAC report proposed a change in statutory language that would allow such assignments when justified. In addition, they would be examined to ensure that they do not encompass assignments prohibited under the Bayh-Dole Act (those made with federal funds). Boards would be allowed to make such assignments only upon payment, at a minimum, of the amount of the revenue stream that would be anticipated from licensing fees.

Legislation implementing this recommendation was introduced as House Bill 2285 (2003). The bill amended § 23-9.10:4, as noted above.

House Bill 2639 (2003), patroned by Delegate May, directed VRTAC to develop strategies for the incubation of new science and technology industries in the Commonwealth by November 30, 2003. In House Document 37 (November 2003), VRTAC's subcommittee on the Creation of New High-Technology Industries in Virginia identified three critical issues that Virginia must immediately address, in order to become a highly sought after state for investments in high-technology research, development and commercialization:

1. Recognizing and building the existing regions of technological leadership in the Commonwealth, while addressing the imperative need to further spur the development of private equity capital targeted at early-stage technology companies in Virginia;
2. Bridging the physical gap between research universities and technology businesses in Virginia, by which it means that the Commonwealth's research universities are not located near Virginia's technology businesses; and
3. Recognizing the importance of the mission of CIT and funding that mission.

One of the subcommittee's seven recommendations was the elimination of barriers between Virginia universities and industry. Specific measures include offering internship incentives, facilitating adjunct faculty appointments, providing funding for "translational" research facilities, and facilitating faculty to take 1-2 year sabbaticals with industry or in national laboratories.

The Governor's Advisory Board for the Virginia Biotechnology Initiative was founded by Executive Order Number 14 (2002) by Governor Warner. The Board concluded that Virginia must develop a culture of "harvesting" biotechnology intellectual property generated in Virginia colleges, universities, laboratories and institutions through the elimination of barriers for

technology transfer, providing incentives to form Virginia-based companies, and strategic licensing of those technologies that will create new jobs and companies in biotechnology.

In Part D of the report entitled Recommendations for a Statewide Comprehensive and Coordinated Strategy for Biotechnology -- The First Steps: Building the Industry Base and Commercializing Current Technologies (November 2002), the Board noted that while important recommendations had been included in the IP Subcommittee of VRTAC's November 2000 report, "it appears that little progress has been made in implementing these recommendations over the ensuing two years since they were made." The Board found that it is imperative not only that Virginia has "user friendly" technology transfer policies among its universities and research laboratories, but should also seek to make the ease of dealing with Virginia's universities a competitive advantage for the Commonwealth.

House Bill 547 (2004), introduced by Delegate May, requires SCHEV to develop policies and strategies to eliminate the barriers between the Commonwealth's institutions of higher education and industry and enhance the development of human capital in the Commonwealth. These policies and strategies shall include a review of:

- (i) offering incentives for industry to partner with universities in the practical training of undergraduate and graduate students;
- (ii) providing opportunities and incentives for corporate scientists and engineers to have adjunct appointments at universities to train and collaborate with faculty and students;
- (iii) assisting universities in acquiring funding to build or buy facilities where academic labs and corporate entities can work together;
- (iv) providing opportunities and assistance for academic researchers to take one- to two-year sabbaticals in a corporate setting or national lab and bring that experience back to the institution;
- (v) increasing the two-year leave of absence for science and engineering faculty to generate more industrial-sponsored research;
- (vi) allowing industry to fully fund faculty salaries and allow the faculty to work in industry while remaining a university employee, with proper safeguards in place; and
- (vii) allowing faculty to be part-time university employees and part-time industry employees, also with proper safeguards in place.

The report on policies and strategies to eliminate the barriers between the Commonwealth's institutions of higher education and industry and enhance the development of human capital in the Commonwealth was to be presented to Governor and the General Assembly by November 30, 2004, and was not considered by the joint subcommittee.

Finally, SCHEV's Report on the Condition of Research at Virginia's Colleges and Universities, dated May 22, 2002, includes the following findings:

- Virginia ranked 16th nationally in 2000 based on academic research and development expenditures; this ranking has been fairly consistent over the past 10 years.

- Based on total R&D expenditures at doctoral-granting institutions, Virginia Tech and UVA ranked 51st and 58th.
- Industrial R&D accounts for 55% of Virginia's total R&D expenditures, ranking the Commonwealth 16th nationally in 1998.
- Federal government agencies and federally supported research laboratories account for 30% of Virginia's R&D activities.
- R&D expenditures at research universities accounted for approximately 10% of total state R&D expenditures in Virginia in 1998.
- Although federal support accounts for the majority of R&D funding at Virginia's institutions, private industry funds 10% of academic R&D expenditures. Three Virginia institutions ranked in the top 100 nationally in terms of industrial support for research (UVA - 32nd; VT - 41st; and VCU - 82nd).
- "By law, the Commonwealth requires 30% of all indirect cost recoveries by colleges and universities from external research sponsors be reinvested in E&G [or instructional] programs to offset the administrative costs of research programs."

4. University Policies

The joint subcommittee reviewed excerpts of the policies of Virginia universities regarding ownership of intellectual property developed from sponsored research. A copy of the portion of staff's compilation of these policies is attached as Appendix Q.

The joint subcommittee also received information regarding the corresponding policies of universities in other states. In general, most universities require students and research fellows to assign intellectual property rights to the university if the rights are generated in the performance of the sponsored research. There is more variance, however, among university policies on ownership of intellectual property rights of visiting academic or industry scientists participating in sponsored research. Universities own inventions conceived or reduced to practice solely by their employees during the conduct of research. In general, sponsors have accepted this position, subject to other considerations such as the right to use intellectual property.

Companies from some industrial sectors take the position that the sponsor has a right to own the intellectual property since it has paid for the research. Under this scenario, the sponsor owns the intellectual property through contract or assignment by the university or the investigators. This scenario may apply, for example, when the sponsor has made a substantial investment in the development of the technology that is the subject of the university's research, when the sponsor is likely to be the only practical user of the resulting inventions, or if the sponsor has provided proprietary information, technology, or material which is the basis of the research. In cases when the sponsor acquires ownership of a copyright or invention, the university retains a royalty-free right to use the intellectual property for any internal research and

teaching purposes, and may retain the right to sublicense to investigators for research and teaching purposes.³

An example is provided by the University of Maryland System Policy:

Sponsored research agreements shall provide that all intellectual property developed as a result of the sponsored project shall belong to the University. The University may, however, on a case-by-case basis when circumstances warrant, assign ownership of intellectual property that results from sponsored research to the sponsor.

A report by Louis G. Tornatzky in 2000 for the National Governor's Association (Building State Economies by Promoting University-Industry Technology Transfer) identified several actions that states may take to promote university-industry technology transfer in the interest of building state economies. They include:

- Encouraging university-technology partnerships;
- Investing in entrepreneurial support organizations;
- Enabling private-sector investment in new technologies and technology-based companies (i.e., changing tax laws or increasing the availability of capital);
- Removing legal barriers to university-industry technology transfer;
- Championing the role of universities in economic development;
- Attending to human resource and quality-of-life issues; and
- Monitoring federal policies and programs affecting technology transfer.

With respect to the recommendation that states remove legal barriers to university-industry technology transfer, the author states:

To best exploit their technology assets, universities need to be involved in a variety of intellectual property deals; some of these deals will strain the boundaries of what previously has been considered normal practice. For example, professors and/or universities may want or need to take equity positions in new companies. If faculty members are considered state employees and universities are considered state agencies, such relationships may be explicitly or implicitly prohibited by law. It may also improve the general industry partnering culture of the university if faculty can easily consult with companies and engage in industry-sponsored research. Unfortunately, in several states, there is a residue of well-intentioned statute and constitutional law that creates barriers to formal and informal technology transfer. Many of these provisions are an outgrowth of

³ Intellectual Property Rights in Industry-Sponsored University Research: A Guide to Alternatives for Research Agreements (1993)

populist traditions and ethics laws intended to prevent private companies from unduly gaining advantages from public expenditures.

Mr. Tornatzky was the lead author of Innovation U: New University Roles in a Knowledge Economy, Southern Growth Policies Board (2002), a series of case studies of 12 universities that were doing a particularly good job of building alliances with industry and playing active roles in the economic development of their regions. The authors contend that institutions of higher education can affect the issues of capital and entrepreneurship by such steps as investing endowments in seed funds attuned to helping regional economies, addressing regional capital gaps, and spinning the research of faculty and students into new firms.

5. Laws of Other States

A few other states have enacted legislation addressing this topic. In 1998, Oklahoma's constitution was amended to remove legal prohibitions against state employees and state institutions participating in start-up companies based on faculty inventions and in using campus facilities to foster these activities. Oklahoma's Technology Transfer Act of 1998 led to the adoption of a statewide technology transfer policy by all state universities.

In Mississippi, state conflict of interest laws were construed by the state ethics commission to block state university faculty from having a financial interest in companies commercializing university technology, which precluded their involvement in start-ups. As state agencies, state universities could not hold an equity interest in companies. Under the Mississippi University Research Authority Act, faculty-company relationships may be permitted and universities can hold equity positions in companies commercializing faculty inventions.

Texas enacted S.B. 1190 in 2001 to make it easier for Texas A&M and other universities to work with start-ups. The bill removed barriers to working with and transferring IP to small and start-up companies. Technology transfer centers are authorized to make deals for equity stakes in licensees, manage conflicts of interest, and protect state universities from assuming fiduciary duties as equity shareholders in companies.

In 1996, Maryland enacted legislation (§ 15-107) for the promotion of economic interests through arrangements with private sector. The measure requires public senior higher educational institutions and their governing boards to promote the economic development of the State and to increase the financial resources of the institutions through arrangements with the private sector, including collaborative research and development, commercial application of institution-owned intellectual property, and the provisions of technical assistance.

Ohio's S.B. 286 in 2000 intended to ensure opportunities for employees of Ohio's institutions of higher education to share in the financial rewards of their research, including both the receipt of royalties and the taking of equity positions in firms to which Ohio's institutions license their intellectual properties. The bill:

- Expanded and clarified the scope of the institutions' rights and interests in discoveries, inventions and patents, yet protected the discoveries and inventions made by employees on their own time and with their own resources;
- Allowed the institution to transfer such interests to employees in the current way (by license), or in a new way (by allowing an employee to take a financial interest in a licensee firm);
- Allowed an institution to develop rules that permit an employee researcher to participate in the royalties from, or to take an equity position in, a licensee firm;
- Required certain mandatory rules in such cases;
- Retained the Ohio Ethics Commission's authority to ensure the implementation of the mandatory rules; and
- Required a committee to develop a model set of rules.

V. RECOMMENDATIONS

As noted in Part II of this report, the joint subcommittee endorsed five legislative initiatives at the end of its first year and six at the end of its second year. This part of the report summarizes the joint subcommittee's recommendations and traces the course of these items of legislation, as well as related topics, through the 2005 and 2006 Sessions of the General Assembly.

A. 2005 SESSION RECOMMENDATIONS

1. Continuation of Joint Subcommittee for a Second Year

The complexity of the issues facing Virginia's manufacturing sector, coupled with the fact that the joint subcommittee met only three times in the 2004-2005 interim, prevented the joint subcommittee from completing its work prior to the 2005 Session as directed by Senate Joint Resolution 64. The joint subcommittee unanimously agreed that its existence should be extended for a second year. It endorsed a measure, introduced in the 2005 Session by Senator Wagner as Senate Joint Resolution 361, to continue the joint subcommittee for a second year. Senate Joint Resolution 361 (Appendix B) passed the Senate and House of Delegates without a negative vote.

2. Burden of Regulatory Compliance on the Manufacturing Sector

Virginia's manufacturers expressed concerns during the course of the study that the burden of complying with environmental, health and safety and other regulations fell disproportionately on the manufacturing sector, as compared to other sectors of the economy. The aggregate costs to Virginia's manufacturers of complying with regulations imposed by the federal and state governments have not been quantified. Moreover, some raised the issue of whether the burden on Virginia's manufacturing sector was more onerous than that facing manufacturers in states where the Commonwealth competes for jobs and investments, thus putting Virginia's manufacturers at a disadvantage. The Joint Legislative Audit and Review Commission (JLARC) was identified as having the capability to conduct such a complex analysis.

The joint subcommittee unanimously endorsed legislation directing JLARC to evaluate (i) the total cost of compliance by Virginia manufacturers with state and federal environmental, economic, workplace, and tax regulations; (ii) how the cost of regulatory compliance borne by Virginia manufacturers compares to the regulatory compliance costs borne by firms in other major sectors of Virginia's economy, in the aggregate, on a per-employee basis, based on the sectors' contributions to gross state product, and other relevant bases; and (iii) how the cost of regulatory compliance borne by Virginia manufacturers compares to the regulatory compliance costs borne by manufacturers in other mid-Atlantic and Southern states, in the aggregate, on a per-employee basis, based on the sectors' contributions to gross state product, and other relevant bases.

The measure was introduced by Senator Wagner as Senate Joint Resolution 360. The resolution was amended in the Senate Rules Committee to postpone the date for the submission of JLARC's findings and recommendations from the first day of the 2006 Session to the start of the 2007 Session. A copy of the resolution as passed by the Senate and House of Delegates is attached as Appendix R.

3. Burden of Regulations Affecting Small Businesses

The joint subcommittee was briefed at its November 17, 2004, meeting on federal laws and legislation in other states that address the burden of regulations affecting small businesses. Members expressed interest in the model state legislation developed by the U.S. Small Business Administration's Office of Advocacy, which is addressed in Part IV C of this report. The model legislation seeks to compel regulatory agencies to consider small businesses when regulations are developed and particularly consider the disproportionate impact those regulations might have.

The joint subcommittee unanimously endorsed proposed legislation that incorporates the five major elements of the SBA's model state legislation into existing provisions of Virginia's Administrative Process Act. Delegate Saxman had introduced House Bill 1948 prior to the joint subcommittee's last meeting. The bill included most of the critical elements of the SBA's model act. As introduced, House Bill 1948 would require the Department of Planning and Budget, in addition to the economic impact analysis it already prepares concerning a proposed regulation, to differentiate between small businesses and other businesses identified; estimate the projected reporting, recordkeeping and other administrative costs required for compliance by such small businesses with the regulation; and include a description of any alternative method for achieving the purpose of the regulation while minimizing adverse impact on small businesses. The bill defines "small business" as a business entity, including its affiliates, that (i) is independently owned and operated and (ii) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million. The bill would also require agencies to periodically review their regulations to minimize the economic impact on small businesses.

Deputy Attorney General Judith W. Jagdmann advised the joint subcommittee that the Attorney General's Office was pursuing a similar initiative, which led to the introduction of identical bills by Delegate Kilgore (House Bill 2115) and Senator Obenshain (Senate Bill 1122). These bills differed from House Bill 1948 in that they require the Department of Planning and Budget to identify and estimate the number of small businesses subject to the regulation and determine the probable effect of the regulation on affected small businesses, and give small businesses the right to judicial review of agency compliance with these requirements. Ms. Jagdmann offered to work with members to conform the versions of the legislation.

During the 2005 Session, House Bill 1948 was amended to incorporate the provisions of House Bill 1735, introduced by Delegate Cosgrove, and House Bill 2115. The bill was amended in the Senate to add a provision that it would become effective only if an appropriation of general funds effectuating the purposes of this act is included in the general appropriation act passed by the 2005 Session of the General Assembly. Such amendment was rejected by the House, and the clause was stripped from the bill by a committee of conference. A copy of House Bill 1948, as enacted as Chapter 619 of the 2005 Acts of Assembly, is attached as Appendix S.

The counterpart bill, Senate Bill 1122, which incorporated Senate Bill 1218 (patroned by Senator Bolling) and Senate Bill 1308 (patroned by Senator O'Brien) was enacted as Chapter 682 of the 2005 Acts of Assembly.

4. Moratorium on Development of Offshore Natural Gas Resources

The joint subcommittee was advised at its November 17, 2004, meeting of the potential of the existence of substantial reserves of natural gas several miles off the mid-Atlantic coast. The ability to determine whether commercially recoverable amounts of gas are off Virginia's coast is prohibited by the federal moratorium that blocks all new offshore oil and gas exploratory and recovery activity prior to 2012. Members were also advised of the importance to the manufacturing sector of reliable and affordable supplies of natural gas, which is critical both as a low-polluting energy source and as the raw material in major chemical manufacturing processes.

Members agreed that the federal government should be sent a clear message that the Commonwealth favors lifting the moratorium in order to allow surveying of potential natural gas deposits in areas that are within the jurisdiction of the federal government. In previous years, the standard mechanism for such expressions has been a joint resolution expressing the sentiment of the General Assembly. However, such resolutions have proved ineffective in swaying opinion in Washington, and passage of such resolutions has become more difficult. As a result, the joint subcommittee endorsed escalating the likelihood that the federal government would pay heed to the will of the General Assembly.

The legislative vehicle endorsed by the joint subcommittee was Senate Bill 1054, patroned by Senator Wagner. The bill directed the Virginia Liaison Office to work with members of the State Congressional Delegation and executive agencies to develop and enact legislation or executive action that would provide an exemption to the existing moratorium on offshore natural gas exploratory activity. The joint subcommittee viewed the imposition of this duty on the Virginia Liaison Office as consistent with the existing statutory requirement that the Office's Director be responsible for tasks assigned to the Office by law. The bill also required the Liaison Office to report annually to the Governor and the chairs of the Senate and House Commerce and Labor Committees.

After passing the Senate without a negative vote, the bill was amended with the patron's concurrence in the House Rules Committee to specifically endorse measures such as are contained in the proposed federal State Enhanced Authority for Coastal and Offshore Resources (SEACOR) Act or similar legislation to enhance states' authority over coastal and offshore resources. The amended bill also endorsed development and production of natural gas deposits, rather than merely surveying and exploration. The amended bill passed the House of Delegates by a margin of 54 to 43. After the Senate concurred with the House substitute, the bill was enrolled and sent to Governor Warner, who vetoed the measure. The reasons cited for the veto included assertions that it encroached on the role of the Governor to direct the activities of the Virginia Liaison Office and that it directed the Commonwealth to advocate for draft federal legislation -- the SEACOR Act -- that has yet to be introduced. The Senate failed to override the Governor's veto. A copy of the enrolled bill is attached as Appendix T.

5. Ownership of Intellectual Property Developed through Sponsored Research at State Universities

At its November 17, 2004, meeting, representatives of Virginia manufacturers informed joint subcommittee members of their dissatisfaction with current rules regarding the ownership of intellectual property that is developed at state universities through research sponsored by private firms. In their view, Virginia laws impede the commercialization of intellectual property by preventing firms that sponsor research at state universities to obtain ownership of the patents or other intellectual property developed through the research, universities' license fees are unreasonable, and the process that sponsors must negotiate is difficult and frustrating. A review of the issue is addressed in Part IV D of this report.

At its January 11, 2005, meeting, the joint subcommittee considered the legislation that would amend the current system as follows:

- A university will not assert ownership of interest in intellectual property developed through externally sponsored research (unless provided in written contract) unless the research involves the significant use of institution's resources, which would be defined as 50% of the cost of identifiable resources.
- If the research did involve a significant use of institution's resources, the University shall transfer the externally sponsored research to its sponsor, upon request, if the research did not involve federal funds, the sponsor makes a clear and convincing case that it is needed for commercialization, the sponsor reimburses the university for the amount it invested, and the university retains the right to use the intellectual property in research and education.
- If the research did involve a significant use of institution's resources, but all of the other criteria under which the university would be required to assign the intellectual property to its sponsor are not satisfied, the institution nevertheless has the discretion to assign it to the sponsor without any requirement for the Governor's approval.

Representatives of the state's public universities did not raise objections at the meeting. The joint subcommittee endorsed the legislation. Senator Watkins voiced concerns about the scope of the proposal.

The measure was introduced by Senator Wagner as Senate Bill 1053. A copy is attached as Appendix U. The bill was passed by in the Senate Committee on Education and Health and referred by letter to the Joint Commission on Technology and Science (JCOTS) for further study. JCOTS appointed a subcommittee, chaired by Delegate Cosgrove, to examine the issues raised by the legislation.

B. 2006 SESSION RECOMMENDATIONS

1. Virginia Energy Plan

The Governor's veto of Senate Bill 1054 in 2005 did not dissuade the joint subcommittee from continuing to try to address the needs of the manufacturing sector for adequate and affordable natural gas and other sources of energy. Senator Wagner suggested that Virginia's energy supply problems are the result of the absence of a clearly articulated energy policy. Senator Wagner directed staff to prepare comprehensive energy policy legislation that, in addition to expressing the desire for a lifting of the moratorium on the development of offshore natural gas resources, would implement a planning process and recognize that addressing energy issues requires that attention be paid to both energy consumption and the supply of energy resources.

Senator Wagner unveiled his draft energy policy legislation at the joint subcommittee's August 25, 2005, meeting at the Volvo Trucks assembly plant in Pulaski County. Soon thereafter the Virginia Coal and Energy Commission commenced a review of the proposal. Senator Wagner presented his proposal to the Coal and Energy Commission on October 27, 2005. He testified that the Commonwealth needs to adopt a comprehensive energy policy now, and that the joint subcommittee has been made aware of the effect of rising natural gas prices. The economic implications of the tripling or quadrupling of natural gas prices over the past 18 months has created uncertainty in the manufacturing sector. Senator Wagner stressed the need to reduce energy demand via conservation, and urged that energy issues be resolved in ways that minimize environmental impact and provide employment for Virginians. He suggested that elements of the energy plan should address the use of coal, oil, natural gas, nuclear, and renewable sources of energy. Specific elements offered by Senator Wagner include support for the expansion of the one existing petroleum refinery in Virginia, promoting LNG imports, developing offshore natural gas resources, and preapproving sites for the location of nuclear and wind power generation facilities.

Following Senator Wagner's presentation, Senator William Wampler, the Commission's chair, announced the establishment of a Special Subcommittee on energy policy. The Special Subcommittee, comprised of Senator Watkins (who was asked to chair the special subcommittee), Delegate Parrish, Delegate Kilgore, and James Martin, was charged with developing recommendations for short- and long-term strategic investments and actions to ensure that the Commonwealth is positioned to address energy issues. Senator Wampler invited Senator Frank Wagner, Delegate Harvey Morgan, Michael Lipford of the Nature Conservancy, Hugh Keogh of the Virginia Chamber of Commerce, Chris Anderson of Exxon Mobile Corporation, and Hugh Linginfelter of Virginia Natural Gas to participate in the efforts of the Special Subcommittee.

The Special Subcommittee on Energy Policy met on November 9, 2005, November 28, 2005, and December 15, 2005, to discuss Senator Wagner's legislative proposal. The draft added a title to the Code of Virginia outlining a statewide energy plan. It set out nine energy objectives, along with the elements of a state energy policy directed at achieving those objectives. It charges the Department of Mines, Minerals and Energy with developing a plan to

implement the policy. The plan was to include projections for energy usage and supply for a 20-year period, an analysis of these projections, and recommendations for how to best meet Virginia's energy supply needs. It was to be prepared by January 1, 2007, and updated every five years thereafter. The most controversial section of the draft provides a process for the State Corporation Commission to designate optimal low-emission energy facility sites. Local land use controls would be preempted with respect to the location of low-emission energy facilities at sites that are found to be optimal for such use. Senator Watkins obtained the concurrence of the Special Subcommittee's members to forward the energy policy legislation to the full Commission.

At the full Coal and Energy Commission meeting on January 17, 2006, Senator Watkins presented the Special Subcommittee on Energy Policy's report on Senator Wagner's legislation. He noted that the introduced bill incorporated numerous revisions addressing suggestions offered by interested persons. The specific elements of the bill were not debated during the meeting, as Chairman Wampler noted that the provisions of the bill will be properly debated when it is considered by the standing committees of the General Assembly. Without objection, the Commission accepted the report of the Special Subcommittee.

The draft energy policy legislation was presented to the joint subcommittee at its November 30, 2005, meeting. Major elements of the draft energy policy legislation include:

- Establishing elements of an energy policy for the Commonwealth, for the purpose of achieving enumerated energy objectives;
- Directing the Division of Energy of the Department of Mines, Minerals and Energy, in consultation with the State Corporation Commission, and Virginia Center for Coal and Energy Research, to prepare a comprehensive Virginia Energy Plan to implement the policy;
- Directing the Virginia Liaison Office to work with members of the State Congressional Delegation and executive agencies to obtain an exemption to the existing federal moratorium on offshore natural gas exploration and development activity;
- Providing that royalties, lease payments, and other moneys paid by the federal government to the Commonwealth that are attributable to the development of offshore energy resources will be deposited in a State Offshore Energy Revenue Fund and allocated among the Virginia Water Quality Improvement Fund, the Transportation Trust Fund, clean coal technology research, funding a methane hydrates research center and other alternative energy initiatives, and grants for producing and using clean and efficient energy;
- Directing the Virginia Liaison Office to work with members of the State Congressional Delegation and executive agencies to enact legislation that increases the corporate average fuel efficiency standards for motor vehicles;
- Directing SCHEV to encourage qualified state institutions of higher education to apply for federal grants to finance a center of excellence for advancing new clean coal technologies and will administer a clean coal technology research fund;
- Requiring designs for state buildings to meet certain LEED standards;
- Requiring all localities and transportation districts that provide mass transit or public transportation through the use of diesel-fueled vehicles to use biodiesel fuel in amounts

not less than 1% of total diesel fuel consumption by volume, effective when the annual capacity in the Commonwealth for the production of biodiesel fuel exceeds one million gallons, but in no event before July 1, 2007, as a condition for receiving state funding;

- Establishing a methane hydrates research center at Old Dominion University;
- Invalidating any restrictive covenant or similar specification that restricts or prohibits solar energy collection devices;
- Directing the State Corporation Commission to develop a system for scoring parcels in the Commonwealth for their suitability as wind energy facilities, liquefied natural gas terminals, and nuclear energy facilities;
- Providing grant awards for producing and using clean and efficient energy including (i) grant awards in the amount of 0.85 cents for each kilowatt hour of electricity produced by a corporation from certain renewable energy resources and (ii) grants to individuals and corporations equal to 15% of the cost incurred in installing photovoltaic property, solar water heating property, or wind-powered electrical generators, which are limited to \$2,000 for each system of photovoltaic property, \$1,000 for each system of solar water heating property, and \$1,000 for each system of wind-powered electrical generators, which grants were included in Senator Whipple's Senate Bill 377 of the 2002 Session; and
- Providing up to \$500 in rebates for sales tax paid on certain appliances meeting energy star efficiency requirements developed by the federal government and for fuel cells, heat pumps, air conditioners, boilers, furnaces and water heaters meeting specified performance measures, and on the titling tax paid on motor vehicles using clean special fuel sources, which was also a feature of Senate Bill 377 of the 2002 Session.

Revised energy policy legislation was presented at the joint subcommittee's January 10, 2006, meeting. Changes from the previous draft that were incorporated into the version approved by the joint subcommittee include:

- Replacing provisions for refunds of up to \$500 of the sales and use tax paid in connection with purchases of certain appliances meeting energy star efficiency requirements developed by the federal government and for fuel cells, heat pumps, air conditioners, boilers, furnaces and water heaters meeting specified performance measures, and of the titling tax paid on motor vehicles using clean special fuel sources as a source of propulsion, with new individual income tax deductions for 20% of such costs.
- Adding an exemption from property taxation of certified pollution control equipment and facilities used in collecting, processing, and distributing landfill gas or natural gas recovered from waste.
- Postponing the reporting date for the energy plan by six months to July 1, 2007, and providing that the plan would address the next 10 years, rather than 20 years.
- Including the Department of Environmental Quality in the energy planning process.
- Adding a provision directing the Virginia Liaison Office to work to enable the Commonwealth to exercise exclusive jurisdiction with respect to offshore wind energy resources.
- Expanding the definition of a clean coal project.
- Placing the duties of administering the Clean Coal Technology Research Fund with the Virginia Center for Coal and Energy Research rather than with SCHEV.

- Revamping the provisions addressing energy efficient public buildings by eliminating reference to LEED Green Building Rating System standards.
- Limiting the requirement that the State Corporation Commission (SCC) score potential energy project sites to state-owned parcels that are recommended by the Department of General Services, parcels recommended by the parcel's owner, and parcels recommended by the governing body of a locality with the permission of its owner.
- Replacing provisions that would have preempted local planning and zoning requirements with respect to sites designated as optimal sites for low emissions facilities with a statement that such sites will be eligible for a one-stop permitting process and providing that the issuance of a permit pursuant to the one-stop process would be deemed to satisfy local zoning requirements.
- Declaring the existing Surry and North Anna nuclear plant sites and other sites determined through the U.S. Nuclear Regulatory Commission licensing process to be suitable for development of new nuclear generating units to be deemed optimal sites without further proceedings.
- Adding an enactment clause directing the SCC and Secretary of Natural Resources to develop a proposal for a one-stop permitting process.

The joint subcommittee endorsed the proposed legislation at its final meeting on January 10, 2006. Senator Wagner introduced the measure as Senate Bill 262 and Delegate Lingamfelter introduced identical legislation in the House of Delegates as House Bill 1153. Delegate Lingamfelter's version was reported out by the House Committee on Commerce and Labor with a substitute by a vote of 18 to 4 and the House Committee on Finance with a substitute by a vote of 18 to 2. The House Bill was left in the House Appropriations Committee without action prior to the Session's crossover.

Senate Bill 262 was referred to the Senate Committee on Commerce and Labor, which referred it to a special subcommittee chaired by Senator Thomas Norment. The special subcommittee met twice and recommended that the full committee report an amendment in the nature of a substitute for the bill. The major changes incorporated in the substitute:

- Added a provision, which had been the object of Senate Bill 616, amending § 56-46.1 to state that the SCC's approval of facilities that are appurtenant to an electricity transmission line, including substations, shall be deemed to satisfy local zoning and comprehensive planning laws with regard to such appurtenant facilities;
- Added provisions amending §§ 58.1-609.3 and 58.1-609.10 to provide sales and use tax exemptions for machinery, tools, equipment, and materials used to make wood pellets and for boilers and furnaces fueled by such pellets;
- Replaced language directing the Virginia Liaison Office to take specific actions with statements that it is the policy of the Commonwealth to encourage the members of the State Congressional Delegation and federal executive agencies to take requested actions, which change attempted to address concerns raised by the Governor that it encroaches on his role to direct the activities of the Virginia Liaison Office;
- Revised the income tax deduction for motor vehicle titling taxes paid with respect to alternatively fueled vehicles to apply to vehicles rated at greater than 40 miles per gallon equivalent that have achieved California's SULEV rating;

- Amended elements of the state's energy policy encouraging the use of landfill gas and supporting gas storage systems;
- Eliminated the biodiesel fuel content requirements and added that the Commonwealth Transportation Board would encourage the use of biodiesel and alternative fuels in buses and other public transportation vehicles;
- Expanded the proposed methane hydrates research center to encompass a variety of forms of coastal energy, including offshore winds and wave and tidal action;
- Removed provisions invalidating certain real estate covenants restricting the use of solar energy collection devices and inserted in their place a prohibition on community associations from enacting any provisions restricting solar power or the use of solar energy collection devices on units or lots that are part of the development, except to the extent provided in the applicable instruments, declaration or rules, and an authorization for community associations to prohibit or restrict the installation and use of such solar energy collection devices on the common elements or common areas;
- Added gas storage facilities used for market enhancement or operational flexibility to the definition of LNG facilities that constitute low-emission energy facilities, and provided that there is no limit on the number of gas storage facility sites that may be designated as low-emission energy facilities;
- Added solar energy facilities as a category of low-emission energy facilities;
- Inserted that the SCC shall include compatibility with local land use plans in its scoring system for all categories of low-emission energy facilities;
- Added a parcel's proximity to distribution pipelines and peak shaving capability as elements of the SCC's system of scoring LNG facilities as low-emission energy facilities;
- Revamped provisions supporting increased CAFE standards to remove support for specific benchmarks and insert that the Liaison Office shall work to increase CAFE standards by promoting tax credits, market incentives, and education programs; and
- Added that electricity used in production by a qualified facility, but not sold into the electricity grid, would be eligible for renewable electricity production grants.

Another revision directed all agencies, boards and commissions of the Commonwealth to ensure that any permits or approvals that are required for the exploration and production of hydrocarbons within federal jurisdictional areas off the Commonwealth's Atlantic shore provide that such exploration and production will be undertaken in a manner protective of the environment and public safety. Senate Bill 262 was also revised to prohibit the drilling of any wells for natural gas or oil in areas off the Commonwealth's Atlantic shore within 30 miles of the shoreline. These revisions were added to address recommendations in the Secretary of Commerce and Trade's report of its study of the possibility of exploring for natural gas in the coastal areas of the Commonwealth. The report, published as House Document 22 (2006), recommended that no wells should be drilled closer than 50 miles to the Virginia shoreline.

By a vote of 14 to one, the Senate Commerce and Labor Committee reported and referred the bill to the Senate Finance Committee, which further amended the bill to (i) remove the provisions providing sales and use tax exemptions for machinery, tools, equipment, and materials used to make wood pellets and for boilers and furnaces fueled by such pellets, (ii) add Norfolk State University and the Virginia Institute of Marine Science as members of the Coastal Energy Research Consortium, and (iii) provide that the amendments to § 58.1-322 creating

income tax subtractions will become effective only if reenacted by the 2007 Session of the General Assembly. The Senate Finance Committee reported the revised bill by a vote of 12 to three, and the full Senate passed the Senate Finance Committee's amendment in the nature of a substitute with six negative votes.

The House Committee on Commerce and Labor referred Senate Bill 262 to its Subcommittee on Utilities and Employment, chaired by Delegate Kathy Byron. The subcommittee recommended that the bill be reported with amendments, which were incorporated into another amendment in the nature of a substitute. The subcommittee's proposal included the following substantive revisions:

- Removing the provisions establishing income tax deductions for the purchase of energy efficient appliances and motor vehicles;
- Removing provisions encouraging the development of Virginia's uranium resources;
- Prohibiting the construction on the Eastern Shore of any onshore facilities associated with offshore exploration and production of natural gas;
- Adding the Virginia Tech Advanced Research Institute and James Madison University as members of the Coastal Energy Research Consortium;
- Prohibiting the SCC from designating a parcel as an optimal site for a low-emission energy facility unless the SCC has provided for notice and, if requested, conducted a public hearing; and
- Exempting proposed wind energy facilities in a locality that previously acted upon its siting from the provision that the issuance of permits pursuant to the to-be-developed one-stop permitting process would be deemed to satisfy requirements of local zoning and other land use ordinances.

After rejecting a motion that the measure be carried over to the 2007 Session for further study, the subcommittee's recommended amendment in the nature of a substitute was further amended by the full Commerce and Labor Committee. The Committee amendments:

- Deleted provisions that would deem the issuance of permits for the operation of a low-emissions energy facility pursuant to the one-stop permitting process to have satisfied local zoning requirements;
- Deleted language providing that the existing Surry and North Anna nuclear plant sites and other sites determined through the U.S. Nuclear Regulatory Commission licensing process to be suitable for development of new nuclear generating units be deemed optimal sites without further proceedings; and
- Added several provisions requiring that decisions regarding the development of energy resources and facilities consider their impact on economically disadvantaged and minority communities.

As revised, the House Commerce and Labor Committee voted to report the bill by a vote of 14 to seven, and the bill was passed by the House of Delegates by a margin of 74 to 21. The Senate concurred with the changes made by the House of Delegates with one negative vote, and the bill was sent to the Governor.

Governor Kaine proposed numerous changes to the enrolled Senate Bill 262, which were sent to the General Assembly in the form of an amendment in the nature of a substitute. The Governor's amendments:

- Established a requirement for that gasoline sold and delivered for use in Virginia with an octane rating of less than 91 be blended with a minimum of 10% alcohol by volume, effective when annual alcohol fuel production exceeds 300 million gallons;
- Deleted the statement that it is the policy of the Commonwealth to provide an exemption to the moratorium on development and production of natural gas deposits. In its place, the substitute states that it is the Commonwealth's policy to support federal efforts to determine the extent of natural gas resources 50 miles or more offshore and to support the inclusion of the Atlantic Planning Areas in the federal Mineral Management Service's draft environmental impact statement for natural gas exploration 50 miles or more off the Atlantic shoreline, and specifically adds that this is not a policy statement on the moratorium.
- Required Dominion Virginia Power to apply for annual fuel factor adjustments to its electricity rates commencing July 1, 2007, and allows the SCC to require that 40% of any increase in fuel tariffs for the year 2007-2008 shall be deferred and recovered during the period from July 1, 2008, through December 31, 2010;
- Created a state personal income tax deduction for 20% of the cost of certain energy efficient equipment or appliances, up to \$500 per year;
- Added a statement that it is the policy of the Commonwealth to support federal efforts to examine the feasibility of offshore wind energy being utilized in an environmentally responsible fashion;
- Replaced provisions that required the SCC to designate optimal sites for natural gas and nuclear, wind, and solar power facilities with a requirement in the energy planning process for the development of a system for scoring sites based on their suitability for the siting of wind or solar energy facilities and a requirement that the Division of Energy, upon request, analyze the suitability of parcels for the location of such facilities;
- Deleted provisions regarding energy efficient construction of state buildings with a requirement that state agencies to ensure that the design and construction of state-owned buildings comply with energy standards established by Department of General Services;
- Amended elements of Virginia's Energy policy to delete reference to offshore gas resources and drilling and nuclear power, and to add language promoting biodiesel and ethanol;
- Deleted provisions referencing an Offshore Energy Revenue Fund that would receive royalties and other payments from the development of offshore energy resources;
- In lieu of requiring the SCC and Secretary of Natural Resources to develop a one-stop permitting process for low-emission energy facilities, required them to develop a proposal for a coordinated review of permits for any energy project that requires an environmental permit and a certificate of public convenience and necessity; and
- Provided for the expiration of the provisions establishing the clean coal technology research fund, Coastal Energy Research Consortium, Renewable Electricity Production Grant Program, and Photovoltaic, Solar, and Wind Energy Utilization Grant Program if funding is not appropriated by July 1, 2009.

At the reconvened session on April 19, 2006, the Senate voted, by a margin of 23 to 11, that the Governor's amendments were not specific and severable, and, pursuant to Article V, Section 6 of the Constitution of Virginia, the bill was before the Senate in the form originally sent to the Governor. The Senate subsequently adopted an amendment in the nature of a substitute to Senate Bill 262 that incorporated the enrolled bill with all of the amendments that were proposed in the Governor's substitute with one exception. The Senate's amendment deleted the proposed requirement that certain gasoline be blended with 10% alcohol.

The Senate's amendment in the nature of a substitute, which passed the Senate without a negative vote, passed the House of Delegates without further amendment by a vote of 70 to 20. The reenrolled bill, a copy of which is attached as Appendix V, was returned to the Governor and signed on May 19, 2006.

2. Intellectual Property Developed at State Universities through Sponsored Research

As noted in Part V A 5 above, the joint subcommittee recommended Senate Bill 1053 for enactment in the 2005 Session. The bill, which would have revamped the rules governing the right to acquire ownership if intellectual property developed through sponsored research conducted at a state university, was referred by the Senate Education and Health Committee to JCOTS for further study. JCOTS appointed an advisory committee on intellectual property, chaired by Delegate Cosgrove, to examine the issues raised by Senate Bill 1053.

The JCOTS intellectual property advisory committee met on October 4, 2005. The members agreed that the current framework for technology transfer and intellectual property rights was confusing. It was suggested that the Code provisions relating to technology transfer and intellectual property rights associated with state universities be deleted and replaced with language directing universities to develop their own transfer policies. The group did not reach consensus on the issue of who would be responsible for reviewing IP transfer policies for approval.

JCOTS endorsed a report of its intellectual property advisory committee that proposed legislation to revamp the IP transfer process. The measure, introduced by Delegate Cosgrove as House Bill 134, removes limitations and requirements currently in place governing the assignment of intellectual property rights at public institutions of higher education. Instead, each institution will be required to adopt its own policies concerning assignment of intellectual property. These policies will govern any research contracts to which the institution is a party. Each institution would be required to forward a copy of its policies to JCOTS and report annually to JCOTS on any assignment of any intellectual property interests by that institution. The measure also removes the requirement that SCHEV create guidelines for institutions to follow in developing their policies.

The JCOTS proposal was presented to the joint subcommittee by staff director Lisa Wallmeyer at its meeting on January 10, 2006. The joint subcommittee endorsed the legislation. A copy of the introduced version of House Bill 134 is attached as Appendix W.

The bill passed the House and Senate without amendment and without a negative vote. The Governor recommended amendments to the legislation, in the form of a substitute, that reinsert provisions requiring the Governor's prior written approval for transfers of intellectual property developed through the use of state general funds. The proposed threshold for requiring the Governor's approval is whether the use of state funds was predominant rather than significant, and the test of whether state general funds were used would exclude capital assets. The Governor's substitute also requires the Department of Budget and Planning to issue by December 1, 2006, guidelines defining (i) the conditions under which projects are to be considered wholly or predominately funded by the general fund and (ii) procedures for an expedited review by the Governor of relevant transfers of intellectual properties. Finally, the amendments require institutions to provide copies of their IP transfer policies and report annually to the Governor as well as to JCOTS. Both houses of the legislature unanimously concurred in the Governor's proposed amendments.

3. Standardized Assessments of Machinery and Tools

On several occasions joint subcommittee members expressed the sentiment that the ad valorem taxation of manufacturing equipment was inconsistent with the policy goal of encouraging the investment of capital in the Commonwealth's manufacturing base, as Virginia's best hope for a healthy manufacturing sector lies with high-value added, capital intensive advanced manufacturing. At the same time, members acknowledged that the machinery and tools tax is an important source of revenue for local governments.

The joint subcommittee concluded that perceived abuses in the current system of valuing the personal property could be addressed by standardizing the method by which local governments ascertained the property's taxable value and utilized assessment ratios. Members pointed to the wide disparity in the ways localities depreciated property and set assessment ratios as evidence that local governments' overbroad discretion in determining liability was divorced from the principle that property's fair market value should be established uniformly and equitably.

To this end, Senator Wagner recommended the adoption of a system pursuant to which the assessed value of machinery and tools would be equal to the depreciated book value of the property as reported for federal income tax purposes. At the November 30, 2005, meeting, the joint subcommittee was presented with a draft of legislation that would have required, effective January 1, 2006, machinery and tools be valued at their depreciated basis for income tax purposes. A revised proposal for phasing in the change to the method of assessing machinery and tools currently in service was presented at the January 10, 2006, meeting and was endorsed by the joint subcommittee.

The revised proposal was introduced by Senator Wagner as Senate Bill 258. A copy is attached as Appendix X. The bill would require that machinery and tools placed in service on or after July 1, 2006, be valued at their depreciated basis for federal income tax purposes if the owner has depreciated their value pursuant to the Internal Revenue Code. Machinery and tools that were placed in service prior to July 1, 2006, will be valued commencing in 2010 at their

depreciated basis for federal income tax purposes. Between 2006 and 2010, the value of such machinery and tools would be determined by a phased-in blending of the value determined by the method in effect on January 1, 2006, and by its depreciated basis for federal income tax purposes. Senate Bill 258 was stricken at the patron's request in the Senate Finance Committee.

Delegate Saxman introduced House Bill 1290, which tracked the original proposal's requirement that machinery and tools be valued at their depreciated basis for federal income tax purposes if the owner has depreciated their value pursuant to the Internal Revenue Code. Unlike Senate Bill 258, the House bill did not phase in the change in assessed values. A copy of the introduced House Bill 1290 is attached as Appendix Y.

House Bill 1290 was substantially revised in the House Finance committee to jettison the reference to federal tax depreciated values and to require that in valuing machinery and tools, the commissioner of the revenue shall, upon the written request of the taxpayer, consider any bona fide, independent appraisal presented by the taxpayer.

The Senate Finance Committee amended House Bill 1290 to amend Virginia Code § 58.1-3507 to provide that idle machinery and tools, which it defined as machinery and tools that have not been used for at least three continuous months immediately prior to the date they are returnable for taxation and for which there is no reasonable prospect that they will return to active use within one year after such date, is intangible personal property and exempt from local taxation. The measure then passed the Senate by a vote of 35 to 4, and the House of Delegates concurred in the Senate's substitute by a vote of 83-17.

Governor Kaine recommended amendments to the bill that would remove the provisions exempting idle machinery and tools from local taxation. The House of Delegate rejected a motion to accept the Governors amendments by a vote of 47 to 52. House Bill 1290 was vetoed by the Governor on May 19, 2006.

4. Virginia Industry Investment Act

Virginia's manufacturing community developed a proposal, labeled the Virginia Industry Investment Act (Appendix Z), that would have required localities to reduce its assessments on existing machinery and tools and certified pollution control equipment and facilities used in or for manufacturing, mining, processing, or reprocessing and dairy by one-fifth per year between July 1, 2006, and June 30, 2010. Such property would be exempt from taxation effective July 1, 2010. The proposal also exempted new investments in such property used in these industries from property taxation effective July 1, 2006. The Commonwealth would be required to reimburse localities with general fund revenue for an equivalent sum during the transition period ending June 30, 2010. The Virginia Economic Development Partnership Authority (VEDPA), in cooperation with other agencies, would be required to prepare and execute a specific five-year plan to serve the localities most affected by the elimination of the machinery and tools tax through targeted economic development assistance.

The Virginia Industry Investment Act was presented to the joint subcommittee at the November 30, 2005, meeting. It was acknowledged that the proposal raised serious constitutional concerns. The manufacturing community agreed to work on an alternative approach that would exempt machinery and tools from local taxation by reclassifying them as intangible personal property, which is subject to state taxation (and not in fact taxed by the Commonwealth). The revamped proposal was presented to the joint subcommittee at its January 10, 2006, meeting, at which time it was endorsed without objection. The measure, designated Senate Bill 417, was introduced in the 2006 Session by Senator Emmett Hanger.

Senate Bill 417 was amended by the Senate Finance Committee to replace the provisions reclassifying machinery and tools as intangible personal property with a requirement that the VEDPA, in cooperation with the Virginia Manufacturers Association, the Virginia Chamber of Commerce, the Virginia Poultry Federation, Printing Industries of Virginia, the Virginia Association of Counties, the Virginia Municipal League, the Commissioners of the Revenue Association of Virginia, the Secretary of Commerce and Trade, the Department of Business Assistance, and the Virginia Tobacco Indemnification and Community Revitalization Commission, prepare a specific five-year plan to assist localities in diversifying their economies that are dependent upon facilities used for manufacturing purposes. The plan was to address (i) the direct and indirect economic impact of manufacturing on the Commonwealth and (ii) economic development assistance that will aid cities, counties, and towns with tax base diversification and skill-enhancing employment and training opportunities. The plan was to be presented to "the Virginia Joint Subcommittee Studying Manufacturing (The Manufacturing Development Commission)," by November 1, 2006. The bill also exempted from state and local taxation any certified pollution control equipment and facilities placed in service on or after July 1, 2006, that consists of equipment used in collecting, processing, and distributing landfill gas or synthetic or natural gas recovered from waste, including equipment used to grind, chip, or mulch trees, tree stumps, underbrush, and other vegetative cover for reuse as landfill gas or synthetic or natural gas recovery from waste. The bill was enacted without further major substantive change. A copy of Senate Bill 417 as passed is attached as Appendix AA.

5. Manufacturing Technology Act

The Manufacturing Technology Act refers to an omnibus legislative proposal developed by members of Virginia's manufacturing community that, among other purposes, sought to expand the scope of certain tax exemptions in order to reflect the modern manufacturing process, referred to as the integrated plant theory. The Manufacturing Technology Act also would amend the procedures for valuing machinery and tools in order to more accurately reflect fair market valuations, and exempt new investments in certified pollution control equipment and facilities from taxation in recognition of the substantial mandates on industry to install pollution control equipment.

As presented to the joint subcommittee at its November 30, 2005, meeting, and unanimously endorsed at its January 10, 2006, meeting, the Manufacturing Technology Act would have:

- Expanded the sales and use tax exemption for machinery and tools and industrial materials to include those used in recycling;
- Expanded the sales and use tax exemption for machinery, tools, and equipment to include those used in the integrated process of processing, manufacturing, refining, recycling, mining, or converting products for sale or resale;
- Defined machinery, tools, and equipment for purposes of sales and use taxation;
- Expanded the definition of manufacturing, processing, refining, and conversion;
- Required that tangible personal property employed generally in a trade or business be valued by means other than by a percentage of original cost, if the valuation method may reasonably be expected to determine the actual fair market value, including an independent appraisal or the average of three purchase offers;
- Permitted methods for valuing machinery and tools to differ among the separate categories, as long as each method used is uniform within each category, is consistent with applicable law, and may reasonably be expected to determine actual fair market value as determined by the assessing official;
- Allowed assessment ratios to be used only with the concurrence of the local governing body;
- Required commissioners of revenue, upon request, to take into account the condition of property;
- Required the commissioner of revenue, upon petition and if a recognized pricing guide is not available, to consider an independent appraisal or the average of three written offers for the property;
- Stated that the provisions regarding valuing machinery and tools are declaratory of existing law;
- Declared that new investments in certified pollution control equipment and facilities used for manufacturing, mining, processing or reprocessing, and dairy shall be exempt from taxation; and
- Required local governments shall reduce the assessments on certified pollution control equipment and facilities by one-fifth in each of the next five years, with the Commonwealth reimbursing each locality for its foregone revenue from the General Fund in a transition period ending on June 30, 2010.

The Manufacturing Technology Act was introduced by Senator Wagner as Senate Bill 260. A copy of the introduced version of Senate Bill 260 is attached as Appendix BB.

Senate Bill 260 was amended in the Senate to replace the provisions of the introduced bill with measures that (i) require commissioners of the revenue, upon written request, to consider an independent appraisal submitted by the taxpayer when valuing machinery and tools for taxation; (ii) provide that, for taxable years beginning on or after January 1, 2007, certain certified pollution control equipment and facilities, including landfill gas collection, processing and distribution equipment, are exempt from state and local taxation; and (iii) require the Tax Commissioner to convene a working group to consider several issues relating to the assessment and valuation for appraisals relating to machinery and tools. The House of Delegates adopted an amendment in the nature of a substitute to the bill that did not substantially alter the scope of the Senate substitute. The differing versions of the bill was sent to a joint committee of conference, which agreed to add an amendment to Virginia Code § 58.1-3507 to provide that idle machinery

and tools, which it defined as machinery and tools that have not been used for at least three continuous months immediately prior to the date they are returnable for taxation, if there is no reasonable prospect that they will return to active use within one year after such date, is intangible personal property and exempt from local taxation. A similar provision had been added by the Senate Finance Committee to House Bill 1290.

The Governor proposed amendments to Senate Bill 260 that would have deleted the provisions exempting idle machinery and tools from local taxation. The Senate tied 19 to 19 on the motion that the amendments be accepted, and the Lieutenant Governor broke the tie vote by voting against the motion. Senate Bill 260 was vetoed by the Governor on May 19, 2006.

6. Manufacturing Development Commission

The joint subcommittee endorsed a proposal for legislation to establish a Manufacturing Development Commission as a permanent legislative body. The Commission will be responsible for assessing manufacturing needs and formulating legislative and regulatory remedies to ensure the future of the manufacturing sector in Virginia. The proposal was unanimously endorsed by the joint subcommittee, which viewed the proposal as a vehicle for the continuation of its efforts on behalf of the manufacturing sector. It was specifically mentioned that the report of JLARC pursuant to Senate Joint Resolution 360, which is to address the regulatory burden on Virginia's manufacturing sector, is not scheduled to be completed until the 2007 Session.

As introduced by Senator Wagner as Senate Bill 261 and by Delegate Purkey as House Bill 1233, the 13-member Manufacturing Development Commission was charged with the powers and duties to:

- Assess the direct and indirect economic impact of the manufacturing sector of Virginia's economy;
- Determine how the sector's needs may most speedily, efficiently, and cost-effectively be addressed;
- Consider both local and state tax policies, regulatory compliance costs, research and development investment policies, energy policies and costs, transportation policies and costs, and workforce training policies and costs affecting the manufacturing sector;
- Determine what role state and local governments should properly play in this endeavor;
- Evaluate the effectiveness of state and local economic development programs and incentives as tools to encourage technology-intensive manufacturing;
- Consult and coordinate with the Joint Commission on Technology and Science, the Joint Legislative Audit and Review Commission, the Joint Commission on Administrative Rules, and other legislative commissions, committees, and councils to ensure that there is no overlap in work product;
- Provide manufacturers and advocates with a forum to address their concerns; and
- Report annually its findings and recommendations to the General Assembly and the Governor.

During the legislative session, Senate Bill 261 was amended to include a requirement that the Manufacturing Development Commission develop a comprehensive energy plan for the Commonwealth, which plan is to evaluate the Commonwealth's current and future energy supply and demand. In developing the plan, the Commission shall solicit and analyze suggestions and information from the following sectors: utility providers, petroleum companies, automobile manufacturers, fuel suppliers, technology companies, environmental organizations, and consumers. The inclusion of this duty resulted from the incorporation by the Senate Rules Committee into this bill of Senator Whipple's Senate Joint Resolution 80. The measure was added to House Bill 1233 when the bill went to a joint committee of conference.

As introduced, the bills provided that the Commission would have an indefinite term. The measure was amended to provide that its existence will expire on July 1, 2009. In addition, if the Commission is not funded by a separate appropriation in the appropriation act for any year following its first year of existence, its existence will expire on July 1 of the fiscal year that the Commission fails to receive such funding.

Though the bills were identical as they passed the House and Senate, the Governor proposed an amendment to Senate Bill 261 that clarified that the four-year term of the president of the VMA as a member of the Commission will be coincident with his term of office. The Governor's amendment was agreed to by both houses of the legislature. No such amendment was proposed for House Bill 1233. A copy of the reenrolled Senate Bill 261 incorporating the Governor's amendment is attached as Appendix CC.

7. Association Health Plans

At the group's November 30, 2005, meeting, staff presented a proposal that both directed the Virginia Liaison Office to lobby for federal association health plan (AHP) legislation and amended Virginia's insurance laws to exempt AHPs from state law to the extent preempted by the federal legislation. Though they did not oppose AHPs in concept, members recognized that an attempt to statutorily authorize the operation of AHPs in Virginia prior to the enactment of federal enabling legislation was premature. The proposal was not discussed at the joint subcommittee's January 10, 2006, meeting.

The joint subcommittee's efforts led Senator Wagner to introduce Senate Bill 487, which directed the Virginia Liaison Office to work with members of the State Congressional Delegation and executive agencies to develop, support, and enact legislation, such as the Small Business Health Fairness Act of 2005, that provides (i) for the establishment and governance of group health plans sponsored by trade, industry, professional, chamber of commerce, or similar business associations, which are referred to as association health plans, and (ii) that such plans that meet certain certification requirements under the federal Employment Retirement Income Security Act of 1974, as amended, are preempted, with certain exceptions, from state regulation of health insurers. A copy of Senate Bill 487 as introduced is attached as Appendix DD.

Senate Bill 487 was amended in the Senate Committee on General Laws and Technology to direct the Virginia Liaison Office to work with Virginia's Congressional Delegation and federal executive agencies to develop, support and enact legislation that provides for the establishment of AHPs, provided that such plans remain subject to the laws of the Commonwealth. The measure passed the Senate by a vote of 22 to 15. With nonsubstantive amendments, the measure passed the House by a vote of 70 to 30, and the Senate agreed to the House's amendments.

Governor Kaine proposed amendments to the bill that re-worded it to provide that it is the public policy of the Commonwealth to support federal efforts to encourage pooling of health insurance by small businesses, provided any such health insurance plans remain subject to state law. The House and Senate unanimously accepted the Governor's amendments.

8. Apportionment of Corporate Income

The joint subcommittee was briefed at its November 30, 2005, meeting on several options to revise Virginia's formula for apportioning taxable corporate income among states. Currently, Virginia uses a formula that gives equal weight to a firm's payroll and property and double weight to its sales in the Commonwealth. The joint subcommittee reviewed a proposal to replace the current formula using the firm's sales as the only factor. A copy of the proposal reviewed by the joint subcommittee is attached as Appendix EE.

The joint subcommittee discussed several variations on the proposal, including limiting the use of the single factor formula to manufacturing firms or giving corporations the option to use the single factor sales formula as an alternative to the current method. However, the manufacturing community was unable to develop a consensus proposal that would not be detrimental to some firms, and the issue was not on the agenda for action at the joint subcommittee's final meeting. Accordingly, no recommendation was made on this issue.

VI. CONCLUSION

The Commonwealth's manufacturing sector is weathering difficult times. Rising costs and foreign competition make it increasingly difficult to operate manufacturing facilities in a manner that generates margins that make Virginia's manufacturers competitive with firms located all over the globe. The troubles facing the sector are evident in the loss of over 67,000 manufacturing jobs between 2000 and 2004. The loss of comparatively high-paying manufacturing jobs in many areas of the Commonwealth, notably the textile and furniture production areas of the Southside, has disrupted families, communities, and other sectors of the economy.

Nevertheless, manufacturing remains a vital element of Virginia's diversified economy. While employment has declined in many manufacturing subsectors, the remaining manufacturing employees are increasingly productive. Jobs in the manufacturing sector on average pay higher wages than employment in many service sectors. The manufacturing sector comprised 12% of the Commonwealth's economy, and its \$32 billion contribution to the state's economy cannot be overlooked.

The members of the joint subcommittee recognize the importance of retaining, and expanding, Virginia's manufacturing base. Much of the growth in productivity results from the increasing capital intensive nature of modern manufacturing, and the joint subcommittee recognizes the importance of public policies that encourage future investments in the Commonwealth.

The General Assembly and Governor should ensure that Virginia's policies foster an environment that remains attractive to manufacturing. In order to prevail in the globally competitive market for manufacturing sites, Virginia should focus its attention on steps to encourage advanced manufacturing sectors, which will require investments in both human capital and physical infrastructure. Any barriers that place Virginia at a competitive disadvantage vis-à-vis other states with which it competes for manufacturing investment need to be identified and addressed. The joint subcommittee understands that future success will involve addressing a variety of complex and interrelated issues, starting with rising energy costs and a system of taxation that at times appears to create disincentives for investments in plants and equipment.

While the joint subcommittee is proud of the legislative initiatives it has sponsored in its two years of existence, its members recognize that its task is not completed and that much work remains to be done. Among the tasks that remain are receiving JLARC's report pursuant to Senate Joint Resolution 360 of the comparative burden of regulatory compliance on Virginia's Manufacturing Sector and the five-year plan to assist localities in diversifying their economies that are dependent upon facilities used for manufacturing purposes that is being prepared pursuant to Senate Bill 417 of the 2006 Session. To that end, the members applaud the enactment of legislation creating the Manufacturing Development Commission, and look forward to continuing the work that the joint subcommittee has initiated.

The joint subcommittee appreciates the assistance provided by all interested persons who participated in its work. The efforts of Brett Vassey and Pam Rickman of the VMA have been instrumental to the joint subcommittee throughout the past two years. Finally, the members extend their sincere gratitude to the manufacturing firms, including Georgia Pacific, Wyeth Pharmaceuticals, Barr Laboratories, and Volvo North America, that have hosted meetings of the joint subcommittee at their facilities.

Respectfully submitted,

Senator Frank W. Wagner, Chair
Delegate Harry R. "Bob" Purkey, Vice Chair
Senator John C. Watkins
Senator Martin E. Williams
Delegate Watkins M. Abbitt, Jr.
Delegate Daniel W. Marshall, III
Delegate Samuel A. Nixon, Jr.
Delegate Christopher B. Saxman

2004 SESSION

ENROLLED

SENATE JOINT RESOLUTION NO. 64

Establishing a joint subcommittee to study manufacturing needs and the future of manufacturing in Virginia. Report.

Agreed to by the Senate, February 17, 2004
Agreed to by the House of Delegates, March 9, 2004

WHEREAS, even before the present economic slump, the manufacturing sector of Virginia's economy was in decline; and

WHEREAS, while the decline in manufacturing industries and the disappearance of manufacturing jobs may be most pronounced in south-central Virginia, it is nevertheless a statewide phenomenon; and

WHEREAS, a healthy and prosperous manufacturing sector is essential if Virginia is to have a sound, well-balanced economy; and

WHEREAS, the needs of the manufacturing sector in the economy of the Commonwealth deserve careful, thoughtful consideration; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That a joint subcommittee be established to study manufacturing needs and the future of manufacturing in Virginia. The joint subcommittee shall consist of eight members appointed as follows: three members of the Senate to be appointed by the Senate Committee on Rules and five members of the House of Delegates to be appointed by the Speaker of the House of Delegates in accordance with the principles of proportional representation contained in the Rules of the House of Delegates.

In conducting its study, the joint subcommittee shall (i) assess the current state of the manufacturing sector of Virginia's economy; (ii) determine how the sector's needs may most speedily, efficiently, and cost-effectively be addressed; (iii) consider both local and state tax policies affecting the manufacturing sector and regulatory compliance and costs; and (iv) consider what role state and local governments should properly play in this endeavor.

Administrative staff support shall be provided by the Office of the Clerk of the Senate. Legal, research, policy analysis, and other services as requested by the joint subcommittee shall be provided by the Division of Legislative Services. All agencies of the Commonwealth shall provide assistance to the joint subcommittee for this study, upon request.

The joint subcommittee shall be limited to four meetings for the 2004 interim, and the direct costs of this study shall not exceed \$8,000 without approval as set out in this resolution. Approval for unbudgeted nonmember-related expenses shall require the written authorization of the chairman of the joint subcommittee and the respective Clerk. If a companion joint resolution of the other chamber is agreed to, written authorization of both Clerks shall be required.

No recommendation of the joint subcommittee shall be adopted if a majority of the Senate members or a majority of the House members appointed to the joint subcommittee (i) vote against the recommendation and (ii) vote for the recommendation to fail notwithstanding the majority vote of the joint subcommittee.

The joint subcommittee shall complete its meetings by November 30, 2004, and the chairman shall submit to the Division of Legislative Automated Systems an executive summary of its findings and recommendations no later than the first day of the 2005 Regular Session of the General Assembly. The executive summary shall state whether the joint subcommittee intends to submit to the General Assembly and the Governor a report of its findings and recommendations for publication as a document. The executive summary and report shall be submitted as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports and shall be posted on the General Assembly's website.

Implementation of this resolution is subject to subsequent approval and certification by the Joint Rules Committee. The Committee may approve or disapprove expenditures for this study, extend or delay the period for the conduct of the study, or authorize additional meetings during the 2004 interim.

ENROLLED

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SENATE JOINT RESOLUTION NO. 361

Continuing the joint subcommittee studying the needs of the manufacturing sector and the future of manufacturing in Virginia. Report.

Agreed to by the Senate, February 2, 2005
Agreed to by the House of Delegates, February 24, 2005

WHEREAS, Senate Joint Resolution No. 64 (2004) established the joint subcommittee to study manufacturing needs and the future of manufacturing in Virginia; and

WHEREAS, the joint subcommittee made progress on many of the issues specified in Senate Joint Resolution No. 64 and made a number of legislative recommendations for the 2005 Session; and

WHEREAS, although the joint subcommittee assessed the current state of the manufacturing sector of Virginia's economy, the number and complexity of issues facing the manufacturing sector precluded the joint subcommittee from completing its analysis of how the sector's needs may most speedily, efficiently, and cost-effectively be addressed; and

WHEREAS, due to the need to complete its analyses of the regulatory burden placed upon the manufacturing sector, the equity of the state and local tax structure with respect to the manufacturing sector, the options to alleviate rising health insurance costs, and other relevant issues, the work of the joint subcommittee should be continued for one additional year; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the joint subcommittee studying the needs of the manufacturing sector and the future of manufacturing in Virginia be continued. The joint subcommittee shall consist of eight members appointed as follows: three members of the Senate to be appointed by the Senate Committee on Rules and five members of the House of Delegates to be appointed by the Speaker of the House of Delegates in accordance with the principles of proportional representation contained in the Rules of the House of Delegates. In conducting its study, the joint subcommittee shall continue its work from the 2004 interim to (i) determine how the manufacturing sector's needs may be addressed quickly, efficiently, and cost-effectively and (ii) consider what role state and local governments should have in this endeavor.

Current members appointed by the Speaker of the House of Delegates shall be subject to reappointment. Current members appointed by the Senate Committee on Rules shall continue to serve until replaced. Vacancies shall be filled by the original appointing authority, except that vacancies occurring in Senate appointments shall be filled by the Senate Committee on Rules.

Administrative staff support shall continue to be provided by the Office of the Clerk of the Senate. Legal, research, policy analysis, and other services as requested by the joint subcommittee shall continue to be provided by the Division of Legislative Services. All agencies of the Commonwealth shall provide assistance to the joint subcommittee for this study, upon request.

The joint subcommittee shall be limited to four meetings for the 2005 interim, and the direct costs of this study shall not exceed \$4,800 without approval as set out in this resolution. Approval for unbudgeted nonmember-related expenses shall require the written authorization of the chairman of the joint subcommittee and the respective Clerk.

No recommendation of the joint subcommittee shall be adopted if a majority of the House members or a majority of the Senate members appointed to the joint subcommittee (i) vote against the recommendation and (ii) vote for the recommendation to fail notwithstanding the majority vote of the joint subcommittee.

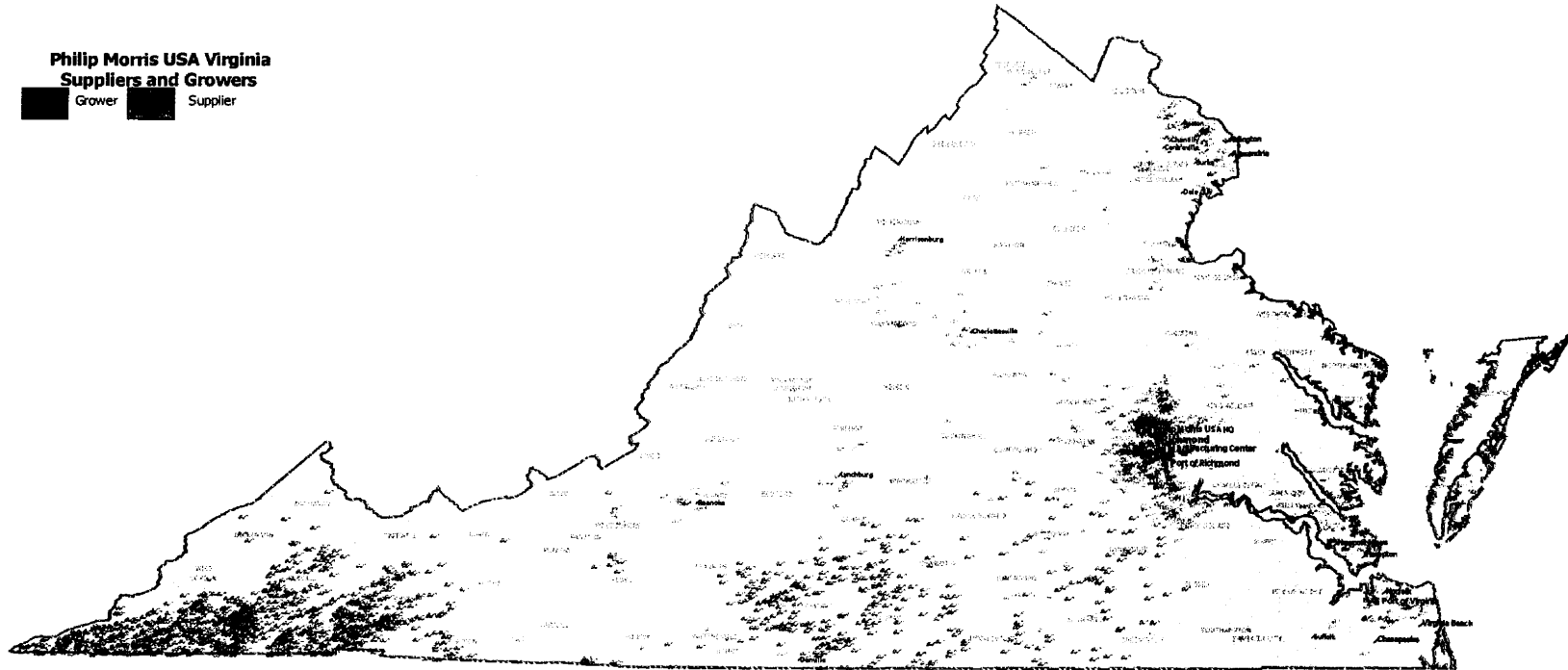
The joint subcommittee shall complete its meetings by November 30, 2005, and the chairman shall submit to the Division of Legislative Automated Systems an executive summary of its findings and recommendations no later than the first day of the 2006 Regular Session of the General Assembly. The executive summary shall state whether the joint subcommittee intends to submit to the General Assembly and the Governor a report of its findings and recommendations. The executive summary and report shall be submitted as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports and shall be posted on the General Assembly's website.

Implementation of this resolution is subject to subsequent approval and certification by the Joint Rules Committee. The Committee may approve or disapprove expenditures for this study, extend or delay the period for the conduct of the study, or authorize additional meetings during the 2005 interim.

ENROLLED

SJ361ER

Philip Morris USA Virginia Suppliers and Growers



Philip Morris USA purchases about \$850 million worth of goods and services on an annual basis, from 1,100 suppliers with facilities in Virginia. We also purchase tobacco from 1,500 growers in Virginia.

8/16/2004



THE VIRGINIA STRATEGY FOR GROWTH AND MANUFACTURING RENEWAL

Whereas, Virginia Manufacturing is essential as ever to the strength of the American economy and its prospects for future growth and is as central to our national security as it is to our economic security; and,

Whereas, the manufacturing sector for decades has accounted durably for about 25% of U.S. economic output and the overwhelming percentage of American exports, and continues to do both today while leading the economy in productivity; and,

Whereas, manufacturing in the United States is innovative, efficient and productive with the best workers in the world, technologies on the global cutting edge and R&D programs and efforts capable of keeping it there; and,

Whereas, manufacturing is challenged as never before -- finding itself on the front lines of the most intense global competition in history which makes it virtually impossible to raise prices even as costs continue to rise for many reasons including actions by government or its failure to act; and,

Whereas, the costs of domestic production for reasons ranging from health care inflation, and regulatory and legal burdens to volatile energy prices have combined with slow economic growth domestically and around the world, a persistently overvalued dollar, terrorism and geopolitical uncertainty, to increase the complexity of the challenge facing manufacturing; and,

Whereas, the economic climate has yielded the slowest manufacturing recovery in decades and a decline in manufacturing employment totaling a loss of two million jobs, despite productivity gains and threatening a loss of the critical skills associated with them; and,

Whereas, an effective strategy for manufacturing renewal to reverse these adverse trends depends in large part on the enactment and implementation of an effective policy agenda for growth by Congress, the Executive Branch, the General Assembly and the Administration; and,

Whereas, special emphasis must be placed on:

- **Tax policy** that enhances economic growth and encourages productivity through technology and investment incentives and recognizes that the effective tax rate on manufacturers must be measured against our ability to compete globally versus simple arithmetic comparisons of single tax rates in neighboring states;
- **Fiscal policy** that does not allow core government services to be devolved into fee-based services that force disproportionate taxation on specific sectors of the economy and recognizes the preference Virginia must demonstrate in encouraging businesses that represent "basic industry" and therefore bring new money to the Commonwealth by

virtue of the fact that 50% or more of their sales come from outside the state or nation;

- **Fees for Services** should be controlled as an “unfunded mandate” on industry, measured as a part of an overall effective tax rate and not allowed to be altered without the same machinations required for other tax rate alterations. Further, fees should: (1) recover only a portion of the agency’s costs of permit processing, (2) be collected for the purpose of more efficiently and expeditiously processing permits, (3) augment, not supplant or reduce, general funding of agencies, (4) have dollar amounts of the fees capped by statute, (5) not place existing or prospective industries at a competitive disadvantage with industries in competing states and countries, and (6) require regulatory agencies to be accountable to the General Assembly for their use of the fees and their effectiveness in processing permits, and budget amendments and bills which are contrary to these six principles should be opposed;
- **Health Care and Retirement System Reforms** that will permanently improve the quality and affordability for employers and employees while lowering the anti-growth and costly job-destroying burdens the regulatory controls governing these systems currently impose. These reforms must focus on efforts to remove the barriers that obstruct flexible insurance plans, remedy that 22% of health insurance premiums are directly due to the fact that Virginia has more mandated health benefits than 45 states, address the escalating rate of uninsured and encourage the development of the long-term care insurance market;
- **Worker and skills** enhancing efforts, first, to put people back to work and further, to empower today’s workers and tomorrow’s, both in school and in the workforce, to acquire certified and competency-based assessments and credentials that meet employer demands and create a world-class pipeline of competitive employees at the “technician” level of employment that have the capability of filling the 30% attrition that could occur by 2007 in manufacturing operations due to retirements, while at the same time educating decision-makers and parents to better appreciate the rewards of modern jobs in technology-intensive manufacturing;
- **Transportation policy** that insures adequate resources are allocated toward insuring our commerce-based infrastructure is operated securely and competitively while valuing that technology and safety enforcement are integral to a multimodal transportation infrastructure that maintains Virginia’s industrial competitiveness in intrastate and interstate commerce;
- **Environmental policy** that recognizes the Commonwealth’s responsibility in maintaining efficient, lean, cost-effective and responsive state environmental agencies and efforts of the Virginia Department of Environmental Quality (DEQ) that result in state administration of federally-delegated programs. Further, these programs and policies should have an appropriate balance between environmental protection and

economic development; be based on good science; consider cost impacts and comparative risk assessments in regulatory process; and, allow for flexible and performance-based approaches;

- **Litigation Efficiency** that will allow frivolous suits to be ended at the summary judgment stage. The Commonwealth of Virginia is the only state that does not permit the use of depositions and certain other evidentiary material for summary judgment purposes. A motion for summary judgment to be supported by depositions, affidavits, pleadings, answers to interrogatories, admissions on file, and orders, if any, made at a pretrial conference;
- **Trade policy** that levels the global playing field for American manufacturers by opening markets, lowering tariffs, modernizing export controls and sanctions policies, enforcing trade laws, achieving market driven currency valuations and insuring that adequate resources are focused on assisting domestic manufacturers compete in the global marketplace for new customers or new sources of material and components;
- **A national and state energy policy** is essential to ensuring sustainable economic growth in manufacturing, with emphasis on reliable supply at affordable prices, conservation, increased efficiency, strengthened infrastructure, and investments in new technologies;
- **Asbestos litigation and the legal system** are especially ripe for reform as the explosion of asbestos liability has bankrupted companies, cost workers their jobs and threatened retirement savings with an accumulated present and future liability burden of \$250 billion acting as an anchor on manufacturing's ability to recover.
- **Technology policy** that will preserve and enhance the U.S. lead in R&D and innovation and assure protection of intellectual property and strengthen our engineering and advanced skills for the purposes of growing Virginia's technology-intensive manufacturers;

Whereas, President Bush, his Administration, the Virginia General Assembly and the Governor have recognized the unique stresses confronting manufacturing, including the loss of employment; and,

Whereas, to further refine, clarify and advance a broader public awareness of the centrality of manufacturing, the pro-growth policies needed to maintain it and the nature and magnitude of the challenges facing it, Virginia should create a Blue-Ribbon Commission, inter-disciplinary and inter-departmental, to analyze each of these and to propose a strategy and plan of action for the state government to complement private sector actions to effectively sustain Virginia leadership at the top of global competitiveness.

Now therefore be it resolved that the Virginia Manufacturers Association commits its energies and resources to a multi-year effort to advance this strategy for growth and manufacturing renewal with every member of our Federal Delegation, the Virginia General Assembly, the Administration and other key officials dedicated to growing Virginia's domestic manufacturing base. We will seek to involve our member companies and their workers in this effort to spread the manufacturing message in Washington, Virginia and around the country -- and encourage our members' 119,000 employees to do the same; and,

Be it further resolved that members of the Virginia Manufacturers Association shall renew our conviction that what we seek with this strategy for growth and manufacturing renewal is in the interest of 330,000+ Virginia manufacturing workers -- the people who make things in America -- the hundreds of thousands of employees in the service sector that are dependent upon a strong manufacturing base, their families, and in the broader interest of the country and the Commonwealth's economy as a whole. Relying on a proven ability to innovate, a consistent commitment to quality and excellence in products and processes and a durable entrepreneurial spirit, modern manufacturers will do their part. We will demand the same of government.

Virginia Manufacturing Economic Impact:

Business Establishments

Manufacturing	=	7,000
Transportation, Trucking & Warehousing	=	5,000
<i>Manufacturers w/20+FTE</i>	=	2,743

Employment

Manufacturing	=	330,000
Average Size	=	144
Median Employment	=	50
Transportation, Trucking & Warehousing	=	52,000

Average Weekly Wages

Manufacturing	=	\$805 (<i>8% above state business average</i>)
Transportation, Trucking & Warehousing	=	\$720

Economic Performance

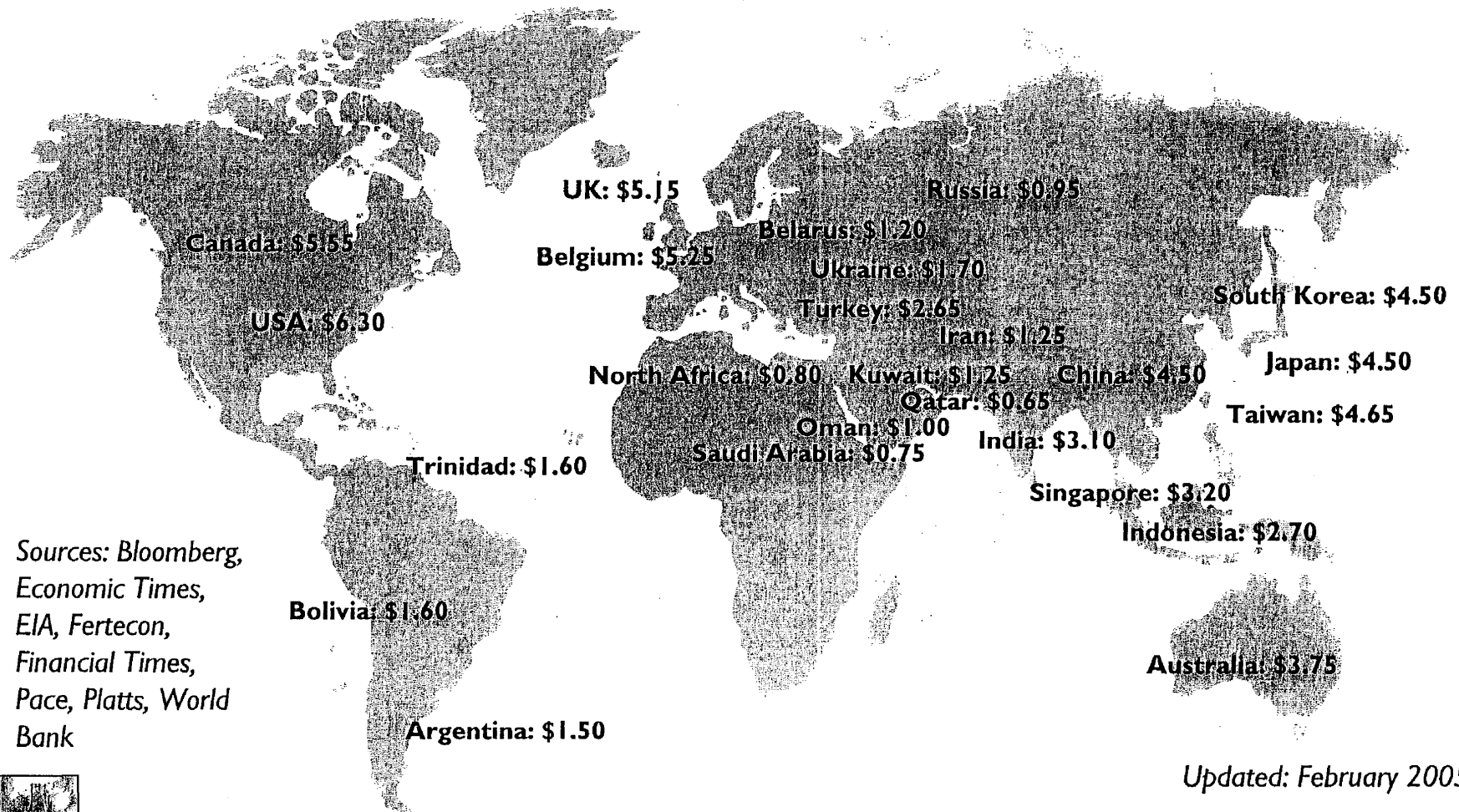
Manufacturing Average Sales	=	\$20,926,167.00 - \$35,760,782.00
Manufacturing Median Sales	=	\$1,000,000.00 - \$5,000,000.00
Manufacturing Share of GSP	=	12.3% (2002), 11.6% (2001)

Technology-Intensive Manufacturers

Average Sales	=	\$50,000,000.00+
Average Employment	=	132

Note: Virginia has lost 1 in 7 manufacturing jobs since July 2000 (Source: BLS, March 2003)

Natural Gas Costs around the World (\$US per million BTUs)



A-8

Sources: Bloomberg,
Economic Times,
EIA, Fertecon,
Financial Times,
Pace, Platts, World
Bank

Updated: February 2005



Honeywell Nylon LLC

Natural Gas and Manufacturing Competitiveness

Keith Togna

Hopewell Site Energy Leader

April 5, 2005

About the Hopewell, Virginia Honeywell Plant

- **Located about 23 miles SSE of Richmond, VA**
- **Constructed in 1915 >> DuPont munitions plant**
- **World's largest single-site producer of caprolactam and ammonium sulfate**
 - **6.8 billion pounds of materials produced annually**
- **Employees 750 people**
- **Contributes approximately 8% of the City of Hopewell's tax base**
- **Consume 57 million CF of natural gas per day**
 - **Equivalent to heating about 170,000 homes**

A-10

Largest industrial natural gas consumer east of the Mississippi

How the Hopewell Plant Uses Natural Gas

- **As a raw material and a fuel**
- **Methane in natural gas (CH_4) used to make ammonia**
 - **Ammonia used to make nylon and fertilizer**
- **Chemical reaction to make ammonia requires heat**
 - **Natural gas used as the fuel to provide that heat**
- **The cost of natural gas impacts Honeywell's bottom line**
 - **As a utility (fuel) - one third**
 - **As a raw material (feedstock) - two thirds**

A-11

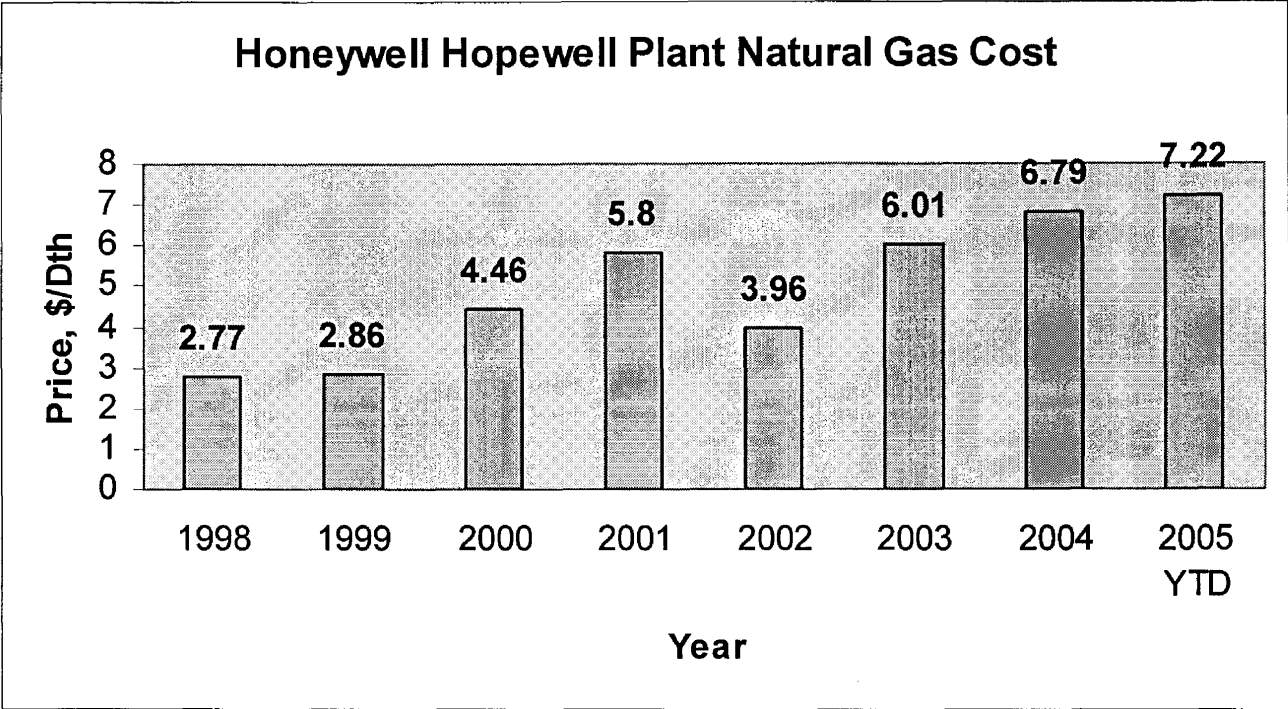
Reliable supply at a reasonable cost is vital to our business.

How the Cost of Natural Gas Impacts Honeywell's Business

- 30% of final product price is the cost of natural gas**
- Domestic competitors located in Texas & Georgia - closer to gas source, so lower transportation/distribution cost**
- Foreign competition: China, India, Eastern Europe - lower labor and energy costs**
- One penny per Dth costs us \$220,000 per year**
 - Our natural gas cost has risen 326 pennies in the past 3 years**
- In the last 3 years, the Virginia operations have experienced a 25% workforce reduction due to rising energy costs and foreign competition**

Honeywell's nylon business future is dependent on cost of energy.

Honeywell Hopewell's Historical Natural Gas Price



Price increase over past 3 years has cost \$72 million

Honeywell Landfill Gas Project

- **The increase in natural gas costs necessitated the exploration of alternative fuels.**
- **The landfill methane project was implemented in January 2004**
 - **EPA’s LMOP “2004 Project of the Year”**
 - * **Equivalent to planting 5500 square miles of trees**
 - * **Equivalent to not burning 1.2 billion gallons of oil**
 - **Longest landfill gas pipeline in the country - 23 miles**
 - **3-year effort of over 30 entities**
- **Currently displaces 4% of the natural gas requirement**
- **Projected to displace up to 20% over the next 50-70 years**

Honeywell has embraced alternative fuels.

LANDFILL GAS in VIRGINIA

Legislative Study of Manufacturing Needs and the Future of
Manufacturing in Virginia
SJR 64 (2004) / SJ 361 (2005)

By

William H. Brinker
President, Enerdyne Power Systems, Inc.

June 7, 2005

LFG TO ENERGY - OPTIONS

- ◆ Boiler fuel or medium BTU heat applications to substitute for natural gas, fuel oil and/or coal
- ◆ Generation of electricity on site or for sale on the electric grid
- ◆ Fuel Conversion
- ◆ High Btu Upgrade
- ◆ Other Technologies

BENEFITS

- ◆ Transform existing liability into asset
- ◆ Remove hazardous gas from the landfills which avoids flaring and undesirable air emissions
- ◆ Benefits the environment by utilizing a clean burning fuel in place of oil, natural gas and coal
- ◆ Reduces use of higher cost fossil fuels
- ◆ Saves money by reducing cost of fuel / electricity for industry

Virginia Sites

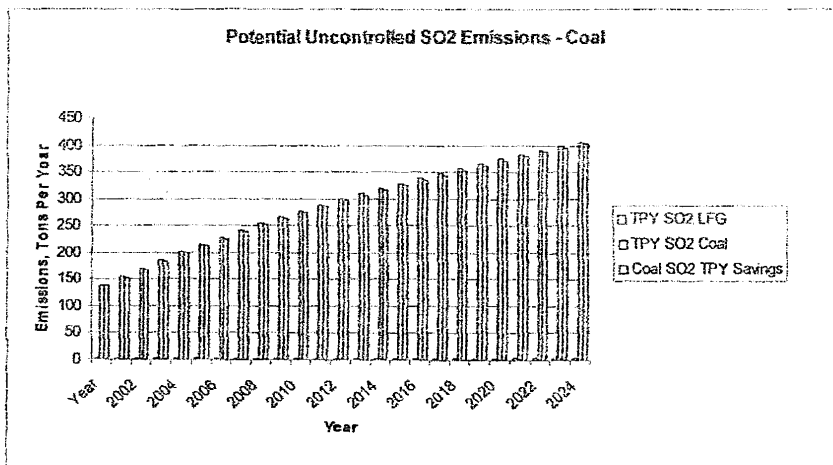
DEVELOPED

- ◆ Lynchburg
 - ✓ RockTenn utilizes LFG in boiler to offset originally coal, now natural gas.
- ◆ Chester - Power generation
- ◆ Amelia - Power generation
- ◆ Manassas - Power generation
- ◆ Virginia Beach - Power generation & Now selling CIBA LFG for boilers
- ◆ Lorton Virginia - Power generation & selling to local WWTP
- ◆ Fauquier County - Power generation LMOP*Community PTNR of Year
- ◆ Hopewell
 - ✓ Honeywell utilizes LFG in ammonia reformer for savings to be more competitive, creates jobs, EPA National Project of the year
- ◆ West Point
 - ✓ Smurfit-Stone has announced plans to utilize LFG in Lime Kilns & boiler
- ◆ King George
 - ✓ Birchwood Power has announced plans to utilize to offset coal in boiler

VIRGINIA SITES TO BE DEVELOPED

- ◆ Ever-increasing supply to trash in landfills
- ◆ Large landfills in Virginia with development potential
 - ◆ - Over 30 sites producing over 700 SCFM, 2 MW or > 600 HP Boiler
 - ◆ - Examples are Hampton, King & Queen, Dominion, Brunswick, Bristol, 4 in Shenandoah Valley
- ◆ Potential for over \$20 million in savings to Virginia Industry

ENVIRONMENTAL BENEFITS



Development of an LFG project

- ◆ Very difficult, takes a long time
 - ✓ Contract with landfill
 - ✓ Contract with LFG user
 - ✓ Construction of extraction and compression facilities
 - ✓ Obtain pipeline easements
 - ✓ Construct pipeline and tie-in to industrial user
- ◆ Each project is unique
- ◆ Not a utility, so no right of eminent domain to acquire rights-of-way
- ◆ Safety jurisdiction of State Corporation Commission by Virginia Statute

No Threat to Local Gas Distribution Companies

- ◆ Limited volumes of LFG available
- ◆ LFG is rarely brought up to pipeline quality, so it doesn't flow through local gas distribution utility pipes
- ◆ Only three customer can be served from a single landfill
- ◆ Most local gas utilities do not sell the gas to large industrial customers, but only transport it for delivery from a remote gas supplier

Recommendations to Joint Subcommittee

- ◆ Encourage State agencies (VDOT, DEQ) to cooperate with LFG projects and provide “constructive guidance.”
- ◆ Create Virginia income tax credits for industries that use landfill gas.
- ◆ Help create industry awareness of the local LFG utilization opportunities.

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Virginia's Apportionment Formula

Presented to the:

**Joint Subcommittee Studying Manufacturing Needs
And The Future Of Manufacturing In Virginia –
Pursuant To SJR 361**

August 25, 2005

Presented By:

**John P. Josephs, Jr.
Senior Tax Policy Analyst
Virginia Department of Taxation**

Background

To promote uniformity and reduce the potential for multiple taxation of corporate income, the Uniform Division of Income for Tax Purposes Act ("UDITPA") was approved in 1958. Under UDITPA, business income is viewed as unitary, that is, all parts contribute to the whole. The income of this unitary business is divided among the states according to a three-factor formula giving equal weight to property, payroll and sales. Most states imposing an income tax adopted UDITPA or a similar apportionment formula. Virginia did not adopt UDITPA, but enacted a similar formula in 1960.

Over the years states began shifting more weight to the sales factor for several reasons. One theory asserts that supply and demand contribute equally to corporate profits, while the formula emphasizes the supply side, or inputs, by giving two-thirds of the weight to property and payroll and only one-third to the demand side, or output. Double-weighting the sales factor equalizes the two sides. Other facts also influenced state tax policy decisions. In some states there is very little industry in relation to their population. They provide a market for producers in other states. These states may emphasize the sales factor because it reflects the value the state contributes to corporate profits by providing a market for the goods and services produced by the business.

By 2000, when Virginia's double-weighted sales factor became effective, most states imposing an income tax gave at least 50% of the weight in their apportionment formula to the sales factor. But today, another policy consideration is influencing the choices in selecting a state income tax apportionment formula – economic development.

Economic Development

State and local taxes are one of many factors reviewed by businesses considering expanding or relocating facilities. Articles on the subject generally conclude that taxes

are rarely a decisive factor, but are always considered. In the last 10 or 15 years Virginia has joined other states in using their tax system to offer incentives to encourage businesses to expand or relocate in Virginia. The major business facility job tax credit was Virginia's first major incentive of this type, and it clearly explains the rationale:

The General Assembly of Virginia finds that modern business infrastructure allows businesses to locate their administrative or manufacturing facilities with minimal regard to the location of markets or the transportation of raw materials and finished goods, and that the economic vitality of the Commonwealth would be enhanced if such facilities were established in Virginia.
§ 58.1-439 T.

Increasing the weight of the sales factor has been suggested as another means of making Virginia more attractive for businesses, particularly manufacturers. To understand how the weight of the sales factor could affect economic development, one must understand how the apportionment formula works.

The Apportionment Formula

After the business determines its income from the unitary business (usually federal taxable income with some adjustments), a formula is applied to determine the portion of that income attributable to the state. The formula starts with the percentages of the business' property, payroll and sales located in the state, and combines them into a single apportionment factor by giving varying weights to each factor.

Of the 47 states and the District of Columbia that impose a corporate income tax, all but 13 permit or require businesses to weight the sales factor at 50% or more. Eight states use a single sales factor for all taxpayers or for specified industries, usually manufacturing, and three more are phasing in a single sales factor. (See the table below.) All of the states contiguous to Virginia (except D.C.) use the same apportionment formula as Virginia, but Maryland recently enacted a single sales factor applicable only to manufacturers. The District of Columbia uses an equally weighted three-factor formula.

Today, Virginia's apportionment formula is in the mainstream in that more states use the same formula as Virginia than any other variation. Recently several states have moved toward a pure sales factor (whether for all multistate businesses or for selected industries). It has been suggested that Virginia should consider similarly changing its apportionment formula.

Such a change would increase the tax liability of some corporations while decreasing the liability of other corporations. The net impact on Virginia's corporation income tax revenue is likely to be negative. Let's examine the impact on taxpayers first.

Sales Factor Weight In Apportionment Formula		
Sales factor only	4	IL, IA, NE, TX
Three factors, sales weighted more than 50%	6	MI (90%), MN (phase in 100%), OH (60%), OR (phase in 100%), PA (60%); WI (phase in 100%)
Three factors, sales weighted 50%, but 100% sales factor for certain industries	4	CT (100% for mfg.); FL (100% for citrus growers); MA (100% for mfg.); MD (100% for mfg.);
Three factors, sales weighted 50%	17	AZ, AR, CA, GA, ID, IN, KY, LA, ME, NH, NJ, NY, NC, SC, TN, VA, WV
Three factors, equally weighted, but with exceptions	3	CO (option to eliminate payroll); NM (50% for certain mfg.) OK (50% certain cases)
Three factors, equally weighted	13	AL, AK, DC, DE, HI, KA, MS, MO, MT, ND, RI, UT, VT
No income tax imposed	4	NV, SD, WA, WY

Source: 2005 Multistate Corporate Tax Guide, Vol. I, CCH Incorporated;
CCH State Tax Review – Vol. 66 Issue 30 (News 7/26/05)

Winners and Losers

Who benefits when the weight of the sales factor is increased?

Mathematically speaking, any corporation whose percentages of property and payroll in Virginia are greater than the percentage of sales (double-weighted) in Virginia will see their Virginia tax go down as the weight of the sales factor goes up.

- This can be seen in Example 1. The sum of the property and payroll factors (58.33%) is significantly greater than the sales factor, doubled (20%). Increasing the weight of the sales factor reduces the business's Virginia apportionment factor and its tax liability.
- In Example 2, however, the property and payroll factors (9.76%) are less than the doubled sales factor (20%), so increasing the weight of the sales factor will increase the apportionment factor and tax liability of this business.

- In Example 3 the property, payroll and sales are relatively equal. As a result the business' tax liability will not be significantly affected by changes to the weight of the sales factor.

What types of businesses do these three examples represent? Example 1 represents a business that has a greater percentage of its facilities in Virginia than its sales in Virginia. Assuming that the business is profitable, it is probably producing more goods and services in Virginia than it sells in Virginia.

The business in Example 2 has a higher percentage of its sales in Virginia than it has facilities in Virginia. Again, assuming a profitable business, it is likely that much of what it sells in Virginia is produced outside of Virginia. The business in Example 3 appears to be balanced in the relationship between what it produces in Virginia and what it sells in Virginia.

<u>Example 1</u>	<u>Property</u>	<u>Payroll</u>	<u>Sales</u>
In Virginia	25,000	40,000	100,000
Everywhere	<u>100,000</u>	<u>120,000</u>	<u>1,000,000</u>
Percentage	25.00%	33.33%	10.00%
<u>Double-weight sales:</u>			
25.00% + 33.33% + (2 x 10.00%) = 78.33% ÷ 4 =			19.58%
<u>Triple-weight sales:</u>			
25.00% + 33.33% + (3 x 10.00%) = 88.33% ÷ 5 =			17.66%
<u>Single sales factor:</u>			10.00%

<u>Example 2</u>	<u>Property</u>	<u>Payroll</u>	<u>Sales</u>
In Virginia	5,000	9,000	100,000
Everywhere	<u>100,000</u>	<u>120,000</u>	<u>1,000,000</u>
Percentage	5.00%	7.50%	10.00%
<u>Double-weight sales:</u>			
5.00% + 7.50% + (2 x 10.00%) = 32.50% ÷ 4 =			8.13%
<u>Triple-weight sales:</u>			
5.00% + 7.50% + (3 x 10.00%) = 42.50% ÷ 5 =			8.50%
<u>Single sales factor:</u>			10.00%

<u>Example 3</u>	<u>Property</u>	<u>Payroll</u>	<u>Sales</u>
In Virginia	8,000	14,400	100,000
Everywhere	<u>100,000</u>	<u>120,000</u>	<u>1,000,000</u>
Percentage	8.00%	12.00%	10.00%
<u>Double-weight sales:</u>			
	$8.00\% + 12.00\% + (2 \times 10.00\%) = 40.00\% \div 4 =$		10.00%
<u>Triple-weight sales:</u>			
	$8.00\% + 12.00\% + (3 \times 10.00\%) = 50.00\% \div 5 =$		10.00%
<u>Single sales factor:</u>			
			10.00%

Any type of business can be in any of the situations represented by the three examples. Retail businesses are often set up as in Example 3 because they usually must be close to their customers. Manufacturers can ship their products anywhere and usually are not required to be close to their customers. They could fit Examples 1 or 2 depending on whether the manufacturing plant is located in Virginia or another state. But other businesses, even retailers, could fit the first two examples. Retail chains usually have central warehouses, headquarters and other administrative facilities that serve a wide region, and the location of these facilities could move a retailer from Example 3 to one of the first two examples.

If an established manufacturer needs to expand, it may compare adding on to an existing facility or building a new facility in another state. In this situation the manufacturer's sales factor will not be affected by the location of the expanded or new facility, only its property and payroll factors.

- If the new facility is placed in Maryland (which has a single sales factor for manufacturers), it would have no impact on Maryland's corporate income tax liability because manufacturer's property and payroll are ignored in apportioning its income.
- If the new facility is placed in Virginia, it would increase Virginia's corporate income tax liability because property and payroll constitute one-half of the apportionment formula.

While a single sales factor would generally be considered a favorable factor by manufacturing businesses considering locating a facility in Virginia, this is not always true.

- There are businesses that have structured their operations to minimize state taxes. Sometimes the emphasis on a sales factor is detrimental to tax planning, so increasing the weight of the sales factor would not be viewed favorably. In

other cases, the tax planning may take advantage of the absence of a property and payroll factor.

- An established out-of-state retail business may expand into Virginia by making a substantial investment in property and payroll to open retail establishments in Virginia, but the sales of the new establishments may take a few years to grow.
- Paradoxically, if an affiliated group of corporations that files a combined Virginia return has one member that is unprofitable, the group would benefit from a higher Virginia apportionment factor for that unprofitable member.

These principles transcend all types of businesses. The following multistate businesses would benefit from an increase in the weight of the sales factor:

- A retail store chain with major warehouses in Virginia
- A regional service business with its parts warehouse in Virginia
- A professional service firm with its centralized administrative office in Virginia
- A manufacturing business with its factory in Virginia

Tax Policy Implications

Increasing the weight of the sales factor is being urged for economic development purposes, not for tax policy reasons. In an ideal world, all states would use the same apportionment formula. When states use different methods of apportioning income, corporations can take advantage of the situation to create “nowhere income,” that is, income that is not apportioned to any state for taxation.

For example, a manufacturer with one factory but nationwide sales would benefit from a single factor formula in the state where the factory is located and an equally weighted three-factor formula in all of the states where it markets its products. It would pay tax on about 2% of its income in its home state, but the 98% of its sales in other states would be reduced as the three-factor formula divides sales in the state by three (since there would be no property or payroll in the other states). Adding up the income apportioned to all of the states would result in just over one-third of its income being taxed – almost two-thirds of its income would be “nowhere income.”

That same manufacturer would see its tax increase in other states that adopt a single sales factor, and if all states adopted a single factor about 100% of its income would be taxed by the states. This explains why Ford Motor Corporation supported a single factor in Michigan (for its single business tax), but opposed adoption of a single factor in

Illinois. Similarly, Kraft Foods, headquartered in Illinois, supported adoption of a single sales factor in Illinois, but opposed it in Maryland.¹

The impact of federal laws must also be considered. Federal law currently prohibits states from taxing a corporation whose only contact with the state is the sale of tangible personal property through salesmen who can only solicit orders (contracts have to be approved outside the state). Most manufacturers can easily structure their marketing to take advantage of this federal law and avoid taxation in many states. Indeed, at least one commentator speculates that corporations have a two-pronged plan to gut state income taxes by seeking a single sales factor in states, while lobbying Congress to expand the federal law prohibiting state taxation of corporations with limited business activity in the state.²

One way to limit the creation of nowhere income associated with the sales factor is to adopt a “throwback rule” that attributes sales to the state from which goods are shipped when the corporation is not taxable in the destination state. Virginia adopted a throwback rule in 1960, but repealed it in 1981. A throwback rule was also included in the Governor’s tax reform proposal in 2004, but was not enacted. Businesses generally oppose the adoption of a throwback rule.

Revenue Impact

In order to estimate the revenue impact of increasing the weight of the sales factor, the Department examined 293 returns filed by a sample of corporations for taxable year 2003 (the latest year for which complete data is available). This sample included all returns for corporations with \$10 million or more in taxable income from Virginia sources, about 97% of the returns with \$5 to \$10 million in taxable income, and representative samples of those with smaller incomes. The returns in the sample represented 72% of Virginia’s total corporate income tax receipts for the 2003 taxable year.

The returns were recalculated to determine the impact of changing the weight of the sales factor in the apportionment formula to 100% (single sales factor) and 60% (triple weighted factor). In addition to noting the amount by which tax liability changed, the number of taxpayers that saw their tax reduced by the change (winners) and increased (losers) was noted. Corporations that had their entire operations in Virginia do not apportion income and showed no change. A few corporations were subject to a minimum tax (telecommunications or electric suppliers) and also showed no change. The “winner/loser” designation was applied to each return regardless of how many

¹ Mazerov, “The ‘Single Sales Factor’ for State Corporate Taxes: A Boon to Economic Development or a Costly Giveaway,” Center for Budget and Policy Priorities. Retrieved 8/19/05 from <http://www.cbpp.org/3-27-01sfp.htm>.

² Mazerov, “Federal ‘Business Activity Tax Bill: Half of a Two-Pronged Strategy To Gut State Corporate Income Taxes,” State Tax Notes, February 7, 2005, p. 399.

affiliates were included in a combined or consolidated return. The results are shown below:

Single Sales Factor (Weight = 100% of Formula)

Income from Virginia Sources	Winners	Losers	No Change	Amount of Change in Tax	Percentage Change
More than \$10 Million	52	28	17	-\$28.0 million	-13.8%
\$ 5 to \$10 Million	47	38	11	-\$4.2 million	-10.0%
\$2 to \$5 Million	10	14	1	+\$3.1 million	+7.2%
\$1 to \$2 Million	9	13	3	-\$3.4 million	-12.6%
\$0.5 to \$1 Million	11	13	1	-\$0.2 million	-1.0%
\$0.1 to \$0.5 Million	16	8	1	-\$4.8 million	-22.7%
Totals	145	114	34	-\$37.5 million	

Triple-Weighted Sales Factor (Weight = 60% of Formula)

Income from Virginia Sources	Winners	Losers	No Change	Amount of Change in Tax	Percentage Change
More than \$10 Million	54	26	17	-\$5.8 million	-2.9%
\$ 5 to \$10 Million	47	38	11	-\$0.9 million	-2.1%
\$2 to \$5 Million	10	14	1	+\$0.6 million	+1.4%
\$1 to \$2 Million	9	12	3	-\$1.2 million	-4.4%
\$0.5 to \$1 Million	11	13	1	-\$0.04 million	-0.2%
\$0.1 to \$0.5 Million	16	8	1	-\$1.0 million	-4.5%
Totals	147	102	34	-\$8.3 million	

As can be seen from the tables, more corporations are winners than losers when the weight of the sales factor is increased. The greater the weight placed on the sales factor, the greater the impact of the change on corporate tax liability. For the Commonwealth, increasing the weight of the sales factor will result in a revenue loss, and the loss from a single sales factor would be more than four times greater than the loss from triple-weighting the factor. This is consistent with the result of a similar analysis performed in connection with legislation that changed Virginia's apportionment formula from equally-weighted factors to double-weight the sales factor.

This data represents the consequences had the revised apportionment formula been in effect for taxable year 2003. Projections of the impact on future fiscal year revenue of the Commonwealth have not been provided. Corporate income tax revenue is the most volatile of our revenue sources. While an individual corporation's apportionment factor usually does not change significantly from year to year, its profitability does. Thus, the impact of changing the apportionment formula will depend on overall corporate profits, as well as which corporations have good or bad years.

The information captured on corporate income tax returns does not allow reliable classification of taxpayers among industry groups. The return asks corporations for their North American Industry Classification System (NAICS) code, but such codes are self-assigned, and may not be representative of large corporations that are engaged in several business sectors. As discussed above, the industry in which a taxpayer is

engaged has little impact on its apportionment. The location of its property and payroll in relation to its sales is the critical factor in apportioning its income. Nevertheless, inspection of the codes revealed that holding companies were consistently winners. Holding companies often have subsidiaries engaged in different industries, and frequently structure their holdings and operations for maximum tax advantage.

The returns have two items of information representing their location: (1) the state of incorporation, and (2) the address on the return. The state of incorporation has little relationship to the corporation's commercial domicile or base of operations. The address on the return is normally the tax office of the corporation, which may or may not be located at the headquarters of the corporation, and which does not always represent the location of most of its operations. Thus, return location information is not relevant to this issue.

REMARKS OF BOB WHELEN TO THE
JOINT SUBCOMMITTEE STUDYING THE MANUFACTURING
NEEDS AND THE FUTURE OF MANUFACTURING IN VIRGINIA
(ECONOMIC DEVELOPMENT)

AUGUST 25, 2005
DUBLIN, VIRGINIA

Good afternoon Mr. Chairman and members of the Committee.

My name is Bob Whelen and I am responsible for economic development for Volvo Trucks and Mack Trucks in North America.

On behalf of Volvo and Mack, I am pleased to welcome you to our factory. As you toured the plant earlier today I trust that you increased your understanding of how important the work we're doing here at the New River Valley Plant is to the success of Volvo and Mack Trucks, and just as importantly, gained an appreciation for the number of folks we employ, and our contribution to the local and state economy.

This is a wonderful community in which to live, and I know that because I essentially lived here for about three years during our expansion at the beginning of this decade.

This area is blessed with scenic vistas and cultural attractions, and a strong educational system. Its also fortunate to have local leadership with vision and foresight. All these attributes help to provide Volvo and Mack with a well-trained, motivated and reliable workforce. That's certainly been one catalyst for our continued desire to invest in this facility, expand our presence, and contribute in a variety of ways to the local community.

The business of manufacturing heavy-duty trucks is extremely cyclical. Over the nearly 25 years we've been here in the New River Valley, we and our competitors have experienced dramatic peaks and valleys in production demand. But throughout this period, Volvo has continued to strengthen the New River Valley plant -- adding capacity, adding new products, and constantly evaluating and improving our manufacturing methods. After each downturn, the New River Valley plant has come back stronger, producing more in the years after each downturn than we had in any years prior to it. Recent examples of our commitment include the 1999 capacity expansion project that resulted in a Volvo investment of roughly \$148 million, and the transfer of Mack's highway tractor production from Winnsboro, South Carolina, to NRV in 2003. As a result of these two initiatives, we now employ about 3,200 people here in New River Valley -- almost a thousand more than we did at the start of this decade.

This factory is a flagship for the Volvo Group, and is certainly the finest, most well-equipped heavy truck manufacturing facility in North America.

Our company believes we are fortunate to have a great facility, a strong and competent workforce and significant support from the community at large and our elected officials. The partnership between Volvo, the New River Valley, and the Commonwealth of Virginia is unquestionably a win-win situation for all. All told, our company, suppliers and employees contribute millions of dollars to the local

and state tax bases, and our presence in the New River Valley is a tremendous boost to the local and regional economy in general.

The Commonwealth of Virginia has certainly recognized Volvo's importance to this region over the last 25 years, and we've enjoyed a good working relationship. In 1994 and 1999 the Commonwealth assisted Volvo with its expansion of the factory by providing performance based economic incentives.

We very much appreciate the support the Commonwealth has provided us, and I also want to commend the Virginia Manufacturing Association for their leadership in this effort and for their continuing effort on behalf of Virginia's manufacturing community.

From an economic development perspective, I believe that Virginia, and more specifically the New River Valley, are genuinely marketable as manufacturing locations as a result of their people, environment, infrastructure, and the commitment of their elected and appointed government officials to supporting employers.

But as good as Volvo's relationship with Virginia has been (and continues to be), there are some economic development trends and initiatives we're seeing in other states that we'd like to pursue with Virginia as our partnership evolves. We're seeing, for example, that huge state cash or tax incentives supporting job creation are becoming fewer and farther between. While some of these deals will

continue as long as intense competition for job creation exists, state and local governments are clearly balking at BMW- or Mercedes-type agreements as they struggle to sustain economic development initiatives, attract new businesses and retain existing businesses and employment. Limited funds are forcing governments and economic development authorities to make difficult choices, and re-think their marketing strategies.

One such strategy that we are contributing to in another state, and which we are finding valuable and refreshing, involves the state and local governments taking a far more active and aggressive interest in the success of the businesses in which taxpayer funds have been invested, and protecting those investments. In our case, for example, that state is assisting us in developing business with U.S. military entities headquartered in the state, with state and local government departments and agencies, and with other industries in that state. They are even helping us gain access to the table when vehicle specifications are being developed so there is a competitive advantage to our business when bid packages are issued. We are also being assisted in obtaining public research and development project funding that's relevant to our commercial business strategy.

Again, while the support we've received here in Virginia has been excellent, we'd welcome the opportunity to move our partnership in this direction, and more

aggressively explore the many “win-win” opportunities that are sure to exist here -- and at little or no cost to the state or its citizens.

Also in this same state, we have regular dialog with members of the governor’s cabinet as they develop an understanding of how particular legislation or proposed projects may impact our business. We communicate regularly with the Department of Business and Economic Development, Department of Transportation and Port Commission to name a few. We are asked for our input on a variety of issues. Some examples include highway funding, port and transportation security, and workforce training needs.

Workforce training, is another area in which we see a very strong interest from other states – and one in which government and business share a very strong, common objective . The training and continuous development of workers is not only important to business success, but is a key to the success of state and local government in creating and maintaining an innovative, productive and competent worker base – so critical to the attraction of new businesses and the retention of existing employers. Virginia is well established in this area through its Workforce Services program by the Department of Business Assistance, Worker Training Tax Credit and through its Community College System. We encourage the continued expansion and growth of these and other programs.

In our business, workforce training is one of the single most critical aspects to our success. The livelihood of our customers is based entirely on their ability to operate the vehicles we build and sell reliably and as cost effectively as possible. As you toured the plant today you saw that the trucks we build are highly customized and very labor intensive. We regularly introduce new product features and options, and at times entirely new trucks are rolled out. This requires us to constantly train and re-train our employees assuring our product quality and efficient operation of our business. Our training needs were not ignored in our work with the Commonwealth in developing our incentive agreements, but were actually a key part of the process, which brings me to a very important point.

I'd like to take this opportunity to remind you of one excellent initiative targeted at workforce training here in New River Valley, which I believe we should make a reality as soon as possible.

In 1999, the economic incentive agreement negotiated with the Virginia Economic Development Partnership and signed by then Governor Jim Gilmore included \$5 million for the construction and development of a worker training "Center of Excellence." This Center of Excellence was intended to be a constructed here, and would be used not only to help satisfy the training needs of

Volvo, but was to serve as a community wide training and meeting facility, benefiting the entire region.

Participating in the development of the concept for this center were Volvo, Pulaski County, the Industrial Development Authority, and the New River Community College. All stakeholders involved were in agreement as to the benefits of such a center. The vision was that this Center of Excellence would serve as the cornerstone in developing a highly trained workforce in the New River Valley, increasing its competitiveness in attracting new business, maintaining existing businesses, and re-training workers displaced by shrinking legacy employers. The center was to be built and equipped to be flexible, where, for example, advanced manufacturing technologies could be taught (such as robotics) as well as front office training (such as working with computers or basic accounting systems). The local governments would use the facility to host town hall meetings, public hearings or other sizeable gatherings. The Community College and even Virginia Tech expressed an interest in using to facility to conduct remote or satellite classes. As I say this was to be a region-wide win-win.

Unfortunately, this facility remains un-funded. The previous administration failed to fund the center for unknown reasons. The following year, the year of the “great budget battle”, both the House of Delegates and Senate adopted budget amendments which included the promised funding for the Center. Unfortunately,

after adjourning without a budget that year, the final budget negotiation resulted in funding for the center being eliminated.

In the past few years, economic circumstances in the Commonwealth have been such that for the General Assembly to fund the center would not have been appropriate.

However, with the success of budget reform in Virginia and the ability to see the light at the end of the tunnel economically, it seems only appropriate that with surplus dollars, the Commonwealth meet the commitments of the past. I ask that as you continue your investigations into the future of manufacturing in Virginia, and that you help us help this community and appropriate the \$5 million for the Center of Excellence. If you do, Volvo will, without question, make its best effort to ensure that this Center becomes not only a building of bricks and mortar, but a symbol of successful, effective investment, a symbol of community -- a living commitment to the needs and growth of manufacturing in the New River Valley.

I appreciate very much the time you spent with us today and I look forward to answering any questions you may have.

Thank You.

REMARKS OF BOB WHELEN TO THE
JOINT SUBCOMMITTEE STUDYING THE MANUFACTURING
NEEDS AND THE FUTURE OF MANUFACTURING IN VIRGINIA
(TRANSPORTATION)

AUGUST 25, 2005
DUBLIN, VIRGINIA

Thank you again.

Before I begin, let me just state that obviously Volvo designs and builds our products in response to the demands of our customers, the heavy truck market, and the myriad of regulatory requirements affecting our industry. So our whole approach to thinking about traffic congestion, and contributions we can make to reducing it, are colored by this reality, and the challenges our customers are facing every day.

Having said this, we, like all Virginia manufacturers, are concerned about the impact of congestion on our business and our customers' business, and we appreciate the opportunity to comment on this issue.

Being successful in today's competitive marketplace requires us to take a holistic view of our costs: material costs, labor costs, the cost of our infrastructure, administrative costs, etc. Of significant consequence to our business is the cost of transportation and freight -- how much it costs to bring our materials into the factory; how much it costs to deliver our products to the dealer; and to a degree, what it costs for our employees to travel to and from their jobs each day and how such cost might effect their cost of living. Breakdowns in transportation, whether due to traffic congestion, construction, or time wasted at inspection and weigh stations,

can have a significant impact on our inventory costs – and at their worst, lead to lost production.

So, as a major player in the freight transportation industry, as a Virginia manufacturer, as a significant employer -- and in keeping with our core values of safety and “care for the environment” -- we are extremely interested in seeing practical, balanced and economically feasible solutions to highway congestion.

As I said a minute ago, our trucks are required to comply with numerous regulatory requirements in order to be sold. These include various state and federal weight limits, and I understand there will be some discussion today regarding the possibility of increasing the gross vehicle weight rating, or GVWR, above the current federal limit of 80,000 pounds. If such an increase becomes law, I am confident that Volvo, and our industry as a whole, would respond by offering trucks that could haul the increased weight safely and reliably. However, we do think it's important that several issues are kept in mind when considering such a proposal:

- Would the increase be sought at the federal or state level?

- Could the increased weight be handled by existing and planned infrastructure -- not only interstate highways, but also secondary highways and local roadways and bridges
- Would an increased maximum weight rating actually result in more freight being moved by less trucks?

If these issues can be dealt with effectively, we feel that increasing weight restrictions for heavy-duty trucks could prove to be a viable component of a balanced long-range plan aimed at reducing congestion on our roadways.

I think the key word in discussing transportation planning is “balance.”

Generally speaking, federal, state and local governments have typically turned to construction to relieve congestion -- constructing new, or expanding existing infrastructure. As members of the General Assembly know all too well, requests for highway funds always exceed available funding, leading to some very difficult choices. Furthermore, in some cases, a new or expanded road is basically obsolete upon completion -- or better stated, will be carrying more vehicles right from the start of its life than it was intended to carry even in the long term. Infrastructure improvements alone lead to a vicious cycle of construction,

congestion, orange barrels, delays and accidents. Now, this is not to minimize the importance of infrastructure improvements. But when we ask “How do we move all the vehicles that travel on our roads safely, efficiently and cost effectively?,” I believe the answer needs to include more than just new or bigger highways. A variety of strategies, applied in combination, are probably the best way to develop long-term plans and actions to reduce congestion. I’m talking about balancing infrastructure improvements, with, among other things, Intelligent Transportation Systems, or “I-T-S.” There are two types of ITS recognized by the U.S. Department of Transportation. The first is Intelligent Infrastructure, or systems put in place to maximize road utilization and route traffic on existing roadways in the most efficient manner. The other recognized ITS is the Intelligent Vehicle. This involves the installation of on-board vehicle systems that interact with the Intelligent Infrastructure, alerting the driver of what to avoid or what route to take to minimize travel time.

Again, we’re not experts in the area of ITS, but monitor their development and implementation to determine what we need to develop or install in our products to satisfy what the customer may require. This community is fortunate, though, to have ITS expertise nearby, and I would suggest that the Virginia Tech Transportation Institute play a part in your discussions.

As I said, the movement of freight in a timely, cost effective manner is critical to the competitiveness of Volvo Trucks and our customers, so I'd like to discuss just a few technologies that we believe show promise.

For instance, increased deployment of electronic weight and vehicle safety screening. How many of you have gotten held up by traffic congestion while a snake line of trucks wait to cross a scale at a weigh station -- or worse, have felt unsafe as trucks leaving a weigh station slow traffic as they regain highway speed? Today, more than four million tractor-trailers travel the roads of the United States. Nationwide, the majority of inspections conducted by enforcement agencies are done at weigh stations. Limited capacity at the scales, and limited manpower at the inspection stations, are often the cause of unsafe conditions. In many cases, weigh and inspection stations close to relieve congestion, allowing potentially unsafe trucks to travel on, which may result in a breakdown or accident down the road.

Electronic weighing and inspection allows enforcement agencies to electronically pre-select trucks to bypass the station based on vehicle history and standing. This allows fewer trucks to enter the station, relieving congestion and allowing enforcement agencies to make better

use of their resources. Such electronic monitoring is up and running in various states and is a win-win all around.

Taking this a step further, Volvo has joined forces with the University of Tennessee and the National Transportation Research Center to develop on-board safety monitoring systems that can relay information such as brake conditions from the vehicle to fixed or mobile monitors. This technology, which we refer to as the “Trusted Truck” program, allows inspectors to target vehicles that are in need of repair, resulting in fewer accidents, decreased highway injuries, and less traffic congestion.

Another ITS involves freight and asset tracking combined with real time traffic surveillance and detection systems. Today, many transporters utilize GPS devices to track the precise location of their assets and their customers’ freight. With the installation of traffic surveillance and detection systems, trucks can be re-directed away from congestion and onto alternate routes. Communication with the traffic surveillance and detection systems and the vehicle can be accomplished in a variety of ways including internet sites, dynamic message signs, highway advisory radio, or in-vehicle systems capable of displaying traveller alerts and traffic information.

These are just a couple of examples. The point is, there are a host of technologies, either readily available or under development, to increase transport efficiency and minimize traffic congestion. Deployment of ITS does several important things:

- Helps business control its freight and inventory costs
- Helps to reduce infrastructure capital requirements
- Helps ease congestion in general, leading to improved highway safety, reduced environmental impact, reduced fuel consumption, and, for those of us who regularly sit in traffic, an improved quality of life in general.

ITS has proven effective in reducing highway congestion in many locations, here in the US but particularly in certain European countries. As the Virginia DOT, county and municipal governments, and the General Assembly develop long term highway transportation plans and budgets, we suggest funding be appropriated for research, development and deployment of value added ITS solutions in balance with funds for new construction projects.

Thank you for your attention and allowing us to participate in this dialog.

24-Hour Care Coverage: An Overview

Lawrence D. Tarr, Chairman

The Virginia Workers' Compensation
Commission

Joint Subcommittee Studying Manufacturing Needs
And The Future Of Manufacturing In Virginia

Williamsburg, Virginia

November 30, 2005

The 24-Hour Care Concept: Definition

- A benefits program that coordinates or integrates the medical care and wage replacement benefits available through worker's compensation with the other private and public health insurance and disability benefits programs.

Definition (continued)

- “The consolidation of health care benefits and, possibly disability benefits for both work-related and non-work-related claims, so that services are delivered by the same group of providers under a coordinated insurance package.”

Traditional Benefits Model

- In most states, including Virginia, work related compensation for work-related disabilities is administered through a workers' compensation system.
- Compensation for all other disabilities is administered through a separate system usually involving private disability insurance.

Basic Premises of 24-Hour Care

- replace multiple payment systems with a single payer mechanism, thereby reducing costs
- administer medical and disability payments without the traditional differentiation based on whether the disabling condition was caused by work, thereby eliminating inefficient duplication of programs.

Elements of a 24-Hour Care System

- one seamless health and disability system, providing medical care and disability payments to workers, without regard to whether the worker was hurt on or off the job;
- one coordinated system of health care delivery, and
- one system where claims from various benefits system are handled by the same party or at the same location.

Benefits of a 24-Hour Care System

- Streamlined and more cost-effective claims administration eliminating duplicative services that result from parallel administrative systems.
- Improved communication among health care providers.
- Elimination of gaps in coverage that result from the complicated interplay among various programs.
- Elimination of very difficult determinations caused by the demographics of our aging workforce.
- Reduction in fraud and double dipping, by preventing costs shifting between insurance systems.

24-Hour Coverage In Other States

- Passed 24-Hour Coverage Provisions in 1990s:
 - California, Florida, Georgia, Kentucky, Louisiana, Maine, Massachusetts, Minnesota, Oklahoma and Oregon
- Considered 24-Hour Coverage provisions, but did not enact legislation:
 - Hawaii, Iowa, Montana, North Carolina and Washington

Subsequent History in Other States

- California: Authorizing statutes repealed in 2001.
- Florida: 24-hour care legislation not in current statutes.
- Georgia: Current statute continues to allow 24-hour care arrangements.
- Kentucky: Current statute continues to allow for 24-hour care pilot projects.
- Louisiana: Current statute continues to allow for 24-hour care pilot projects.
- Maine: Authorizing statutes repealed in 2001.
- Massachusetts: Current statute continues to allow for 24-hour care pilot projects in collective bargaining agreements.
- Minnesota: Current statute continues to allow for 24-hour care pilot projects.
- Oklahoma: Current statute continues to allow for 24-hour care pilot projects.
- Oregon: Sunset expiration in 1996.

Factors Leading to Limited Utilization

- Stabilization in workers compensation costs.
- Collapse of the Clinton Health Care reform initiative.
- Low employer participation.
- Systemic barriers to Implementation.

Systemic Barriers to Implementation

- Legal issues
 - Workers' Compensation exclusive remedy provisions
 - ERISA
 - In most states, workers' compensation is mandatory whereas employers generally are not required to provide other types of disability coverage

Systemic Barriers (continued)

- Program characteristics
 - Length of employer's liability obligation
 - Co-payments and deductibles
 - Choice of treating physician

Virginia's Apportionment Formula

Presented to the:

**Joint Subcommittee Studying Manufacturing Needs
And The Future of Manufacturing In Virginia –
Pursuant to SJR 361**

November 30, 2005

Presented By:

**John P. Josephs, Jr.
Senior Tax Policy Analyst
Virginia Department of Taxation**

Background

At the August 25, 2005, meeting the Subcommittee was informed that the Commonwealth would lose an estimated \$37.5 million revenue if a single sales factor had been in effect in 2003. The Department of Taxation was then asked estimate the revenue impact if a single sales factor formula was limited to manufacturers. The Department also considered the impact if taxpayers were allowed to elect to use a single sales factor.

Single sales factor limited solely to manufacturers

As explained at the August meeting, the Department examined a sample of 293 returns representing 72% of total corporate income tax revenue for 2003. The only indicator on Virginia tax returns of the nature of each taxpayer's business is a North American Industry Classification system (NAICS) code, but using NAICS codes is problematic because:

- There is one code for each return regardless of how many businesses the taxpayer may own, or how many corporations may be included in a consolidated or combined return.
- The taxpayer chooses the code. It is not assigned by a government agency. Taxpayers involved in several businesses may choose the code that provides the most advantageous tax treatment.
- The NAICS definitions of manufacturing differ from the common law definition used by Virginia for other tax purposes, and are significantly broader.

Therefore, the returns do not have sufficient data to allow the Department to determine which taxpayers are manufacturers. The Department was unable to locate other sources of relevant data. Indeed, it was the lack of such data that required the Department to conduct such an exhaustive recalculation of a large sample of returns to estimate the impact of changing the apportionment factor for all corporations.

Definition of “Manufacturer” in Virginia

Virginia currently utilizes a common law definition of manufacturing, which courts have defined as the transformation of new material into an article or a product of substantially different character.¹ Merely assembling or processing material, without a transformation, is not manufacturing under the common law definition.

The NAICS definition of manufacturing is much broader because it includes processing and assembling. The codes are organized along product lines, and every business that manufacturers (i.e., “transforms”), processes or handles a particular type of product would be assigned the same code. Thus, a business can legitimately use a manufacturing NAICS code even though it would not qualify as a manufacturer under the common law definition.

Definition in Other States

Virginia is not alone in its inability to estimate the revenue impact of changes in apportionment formulas for a specific industry. Most states either use a definition of manufacturer that closely parallels the common law definition, or is silent thereby forcing courts to use the common law definition. Only two (Maryland and Connecticut) use NAICS codes.

- Maryland changed its manufacturing apportionment formula to reflect a single sales factor, but was unable to provide an expected state revenue impact in its fiscal notes on the legislation. Maryland uses NAICS codes to define eligible manufacturers. The Maryland report does, however, state that “studies conducted in other states with larger manufacturing bases than Maryland, have projected state revenue losses as a result of switching to a single sales factor.”²
- Massachusetts did not provide an estimate when it adopted a single sales factor.
- Louisiana projected a revenue loss. Although the legislation imposed a single sales factor on manufacturing and merchandising businesses only, the methodology used to calculate revenue impact was a random sampling of all taxpayers. Louisiana did not attempt quantify any

¹ County of Chesterfield v. BBC Brown Boveri, Inc., 238 Va. 64, 69, 380 S.E.2d 890, 893 (1989)

² Fiscal Note HB 11 (2001), Dept. of Leg. Serv. Maryland Gen. Assembly.

margin of error as a result of the methodology used, but stressed that changes to the apportionment formula “are likely to involve considerable shifting of the tax burden among different tax payers that results in the net aggregate effects.”³

- Wisconsin,⁴ Oregon,⁵ and Michigan⁶ have each either increased or considered increasing their sales factor percentage in recent legislative sessions. Each state applied the new formula to almost all industries, instead of limiting the change to manufacturers, and each state predicted losses in revenue.

Election to Use Single Sales Factor

Should the Commonwealth adopt an alternative single sales factor, allowing corporations to choose how to apportion their taxable income, the revenue loss will be greater than the \$37.5 million loss previously reported.

As stated at the August meeting, the table below summarizes the revenue impact of a single sales factor formula. The “winner/loser” designation was applied to each return regardless of how many affiliates were included in a combined or consolidated return.

Single Sales Factor (Weight = 100% of Formula)

Income from Virginia Sources	Winners	Losers	No Change	Amount of Change in Tax	Percentage Change
More than \$10 Million	52	28	17	-\$28.0 million	-13.8%
\$ 5 to \$10 Million	47	38	11	-\$4.2 million	-10.0%
\$2 to \$5 Million	10	14	1	+\$3.1 million	+7.2%
\$1 to \$2 Million	9	13	3	-\$3.4 million	-12.6%
\$0.5 to \$1 Million	11	13	1	-\$0.2 million	-1.0%
\$0.1 to \$0.5 Million	16	8	1	-\$4.8 million	-22.7%
Totals	145	114	34	-\$37.5 million	

If the corporations have a choice, we would expect all of the 145 “winners” to elect the single factor, while all of the 114 “losers” would stay with the three-factor formula. Without any revenue gains to offset the losses, the revenue loss from an elective single sales factor would obviously be greater than if it were mandated for all multistate corporations. An examination of the return data suggests that the revenue loss might be as much as \$10 million greater.

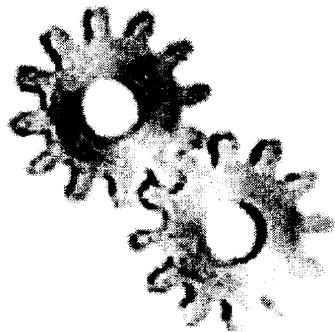
³ Louisiana Legislative Fiscal Note, HB 679, 6/15/2005

⁴ Wisconsin Fiscal Estimate Narrative, 6/18/2003, SB-197

⁵ Oregon Revenue Impact of Proposed Legislation, SB 31A, 8/4/05

⁶ Michigan Legislative Analysis, House Bill 5108, 8/29/05

Virginia Department of Business Assistance



Manufacturing in Virginia

Overview



707 East Main Street, Suite 300
P.O. Box 446
Richmond, VA 23218-0446
(804) 371-8200
www.dba.state.va.us

For more information contact Jay Ruehrmund at 804.371.0071 or
by email juehrmund@dba.state.va.us

Overall Assessment

- Manufacturing is Virginia's largest basic industry with 388,800 employees in 6,908 establishments and with finished product shipments worth more than \$92 billion annually.
- Manufacturing's share of nonagricultural employment has dropped from 28.6 percent in 1949 to 11.1 percent in 2000 primarily due to the faster employment growth of nonmanufacturing industries relative to manufacturing.
- Manufacturing employment in Virginia peaked at 432,500 in September 1989. As of August 2001 it has lost 57,000 jobs -- 35,000 in textiles and apparel.
- Since 1989 manufacturers have been producing more with the same or fewer workers.
- Adjusted for inflation, the value added per manufacturing employee increased from \$50,200 in 1985 to \$70,100 in 1997, a gain of 40 percent.

Employment - Ten Largest Manufacturing Industries, 2000

Virginia		
Industry	Employment	% of total
Manufacturing	388,800	100.0
1. Transportation	39,800	10.2
2. Food and kindred products	38,500	9.9
3. Printing and publishing	38,000	9.8
4. Industrial machinery	28,700	7.4
5. Lumber and wood products	27,800	7.2
6. Electrical and electronic equipment	27,700	7.1
7. Textile mill products	26,300	6.8
8. Rubber and misc. plastics	24,500	6.3
9. Furniture and fixtures	21,900	5.6
10. Chemical and allied products	20,400	5.2
Top Ten Total	293,600	75.5

Source: U.S. Department of Labor, Bureau of Labor Statistics.

- Virginia's 10 largest manufacturing industries account for almost 76 percent of manufacturing employment
- In 1949 the three largest manufacturing industries were textiles, chemicals, and lumber and wood products. They now rank seventh, tenth, and fifth, respectively.

Employment Growth - Largest Job Growth Industries, 1969-2000

Virginia		
Industry	Employment Increase	Percent Increase
Manufacturing	17,800	4.8
1. Printing and publishing	24,100	173.4
2. Industrial machinery	19,000	195.9
3. Transportation equipment	10,700	36.8
4. Instruments	9,400	408.7
5. Fabricated metal products	5,300	44.9
6. Electrical and electronic equipment	4,900	21.5
7. Lumber and wood products	4,200	17.8
8. Paper and allied products	3,100	22.1
9. Food and kindred products	2,300	6.4
10. Stone, clay, and glass products	2,000	18.09
Top Ten Total	102,800	48.7

Source: U.S. Department of Labor, Bureau of Labor Statistics.

- Since 1949 printing and publishing has added 31,400 jobs – more than any other industry in Virginia; 77 percent of these jobs were added after 1969.
- Industrial machinery added almost 25,000 jobs since 1958; 76 percent of these jobs were added after 1969.
- Electrical and electronic equipment added 19,800 jobs from 1969 to 1985; since 1985 it has lost 14,900 jobs.
- Transportation equipment added 15,400 jobs from 1969 to 1988; since 1988 it has lost 4,700 jobs.

Employment Losses - Largest Job Loss Industries, 1969-2000

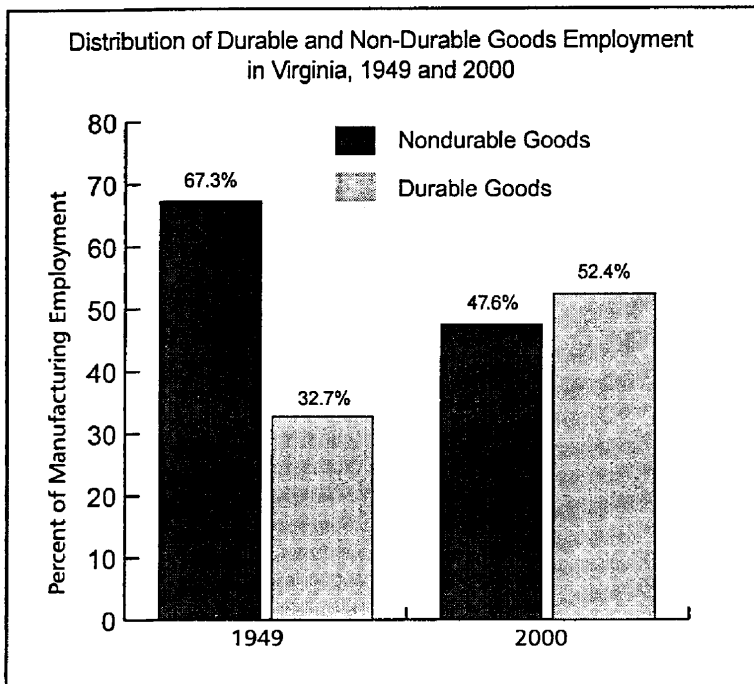
Virginia		
Industry	Employment Loss	Percent Decline
Manufacturing		
1. Chemicals and allied products	-26,600	-56.6
2. Apparel and other textile products	-26,500	-71.8
3. Textile mill products	-17,800	-40.4
4. Tobacco products	-6,200	-41.9
5. Furniture and fixtures	-3,200	-12.7
Total	-80,300	-47.8

Source: U.S. Department of Labor, Bureau of Labor Statistics.

- From 1949 to 1969 apparel added 22,100 jobs; from 1969 to 2000 it lost 26,500 jobs.
- Since 1969 apparel and textiles have lost almost 44,300 jobs.

Employment Trends

Durable-Nondurable Goods Employment Distribution



- In 1949 less than a third of all manufacturing employees in Virginia were employed in durable goods; in 2000 more than half were employed in durable goods.
- The shift to durable goods manufacturing was primarily due to the decline of textiles, apparel, chemicals, and tobacco manufactures and the growth of industrial machinery, electrical and electronic equipment, and transportation equipment.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Absolute Manufacturing Employment Growth

	Virginia	U.S.
	Absolute Employment Change	Absolute Employment Change
1949-2000	167,200	3,996,000
1949-1969	149,400	5,726,000
1969-2000	17,800	-1,730,000

Source: U.S. Department of Labor, Bureau of Labor Statistics.

- Eighty-nine percent of Virginia's manufacturing job growth since 1949 occurred from 1949 to 1969.

Manufacturing in Virginia

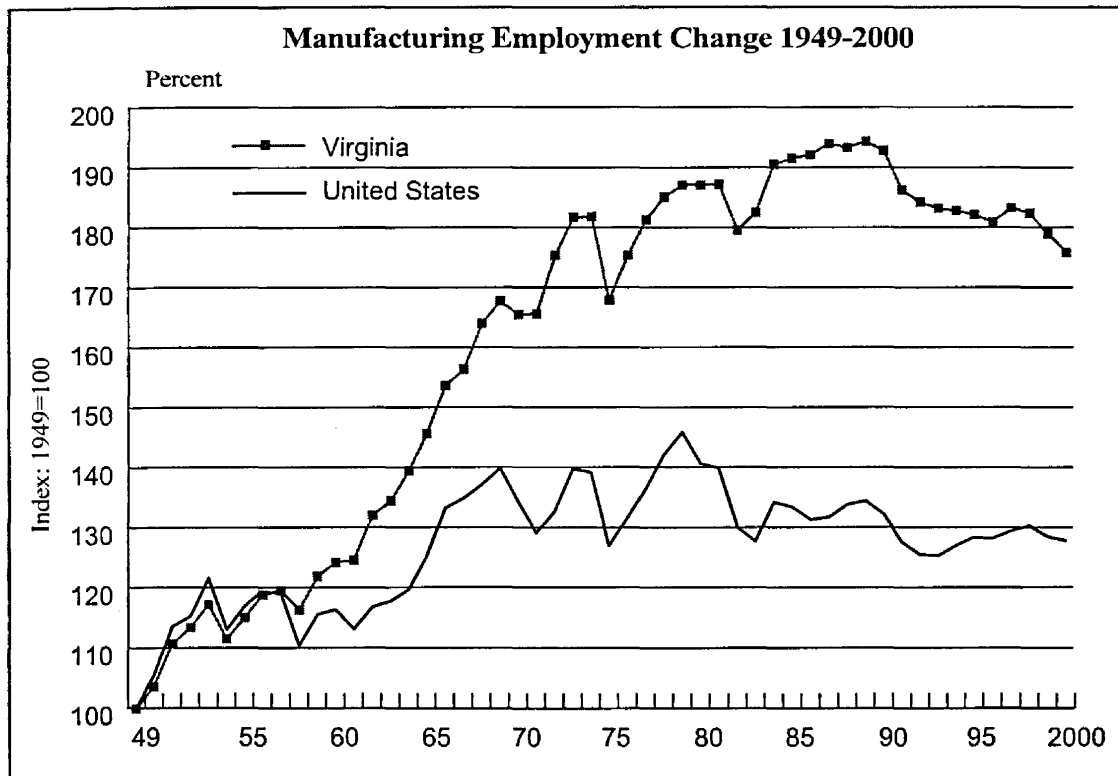
Relative Employment Growth

Virginia Annual Average Growth Rates			
	Annual Growth Rate, 1949-2000	Annual Growth Rate, 1949-69	Annual Growth Rate, 1969-2000
Nonagricultural Employment	3.0%	3.1%	2.9%
Manufacturing	1.1%	2.6%	0.2%
Nondurable Goods	0.4%	2.0%	-0.6%
Durable Goods	2.0%	3.7%	1.0%

Source: U.S. Department of Labor, Bureau of Labor Statistics.

- Manufacturing's compound annual job growth rate was 13 times greater from 1949 to 1969 than from 1969 to 2000.
- Since 1969 the durable goods compound annual job growth rate has been 5 times greater than the comparable rate for manufacturing.

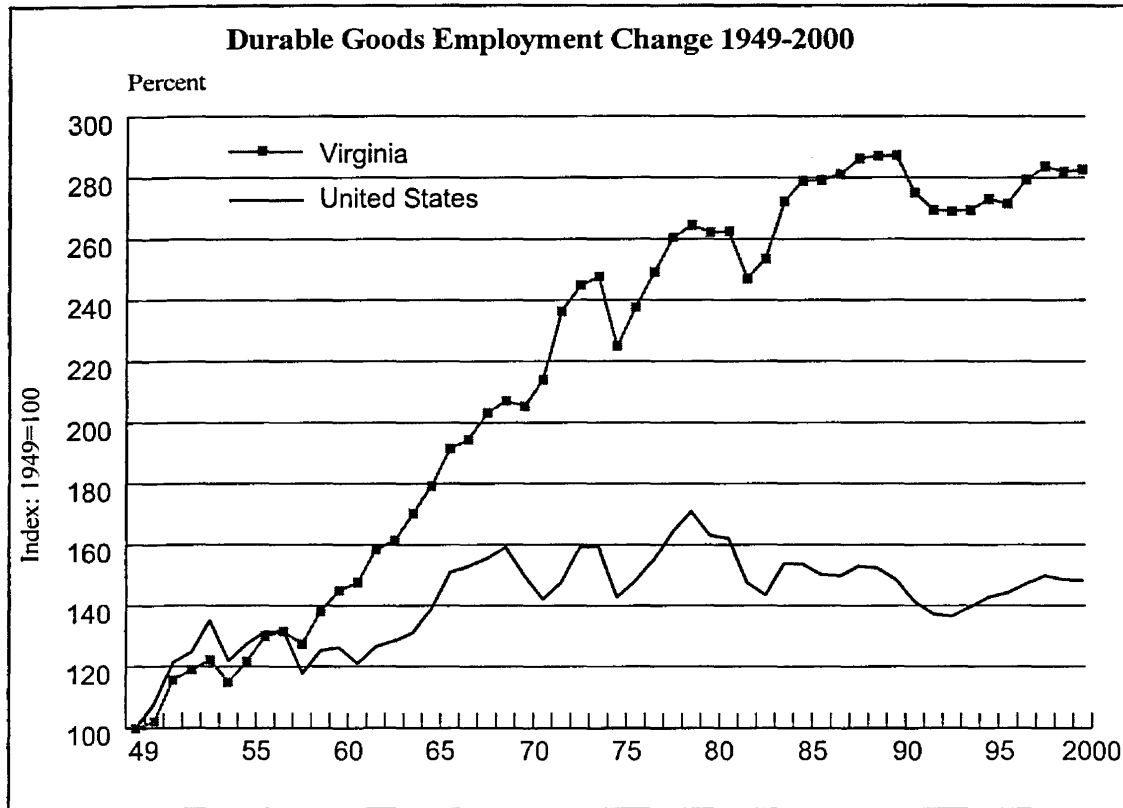
Long-Term Employment Trends



Source: U.S. Department of Labor, Bureau of Labor Statistics.

- Manufacturing employment growth in Virginia has gone through three distinct phases:
 - ▲ 1949-1974: Manufacturing in Virginia experienced its most rapid growth - growing 2.4 percent annually.
 - ▲ 1974-1989: Manufacturing annual employment growth slowed considerably to 0.4 percent.
 - ▲ 1989-2000: Manufacturing employment declined 0.9 percent annually.

Long-Term Employment Trends

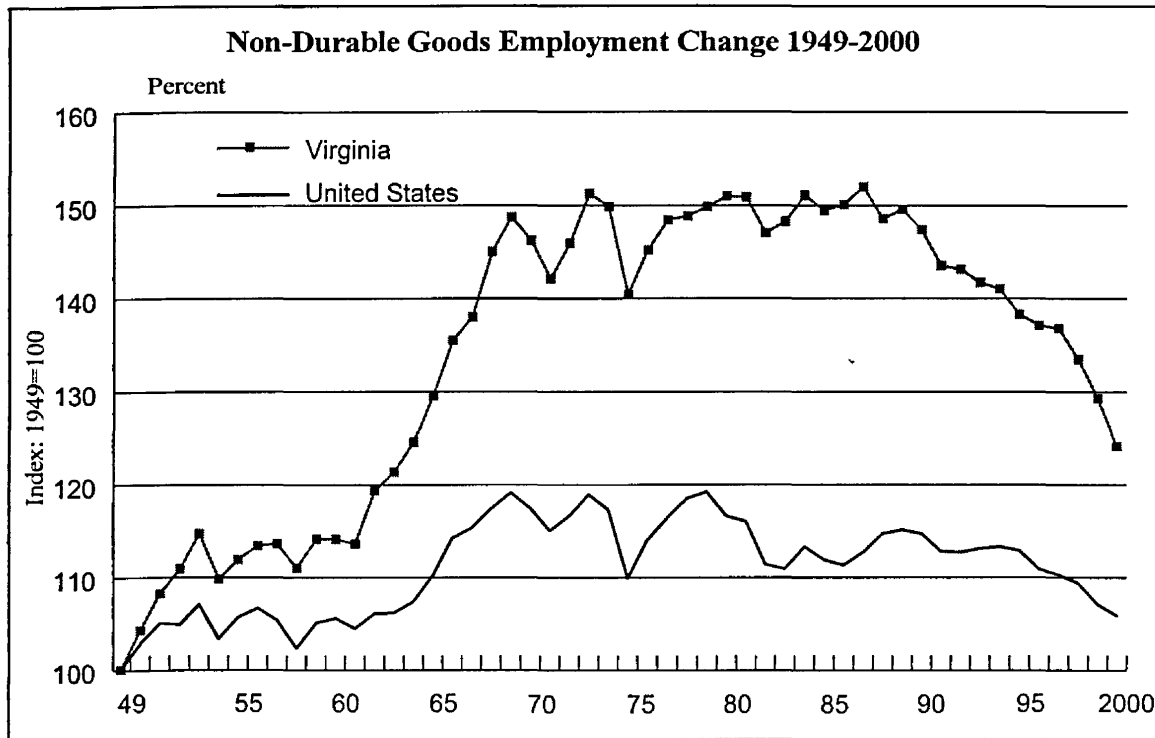


Source: U.S. Department of Labor, Bureau of Labor Statistics.

- Durable goods employment growth in Virginia has gone through three distinct phases:
 - ▲ 1949-1974: Durable goods grew 3.7 percent annually - its fastest growth rate from 1948 to 1998.
 - ▲ 1974-1990: Annual slowed considerably to 0.9 percent, less than one-fourth the rate for the preceding 25 years.
 - ▲ From 1990 to 2000 durable goods employment has experienced a 0.1 percent annual decline.

Manufacturing in Virginia

Long-Term Employment Trends



Source: U.S. Department of Labor, Bureau of Labor Statistics.

- Nondurable goods employment growth in Virginia has gone through three distinct phases of growth since 1949:
 - ▲ 1949-1969: Durable goods grew 2.0 percent annually - its fastest growth rate from 1949 to 1998.
 - ▲ 1969-1987: Growth slowed substantially to 0.1 percent annually.
 - ▲ 1987-2000: Durable goods employment **declined** 1.7 percent annually.

Establishments

Number of Establishments

	Virginia		U.S.	
	Establishments	Percent of Total	Establishments	Percent of Total
Manufacturing	6,908	100.0%	413,506	100.0
1. Printing & publishing	1,409	20.4	66,480	16.1
2. Lumber & wood products	1,329	19.2	39,741	9.6
3. Industrial machinery	779	11.3	63,165	15.3
4. Fabricated metal products	407	5.9	39,074	9.4
5. Food & kindred products	403	5.8	23,708	5.7
6. Stone, clay, & glass products	365	5.3	17,429	4.2
7. Electrical & electronic equipment	285	4.1	20,142	4.9
8. Apparel & other textile products	267	3.9	24,798	6.0
9. Furniture & fixtures	198	2.9	11,516	2.8
10. Miscellaneous manufacturers	180	2.6	18,790	4.5
Top Ten Total	5,622	81.4	324,834	78.5

Source: U.S. Department of Labor, Bureau of Labor Statistics.

- Three Industries—printing, lumber, and industrial machinery—account for half of Virginia’s manufacturing establishments.
- The top 10 industries account for 79 percent of Virginia’s manufacturing establishments.
- The printing industry accounts for almost one out of every five manufacturing establishments in Virginia.

Manufacturing in Virginia

Average Employment per Establishment

	Virginia	U.S.
	Employment	Employment
Manufacturing	57	45
1. Tobacco products	420	191
2. Textile mill products	222	82
3. Transportation equipment	141	119
4. Primary metal products	133	91
5. Rubber & misc. plastics	120	58
6. Paper & allied products	119	88
7. Chemicals & allied products	112	70
8. Furniture & fixtures	111	48
9. Food & kindred products	98	71
10. Electrical & electronic equipment	94	83

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Payroll

Average Payroll per Employee

	Virginia	U.S.	Virginia as % of U.S.
	Payroll per Employee	Payroll per Employee	
Manufacturing	\$35,767	\$41,941	85.3
1. Chemicals & allied products	52,653	61,979	85.0
2. Paper & allied products	45,887	44,339	103.5
3. Transportation equipment	43,702	51,581	84.7
4. Primary metal products	42,974	44,242	97.1
5. Instruments	42,375	33,589	78.7
6. Electrical & electronic equipment	40,785	49,620	82.2
7. Fabricated metal products	37,644	36,632	102.8
8. Printing & publishing	36,526	38,157	95.7
9. Industrial machinery	35,604	48,730	73.1
10. Rubber & misc. plastics	35,355	33,943	104.2

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Exports

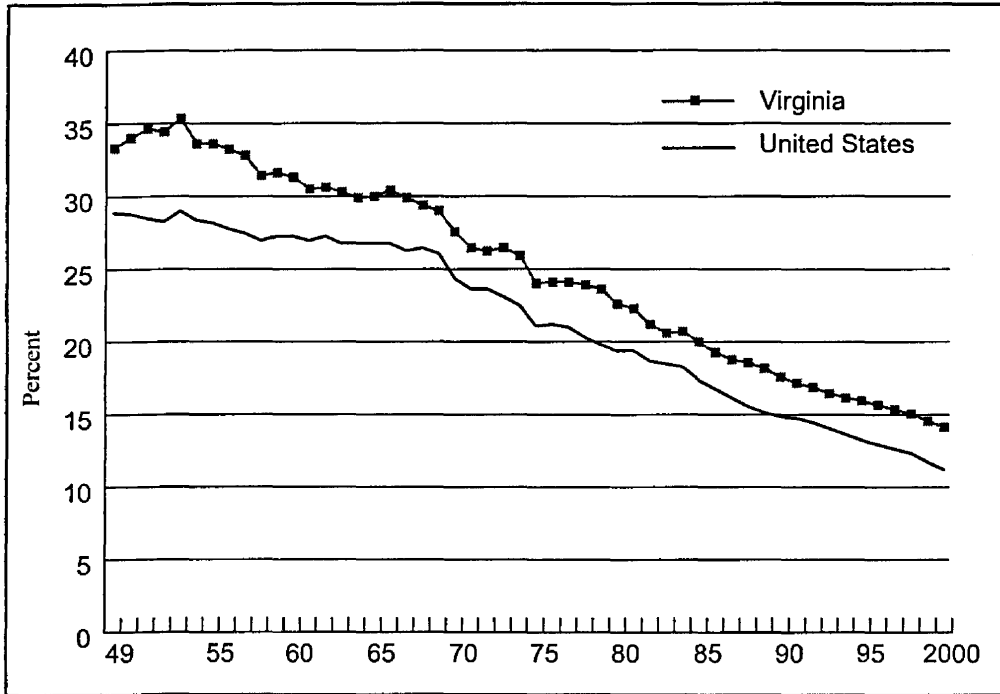
Virginia Exports			
	2000 (000)	1995 (000)	Percent Change 1995-2000
Manufacturing	\$9,396,000	\$9,294,000	1.1
Tobacco products	2,713,000	3,185,000	-14.8
Electrical & electronic equipment	1,394,000	652,000	113.8
Industrial machinery	1,043,000	1,008,000	3.5
Transportation equipment	919,000	989,000	-7.1
Chemical products	728,000	903,000	-19.4
Fabricated metal products	432,000	314,000	37.6
Rubber & plastic products	375,000	234,000	60.3
Scientific & measuring instruments	326,000	311,000	4.8
Paper products	191,000	182,000	4.9
Refined petroleum products	150,000	124,000	21.0
Top Ten Total	\$8,271,000	\$7,902,000	4.7

Source: U.S. Department of Commerce.

- The ten largest industries account for 88 percent of Virginia's manufactured goods exports.
- The three largest exporting industries — tobacco manufactures, electric and electronic equipment, and industrial machinery — account for 55 percent of manufactured goods exports.
- Tobacco manufactures, primarily cigarettes, account for almost 30 percent of Virginia's manufactured goods exports.

Industry Importance

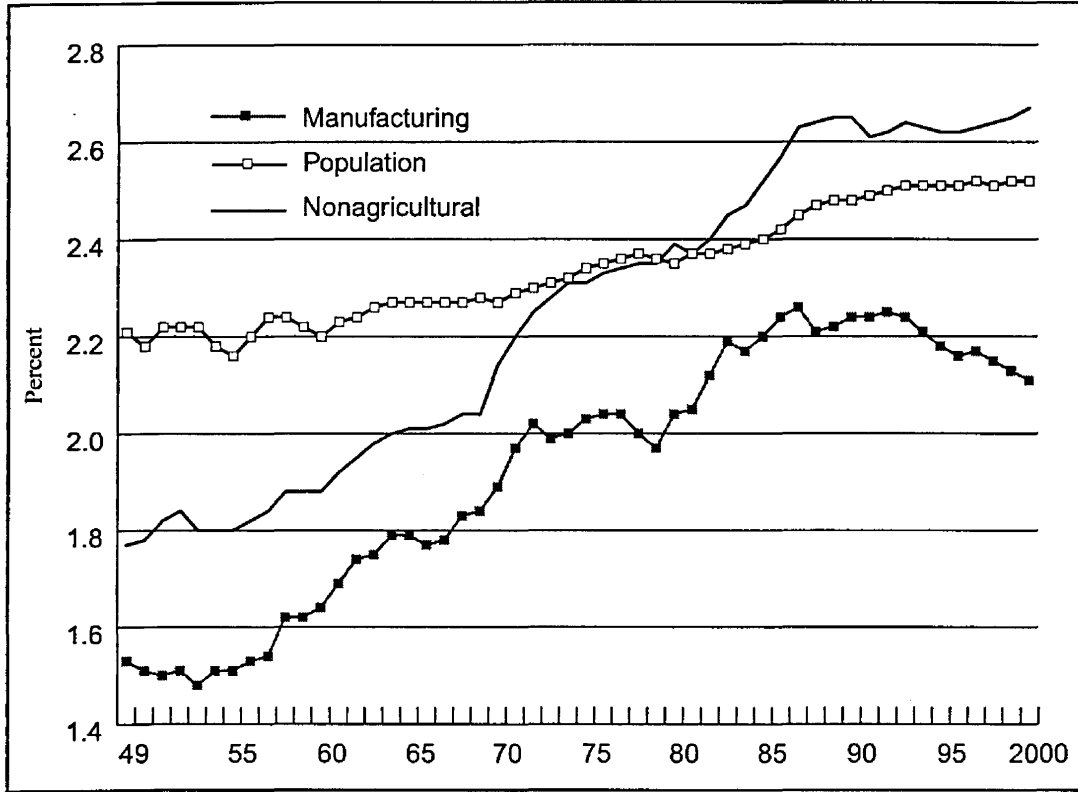
Manufacturing's Share of Nonagricultural Employment



Source: U.S. Department of Labor, Bureau of Labor Statistics.

- Manufacturing's share of nonagricultural employment has been steadily declining for both Virginia and the U.S. during the past 50 years.
- The decline in manufacturing's relative share of nonagricultural employment was largely due to the faster growth of the nonmanufacturing employment until 1989. Since 1989, the absolute decline in manufacturing employment has accelerated the decline in manufacturing's share of nonagricultural employment.
- From 1949 to 2000, nonmanufacturing employment increased at an average 3.5 percent annual rate in Virginia compared with only 1.1 percent for manufacturing.
- For the U.S. nonmanufacturing employment during this period grew 2.7 percent annually versus 0.5 percent for manufacturing.

Virginia's Share of National Manufacturing Employment, Nonagricultural Employment and Population



Source: U.S. Department of Labor, Bureau of Labor Statistics.

- Before 1979 Virginia's share of the nation's population was greater than its share of nonagricultural employment. Since 1979 Virginia's share of the nation's nonagricultural employment has been greater than its share of population due to rapid nonagricultural employment growth.
- In 1949 Virginia's 2.21 percent share of the nation's population was 44 percent greater than its 1.53 percent share of the nation's manufacturing employment.
- In 1987 Virginia's share of population was only 8 percent greater than its share of manufacturing employment due largely to more rapid manufacturing growth.
- By 2000 the gap between Virginia's share of population and manufacturing employment had widened to 19 percent.

APPENDIX N

QUANTITATIVE ECONOMICS
& STATISTICS

AUGUST 25, 2005

 **ERNST & YOUNG**
Quality In Everything We Do

Virginia Taxes Paid by Manufacturers

Introduction

This study provides comprehensive estimates of the state and local taxes paid by businesses operating in Virginia. The study finds that businesses paid \$7.1 billion in Virginia state and local taxes in FY 2003, representing 32 percent of total state and local tax revenue. In addition, despite low corporate profitability due to the recent recession, state and local taxes paid by Virginia businesses have continued to rise. From FY 2000 to FY 2003, Virginia businesses paid 49 percent of the increase in total state and local taxes, significantly more than their share of all taxes in FY 2003.

This study also provides estimates of the state and local taxes paid by Virginia manufacturers. Manufacturers paid \$1.2 billion in state and local taxes in FY 2003. In addition to corporate income taxes, the study includes state and local taxes imposed on business property, purchases of inputs, gross receipts and payroll and state and local license fees. The results of this study highlight the importance in the tax policy debate of evaluating both the level of overall business taxes and differences in tax burdens across industries.

The following points may help to guide legislators, tax administrators and the business community in evaluating the current business tax system and discussing tax reform options:

- ▶ The corporate income tax accounts for only 5 percent of total state and local taxes imposed on businesses in Virginia. It is important to consider all state and local business taxes when evaluating Virginia's business tax system and long-run business tax competitiveness.
- ▶ Certain features of Virginia's tax system result in high effective tax rates on manufacturing and other capital intensive industries that may affect Virginia's ability to retain and attract manufacturing jobs and new investments. For example, the effective tax rate on business property in Virginia is 35 percent higher than the weighted average rate in the five comparison states. Because property taxes account for 48 percent of all state and local business taxes, relatively high property tax rates can have a significant impact on Virginia's competitiveness. The state's relatively high property tax rate is especially significant to manufacturers because property taxes account for 63 percent of manufacturers' total Virginia business taxes.
- ▶ The property tax is not the only tax on capital invested in Virginia. Additional taxes include sales taxes on business purchases of machinery and equipment and corporate income taxes¹. Adding these three taxes together, 69 percent of Virginia's state and local business taxes are taxes directly related to capital investments².
- ▶ Comparisons of state and local tax burdens among selected industries in Virginia and across six comparison states used in this study show that combined state and local taxes on manufacturers in Virginia are relatively high.

¹ Not all manufacturing machinery and equipment purchases are exempt from the sales tax.

² Includes all business taxes, not just manufacturing.

Virginia Business Taxes

Businesses paid \$7.1 billion in state-local taxes in FY 2003, representing 32 percent of total Virginia state and local tax revenue (\$22.0 billion).³

The business taxes considered in this analysis include state and local property taxes, sales and excise taxes on business inputs, corporate income and franchise taxes, gross receipts taxes (e.g., insurance premiums taxes and a portion of utility taxes), business license taxes (including the business and occupation tax), and unemployment and workers compensation payroll taxes.

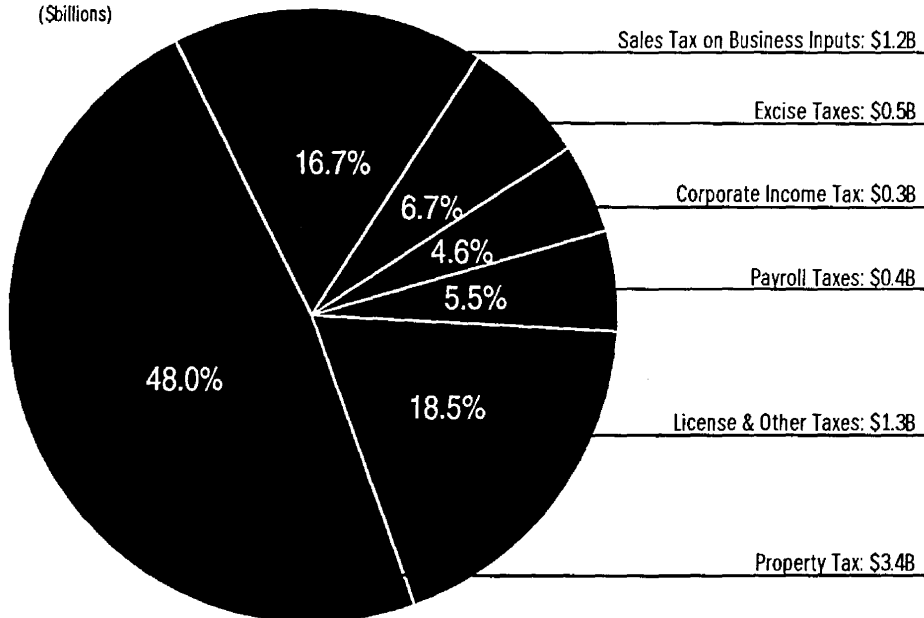
The estimates do not include individual income taxes withheld by employers, sales taxes on final sales of goods and services to consumers, or individual income taxes paid on pass-through business income.

Figure 1 illustrates the composition of total taxes paid by all Virginia businesses in FY2003.

- ▶ Property taxes represent the largest share of business taxes, 48.0 percent.
- ▶ Sales taxes on business inputs and excise taxes (including gross receipts taxes) contribute significantly to the total business tax burden, accounting for 23.4 percent of total business taxes.
- ▶ The corporate income tax accounts for 4.6 percent of total state and local business taxes in Virginia.

Figure 1
Composition of Virginia Total Business Taxes, FY2003

(Billions)



Source: Ernst and Young estimates

³ Total taxes are calculated using U.S. Census Bureau data and definitions. The share of total taxes paid by business is a function of the state and local tax structure on both businesses and households and the structure of a state's economy. The share of taxes paid by business cannot be used directly to determine a state's overall business tax competitiveness.

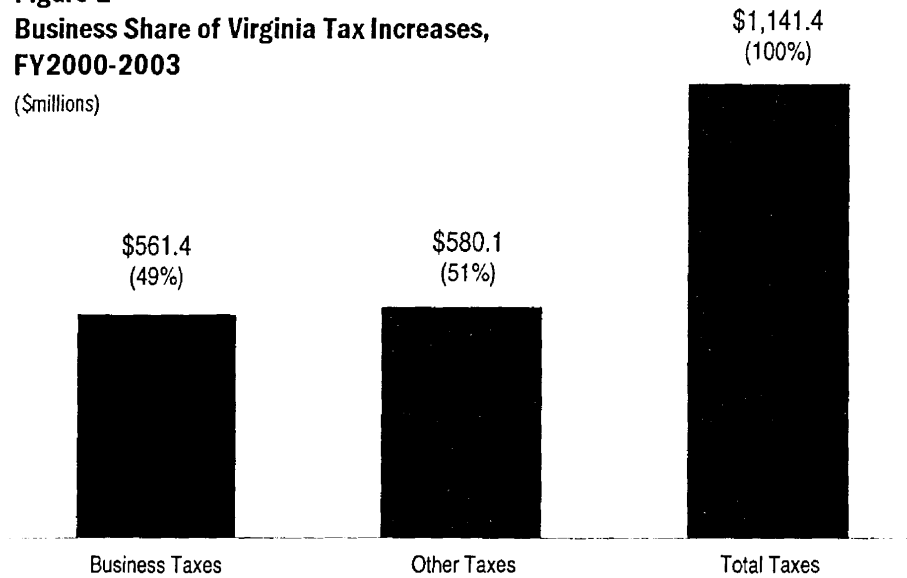
VIRGINIA STATE AND LOCAL TAXES
PAID BY MANUFACTURERS

The \$1.3 billion of license and other business taxes, including the business, professional, and occupational license tax (BPOL) are significant liabilities for many business taxpayers.

In addition to paying a significant share of total state and local taxes, businesses accounted for a large percent of the *increase* in Virginia's state and local taxes from FY 2000 to FY 2003. The business share of the \$1.14 billion increase, 49 percent, was significantly higher than the business share of taxes in FY 2003, 32 percent. The faster growth in state and local business taxes was due to the combination of economic factors and legislated changes in tax laws. As a result of these changes, the share of taxes paid by business increased over this period.

Figure 2
Business Share of Virginia Tax Increases,
FY2000-2003

(\$millions)



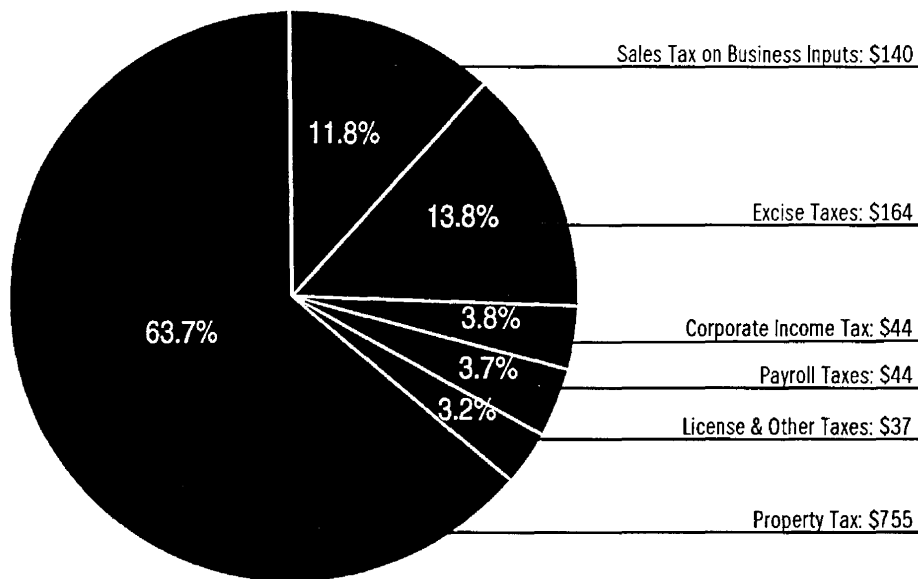
Source: U.S. Census Bureau State and Local Governmental Finances data and Ernst & Young estimates

Virginia Taxes Paid by Manufacturers

State and Local Taxes on Manufacturers

Manufacturers paid \$1.2 billion in Virginia state and local taxes in FY2003. The largest tax liability faced by Virginia manufacturers is the property tax, including taxes on real property, personal property, and machinery and equipment. Illustrated in Figure 3, the property tax (\$755 million in FY 2003) represents 63.7 percent of state and local taxes on manufacturers. The second largest tax is the excise tax category at 13.8 percent. This category includes the gross receipts taxes on utilities that are estimated to be passed along in higher prices to manufacturers and other customers. The corporate income tax accounted for less than 4 percent of the total.

Figure 3
Composition of Virginia Taxes on Manufacturers (\$1.2 billion), FY2003
(Smillions)



Source: Ernst & Young estimates

Effective Virginia Business Tax Rates

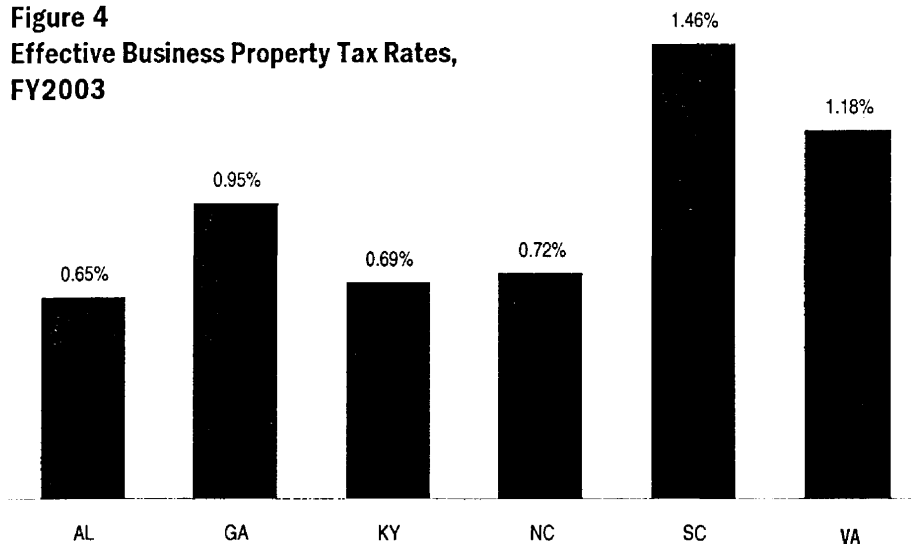
The prior sections presented estimates of the total state and local taxes paid by all Virginia businesses and by manufacturers. This section presents estimates of the relative level of business taxes in Virginia and five neighboring states: Alabama, Georgia, Kentucky, North Carolina, and South Carolina. The metric used to compare across states, *effective tax rates*, is the ratio of taxes to a measure of the tax base. For example, the effective property tax rates in the next section calculate effective tax rates as the ratio of state and local property taxes to the value of business property.⁴

Property Taxes

Effective tax rates for property taxes paid by all businesses for the six states are presented in Figure 4.

The effective business property tax rate is calculated as revenue from real and personal property tax collections divided by the equivalent real and personal property tax base in each state. As shown in Figure 4, Virginia's effective property tax rate is second highest among the states, 35 percent higher than the weighted average rate (0.87%) in the five comparison states.

Figure 4
Effective Business Property Tax Rates,
FY2003



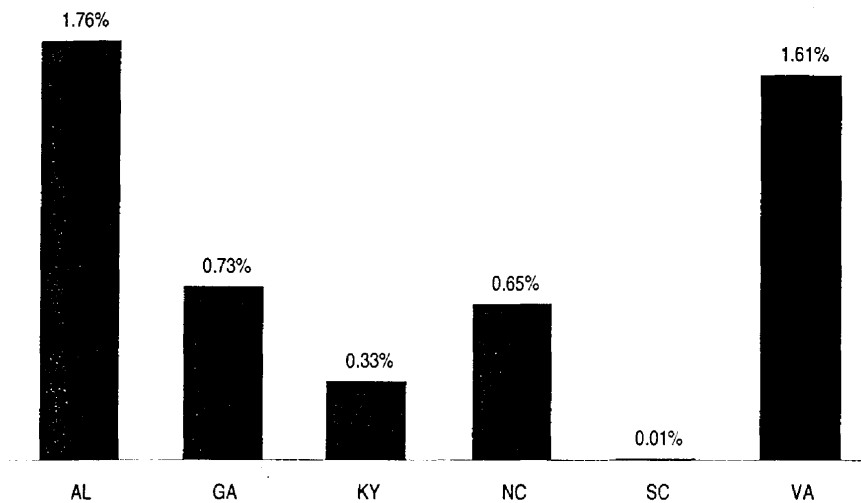
Source: Ernst & Young estimates based on estimated business property tax collections and business fixed asset values.

⁴ The real and personal property tax collection data were obtained from individual state property tax reports. The value of business property is estimated by Ernst & Young using U.S. Bureau of Economic Analysis fixed asset tables (real and personal property assets distributed by industry), adjusted for state differences in industry composition.

Utility Taxes

Figure 5 illustrates the effective tax rate on purchases of electric utility services by manufacturers. The effective tax rate equals estimated electric utility taxes paid by manufacturers divided by the value of utility services purchased by manufacturers. In these calculations the state and local gross receipts and excise taxes imposed on electric utilities are assumed to be passed forward to business (manufacturers) and household consumers of electricity. The Virginia effective tax rate, 1.61 percent, is just below Alabama's rate and significantly higher than the rates in the other states. Because of the importance of electricity to manufacturing businesses, the high effective state and local tax rate on these purchases contributes to a high overall effective tax rate on manufacturers.

Figure 5
Effective Tax Rates on Electric Utilities Used by Manufacturers



Sources: Energy information Administration, U.S. Department of Energy; U.S. Census Bureau; Ernst & Young estimates

Overall Manufacturing Taxes

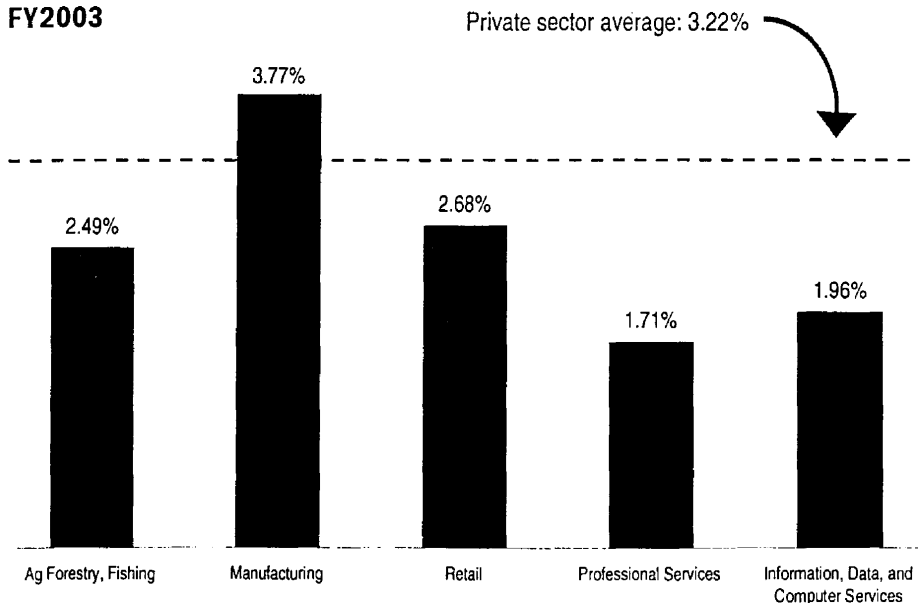
This section compares total state and local taxes imposed on manufacturers to other industries in Virginia and to manufacturing taxes in the comparison states.

Comparing Manufacturing to Other Virginia Industries

Figure 6 presents a comparison of the Virginia effective tax rates, including all state and local business taxes, for manufacturers and four other broad industry groups: agriculture, forestry and fishing; retail; professional services; and information, data and computer services. To compare across industries, the effective tax rates are calculated by dividing total state and local taxes for each industry by industry value added. Value added is a measure of the additional economic activity produced in each industry; it is equivalent to the capital and labor income produced by the industry.⁵

As shown in Figure 6, manufacturing has the highest overall state and local business tax rate, 3.8 percent, for the five industry categories. The disproportionately high effective tax rates on manufacturing machinery, tools, and other property, combined with relatively high tax rates on electric utility services utilities and growing payroll taxes, results in relatively high effective tax rates on manufacturing activities in Virginia (17 percent above the average for all of the industries).

Figure 6
Effective Virginia State and Local Tax Rates on All Industries,
Measured by Value-Added,
FY2003

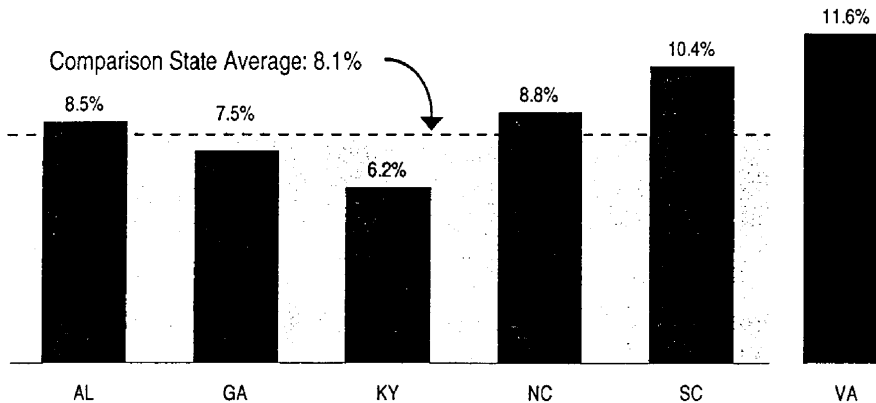


⁵ Value added is a measure of the economic contribution of labor and property located in a state. In concept, an industry's value added is equivalent to its gross output (sales or receipts and other operating income, commodity taxes, and inventory change) minus its intermediate inputs (consumption of goods and services purchased from other U.S. industries or imported). Thus, a state's value added is often considered the state counterpart of the nation's gross domestic product (GDP). In practice, value added estimates are measured as the sum of the costs incurred and incomes earned in the production of GDP. Note that value added also includes the non-corporate taxes paid by firms in an industry as a cost incurred in production of GDP.

Comparison with Other States

The final effective tax rate comparison compares total state and local taxes paid by manufacturers in Virginia and other selected states. The effective tax rates presented in Figure 7 are calculated as the ratio of total state and local business taxes paid by manufacturers to property income generated in the manufacturing sector.⁶ Similar to a reduction in the expected return from investment in the state, the effective tax rate on business property income is a key metric in determining Virginia's ability to attract new capital investment. Virginia's effective manufacturing tax rate is 11.6 percent, 43 percent higher than the weighted average manufacturing rate in the five comparison states and nearly double the effective tax rate on Kentucky manufacturers.

Figure 7
Effective State and Local Tax Rates on Manufacturers,
Measured by Industry Property Income, FY2003



⁶ Property income consists of two major components: proprietors' income and capital charges. Proprietors' income includes income of unincorporated establishments (adjusted for changes in inventory value), rental income of persons, and non-corporate economic depreciation. Capital charges include corporate profits before taxes (adjusted for changes in inventory value and economic depreciation), net interest, business transfer payments, and subsidies.

Appendix A: Supplemental Results

Size and Composition of the Manufacturing Industry Employment

Manufacturing employment in each of the study states is presented below as one measure of the size of the manufacturing sector in each state.

Table A-1. Regional Manufacturing Industry Employment

(Employment in Thousands)

Industry	AL	GA	KY	NC	SC	VA
Non-Durable Manufacturing	169,766	257,830	103,482	313,560	145,460	141,700
Durable Manufacturing	170,247	208,839	170,097	308,702	138,441	174,089
Total Manufacturing Jobs	340,013	466,669	273,579	622,262	283,901	315,789

Source: Bureau of Economic Analysis, U.S. Dept. of Commerce

Permit Fees

Virginia fees (\$12.9 million) are a significant manufacturing business cost but were not included in the business tax estimates in the study. If these fees were added to corporate income taxes paid by manufacturing corporations in Virginia, they would represent a 29% increase in the tax rate.

Table A-2. Estimated Permit Fees, Relative to Corporate Income Taxes

(\$millions)

State	Estimated Permit Fees	Effective Increase
Alabama	\$8.8	18%
Georgia	17.7	20%
Kentucky	1.6	1%
North Carolina	14.4	8%
South Carolina	4.7	19%
Virginia	\$12.9	29%

Source: Joint Legislative Audit and Review Commission (JLARC) Environmental Fee Study and Ernst and Young calculations.

Appendix B: Description of Methodology

Generally, business taxes include all taxes that are the legal liabilities of business, including taxes paid with respect to corporations; non-corporate businesses, including partnerships and sole-proprietorships; non-profit entities; and rental property owned by individuals. Sales and excise taxes on sales to households are not considered to be business taxes, even though the taxes may be the legal liability of retailers and wholesalers. Although generally considered a business tax liability, utility gross receipts taxes have been allocated to consumers and business based on consumption and average unit price paid by each group. The individual income taxes paid by owners of pass-through business entities are not included.

Real and Tangible Property Taxes. Taxes on residential rental property are treated as business taxes, similar to the treatment by the U.S. Commerce Department in measuring national income. Educational, farm, and not-for-profit entity property was allocated to business to the extent that it was taxed.

State Intangible Property Taxes and Local Merchants' Capital Taxes. State-level property taxes on intangible property held by corporations and partnerships and merchants' capital taxes are allocated entirely to business.

General Sales Tax. Sales tax paid by businesses on purchases of goods and services used in operations and production and on business purchases of capital equipment was estimated using the E&Y 50-state sales tax model.⁷ The model estimates the total taxable business input purchases, business investment purchases, and personal consumption purchases that occur annually in each state to calculate the business share of total sales tax collections.

Gross Receipts Taxes on Insurance Premiums. Gross receipt taxes levied on insurance companies were classified as business taxes because they are the legal liability of insurers and are often levied in lieu of generally applicable business taxes.

Public Utility Taxes. Taxes on public utility services, including electric and natural gas services, were allocated to industries or households consuming utility services based on the consumption and average price paid by each group.

Motor Fuel Excise Taxes. Motor fuel taxes were allocated to the purchaser of the fuel, although many states require the wholesale distributor to remit such taxes. The percent of fuel consumed by business consumers was estimated using national input-output data describing the total value of petroleum refinery products used in commercial transportation activities and by household users. Purchases by other users of petroleum refinery products were excluded from the calculations under the assumption that these users were purchasing non-motor-fuel petroleum products.

⁷ The 50-State Sales Tax Model has been used in the series of state and local business tax studies that Ernst & Young has prepared for the Council on State Taxation. See Robert Cline, Thomas Neubig, Andrew Phillips, and William Fox, "Total State and Local Business Taxes: Nationally and by State: 2000-2004," *State Tax Notes*, May 9, 2005.

Other Selective Sales Taxes. Excise taxes on alcohol, pari-mutuels, and tobacco were considered household taxes and excluded from the business tax estimates.

Corporation Net Income Tax. These taxes were allocated entirely to business. Individual income taxes were allocated entirely to households, except the portion of these taxes due to income earned by owners of pass-through entities. Individual income taxes paid on corporate dividends were allocated entirely to households.

Documentary and Stock Transfer Taxes. These taxes on the transfer of ownership of an asset were allocated 80% to households and 20% to business. Only the 20% of these taxes that were estimated to arise from business acquisition of assets were considered paid by business.

Estate and Gift Taxes. All taxes on transfers of assets by gift or bequeath were assumed to be paid by individuals and were excluded from the business tax estimates.

Business License Taxes, including the BPOL Tax. These taxes were allocated entirely to business. License taxes paid by businesses selling entirely to consumers were allocated to business because these taxes are the statutory liability of business.

Motor Vehicle License Taxes. Taxes on motor vehicle licenses and registrations were allocated to business based on U.S. Department of Transportation data describing the revenue for each type of vehicle by state. Automobile taxes and a portion of truck taxes were allocated to households, while all fees by weight, motor carrier fees, and other truck fees were allocated to business.

Driver's License and Hunting and Fishing License Taxes. These fees and taxes were allocated to households because they were generally the liability of individuals, even if directly related to the operation of a business or profession.

Machinery and Tools Tax Revenue, by Locality

Source: Auditor of Public Accounts, Comparative Report of Local Government Revenues and Expenditures

City	Fiscal Year 2004*	Fiscal Year 2003
Alexandria	\$ 776,364	\$ 469,378
Bedford	340,650	422,858
Bristol	**	787,509
Buena Vista	181,326	148,421
Charlottesville	133,009	122,425
Chesapeake	2,608,522	2,399,467
Colonial Heights	81,396	76,085
Covington	4,354,420	4,141,611
Danville	1,214,566	1,431,435
Emporia	222,884	-
Fairfax	57,374	47,570
Falls Church	-	-
Franklin	22,320	-
Fredericksburg	113,200	118,920
Galax	842,231	833,071
Hampton	1,885,903	1,971,391
Harrisonburg	2,052,925	2,123,228
Hopewell	2,725,329	3,513,871
Lexington	-	-
Lynchburg	3,416,744	3,468,767
Manassas	3,756,667	6,180,283
Manassas Park	40,472	40,524
Martinsville	251,949	258,466
Newport News	11,539,677	12,062,608
Norfolk	7,029,969	8,288,569
Norton	57,876	55,449
Petersburg	2,248,497	2,445,708
Poquoson	-	-
Portsmouth	2,518,664	3,120,273
Radford	686,039	689,927
Richmond	14,831,660	15,674,402
Roanoke	3,036,250	2,850,877
Salem	**	-
Staunton	133,572	195,073
Suffolk	1,337,142	1,301,285
Virginia Beach	894,266	646,224
Waynesboro	3,378,815	3,280,366
Williamsburg	1,222,825	1,246,089
Winchester	1,389,896	1,592,688
Total	\$75,383,399	\$ 82,004,818

County	Fiscal Year 2004*	Fiscal Year 2003
Accomack	\$ 530,724	\$ 490,623
Albemarle	662,535	931,484
Alleghany	5,843,689	5,532,026
Amelia	47,994	40,662
Amherst	1,522,400	1,492,939
Appomattox	208,129	185,548
Arlington	193,775	160,790
Augusta	2,403,232	2,344,287
Bath	155	315
Bedford	2,074,996	2,068,594
Bland	152,865	144,117
Botetourt	2,409,823	2,345,871
Brunswick	230,083	219,551
Buchanan	3,148,612	2,609,560
Buckingham	126,646	114,538
Campbell	4,700,774	4,636,345
Caroline	220,126	229,204
Carroll	1,424,783	-
Charles City	171,820	88,507
Charlotte	148,995	348,882
Chesterfield	4,155,915	3,971,207
Clarke	285,802	237,880
Craig	**	13,454
Culpeper	1,511,042	1,538,333
Cumberland	77,324	76,857
Dickenson	464,913	569,990
Dinwiddie	553,043	2,631,118
Essex	164,953	253,415
Fairfax	4,434,118	5,419,568
Fauquier	395,557	375,247
Floyd	173,663	-
Fluvanna	42,265	42,811
Franklin	251,146	273,604
Frederick	4,749,016	4,746,479
Giles	2,111,353	2,119,016
Gloucester	140,023	129,829
Goochland	251,772	247,602
Grayson	166,774	197,312
Greene	329,980	775,226
Greensville	730,228	755,287
Halifax	1,335,049	1,255,085
Hanover	1,579,027	1,651,489
Henrico	4,946,967	4,946,967
Henry	5,006,954	4,604,256
Highland	232	240
Isle of Wight	5,661,308	5,511,778
James City	5,073,476	5,403,083
King & Queen	124,230	164,199
King George	73,930	129,925
King William	1,295,437	1,352,856
Lancaster	\$ 4,437	4,086
Lee	**	-
Loudoun	1,122,576	1,029,487
Louisa	237,942	240,476

Lunenburg	131,426	145,846
Madison	81,884	89,531
Mathews	179,759	180,875
Mecklenburg	506,482	609,060
Middlesex	5,863	5,583
Montgomery	2,182,863	1,929,897
Nelson	28,423	19,957
New Kent	63,533	70,873
Northampton	97,879	68,708
Northumberland	102,840	108,969
Nottoway	185,348	207,246
Orange	1,004,565	1,279,425
Page	788,001	819,083
Patrick	503,740	681,907
Pittsylvania	1,808,673	1,417,002
Powhatan	244,776	286,169
Prince Edward	156,499	146,561
Prince George	281,212	275,974
Prince William	320,000	400,000
Pulaski	2,936,114	2,708,077
Rappahannock	-	-
Richmond	19,559	19,309
Roanoke	905,629	961,472
Rockbridge	734,152	481,234
Rockingham	6,384,130	5,549,252
Russell	1,096,075	1,130,097
Scott	183,793	187,229
Shenandoah	1,701,204	1,541,416
Smyth	979,145	995,090
Southampton	400,070	414,749
Spotsylvania	1,153,751	1,126,486
Stafford	120,300	89,882
Surry	-	-
Sussex	989,780	816,563
Tazewell	586,531	665,197
Warren	536,795	565,620
Washington	2,912,126	2,654,705
Westmoreland	141,978	138,198
Wise	2,640,095	2,649,595
Wythe	946,828	968,175
York	1,393,532	1,401,971
Total	\$ 109,107,961	\$ 108,458,988

Town	Fiscal Year 2004*	Fiscal Year 2003
Abingdon	\$ 8,105	\$ 3,941
Ashland	14,333	14,384
Big Stone Gap	452	626
Blacksburg	-	-
Blackstone	9,462	12,594
Bluefield	22,585	21,372
Bridgewater	131,272	140,333
Chincoteague	**	231
Christiansburg	274,363	234,394
Clifton Forge	6,335	6,335
Colonial Beach	-	-
Culpeper	184,799	221,780
Dumfries	-	-
Farmville	-	-
Front Royal	4,983	3,830
Herndon	-	-
Leesburg	16,236	16,506
Luray	92,902	95,260
Marion	20,458	19,413
Orange	5,608	4,431
Pulaski	259,503	176,701
Purcellville	2,982	3,432
Richlands	-	-
Rocky Mount	51,381	57,997
Smithfield	130,091	123,108
South Boston	1,455	6,745
South Hill	188,793	217,977
Strasburg	262,936	212,634
Tazewell	**	-
Vienna	-	-
Vinton	71,799	60,981
Warrenton	4,052	5,607
West Point	2,738,638	2,965,891
Wise	-	-
Woodstock	**	5,692
Wytheville	127,490	102,009
Total	\$ 4,631,013	\$ 4,734,204
Grand Total	\$ 189,122,373	\$ 195,198,010

*Preliminary Comparative Report for the Fiscal Year Ended June 30, 2004 (February 1, 2005).

** The Cities of Bristol and Salem, the Counties of Craig and Lee, and the Towns of Chincoteague, Tazewell, and Woodstock did not provide the auditors financial information in sufficient time to meet the statutory deadlines and did not submit Comparative Report data for inclusion in the 2004 preliminary report.

**Table 10.1
Machinery and Tools Property Tax, 2004**

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
Cities (Note: All cities responded to this survey.)						
Alexandria	OC	IN	4.50	<u>General</u>		
				1	80	3.60
				2	70	3.15
				3	60	2.70
				4	50	2.25
				5	40	1.80
				6	30	1.35
				7+	20	0.90
Bedford	OC	IN	1.30		60	0.78
Bristol	OC	IN	6.00		11	0.66
Buena Vista	OC	IN	4.25	0-10	20	0.85
				11-20	15	0.64
				21+	10	0.43
				Not in use for 1 year	1	0.04
Charlottesville	OC	IN	4.20	1	25	1.05
				2	22.5	0.95
				3	20	0.84
				4	17.5	0.74
				5	15	0.63
				6	12.5	0.53
Chesapeake	OC	IN	3.12 ^b		20	0.62
Colonial Heights	OC	IN	2.00	1	90	1.80
				2	80	1.60
				3	70	1.40
				4	60	1.20
				5	50	1.00
				6+	40	0.80
Covington	OC	IN	5.53		15	0.83
Danville	OC	IN	1.50	1-10	20	0.30
				11-15	10	0.15
				16+	2	0.03
Emporia	OC	IN	5.00		12.5	0.63
Fairfax	OC	IN	3.29	1	80	2.63
				2	70	2.30
				3	60	1.97
				4	50	1.65
				5	40	1.32
				6	30	0.99
				7	20	0.66
				8+	10	0.33
Falls Church	OC	IN	4.71	<u>General</u>		
				1	80	3.77
				2	70	3.30
				3	60	2.83
				4	50	2.36
				5	40	1.88
				6	30	1.41
				7+	20	0.94
				<u>Computer Equipment</u>		
				1	75	3.53
				2	50	2.36
				3	35	1.65
				4	15	0.71
				5	5	0.24

See the last page of table for key to abbreviations.

^a Effective rates in different localities are not comparable unless they share the same basis of assessment and assessment schedule.

^b Chesapeake City adds an additional \$0.08 per \$100 mosquito district tax on its machinery and tools rate.

Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
Cities (continued)						
Franklin	OC	IN	2.00		30	0.60
Fredericksburg	OC	IN	0.80	1	90	0.72
				2	80	0.64
				3	70	0.56
				4	60	0.48
				5	45	0.36
				6	30	0.24
				7+	20	0.16
Galax	OC	IN	1.42		50	0.71
Hampton	OC	IN	3.00		35	1.05
Harrisonburg	OC	IN	2.00	1	90	1.80
				2	80	1.60
				3	70	1.40
				4	60	1.20
				5	50	1.00
				6	40	0.80
				7+	30	0.60
Hopewell	OC	IN	3.05		25	0.76
Lexington	BV	IN	3.95		25	0.99
Lynchburg	OC	IN	3.00	1-5	30	0.90
				6+	25.35	0.76
Manassas	OC	IN	2.50	1	80	2.00
				2	70	1.75
				3	60	1.50
				4	50	1.25
				5	30	0.75
				6	20	0.50
				7+	15	0.38
Manassas Park	OC	IN	3.50	1	70	2.45
				2	60	2.10
				3	50	1.75
				4	40	1.40
				5	30	1.05
Martinsville	OC	IN	1.85	6+	20	0.70
				1	90	1.67
				2	80	1.48
				3	70	1.30
				4	60	1.11
				5	50	0.93
				6	40	0.74
7	30	0.56				
8+	25	0.46				
Newport News	OC	IN	3.50		33.3	1.17
Norfolk	OC	IN	4.00		40	1.60
Norton	OC	IN	1.85		10	0.19
Petersburg	OC	IN	3.80	1	40	1.52
				2	35	1.33
				3	30	1.14
				4	25	0.95
				5+	20	0.76
Poquoson	OC	IN	3.85		30	1.16
Portsmouth	OC	IN	3.00		50	1.50
Radford	OC	IN	1.76		30	0.53
Richmond	OC	IN	2.30	1	90	2.07
				2	80	1.84
				3	70	1.61
				4	60	1.38
				5	50	1.15
				6+	40	0.92

See the last page of table for key to abbreviations.

^a Effective rates in different localities are not comparable unless they share the same basis of assessment and assessment schedule.

Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
Cities (continued)						
Roanoke	OC	IN	3.45	1	60	2.07
				2	50	1.73
				3	40	1.38
				4	30	1.04
				5+	20	0.69
Salem	OC	IN	3.20	1	70	2.24
				2	60	1.92
				3	50	1.60
				4	40	1.28
				5	30	0.96
				6+	25	0.80
Staunton	FMV	IN	1.24 ^c		100	1.24
Suffolk	OC	IN	3.15	1-5	20	0.63
				6+	10	0.32
Virginia Beach	OC	IN	1.00		40	0.40
Waynesboro	OC	IN	3.00	1	27	0.81
				2	25	0.75
				3	22	0.66
				4	20	0.60
				5	15	0.45
				6+	12	0.30
Williamsburg	OC	IN	3.50		30	1.05
Winchester	OC	IN	1.30	1	80	1.04
				2	70	0.91
				3	60	0.78
				4	50	0.65
				5	40	0.52
				6+	30	0.39
City effective tax rates, one year old property:						
Unweighted mean						1.36
Median						1.05
First quartile						0.71
Third quartile						1.80
Counties (Note: All counties responded to this survey.)						
Accomack	OC	IN				
		District 2	3.24	1	45	1.30
				2	35	0.97
				3	30	0.81
				4-10	20	0.65
				11+	10	0.32
		District 3	3.26	1	45	1.30
				2	35	0.98
				3	30	0.82
				4-10	20	0.65
				11+	10	0.33
		Districts 4 & 5	3.22	1	45	1.29
				2	35	0.97
				3	30	0.81
				4-10	20	0.64
				11+	10	0.32
		District 6	3.13	1	45	1.25
				2	35	0.94
				3	30	0.78
				4-10	20	0.63
				11+	10	0.31

See the last page of table for key to abbreviations.

^a Effective rates in different localities are not comparable unless they share the same basis of assessment and assessment schedule.

^c Unless enterprise zone-then 50 percent of rate.

Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
Counties (continued)						
Albemarle	OC	IN	4.28	1	25	1.07
				2	22.5	0.96
				3	20	0.86
				4	17.5	0.75
				5	15	0.64
				6	12.5	0.54
Alleghany	OC	IN	5.95		15	0.89
Amelia	OC	IN	1.00		100	1.00
Amherst	OC	IN	2.00		25	0.50
Appomattox	OC	IN	3.50		12.5	0.44
Arlington	OC	IN	4.40	1	80	3.52
				2	70	3.08
				3	60	2.64
				4	50	2.20
				5	40	1.76
				6	30	1.32
				7+	20	0.88
Augusta	OC	IN	1.90		20	0.38
Bath	BV	IN	0.20		100	0.20
Bedford	OC	IN	6.00	1	100	1.20
				2	95	1.14
				3	90	1.08
				4	85	1.02
				5	80	0.96
				6+	75	0.90
Bland	OC	IN	0.89	1	95	0.85
				2	90	0.80
				3	85	0.76
				4	80	0.71
				5	75	0.67
				6	70	0.62
				7	65	0.58
				8	60	0.53
				9	55	0.49
				10	50	0.45
				11	45	0.40
				12	40	0.36
				13	35	0.31
				14	30	0.27
				15	25	0.22
				16+	20	0.18
Botetourt	OC	IN	1.80	1-5	50	0.90
				6+	42	0.76
Brunswick	OC	IN	3.40		20	0.68
Buchanan	OC	IN	1.95	1-3	80	1.56
				4-6	60	1.17
				7-9	40	0.78
				10+	20	0.39
Buckingham	OC	IN	2.90	0-9	15	0.44
				10-19	10	0.29
				20+	5	0.15
Campbell	OC	IN	3.25		25	0.81
Caroline	OC	IN	3.50		20	0.70

See the last page of table for key to abbreviations.

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Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
Counties (continued)						
Carroll	OC	IN	1.30	1	90	1.17
				2	85	1.11
				3	80	0.98
				4	70	0.85
				5	60	0.72
				6	50	0.59
				7	40	0.52
				8	35	0.46
				9+	30	0.39
Charles City	OC	IN	2.50	1	50	1.25
				2	40	1.00
				3	30	0.75
				4	20	0.50
				5+	10	0.25
Charlotte	OC	IN	2.00	1	45	0.90
				2	40.5	0.81
				3	36.45	0.73
				4	32.8	0.66
				5+	29.52	0.59
Chesterfield	OC	IN	1.00	1-10	25	0.25
				11-20	20	0.20
				21+	15	0.15
				Idle	1	0.01
Clarke	OC	IN	1.25	1	50	0.63
				2	45	0.56
				3	40	0.50
				4	37.5	0.47
				5	35	0.44
				6	32.5	0.41
				7	30	0.38
				8	27.5	0.34
				9	25	0.31
				10	22.5	0.28
				11	20	0.25
				12	17.5	0.22
				13	15	0.19
				14	12.5	0.16
				15+	10	0.13
Craig	OC	IN	2.20	1	75	1.65
				2	70	1.54
				3	65	1.43
				4	60	1.32
				5	55	1.21
				6	50	1.10
				7	45	0.99
				8	40	0.88
				9	35	0.77
				10	30	0.66
				11	25	0.55
				12	20	0.44
				13	15	0.33
				14	10	0.22
				15+	5	0.11
Culpeper	OC	IN	2.00	1	70	1.40
				2	60	1.20
				3	50	1.00
				4	40	0.80
				5+	30	0.60

See the last page of table for key to abbreviations.

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Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
Counties (continued)						
Cumberland	OC	IN	4.50		30	1.35
Dickenson	OC	IN	1.59	1-3	80	1.27
				4-6	60	0.95
				7-9	40	0.64
				10+	20	0.32
Dinwiddie	OC	IN	3.30		20	0.66
Essex	OC	IN	3.50		10	0.35
Fairfax	OC	IN	4.57	<u>General</u>		
				1	80	3.66
				2	70	3.20
				3	60	2.74
				4	50	2.29
				5	40	1.83
				6	30	1.37
				7+	20	0.91
				<u>Computer Equipment</u>		
				1	50	2.29
				2	35	1.60
				3	20	0.91
				4	10	0.46
				5	2	0.09
Fauquier	OC	IN	4.65	1	70	3.26
				2	60	2.80
				3	50	2.33
				4	40	1.86
				5	30	1.40
				6	20	0.93
				7+	10	0.47
Floyd	OC	IN	1.55	1	60	0.93
				2	50	0.78
				3	40	0.62
				4	30	0.47
				5+	20	0.31
Fluvanna	OC	IN	2.00	1	20	0.40
				2+	13	0.26
Franklin	OC	IN	0.54	1	100	0.54
				2	90	0.49
				3	80	0.43
				4	70	0.38
				5	60	0.32
				6	50	0.27
				7+	40	0.22
Frederick	OC	IN	2.00	1	60	1.20
				2	50	1.00
				3	40	0.80
				4+	30	0.60
Giles	OC	IN	0.90		100	0.90
Gloucester	OC	IN	4.00		30	1.12
Goochland ^d	OC	IN	3.75(M)	1-5	20	0.75
			4.00(O)	6-10	15	0.56
				11+	10	0.38
Grayson	OC	IN	1.60	1	100	1.60
				2	90	1.44
				3	80	1.28
				4	70	1.12
				5	60	0.96
				6	50	0.80
				7	40	0.64
				8+	30	0.48

See the last page of table for key to abbreviations.

^a Effective rates in different localities are not comparable unless they share the same basis of assessment and assessment schedule.

^d In Goochland County, (M) applies to manufacturing only; (O) applies to non-manufacturing businesses or professions.

Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
Counties (continued)						
Greene	BV	IN	2.00		100	2.00
Greensville	OC	IN	3.50		20	2.45
Halifax	OC	IN	1.26	1-18	50	0.63
				19+	20	0.25
				Idle & unused	5	
Hanover	OC	IN	3.64		10	0.36
Henrico	OC	IN	1.00 ^o	1	75	0.75
				2	70	0.60
				3	65	0.50
				4	60	0.40
				5	50	0.30
				6-10	25	0.20
				11-12	20	0.15
				13-14	15	0.10
15+	8	0.05				
Henry	OC	IN	1.19		71	0.85
Highland	OC	IN	1.00		5	0.05
Isle of Wight	OC	IN	0.95		100	0.95
James City	OC	IN	4.00		25	1.00
King & Queen	OC	IN	0.99	1	70	0.69
				2	60	0.57
				3	50	0.50
				4	40	0.40
				5	30	0.30
				6	20	0.20
				7+	10	0.10
King George	OC	IN	2.50		20	0.50
King William	OC	IN	2.30		25	0.58
Lancaster	BV	IN	1.52	1	100	1.52
				2	90	1.37
				3	80	1.22
				4	70	1.06
				5	60	0.91
				6	50	0.76
				7	40	0.61
				8	30	0.46
9+	20	0.30				
Lee	OC	IN	1.41	1	90	1.27
				2	80	1.13
				3	70	0.99
				4	60	0.85
				5	50	0.71
				6	40	0.56
				7	30	0.42
				8+	20	0.28
Loudoun	OC	IN	2.75	1	50	1.38
				2	40	1.10
				3	30	0.83
				4	20	0.55
				5+	10	0.28
Louisa	OC	IN	1.90		10	0.19
Lunenburg	OC	IN	1.80	1-5	50	0.90
				6-10	40	0.72
				11-15	30	0.54
				16-20	20	0.36
				21+	10	0.18

See the last page of table for key to abbreviations.

^a Effective rates in different localities are not comparable unless they share the same basis of assessment and assessment schedule.

^o Henrico's rate includes \$.001/\$100 sanitary district tax.

Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
Counties (continued)						
Madison	OC	IN	5.50		20	1.10
Mathews	FMV	IN	2.14		100	2.14
Mecklenburg	OC	IN	0.66		80	0.53
Middlesex	OC	IN	3.50		10	0.35
Montgomery	OC	IN	1.82	1-4	60	1.09
				5-7	50	0.91
				8+	40	0.73
Nelson	OC	IN	1.25	1-5	40	0.50
				6-10	30	0.38
				11-15	20	0.25
				16+	10	0.13
New Kent	OC	IN	3.00	1-3	35	1.05
				4-6	30	0.90
				7-10	25	0.75
				11+	20	0.60
				Idle	5	0.15
Northampton	OC	IN	2.25	1	70	1.58
				2	60	1.35
				3	50	1.13
				4	40	0.90
				5	25	0.57
				6+	10	0.23
Northumberland	OC	IN	3.60		25	0.90
Nottoway	OC	IN	1.25	1-3	70	0.88
				4-7	60	0.75
				8+	30	0.38
Orange	OC	IN	1.83	1	80	1.46
				2	76	1.39
				3	72	1.32
				4	68	1.24
				5	64	1.17
				6	60	1.10
				7	56	1.02
				8	52	0.95
				9	48	0.88
				10	44	
				11+	40	
Page	OC	IN	2.00		40	0.80
Patrick	OC	IN	1.36	1	95	1.29
				2	85.5	1.16
				3	77	1.05
				4	69.3	0.94
				5	62.3	0.85
				6	56.1	0.76
				7	50.5	0.69
				8	45.4	0.62
				9	40.9	0.56
				10	36.8	0.50
				11	33.1	0.45
				12	29.8	0.41
				13	26.8	0.37
				14+	25	0.34
Pittsylvania	OC	IN	4.50		10	0.45
Powhatan	FMV	IN	3.60	1	60	2.16
				2	45	1.44
				3	37.5	1.35
				4	30	1.08
				5+	20	0.72
Prince Edward	OC	IN	3.20		10	0.32

See the last page of table for key to abbreviations.

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Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
Counties (continued)						
Prince George	OC	IN	1.50	1	60	0.90
				2	50	0.75
				3	40	0.60
				4	30	0.45
				5+	20	0.30
Prince William ^f	OC	IN	2.00	1	85	1.70
				2	75	1.50
				3	65	1.30
				4	55	1.10
				5	45	0.90
				6	35	0.70
				7	25	0.50
				8	15	0.30
				9+	10	0.20
Pulaski	OC	IN	1.50		48	0.72
Rappahannock	N/A	N/A	N/A		N/A	N/A
Richmond	BV	IN	0.50		100	0.50
Roanoke	OC	IN	3.00	1-5	25	0.75
				6-10	20	0.60
				11+	15	0.45
Rockbridge	OC	IN	2.35		10	0.24
Rockingham	OC	IN	2.55	1	90	2.30
				2	80	2.04
				3	70	1.79
				4	60	1.53
				5	50	1.28
				6	40	1.02
				7	30	0.77
				8+	20	0.51
Russell	OC	IN	2.45	0-1	90	2.21
				2-3	80	1.96
				4-5	70	1.72
				6-7	60	1.47
				8-10	50	1.23
				11-14	40	0.98
15+	30	0.49				
Scott	OC	IN	0.72		100	0.72
Shenandoah	OC	IN	2.86	1	55	1.57
				2	50	1.43
				3	45	1.29
				4	40	1.14
				5	25	0.72
				6+	10	0.29
Smyth	OC	IN	1.20	1	90	1.08
				2	80	0.96
				3	70	0.84
				4	60	0.72
				5	50	0.60
				6	40	0.48
				7	30	0.36
				8+	20	0.24

N/A Not applicable

See the last page of table for key to abbreviations.

^a Effective rates in different localities are not comparable unless they share the same basis of assessment and assessment schedule.

^f The base effective tax rate in Prince William County is \$2.00, but several district levies range from \$0.0033 to \$0.16.

Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$ Per \$100)	Assessment		Effective Rate (\$ Per \$100 ^a)
				Year	Ratio (%)	
Counties (continued)						
Southampton	OC	IN	2.40	1	80	1.92
				2	70	1.68
				3	60	1.44
				4	50	1.20
				5	40	0.96
				6	30	0.72
				7	20	0.48
				8+	10	0.24
Spotsylvania	OC	IN	2.50	1	50	1.25
				2	45	1.13
				3	40	1.00
				4	30	0.75
				5+	20	0.50
Stafford	OC	IN	0.75	1	90	0.68
				2	80	0.60
				3	65	0.49
				4	50	0.38
				5	35	0.26
				6+	20	0.15
Surry	OC	IN	1.00	1	60	0.60
				2	50	0.50
				3	40	0.40
				4	30	0.30
				5+	20	0.20
Sussex	OC	IN	4.85	1-5	50	2.43
				6-15	40	1.94
				16-25	25	1.21
				26+	10	0.49
Tazewell	OC	IN	2.00		100	2.00
Warren	OC	IN	2.25	1-6	25	0.56
				7-15	15	0.34
				16+	12.5	0.28
Washington	OC	IN	1.55	0	100	1.55
				1	90	1.40
				2	80	1.24
				3	70	1.09
				4	60	0.93
				5+	50	0.78
Westmoreland	OC	IN	1.50		100	1.50
Wise	OC	IN	1.15	1	85	0.98
				2	80	0.92
				3	75	0.86
				4	70	0.81
				5	65	0.75
				6	60	0.69
				7	40	0.46
				8	30	0.35
				9	20	0.23
				10+	15	0.17
Wythe	OC	IN	1.50	1-5	50	0.75
				6+	20	0.30
York	OC	IN	4.00		25	1.00
County effective tax rates, one year old property:						
Unweighted mean						1.04
Median						0.90
First quartile						0.63
Third quartile						1.29

See the last page of table for key to abbreviations.

^a Effective rates in different localities are not comparable unless they share the same basis of assessment and assessment schedule.

Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
City and county effective tax rates, one year old property:						
Unweighted mean						1.13
Median						0.93
First quartile						0.65
Third quartile						1.43
Towns (Note: Towns that answered "not applicable" to all items are excluded. For a list of respondent and non-respondent towns, see Appendix B.)						
Abingdon	OC	C	0.55		100	0.55
Accomac	BV	IN	0.10		100	0.10
Alberta	OC	...	1.90		20	0.38
Altavista	OC	...	2.00		25	0.50
Amherst	OC	...	0.35		25	0.088
Appomattox	FMV	IN	0.55		12.5	0.07
Ashland	OC	G	0.77		10	0.077
Berryville	OC	IN	0.90	1	50	0.45
				2	45	0.405
				3	40	0.36
				Depreciates 2.5 percentage points annually, after year 3 to a minimum of 10%.		
Big Stone Gap	OC	C	0.62		100	0.62
Blackstone	OC	C	0.65		100	0.65
Bluefield	0.60		100	0.60
Boones Mill	OC	...	1.00	1	10	0.10
				2	9	0.09
				3	8	0.08
				4	7	0.07
				5	6	0.06
				6	5	0.05
				7+	4	0.04
Bowling Green	OC	IN	1.20		20	0.24
Boydton	OC	...	0.88		100	0.88
Branchville	OC	...	0.61		100	0.61
Bridgewater	OC	...	0.75	1	90	0.675
				2	80	0.60
				3	70	0.525
				4	60	0.45
				5	50	0.375
				6	40	0.30
				7	30	0.225
				8+	20	0.15
Broadway	N/A	G	0.40		100	0.40
Brodnax	OC	G	0.30		80	0.24
Brookneal	OC	...	1.70	1-10	20	0.34
				11-20	15	0.26
				21+	10	0.17
Buchanan	OC	IN	0.10		20	0.02
Burkeville	OC	...	0.68		100	0.68
Cape Charles	OC	...	1.00		100	1.00
Cedar Bluff	OC	...	0.35		100	0.35
Chase City	N/A	G	0.61		80	0.49
Chilhowie	FMV	...	0.20 (\$5 min)		100	0.20
Chincoteague	OC	IN	0.85		100	0.85
Christiansburg	OC	C	0.45		100	0.45
Claremont	OC	...	0.60		100	0.60
Clarksville	OC	IN	0.38		80	0.304
Clintwood	OC	...	0.30		100	0.30
Coeburn	BV	IN	0.40		100	0.40
Culpeper	OC	IN	0.80		50	0.40

See the last page of table for key to abbreviations.

... No response provided.

^a Effective rates in different localities are not comparable unless they share the same basis of assessment and assessment schedule.

Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
Towns (continued)						
Damascus	OC	G	0.54		100	0.54
Dillwyn	OC	G	0.28		100	0.28
Drakes Branch	OC	...	0.37		100	0.37
Dublin	OC	IN	0.50		100	0.50
Eastville	FMV	...	0.25		100	0.25
Exmore	OC	IN	0.45		25	0.113
Floyd	OC	IN	0.25	1	60	0.15
				2	50	0.125
				3	40	0.10
				4	30	0.075
				5+	20	0.05
Fries	OC	C	1.74		10	0.174
Front Royal	OC	C	0.60	1-6	25	0.15
				7-15	15	0.09
				16	12.5	0.075
Glasgow	OC	...	0.60		10	0.06
Glen Lyn	OC	C	0.90		100	0.90
Gordonsville	OC	IN	0.17		26.64	0.05
Gretna	N/A	G	2.00		10	0.20
Hallwood	OC	C	0.45		100	0.45
Hamilton	OC	IN	1.10	1	50	0.55
				2	40	0.44
				3	30	0.33
				4	20	0.22
				5+	10	0.11
Haymarket	OC	C	0.60	1	85	0.51
				2	75	0.45
				3	65	0.39
				4	55	0.33
				5	45	0.27
				6	35	0.21
				7	25	0.15
				8	15	0.09
				9+	10	0.06
Haysi	BV	IN	0.15	1-3	80	0.12
				4-6	60	0.09
				7-9	40	0.06
				10+	20	0.03
Hillsville	OC	IN	0.70		100	0.70
Hurt	OC	IN	2.50		10	0.25
Independence	N/A	N/A	0.63		10	0.063
Iron Gate	FMV	C	1.00		10	0.10
Ivor	OC	C	0.50		100	0.50
Jonesville	OC	N/A	0.25		100	0.25
Keysville	N/A	G	0.60		100	0.60
La Crosse	OC	C	0.24		80	0.192
Lawrenceville	OC	...	1.80		20	0.36
Lebanon	OC	...	0.75		100	0.75
Leesburg	OC	C	1.00	1	50	0.50
				2	40	0.40
				3	30	0.30
				4	20	0.20
				5+	10	0.10
Luray	OC	IN	0.40		100	0.40
Marion	OC	C	0.29		100	0.29

See the last page of table for key to abbreviations.

... No response provided.

^a Effective rates in different localities are not comparable unless they share the same basis of assessment and assessment schedule.

Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
Towns (continued)						
Middleburg	OC	C	1.00	1	50	0.50
				2	40	0.40
				3	30	0.30
				4	20	0.20
				5+	10	0.10
Monterey	OC	IN	1.00		10	0.10
Narrows	OC	...	0.94		12.50	0.12
New Market	OC	C	0.80	New	100	0.80
				1	80	0.64
				2	70	0.56
				3	55	0.44
				4	40	0.32
				5	25	0.20
				6+	10	0.08
Onancock	OC	C	2.00	1	25	0.50
				2-3	15	0.30
				4+	9	0.18
					100	0.15
Onley	OC	...	0.15			
Orange	OC	...	0.07	1	80	0.056
				2	76	0.053
				3	72	0.050
				4	68	0.048
				5	64	0.045
				6	60	0.042
				7	56	0.039
				8	52	0.036
				9	48	0.034
				10	44	0.031
				11+	40	0.028
Pearisburg	FMV	C	3.75		25	0.94
Pennington Gap	OC	...	0.25		100	0.25
Pound	OC	IN	0.44		100	0.44
Rocky Mount	OC	G	0.17	1	100	0.17
				2	90	0.153
				3	80	0.136
				4	70	0.119
				5	60	0.102
				6	50	0.085
				7+	40	0.068
Rural Retreat	OC	IN	0.10	1-5	50	0.05
				6+	20	0.02
Saint Paul	OC	IN	0.31		100	0.31
Saltville	OC	...	0.65		100	0.65
Saxis	OC	...	0.27	1	25	0.068
				2-3	15	0.041
				4+	9	0.024
Shenandoah	OC	...	0.33		100	0.33
Smithfield	OC	G	0.15		100	0.15
South Boston	OC	IN	0.31		15	0.047
South Hill	N/A	G	0.38		80	0.304
Stanley	OC	IN	0.45		100	0.45
Stephens City	OC	N/A	0.50		30	0.15
Stony Creek	BV	N/A	0.60		100	0.60
Strasburg	BV	G	0.86	1	80	0.688
				2	70	0.602
				3	55	0.473
				4	40	0.344
				5	25	0.215
				6+	10	0.086

See the last page of table for key to abbreviations.

... No response provided.

^a Effective rates in different localities are not comparable unless they share the same basis of assessment and assessment schedule.

Table 10.1 Machinery and Tools Property Tax, 2004 (continued)

Locality	Basis of Assessment	Assessment Type	Nominal Rate (\$) Per \$100	Assessment		Effective Rate (\$) Per \$100 ^a
				Year	Ratio (%)	
Towns (continued)						
Stuart	OC	G	0.33		30	0.099
Surry	N/A	G	0.60		100	0.60
Tangier	OC	...	1.25		100	1.25
Tappahannock	OC	C	1.00		10	0.10
Tazewell	OC	...	0.50		100	0.50
Timberville	OC	IN	0.30		100	0.30
Victoria	OC	...	0.75		33.3	0.25
Vinton	OC	IN	1.00	1-5	25	0.25
				6-10	20	0.20
				11+	15	0.15
					100	0.86
Wakefield	OC	C	0.86		100	0.86
Warrenton	OC	...	1.00	1	70	0.70
				2	60	0.60
				3	50	0.50
				4	40	0.40
				5	30	0.30
				6	20	0.20
				7+	10	0.10
					100	0.60
Warsaw	BV	C	0.60		100	0.60
Waverly	OC	IN	1.06	1-5	50	0.53
				6-15	40	0.44
				16-25	25	0.27
				26+	10	0.11
					100	0.10
Windsor	OC	G	0.10		100	0.10
Wise	OC	IN	0.53		100	0.53
Woodstock	OC	IN	0.90	1	80	0.72
				2	70	0.63
				3	55	0.495
				4	40	0.36
				5	25	0.225
				6+	10	0.09
					100	0.14
Wytheville	OC	IN	0.28		50	0.14
				6+	20	0.056
Town effective tax rates, one year property:						
Unweighted mean						0.39
Median						0.37
First quartile						0.15
Third quartile						0.55

Key to abbreviations:

Basis of Assessment: BV - Book Value FMV - Fair Market Value OC - Original Cost
 Assessment Type: C - Contracted Out G - County Government IN - In-House

... No response provided.

^a Effective rates in different localities are not comparable unless they share the same basis of assessment and assessment schedule.

SUMMARY OF POLICIES OF VIRGINIA UNIVERSITIES REGARDING OWNERSHIP OF INTELLECTUAL PROPERTY DEVELOPED FROM SPONSORED RESEARCH

Division of Legislative Services
November 17, 2004

A. College of William and Mary

According to Senate Document 25 (2000), William and Mary is the only Virginia university that has allowed the assignment of IP to third parties. Its intellectual property policy, which at the time was awaiting approval by the Office of the Attorney General, is unlike that of most Virginia universities by providing that, except in specific circumstances, faculty, staff and student inventors retain ownership to the intellectual property they develop while employed at the College, and may patent, copyright or license the technology and retain any royalties.

Policy 3.2.2.2: Non-Federally Funded Research

Ownership of intellectual property resulting from research that is funded wholly or in part by an Industrial Partner; Philanthropic or Other Organizations, including Non-Federal Government Agencies; or by an individual will be determined in the Sponsored Research Agreement between the College and the funding source.

B. Old Dominion University

ODU's IP policy stipulates that inventions made as a result of university or sponsored research or made with significant use of university facilities, funds, or employee time must be assigned to the university, which assigns the IP to the ODU Research Foundation.

ODU's 1999 technology transfer information sheet recites:

The University (or "an entity whose purpose is to benefit the respective institution") must retain title to intellectual properties created by a University employee and resulting from a contract which is supported by the Commonwealth. (citing § 23-4.4). Generally, industry sponsored research at the institution relies on purchased release time, which becomes state general funds. Other laws, state and federal, may apply. See, e.g., I.R.S. Rev. Proc. 97-14.

Part IV. Ownership

An invention developed by a university employee shall be the exclusive property of the inventor unless the development or invention is a product of university or sponsored research, or was developed with the significant use of university facilities or funds, or employee time. Rights to inventions which are subject to the terms of the university will be determined by the terms of the agreement.

IX. Transfer of Intellectual Property

Except when the governor's prior written approval is required, the university's governing board may transfer ownership of any intellectual property in which it claims an interest.

C. Virginia Tech

2.4 Policy Guidelines

The strong presumption of ownership of research such as products, processes, machines, software, biological technology, etc., is to the university (with the originator having a right to share in the benefits derived therefrom). Thus unless there is convincing and explicit evidence that the IP was developed without the use of university resources and/or facilities (which may include but is not limited to any of the following: use of equipment, lab or office space, university time of originator and/or personnel under his/her control, funds supplied by the university and/or funds originating from sponsored research projects and/or donations to university/affiliated companies, etc.) ownership of the IP rests with the university and the originator(s) are obliged to sign the appropriate legal assignment documents upon request.

Sponsor Rights: In the case in which an IP is generated as a result of research funded by a private sector company under a sponsored research project, the IP rights of the sponsor as defined in the applicable clauses of the Sponsored Research Agreement (as approved by the Associate Provost for Research and signed by an authorized officer of the university) shall take precedence over the rights of the university/inventor(s).

D. Virginia Commonwealth University

Industry Sponsored research policies:

Patents and Other Intellectual Property: The University has an interest in all intellectual property of VCU personnel, including students, created using university time and resources. The University retains all patent rights from sponsored research and any invention or patentable idea conceived or reduced to practice in the course of the research belongs to VCU. The University will grant to the sponsor a time-limited first right to negotiate an exclusive or non-exclusive license based upon the level of sponsor support. The management of VCU intellectual property is the charge of the Office of Technology Transfer.

IP Policy (May 2003): Ownership of Intellectual Property

Properties of this nature developed by University members using facilities owned or operated by, or resources, beyond their customary or normal usage as defined in Significant Use of University Resources section, administered by the University, become the property of the University.

When intellectual property is created under an internal or external grant, contract, or other agreement approved by the University, the terms of which stipulate ownership of intellectual property, the terms of the agreement will prevail over conflicting terms of this Policy.

Rights of ownership assigned to the University will be directly transferred to the Foundation which shall be responsible for commercialization of University intellectual property.

E. James Madison University

5.1 Patentable Discoveries and Inventions

University Ownership: Patentable materials developed by University employees shall usually be the property of the university. A discovery or invention developed by an employee that is a work made for hire, or that is developed or created using substantial university resources, or that is related to any university research program involving the employee within the past twelve (12) months, is the property of the university. Under this policy, the rights to all patentable discoveries and inventions are retained by the University unless that right is preempted by an external project sponsor. Different sponsors have different policies with respect to inventions resulting from work done under sponsored projects. ***In general, the University is unwilling to give up its patent rights unless the full cost of the research is supported by the sponsor.*** Should royalty income be generated from the application of technology, the university will share in that income according to the formula found in section 6.3.

Sponsored Research and Outside Ownership: Depending on the terms of the grant or contract, *Sponsors of research projects may be entitled to ownership of a discovery or invention made by an employee of the University without payment of any royalty. This ownership may occur when the sponsor provides funds for the entire project and in research involving the testing of a product or products developed by the sponsor.* Agreements on patent matters may be negotiated where it is necessary to do so as a prerequisite to University participation in the project or receipt of a grant or contract.

5.2 Copyrightable Works

Sponsored Research and Outside Ownership - Funds and facilities provided by governmental, commercial, industrial, or other private organizations, *which however are administered and controlled by the University, shall be considered to be funds and facilities provided by or through the University* for the purpose of this policy statement. Agreement between the University and the sponsor pertaining to share of royalties and title to copyrightable materials shall be addressed in the contract between the University and the sponsor. University employees who contract with third parties for the development of copyrightable materials can relinquish no greater interest in the materials than they legally possess. Therefore, if substantial University resources are employed in

the development of material subject to copyright, the University retains interests in the materials, regardless of the terms of a contract between the third party and the University employee, unless the University specifically waives its rights.

F. Christopher Newport University

b. 1. Outside Ownership (patents)

Certain research projects sponsored by governmental agencies, industrial organizations, or others may entitle the sponsors to ownership of a discovery or invention made by a faculty or staff member of the University without payment of a royalty. *This ownership may occur when the sponsor provides funds for the entire project and in research involving the testing of a product or products developed by the sponsor.*

Outside ownership - copyright

3. a. Agreement between the University and sponsor pertaining to sharing royalties and title to copyrightable material shall be addressed in the contract between the University and the sponsor. . . . *If substantial University resources are employed in the development of materials subject to copyright, the University retains interests in the materials, regardless of the terms of the contract between the third party and the University employee, unless the University specifically has waived its rights.*

G. George Mason University

Patent policy -- II. Ownership of Patents

A. Patents Created by University Faculty

Patents and inventions developed by faculty members shall be the property of such faculty members, except as follows:

1. Sponsored Research

Patents and inventions arising in the course of sponsored research shall belong to the University.

2. Research Financed Wholly or in Part by Federal Government Funds

Patents and inventions which result from research financed wholly or in part by Federal Government funds will be treated in accordance with the provisions of Public Law 96-517, "The Patent and Trademark Amendments of 1980," and will be owned by the University.

3. Research Financed Wholly or in Part by Industrial, Philanthropic or Other Organizations, Including Non-Federal Government Agencies or by Individuals, Under Contracts or Written Agreements with the University

Rights with respect to patents and inventions in this category will be governed by the agreement between the University and funding source.

4. Research in the Course of Assigned Duties or Conducted Wholly or Significantly Through the Use of General Funds

Patents and inventions developed in the course of assigned duties or developed wholly or significantly through the use of general funds shall belong to the University.

Definitions - Significant Use of General Funds, and the phrase "developed wholly or significantly through the use of general funds," mean that general funds *provided over half of the identifiable resources used to develop a particular intellectual property, and exceeded \$10,000.00*. A reasonable cost should be assigned to those resources for which a cost figure is not readily available, such as salary, support staff, and other equipment and resources dedicated to the creator's efforts. Resources such as libraries that are available to employees generally should not be counted in the assessment of the use of general funds.

GMU's Office of Sponsored Research's guidelines for clauses in contracts with potential private sponsors provides, as of July 1999, with respect to ownership of IP:

Title to all intellectual property developed under a sponsored agreement by employees of the University vests with the University. This position protects the University's tax exempt status and also ensures that after protection, the property will reach the public and will be used for the public good. We will, however, agree to give a corporate sponsor the first option to secure a royalty bearing exclusive license or non-royalty bearing non-exclusive license for a specific period.

H. University of Virginia

Under the University of Virginia patent policy and copyright policy, University employees are obligated to assign ownership to any inventions that are developed (1) within the scope of their employment or (2) using significant University resources (including grant money).

2.4 Inventions and Discoveries Which are not the Result of University Research

The University normally will relinquish any claim to an invention or discovery which is judged by the Vice President for Research and Public Service not to be the product of University research. However, in such cases the researcher may request that the invention or discovery be appraised by and, if appropriate, assigned to the University. In such cases, the terms of the agreement will be determined by the inventor and the University.

2005 SESSION

ENROLLED

SENATE JOINT RESOLUTION NO. 360

Directing the Joint Legislative Audit and Review Commission to study the comparative burden of regulatory compliance on Virginia's manufacturing sector. Report.

Agreed to by the Senate, February 8, 2005
 Agreed to by the House of Delegates, February 24, 2005

WHEREAS, the manufacturing sector, which accounts for almost 12 percent of Virginia's total gross state product and employs nearly 300,000 Virginians, is a crucial part of the Commonwealth's economy; and

WHEREAS, while aspects of the sector are faring well, Virginia's manufacturers have shed approximately 68,000 jobs over the past five years, with nearly 9,000 of these jobs being lost in the past year; and

WHEREAS, while rising productivity accounts for some of the employment losses in Virginia's manufacturing sector, a 2003 study by the Manufacturers Alliance/MAPI concludes that the ability of manufacturing firms to compete with low-cost producers in other countries is impaired by comparatively high employee benefits, corporate tax rates, energy costs, costs of tort litigation, and costs of regulatory compliance; and

WHEREAS, the Manufacturers Alliance/MAPI study concludes that the total cost of complying with environmental, economic, workplace, and tax regulations incurred by United States manufacturers is approximately \$160 billion, which is the equivalent of a 12 percent excise tax on manufacturing production; and

WHEREAS, at the national level, the burden of complying with certain classes of regulation, such as pollution abatement and worker health and safety, falls disproportionately on manufacturers; and

WHEREAS, the aggregate costs to Virginia's manufacturers of complying with regulations imposed by the federal and state governments have not been quantified; and

WHEREAS, the regulatory compliance costs borne by Virginia manufacturers have not been compared to the regulatory compliance costs borne by other sectors of the Commonwealth's economy; and

WHEREAS, the regulatory compliance costs imposed on Virginia manufacturers have not been compared to those imposed on manufacturers in other states with which the Commonwealth competes for jobs and investments; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Joint Legislative Audit and Review Commission be directed to study the comparative burden of regulatory compliance on Virginia's manufacturing sector.

In conducting its study, the Commission shall include among other things an evaluation of (i) the total cost of compliance by Virginia manufacturers with state and federal environmental, economic, workplace, and tax regulations; (ii) how the cost of regulatory compliance borne by Virginia manufacturers compares to the regulatory compliance costs borne by firms in other major sectors of Virginia's economy, in the aggregate, on a per-employee basis, based on the sectors' contributions to gross state product, and other relevant bases; and (iii) how the cost of regulatory compliance borne by Virginia manufacturers compares to the regulatory compliance costs borne by manufacturers in other mid-Atlantic and Southern states, in the aggregate, on a per-employee basis, based on the sectors' contributions to gross state product, and other relevant bases.

All agencies of the Commonwealth shall provide assistance to the Commission for this study, upon request.

The Commission shall complete its meetings by November 30, 2006, and the Director of the Commission shall submit to the Division of Legislative Automated Systems an executive summary of its findings and recommendations no later than the first day of the 2007 Regular Session of the General Assembly. The executive summary shall state whether the Commission intends to submit to the General Assembly and the Governor a report of its findings and recommendations for publication as a House or Senate document. The executive summary and report shall be submitted as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports and shall be posted on the General Assembly's website.

ENROLLED

SJ360ER

VIRGINIA ACTS OF ASSEMBLY -- 2005 SESSION

CHAPTER 619

An Act to amend and reenact §§ 2.2-4007 and 2.2-4027 of the Code of Virginia and to amend the Code of Virginia by adding a section numbered 2.2-4007.1, relating to the Administrative Process Act; regulatory flexibility for small businesses.

[H 1948]

Approved March 23, 2005

Be it enacted by the General Assembly of Virginia:

1. That §§ 2.2-4007 and 2.2-4027 of the Code of Virginia are amended and reenacted and that the Code of Virginia is amended by adding a section numbered 2.2-4007.1 as follows:

§ 2.2-4007. Notice of intended regulatory action; public participation; informational proceedings; effect of noncompliance.

A. Any person may petition an agency to request the agency to develop a new regulation or amend an existing regulation. The petition shall state (i) the substance and purpose of the rulemaking that is requested, including reference to any applicable Virginia Administrative Code sections, and (ii) reference to the legal authority of the agency to take the action requested. Within 14 days of receiving a petition, the agency shall send a notice identifying the petitioner, the nature of the petitioner's request and the agency's plan for disposition of the petition to the Registrar for publication in the Virginia Register of Regulations in accordance with the provisions of subsection B of § 2.2-4031. A 21-day period for acceptance of written public comment on the petition shall be provided after publication in the Virginia Register. The agency shall issue a written decision to grant or deny the petitioner's request within 90 days following the close of the comment period. However, if the rulemaking authority is vested in an entity that has not met within that 90-day period, the entity shall issue a written decision no later than 14 days after it next meets. The written decision issued by the agency shall include a statement of its reasons and shall be submitted to the Registrar for publication in the Virginia Register of Regulations. Agency decisions to initiate or not initiate rulemaking in response to petitions shall not be subject to judicial review.

B. In the case of all regulations, except those regulations exempted by §§ 2.2-4002, 2.2-4006, 2.2-4011, or § 2.2-4012.1, an agency shall provide the Registrar of Regulations with a Notice of Intended Regulatory Action that describes the subject matter and intent of the planned regulation. At least 30 days shall be provided for public comment after publication of the Notice of Intended Regulatory Action. An agency shall not file proposed regulations with the Registrar until the public comment period on the Notice of Intended Regulatory Action has closed.

C. Agencies shall state in the Notice of Intended Regulatory Action whether they plan to hold a public hearing on the proposed regulation after it is published. Agencies shall hold such public hearings if required by basic law. If the agency states an intent to hold a public hearing on the proposed regulation in the Notice of Intended Regulatory Action, then it shall hold the public hearing. If the agency states in its Notice of Intended Regulatory Action that it does not plan to hold a hearing on the proposed regulation, then no public hearing is required unless, prior to completion of the comment period specified in the Notice of Intended Regulatory Action (i) the Governor directs the agency to hold a public hearing or (ii) the agency receives requests for a public hearing from at least 25 persons.

D. Public participation guidelines for soliciting the input of interested parties in the formation and development of its regulations shall be developed, adopted and utilized by each agency pursuant to the provisions of this chapter. The guidelines shall set out any methods for the identification and notification of interested parties, and any specific means of seeking input from interested persons or groups that the agency intends to use in addition to the Notice of Intended Regulatory Action. The guidelines shall set out a general policy for the use of standing or ad hoc advisory panels and consultation with groups and individuals registering interest in working with the agency. Such policy shall address the circumstances in which the agency considers the panels or consultation appropriate and intends to make use of the panels or consultation.

E. In formulating any regulation, including but not limited to those in public assistance and social services programs, the agency pursuant to its public participation guidelines shall afford interested persons an opportunity to submit data, views, and arguments, either orally or in writing, to the agency or its specially designated subordinate. However, the agency may begin drafting the proposed regulation prior to or during any opportunities it provides to the public to submit comments.

F. In the case of all regulations, except those regulations exempted by §§ 2.2-4002, 2.2-4006, or § 2.2-4011, the proposed regulation and general notice of opportunity for oral or written submittals as to that regulation shall be published in the Virginia Register of Regulations in accordance with the provisions of subsection B of § 2.2-4031. In addition, the agency may, in its discretion, (i) publish the

notice in any newspaper and (ii) publicize the notice through press releases and such other media as will best serve the purpose and subject involved. The Register and any newspaper publication shall be made at least 60 days in advance of the last date prescribed in the notice for such submittals. All notices, written submittals, and transcripts, summaries or notations of oral presentations, as well as any agency action thereon, shall be matters of public record in the custody of the agency.

G. If an agency wishes to change a proposed regulation before adopting it as a final regulation, it may choose to publish a revised proposed regulation provided the latter is subject to a public comment period of at least 30 additional days and the agency complies in all other respects with this section.

H. Before delivering any proposed regulation under consideration to the Registrar as required in subsection I, the agency shall deliver a copy of that regulation to the Department of Planning and Budget. In addition to determining the public benefit, the Department of Planning and Budget in coordination with the agency, shall, within 45 days, prepare an economic impact analysis of the proposed regulation, *as follows*:

1. The economic impact analysis shall include, but need not be limited to, the projected number of businesses or other entities to whom the regulation would apply; the identity of any localities and types of businesses or other entities particularly affected by the regulation; the projected number of persons and employment positions to be affected; the impact of the regulation on the use and value of private property; and the projected costs to affected businesses, localities or entities to implement or comply with the regulations, including the estimated fiscal impact on such localities and sources of potential funds to implement and comply with such regulation; *and*

2. *If the regulation may have an adverse effect on small businesses, the economic impact analysis shall also include (i) an identification and estimate of the number of small businesses subject to the regulation; (ii) the projected reporting, recordkeeping, and other administrative costs required for small businesses to comply with the regulation, including the type of professional skills necessary for preparing required reports and other documents; (iii) a statement of the probable effect of the regulation on affected small businesses; and (iv) a description of any less intrusive or less costly alternative methods of achieving the purpose of the regulation. As used in this subdivision, "small business" has the same meaning as provided in subsection A of § 2.2-4007.1.*

Agencies shall provide the Department with such estimated fiscal impacts on localities and sources of potential funds. The Department may request the assistance of any other agency in preparing the analysis. The Department shall deliver a copy of the analysis to the agency drafting the regulation, which shall comment thereon as provided in subsection I, and a copy to the Registrar for publication with the proposed regulation. No regulation shall be promulgated for consideration pursuant to subsection I until the impact analysis has been received by the Registrar. For purposes of this section, the term "locality, business, or entity particularly affected" means any locality, business, or entity that bears any identified disproportionate material impact that would not be experienced by other localities, businesses, or entities. The analysis shall represent the Department's best estimate for the purposes of public review and comment on the proposed regulation. The accuracy of the estimate shall in no way affect the validity of the regulation, nor shall any failure to comply with or otherwise follow the procedures set forth in this subsection create any cause of action or provide standing for any person under Article 5 (§ 2.2-4025 et seq.) of this chapter or otherwise to challenge the actions of the Department hereunder or the action of the agency in adopting the proposed regulation.

I. Before promulgating any regulation under consideration, the agency shall deliver a copy of that regulation to the Registrar together with a summary of the regulation and a separate and concise statement of (i) the basis of the regulation, defined as the statutory authority for promulgating the regulation, including an identification of the section number and a brief statement relating the content of the statutory authority to the specific regulation proposed; (ii) the purpose of the regulation, defined as the rationale or justification for the new provisions of the regulation, from the standpoint of the public's health, safety or welfare; (iii) the substance of the regulation, defined as the identification and explanation of the key provisions of the regulation that make changes to the current status of the law; (iv) the issues of the regulation, defined as the primary advantages and disadvantages for the public, and as applicable for the agency or the state, of implementing the new regulatory provisions; and (v) the agency's response to the economic impact analysis submitted by the Department of Planning and Budget pursuant to subsection H. Any economic impact estimate included in the agency's response shall represent the agency's best estimate for the purposes of public review and comment, but the accuracy of the estimate shall in no way affect the validity of the regulation. Staff as designated by the Code Commission shall review proposed regulation submission packages to ensure the requirements of this subsection are met prior to publication of the proposed regulation in the Register. The summary; the statement of the basis, purpose, substance, and issues; the economic impact analysis; and the agency's response shall be published in the Virginia Register of Regulations, together with the notice of opportunity for oral or written submittals on the proposed regulation.

J. When an agency formulating regulations in public assistance and social services programs cannot comply with the public comment requirements of subsection F due to time limitations imposed by state or federal laws or regulations for the adoption of such regulation, the Secretary of Health and Human

Resources may shorten the time requirements of subsection F. If, in the Secretary's sole discretion, such time limitations reasonably preclude any advance published notice, he may waive the requirements of subsection F. However, the agency shall, as soon as practicable after the adoption of the regulation in a manner consistent with the requirements of subsection F, publish notice of the promulgation of the regulation and afford an opportunity for public comment. The precise factual basis for the Secretary's determination shall be stated in the published notice.

K. If one or more changes with substantial impact are made to a proposed regulation from the time that it is published as a proposed regulation to the time it is published as a final regulation, any person may petition the agency within 30 days from the publication of the final regulation to request an opportunity for oral and written submittals on the changes to the regulation. If the agency receives requests from at least 25 persons for an opportunity to submit oral and written comments on the changes to the regulation, the agency shall (i) suspend the regulatory process for 30 days to solicit additional public comment and (ii) file notice of the additional 30-day public comment period with the Registrar of Regulations, unless the agency determines that the changes made are minor or inconsequential in their impact. The comment period, if any, shall begin on the date of publication of the notice in the Register. Agency denial of petitions for a comment period on changes to the regulation shall be subject to judicial review.

L. In no event shall the failure to comply with the requirements of subsection F be deemed mere harmless error for the purposes of § 2.2-4027.

M. This section shall not apply to the issuance by the State Air Pollution Control Board of variances to its regulations.

§ 2.2-4007.1. Regulatory flexibility for small businesses; periodic review of regulations.

A. *As used in this section, "small business" means a business entity, including its affiliates, that (i) is independently owned and operated and (ii) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million.*

B. *In addition to the requirements of § 2.2-4007, prior to the adoption of any proposed regulation, the agency proposing a regulation shall prepare a regulatory flexibility analysis in which the agency shall consider utilizing alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small businesses. The agency shall consider, at a minimum, each of the following methods of reducing the effects of the proposed regulation on small businesses:*

- 1. The establishment of less stringent compliance or reporting requirements;*
- 2. The establishment of less stringent schedules or deadlines for compliance or reporting requirements;*
- 3. The consolidation or simplification of compliance or reporting requirements;*
- 4. The establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation; and*
- 5. The exemption of small businesses from all or any part of the requirements contained in the proposed regulation.*

C. *Prior to the adoption of any proposed regulation that may have an adverse effect on small businesses, each agency shall notify the Joint Commission on Administrative Rules of its intent to adopt the proposed regulation. The Joint Commission on Administrative Rules shall advise and assist agencies in complying with the provisions of this section.*

D. *In addition to the requirements of § 2.2-4017, on or before July 1, 2009, an agency shall review its existing regulations to determine whether they should be continued without change or be amended or repealed, consistent with the stated objectives of applicable law, to minimize the economic impact of regulations on small businesses. If an agency head determines that completion of the review of existing regulations is not feasible by July 1, 2009, that agency shall publish a statement certifying that determination. An agency may extend the date required by this subsection in increments of one year, not to exceed a total of five years.*

E. *In addition to other requirements of § 2.2-4017, all final regulations adopted after July 1, 2005, shall be reviewed every five years to ensure that they minimize the economic impact on small businesses in a manner consistent with the stated objectives of applicable law.*

F. *The regulatory review required by this section shall include consideration of:*

- 1. The continued need for the rule;*
- 2. The nature of complaints or comments received concerning the regulation from the public;*
- 3. The complexity of the regulation;*
- 4. The extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and*
- 5. The length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation.*

§ 2.2-4027. Issues on review.

The burden shall be upon the party complaining of agency action to designate and demonstrate an error of law subject to review by the court. Such issues of law include: (i) accordance with

constitutional right, power, privilege, or immunity, (ii) compliance with statutory authority, jurisdiction limitations, or right as provided in the basic laws as to subject matter, the stated objectives for which regulations may be made, and the factual showing respecting violations or entitlement in connection with case decisions, (iii) observance of required procedure where any failure therein is not mere harmless error, and (iv) the substantiality of the evidentiary support for findings of fact. The determination of such fact issue shall be made upon the whole evidentiary record provided by the agency if its proceeding was required to be conducted as provided in § 2.2-4009 or § 2.2-4020 or, as to subjects exempted from those sections, pursuant to constitutional requirement or statutory provisions for opportunity for an agency record of and decision upon the evidence therein.

In addition to any other judicial review provided by law, a small business, as defined in subsection A of § 2.2-4007.1, that is adversely affected or aggrieved by final agency action shall be entitled to judicial review of compliance with the requirements of subdivision H 2 of § 2.2-4007 and § 2.2-4007.1 within one year following the date of final agency action.

When the decision on review is to be made on the agency record, the duty of the court with respect to issues of fact shall be limited to ascertaining whether there was substantial evidence in the agency record upon which the agency as the trier of the facts could reasonably find them to be as it did.

Where there is no agency record so required and made, any necessary facts in controversy shall be determined by the court upon the basis of the agency file, minutes, and records of its proceedings under § 2.2-4007 or § 2.2-4019 as augmented, if need be, by the agency pursuant to order of the court or supplemented by any allowable and necessary proofs adduced in court except that the function of the court shall be to determine only whether the result reached by the agency could reasonably be said, on all such proofs, to be within the scope of the legal authority of the agency.

Whether the fact issues are reviewed on the agency record or one made in the review action, the court shall take due account of the presumption of official regularity, the experience and specialized competence of the agency, and the purposes of the basic law under which the agency has acted.

2005 SESSION

ENROLLED

ENROLLED

SB1054ER

1 VIRGINIA ACTS OF ASSEMBLY — CHAPTER

2 *An Act to amend the Code of Virginia by adding a section numbered 2.2-302.1, relating to duties of*
 3 *Virginia Liaison Office; efforts to permit off-shore surveying, exploration, development, and*
 4 *production of potential natural gas resources.*

[S 1054]

Approved

8 **Be it enacted by the General Assembly of Virginia:**9 **1. That the Code of Virginia is amended by adding a section numbered 2.2-302.1 as follows:**

10 § 2.2-302.1. *Efforts to allow off-shore natural gas surveying, exploration, development, and*
 11 *production.*

12 *A. In addition to its responsibilities enumerated in § 2.2-302, the Office shall work with the members*
 13 *of the State Congressional Delegation and executive agencies to develop, support, and enact federal*
 14 *legislation or take appropriate federal executive action, including measures such as are contained in the*
 15 *proposed federal State Enhanced Authority for Coastal and Offshore Resources Act (SEACOR) or*
 16 *similar legislation to enhance states' authority over coastal and offshore resources, that (i) provide an*
 17 *exemption to the moratorium that prevents until 2012 any surveying, exploration, development, or*
 18 *production of potential natural gas deposits in areas off the Commonwealth's Atlantic shore that are*
 19 *under federal jurisdiction and (ii) incorporate revenue sharing between the federal and state*
 20 *governments for leasing activity that potentially will provide the Commonwealth with significant*
 21 *additional sources of revenue. The requested exemption to the moratorium will:*

22 *1. Permit surveying, mapping, exploration, development, and production of off-shore deposits of*
 23 *natural gas; and*

24 *2. Not authorize drilling or other exploratory activity within the Chesapeake Bay.*

25 *B. The Office shall submit an annual report to the Governor and the chairs of the Senate Committee*
 26 *on Commerce and Labor and the House Committee on Commerce and Labor, no later than January 1*
 27 *of each year, that summarizes the status of the moratorium on off-shore natural gas exploration,*
 28 *development, and production activities; efforts by Congress and executive agencies to provide an*
 29 *exemption to the moratorium as described in subsection A; and activities by the Office in furtherance of*
 30 *this section.*

2005 SESSION

INTRODUCED

054112832

SENATE BILL NO. 1053

Offered January 12, 2005

Prefiled January 12, 2005

A BILL to amend and reenact §§ 23-4.3, 23-4.4, and 23-9.10:4 of the Code of Virginia, relating to intellectual property developed at public institutions of higher education.

Patron—Wagner

Referred to Committee on Education and Health

Be it enacted by the General Assembly of Virginia:

1. That §§ 23-4.3, 23-4.4, and 23-9.10:4 of the Code of Virginia are amended and reenacted as follows:

§ 23-4.3. Adoption of intellectual property policies; employees to be bound by such policies.

A. The boards of visitors of state-supported institutions of higher education and the State Board for Community Colleges shall adopt patent and copyright policies regarding the ownership, protection, assignment, and use of intellectual property that are consistent with the policy guidelines promulgated by the State Council of Higher Education working in cooperation with the state-supported institutions of higher education pursuant to § 23-9.10:4. Such policies shall be submitted to the Council.

B. All employees of state-supported institutions of higher education, including the Virginia Community College System, as a condition of employment, shall be bound by the patent and copyright intellectual property policies of the institution employing them. Anyone using facilities of a

C. A state-supported institution who has not otherwise entered into a shall not assert ownership of, or require the assignment to it, of an interest in intellectual property developed pursuant to externally-sponsored research, unless (i) otherwise provided in a written contract with the institution concerning such use shall be subject to the institution's patent and copyright policies where the institution's Board of Visitors, the State Board for Community Colleges or their designees determine that such use constitutes or (ii) the externally-sponsored research involves a significant use of the institution's facilities resources. The use of an institution's resources in externally-sponsored research shall be deemed significant if the cost of institution-provided identifiable resources dedicated to the research exceeds 50 percent of the total cost of identifiable resources dedicated to the research and exceeds \$10,000. If the actual cost of salary, equipment, and other identifiable resources dedicated to the research is not readily ascertainable, the institution shall assign a reasonable portion of such costs to such research. The customary and normal usage of an institution's buildings, telecommunications systems, computer systems, software, library resources, office equipment, or other support services shall not be considered identifiable resources dedicated to the research.

D. As used in this section:

"Externally-sponsored research" means research conducted in whole or in part under a contractual agreement between or among a state-supported institution of higher education, including the Virginia Community College System, and one or several private entity sponsors. It does not include research involving the use of federal funds or conducted under a contractual agreement in which a sponsor is a governmental entity or a not for profit organization.

"Intellectual property" means (i) a potentially patentable machine, article of manufacture, composition of matter, process, or improvement in any of those; (ii) an issued patent; (iii) a legal right that inheres in a patent; or (iv) anything that is copyrightable.

§ 23-4.4. Authorization to assign interest in intellectual property.

A. The Boards of Visitors, the State Board for Community Colleges, or their designees may transfer are authorized to assign any interest they possess in patents and copyrights intellectual property or in materials in which the institution claims an interest under, provided such assignment shall be in accordance with the terms of its patent or copyright intellectual property policy adopted pursuant to subsection A of § 23-4.3. However, the Governor's prior written approval shall be required for transfers of such property developed wholly or significantly through the use of state general funds and either (i) such property was developed by an employee of the institution acting within the scope of his assigned duties, or (ii) such property is to be transferred to an entity other than the Innovative Technology Authority, an entity whose purpose is to manage intellectual properties on behalf of nonprofit organizations, colleges and universities, or an entity whose purpose is to benefit the respective institutions. The Governor may attach conditions to these transfers as he deems necessary. In the event the Governor does not approve such transfer, the materials shall remain the property of the respective institutions and may be used and developed in any manner permitted by law. The State Council of

INTRODUCED

SB1053

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59 Higher Education working in cooperation with the state-supported institutions of higher education and in
 60 accordance with § 23-9.10:4 shall adopt a uniform statement defining (i) the conditions under which a
 61 significant use of general funds occurs and (ii) the circumstances constituting an assigned duty.

62 B. Notwithstanding subsection A, the Governor's approval is not required to transfer such Board of
 63 Visitors of any public institution of higher education, the State Board for Community Colleges, or their
 64 designee shall assign any interest it possesses in intellectual property that was developed in the course
 65 of externally-sponsored research to an the entity described in clause (ii) of subsection A that sponsored
 66 such research if (i) the interest was developed without the use of federal funds such entity requests the
 67 assignment, (ii) such entity makes a clear and convincing case to the relevant board that its ownership
 68 of the interest is critical to its ability to commercialize that interest, and (iii) the institution receives, at a
 69 minimum, compensation equal to the anticipated revenue stream of licensing the interest amount of the
 70 institution's resources used in the conduct of the externally-sponsored research, and (iv) the institution
 71 retains the ability to use the intellectual property in the conduct of its educational and research
 72 functions.

73 C. As used in this section:

74 "Externally-sponsored research" has the same meaning ascribed thereto in § 23-4.3.

75 "Intellectual property" has the same meaning ascribed thereto in § 23-4.3.

76 § 23-9.10:4. Council to develop intellectual property policy guidelines for state-supported institutions
 77 of higher education.

78 A. In addition to any other powers and duties, the State Council of Higher Education for Virginia
 79 shall promulgate and, from time to time, revise patent and copyright policy guidelines for the policies to
 80 be adopted by state-supported institutions of higher education, including the Virginia Community
 81 College System, regarding the ownership, protection, assignment and use of intellectual property
 82 developed at such institutions. These policy guidelines shall not be subject to the requirements of the
 83 Administrative Process Act (§ 2.2-4000 et seq.). The

84 B. Intellectual property policy guidelines developed by the Council shall:

85 1. Unless another disposition of the intellectual property is required by applicable law, authorize the
 86 institution to assign its intellectual property to (i) the Innovative Technology Authority, (ii) an entity
 87 whose purpose is to manage intellectual properties on behalf of nonprofit organizations, colleges and
 88 universities, or (iii) an entity whose purpose is to benefit the respective institution;

89 2. Notwithstanding any provision of § 23-4.3 or § 23-4.4, prohibit the assignment of intellectual
 90 property to the sponsor of externally-sponsored research if the assignment would contravene restrictions
 91 imposed by the Bayh-Dole Act of 1980, P.L. 96-517, as amended or the Federal Tax Free Bond Act of
 92 1986, as amended, or other provision of the Internal Revenue Code of 1986;

93 3. Require that any assignment by an institution, or by an entity described in clauses (i), (ii), or (ii)
 94 of subdivision B. 1 that has acquired ownership of intellectual property developed at the institution, of
 95 its interest in intellectual property to the sponsor of externally-sponsored research may be made subject
 96 to a provision that the institution will acquire or retain the equivalent of a shop right to use the
 97 intellectual property without payment to the sponsor;

98 4. Require that any assignment by an institution, or by an entity described in clauses (i), (ii), or (ii)
 99 of subdivision B. 1 that has acquired ownership of intellectual property developed at the institution, of
 100 its interest in intellectual property to the sponsor of externally-sponsored research may be made subject
 101 to a provision that the assignee shall not further assign the intellectual property to a third party without
 102 first offering to reassign the intellectual property to the institution on the same terms and conditions by
 103 which the sponsor proposes to assign the intellectual property to the third party; and

104 5. Prohibit an institution from asserting, claiming or acquiring any claims to or rights in any
 105 background intellectual property utilized or developed in the course of externally-sponsored research.

106 C. To the extent not inconsistent with the requirements set forth in subsection B, the Council shall
 107 take into consideration the view of the executive director of the Innovative Technology Authority in
 108 developing policy guidelines.

109 D. As used in this section:

110 "Externally-sponsored research" has the same meaning ascribed thereto in § 23-4.3.

111 "Intellectual property" has the same meaning ascribed thereto in § 23-4.3.

REENROLLED

SB262ER2

VIRGINIA ACTS OF ASSEMBLY — CHAPTER

An Act to amend and reenact §§ 2.2-1132, 23-135.7:6, 45.1-390, 56-249.6, 58.1-322, and 58.1-3660 of the Code of Virginia and to amend the Code of Virginia by adding a title numbered 67, consisting of a chapter numbered 1, consisting of sections numbered 67-100, 67-101, and 67-102; a chapter numbered 2, consisting of sections numbered 67-200 through 67-203; a chapter numbered 3, consisting of a section numbered 67-300; a chapter numbered 4, consisting of sections numbered 67-400 through 67-403; a chapter numbered 5, consisting of sections numbered 67-500 and 67-501; a chapter numbered 6, consisting of sections numbered 67-600 through 67-604; a chapter numbered 7, consisting of sections numbered 67-700 and 67-701; a chapter numbered 8, consisting of sections numbered 67-800 and 67-801; a chapter numbered 9, consisting of sections numbered 67-900 through 67-903; and a chapter numbered 10, consisting of sections numbered 67-1000 through 67-1003, relating to energy policy; offshore gas and oil resource development; grants for purchasing, producing or using clean and efficient energy; recovery of fuel and purchased power costs under utility rate caps; income tax credits for purchases of certain energy-efficient appliances and equipment; exempting certain certified pollution control equipment and facilities from local property taxation; clean coal projects; energy efficiency in state buildings; use of biodiesel fuel in public transportation vehicles; covenants restricting the use of solar energy collection devices; motor vehicle fuel efficiency standards; and the establishment of a coastal energy research center, all of which comprise components of the Virginia Energy Plan.

[S 262]

Approved

Be it enacted by the General Assembly of Virginia:

1. That §§ 2.2-1132, 23-135.7:6, 45.1-390, 56-249.6, 58.1-322, and 58.1-3660 of the Code of Virginia are amended and reenacted and that the Code of Virginia is amended by adding a title numbered 67, consisting of a chapter numbered 1, consisting of sections numbered 67-100, 67-101, and 67-102; a chapter numbered 2, consisting of sections numbered 67-200 through 67-203; a chapter numbered 3, consisting of a section numbered 67-300; a chapter numbered 4, consisting of sections numbered 67-400 through 67-403; a chapter numbered 5, consisting of sections numbered 67-500 and 67-501; a chapter numbered 6, consisting of sections numbered 67-600 through 67-604; a chapter numbered 7, consisting of sections numbered 67-700 and 67-701; a chapter numbered 8, consisting of sections numbered 67-800 and 67-801; a chapter numbered 9, consisting of sections numbered 67-900 through 67-903; and a chapter numbered 10, consisting of sections numbered 67-1000 through 67-1003, as follows:

§ 2.2-1132. Administration of capital outlay construction; exception for certain educational institutions.

A. The Division shall provide assistance in the administration of capital outlay construction projects set forth in the appropriation act, other than highway construction undertaken by the Department of Transportation and the acquisition or improvement of specialized cargo-handling equipment and related port infrastructure including, but not limited to, port construction, renovation, and demolition that is required in a timely manner to meet market demands to enhance commerce through the Virginia Port Authority, the review and approval of plans and specifications, and acceptance of completed projects.

B. The Division may establish standards, as needed, for construction by the Commonwealth and may, with the advice of the Attorney General, establish standard contract provisions and procedures for the procurement and administration of construction and for the procurement and administration of architectural and engineering services relating to construction, which shall be used by all departments, agencies and institutions of the Commonwealth. All departments, agencies and institutions of the Commonwealth shall ensure that the design and construction of state-owned buildings comply with the standards governing energy use and efficiency established by the Division. The standards may provide for incentive contracting that offers a contractor whose bid is accepted the opportunity to share in any cost savings realized by the Commonwealth when project costs are reduced by the contractor, without affecting project quality, during construction of the project. The fee, if any, charged by the project engineer or architect for determining the cost savings shall be paid as a separate cost and shall not be calculated as part of any cost savings.

C. Notwithstanding any standards established by the Division or law to the contrary except as provided in this subsection, any public institution of higher education that has in effect a signed memorandum of understanding with the Secretary of Administration regarding participation in the

57 nongeneral fund decentralization program as set forth in the appropriation act may enter into contracts
58 for specific construction projects without the preliminary review and approval of the Division, provided
59 such institutions are in compliance with the requirements of the Virginia Public Procurement Act
60 (§ 2.2-4300 et seq.) and utilize the general terms and conditions for those forms of procurement
61 approved by the Division and the Office of the Attorney General. The authority granted in this
62 subsection shall only become effective if the institution meets the conditions prescribed in subsection B
63 of § 23-38.88. The Secretary of Administration shall establish guidelines to assist institutions in
64 evaluating alternative project delivery methods prior to entering into a contract. For projects constructed
65 pursuant to this subsection, the responsibility of the Division of Engineering and Buildings shall be as
66 set forth in subsection C of § 36-98.1.

67 For purposes of this section, "construction" shall include new construction, reconstruction, renovation,
68 restoration, major repair, demolition and all similar work upon buildings and ancillary facilities owned
69 or to be acquired by the Commonwealth. It shall not include buildings or other facilities ancillary to the
70 use of state highways that are located within the right-of-way of any state highway, or assets for use by
71 the Virginia Port Authority within the boundaries of property owned or leased by the Virginia Port
72 Authority.

73 § 23-135.7:6. Powers and duties of Center.

74 The Center, under the direction of the executive director, shall have the following powers and duties:

75 1. To develop a degree program in energy production and conservation research at the master's level
76 in conjunction with the State Council on Higher Education;

77 2. To develop and provide programs of continuing education and in-service training for persons who
78 work in the field of coal or other energy research, development or production;

79 3. To operate in conjunction with other departments of Virginia Polytechnic Institute and State
80 University, including but not limited to the Department of Mining Engineering;

81 4. To conduct research in the fields of coal, coal utilization, migrating natural gases such as methane
82 and propane, and other energy related work;

83 5. To collect and maintain data on energy production, development and utilization;

84 6. To foster the utilization of research information, discoveries and data;

85 7. To coordinate the functions of the Center with the energy research facilities to prevent duplication
86 of effort;

87 8. To apply for and accept grants from the United States government and the state government and
88 agencies and instrumentalities thereof and from any other source in carrying out the purposes of this
89 article. To these ends, the Center shall have the power to comply with conditions and execute such
90 agreements as may be necessary;

91 9. To accept gifts, bequests, and any other thing of value to be used for carrying out the purposes of
92 this article;

93 10. To receive, administer and expend all funds and other assistance made available to the Center for
94 the purposes of carrying out this article; ~~and~~

95 11. *To consult with the Division of Energy of the Department of Mines, Minerals and Energy in the*
96 *preparation of the Virginia Energy Plan pursuant to § 67-201; and*

97 12. To do all things necessary or convenient for the proper administration of this article.

98 § 45.1-390. Division of Energy established; findings and policy; powers and duties.

99 The General Assembly finds that because energy-related issues continually confront the
100 Commonwealth, and many separate agencies are involved in providing energy programs and services,
101 there exists a need for a state organization responsible for coordinating Virginia's energy programs and
102 ensuring Virginia's commitment to the development of renewable and indigenous energy sources, as well
103 as the efficient use of traditional energy resources. In accordance with this need, the Division of Energy
104 is created in the Department of Mines, Minerals and Energy. The Director shall have the immediate
105 authority to coordinate development and implementation of energy policy in Virginia.

106 The Division shall coordinate the energy-related activities of the various state agencies and advise the
107 Governor on energy issues that arise at the local, state and national levels. All state agencies and
108 institutions shall cooperate fully with the Division to assist in the proper execution of the duties assigned
109 by this section.

110 In addition, the Division is authorized to make and enter into all contracts and agreements necessary
111 or incidental to the performance of its duties or the execution of its powers, including the
112 implementation of energy information and conservation plans and programs.

113 The Division shall:

114 1. Consult with any or all state agencies and institutions concerning energy-related activities or
115 policies as needed for the proper execution of the duties assigned to the Division by this section;

116 2. Maintain liaison with appropriate agencies of the federal government on the activities of the
117 federal government related to energy production, consumption, transportation and energy resource

118 management in general;

119 3. Provide services to encourage efforts by and among Virginia businesses, industries, utilities,
120 academic institutions, state and local governments and private institutions to develop energy conservation
121 programs and energy resources; and

122 4. *In consultation with the State Corporation Commission, the Department of Environmental Quality,*
123 *and the Center for Coal and Energy Research, prepare the Virginia Energy Plan pursuant to § 67-201;*
124 *and*

125 5. Observe the energy-related activities of state agencies and advise these agencies in order to
126 encourage conformity with established energy policy.

127 § 56-249.6. Recovery of fuel and purchased power costs.

128 A. 1. Each electric utility that purchases fuel for the generation of electricity or purchases power and
129 that was not, as of July 1, 1999, bound by a rate case settlement adopted by the Commission that
130 extended in its application beyond January 1, 2002, shall submit to the Commission its estimate of fuel
131 costs, including the cost of purchased power, for the 12-month period beginning on the date prescribed
132 by the Commission. Upon investigation of such estimates and hearings in accordance with law, the
133 Commission shall direct each company to place in effect tariff provisions designed to recover the fuel
134 costs determined by the Commission to be appropriate for that period, adjusted for any over-recovery or
135 under-recovery of fuel costs previously incurred.

136 2. The Commission shall continuously review fuel costs and if it finds that any utility described in
137 subdivision A 1 is in an over-recovery position by more than five percent, or likely to be so, it may
138 reduce the fuel cost tariffs to correct the over-recovery.

139 B. All fuel costs recovery tariff provisions in effect on January 1, 2004, for any electric utility that
140 purchases fuel for the generation of electricity and that was, as of July 1, 1999, bound by a rate case
141 settlement adopted by the Commission that extended in its application beyond January 1, 2002, shall
142 remain in effect until the earlier of (i) July 1, 2007; (ii) the termination of capped rates pursuant to the
143 provisions of subsection C of § 56-582; or (iii) the establishment of tariff provisions under subsection C.
144 Any such utility shall continue to report to the Commission annually its actual fuel costs, including the
145 cost of purchased power until July 1, 2007.

146 C. ~~Unless~~ *Until the capped rates for such utility expire or are terminated pursuant to the provisions*
147 *of subsection C of § 56-582 prior to July 1, 2007, the Commission shall direct* each electric utility
148 *described in subsection B to shall submit annually to the Commission its estimate of fuel costs,*
149 *including the cost of purchased power, for the 42-month period successive 12-month periods beginning*
150 *July 1, 2007, and ending December 31, 2010 on July 1, 2007, 2008, and 2009, and the six-month period*
151 *beginning July 1, 2010. Upon investigation of such estimate estimates and hearing hearings in*
152 *accordance with law, the Commission shall direct each such utility to place in effect tariff provisions*
153 *designed to recover the fuel costs determined by the Commission to be appropriate for such period*
154 *periods, without adjustment adjusted for any over-recovery or under-recovery of fuel costs previously*
155 *incurred; however, (i) no such adjustment for any over-recovery or under-recovery of fuel costs*
156 *previously incurred shall be made for any period prior to July 1, 2007, and (ii) the Commission may*
157 *order that up to 40% of any increase in fuel tariffs determined by the Commission to be appropriate for*
158 *the 12-month period beginning July 1, 2007, above the fuel tariffs previously existing, shall be deferred*
159 *and recovered during the period from July 1, 2008, through December 31, 2010. Such tariff provisions*
160 *shall remain in effect until the capped rates for such utility expire or are terminated pursuant to the*
161 *provisions of § 56-582.*

162 D. 1. In proceedings under subsections A and C, the Commission may, to the extent deemed
163 appropriate, offset against fuel costs and purchased power costs to be recovered the revenues attributable
164 to sales of power pursuant to interconnection agreements with neighboring electric utilities.

165 2. In proceedings under subsections A and C, the Commission shall disallow recovery of any fuel
166 costs that it finds without just cause to be the result of failure of the utility to make every reasonable
167 effort to minimize fuel costs or any decision of the utility resulting in unreasonable fuel costs, giving
168 due regard to reliability of service and the need to maintain reliable sources of supply, economical
169 generation mix, generating experience of comparable facilities, and minimization of the total cost of
170 providing service.

171 3. The Commission is authorized to promulgate, in accordance with the provisions of this section, all
172 rules and regulations necessary to allow the recovery by electric utilities of all of their prudently
173 incurred fuel costs under subsections A and C, including the cost of purchased power, as precisely and
174 promptly as possible, with no over-recovery or under-recovery, except as provided in subsection C, in a
175 manner that will tend to assure public confidence and minimize abrupt changes in charges to consumers.

176 The Commission may, however, dispense with the procedures set forth above for any electric utility
177 if it finds, after notice and hearing, that the electric utility's fuel costs can be reasonably recovered
178 through the rates and charges investigated and established in accordance with other sections of this

179 chapter.

180 § 58.1-322. Virginia taxable income of residents.

181 A. The Virginia taxable income of a resident individual means his federal adjusted gross income for
182 the taxable year, which excludes combat pay for certain members of the Armed Forces of the United
183 States as provided in § 112 of the Internal Revenue Code, as amended, and with the modifications
184 specified in this section.

185 B. To the extent excluded from federal adjusted gross income, there shall be added:

186 1. Interest, less related expenses to the extent not deducted in determining federal income, on
187 obligations of any state other than Virginia, or of a political subdivision of any such other state unless
188 created by compact or agreement to which Virginia is a party;

189 2. Interest or dividends, less related expenses to the extent not deducted in determining federal
190 taxable income, on obligations or securities of any authority, commission or instrumentality of the
191 United States, which the laws of the United States exempt from federal income tax but not from state
192 income taxes;

193 3. Unrelated business taxable income as defined by § 512 of the Internal Revenue Code;

194 4. The amount of a lump sum distribution from a qualified retirement plan, less the minimum
195 distribution allowance and any amount excludable for federal income tax purposes that is excluded from
196 federal adjusted gross income solely by virtue of an individual's election to use the averaging provisions
197 under § 402 of the Internal Revenue Code; and

198 5. through 8. [Repealed.]

199 9. The amount required to be included in income for the purpose of computing the partial tax on an
200 accumulation distribution pursuant to § 667 of the Internal Revenue Code.

201 C. To the extent included in federal adjusted gross income, there shall be subtracted:

202 1. Income derived from obligations, or on the sale or exchange of obligations, of the United States
203 and on obligations or securities of any authority, commission or instrumentality of the United States to
204 the extent exempt from state income taxes under the laws of the United States including, but not limited
205 to, stocks, bonds, treasury bills, and treasury notes, but not including interest on refunds of federal taxes,
206 interest on equipment purchase contracts, or interest on other normal business transactions.

207 2. Income derived from obligations, or on the sale or exchange of obligations of this Commonwealth
208 or of any political subdivision or instrumentality of the Commonwealth.

209 3. [Repealed.]

210 4. Benefits received under Title II of the Social Security Act and other benefits subject to federal
211 income taxation solely pursuant to § 86 of the Internal Revenue Code.

212 4a. Through December 31, 2000, the same amount used in computing the federal credit allowed
213 under § 22 of the Internal Revenue Code by a retiree under age 65 who qualified for such retirement on
214 the basis of permanent and total disability and who is a qualified individual as defined in § 22 (b) (2) of
215 the Internal Revenue Code; however, any person who claims a deduction under subdivision 5 of
216 subsection D of this section may not also claim a subtraction under this subdivision.

217 4b. For taxable years beginning on or after January 1, 2001, up to \$20,000 of disability income, as
218 defined in § 22 (c) (2) (B) (iii) of the Internal Revenue Code; however, any person who claims a
219 deduction under subdivision 5 of subsection D of this section may not also claim a subtraction under
220 this subdivision.

221 5. The amount of any refund or credit for overpayment of income taxes imposed by the
222 Commonwealth or any other taxing jurisdiction.

223 6. The amount of wages or salaries eligible for the federal Targeted Jobs Credit which was not
224 deducted for federal purposes on account of the provisions of § 280C (a) of the Internal Revenue Code.

225 7, 8. [Repealed.]

226 9. [Expired.]

227 10. Any amount included therein less than \$600 from a prize awarded by the State Lottery
228 Department.

229 11. The wages or salaries received by any person for active and inactive service in the National
230 Guard of the Commonwealth of Virginia, not to exceed the amount of income derived from 39 calendar
231 days of such service or \$3,000, whichever amount is less; however, only those persons in the ranks of
232 O3 and below shall be entitled to the deductions specified herein.

233 12. Amounts received by an individual, not to exceed \$1,000 in any taxable year, as a reward for
234 information provided to a law-enforcement official or agency, or to a nonprofit corporation created
235 exclusively to assist such law-enforcement official or agency, in the apprehension and conviction of
236 perpetrators of crimes. This provision shall not apply to the following: an individual who is an employee
237 of, or under contract with, a law-enforcement agency, a victim or the perpetrator of the crime for which
238 the reward was paid, or any person who is compensated for the investigation of crimes or accidents.

239 13. [Repealed.]

240 14. [Expired.]

241 15, 16. [Repealed.]

242 17. For taxable years beginning on and after January 1, 1995, the amount of "qualified research
243 expenses" or "basic research expenses" eligible for deduction for federal purposes, but which were not
244 deducted, on account of the provisions of § 280C (c) of the Internal Revenue Code and which shall be
245 available to partners, shareholders of S corporations, and members of limited liability companies to the
246 extent and in the same manner as other deductions may pass through to such partners, shareholders, and
247 members.

248 18. For taxable years beginning on or after January 1, 1995, all military pay and allowances, not
249 otherwise subtracted under this subsection, earned for any month during any part of which such member
250 performed military service in any part of the former Yugoslavia, including the air space above such
251 location or any waters subject to related naval operations, in support of Operation JOINT ENDEAVOR
252 as part of the NATO Peace Keeping Force. Such subtraction shall be available until the taxpayer
253 completes such service.

254 19. For taxable years beginning on and after January 1, 1996, any income received during the taxable
255 year derived from a qualified pension, profit-sharing, or stock bonus plan as described by § 401 of the
256 Internal Revenue Code, an individual retirement account or annuity established under § 408 of the
257 Internal Revenue Code, a deferred compensation plan as defined by § 457 of the Internal Revenue Code,
258 or any federal government retirement program, the contributions to which were deductible from the
259 taxpayer's federal adjusted gross income, but only to the extent the contributions to such plan or
260 program were subject to taxation under the income tax in another state.

261 20. For taxable years beginning on and after January 1, 1997, any income attributable to a
262 distribution of benefits or a refund from a prepaid tuition contract or savings trust account with the
263 Virginia College Savings Plan, created pursuant to Chapter 4.9 (§ 23-38.75 et seq.) of Title 23. The
264 subtraction for any income attributable to a refund shall be limited to income attributable to a refund in
265 the event of a beneficiary's death, disability, or receipt of a scholarship.

266 21. For taxable years beginning on or after January 1, 1998, all military pay and allowances, to the
267 extent included in federal adjusted gross income and not otherwise subtracted, deducted or exempted
268 under this section, earned by military personnel while serving by order of the President of the United
269 States with the consent of Congress in a combat zone or qualified hazardous duty area which is treated
270 as a combat zone for federal tax purposes pursuant to § 112 of the Internal Revenue Code.

271 22. For taxable years beginning on or after January 1, 2000, the gain derived from the sale or
272 exchange of real property or the sale or exchange of an easement to real property which results in the
273 real property or the easement thereto being devoted to open-space use, as that term is defined in
274 § 58.1-3230, for a period of time not less than 30 years. To the extent a subtraction is taken in
275 accordance with this subdivision, no tax credit under this chapter for donating land for its preservation
276 shall be allowed for three years following the year in which the subtraction is taken.

277 23. Effective for all taxable years beginning on or after January 1, 2000, \$15,000 of military basic
278 pay for military service personnel on extended active duty for periods in excess of 90 days; however,
279 the subtraction amount shall be reduced dollar-for-dollar by the amount which the taxpayer's military
280 basic pay exceeds \$15,000 and shall be reduced to zero if such military basic pay amount is equal to or
281 exceeds \$30,000.

282 24. Effective for all taxable years beginning on and after January 1, 2000, the first \$15,000 of salary
283 for each federal and state employee whose total annual salary from all employment for the taxable year
284 is \$15,000 or less.

285 25. Unemployment benefits taxable pursuant to § 85 of the Internal Revenue Code.

286 26. For taxable years beginning on and after January 1, 2001, any amount received as military
287 retirement income by an individual awarded the Congressional Medal of Honor.

288 27. Effective for all taxable years beginning on and after January 1, 1999, income received as a
289 result of (i) the "Master Settlement Agreement," as defined in § 3.1-1106; (ii) the National Tobacco
290 Grower Settlement Trust dated July 19, 1999; and (iii) the Tobacco Loss Assistance Program, pursuant
291 to 7 C.F.R. Part 1464 (Subpart C, §§ 1464.201 through 1464.205), by (a) tobacco farmers; (b) any
292 person holding a tobacco marketing quota, or tobacco farm acreage allotment, under the Agricultural
293 Adjustment Act of 1938; or (c) any person having the right to grow tobacco pursuant to such a quota or
294 allotment, but only to the extent that such income has not been subtracted pursuant to subdivision C 18
295 of § 58.1-402.

296 28. For taxable years beginning on and after January 1, 2000, items of income attributable to,
297 derived from or in any way related to (i) assets stolen from, hidden from or otherwise lost by an
298 individual who was a victim or target of Nazi persecution or (ii) damages, reparations, or other
299 consideration received by a victim or target of Nazi persecution to compensate such individual for
300 performing labor against his will under the threat of death, during World War II and its prelude and

301 direct aftermath. This subtraction shall not apply to assets acquired with such items of income or with
302 the proceeds from the sale of assets stolen from, hidden from or otherwise lost to, during World War II
303 and its prelude and direct aftermath, a victim or target of Nazi persecution. The provisions of this
304 subdivision shall only apply to an individual who was the first recipient of such items of income and
305 who was a victim or target of Nazi persecution, or a spouse, widow, widower, or child or stepchild of
306 such victim.

307 "Victim or target of Nazi persecution" means any individual persecuted or targeted for persecution by
308 the Nazi regime who had assets stolen from, hidden from or otherwise lost as a result of any act or
309 omission in any way relating to (i) the Holocaust; (ii) World War II and its prelude and direct
310 aftermath; (iii) transactions with or actions of the Nazi regime; (iv) treatment of refugees fleeing Nazi
311 persecution; or (v) the holding of such assets by entities or persons in the Swiss Confederation during
312 World War II and its prelude and aftermath. A victim or target of Nazi persecution shall also include
313 any individual forced into labor against his will, under the threat of death, during World War II and its
314 prelude and direct aftermath. As used in this subdivision, "Nazi regime" means the country of Nazi
315 Germany, areas occupied by Nazi Germany, those European countries allied with Nazi Germany, or any
316 other neutral European country or area in Europe under the influence or threat of Nazi invasion.

317 29. For taxable years beginning on and after January 1, 2002, any gain recognized as a result of the
318 Peanut Quota Buyout Program of the Farm Security and Rural Investment Act of 2002 pursuant to 7
319 C.F.R. Part 1412 (Subpart H, §§ 1412.801 through 1412.811) as follows:

320 a. If the payment is received in installment payments pursuant to 7 C.F.R. § 1412.807(a) (2), then the
321 entire gain recognized may be subtracted.

322 b. If the payment is received in a single payment pursuant to 7 C.F.R. § 1412.807(a) (3), then 20
323 percent of the recognized gain may be subtracted. The taxpayer may then deduct an equal amount in
324 each of the four succeeding taxable years.

325 30. Effective for all taxable years beginning on and after January 1, 2002, but before January 1,
326 2005, the indemnification payments received by contract poultry growers and table egg producers from
327 the U.S. Department of Agriculture as a result of the depopulation of poultry flocks because of low
328 pathogenic avian influenza in 2002. In no event shall indemnification payments made to owners of
329 poultry who contract with poultry growers qualify for this subtraction.

330 31. Effective for all taxable years beginning on or after January 1, 2001, the military death gratuity
331 payment made after September 11, 2001, to the survivor of deceased military personnel killed in the line
332 of duty, pursuant to Chapter 75 of Title 10 of the United States Code; however, the subtraction amount
333 shall be reduced dollar-for-dollar by the amount that the survivor may exclude from his federal gross
334 income in accordance with § 134 of the Internal Revenue Code.

335 D. In computing Virginia taxable income there shall be deducted from Virginia adjusted gross
336 income as defined in § 58.1-321:

337 1. a. The amount allowable for itemized deductions for federal income tax purposes where the
338 taxpayer has elected for the taxable year to itemize deductions on his federal return, but reduced by the
339 amount of income taxes imposed by the Commonwealth or any other taxing jurisdiction and deducted
340 on such federal return and increased by an amount which, when added to the amount deducted under
341 § 170 of the Internal Revenue Code for mileage, results in a mileage deduction at the state level for
342 such purposes at a rate of 18 cents per mile; or

343 b. Three thousand dollars for single individuals for taxable years beginning on and after January 1,
344 1989; \$5,000 for married persons (one-half of such amounts in the case of a married individual filing a
345 separate return) for taxable years beginning on and after January 1, 1989, but before January 1, 2005;
346 and \$6,000 for married persons (one-half of such amounts in the case of a married individual filing a
347 separate return) for taxable years beginning on and after January 1, 2005; provided that the taxpayer has
348 not itemized deductions for the taxable year on his federal income tax return. For purposes of this
349 section, any person who may be claimed as a dependent on another taxpayer's return for the taxable year
350 may compute the deduction only with respect to earned income.

351 2. a. A deduction in the amount of \$800 for taxable years beginning on and after January 1, 1988,
352 but before January 1, 2005, and \$900 for taxable years beginning on and after January 1, 2005, for each
353 personal exemption allowable to the taxpayer for federal income tax purposes.

354 b. For taxable years beginning on and after January 1, 1987, each blind or aged taxpayer as defined
355 under § 63 (f) of the Internal Revenue Code shall be entitled to an additional personal exemption in the
356 amount of \$800.

357 The additional deduction for blind or aged taxpayers allowed under this subdivision shall be
358 allowable regardless of whether the taxpayer itemizes deductions for the taxable year for federal income
359 tax purposes.

360 3. A deduction equal to the amount of employment-related expenses upon which the federal credit is
361 based under § 21 of the Internal Revenue Code for expenses for household and dependent care services

362 necessary for gainful employment.

363 4. An additional \$1,000 deduction for each child residing for the entire taxable year in a home under
364 permanent foster care placement as defined in § 63.2-908, provided the taxpayer can also claim the child
365 as a personal exemption under § 151 of the Internal Revenue Code.

366 5. a. Effective for all taxable years beginning on or after January 1, 1996, but before January 1,
367 2004, a deduction in the amount of \$12,000 for taxpayers age 65 or older, or \$6,000 for taxpayers age
368 62 through 64.

369 b. For taxable years beginning on and after January 1, 2004, a deduction in the amount of \$12,000
370 for individuals born on or before January 1, 1939.

371 c. For taxable years beginning January 1, 2004, but before January 1, 2005, a deduction in the
372 amount of \$6,000 for individuals born on or between January 2, 1940, and January 1, 1942.

373 d. For taxable years beginning January 1, 2005, but before January 1, 2006, a deduction in the
374 amount of \$6,000 for individuals born on or between January 2, 1941, and January 1, 1942.

375 e. For taxable years beginning on and after January 1, 2004, a deduction in the amount of \$12,000
376 for individuals born after January 1, 1939, who have attained the age of 65. This deduction shall be
377 reduced by \$1 for every \$1 that the taxpayer's adjusted federal adjusted gross income exceeds \$50,000
378 for single taxpayers or \$75,000 for married taxpayers. For married taxpayers filing separately, the
379 deduction will be reduced by \$1 for every \$1 the total combined adjusted federal adjusted gross income
380 of both spouses exceeds \$75,000.

381 f. For the purposes of this subdivision, "adjusted federal adjusted gross income" means federal
382 adjusted gross income minus any benefits received under Title II of the Social Security Act and other
383 benefits subject to federal income taxation solely pursuant to § 86 of the Internal Revenue Code, as
384 amended.

385 6. For taxable years beginning on and after January 1, 1997, the amount an individual pays as a fee
386 for an initial screening to become a possible bone marrow donor, if (i) the individual is not reimbursed
387 for such fee or (ii) the individual has not claimed a deduction for the payment of such fee on his federal
388 income tax return.

389 7. a. A deduction shall be allowed to the purchaser or contributor for the amount paid or contributed
390 during the taxable year for a prepaid tuition contract or savings trust account entered into with the
391 Virginia College Savings Plan, pursuant to Chapter 4.9 (§ 23-38.75 et seq.) of Title 23. Except as
392 provided in subdivision 7 c, the amount deducted on any individual income tax return in any taxable
393 year shall be limited to \$2,000 per prepaid tuition contract or savings trust account. No deduction shall
394 be allowed pursuant to this section if such payments or contributions are deducted on the purchaser's or
395 contributor's federal income tax return. If the purchase price or annual contribution to a savings trust
396 account exceeds \$2,000, the remainder may be carried forward and subtracted in future taxable years
397 until the purchase price or savings trust contribution has been fully deducted; however, except as
398 provided in subdivision 7 c, in no event shall the amount deducted in any taxable year exceed \$2,000
399 per contract or savings trust account. Notwithstanding the statute of limitations on assessments contained
400 in § 58.1-312, any deduction taken hereunder shall be subject to recapture in the taxable year or years in
401 which distributions or refunds are made for any reason other than (i) to pay qualified higher education
402 expenses, as defined in § 529 of the Internal Revenue Code or (ii) the beneficiary's death, disability, or
403 receipt of a scholarship. For the purposes of this subdivision, the term "purchaser" or "contributor"
404 means the person shown as such on the records of the Virginia College Savings Plan as of December 31
405 of the taxable year. In the case of a transfer of ownership of a prepaid tuition contract or savings trust
406 account, the transferee shall succeed to the transferor's tax attributes associated with a prepaid tuition
407 contract or savings trust account, including, but not limited to, carryover and recapture of deductions.

408 b. The amount paid for a prepaid tuition contract during taxable years beginning on or after January
409 1, 1996, but before January 1, 1998, shall be deducted in taxable years beginning on or after January 1,
410 1998, and shall be subject to the limitations set out in subdivision 7 a.

411 c. A purchaser of a prepaid tuition contract or contributor to a savings trust account who has attained
412 age 70 shall not be subject to the limitation that the amount of the deduction not exceed \$2,000 per
413 prepaid tuition contract or savings trust account in any taxable year. Such taxpayer shall be allowed a
414 deduction for the full amount paid for the contract or contributed to a savings trust account, less any
415 amounts previously deducted. If a prepaid tuition contract was purchased by such taxpayer during
416 taxable years beginning on or after January 1, 1996, but before January 1, 1998, such taxpayer may take
417 the deduction for the full amount paid during such years, less any amounts previously deducted with
418 respect to such payments, in taxable year 1999 or by filing an amended return for taxable year 1998.

419 8. For taxable years beginning on and after January 1, 2000, the total amount an individual actually
420 contributed in funds to the Virginia Public School Construction Grants Program and Fund, established in
421 Chapter 11.1 (§ 22.1-175.1 et seq.) of Title 22.1, provided the individual has not claimed a deduction for
422 such amount on his federal income tax return.

423 9. For taxable years beginning on and after January 1, 1999, an amount equal to 20 percent of the
 424 tuition costs incurred by an individual employed as a primary or secondary school teacher licensed
 425 pursuant to Chapter 15 (§ 22.1-289.1 et seq.) of Title 22.1 to attend continuing teacher education courses
 426 that are required as a condition of employment; however, the deduction provided by this subsection shall
 427 be available only if (i) the individual is not reimbursed for such tuition costs and (ii) the individual has
 428 not claimed a deduction for the payment of such tuition costs on his federal income tax return.

429 10. For taxable years beginning on and after January 1, 2000, the amount an individual pays
 430 annually in premiums for long-term health care insurance, provided the individual has not claimed a
 431 deduction for federal income tax purposes.

432 11. For taxable years beginning on and after January 1, 2007, an amount equal to 20% of the sum
 433 paid by an individual pursuant to Chapter 6 (§ 58.1-600 et seq.) of this title, not to exceed \$500 in each
 434 taxable year, in purchasing for his own use the following items of tangible personal property: (i) any
 435 clothes washers, room air conditioners, dishwashers, and standard size refrigerators that meet or exceed
 436 the applicable energy star efficiency requirements developed by the United States Environmental
 437 Protection Agency and the United States Department of Energy; (ii) any fuel cell that (a) generates
 438 electricity using an electrochemical process, (b) has an electricity-only generation efficiency greater than
 439 35%, and (c) has a generating capacity of at least two kilowatts; (iii) any gas heat pump that has a
 440 coefficient of performance of at least 1.25 for heating and at least 0.70 for cooling; (iv) any electric
 441 heat pump hot water heater that yields an energy factor of at least 1.7; (v) any electric heat pump that
 442 has a heating system performance factor of at least 8.0 and a cooling seasonal energy efficiency ratio of
 443 at least 13.0; (vi) any central air conditioner that has a cooling seasonal energy efficiency ratio of at
 444 least 13.5; (vii) any advanced gas or oil water heater that has an energy factor of at least 0.65; (viii)
 445 any advanced oil-fired boiler with a minimum annual fuel-utilization rating of 85; (ix) any advanced
 446 oil-fired furnace with a minimum annual fuel-utilization rating of 85; and (ix) programmable
 447 thermostats.

448 E. There shall be added to or subtracted from federal adjusted gross income, as the case may be, the
 449 individual's share, as beneficiary of an estate or trust, of the Virginia fiduciary adjustment determined
 450 under § 58.1-361.

451 F. There shall be added or subtracted, as the case may be, the amounts provided in § 58.1-315 as
 452 transitional modifications.

453 § 58.1-3660. Certified pollution control equipment and facilities.

454 A. Certified pollution control equipment and facilities, as defined herein, are hereby declared to be a
 455 separate class of property and shall constitute a classification for local taxation separate from other such
 456 classification of real or personal property and such property. The governing body of any county, city or
 457 town may, by ordinance, exempt or partially exempt such property from local taxation. *Certified*
 458 *pollution control equipment and facilities consisting of equipment used in collecting, processing, and*
 459 *distributing, or generating electricity from, landfill gas or synthetic or natural gas recovered from waste,*
 460 *including equipment used to grind, chip, or mulch trees, tree stumps, underbrush, and other vegetative*
 461 *cover for reuse as landfill gas or synthetic or natural gas recovery from waste, placed in service on or*
 462 *after July 1, 2006, shall be exempt from state and local taxation pursuant to subsection d of Section 6*
 463 *of Article X of the Constitution of Virginia.*

464 B. As used in this section:

465 "Certified pollution control equipment and facilities" shall mean any property, including real or
 466 personal property, equipment, facilities, or devices, used primarily for the purpose of abating or
 467 preventing pollution of the atmosphere or waters of the Commonwealth and which the state certifying
 468 authority having jurisdiction with respect to such property has certified to the Department of Taxation as
 469 having been constructed, reconstructed, erected, or acquired in conformity with the state program or
 470 requirements for abatement or control of water or atmospheric pollution or contamination. Such property
 471 shall include, but is not limited to, any equipment used to grind, chip, or mulch trees, tree stumps,
 472 underbrush, and other vegetative cover for reuse as mulch, compost, *landfill gas, synthetic or natural*
 473 *gas recovery from waste or other fuel, and equipment used in collecting, processing, and distributing, or*
 474 *generating electricity from, landfill gas or synthetic or natural gas recovered from waste, whether or not*
 475 such property has been certified to the Department of Taxation by a state certifying authority.

476 "State certifying authority" shall mean the State Water Control Board, for water pollution; the State
 477 Air Pollution Control Board, for air pollution; the Department of Mines, Minerals and Energy, for coal,
 478 oil, and gas production, including gas, natural gas, and coalbed methane gas; and the Virginia Waste
 479 Management Board, for waste disposal facilities, *natural gas recovery from waste facilities, and landfill*
 480 *gas production facilities,* and shall include any interstate agency authorized to act in place of a certifying
 481 authority of the Commonwealth.

482
 483

TITLE 67.
 VIRGINIA ENERGY PLAN.

CHAPTER 1.

ENERGY POLICY OF THE COMMONWEALTH.

§ 67-100. Legislative findings.

The General Assembly hereby finds that:

- 1. Energy is essential to the health, safety, and welfare of the people of this Commonwealth and to the Commonwealth's economy;
- 2. The state government should facilitate the availability and delivery of reliable and adequate supplies of energy to industrial, commercial, and residential users at reasonable costs such that these users and the Commonwealth's economy are able to be productive; and
- 3. The Commonwealth would benefit from articulating clear objectives pertaining to energy issues, adopting an energy policy that advances these objectives, and establishing a procedure for measuring the implementation of these policies.

§ 67-101. Energy objectives.

The Commonwealth recognizes each of the following objectives pertaining to energy issues will advance the health, welfare, and safety of the residents of the Commonwealth:

- 1. Ensuring the availability of reliable energy at costs that are reasonable and in quantities that will support the Commonwealth's economy;
- 2. Managing the rate of consumption of existing energy resources in relation to economic growth;
- 3. Establishing sufficient supply and delivery infrastructure to maintain reliable energy availability in the event of a disruption occurring to a portion of the Commonwealth's energy matrix;
- 4. Using energy resources more efficiently;
- 5. Facilitating conservation;
- 6. Optimizing intrastate and interstate use of energy supply and delivery to maximize energy availability, reliability, and price opportunities to the benefit of all user classes and the Commonwealth's economy as stated in subdivision 2 of § 67-100;
- 7. Increasing Virginia's reliance on sources of energy that, compared to traditional energy resources, are less polluting of the Commonwealth's air and waters;
- 8. Researching the efficacy, cost, and benefits of reducing, avoiding, or sequestering the emissions of greenhouse gases produced in connection with the generation of energy;
- 9. Removing impediments to the use of abundant low-cost energy resources located within and outside the Commonwealth and ensuring the economic viability of the producers, especially those in the Commonwealth, of such resources;
- 10. Developing energy resources and facilities in a manner that does not impose a disproportionate adverse impact on economically disadvantaged or minority communities;
- 11. Recognizing the need to foster those economically developable alternative sources of energy that can be provided at market prices as vital components of a diversified portfolio of energy resources; and
- 12. Increasing Virginia's reliance on biodiesel and ethanol produced from corn, soybeans, hullless barley, and other suitable crops grown in the Commonwealth that will create jobs and income, produce clean-burning fuels that will help to improve air quality, and provide the new markets for Virginia's agricultural products needed to preserve farm employment, conserve farmland, and help pay for agricultural best management practices to protect water quality.

Nothing in this section shall be deemed to abrogate or modify in any way the provisions of the Virginia Electric Utility Restructuring Act (§ 56-576 et seq.).

§ 67-102. Commonwealth Energy Policy.

A. To achieve the objectives enumerated in § 67-101, it shall be the policy of the Commonwealth to:

- 1. Support research and development of, and promote the use of, renewable energy sources;
- 2. Ensure that the combination of energy supplies and energy-saving systems are sufficient to support the demands of economic growth;
- 3. Promote research and development of clean coal technologies, including but not limited to integrated gasification combined cycle systems;
- 4. Promote cost-effective conservation of energy and fuel supplies;
- 5. Ensure the availability of affordable natural gas throughout the Commonwealth by expanding Virginia's natural gas distribution and transmission pipeline infrastructure; developing coalbed methane gas resources and methane hydrate resources; encouraging the productive use of landfill gas; and siting one or more liquefied natural gas terminals;
- 6. Promote the generation of electricity through technologies that do not contribute to greenhouse gases and global warming;
- 7. Facilitate the development of new, and the expansion of existing, petroleum refining facilities within the Commonwealth;
- 8. Promote the use of motor vehicles that utilize alternate fuels and are highly energy efficient;
- 9. Support efforts to reduce the demand for imported petroleum by developing alternative

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545 technologies, including but not limited to the production of synthetic and hydrogen-based fuels, and the
546 infrastructure required for the widespread implementation of such technologies;

547 10. Promote the use of biodiesel and ethanol produced from agricultural crops grown in the
548 Commonwealth;

549 11. Ensure that development of new, or expansion of existing, energy resources or facilities does not
550 have a disproportionate adverse impact on economically disadvantaged or minority communities; and

551 12. Ensure that energy generation and delivery systems that may be approved for development in the
552 Commonwealth, including liquefied natural gas and related delivery and storage systems, should be
553 located so as to minimize impacts to pristine natural areas and other significant onshore natural
554 resources, and as near to compatible development as possible.

555 B. The elements of the policy set forth in subsection A shall be referred to collectively in this title as
556 the Commonwealth Energy Policy.

557 C. All agencies and political subdivisions of the Commonwealth, in taking discretionary action with
558 regard to energy issues, shall recognize the elements of the Commonwealth Energy Policy and where
559 appropriate, shall act in a manner consistent therewith.

560 D. The Commonwealth Energy Policy is intended to provide guidance to the agencies and political
561 subdivisions of the Commonwealth in taking discretionary action with regard to energy issues, and shall
562 not be construed to amend, repeal, or override any contrary provision of applicable law. The failure or
563 refusal of any person to recognize the elements of the Commonwealth Energy Policy, to act in a manner
564 consistent with the Commonwealth Energy Policy, or to take any other action whatsoever, shall not
565 create any right, action, or cause of action or provide standing for any person to challenge the action
566 of the Commonwealth or any of its agencies or political subdivisions.

567 CHAPTER 2.

568 VIRGINIA ENERGY PLAN.

569 § 67-200. Definitions.

570 As used in this title:

571 "Division" means the Division of Energy of the Department of Mines, Minerals and Energy.

572 "Plan" means the Virginia Energy Plan prepared pursuant to this chapter, including any updates
573 thereto.

574 § 67-201. Development of the Virginia Energy Plan.

575 A. The Division, in consultation with the State Corporation Commission, the Department of
576 Environmental Quality, and the Center for Coal and Energy Research, shall prepare a comprehensive
577 Virginia Energy Plan covering a 10-year period. The Plan shall propose actions, consistent with the
578 objectives enumerated in § 67-101, that will implement the Commonwealth Energy Policy set forth in
579 § 67-102.

580 B. In addition, the Plan shall include:

581 1. Projections of energy consumption in the Commonwealth, including but not limited to the use of
582 fuel sources and costs of electricity, natural gas, gasoline, coal, renewable resources, and other forms of
583 energy resources used in the Commonwealth;

584 2. An analysis of the adequacy of electricity generation, transmission, and distribution resources in
585 the Commonwealth for the natural gas and electric industries, and how regional generation,
586 transmission, and distribution resources affect the Commonwealth;

587 3. An analysis of siting requirements for electric generation resources and natural gas and electric
588 transmission and distribution resources;

589 4. An analysis of fuel diversity for electricity generation, recognizing the importance of flexibility in
590 meeting future capacity needs;

591 5. An analysis of the efficient use of energy resources and conservation initiatives;

592 6. An analysis of how these Virginia-specific issues relate to regional initiatives to assure the
593 adequacy of fuel production, generation, transmission, and distribution assets;

594 7. An analysis of siting of energy resource development, refining or transmission facilities to identify
595 any disproportionate adverse impact of such activities on economically disadvantaged or minority
596 communities; and

597 8. Recommendations, based on the analyses completed under subdivisions 1 through 7, for
598 legislative, regulatory, and other public and private actions to implement the elements of the
599 Commonwealth Energy Policy.

600 C. In preparing the Plan, the Division and other agencies involved in the planning process shall
601 utilize state geographic information systems, to the extent deemed practicable, to assess how
602 recommendations in the plan may affect pristine natural areas and other significant onshore natural
603 resources.

604 D. In preparing the Plan, the Division and other agencies involved in the planning process shall
605 develop a system for ascribing numerical scores to parcels of real property based on the extent to which

606 the parcels are suitable for the siting of a wind energy facility or solar energy facility. For wind energy
 607 facilities, the scoring system shall address the wind velocity, sustained velocity, turbulence, proximity to
 608 electric power transmission systems, potential impacts to natural and historic resources and to
 609 economically disadvantaged or minority communities, and compatibility with the local land use plan.
 610 For solar energy facilities, the scoring system shall address the parcel's proximity to electric power
 611 transmission lines, potential impacts of such a facility to natural and historic resources and to
 612 economically disadvantaged or minority communities, and compatibility with the local land use plan.
 613 The system developed pursuant to this section shall allow the suitability of the parcel for the siting of a
 614 wind energy facility or solar energy facility to be compared to the suitability of other parcels so scored,
 615 and shall be based on a scale that allows the suitability of the parcel for the siting of a such an energy
 616 facility to be measured against the hypothetical score of an ideal location for such a facility.

617 E. After July 1, 2007, upon receipt by the Division of a recommendation from the Department of
 618 General Services, a local governing body, or the parcel's owner that a parcel of real property is a
 619 potentially suitable location for a wind energy facility or solar energy facility, the Division shall analyze
 620 the suitability of the parcel for the location of such a facility. In conducting its analysis, the Division
 621 shall ascribe a numerical score to the parcel using the scoring system developed pursuant to subsection
 622 D.

623 § 67-202. Schedule.

624 A. The Division shall complete the Plan by July 1, 2007.

625 B. Prior to completion of the Plan, the Division shall present drafts to, and consult with, the Coal
 626 and Energy Commission and the Commission on Electric Utility Restructuring.

627 C. The Plan shall be updated by the Division no less frequently than every five years.

628 § 67-203. Submission of Plan.

629 Upon completion, the Division shall submit the Plan, including periodic updates thereto, to the
 630 Governor, the Commissioners of the State Corporation Commission, and the General Assembly. The
 631 Plan shall be submitted as provided in the procedures of the Division of Legislative Automated Systems
 632 for the processing of legislative documents. The Plan's executive summary shall be posted on the
 633 General Assembly's website.

634 CHAPTER 3.

635 OFFSHORE NATURAL GAS AND WIND RESOURCES.

636 § 67-300. Offshore natural gas and wind resources.

637 A. In recognition of the need for energy independence, it shall be the policy of the Commonwealth to
 638 support federal efforts to determine the extent of natural gas resources 50 miles or more off the Atlantic
 639 shoreline, including appropriate federal funding for such an investigation. The policy of the
 640 Commonwealth shall further support the inclusion of the Atlantic Planning Areas in the Minerals
 641 Management Service's draft environmental impact statement with respect to natural gas exploration 50
 642 miles or more off the Atlantic shoreline. Nothing in this Act shall be construed as a policy statement on
 643 the executive or Congressional moratoria on production and development of natural gas off the Atlantic
 644 shoreline.

645 B. It shall be the policy of the Commonwealth to support federal efforts to examine the feasibility of
 646 offshore wind energy being utilized in an environmentally responsible fashion.

647 CHAPTER 4.

648 CLEAN COAL PROJECTS.

649 § 67-400. Definitions.

650 As used in this chapter:

651 "Center" means the Virginia Center for Coal and Energy Research.

652 "Clean coal project" means any project that uses any technology, including technologies applied at
 653 the precombustion, combustion, or postcombustion stage, at a new or existing facility that will achieve
 654 significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the
 655 utilization of coal in the generation of electricity, process steam, or industrial products, which is not in
 656 widespread use, or is otherwise defined as clean coal technology pursuant to 42 U.S.C. § 7651n.

657 § 67-401. Permitting process for clean coal projects.

658 To the extent authorized by federal law, the State Air Pollution Control Board shall implement
 659 permit processes that facilitate the construction of clean coal projects in the Commonwealth by, among
 660 such other actions as it deems appropriate, giving priority to processing permit applications for clean
 661 coal projects.

662 § 67-402. Center for excellence for clean coal technologies.

663 A. The Center shall encourage qualified state institutions of higher education to apply to the U.S.
 664 Secretary of Energy, pursuant to § 404 of the federal Energy Policy Act of 2005, for competitive,
 665 merit-based grants to be used to assist in financing the establishment in the Commonwealth of a center
 666 of excellence for advancing new clean coal technologies.

667 B. The Center shall be authorized to provide such assistance it deems reasonable and appropriate to
 668 qualified state institutions of higher education that elect to apply for grants pursuant to subsection A.

669 § 67-403. Clean Coal Technology Research Fund.

670 A. There is hereby established in the state treasury a special nonreverting fund to be known as the
 671 Clean Coal Technology Research Fund. The Fund shall consist of such moneys as may be appropriated
 672 by the General Assembly from time to time. Any moneys deposited to or remaining in the Fund during
 673 or at the end of each fiscal year or biennium, including interest thereon, shall not revert to the general
 674 fund but shall remain in the Fund and be available for allocation under this chapter in ensuing fiscal
 675 years. Interest on all moneys in the Fund shall remain in the Fund and be credited to it. The Fund shall
 676 be used solely for the payment of grants to state institutions of higher education to assist in the
 677 development and implementation of clean coal technologies. The Center shall administer the Fund.

678 B. The Center shall award such grants to applying eligible institutions on a competitive basis.

679 C. The Center shall not allocate an amount in excess of the moneys available in the Fund for the
 680 payment of grants.

681 D. Beginning in calendar year 2007, by June 30 of each year, the Center shall (i) determine the
 682 amount of the grants to be allocated to eligible institutions and (ii) certify to the Comptroller and each
 683 eligible grant applicant the amount of the grant allocated to successful applicants. Payment of such
 684 grants shall be made by the State Treasurer on warrant of the Comptroller within 60 days of such
 685 certification.

686 CHAPTER 5. 687 BIODIESEL FUEL.

688 § 67-500. Definitions.

689 As used in this chapter:

690 "Biodiesel fuel" means a renewable, biodegradable, mono-alkyl ester combustible liquid fluid fuel
 691 from agricultural plant oils or animal fats that meets the applicable American Society for Testing and
 692 Materials (ASTM) Specification for Biodiesel Fuel (B100) Blend Stock for Distillate Fuels.

693 § 67-501. Use of biodiesel and other alternative fuels in vehicles providing public transportation.

694 The Commonwealth Transportation Board shall encourage the use of biodiesel fuel and other
 695 alternative fuels, to the extent practicable, in buses and other vehicles used to provide public
 696 transportation in the Commonwealth.

697 CHAPTER 6. 698 VIRGINIA COASTAL ENERGY RESEARCH CONSORTIUM.

699 § 67-600. Virginia Coastal Energy Research Consortium established.

700 The Virginia Coastal Energy Research Consortium, hereinafter referred to as the Research
 701 Consortium, is hereby created to include Old Dominion University, the Virginia Institute of Marine
 702 Science, the Virginia Tech Advanced Research Institute, James Madison University, and Norfolk State
 703 University and is to be located at Old Dominion University.

704 § 67-601. Functions, powers, and duties of the Research Consortium.

705 The Coastal Energy Research Consortium shall serve as an interdisciplinary study, research, and
 706 information resource for the Commonwealth on coastal energy issues. As used in this chapter, "coastal
 707 energy" includes wave or tidal action, currents, offshore winds, thermal differences, and methane
 708 hydrates. The Research Consortium shall (i) consult with the General Assembly, federal, state, and local
 709 agencies, nonprofit organizations, private industry and other potential users of coastal energy research;
 710 (ii) establish and administer agreements with other universities of the Commonwealth to carry out
 711 research projects relating to the feasibility of recovering fuel gases from methane hydrates and
 712 increasing the Commonwealth's reliance on other forms of coastal energy; (iii) disseminate new
 713 information and research results; (iv) apply for grants made available pursuant to federal legislation,
 714 including but not limited to the federal Methane Hydrate Research and Development Act of 1999, P.L.
 715 106-193 and from other sources; and (v) facilitate the application and transfer of new coastal energy
 716 technologies.

717 § 67-602. Control and supervision.

718 The Research Consortium shall be governed by a board which shall consist of nine members as
 719 follows: (i) the Director of the Department of Mines, Minerals and Energy or his designee; (ii) the
 720 Commissioner of Marine Resources or his designee; (iii) a member of the maritime industry to be
 721 appointed by the Virginia Manufacturers Association; (iv) a member of the maritime industry to be
 722 appointed by the Hampton Roads Maritime Association; (v) the Director of the Virginia Tech Advanced
 723 Research Institute or his designee; (vi) the President of Old Dominion University or his designee; (vii)
 724 the Director of the Virginia Institute of Marine Sciences or his designee; (viii) the President of Norfolk
 725 State University or his designee; and (ix) the President of James Madison University or his designee.

726 § 67-603. Appointment of a director.

727 The board of the Research Consortium shall appoint a director to serve as the principal

728 administrative officer of the Research Consortium. The director shall report to the board and be under
729 its supervision.

730 § 67-604. Powers and duties of the director.

731 The director shall exercise all powers imposed upon him by law, carry out the specific duties
732 imposed on him by the board of the Research Consortium, and develop appropriate policies and
733 procedures for (i) identifying priority coastal energy research projects; (ii) cooperating with the General
734 Assembly, federal, state, and local governmental agencies, nonprofit organizations and private industry
735 in formulating its research projects; (iii) selecting research projects to be funded; and (iv) disseminating
736 information and transferring technology related to coastal energy within the Commonwealth. The
737 director shall employ such personnel and secure such services as may be required to carry out the
738 purposes of this chapter, expend appropriated funds, and accept moneys from federal or private sources
739 for cost-sharing on coastal energy projects.

740 CHAPTER 7.

741 COVENANTS RESTRICTING SOLAR ENERGY COLLECTION DEVICES.

742 § 67-700. Definitions.

743 As used in this chapter:

744 "Community association" means an unincorporated association or corporation that owns or has
745 under its care, custody, or control real estate subject to a recorded declaration of covenants that
746 obligates a person, by virtue of ownership of specific real estate, to be a member of the unincorporated
747 association or corporation.

748 "Solar energy collection device" means any device that facilitates the collection and beneficial use of
749 solar energy, including passive heating panels or building components and solar photovoltaic apparatus.

750 § 67-701. Covenants regarding solar power.

751 A. Except to the extent provided in the condominium instruments, declaration, or rules and
752 regulations duly adopted pursuant thereto, no community association shall enact any provisions
753 restricting solar power or the use of solar energy collection device on units or lots that are part of the
754 development.

755 B. The community association may prohibit or restrict the installation and use of such solar energy
756 collection devices on the common elements or common areas.

757 CHAPTER 8.

758 MOTOR VEHICLE FUEL EFFICIENCY STANDARDS.

759 § 67-800. Definitions.

760 As used in this section, "CAFE standards" means the corporate average fuel economy standards for
761 passenger cars and light trucks manufactured for sale in the United States that have been implemented
762 pursuant to the federal Energy Policy and Conservation Act of 1975 (P. L. 94-163), as amended.

763 § 67-801. Efforts to increase CAFE standards.

764 It is the policy of the Commonwealth to support federal action that provides for:

765 1. An increase the CAFE standards from the current standard by promoting performance-based tax
766 credits for advanced technology, fuel-efficient vehicles to facilitate the introduction and purchase of such
767 vehicles; and

768 2. Market incentives and education programs to build demand for high-efficiency, cleaner vehicles,
769 including tax incentives for highly efficient vehicles.

770 CHAPTER 9.

771 RENEWABLE ELECTRICITY PRODUCTION GRANT PROGRAM.

772 § 67-900. Definitions.

773 As used in this chapter, unless the context clearly requires otherwise:

774 "Corporation" means an entity subject to the tax imposed by Article 10 (§ 58.1-400 et seq.) of
775 Chapter 3 of Title 58.1.

776 "Department" means the Department of Mines, Minerals and Energy.

777 "Fund" means the Renewable Electricity Production Grant Fund established pursuant to § 67-902.

778 "Qualified energy resources" means the same as that term is defined by Internal Revenue Code
779 § 45(c)(1), and includes wind, closed-loop biomass, organic, livestock, and poultry waste resources and
780 lignin and other organic by-products of kraft pulping processes, bark, chip rejects, sawdust, fines and
781 other wood waste, regardless of the point of origin.

782 "Qualified Virginia facility" means a facility located in the Commonwealth that uses qualified energy
783 resources to produce electricity.

784 § 67-901. Eligibility for grants for production of qualified energy resources.

785 Subject to appropriation of sufficient moneys in the Fund, an eligible corporation may receive a
786 grant payable from the Fund for certain kilowatt hours of electricity produced after December 31, 2005.
787 The grant amount shall be \$0.85 for each kilowatt hour of electricity (i) produced by the corporation
788 from qualified energy resources at a qualified Virginia facility and (ii) sold and transmitted into the

789 *electric grid, or used in production by a qualified Virginia facility, in a calendar year. Grant amounts*
 790 *shall be based on each such kilowatt hour of electricity sold or used in production by a qualified*
 791 *Virginia facility beginning with calendar year 2006.*

792 *§ 67-902. Renewable Electricity Production Grant Fund.*

793 *A. There is hereby established in the state treasury a special nonreverting fund to be known as the*
 794 *Renewable Electricity Production Grant Fund. The Fund shall consist of such moneys as may be*
 795 *appropriated by the General Assembly from time to time. Any moneys deposited to or remaining in the*
 796 *Fund during or at the end of each fiscal year or biennium, including interest thereon, shall not revert to*
 797 *the general fund but shall remain in the Fund and be available for allocation under this chapter in*
 798 *ensuing fiscal years. Interest on all moneys in the Fund shall remain in the Fund and be credited to it.*
 799 *The Fund shall be used solely for the payment of the grants provided under this chapter. The*
 800 *Department shall administer the Fund.*

801 *B. The Department shall allocate moneys from the Fund in the following order of priority: (i) first to*
 802 *unpaid grant amounts carried forward from prior years because eligible corporations did not receive*
 803 *the full amount of any grant to which they were eligible in a prior year pursuant to this chapter and (ii)*
 804 *then to other approved applicants. If the moneys in the Fund are less than the amount of grants to*
 805 *which approved applicants in any class of priority are eligible, the moneys in the Fund shall be*
 806 *apportioned pro rata among eligible applicants in such class, based upon the amount of the grant to*
 807 *which an approved applicant is eligible and the amount of money in the Fund available for allocation*
 808 *to such class.*

809 *C. The Department shall not allocate an amount in excess of the moneys available in the Fund for*
 810 *the payment of grants.*

811 *D. Beginning in calendar year 2007, by June 30 of each year, the Department shall (i) determine the*
 812 *amount of the grants to be allocated to eligible corporations and (ii) certify to the Comptroller and*
 813 *each eligible corporation the amount of the grant allocated to such corporation. Payment of such grants*
 814 *shall be made by the State Treasurer on warrant of the Comptroller within 60 days of such certification,*
 815 *subject to appropriation of sufficient moneys in the Fund.*

816 *E. If a grant recipient is allocated less than the full amount of a grant to which it is eligible in any*
 817 *year pursuant to this chapter, such corporation shall not be eligible for the deficiency in that year, but*
 818 *the unpaid portion of the grant to which it was eligible shall be carried forward by the Department to*
 819 *the following year, during which it shall be in the first class of priority as provided in clause (i) of*
 820 *subsection B.*

821 *F. In no case shall the Department certify grants from the Fund for kilowatts of electricity produced*
 822 *prior to January 1, 2006.*

823 *G. Actions of the Department relating to the allocation and awarding of grants shall be exempt from*
 824 *the provisions of the Administrative Process Act pursuant to subdivision B 4 of § 2.2-4002.*

825 *§ 67-903. Requirements for grants generally.*

826 *A. The Department shall establish an application process by which eligible corporations shall apply*
 827 *for a grant under this chapter. An application for a grant under this chapter shall not be approved until*
 828 *the Department has verified that the electricity has been produced from qualified energy resources at a*
 829 *qualified Virginia facility and that sufficient moneys are available in the Fund.*

830 *B. The application shall be filed with the director of the Department no later than March 31 each*
 831 *year following the calendar year in which such kilowatt hours of electricity were sold or used in*
 832 *production by a qualified Virginia facility. Failure to meet the filing deadline shall render the applicant*
 833 *ineligible to receive a grant for such kilowatt hours of electricity sold or so used in the prior calendar*
 834 *year. For filings by mail, the postmark cancellation shall govern the date of the filing determination.*

835 *C. The application shall provide evidence, satisfactory to the Department, of the number of kilowatt*
 836 *hours of electricity produced by the corporation from qualified energy resources at a qualified Virginia*
 837 *facility that were sold, or used in production by a qualified Virginia facility, by such corporation in the*
 838 *prior calendar year.*

839 *D. As a condition of receipt of a grant, an eligible corporation shall make available to the*
 840 *Department for inspection upon request all relevant and applicable documents to determine whether the*
 841 *requirements for the receipt of grants as set forth in this chapter have been satisfied. All such*
 842 *documents appropriately identified by the eligible corporation shall be considered confidential and*
 843 *proprietary.*

844 *E. A corporation receiving a grant for the production and sale of kilowatt hours of electricity under*
 845 *this chapter may not use the production or sale of such kilowatt hours of electricity as the basis for*
 846 *claiming any other grant or credit against taxes, as provided under the Code of Virginia or in an*
 847 *appropriation act.*

848

CHAPTER 10.

PHOTOVOLTAIC, SOLAR, AND WIND ENERGY UTILIZATION GRANT PROGRAM.

849

850 § 67-1000. Definitions.

851 As used in this chapter, unless the context clearly requires otherwise:

852 "Corporation" means an entity subject to the tax imposed by Article 10 (§ 58.1-400 et seq.) of
853 Chapter 3 of Title 58.1.

854 "Department" means the Department of Mines, Minerals and Energy.

855 "Fund" means the Photovoltaic, Solar, and Wind Energy Utilization Grant Fund established pursuant
856 to § 67-1002.

857 "Individual" means the same as that term is defined in § 58.1-302.

858 "Photovoltaic property" means property that uses a solar photovoltaic process to generate electricity
859 and that meets applicable performance and quality standards and certification requirements in effect at
860 the time of acquisition of the property, as specified by the Department.

861 "Solar water heating property" means property that, when installed in connection with a structure,
862 uses solar energy for the purpose of providing hot water for use within the structure and meets
863 applicable performance and quality standards and certification requirements in effect at the time of
864 acquisition of the property, as specified by the Department.

865 "Wind-powered electrical generator" means an electrical generating unit that (i) has a capacity of
866 not more than 10 kilowatts, (ii) uses wind as its total source of fuel, (iii) is located on the individual's
867 or corporation's premises, and (iv) is intended primarily to offset all or part of the individual's or
868 corporation's own electricity requirements.

869 § 67-1001. Eligibility for grants for installation of photovoltaic property, solar water heating
870 property, and wind-powered electrical generators.

871 A. Subject to appropriation of sufficient moneys in the Fund, beginning with calendar year 2006, an
872 eligible individual or corporation may receive a grant payable from the Fund for a portion of the cost
873 of photovoltaic property, solar water heating property, or wind-powered electrical generators placed in
874 service during the calendar year by such individual or corporation. The grant amount shall be 15% of
875 the total installed cost of photovoltaic property, solar water heating property, or wind-powered
876 electrical generators but shall not exceed an aggregate total of:

- 877 1. \$2,000 for each system of photovoltaic property;
- 878 2. \$1,000 for each system of solar water heating property; and
- 879 3. \$1,000 for each system of wind-powered electrical generators.

880 B. Persons or entities placing in service photovoltaic property, solar water heating property, or
881 wind-powered electrical generators for or on behalf of another person or entity shall not be eligible to
882 receive a grant for such property.

883 § 67-1002. Photovoltaic, Solar, and Wind Energy Utilization Grant Fund.

884 A. There is hereby established in the state treasury a special nonreverting fund to be known as the
885 Photovoltaic, Solar, and Wind Energy Utilization Grant Fund. The Fund shall consist of such moneys as
886 may be appropriated by the General Assembly from time to time. Any moneys deposited to or remaining
887 in the Fund during or at the end of each fiscal year or biennium, including interest thereon, shall not
888 revert to the general fund but shall remain in the Fund and be available for allocation under this
889 chapter in ensuing fiscal years. Interest on all moneys in the Fund shall remain in the Fund and be
890 credited to it. The Fund shall be used solely for the payment of the grants provided under this chapter.
891 The Department shall administer the Fund.

892 B. The Department shall allocate moneys from the Fund in the following order of priority: (i) first to
893 unpaid grant amounts carried forward from prior years because eligible individuals or corporations did
894 not receive the full amount of any grant to which they were eligible in a prior year pursuant to this
895 chapter and (ii) then to other approved applicants. If the moneys in the Fund are less than the amount
896 of grants to which approved applicants in any class of priority are eligible, the moneys in the Fund
897 shall be apportioned pro rata among eligible applicants in such class, based upon the amount of the
898 grant to which an approved applicant is eligible and the amount of money in the Fund available for
899 allocation to such class.

900 C. The Department shall not allocate an amount in excess of the moneys available in the Fund for
901 the payment of grants.

902 D. Beginning in calendar year 2007, by June 30 of each year, the Department shall (i) determine the
903 amount of the grants to be allocated to eligible individuals and corporations, and (ii) certify to the
904 Comptroller and each eligible grant applicant the amount of the grant allocated to such applicant.
905 Payment of such grants shall be made by the State Treasurer on warrant of the Comptroller within 60
906 days of such certification.

907 E. If a grant recipient is allocated less than the full amount of a grant to which it is eligible in any
908 year pursuant to this chapter, such individual or corporation shall not be eligible for the deficiency in
909 that year, but the unpaid portion of the grant to which it was eligible shall be carried forward by the
910 Department to the following year, during which it shall be in the first class of priority as provided in

911 *clause (i) of subsection B.*

912 *F. In no case shall the Department certify grants from the Fund for photovoltaic property, solar*
 913 *water heating property, or wind-powered electrical generators placed in service prior to January 1,*
 914 *2006.*

915 *G. Actions of the Department relating to the allocation and awarding of grants shall be exempt from*
 916 *the provisions of the Administrative Process Act pursuant to subdivision B 4 of § 2.2-4002.*

917 *§ 67-1003. Requirements for grants generally.*

918 *A. The Department shall establish an application process by which eligible individuals and*
 919 *corporations shall apply for a grant under this chapter. The application shall be filed with the director*
 920 *of the Department no later than March 31 each year following the calendar year in which such*
 921 *property was placed in service. Failure to meet the filing deadline shall render the applicant ineligible*
 922 *to receive a grant for photovoltaic property, solar water heating property, or wind-powered electrical*
 923 *generators placed in service in the prior calendar year. For filings by mail, the postmark cancellation*
 924 *shall govern the date of the filing determination.*

925 *B. The application shall provide evidence, satisfactory to the Department, of the total installed cost*
 926 *of each system of photovoltaic property, solar water heating property, or wind-powered electrical*
 927 *generators placed in service by such individual or corporation in the prior calendar year.*

928 *C. As a condition of receipt of a grant, an eligible individual or corporation shall make available to*
 929 *the Department for inspection upon request all relevant and applicable documents to determine whether*
 930 *the requirements for the receipt of grants as set forth in this chapter have been satisfied.*

931 *D. An individual or corporation receiving a grant pursuant to this chapter for a system of*
 932 *photovoltaic property, solar water heating property, or wind-powered electrical generators may not use*
 933 *such system as the basis for claiming any other grant or credit against taxes, as provided under the*
 934 *Code of Virginia or in an appropriation act.*

935 **2. That the Department of Mines, Minerals and Energy shall develop guidelines, in accordance**
 936 **with the Administrative Process Act (§ 2.2-4000 et seq. of the Code of Virginia), for purposes of**
 937 **carrying out the provisions of Chapters 9 (§ 67-900 et seq.) and 10 (§ 67-1000 et seq.) of Title 67 of**
 938 **the Code of Virginia.**

939 **3. That the Department of Mines, Minerals and Energy, working with the Department of General**
 940 **Services, the State Council on Higher Education, and representatives of other agencies and**
 941 **institutions that construct and operate facilities shall analyze current energy performance**
 942 **standards that agencies and institutions use in facility design, make recommendations for changes**
 943 **to the current design and construction practices that will enhance energy performance and**
 944 **efficiency, and research facility energy performance and efficiency benchmarks and metrics that**
 945 **may be used to measure facility performance.**

946 **4. That the State Corporation Commission and Secretary of Natural Resources shall develop a**
 947 **proposal for a coordinated review of permits for an energy facility requiring (i) an environmental**
 948 **permit that is subject to issuance by any agency or board within the Secretariat of Natural**
 949 **Resources and (ii) a certificate of public convenience and necessity that is subject to issuance by**
 950 **the Commission. The State Corporation Commission and Secretary of Natural Resources shall**
 951 **submit their proposal for a coordinated review process, together with a listing of the types of**
 952 **projects and permits to be reviewed under the coordinated process, an analysis of the potential**
 953 **costs and benefits of such a process, and any legislation required to establish the coordinated**
 954 **review process, to the Governor and the chairmen of the House Committee on Commerce and**
 955 **Labor, the House Committee on Agriculture, Chesapeake and Natural Resources, the Senate**
 956 **Committee on Commerce and Labor, and the Senate Committee on Agriculture, Conservation and**
 957 **Natural Resources by December 1, 2006.**

958 **5. That the Department of Taxation shall develop guidelines that describe the items that qualify**
 959 **for the deduction under subdivision D 11 of § 58.1-322 of the Code of Virginia for energy-efficient**
 960 **appliances and equipment, and shall make such guidelines available, both electronically and in**
 961 **hard copy, no later than October 1, 2006.**

962 **6. That if the Fund established under § 67-403 of the Code of Virginia does not receive a deposit**
 963 **of general funds, nongeneral funds, grant funds, or other funds before July 1, 2009, then §§ 67-402**
 964 **and 67-403 shall expire on July 1, 2009.**

965 **7. That if the Virginia Coastal Energy Research Consortium established under § 67-600 of the**
 966 **Code of Virginia is not funded before July 1, 2009, then Chapter 6 of Title 67 (§ 67-600 et seq.)**
 967 **shall expire on July 1, 2009.**

968 **8. That if the Fund established under § 67-902 of the Code of Virginia does not receive a deposit**
 969 **of general funds, nongeneral funds, grant funds, or other funds before July 1, 2009, then the**
 970 **provisions of Chapter 9 of Title 67 (§ 67-900 et seq.) shall expire on July 1, 2009.**

971 **9. That if the Fund established under § 67-1002 of the Code of Virginia does not receive a deposit**

972 of general funds, nongeneral funds, grant funds, or other funds before July 1, 2009, then the
973 provisions of Chapter 10 of Title 67 (§ 67-1000 et seq.) shall expire on July 1, 2009.

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2006 SESSION

INTRODUCED

063893162

HOUSE BILL NO. 134

Offered January 11, 2006

Prefiled December 28, 2005

A BILL to amend and reenact §§ 2.2-2233.2, 23-4.3 and 23-4.4 of the Code of Virginia and to repeal § 23-9.10:4 of the Code of Virginia, relating to intellectual property developed at public institutions of higher education.

Patrons—Cosgrove and Nixon

Referred to Committee on Science and Technology

Be it enacted by the General Assembly of Virginia:

1. That §§ 2.2-2233.2, 23-4.3 and 23-4.4 of the Code of Virginia are amended and reenacted as follows:

§ 2.2-2233.2. Biotechnology Commercialization Loan Fund; created; purposes; report.

A. From such funds as may be appropriated by the General Assembly and any gifts, grants, or donations from public or private sources, there is created in the state treasury a special nonreverting, permanent fund, to be known as the Biotechnology Commercialization Loan Fund (the Fund), to be administered by the Authority. The Fund shall be established on the books of the Comptroller. Interest earned on moneys in the Fund shall remain in the Fund and be credited to it. Any moneys remaining in the Fund at the end of each fiscal year, including interest thereon, shall not revert to the general fund but shall remain in the Fund. Expenditures and disbursements from the Fund, which shall consist of loans, shall be made by the State Treasurer on warrants issued by the Comptroller upon written request bearing the signature of the chairman or the vice-chairman of the Authority, or, if so authorized by the Authority, bearing his facsimile signature, and the official seal of the Authority.

B. Moneys in the Fund shall be used for the sole purpose of financing technology transfer and commercialization activities related to biotechnology inventions made, solely or in cooperation with other organizations, at qualifying institutions. Such activities shall include, but not be limited to, legal and business consulting services and expenses, including employee compensation, relating to assessing the patentability of inventions, obtaining patent protection for such inventions in the United States and internationally, marketing for such inventions and patents thereon to potential licensees, and negotiating licensing or commercialization agreements with licensees, as well as development of new technology transfer and commercialization programs at qualifying institutions.

The maximum amount of any loans outstanding under the Fund shall be \$3,000,000.

C. Qualifying institutions may apply to the Fund for loans to the extent that such institution's outstanding principal balance at any one time does not exceed \$500,000. Loan applications shall include business plans that detail and explain the anticipated uses of funds received and the proposed repayment schedule.

Loans from the Fund shall take the form of a contractual commitment to the recipient qualifying institution for a line of credit for up to three years, along with an approved schedule of repayment. During the contractual period the recipient qualifying institution may draw upon the line of credit for any expense for which the loan was made, not to exceed the stated amount of the loan award. At the end of the contractual period, the line of credit shall terminate and the outstanding balance of the withdrawals on that line of credit shall become the established basis for that loan.

During the contractual period, deferred interest shall accumulate on the outstanding balance at a rate of three percent compounded annually. Borrowing institutions may prepay part or all of any loan received from the Fund without penalty, and, if repayment is completed within the contractual period of the line of credit, the accumulated interest obligation shall be forgiven.

Repayment of the established basis shall consist of a maximum of 84 equal monthly payments of principal and compounded interest at the determined rate beginning on the first day of the month following the end of the contractual period.

D. Decisions to make loans to applicants from the Fund shall be made by a panel, which shall consist of the President of the Center for Innovative Technology, the Director of the Department of Planning and Budget and the Executive Director of the Virginia Economic Development Partnership, or their designees. The President of the Center for Innovative Technology, or his designee, shall serve as chair. The panel may seek the advice of experts in technology, business, technology transfer or other relevant fields as appropriate in devising guidelines for the implementation of this loan program as well as in making loan decisions.

Specific guidelines for the award of funds from this program shall be established and maintained by

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59 the Authority, in consultation with the Virginia Economic Development Partnership and the State
60 Council of Higher Education.

61 E. A recipient of a loan from the Fund shall report annually to the panel on the uses of loan
62 proceeds during the previous year and on plans for the use of any additional funds it may plan to draw.
63 Such reports shall be filed for so long as the recipient owes money to the Fund.

64 F. The chairman of the Authority shall report annually to the Governor and the General Assembly on
65 activities of the Fund, including a detailed list of awards committed, the amount and description of each
66 approved award, and an assessment of the effectiveness of the Fund in encouraging the
67 commercialization of bioscience and biotechnology inventions made at Virginia institutions of higher
68 education.

69 G. A record transmitted or delivered by a loan applicant or a loan recipient to a public body in the
70 conduct of its duties under this section shall be excluded from disclosure under the Virginia Freedom of
71 Information Act to the extent such record reveals information that (a) is the property of the submitting
72 party, (b) has independent economic value to the owner that causes it to be maintained in secrecy by the
73 owner, and (c) is clearly and specifically identified in writing as proprietary, confidential information at
74 the time of its delivery or transmission to the public body. Nothing in this paragraph shall be construed
75 to prevent the disclosure of information regarding the financial or administrative oversight of the Fund
76 by the Authority.

77 H. For purposes of this section:

78 "Determined rate" means the rate of interest paid by the Commonwealth on the most recent sale of
79 tax-exempt bonds backed by the full faith and credit of the Commonwealth.

80 "Qualifying institution" means an institution of higher education in the Commonwealth or its
81 associated intellectual property foundation that maintains a recognized program of technology transfer,
82 licensing, or commercialization in conformance with the guidelines established by the State Council of
83 Higher Education for Virginia pursuant to § 23-9-10:4 adopts a policy regarding the ownership,
84 protection, assignment, and use of intellectual property pursuant to § 23-4.3.

85 I. No loan shall be made to any entity which conducts human stem cell research from human
86 embryos, or for any loan to conduct such research; however, research conducted using adult stem cells
87 may be funded.

88 § 23-4.3. Adoption of patent and copyright policies; employees to be bound by such policies.

89 A. The boards of visitors of state-supported institutions of higher education and the State Board for
90 Community Colleges shall adopt patent and copyright policies regarding the ownership, protection,
91 assignment, and use of intellectual property consistent with the policy guidelines promulgated by the
92 State Council of Higher Education working in cooperation with the state-supported institutions of higher
93 education pursuant to § 23-9-10:4. Such policies shall be submitted to the Council.

94 B. All employees of state-supported institutions of higher education, including the Virginia
95 Community College System, as a condition of employment, shall be bound by the patent and copyright
96 intellectual property policies of the institution employing them. Anyone using facilities of a
97 state-supported institution who has not otherwise entered into a written contract with the institution
98 concerning such use shall be subject to the institution's patent and copyright policies where the
99 institution's Board of Visitors, the State Board for Community Colleges or their designees determine that
100 such use constitutes a significant use of the institution's facilities.

101 C. Upon adoption, the boards of visitors of state-supported institutions of higher education, including
102 the State Board for Community Colleges, shall provide a copy of their intellectual property policies to
103 the Joint Commission on Technology and Science.

104 D. For purposes of this section, "intellectual property" means (i) a potentially patentable machine,
105 article of manufacture, composition of matter, process, or improvement in any of those; (ii) an issued
106 patent; (iii) a legal right that inheres in a patent; or (iv) anything that is copyrightable.

107 § 23-4.4. Authorization to transfer interest; Governor's approval required under certain circumstances.

108 A. The Boards of Visitors boards of visitors, the State Board for Community Colleges, or their
109 designees may transfer are authorized to assign any interest they possess in patents and copyrights
110 intellectual property or in materials in which the institution claims an interest, provided such assignment
111 is in accordance with the terms of the institution's intellectual property policies adopted pursuant to
112 subsection A of § 23-4.3 under its patent or copyright policy. However, the Governor's prior written
113 approval shall be required for transfers of such property developed wholly or significantly through the
114 use of state general funds and either (i) such property was developed by an employee of the institution
115 acting within the scope of his assigned duties, or (ii) such property is to be transferred to an entity other
116 than the Innovative Technology Authority, an entity whose purpose is to manage intellectual properties
117 on behalf of nonprofit organizations, colleges and universities, or an entity whose purpose is to benefit
118 the respective institutions. The Governor may attach conditions to these transfers as he deems necessary.
119 In the event the Governor does not approve such transfer, the materials shall remain the property of the
120 respective institutions and may be used and developed in any manner permitted by law. The State

121 Council of Higher Education working in cooperation with the state-supported institutions of higher
122 education and in accordance with § 23-9.10:4 shall adopt a uniform statement defining (i) the conditions
123 under which a significant use of general funds occurs and (ii) the circumstances constituting an assigned
124 duty.

125 B. Notwithstanding subsection A, the Governor's approval is not required to transfer such property to
126 an entity described in clause (ii) of subsection A if (i) the interest was developed without the use of
127 federal funds; (ii) such entity makes a clear and convincing case to the relevant board that its ownership
128 of the interest is critical to its ability to commercialize that interest; and (iii) the institution receives, at a
129 minimum, compensation equal to the anticipated revenue stream of licensing the interest.

130 *The president of each state-supported institution of higher education, including the chancellor of the*
131 *Virginia Community College System, shall report annually to the Joint Commission on Technology and*
132 *Science regarding the assignment of any intellectual property interests by that institution.*

133 2. That § 23-9.10:4 of the Code of Virginia is repealed.

062605832

SENATE BILL NO. 258

Offered January 11, 2006

Prefiled January 10, 2006

A *BILL to amend and reenact §§ 58.1-3507, 58.1-3508.1, and 58.1-3518 of the Code of Virginia, relating to machinery and tools tax; valuation based on depreciated basis for federal income tax purposes.*

Patrons—Wagner, Watkins and Williams; Delegates: Nixon and Purkey

Referred to Committee on Finance

Be it enacted by the General Assembly of Virginia:

1. That §§ 58.1-3507, 58.1-3508.1, and 58.1-3518 of the Code of Virginia are amended and reenacted as follows:

§ 58.1-3507. Certain machinery and tools segregated for local taxation only; notice prior to change in valuation, hearing.

A. Machinery and tools, except machinery and equipment used by farm wineries as defined in § 4.1-100, used in a manufacturing, mining, water well drilling, processing or reprocessing, radio or television broadcasting, dairy, dry cleaning or laundry business shall be listed and are hereby segregated as a class of tangible personal property separate from all other classes of property and shall be subject to local taxation only. The rate of tax imposed by a county, city or town on such machinery and tools shall not exceed the rate imposed upon the general class of tangible personal property.

B. Machinery and tools segregated for local taxation pursuant to subsection A, other than energy conservation equipment of manufacturers, shall be valued by means of depreciated cost or a percentage or percentages of original total capitalized cost excluding capitalized interest; *however, if the owner of the machinery or tools placed in service on or after July 1, 2006, depreciates the value thereof for federal income taxation purposes in a manner authorized under the Internal Revenue Code of 1986, then the machinery or tools shall be valued at the depreciated basis of the machinery or tools for federal income tax purposes as of the assessment date, as reflected on the income tax return of the owner filed for the period that includes the assessment date. If the owner of machinery or tools placed in service prior to July 1, 2006, depreciates the value thereof for federal income taxation purposes in a manner authorized under the Internal Revenue Code of 1986, then the machinery or tools shall be valued:*

1. *For years in which the assessment date is on or after July 1, 2006, but before July 1, 2007, the machinery or tools shall be valued at the sum of (i) four-fifths of the property's value obtained by the means that was in effect on January 1, 2006, and (ii) one-fifth of the depreciated basis of the machinery or tools for federal income tax purposes as of the assessment date, as reflected on the income tax return of the owner filed for the period that includes the assessment date;*

2. *For years in which the assessment date is on or after July 1, 2007, but before July 1, 2008, the machinery or tools shall be valued at the sum of (i) three-fifths of the property's value obtained by the means that was in effect on January 1, 2006, and (ii) two-fifths of the depreciated basis of the machinery or tools for federal income tax purposes as of the assessment date, as reflected on the income tax return of the owner filed for the period that includes the assessment date;*

3. *For years in which the assessment date is on or after July 1, 2008, but before July 1, 2009, the machinery or tools shall be valued at the sum of (i) two-fifths of the property's value obtained by the means that was in effect on January 1, 2006, and (ii) three-fifths of the depreciated basis of the machinery or tools for federal income tax purposes as of the assessment date, as reflected on the income tax return of the owner filed for the period that includes the assessment date;*

4. *For years in which the assessment date is on or after July 1, 2009, but before July 1, 2010, the machinery or tools shall be valued at the sum of (i) one-fifth of the property's value obtained by the means that was in effect on January 1, 2006, and (ii) four-fifths of the depreciated basis of the machinery or tools for federal income tax purposes as of the assessment date, as reflected on the income tax return of the owner filed for the period that includes the assessment date; and*

5. *For years in which the assessment date is on or after July 1, 2010, the machinery or tools shall be valued at the depreciated basis of the machinery or tools for federal income tax purposes as of the assessment date, as reflected on the income tax return of the owner filed for the period that includes the assessment date.*

Whenever the commissioner of the revenue proposes to change the means of valuing machinery and tools, *excluding any change resulting in the valuation of machinery and tools at their depreciated basis for federal income tax purposes*, such proposed change shall be published in a newspaper having general

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59 circulation in the affected locality at least 30 days before the proposed change would take effect and the
60 citizens of the locality shall be allowed to submit written comments, during the 30-day period, to the
61 commissioner of the revenue regarding the proposed change.

62 C. All motor vehicles which are registered pursuant to § 46.2-600 with the Department of Motor
63 Vehicles and owned by persons engaged in those businesses set forth in subsection A shall be taxed as
64 tangible personal property by the county, city or town in accordance with the provisions of this chapter.
65 All other motor vehicles and delivery equipment owned by persons engaged in those businesses set forth
66 in subsection A shall be included in and taxed as machinery and tools.

67 § 58.1-3508.1. Separate classification of machinery and tools used in semiconductor manufacturing.

68 Machinery and tools used in semiconductor manufacturing shall constitute a classification for local
69 taxation separate from other classifications of machinery and tools as defined in § 58.1-3507. The
70 governing body of any county, city or town may levy a tax on such classification of property at a
71 different rate from the tax levied on other machinery and tools. The rate of tax and the rate of
72 assessment shall not exceed that applicable generally to machinery and tools. *Machinery and tools used*
73 *in semiconductor manufacturing shall be valued as provided in subsection B of § 58.1-3507.*

74 § 58.1-3518. Taxpayers to file returns.

75 Every taxpayer owning any of the property subject to taxation under this chapter on January 1 of any
76 year shall file a return thereof with the commissioner of the revenue for his county or city on the
77 appropriate forms; however, the commissioner of the revenue may elect not to require such a return
78 from any taxpayer who owns such property which does not have sufficient value to generate a tax
79 assessment. Every person who leases any of such property from the owner thereof on such date shall
80 file a return with the commissioner of the revenue of the county or city wherein such property is located
81 giving the name and address of the owner, except any person leasing a motor vehicle which is subject to
82 the tax imposed under § 58.1-2402. Such returns shall be filed on or before May 1 of each year, except
83 as otherwise provided by ordinance authorized by § 58.1-3916.

84 Every fiduciary shall file the returns mentioned in this chapter with the commissioner of revenue
85 having jurisdiction. Every taxpayer owning machinery and tools or business personal property, if
86 requested by the commissioner of the revenue, shall include on his annual return of such property
87 information as to the total of original cost by year of purchase *and information regarding the*
88 *depreciated basis of the machinery or tools for federal income tax purposes.* The cost should be the
89 original capitalized cost or the cost that would have been capitalized if the expense deduction in lieu of
90 depreciation was elected under § 179 of the Internal Revenue Code.

91 **2. That the provisions of this act shall be effective for taxable years beginning on or after January**
92 **1, 2007.**

2006 SESSION

INTRODUCED

062625496

HOUSE BILL NO. 1290

Offered January 11, 2006

Prefiled January 11, 2006

A BILL to amend and reenact §§ 58.1-3507, 58.1-3508.1, and 58.1-3518 of the Code of Virginia, relating to machinery and tools tax; valuation based on depreciated basis for federal income tax purposes.

Patron—Saxman

Referred to Committee on Finance

Be it enacted by the General Assembly of Virginia:

1. That §§ 58.1-3507, 58.1-3508.1, and 58.1-3518 of the Code of Virginia are amended and reenacted as follows:

§ 58.1-3507. Certain machinery and tools segregated for local taxation only; notice prior to change in valuation, hearing.

A. Machinery and tools, except machinery and equipment used by farm wineries as defined in § 4.1-100, used in a manufacturing, mining, water well drilling, processing or reprocessing, radio or television broadcasting, dairy, dry cleaning or laundry business shall be listed and are hereby segregated as a class of tangible personal property separate from all other classes of property and shall be subject to local taxation only. The rate of tax imposed by a county, city or town on such machinery and tools shall not exceed the rate imposed upon the general class of tangible personal property.

B. Machinery and tools segregated for local taxation pursuant to subsection A, other than energy conservation equipment of manufacturers, shall be valued by means of depreciated cost or a percentage or percentages of original total capitalized cost excluding capitalized interest; however, if the owner of the machinery or tools has depreciated the value thereof for federal income taxation purposes in a manner authorized under the Internal Revenue Code of 1986, then the machinery or tools shall be valued at the depreciated basis of the machinery or tools for federal income tax purposes as of the assessment date, as reflected on the income tax return of the owner filed for the period that includes the assessment date.

Whenever the commissioner of the revenue proposes to change the means of valuing machinery and tools, excluding any change resulting in the valuation of machinery and tools at their depreciated basis for federal income tax purposes, such proposed change shall be published in a newspaper having general circulation in the affected locality at least 30 days before the proposed change would take effect and the citizens of the locality shall be allowed to submit written comments, during the 30-day period, to the commissioner of the revenue regarding the proposed change.

C. All motor vehicles which are registered pursuant to § 46.2-600 with the Department of Motor Vehicles and owned by persons engaged in those businesses set forth in subsection A shall be taxed as tangible personal property by the county, city or town in accordance with the provisions of this chapter. All other motor vehicles and delivery equipment owned by persons engaged in those businesses set forth in subsection A shall be included in and taxed as machinery and tools.

§ 58.1-3508.1. Separate classification of machinery and tools used in semiconductor manufacturing.

Machinery and tools used in semiconductor manufacturing shall constitute a classification for local taxation separate from other classifications of machinery and tools as defined in § 58.1-3507. The governing body of any county, city or town may levy a tax on such classification of property at a different rate from the tax levied on other machinery and tools. The rate of tax and the rate of assessment shall not exceed that applicable generally to machinery and tools. Machinery and tools used in semiconductor manufacturing shall be valued as provided in subsection B of § 58.1-3507.

§ 58.1-3518. Taxpayers to file returns.

Every taxpayer owning any of the property subject to taxation under this chapter on January 1 of any year shall file a return thereof with the commissioner of the revenue for his county or city on the appropriate forms; however, the commissioner of the revenue may elect not to require such a return from any taxpayer who owns such property which does not have sufficient value to generate a tax assessment. Every person who leases any of such property from the owner thereof on such date shall file a return with the commissioner of the revenue of the county or city wherein such property is located giving the name and address of the owner, except any person leasing a motor vehicle which is subject to the tax imposed under § 58.1-2402. Such returns shall be filed on or before May 1 of each year, except as otherwise provided by ordinance authorized by § 58.1-3916.

Every fiduciary shall file the returns mentioned in this chapter with the commissioner of revenue

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59 having jurisdiction. Every taxpayer owning machinery and tools or business personal property, if
60 requested by the commissioner of the revenue, shall include on his annual return of such property
61 information as to the total of original cost by year of purchase *and information regarding the*
62 *depreciated basis of the machinery or tools for federal income tax purposes.* The cost should be the
63 original capitalized cost or the cost that would have been capitalized if the expense deduction in lieu of
64 depreciation was elected under § 179 of the Internal Revenue Code.
65 **2. That the provisions of this act shall be effective for taxable years beginning on or after January**
66 **1, 2007.**

Virginia Industry Investment Act

Summary; Industry Investment Act. Five-year phase-out of the Machinery & Tools Tax using state revenue to reimburse localities for annual reductions. Immediately cap M&T for all new investments. Place a rider in the bill that directs the Secretary of Commerce & Trade to develop a tax diversification plan for those localities that will be disproportionately impacted (e.g., West Point, Covington, Newport News, etc.) by expediting economic development assistance.

§ 58.1-3507. Certain machinery and tools segregated for local taxation only; notice prior to change in valuation, hearing.

A. Machinery and tools, except machinery and equipment used by farm wineries as defined in § 4.1-100, used in a manufacturing, mining, recycling, water well drilling, processing or reprocessing, radio or television broadcasting, dairy, dry cleaning or laundry business shall be listed and are hereby segregated as a class of tangible personal property separate from all other classes of property and shall be subject to local taxation only. The rate of tax imposed by a county, city or town on such machinery and tools shall not exceed the rate imposed upon the general class of tangible personal property.

B. Machinery and tools segregated for local taxation pursuant to subsection A, other than energy conservation equipment of manufacturers, shall be valued by means of depreciated cost or a percentage or percentages of original total capitalized cost excluding capitalized interest.

Machinery and tools used in a manufacturing, mining, processing or reprocessing and dairy shall not be taxed as tangible personal property after July 1, 2010. Effective July 1, 2006, new investments in machinery and tools used in these respective industries shall be exempt from state and local taxation and shall remain a separate class of exempt tangible personal property. Between July 1, 2006 and June 30, 2010 each local government shall reduce its existing assessments on this class of tangible personal property for manufacturing, mining, recycling, processing or reprocessing and dairy by 1/5 per year. The Commonwealth shall reimburse each local government from the General Fund an equivalent sum during this transition period to end on June 30, 2010.

Whenever the commissioner of the revenue proposes to change the means of valuing machinery and tools, such proposed change shall be published in a newspaper having general circulation in the affected locality at least 30 days before the proposed change would take effect and the citizens of the locality shall be allowed to submit written comments, during the 30-day period, to the commissioner of the revenue regarding the proposed change.

C. All motor vehicles which are registered pursuant to § 46.2-600 with the Department of Motor Vehicles and owned by persons engaged in those businesses set forth in subsection

A shall be taxed as tangible personal property by the county, city or town in accordance with the provisions of this chapter. All other motor vehicles and delivery equipment owned by persons engaged in those businesses set forth in subsection A shall be included in and taxed as machinery and tools.

§ 58.1-3660. Certified pollution control equipment and facilities.

A. Certified pollution control equipment and facilities, as defined herein, are hereby declared to be a separate class of property and shall constitute a classification for local taxation separate from other such classification of real or personal property and such property. The governing body of any county, city or town may, by ordinance, exempt or partially exempt such property from local taxation.

Effective July 1, 2006, new investments in certified pollution control equipment and facilities used for manufacturing, mining, processing or reprocessing and dairy shall be exempt from state and local taxation and shall remain a separate class of exempt property. Between July 1, 2006 and June 30, 2010 each local government shall reduce its existing assessments on this class of property for manufacturing, mining, processing or reprocessing and dairy by 1/5. The Commonwealth shall reimburse each local government from the General Fund an equivalent sum during this transition period to end on June 30, 2010.

B. As used in this section:

"Certified pollution control equipment and facilities" shall mean any property, including real or personal property, equipment, facilities, or devices, used primarily for the purpose of abating or preventing pollution of the atmosphere or waters of the Commonwealth and which the state certifying authority having jurisdiction with respect to such property has certified to the Department of Taxation as having been constructed, reconstructed, erected, or acquired in conformity with the state program or requirements for abatement or control of water or atmospheric pollution or contamination. Such property shall include, but is not limited to, any equipment used to grind, chip, or mulch trees, tree stumps, underbrush, and other vegetative cover for reuse as mulch, compost, **landfill gas, natural gas recovery from waste** or fuel, whether or not such property has been certified to the Department of Taxation by a state certifying authority.

"State certifying authority" shall mean the State Water Control Board, for water pollution; the State Air Pollution Control Board, for air pollution; the Department of

Mines, Minerals and Energy, for coal, oil, and gas production, including gas, natural gas, landfill gas and coalbed methane gas; and the Virginia Waste Management Board, for waste disposal facilities, and shall include any interstate agency authorized to act in place of a certifying authority of the Commonwealth.

(Code 1950, § 58-16.3; 1972, c. 694; 1984, c. 675; 1995, c. 229; 2003, c. 859.)

§ 2.2-2238. Economic development services.

A. It shall be the duty of the Authority to encourage, stimulate, and support the development and expansion of the economy of the Commonwealth. The Authority is charged with the following duties and responsibilities to:

1. See that there are prepared and carried out effective economic development marketing and promotional programs;
2. Make available, in conjunction and cooperation with localities, chambers of commerce, industrial authorities, and other public and private groups, to prospective new businesses basic information and pertinent factors of interest and concern to such businesses;
3. Formulate, promulgate, and advance programs throughout the Commonwealth for encouraging the location of new businesses in the Commonwealth and the retention and growth of existing businesses;
4. Encourage and solicit private sector involvement, support, and funding for economic development in the Commonwealth;
5. Encourage the coordination of the economic development efforts of public institutions, regions, communities, and private industry and collect and maintain data on the development and utilization of economic development capabilities;
6. Establish such offices within and without the Commonwealth that are necessary to the expansion and development of industries and trade;
7. Encourage the export of products and services from the Commonwealth to international markets;

8. Advise, upon request, the State Board for Community Colleges in designating technical training programs in Virginia's comprehensive community colleges for the Community College Incentive Scholarship Program pursuant to § 23-220.4; and

9. [Repealed.]

B. The Authority shall prepare a specific plan annually that shall serve as the basis for marketing high unemployment areas of Virginia. This plan shall be submitted to the Governor and General Assembly annually on or before November 1 of each year. The report shall contain the plan and activities conducted by the Authority to market these high unemployment areas. The annual report shall be part of the report required by § 2.2-2242.

C. The Authority, in cooperation with the Virginia Secretary of Commerce & Trade, Virginia Department of Business Assistance, Virginia Department of Agriculture and Consumer Services and the Virginia Tobacco Commission, prepare and execute a specific five-year plan to serve the most affected local governments by the elimination of the machinery and tools tax revenue stream through targeted economic development assistance that will aid the affected localities replace the revenue with tax base diversification and other revenue sources.

VIRGINIA ACTS OF ASSEMBLY -- 2006 SESSION

CHAPTER 375

An Act to amend and reenact § 58.1-3660 of the Code of Virginia, relating to the exemption of certified pollution control equipment and facilities from taxation; offsetting economic development assistance.

[S 417]

Approved March 30, 2006

Be it enacted by the General Assembly of Virginia:

1. That § 58.1-3660 of the Code of Virginia is amended and reenacted as follows:

§ 58.1-3660. Certified pollution control equipment and facilities.

A. Certified pollution control equipment and facilities, as defined herein, are hereby declared to be a separate class of property and shall constitute a classification for local taxation separate from other such classification of real or personal property and such property. The governing body of any county, city or town may, by ordinance, exempt or partially exempt such property from local taxation. *Certified pollution control equipment and facilities consisting of equipment used in collecting, processing, and distributing or generating electricity from landfill gas or synthetic or natural gas recovered from waste, including equipment used to grind, chip, or mulch trees, tree stumps, underbrush, and other vegetative cover for reuse as landfill gas or synthetic or natural gas recovered from waste, placed in service on or after July 1, 2006, shall be exempt from state and local taxation pursuant to subsection d of Section 6 of Article X of the Constitution of Virginia.*

B. As used in this section:

"Certified pollution control equipment and facilities" shall mean any property, including real or personal property, equipment, facilities, or devices, used primarily for the purpose of abating or preventing pollution of the atmosphere or waters of the Commonwealth and which the state certifying authority having jurisdiction with respect to such property has certified to the Department of Taxation as having been constructed, reconstructed, erected, or acquired in conformity with the state program or requirements for abatement or control of water or atmospheric pollution or contamination. Such property shall include, but is not limited to, any equipment used to grind, chip, or mulch trees, tree stumps, underbrush, and other vegetative cover for reuse as mulch, compost, *landfill gas, synthetic or natural gas recovered from waste, or other fuel, and equipment used in collecting, processing, and distributing or generating electricity from landfill gas or synthetic or natural gas recovered from waste*, whether or not such property has been certified to the Department of Taxation by a state certifying authority.

"State certifying authority" shall mean the State Water Control Board, for water pollution; the State Air Pollution Control Board, for air pollution; the Department of Mines, Minerals and Energy, for coal, oil, and gas production, including gas, natural gas, and coalbed methane gas; and the Virginia Waste Management Board, for waste disposal, *landfill gas, and synthetic or natural gas recovery from waste* facilities, and shall include any interstate agency authorized to act in place of a certifying authority of the Commonwealth.

2. That the Virginia Economic Development Partnership Authority, in cooperation with the Virginia Manufacturers Association, the Virginia Chamber of Commerce, the Virginia Poultry Federation, Printing Industries of Virginia, the Virginia Association of Counties, the Virginia Municipal League, the Commissioners of the Revenue Association of Virginia, the Secretary of Commerce and Trade, the Department of Business Assistance, and the Virginia Tobacco Indemnification and Community Revitalization Commission, shall prepare a specific five-year plan to assist localities in diversifying their economies that are dependent upon facilities used for manufacturing purposes. The plan shall be presented to the Virginia Joint Subcommittee Studying Manufacturing (The Manufacturing Development Commission), no later than November 1, 2006, and address the following topics:

- 1. The direct and indirect economic impact of manufacturing on the Commonwealth; and**
- 2. Economic development assistance that will aid cities, counties, and towns with tax base diversification and skill-enhancing employment and training opportunities.**

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SENATE BILL NO. 260

Offered January 11, 2006

Prefiled January 10, 2006

A *BILL to amend and reenact §§ 58.1-602, 58.1-609.3, 58.1-3503, 58.1-3507, and 58.1-3660 of the Code of Virginia, relating to the taxation of property utilized in manufacturing; sales and use tax exemptions and the classification and assessment of property.*

Patrons—Wagner and Williams; Delegates: Abbitt, Marshall, D.W., Nixon, Purkey and Saxman

Referred to Committee on Finance

Be it enacted by the General Assembly of Virginia:

1. That §§ 58.1-602, 58.1-609.3, 58.1-3503, 58.1-3507, and 58.1-3660 of the Code of Virginia are amended and reenacted as follows:

§ 58.1-602. Definitions.

As used in this chapter, unless the context clearly shows otherwise, the term or phrase:

"Advertising" means the planning, creating, or placing of advertising in newspapers, magazines, billboards, broadcasting and other media, including, without limitation, the providing of concept, writing, graphic design, mechanical art, photography and production supervision. Any person providing advertising as defined herein shall be deemed to be the user or consumer of all tangible personal property purchased for use in such advertising.

"Amplification, transmission and distribution equipment" means, but is not limited to, production, distribution, and other equipment used to provide Internet-access services, such as computer and communications equipment and software used for storing, processing and retrieving end-user subscribers' requests.

"Business" includes any activity engaged in by any person, or caused to be engaged in by him, with the object of gain, benefit or advantage, either directly or indirectly.

"Cost price" means the actual cost of an item or article of tangible personal property computed in the same manner as the sales price as defined in this section without any deductions therefrom on account of the cost of materials used, labor, or service costs, transportation charges, or any expenses whatsoever.

"Custom program" means a computer program which is specifically designed and developed only for one customer. The combining of two or more prewritten programs does not constitute a custom computer program. A prewritten program that is modified to any degree remains a prewritten program and does not become custom.

"Distribution" means the transfer or delivery of tangible personal property for use, consumption, or storage by the distributee, and the use, consumption, or storage of tangible personal property by a person who has processed, manufactured, refined, or converted such property, but does not include the transfer or delivery of tangible personal property for resale or any use, consumption, or storage otherwise exempt under this chapter.

"Gross proceeds" means the charges made or voluntary contributions received for the lease or rental of tangible personal property or for furnishing services, computed with the same deductions, where applicable, as for sales price as defined in this section over the term of the lease, rental, service, or use, but not less frequently than monthly.

"Gross sales" means the sum total of all retail sales of tangible personal property or services as defined in this chapter, without any deduction, except as provided in this chapter. "Gross sales" shall not include the federal retailers' excise tax or the federal diesel fuel excise tax imposed in § 4091 of the Internal Revenue Code if the excise tax is billed to the purchaser separately from the selling price of the article, or the Virginia retail sales or use tax, or any sales or use tax imposed by any county or city under § 58.1-605 or 58.1-606.

"Import" and "imported" are words applicable to tangible personal property imported into the Commonwealth from other states as well as from foreign countries, and "export" and "exported" are words applicable to tangible personal property exported from the Commonwealth to other states as well as to foreign countries.

"In this Commonwealth" or "in the Commonwealth" means within the limits of the Commonwealth of Virginia and includes all territory within these limits owned by or ceded to the United States of America.

"Integrated process" means all necessary or essential steps of an integrated processing, manufacturing, refining, recycling, or conversion process. A step in the integrated process is necessary or essential if there would be an adverse effect on product quality or production yields if the step were

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59 *not performed. The integrated process includes materials and supplies required to calibrate, test, or*
60 *otherwise prepare a piece of manufacturing equipment for its use in a given manufacturing, refining,*
61 *recycling, or conversion process. The integrated process also includes those items required to maintain*
62 *the controlled environment required to perform the processing step. When used in relation to mining, it*
63 *will refer to the activities specified above, and in addition, any reclamation activity of the land*
64 *previously mined by the mining company required by state or federal law.*

65 "Internet" means collectively, the myriad of computer and telecommunications facilities, which
66 comprise the interconnected world-wide network of computer networks.

67 "Internet service" means a service that enables users to access proprietary and other content,
68 information electronic mail, and the Internet as part of a package of services sold to end-user
69 subscribers.

70 "Lease or rental" means the leasing or renting of tangible personal property and the possession or use
71 thereof by the lessee or renter for a consideration, without transfer of the title to such property.

72 "*Machinery, tools and equipment*" includes all supports, bases, foundations, or other accessories
73 *required for the proper operation of the machinery, tools and equipment and its use in the integrated*
74 *process, without regard to its proximity to the manufacturing process, or the manner of attachment to*
75 *the equipment or whether the support, base, foundation, or other accessory is affixed or attached to*
76 *realty.*

77 "Manufacturing, processing, refining, recycling, or conversion" includes activities conducted at the
78 ~~production line of the plant site~~ starting with the unloading, handling, and or storage of raw materials at
79 ~~the plant site~~ and continuing through the last step of production where the product is finished or
80 completed for sale and conveyed to a warehouse, including conveyance and placement into final storage
81 at the ~~production plant site, and~~. The term also includes equipment and supplies used for ~~production line~~
82 ~~testing and~~ quality control or testing of product or industrial materials regardless of where the testing
83 actually takes place or whether the equipment automatically adjusts the machinery, tools and equipment
84 used in the integrated process, or comes into contact with the product. The term "manufacturing" shall
85 also include the necessary ancillary activities of newspaper and magazine printing when such activities
86 are performed by the publisher of any newspaper or magazine for sale daily or regularly at average
87 intervals not exceeding three months.

88 The determination whether any manufacturing, mining, processing, refining or conversion activity is
89 industrial in nature shall be made without regard to plant size, existence or size of finished product
90 inventory, degree of mechanization, amount of capital investment, number of employees or other factors
91 relating principally to the size of the business. Further, "industrial in nature" shall include, but not be
92 limited to, those businesses classified in codes 10 through 14 and 20 through 39 published in the
93 Standard Industrial Classification Manual for 1972 and any supplements issued thereafter.

94 "Modular building" means, but shall not be limited to, single and multifamily houses, apartment
95 units, commercial buildings, and permanent additions thereof, comprised of one or more sections that are
96 intended to become real property, primarily constructed at a location other than the permanent site, built
97 to comply with the Virginia Industrialized Building Safety Law (§ 36-70 et seq.) as regulated by the
98 Virginia Department of Housing and Community Development, and shipped with most permanent
99 components in place to the site of final assembly. For purposes of this chapter, a modular building shall
100 not include a mobile office as defined in § 58.1-2401 or any manufactured building subject to and
101 certified under the provisions of the National Manufactured Housing Construction and Safety Standards
102 Act of 1974 (42 U.S.C. § 5401 et seq.).

103 "Modular building manufacturer" means a person or corporation who owns or operates a
104 manufacturing facility and is engaged in the fabrication, construction and assembling of building
105 supplies and materials into modular buildings, as defined in this section, at a location other than at the
106 site where the modular building will be assembled on the permanent foundation and may or may not be
107 engaged in the process of affixing the modules to the foundation at the permanent site.

108 "Modular building retailer" means any person who purchases or acquires a modular building from a
109 modular building manufacturer, or from another person, for subsequent sale to a customer residing
110 within or outside of the Commonwealth, with or without installation of the modular building to the
111 foundation at the permanent site.

112 "Motor vehicle" means a "motor vehicle" as defined in § 58.1-2401, taxable under the provisions of
113 the Virginia Motor Vehicles Sales and Use Tax Act (§ 58.1-2400 et seq.) and upon the sale of which all
114 applicable motor vehicle sales and use taxes have been paid.

115 "Occasional sale" means a sale of tangible personal property not held or used by a seller in the
116 course of an activity for which he is required to hold a certificate of registration, including the sale or
117 exchange of all or substantially all the assets of any business and the reorganization or liquidation of
118 any business, provided such sale or exchange is not one of a series of sales and exchanges sufficient in
119 number, scope and character to constitute an activity requiring the holding of a certificate of registration.

120 "Open video system" means an open video system authorized pursuant to 47 U.S.C. § 573 and, for

121 purposes of this chapter only, shall also include Internet service regardless of whether the provider of
122 such service is also a telephone common carrier.

123 "Person" includes any individual, firm, copartnership, cooperative, nonprofit membership corporation,
124 joint venture, association, corporation, estate, trust, business trust, trustee in bankruptcy, receiver,
125 auctioneer, syndicate, assignee, club, society, or other group or combination acting as a unit, body
126 politic or political subdivision, whether public or private, or quasi-public, and the plural of such term
127 shall mean the same as the singular.

128 "Prewritten program" means a computer program that is prepared, held or existing for general or
129 repeated sale or lease, including a computer program developed for in-house use and subsequently sold
130 or leased to unrelated third parties.

131 "Retail sale" or a "sale at retail" means a sale to any person for any purpose other than for resale in
132 the form of tangible personal property or services taxable under this chapter, and shall include any such
133 transaction as the Tax Commissioner upon investigation finds to be in lieu of a sale. All sales for resale
134 must be made in strict compliance with regulations applicable to this chapter. Any dealer making a sale
135 for resale which is not in strict compliance with such regulations shall be personally liable for payment
136 of the tax.

137 The terms "retail sale" and a "sale at retail" shall specifically include the following: (i) the sale or
138 charges for any room or rooms, lodgings, or accommodations furnished to transients for less than 90
139 continuous days by any hotel, motel, inn, tourist camp, tourist cabin, camping grounds, club, or any
140 other place in which rooms, lodging, space, or accommodations are regularly furnished to transients for
141 a consideration; (ii) sales of tangible personal property to persons for resale when because of the
142 operation of the business, or its very nature, or the lack of a place of business in which to display a
143 certificate of registration, or the lack of a place of business in which to keep records, or the lack of
144 adequate records, or because such persons are minors or transients, or because such persons are engaged
145 in essentially service businesses, or for any other reason there is likelihood that the Commonwealth will
146 lose tax funds due to the difficulty of policing such business operations; and (iii) the separately stated
147 charge made for automotive refinish repair materials that are permanently applied to or affixed to a
148 motor vehicle during its repair. The Tax Commissioner is authorized to promulgate regulations requiring
149 vendors of or sellers to such persons to collect the tax imposed by this chapter on the cost price of such
150 tangible personal property to such persons and may refuse to issue certificates of registration to such
151 persons.

152 The term "transient" shall not include a purchaser of camping memberships, time-shares,
153 condominiums, or other similar contracts or interests that permit the use of, or constitute an interest in,
154 real estate, however created or sold and whether registered with the Commonwealth or not. Further, a
155 purchaser of a right or license which entitles the purchaser to use the amenities and facilities of a
156 specific real estate project on an ongoing basis throughout its term shall not be deemed a transient;
157 provided, however, that the term or time period involved is for seven years or more.

158 The terms "retail sale" and "sale at retail" shall not include a transfer of title to tangible personal
159 property after its use as tools, tooling, machinery or equipment, including dies, molds, and patterns, if (i)
160 at the time of purchase, the purchaser is obligated, under the terms of a written contract, to make the
161 transfer and (ii) the transfer is made for the same or a greater consideration to the person for whom the
162 purchaser manufactures goods.

163 "Retailer" means every person engaged in the business of making sales at retail, or for distribution,
164 use, consumption, or storage to be used or consumed in the Commonwealth.

165 "Sale" means any transfer of title or possession, or both, exchange, barter, lease or rental, conditional
166 or otherwise, in any manner or by any means whatsoever, of tangible personal property and any
167 rendition of a taxable service for a consideration, and includes the fabrication of tangible personal
168 property for consumers who furnish, either directly or indirectly, the materials used in fabrication, and
169 the furnishing, preparing, or serving for a consideration of any tangible personal property consumed on
170 the premises of the person furnishing, preparing, or serving such tangible personal property. A
171 transaction whereby the possession of property is transferred but the seller retains title as security for the
172 payment of the price shall be deemed a sale.

173 "Sales price" means the total amount for which tangible personal property or services are sold,
174 including any services that are a part of the sale, valued in money, whether paid in money or otherwise,
175 and includes any amount for which credit is given to the purchaser, consumer, or lessee by the dealer,
176 without any deduction therefrom on account of the cost of the property sold, the cost of materials used,
177 labor or service costs, losses or any other expenses whatsoever. "Sales price" shall not include (i) any
178 cash discount allowed and taken (ii) finance charges, carrying charges, service charges or interest from
179 credit extended on sales of tangible personal property under conditional sale contracts or other
180 conditional contracts providing for deferred payments of the purchase price, or (iii) separately stated
181 local property taxes collected. Where used articles are taken in trade, or in a series of trades as a credit

182 or part payment on the sale of new or used articles, the tax levied by this chapter shall be paid on the
183 net difference between the sales price of the new or used articles and the credit for the used articles.

184 "Storage" means any keeping or retention of tangible personal property for use, consumption or
185 distribution in the Commonwealth, or for any purpose other than sale at retail in the regular course of
186 business.

187 "Tangible personal property" means personal property which may be seen, weighed, measured, felt,
188 or touched, or is in any other manner perceptible to the senses. The term "tangible personal property"
189 shall not include stocks, bonds, notes, insurance or other obligations or securities. The term "tangible
190 personal property" shall include (i) telephone calling cards upon their initial sale, which shall be exempt
191 from all other state and local utility taxes, and (ii) manufactured signs.

192 "Use" means the exercise of any right or power over tangible personal property incident to the
193 ownership thereof, except that it does not include the sale at retail of that property in the regular course
194 of business. The term does not include the exercise of any right or power, including use, distribution, or
195 storage, over any tangible personal property sold to a nonresident donor for delivery outside of the
196 Commonwealth to a nonresident recipient pursuant to an order placed by the donor from outside the
197 Commonwealth via mail or telephone. The term does not include any sale determined to be a gift
198 transaction, subject to tax under § 58.1-604.6.

199 "Use tax" refers to the tax imposed upon the use, consumption, distribution, and storage as herein
200 defined.

201 ~~"Used directly," when used in relation to manufacturing, processing, refining, or conversion, refers to~~
202 ~~those activities which are an integral part of the production of a product, including all steps of an~~
203 ~~integrated manufacturing or mining process, but not including ancillary activities such as general~~
204 ~~maintenance or administration. When used in relation to mining, it shall refer to the activities specified~~
205 ~~above, and in addition, any reclamation activity of the land previously mined by the mining company~~
206 ~~required by state or federal law.~~

207 "Video programmer" means a person or entity who provides video programming to end-user
208 subscribers.

209 "Video programming" means video and/or information programming provided by or generally
210 considered comparable to programming provided by a cable operator including, but not limited to,
211 Internet service.

212 § 58.1-609.3. Commercial and industrial exemptions.

213 The tax imposed by this chapter or pursuant to the authority granted in §§ 58.1-605 and 58.1-606
214 shall not apply to the following:

215 1. Personal property purchased by a contractor which is used solely in another state or in a foreign
216 country, which could be purchased by such contractor for such use free from sales tax in such other
217 state or foreign country, and which is stored temporarily in Virginia pending shipment to such state or
218 country.

219 2. (i) Industrial materials for future processing, manufacturing, refining, *recycling*, or conversion into
220 articles of tangible personal property for resale where such industrial materials either enter into the
221 production of or become a component part of the finished product; (ii) industrial materials that are
222 coated upon or impregnated into the product at any stage of its being processed, manufactured, refined,
223 *recycled*, or converted for resale; (iii) machinery ~~or~~ *tools and equipment*, or repair parts therefor or
224 replacements thereof, fuel, power, energy, or supplies, used ~~directly~~ *in the integrated process of*
225 processing, manufacturing, refining, *recycling*, mining or converting products for sale or resale; (iv)
226 materials, containers, labels, sacks, cans, boxes, drums or bags for future use for packaging tangible
227 personal property for shipment or sale; or (v) equipment, printing or supplies used directly to produce a
228 publication described in subdivision 3 of § 58.1-609.6 whether it is ultimately sold at retail or for resale
229 or distribution at no cost. Machinery, tools and equipment, or repair parts therefor or replacements
230 thereof, shall be exempt if the preponderance of their use is ~~directly~~ *in the integrated process of*
231 processing, manufacturing, refining, *recycling*, mining or converting products for sale or resale. The
232 provisions of this subsection do not apply to the drilling, extraction, refining, or processing of oil, gas,
233 natural gas and coalbed methane gas. In addition, the exemption provided herein shall not be applicable
234 to any machinery, tools, and equipment, or any other tangible personal property used by a public service
235 corporation in the generation of electric power, except for raw materials that are inputs to production of
236 electricity, including fuel.

237 3. Tangible personal property sold or leased to a public service corporation engaged in business as a
238 common carrier of property or passengers by railway, for use or consumption by such common carrier
239 directly in the rendition of its public service.

240 4. Ships or vessels, or repairs and alterations thereof, used or to be used exclusively or principally in
241 interstate or foreign commerce; fuel and supplies for use or consumption aboard ships or vessels plying
242 the high seas, either in intercoastal trade between ports in the Commonwealth and ports in other states
243 of the United States or its territories or possessions, or in foreign commerce between ports in the

244 Commonwealth and ports in foreign countries, when delivered directly to such ships or vessels; or
 245 tangible personal property used directly in the building, conversion or repair of the ships or vessels
 246 covered by this subdivision. This exemption shall include dredges, their supporting equipment, attendant
 247 vessels, and fuel and supplies for use or consumption aboard such vessels, provided the dredges are used
 248 exclusively or principally in interstate or foreign commerce.

249 5. Tangible personal property purchased for use or consumption directly and exclusively in basic
 250 research or research and development in the experimental or laboratory sense.

251 6. Tangible personal property sold or leased to an airline operating in intrastate, interstate or foreign
 252 commerce as a common carrier providing scheduled air service on a continuing basis to one or more
 253 Virginia airports at least one day per week, for use or consumption by such airline directly in the
 254 rendition of its common carrier service.

255 7. Meals furnished by restaurants or food service operators to employees as a part of wages.

256 8. Tangible personal property including machinery and tools, repair parts or replacements thereof,
 257 and supplies and materials used directly in maintaining and preparing textile products for rental or
 258 leasing by an industrial processor engaged in the commercial leasing or renting of laundered textile
 259 products.

260 9. (i) Certified pollution control equipment and facilities as defined in § 58.1-3660, except for any
 261 equipment that has not been certified to the Department of Taxation by a state certifying authority
 262 pursuant to such section and (ii) effective retroactive to July 1, 1994, and ending July 1, 2006, certified
 263 pollution control equipment and facilities as defined in § 58.1-3660 and which, in accordance with such
 264 section, have been certified by the Department of Mines, Minerals and Energy for coal, oil and gas
 265 production, including gas, natural gas, and coalbed methane gas.

266 10. Parts, tires, meters and dispatch radios sold or leased to taxicab operators for use or consumption
 267 directly in the rendition of their services.

268 11. High speed electrostatic duplicators or any other duplicators which have a printing capacity of
 269 4,000 impressions or more per hour purchased or leased by persons engaged primarily in the printing or
 270 photocopying of products for sale or resale.

271 12. From July 1, 1994, and ending July 1, 2006, raw materials, fuel, power, energy, supplies,
 272 machinery or tools or repair parts therefor or replacements thereof, used directly in the drilling,
 273 extraction, refining, or processing of natural gas or oil and the reclamation of the well area. For the
 274 purposes of this section, the term "natural gas" shall mean "gas," "natural gas," and "coalbed methane
 275 gas" as defined in § 45.1-361.1. For the purposes of this section, "drilling," "extraction," "refining," and
 276 "processing" shall include production, inspection, testing, dewatering, dehydration, or distillation of raw
 277 natural gas into a usable condition consistent with commercial practices, and the gathering and
 278 transportation of raw natural gas to a facility wherein the gas is converted into such a usable condition.
 279 Machinery, tools and equipment, or repair parts therefor or replacements thereof, shall be exempt if the
 280 preponderance of their use is directly in the drilling, extraction, refining, or processing of natural gas or
 281 oil for sale or resale, or in well area reclamation activities required by state or federal law.

282 13. Beginning July 1, 1997, and ending July 1, 2011, (i) the sale, lease, use, storage, consumption, or
 283 distribution of an orbital or suborbital space facility, space propulsion system, space vehicle, satellite, or
 284 space station of any kind possessing space flight capability, including the components thereof,
 285 irrespective of whether such facility, system, vehicle, satellite, or station is returned to this
 286 Commonwealth for subsequent use, storage or consumption in any manner when used to conduct
 287 spaceport activities; (ii) the sale, lease, use, storage, consumption or distribution of tangible personal
 288 property placed on or used aboard any orbital or suborbital space facility, space propulsion system,
 289 space vehicle, satellite or space station of any kind, irrespective of whether such tangible personal
 290 property is returned to this Commonwealth for subsequent use, storage or consumption in any manner
 291 when used to conduct spaceport activities; (iii) fuels of such quality not adapted for use in ordinary
 292 vehicles, being produced for, sold and exclusively used for space flight when used to conduct spaceport
 293 activities; (iv) the sale, lease, use, storage, consumption or distribution of machinery and equipment
 294 purchased, sold, leased, rented or used exclusively for spaceport activities and the sale of goods and
 295 services provided to operate and maintain launch facilities, launch equipment, payload processing
 296 facilities and payload processing equipment used to conduct spaceport activities.

297 For purposes of this subdivision, "spaceport activities" means activities directed or sponsored at a
 298 facility owned, leased, or operated by or on behalf of the Virginia Commercial Space Flight Authority.

299 The exemptions provided by this subdivision shall not be denied by reason of a failure,
 300 postponement or cancellation of a launch of any orbital or suborbital space facility, space propulsion
 301 system, space vehicle, satellite or space station of any kind or the destruction of any launch vehicle or
 302 any components thereof.

303 § 58.1-3503. General classification of tangible personal property.

304 A. Tangible personal property is classified for valuation purposes according to the following separate

305 categories which are not to be considered separate classes for rate purposes:

306 1. Farm animals, except as exempted under § 58.1-3505.

307 2. Farm machinery, except as exempted under § 58.1-3505.

308 3. Automobiles, except those described in subdivisions 7, 8 and 9 of this subsection and in
309 subdivision A 8 of § 58.1-3504, which shall be valued by means of a recognized pricing guide or if the
310 model and year of the individual automobile are not listed in the recognized pricing guide, the
311 individual vehicle may be valued on the basis of percentage or percentages of original cost. In using a
312 recognized pricing guide, the commissioner shall use either of the following two methods. The
313 commissioner may use all applicable adjustments in such guide to determine the value of each
314 individual automobile, or alternatively, if the commissioner does not utilize all applicable adjustments in
315 valuing each automobile, he shall use the base value specified in such guide which may be either
316 average retail, wholesale, or loan value, so long as uniformly applied within classifications of property.
317 If the model and year of the individual automobile are not listed in the recognized pricing guide, the
318 taxpayer may present to the commissioner proof of the original cost, and the basis of the tax for
319 purposes of the motor vehicle sales and use tax as described in § 58.1-2405 shall constitute proof of
320 original cost. If such percentage or percentages of original cost do not accurately reflect fair market
321 value, or if the taxpayer does not supply proof of original cost, then the commissioner may select
322 another method which establishes fair market value.

323 4. Trucks of less than two tons, which may be valued by means of a recognized pricing guide or, if
324 the model and year of the individual truck are not listed in the recognized pricing guide, on the basis of
325 a percentage or percentages of original cost.

326 5. Trucks and other vehicles, as defined in § 46.2-100, except those described in subdivisions 4, and
327 6 through 10 of this subsection, which shall be valued by means of either a recognized pricing guide
328 using the lowest value specified in such guide or a percentage or percentages of original cost.

329 6. Manufactured homes, as defined in § 36-85.3, which may be valued on the basis of square footage
330 of living space.

331 7. Antique motor vehicles, as defined in § 46.2-100, which may be used for general transportation
332 purposes as provided in subsection C of § 46.2-730.

333 8. Taxicabs.

334 9. Motor vehicles with specially designed equipment for use by the handicapped, which shall not be
335 valued in relation to their initial cost, but by determining their actual market value if offered for sale on
336 the open market.

337 10. Motorcycles, campers and other recreational vehicles, which shall be valued by means of a
338 recognized pricing guide or a percentage or percentages of original cost.

339 11. Boats weighing under five tons and boat trailers, which shall be valued by means of a recognized
340 pricing guide or a percentage or percentages of original cost.

341 12. Boats or watercraft weighing five tons or more, which shall be valued by means of a percentage
342 or percentages of original cost.

343 13. Aircraft, which shall be valued by means of a recognized pricing guide or a percentage or
344 percentages of original cost.

345 14. Household goods and personal effects, except as exempted under § 58.1-3504.

346 15. Tangible personal property used in a research and development business, which shall be valued
347 by means of a percentage or percentages of original cost.

348 16. Programmable computer equipment and peripherals used in business which shall be valued by
349 means of a percentage or percentages of original cost to the taxpayer, or by such other method as may
350 reasonably be expected to determine the actual fair market value.

351 17. All tangible personal property employed in a trade or business other than that described in
352 subdivisions 1 through 16 of this subsection, which shall be valued by means of a percentage or
353 percentages of original cost, *or by such other method as may reasonably be expected to determine the*
354 *actual fair market value, to include an independent appraisal or the average of three written offers for*
355 *the purchase of the property subject to taxation.*

356 18. All other tangible personal property.

357 B. Methods of valuing property may differ among the separate categories, so long as each method
358 used is uniform within each category, is consistent with requirements of this section and may reasonably
359 be expected to determine actual fair market value as determined by the commissioner of revenue or
360 other assessing official; however, assessment ratios shall only be used with the concurrence of the local
361 governing body. A commissioner of revenue shall upon request take into account the condition of the
362 property. The term "condition of the property" includes, but is not limited to, technological obsolescence
363 of property where technological obsolescence is an appropriate factor for valuing such property. The
364 commissioner of revenue shall make available to taxpayers on request a reasonable description of his
365 valuation methods. Such commissioner, or other assessing officer, or his authorized agent, when using a
366 recognized pricing guide as provided for in this section, may automatically extend the assessment if the

367 pricing information is stored in a computer. *If petitioned in writing, the commissioner of revenue shall*
368 *consider, in his determination of fair market value, an independent appraisal or the average of three*
369 *written offers for the purchase of the property subject to taxation.*

370 § 58.1-3507. Certain machinery and tools segregated for local taxation only; notice prior to change in
371 valuation, hearing.

372 A. Machinery and tools, except machinery and equipment used by farm wineries as defined in
373 § 4.1-100, used in a manufacturing, mining, *recycling*, water well drilling, processing or reprocessing,
374 radio or television broadcasting, dairy, dry cleaning or laundry business shall be listed and are hereby
375 segregated as a class of tangible personal property separate from all other classes of property and shall
376 be subject to local taxation only. The rate of tax imposed by a county, city or town on such machinery
377 and tools shall not exceed the rate imposed upon the general class of tangible personal property.

378 B. Machinery and tools segregated for local taxation pursuant to subsection A, other than energy
379 conservation equipment of manufacturers, shall be valued by means of depreciated cost or a percentage
380 or percentages of original total capitalized cost excluding capitalized interest.

381 Whenever the commissioner of the revenue proposes to change the means of valuing machinery and
382 tools, such proposed change shall be published in a newspaper having general circulation in the affected
383 locality at least 30 days before the proposed change would take effect and the citizens of the locality
384 shall be allowed to submit written comments, during the 30-day period, to the commissioner of the
385 revenue regarding the proposed change.

386 C. All motor vehicles which are registered pursuant to § 46.2-600 with the Department of Motor
387 Vehicles and owned by persons engaged in those businesses set forth in subsection A shall be taxed as
388 tangible personal property by the county, city or town in accordance with the provisions of this chapter.
389 All other motor vehicles and delivery equipment owned by persons engaged in those businesses set forth
390 in subsection A shall be included in and taxed as machinery and tools.

391 D. *Methods of valuing property may differ among the separate categories, so long as each method*
392 *used is uniform within each category, is consistent with requirements of this section and may reasonably*
393 *be expected to determine actual fair market value as determined by the commissioner of revenue or*
394 *other assessing official; however, assessment ratios shall only be used with the concurrence of the local*
395 *governing body. A commissioner of revenue shall upon request take into account the condition of the*
396 *property. The term "condition of the property" includes, but is not limited to, technological obsolescence*
397 *of property where technological obsolescence is an appropriate factor for valuing such property. The*
398 *term "technological obsolescence" shall include all equipment that has been idle, operating less than 1%*
399 *of the available production time for the location, for more than one year. The commissioner of revenue*
400 *shall make available to taxpayers upon request a reasonable description of his valuation methods. Such*
401 *commissioner, or other assessing officer, or his authorized agent, when using a recognized pricing*
402 *guide, may automatically extend the assessment if the pricing information is stored in a computer.*
403 *Absent a recognized pricing guide, if petitioned in writing, the commissioner of revenue shall consider*
404 *in his determination of fair market value an independent appraisal or the average of three written offers*
405 *for the purchase of the property subject to taxation.*

406 § 58.1-3660. Certified pollution control equipment and facilities.

407 A. Certified pollution control equipment and facilities, as defined herein, are hereby declared to be a
408 separate class of property and shall constitute a classification for local taxation separate from other such
409 classification of real or personal property and such property. The governing body of any county, city or
410 town may, by ordinance, exempt or partially exempt such property from local taxation.

411 *Effective July 1, 2006, new investments in certified pollution control equipment and facilities used for*
412 *manufacturing, mining, processing or reprocessing, or in a dairy shall be exempt from state and local*
413 *taxation and shall remain a separate class of exempt property. Between July 1, 2006, and June 30,*
414 *2010, each local government shall reduce its existing assessments on this class of property for*
415 *manufacturing, mining, processing or reprocessing and dairy by one-fifth. The Commonwealth shall*
416 *reimburse each local government from the General Fund an equivalent sum during this transition period*
417 *to end on June 30, 2010.*

418 B. As used in this section:

419 "Certified pollution control equipment and facilities" shall mean any property, including real or
420 personal property, equipment, facilities, or devices, used primarily for the purpose of abating or
421 preventing pollution of the atmosphere or waters of the Commonwealth and which the state certifying
422 authority having jurisdiction with respect to such property has certified to the Department of Taxation as
423 having been constructed, reconstructed, erected, or acquired in conformity with the state program or
424 requirements for abatement or control of water or atmospheric pollution or contamination. Such property
425 shall include, but is not limited to, any equipment used to grind, chip, or mulch trees, tree stumps,
426 underbrush, and other vegetative cover for reuse as mulch, compost, *landfill gas, natural gas recovery*
427 *from waste*, or fuel, whether or not such property has been certified to the Department of Taxation by a

428 state certifying authority.

429 "State certifying authority" shall mean the State Water Control Board, for water pollution; the State
430 Air Pollution Control Board, for air pollution; the Department of Mines, Minerals and Energy, for coal,
431 oil, and gas production, including gas, natural gas, *landfill gas*, and coalbed methane gas; and the
432 Virginia Waste Management Board, for waste disposal facilities, and shall include any interstate agency
433 authorized to act in place of a certifying authority of the Commonwealth.

434 **2. That the provisions of subsection D of § 58.1-3507 of the Code of Virginia, as amended and**
435 **reenacted by this act, are declaratory of existing law.**

2006 RECONVENED SESSION

REENROLLED

REENROLLED

SB261ER2

1 VIRGINIA ACTS OF ASSEMBLY — CHAPTER

2 *An Act to amend the Code of Virginia by adding in Title 30 a chapter numbered 40, consisting of*
 3 *sections numbered 30-266, 30-267, and 30-268, relating to the Manufacturing Development*
 4 *Commission. Report.*

5 [S 261]

6 Approved

7
 8 **Be it enacted by the General Assembly of Virginia:**

9 **1. That the Code of Virginia is amended by adding in Title 30 a chapter numbered 40, consisting**
 10 **of sections numbered 30-266, 30-267, and 30-268 as follows:**

11 **CHAPTER 40.**

12 **MANUFACTURING DEVELOPMENT COMMISSION.**

13 *§ 30-266. Manufacturing Development Commission; purpose; membership; terms; compensation and*
 14 *expenses; staff; voting on recommendations.*

15 *A. The Manufacturing Development Commission (the Commission) is established in the legislative*
 16 *branch of state government. The purpose of the Commission shall be to assess manufacturing needs and*
 17 *formulate legislative and regulatory remedies to ensure the future of the manufacturing sector in*
 18 *Virginia.*

19 *B. The Commission shall have a total membership of 13 that shall consist of eight legislative*
 20 *members, four nonlegislative citizen members, and one ex officio member. Members shall be appointed*
 21 *as follows: three members of the Senate, to be appointed by the Senate Committee on Rules; five*
 22 *members of the House of Delegates, to be appointed by the Speaker of the House of Delegates in*
 23 *accordance with the principles of proportional representation contained in the Rules of the House of*
 24 *Delegates; and four nonlegislative citizen members of whom one shall be a representative of a public*
 25 *institution of higher education, one shall be a representative of an entity or organization active in*
 26 *economic development efforts in the Commonwealth, one shall be a representative of a Virginia*
 27 *manufacturer, and one shall be the president of the Virginia Manufacturers Association, to be appointed*
 28 *by the Governor. The Secretary of Commerce and Trade or his designee shall serve ex officio with*
 29 *voting privileges. Nonlegislative citizen members shall be citizens of the Commonwealth.*

30 *Nonlegislative citizen members shall be appointed for terms of four years. Legislative members, the*
 31 *president of the Virginia Manufacturers Association, and ex officio members shall serve terms coincident*
 32 *with their terms of office. All members may be reappointed for successive terms. Appointments to fill*
 33 *vacancies, other than by expiration of a term, shall be for the unexpired terms. Vacancies shall be filled*
 34 *in the same manner as the original appointments.*

35 *C. The members of the Commission shall elect a chairman and a vice-chairman annually, who shall*
 36 *be members of the General Assembly. A majority of the members of the Commission shall constitute a*
 37 *quorum. The Commission shall meet at the call of the chairman or whenever a majority of the members*
 38 *so request.*

39 *D. Legislative members of the Commission shall receive such compensation as is set forth in*
 40 *§ 30-19.12. Nonlegislative citizen members shall serve without compensation. All members shall be*
 41 *reimbursed for all reasonable and necessary expenses incurred in the performance of their duties as*
 42 *provided in §§ 2.2-2813 and 2.2-2825. Funding for compensation and reimbursement of expenses of the*
 43 *members shall be provided from existing appropriations to the Commission. Costs of this Commission*
 44 *shall not exceed \$12,000 per year.*

45 *E. Administrative staff support shall be provided by the Office of the Clerk of the Senate or the*
 46 *Office of the Clerk of the House of Delegates as may be appropriate for the house in which the*
 47 *chairman of the Commission serves. The Division of Legislative Services shall provide legal, research,*
 48 *policy analysis, and other services as requested by the Commission. Technical assistance shall be*
 49 *provided by the Department of Mines, Minerals and Energy. All agencies of the Commonwealth shall*
 50 *assist the Commission, upon request.*

51 *F. No recommendation of the Commission shall be adopted if a majority of the Senate members or a*
 52 *majority of the House members appointed to the Commission (i) votes against the recommendation and*
 53 *(ii) votes for the recommendation to fail notwithstanding the majority vote of the Commission.*

54 *§ 30-267. Powers and duties of the Commission.*

55 *The Commission shall have the power and duty to:*

- 56 1. *Assess the direct and indirect economic impact of the manufacturing sector on Virginia's economy.*
 57 2. *Determine the needs of the manufacturing sector and the most efficient, and cost-effective manner*

58 *in which such needs may be addressed.*

59 *3. Consider the effect of local and state tax policies; regulatory compliance costs; research and*
60 *development investment, energy, transportation, and workforce training policies and costs on the*
61 *manufacturing sector; and recommend the appropriate role for state and local governments in ensuring*
62 *the future of the manufacturing sector in the Commonwealth.*

63 *4. Develop a comprehensive energy plan for the Commonwealth, which evaluates the*
64 *Commonwealth's current and future energy supply and demand. In developing the plan, the Commission*
65 *shall solicit and analyze suggestions and information from the following sectors: utility providers,*
66 *petroleum companies, automobile manufacturers, fuel suppliers, technology companies, environmental*
67 *organizations, and consumers.*

68 *5. Evaluate the effectiveness of state and local economic development programs and incentives on the*
69 *research and development of technology-intensive manufacturing.*

70 *6. Consult and coordinate with the Joint Commission on Technology and Science, the Joint*
71 *Legislative Audit and Review Commission, the Joint Commission on Administrative Rules, and other*
72 *legislative commissions, committees, and councils to minimize fragmentation and duplication relative to*
73 *the respective powers and duties of such groups.*

74 *7. Provide manufacturers and advocates with a forum to address their concerns.*

75 *8. Report annually its findings and recommendations to the General Assembly and the Governor as*
76 *provided in the procedures of the Division of Legislative Automated Systems. The chairman of the*
77 *Commission shall submit to the General Assembly and the Governor an annual executive summary of*
78 *the interim activity and work of the Commission no later than the first day of each regular session of*
79 *the General Assembly. The executive summary shall be submitted as provided in the procedures of the*
80 *Division of Legislative Automated Systems for the processing of legislative documents and reports and*
81 *shall be posted on the General Assembly's website.*

82 *§ 30-268. Sunset.*

83 *This chapter shall expire on July 1, 2009.*

84 **2. For its first year of existence, if the Commission is not funded by a separate appropriation in**
85 **the Appropriation Act, the Commission may be funded from the operating budgets of the Clerk of**
86 **the House of Delegates and the Clerk of the Senate upon the approval of the Joint Rules**
87 **Committee. If the Commission is not funded by a separate appropriation in the Appropriation Act**
88 **for any year thereafter, this chapter shall expire on July 1 of the fiscal year that the Commission**
89 **fails to receive such funding.**

062613832

SENATE BILL NO. 487

Offered January 11, 2006

Prefiled January 11, 2006

A BILL to amend the Code of Virginia by adding a section numbered 2.2-302.1, relating to duties of Virginia Liaison Office; support for enactment of association health plan legislation.

Patron—Wagner

Referred to Committee on General Laws and Technology

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding a section numbered 2.2-302.1 as follows:

§ 2.2-302.1. Support for enactment of association health plan legislation.

A. In addition to its responsibilities enumerated in § 2.2-302, the Office shall work with the members of the State Congressional Delegation and federal executive branch agencies to develop, support, and enact federal legislation, in the same or similar form as the Small Business Health Fairness Act of 2005, that provides for the establishment and governance of group health plans sponsored by trade, industry, professional, chamber of commerce, or similar business associations, which are referred to as association health plans, and provides that such association health plans that meet certain certification requirements under the federal Employment Retirement Income Security Act of 1974, as amended, are preempted, with certain exceptions, from state regulation of health insurers.

B. The Office shall submit an annual report to the Governor and the chairs of Senate Committee on Commerce and Labor and the House Committee on Commerce and Labor, no later than January 1 of each year, that summarizes the status of such federal legislation and activities by the Office in furtherance of this section.

INTRODUCED

SB487

SENATE BILL NO. _____ HOUSE BILL NO. _____

1 A BILL to amend and reenact § 58.1-408 of the Code of Virginia, relating to the apportionment of
2 taxable income of corporations.

3 **Be it enacted by the General Assembly of Virginia:**

4 **1. That § 58.1-408 of the Code of Virginia is amended and reenacted as follows:**

5 § 58.1-408. What income apportioned and how.

6 The Virginia taxable income of any corporation, except those subject to the provisions of §§
7 58.1-417, 58.1-418, 58.1-419, or § 58.1-420, excluding income allocable under § 58.1-407, shall be
8 apportioned to the Commonwealth by multiplying such income by a fraction, ~~the numerator of which is~~
9 ~~the property factor plus the payroll factor, plus twice the sales factor, and the denominator of which is~~
10 ~~four; however, where the sales factor does not exist, such income shall be multiplied by a fraction, the~~
11 ~~numerator of which is the property factor plus the payroll factor and the denominator of the fraction~~
12 ~~shall be the number of existing factors and where the sales factor exists but the payroll factor or the~~
13 ~~property factor does not exist, the denominator of the fraction shall be the number of existing factors~~
14 ~~plus one which is two, reduced by the number of factors, if any, having no denominator.~~

15 **2. That the provisions of this act shall be effective for taxable years beginning on and after**
16 **January 1, 2007.**

17 #

