

**REPORT OF THE VIRGINIA ECONOMIC
DEVELOPMENT PARTNERSHIP**

**Hampton Roads Maritime
Industry Out-of-State Talent
Attraction Strategies (2022
Appropriation Act, Item
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Hampton Roads Maritime Industry Out-of-State Talent Attraction Strategies

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Executive Summary

The General Assembly of the Commonwealth of Virginia directed the Virginia Economic Development Partnership Authority (VEDP) to evaluate strategies to attract skilled out-of-state talent to fill maritime jobs in Hampton Roads in support of shipbuilding, ship repair, and offshore wind industries.¹

From August through October 2022, VEDP, in partnership with a consultant, conducted research for this charge, which included reviewing literature on domestic migration drivers and trends; identifying and evaluating 44 domestic and international talent attraction incentive programs; conducting an in-depth analysis of 14 of the most relevant programs in North America; and holding 18 interviews with key stakeholders in the Hampton Roads area, including regional and industry associations, workforce development organizations, maritime and offshore wind employers, and skilled trades workers.

Overall, while a targeted domestic worker migration program might have some value for Hampton Roads, evidence from other states and regions shows that these programs result in the recruitment of small numbers of workers and that there may be challenges recruiting skilled trades workers. Given the need for workers in Hampton Roads, no single initiative can fully address the skilled trades talent gap. Therefore, solving this talent gap will require a combination of initiatives targeting recruiting practices, training, wages, benefits, career paths, wraparound services, worker retention, and potential incentives for out-of-state talent attraction.

Several trends driving the current and projected skilled worker talent gap in Hampton Roads emerged from the research:

- Emergence of the offshore wind industry over the coming years due to the Coastal Virginia Offshore Wind Project
- Increasing competitiveness in wages from other sectors and industries, especially retail, hospitality, and trucking
- Decreasing competitiveness of wages, locked-in labor rates for military contracts, and reduced flexibility for hiring policy and practice at larger maritime employers, including citizenship and drug testing requirements
- Decreasing numbers of high school and community college graduates entering the skilled trades
- High attrition in skilled trades jobs like welders, electricians, and machinists
- Declining number of transitioning military personnel in the region

The region is currently making strides to help fill these gaps; one example is the U.S. Economic Development Administration's (EDA) \$11 million award in 2022 to the Hampton Roads Workforce Council to build a regional talent pipeline focused on the blue economy, clean energy, and related cybersecurity.²

The literature makes it clear that domestic migration and promotion of domestic migration to attract workers is both complicated and challenging. Some themes from our literature review are noted below:

- Research shows that education level impacts migration likelihood; workers without a college education are less likely to relocate.³

- There is nationwide demand for skilled workers. Scholars have identified this as a shortage driven by retirements of working populations and the movement toward degree attainment in recent decades rather than career and technical pathways.⁴
- Competition for workers is strong. Employers across the country are increasing wages for both skilled and unskilled work in areas like retail and hospitality, which may make it even harder to incentivize migration for skilled labor.
- Housing, familial connections, and other factors play a key role in decisions about domestic migration.⁵

In addition to these challenges, our volume of knowledge about the success of current domestic migration initiatives is scant. The reviewed incentive programs had limited data available to indicate the number of workers they had attracted, the length of those workers' tenure in both the jobs they were recruited for, and the state to which they moved. Those that had data showed success recruiting small numbers of on-site workers (typically around 50 and no more than 100). Thus, although it appears that promoting domestic migration could be a valuable solution for a small set of workers, it is unlikely to make a meaningful dent in the more significant problem underlying this study: the dwindling skilled trades workforce in the shipbuilding, ship repair, and offshore wind industries.

However, if policy makers are interested in moving forward with an out-of-state talent attraction incentive program, the literature review and case studies contained in this brief highlight program-design insights to consider.

- Strong financial incentives improve the cost-benefit analysis around domestic migration, making them a valuable tool to drive relocation.⁶ However, domestic migration also involves high nonmonetary costs. It is therefore critical to couple financial incentives with support and services that improve information access and reduce friction and costs of relocation.
- Most initiatives were accompanied by extensive marketing campaigns to drive publicity and favorably showcase the city or region, highlighting lower costs and benefits of relocation.
- Family ties and social networks are key drivers of domestic migration;⁷ benchmarked programs were most successful in relocating workers who already had ties to the region.
- Incentive programs are most effective when regionally developed, structured in a way that drives employer engagement, and administered with incentives spread over time to support retention.

Out-of-state talent attraction incentives could effectively address a small portion of the skilled trades – worker talent gap for the maritime and offshore wind industries in Hampton Roads. The case studies provide relevant lessons and considerations for Hampton Roads. If the region develops a program, designers must consider the type of skilled worker in demand, the dynamics of the regional employers, and the current economic landscape.

Notes

¹Virginia General Assembly, *Budget Amendments - HB30 (Conference Report): Item 125 #9C*. Virginia Legislative Information System, 2022 <https://budget.lis.virginia.gov/item/2022/2/HB30/Chapter/1/125/>.

²U.S. Economic Development Administration (EDA) Public Affairs Department, *Press Release: U.S. Department of Commerce Invests \$11 Million to Boost Blue Economy and Clean Energy Workforce Training Program in Hampton Roads Region through American Rescue Plan Good Jobs Challenge*, U.S. Economic Development Administration, August 3, 2022 <https://eda.gov/news/press-releases/2022/08/03/Hampton-Roads-Workforce-Council.htm>; HRWC, 2022).

³John Bound and Harry J. Holzer, "Demand Shifts, Population Adjustments, and Labor Market Outcomes During the 1980s," *Journal of Labor Economics* 18, no. 1 (January 2000): 20–54, <https://doi.org/10.1086/209949>; Raven Molloy and Christopher Smith, "U.S. Internal Migration: Recent Patterns and Outstanding Puzzles" (paper presentation, Federal Reserve Bank of Boston conference, Boston, MA, October 4–5, 2019); Ofer Malamud and Abigail Wozniak, "The Impact of College on Migration: Evidence from the Vietnam Generation," *Journal of Human Resources* 47, no. 4 (2021): 913–50, <https://doi.org/10.1353/jhr.2012.0031>; Ning Jia, Raven Molloy, Christopher Smith, and Abigail Wozniak, *The Economics of Internal Migration: Advances and Policy Questions: Finance and Economics Discussion Series 2022-003*, Board of Governors of the Federal Reserve System, 2022 <https://doi.org/10.17016/FEDS.2022.003>.

⁴Lisa Soricone, *Breaking Ground: A First Look at American High School Skills Trade Education*, Jobs for the Future, 2020 https://jfforg-prod-new.s3.amazonaws.com/media/documents/Breaking_Ground_Final_report_08-06-20-Updated.pdf.

⁵Jia et al., *Economics*.

⁶Jia et al., *Economics*.

⁷Ibid.

Background & Context

Core Questions and Methods

The General Assembly of the Commonwealth of Virginia, Item 125 R of Chapter 2 of the 2022 Acts of Assembly, Special Session I (the 2022–24 Biennial Budget), assigned a study on Offshore Wind and Maritime Talent Attraction to the Virginia Economic Development Partnership Authority (VEDP).¹

This line item directed VEDP

... to evaluate strategies to attract skilled out-of-state talent to fill maritime jobs in Hampton Roads to support the shipbuilding, ship repair, and offshore wind industries. In conducting the study, the Authority shall assess talent attraction programs operated in other states and review their recruiting strategies, incentives offered for relocation, and the overall programmatic effectiveness. The report shall contain both legislative and funding recommendations concerning implementation strategies focused on specifically targeted out-of-state populations, including transitioning military personnel, trade-school graduates, and other wind-industry related skillsets, specific incentives that would attract such talent, and potential costs to effectively administer such a program.²

This qualitative report, developed from August to October 2022, outlines potential talent attraction strategies for the Hampton Roads region. The research team collected data through desk research on more than 40 talent attraction programs in other states and countries. We prioritized 14 of these programs for deeper analysis based on their relevance to Hampton Roads. Our research was informed in consultation with existing industry reports on the region and other publicly available sources, including literature on domestic migration drivers. Additionally, to better understand the current and projected future needs of Hampton Roads and to gauge the applicability of the case studies to the region, we conducted semi-structured interviews with members of various local stakeholder groups, including regional and industry associations, workforce development organizations, regional maritime industry companies, and with current skilled trades workers. Respondents were identified through snowball sampling; we conducted 15 interviews with members of 11 organizations and three workers – an electrician and two welders.

This report closes with recommendations and suggested next steps. The emergent recommendations include possible program design and financial considerations. As noted above, the report's primary focus is on the viability of and potential strategies for recruiting out-of-state populations for high-demand skilled trades jobs in the maritime and offshore wind sectors in Hampton Roads. However, potential ideas for recruitment and retention of local workers also emerged from the research and interviews and are included in the recommendations.

An out-of-state talent attraction program is not a strong solution to address the issue of worker shortages in Hampton Roads because of the complexity of the skilled worker gap and challenges associated with domestic migration. The case studies show that domestic migration programs result in a small number of workers relocating; there is very little data on success. However, if the Commonwealth implements a domestic migration incentive policy or program, success will require a combination of activities, including recruiting, training, wages, benefits, wraparound services, and worker retention alongside potential incentives.

Domestic Migration Literature Review and Trends

A recent literature review by the Federal Reserve Board examined the economics of internal migration in the U.S.³ This review found that domestic migration is a topic of increasing attention among scholars due to the decline in internal migration over the last three decades. Scholars are exploring reasons for this decline and its impact on economic disparities across geographies.⁴

Work is a primary driver for changing states, and it is generally thought that individuals migrate when expected net benefits exceed costs. Much of the literature identifies migration costs as high and describes costs as both monetary, such as moving costs, and nonmonetary, such as earnings forgone due to the time it takes to move and psychological adjustment costs for individuals and families due to changes in environment.⁵ Similarly, the benefits or returns of migration may be both monetary (e.g., immediate and potential increased earnings) and nonmonetary (e.g., a desirable location or familial connections).⁶ The role that wages and cost of living play in migration varies by study, but recent work suggests that both of these factors significantly impact the decision to migrate.⁷

Previous studies have revealed various factors that hinder migration and others that drive its success. For example, the bulk of the decline in domestic migration over the last two decades can be attributed to a decline in work-related migration.⁸ On the other hand, migration can be promoted by personal or societal economic shock or natural disasters.⁹

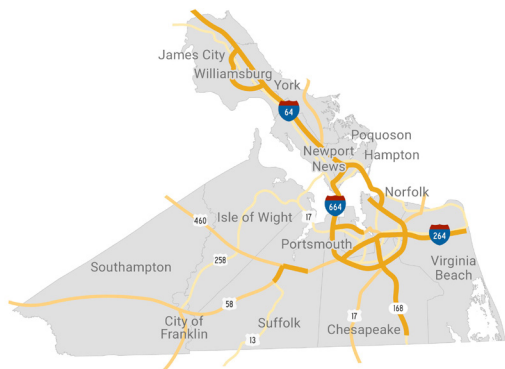
The research also identifies specific demographic characteristics that make relocation more or less likely. College-educated workers are more likely than those without college education, and migration is more common among younger workers than among older workers.¹⁰ Homeowners are less likely than renters to relocate.¹¹

Existing literature also sheds light on what works to motivate interstate movement. Migration is more likely when information about an area, including the actual costs and benefits of relocation, is available to potential workers. Thus, making targeted efforts to educate potential workers, enabling visits, and developing easily accessible public information can all promote migration to a region.¹² Family ties in the location of origin can hinder mobility; similarly, the presence of family ties and social networks play an important role in migrants' relocation decisions.¹³ Migration is more likely when workers who have ties to the region through family and friends are targeted.¹⁴

Workers are more likely to migrate when given supports, including assistance finding housing, financial support for housing, access to affordable housing, and the ability to benefit from local services and amenities.¹⁵

Our qualitative interviews with key stakeholders in the Hampton Roads region reflected and validated the research findings from the literature.

Maritime and Offshore Wind Industries Within Hampton Roads



The Hampton Roads region comprises 17 localities with a population of 1.8 million, making it the second-largest region in the Commonwealth of Virginia after Northern Virginia.¹⁶

The regional economy is primarily driven by defense spending, but logistics, distribution, and tourism also make significant contributions.¹⁷

The maritime industry is among the region's most prominent. Natural harbors and rivers in Hampton Roads are recognized as prime locations for commerce, trades, and shipbuilding; it is home to The Port of Virginia, the third-busiest port on the East Coast of the United States, which provides connections to over 200 countries around the world. Additionally, a large private shipbuilding and ship repair industry serves military and commercial clients in the region.

Some of the largest regional maritime entities include:

- **Naval Station Norfolk:** The world's largest Navy base; supports the operations of the U.S. Atlantic Fleet and is the Department of Defense's largest supply center
- **Norfolk Naval Shipyard:** The U.S. Navy's oldest shipyard, credited with being the birthplace of naval technology; also the largest and most multifaceted industrial facility owned by the U.S. Navy
- **HII:** The largest military shipbuilding company in the U.S. Newport News Shipbuilding is one of the divisions within HII and is the largest industrial employer in Virginia, the sole designer, builder, and refueler of U.S. Navy aircraft carriers; one of only two providers of U.S. Navy submarines

In addition to the highlighted maritime industry, meaningful growth is also anticipated in the offshore wind industry due to Dominion Energy's Coastal Virginia Offshore Wind (CVOW) project.¹⁸ CVOW, currently under development off Virginia Beach's coast, is the largest offshore wind project in the U.S. Once completed, it is expected to create an estimated 1,100 jobs in Hampton Roads.¹⁹ Moreover, the project is committed to using local workers, hiring and retaining veterans, and employing workers from historically economically disadvantaged communities.²⁰ Additionally, Siemens Gamesa Renewable Energy announced it will locate the nation's first offshore wind turbine blade facility in Portsmouth, Virginia, to support the CVOW project.²¹ This will create over 300 new jobs in Hampton Roads.²² (It is worth noting here that multiple states along the Eastern Seaboard have plans to develop offshore wind farms, all of which will require manufacturing supply chain centers.)

The Hampton Roads Workforce Council projects a hiring demand of over 18,000 maritime workers over the next five years.²³ By the time the East Coast offshore wind industry reaches its anticipated capacity in 2026, it will have added an estimated 5,200 direct and indirect jobs to Virginia's economy, almost all of which will be located in Hampton Roads.²⁴ Both the maritime and offshore wind industries will need skilled trades workers, changing the trajectory of in-demand skills in the region.

The Skilled Trades Workforce

Occupational Makeup

Currently, occupations defined in this report as the skilled maritime workforce in Hampton Roads account for approximately 41,700 workers, or 5% of the region's total workforce.²⁵ According to employers and local industry associations, the skilled trades talent gap primarily includes roles that are key to supporting the shipbuilding and ship repair industries as well as the burgeoning offshore wind industry. These roles include construction laborers, electricians, welders, pipefitters, machinists, and general metal and plastic workers. Based on employment projections from Hampton Roads maritime employers, the need for these skilled workers is projected to be in the thousands; Newport News Shipbuilding, mentioned above, currently projects a need to hire approximately 3,000 skilled trades workers, while many of the smaller shipbuilding and ship repair companies are projecting to hire between 20 and 200 skilled trades workers.

Currently, Hampton Roads residents account for approximately 88% of the maritime industry workforce (about 36,750 workers) identified in this study; the remaining 12% (about 5,000 workers) are nonresidents of the region.

The Retiring Workforce Population and Military Personnel

In conjunction with the demand for a skilled maritime workforce, job growth and annual job openings are expected to remain relatively constant over the next five years (-0.7% and 10%, respectively) with nearly 25% of the current maritime industry workforce (approximately 10,350 workers) is estimated to retire within 10 years.²⁶ The military is a significant driver of the economy in Hampton Roads because the region is home to several military bases. Starting in 1969 (when the first data became available), uniformed military personnel in Hampton Roads represented over 25% (or about 270,000) of all workers in Hampton Roads. Since then, the share of direct military employment in Hampton Roads has steadily declined, making up only about 7.5% (or 81,000) of workers in 2017.²⁷ From 2003 to 2017, federal civilian employment increased by about 11,000 workers.²⁸ These employment shifts in Hampton Roads reflect the national experience; across the U.S., uniformed military employment has decreased as employment in the defense contracting industry has increased.

Race, Ethnicity, and Education

Relative to national averages, the Hampton Roads region has a larger Black population (31% vs. 14% nationally) and a smaller Latinx population (7% vs. 19% nationally). There are more females than males in the region by nearly 3.5%.²⁹ These regional demographics are noteworthy given the makeup of workers within the maritime industry, which skews heavily male relative to the region's population. In the maritime industry in Hampton Roads, 94% of the workforce is male and 62% is white.³⁰

Typically, the entry-level education of the workforce within the regional maritime industry is a high school diploma or equivalent. Workers in the region with high school equivalence have lower unemployment rates and higher wages than those without. The high school graduation rate is 93%, which is in line with the Commonwealth broadly, indicating that high school education is not a significant barrier to talent attraction in the skilled trades.³¹

Current and Projected Industry Pressures

The skilled trades worker talent gap in the maritime industry in Hampton Roads is fueled by demand, an aging workforce, and other factors detailed below.

- 1. Emergence of the Offshore Wind Industry:** As the offshore wind industry emerges in the region, it is expected to intensify the talent shortage, especially during the building phase slated to start at the end of 2023 and last approximately five years. According to the Business Network for Offshore Wind, the industry is expected to offer wages that are higher than the regional average, along with robust benefits and cutting-edge job skills and certifications. These offerings will likely draw workforce away from existing employers, including incumbent shipbuilding and ship repair companies.³²
- 2. Increased Competitiveness in Wages from Other Local Employers:** Beyond competition within the maritime industry, the region is seeing an emergence of other industries contending for local talent within Hampton Roads. The retail, hospitality, and trucking industries provide competitive pay, easier and more flexible work environments, and more evident job growth opportunities. For example, the average entry-level pay for the maritime industry (e.g., construction laborers, welders, pipefitters) is \$13.90/hour, and the average experienced-level pay is \$29.90/hour. Similar entry-level retail positions (e.g., cashiers, warehouse personnel) offer an average of \$23.50/hour.³³ This reality contributes to attrition rates in maritime jobs.
- 3. Locked-In Labor Rates and Less Flexibility at Larger Maritime Employers:** Larger maritime employers in the region, particularly those with government contracts, feel more acutely all the workforce challenges we have discussed. This is because they have more stringent requirements for their workforce, including citizenship and drug testing, that decrease their pool of potential new hires. Increasing wages is difficult due to long-term contracts with the Department of Defense, which often have locked-in labor rates. Additionally, their working conditions may be less flexible than those of smaller employers (e.g., requirements to work any shift, inability to take personal calls during work hours).
- 4. Lower Workforce Entry Into and Retention in Skilled Trades:** Workforce entry into the skilled trades is lower than it has been over the last decade.³⁴ This is driven partly by lower wages but is compounded by the shipyards' challenging and often less flexible working conditions. Young high school graduates are directed to four-year college degrees as the path to income stability and dissuaded from pursuing a career in the skilled trades. At the same time, higher retirement and attrition rates, particularly among welders, electricians, and machinists, are driving high workforce turnover.
- 5. Declining Numbers of Transitioning Military Personnel:** Transitioning military personnel have historically been a source of the skilled labor workforce in Hampton Roads. However, there has been a steady decline over the past 20–30 years, with those leaving the military increasingly opting to return home after their assignments.³⁵ Programs like the Department of Defense's SkillBridge can be valuable in helping transitioning military personnel get training and placement with regional employers.³⁶ SkillBridge is for active-duty military in their last six months of service. They can choose a corporate partner to work for upon approval from their unit commander. The military continues to pay them. The program offers mutual benefit in that a service member gets training and the opportunity to explore working in a civilian role at a company, and corporate partners get access to a trained military workforce at no cost. At the end of the program and the completion of the service member's active duty, participants can transition to a full-time role should the company offer one.

Key Stakeholder Perspectives

Several regional stakeholders play a role in attracting and retaining skilled trades workers. While maritime industry employers and workers are most directly involved, regional and industry associations, workforce development agencies, government entities, the emerging offshore wind industry, and other tangential industries are all impacted by the region's current and projected talent gap.³⁷ The research team conducted interviews with key regional stakeholders to investigate macro trends related to the skilled worker talent gap within the specific context of the Hampton Roads region and to ensure that assessed benchmarked programs from other states were considered appropriately given their relevance and applicability to Hampton Roads.

Additionally, if the General Assembly decides to move forward with a talent attraction program, it will help to understand the perspective of various stakeholders and the roles they will need to play in implementing potential strategies to attract out-of-state talent.

Notable insights from the interviews are captured below. See Appendix III: Interviewed Individuals & Companies Represented for a list of those interviewed.

Stakeholder Group I: Regional and Industry Associations

Key insights

Regional and industry associations have a vested interest in strengthening the health of Hampton Roads and growing business in the maritime and offshore wind industries. They continue to see companies across the region struggle to attract and retain talent but have yet to see any significant successes in attracting out-of-state talent.

According to respondents, the region can do more to attract, train, and retain local and in-state talent, particularly through early intervention methods (starting with middle and high school), demonstrating clear career paths in the skilled trades, and showcasing skilled trades roles as high value and high earning. Some noted that it is significantly more expensive to attract and relocate out-of-state talent than to pay to reskill or upskill local talent. They recognize that quality training is an integral part of talent attraction and retention and emphasize the need for the creation of effective training programs that are coupled with support systems for workers as they get trained. They identified child care, transportation, and housing challenges as acute pain points for workers, particularly at the entry level.

Generally, respondents believe that talent attraction problems felt in the region are not unique to Hampton Roads and are common in ports and shipyards across the country. They also recognize that companies in Hampton Roads that service Department of Defense contracts face heightened challenges than others in this regard due to the increased requirements for incoming workers (citizenship, drug testing, etc.) and lower wage flexibility connected to long-term military contracts.

Respondents reported seeing evidence that wages drive talent attraction in the skilled trades, particularly in the ship repair space, and increases in wages are in some cases able to address talent challenges, which they consider the responsibility of employers. They broadly see the entry of offshore wind in the area as a positive for the region's economic development and recognize that the wind industry will have some talent overlap along with unique needs.

They believe wind companies will be attracting a larger workforce to the region that could transition to supporting the maritime industry after the intensive build phase of the windfarms.

Stakeholder Group II: Workforce Development Agencies

Key insights

Workforce development agencies in Hampton Roads are interested in the overall health of the workforce and talent pipeline across industries. Designing and delivering training programs to help prepare workers for employment is critical to maintaining the talent pipeline and upskilling potential workers in the skilled trades.

Respondents from this group see a significant need for development of the skilled trades workforce in the region. They have been conducting research to understand current and future projected talent needs so they can help ensure workforce readiness. They have valuable insights into the workforce's needs, particularly regarding support and wraparound services, given their proximity to the workers they train. They identified the primary challenges of Hampton Roads workers as child care, transportation costs, and affordable housing near training and job sites. These pain points are even stronger for workers coming from out of state because they are less likely to have local community and support structures to help address these challenges.

Respondents believe that a key factor driving higher-than-usual attrition rates among skilled workers in the maritime industry is wage stagnation from certain employers. They connect this issue to an increased demand for commercial driver's license (CDL) certifications and to an increasing number of workers veering away from the skilled trades for sectors like retail or hospitality, where they can earn comparable wages while enjoying easier and more flexible working environments.

Respondents recognize that while their training programs help build critical hard and soft skills for workers, the reality of working conditions in the shipyards is not always something that workers are prepared for. Though longer training programs tend to prepare workers better in this regard, employers are pushing for more accelerated training to get talent working immediately. This, too, may have an effect on retention.

The workforce development respondents we spoke to reported that their organizations focus on training local talent. This is likely due to their typical funding models. To qualify for community college financial aid programs, workers must typically live in Virginia. This reality makes it hard for workforce development agencies to train workers from outside the state. Respondents also reported a focus on helping to place transitioning military workers in permanent full-time roles as they exit.

Stakeholder Group III: Maritime and Offshore Wind Employers

Key insights

The research team interviewed four regional employers; these companies rely on skilled workers to deliver on contracts and grow their businesses. Increased attrition and lower workforce entry create challenges for these employers, particularly the larger ones with long-term government contracts. Employers are experiencing challenges recruiting and retaining local talent.

Some employers, particularly the larger ones, have implemented efforts to recruit talent from out of state, mainly through partnerships with trade schools or community colleges in neighboring states. They have had some success but are not sufficiently addressing the scope of current needs. They have also seen companies from other states try to recruit their employees.

Many employers have started offering signing bonuses to new skilled workers, which has helped attract more talent. Moreover, as employers have increased wages to the \$25–30/hour range, they have found it much easier to attract and retain talent. This is generally easier with short-term (1–2 year) contracts, which ensure that employers are charging their buyers at a level commensurate with what they need to pay their workers. Employers with long-term contracts may have less flexibility if they do not have labor wage escalation clauses in their contracts. Smaller employers or ones who do not have long-term contracts also have to ensure that their hiring aligns with immediate contracts; managing this balance is difficult.

Employers generally do not struggle to find skilled workers for short-term assignments. Leased labor workers are plentiful; they are happy to come to the Hampton Roads region for a few months, primarily driven by higher wages and better benefits than they can get in their local areas. These workers typically receive housing and a per diem, so it can be lucrative for them to take on short-term contracts that do not require them to uproot and relocate their families. Given the higher costs, employers generally prefer to cap short-term labor at 10–20% of their workforce.

Most smaller employers reported a need for 10–30 welders and structural fitters at the time they were interviewed, which they can largely address through leased labor or by offering slight wage increases. Larger employers reported needs for skilled workers in the thousands.

Benefits and wraparound services are also important. Employers believe that more child care options, increased affordable housing nearby (within three miles of) the shipyards, and better public transportation options would make it easier for skilled workers to stay in the workforce.

Additionally, higher investment in workforce development drives employee productivity and retention. Employers believe that promoting the trades as viable career paths earlier in schools (starting K–12) and bringing parents along to showcase the trajectory and earning potential is important to grow the workforce.

Attrition has been a big challenge. At the same time that many older workers are retiring, others are leaving to pursue commercial driving or retail work. Employers see up to 30% attrition within the first year for new skilled trades hires.

As offshore wind grows in the region, employers within that space will need to hire. Offshore wind will have more flexibility in hiring workers – they will be able to hire foreign nationals and will not have government-mandated drug testing. They will, however, need to train and certify workers; even experienced skilled trades workers will require a GWO (Global Wind Organization) certification before they can begin working. The offshore wind companies have committed to creating jobs and driving employment within Virginia, focusing more on local talent.

Stakeholder Group IV: Skilled Trades Workers

Key insights

Skilled trade workers in demand in the maritime industry in Hampton Roads include construction workers, electricians, welders, pipefitters, machinists, and general metal and plastic workers. The roles in highest demand within the region are welders, electricians, structural fitters and pipefitters, and other metal workers.

Conversations with workers reinforced many themes that emerged from other stakeholder groups and yielded some additional insights.

None of the three workers interviewed are originally from Hampton Roads; military service or family in the region initially brought them to the area. They stated that it would have been unlikely for them to have moved to the area otherwise.

Workers indicated that features of the area such as the lower cost of living relative to urban centers on the East Coast and the local community were important considerations in staying in the area. Additionally, for workers who had been in the military, having a community of veterans in the region and at work also drove them to stay.

The workers highlighted the value of support and wraparound services, particularly during training and transition. In addition to housing and transportation support, they mentioned that additional support around the job placement process and integration into the community would have been helpful. They noted that the quality of training for occupations like welding was strong technically, but wished the training gave them a better sense of how to navigate the system once they were employed.

For workers whose entire career had been in the military, support in transitioning from military to civilian life was extremely beneficial. Workers cited programs like SkillBridge, mentioned above, as being particularly valuable in giving them exposure to an employer and facilitating their transition. They also indicated that additional support around job applications, résumé writing, and integration into employer environments that differed in schedule and structure from the military would be of value.

Workers also spoke about the importance of financial remuneration in their decision to join their employers. They indicated that they would likely leave their employer if they saw roles with similar or higher wages in other sectors.

Finally, the workers expressed a lack of clarity around their career trajectories. They did not know when their next promotion would be, what opportunities would exist for them over time, or how to position themselves for those opportunities. This created frustration, and they noted that it might make them more likely to leave for other opportunities.

Across these stakeholder groups, we heard similar themes. Many of the themes relating to domestic migration are also backed up by research findings.

- The skilled trades worker talent gap is meaningful in the region but is felt differently by employers of different sizes and needs.
- Attracting skilled trades workers to the region is important, but so are efforts to hire locally and reduce turnover and attrition.

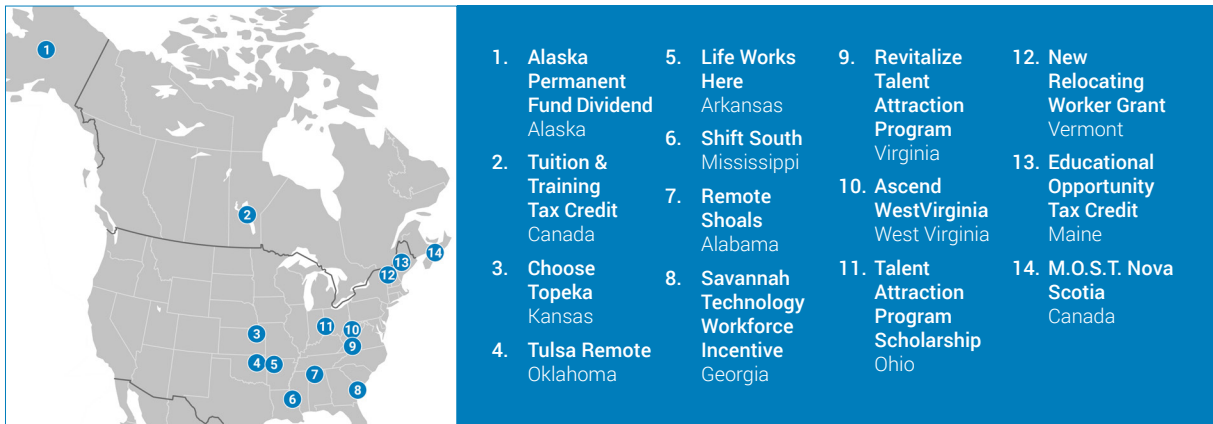
- Increasing wages can help, and short-term leased labor is not difficult to find, indicating that higher compensation and benefits do drive talent attraction.
- Child care, transportation, and affordable housing challenges are significant pain points for workers and those in training.

Family and social networks in the area make it more likely that out-of-state talent will come, stay, and thrive in Hampton Roads.

Out-of-State Talent attraction Incentive Program Case Studies

Case Studies from Global Talent Attraction Incentive Programs

The research team benchmarked over 40 global programs for this analysis (see Appendix I: Global Case Studies Evaluated). Of those, 14 were shortlisted for deeper research based on their relevance and applicability to Hampton Roads. The map below shows the 14 programs studied most closely.



Prioritized Programs

Programs were prioritized based on two key factors: (1) target worker type, specifically domestic and on-site workers; (2) program design, funding, and administration, specifically those programs implemented by governments, public sector organizations, and public-private partnerships.

1. Target Worker Type

- Programs that focused on domestic workers and did not rely on international migrant labor or visa incentives were most relevant to the levers that the Commonwealth of Virginia can pull, particularly given the citizenship requirements for skilled trades workers employed by companies with Department of Defense contracts.
- Prioritization was given to programs that targeted on-site rather than remote workers, specifically those in the skilled trades. Eight of the 14 shortlisted programs targeted on-site workers. However, assessments were conducted on six programs that targeted only remote workers because they offered information about incentive design or structure, funding, or program administration.

2. Design, Funding, and Administration

- Prioritization was given to programs implemented in a state, province, or region by governments, public sector organizations, or public-private partnerships rather than those run solely by individual employers. None of the benchmarked programs are solely employer funded.
- Programs launched before 2021 were prioritized to reference information on program outcomes. Four more recent programs were included on the shortlist because of their relevance to skilled trades workers. It is also worth noting that outcomes data is inconsistent across programs. While some programs have published information on program targets; number of applicants, awardees, and people relocated; impact on income tax, sales tax, and property tax; job creation; local GDP; average worker salary; and more, other programs have only released information on a subset of these items or none at all.

Summary of Benchmarked Case Studies

The 14 selected case studies were further assessed based on five factors. The factors are outlined below, along with a summary of each program’s assessment. Detailed information, including links to the 14 program websites, can be found in Appendix II: Case Study Deep Dives. The section below outlines details that emerged on the following:

1. **Target Worker Type:** The assessed programs were already filtered for on-site workers, but the sample includes some programs focused on remote workers, given other program relevancies to Hampton Roads.
2. **Incentives Offered:** This includes specific program incentives and offerings to program participants.
3. **Program Requirements:** This outlines any key program requirements relating to worker age, location, program dates, or other program regulations.
4. **Program Effectiveness:** This highlights key program outcomes such as the total number of awardees, awarded dollars, and any reported information on the program’s economic development impact.
5. **Funding and Administration:** This identifies which entity or entities funded and/or administered the program, including marketing, program launch and selection, program operations, and program maintenance.

Table I provides an overview of the 14 focus programs.

Table 1
Benchmarked Program Overview

Program	Target Worker Type	Incentive Value and Structure	Funding	Launch Date
Savannah Technology Workforce Incentive	Remote tech workers	\$2,000 Cash reimbursement for relocation expenses	Local Economic Development Authority	2020
Shift South	Remote workers	\$6,100 Cash reimbursement for relocation expenses + monthly cash stipend for the first year	Regional Public Private Economic Development Partnership	2020
Talent Attraction Program Scholarship Text	On-site and remote workers in STEAM	\$10,000 Monthly grant toward repayment of student loan debt. Dollars are equally split monthly for one year	Local Public Charity	2018
Tulsa Remote	Remote workers	\$10,000 Cash reimbursement for relocation expenses + monthly cash stipend for first year + co-working space	Local Family Foundation	2018

Program	Target Worker Type	Incentive Value and Structure	Funding	Launch Date
Choose Topeka	On-site and remote workers	\$10,000 - \$15,000 Cash grant for rental costs or home purchase expenses	Partnership between the County and City; 50% funded by employers	2019
Life Works Here	Remote tech/STEM workers	\$10,000 Monthly cash stipend for first year + mountain bike + cultural memberships Dollars are equally split monthly for one year	Local Corporate Family Foundation	2020
Ascend West Virginia	Remote workers	\$2,000 + \$10,000 + \$2,500 Monthly cash stipend for first year + bonus at end of second year + mortgage assistance for all applicants + recreational benefits and co-working space	Local Family Foundation	2021
Remote Shoals	Remote workers	\$10,000 25% upfront for relocation costs; 25% after 6 months; 50% at the end of the first year	Local Economic Development Authority and Chamber of Commerce	2019
Educational Opportunity Tax Credit	On-site and remote workers	\$25,000 \$2,500 annual reimbursement of student loan repayments through refundable state tax credit	State Government	2008
New Relocating Worker Grant	On-site workers in short-staffed industries	\$7,500 Cash reimbursement for relocation expenses including moving costs, lease or closing costs, first month rent	State Government	2021
Alaska Permanent Fund Dividend	On-site and remote workers	\$3,850 Expected payout for 2022; amount varies each year (was \$1,114 in 2021)	State Government	1976
Talent Attraction Program	On-site workers in targeted, hard-to-fill occupations	\$48,000 \$12,000 annually in student loan repayment reimbursements	Regional Commission	2019
M.O.S.T. Nova Scotia	On-site skilled trades workers	\$2,700 Provincial tax rebate on the first \$50,000 of income earned through work in eligible skilled trades	Provincial Government	2022
Tuition and Training Tax Credit	On-site skilled trades workers	\$5,000 Tax credit for up to 50% of any training, certification, or licensing courses or exams from certified institutions	Federal Government	2020

Insights from Case Studies

Most talent attraction programs intend to stimulate economic development in a city, region, or state. Historically, incentives have been offered to attract corporations to a given area; the programs we examine here focus instead on attracting workers. The reviewed programs were designed to generate value through local economic stimulus, property taxes, sales taxes, and local income taxes, as well as to address talent attrition or talent gaps in key areas. As the research we highlight in the literature review section indicates, increasing economic value for a migrant in the destination area through cash incentives, housing incentives, income tax rebates or exemptions, student loan repayment reimbursements, or other benefits can effectively incentivize migration.

Across the case studies, insights emerged that drive considerations for Hampton Roads.

1. Worker Type

Most talent attraction incentive programs did not target on-site skilled workers. Most programs were designed to target more mobile workers, which often meant remote workers, technology workers, and other more educated and mobile worker groups as indicated in the research. Additionally, many programs were intentionally designed to ensure local jobs were not lost to incoming talent, so they specifically focused on remote or self-employed workers. The programs in Vermont, Nova Scotia Topeka, and Virginia are the most relevant to Hampton Roads in targeting on-site workers, skilled trades workers, and other hourly wage workers.

- Virginia's Talent Attraction Program (TAP) focuses on workers in high-demand/hard-to-fill roles in the Tobacco Region of Virginia. The TAP program provides for student loan repayment reimbursement, which is likely less applicable to the skilled trades workers we are targeting in Hampton Roads because they may not have student loans.
- Vermont's New Relocating Worker Grant also targets workers in high-demand roles, including skilled trades workers. The program provides workers with a cash grant of up to \$7,500 for relocation expenses.
- The M.O.S.T. Nova Scotia program specifically targets skilled trades workers with an income tax rebate at the provincial level. The expected average value of this incentive is \$2,700 CAD, but because the program will be implemented for the first time for the 2022 tax year, there is no available data on program implementation or efficacy. Moreover, this program applies to all skilled trades workers in the province and does not require that workers relocate to Nova Scotia to reap the award. Its intent is to attract and retain younger people in the skilled trades, given that older workers are retiring.
- Choose Topeka has two sleeves: one targeting remote workers and the other focused on on-site workers. For this latter sleeve, if a worker moves to Topeka for a full-time position with a qualified local employer and rents or purchases a home in the county, they are given a stipend of \$10,000 (rental) or \$15,000 (home purchase).

2. Program Scale

Most benchmarked programs are still in their early stages or are being run as pilots and, on average, target only 10–100 on-site workers per year. The number of workers that programs focused on out-of-state relocation have targeted and successfully attracted are generally in the double digits, or at maximum in the hundreds, and the cost of attracting these workers has been significant. It is unclear whether these workers will stay long-term, given that most programs were launched within the last five years and have not published any retention data.

None of the larger-scale programs we examined seek to relocate talent; instead, they focus on awarding all those in an industry or state.

- M.O.S.T Nova Scotia will offer a provincial tax rebate on the first \$50,000 of income earned through work in eligible skilled trades; it will apply to all skilled workers (approximately 7,500) in the province and will not require relocation.
- Similarly, the Alaska Permanent Dividend Fund, which provides an annual tax grant to Alaskans, applies to all Alaska residents and does not focus on relocating talent.
- Maine's Educational Opportunity Tax Credit provides reimbursement for student loan repayments for any worker with a bachelor's or associate degree from a U.S. school who is a Maine resident and works in Maine.

Of the programs focused on talent attraction and relocating workers, Tulsa Remote is the largest, with 1,700 workers accepted into the program and relocated to Tulsa, Oklahoma. However, this program targets only remote workers. None of the programs targeting on-site workers have relocated more than around 100 workers to date.

3. Incentives Offered

Programs vary in the amount and structure of the incentive they provide. Many were set up to deploy the incentive over a year or longer and combine some upfront relocation cost coverage with monthly stipends. Spreading benefits over one to two years may help ensure worker retention. Mississippi's Shift South, Tulsa Remote, Life Works Here in Arkansas, Ascend West Virginia, and Alabama's Remote Shoals program all provide monthly payments. Ascend West Virginia offers an additional \$2,000 stipend at the end of the second year to incentivize retention.

Programs offered various combinations of cash grants for relocation, monthly cash stipends, rental or home purchase rebates, income tax rebates, and student debt repayment reimbursements. As noted above, student debt repayment reimbursement may be less applicable for skilled trades workers in Hampton Roads, but the other types of incentives could all be applicable. Generally, workers prefer some upfront payment versus simply an income tax rebate, but both put more money into workers' hands.

While the essential benefit offered is most often a cash incentive or financial benefit, almost all programs include a host of wraparound services that the literature review indicates are critical in helping workers successfully relocate to and integrate into the new area. Programs offer support in areas including assistance with searching for housing, finding employment for partners/spouses or other family members, and access to events to help integrate workers into the local social scene. Almost all programs offered some level of support in these areas. Additionally, networking events (Tulsa Remote, Ascend West Virginia), free use of co-working spaces for remote workers (Tulsa Remote, Ascend West Virginia), and other cultural, outdoor, and recreational benefits (Ascend West Virginia, Life Works Here) were also common to help incoming workers connect to the area and community.

4. Program Costs and Benefits

It is still early in the lifespan of many of these talent attraction incentive programs, and limited public data is available on the effectiveness of certain programs. Where results are available, states claim to see significant value generated in local GDP; income, sales, and property tax revenue; and local job creation.

- Tulsa Remote estimates that for every dollar spent on the program, just under \$14 was generated in local income taxes and that the program generated \$62 million in new labor income to the local economy.

- Choose Topeka reports generating over \$3 million in economic impact.
- Remote Shoals projects a \$6 million increase in GDP related to the program.
- Vermont reports that its New Relocating Worker grants generated \$17 million for the state economy and \$1 million in tax revenue.

Most of the programs we reviewed have been renewed or extended, but a few have been shut down, mainly due to funding running out. Program costs ranged from \$2,000 to more than \$20,000 per worker, not including program operating and administrative expenses.

Most initiatives were accompanied by large marketing campaigns to spread the word and showcase the city or region favorably. Highlighted campaign elements included low cost of living, cultural events, and access to outdoor activities.

Programs found that they were most successful in relocating workers who already had ties to the region (e.g., grew up, went to school, had family or friends nearby). This finding is backed by research, which shows that family and social network presence are significant drivers of domestic migration.

5. Program Funding and Administration

Regarding funding and administration, it is worth noting that few programs were implemented at the state level; rather, they operate within a specific city, county, or region. Programs implemented at the state level generally focused on income tax rebates or student debt repayment, such as Maine’s Educational Opportunity Tax Credit and M.O.S.T. Nova Scotia. Vermont’s New Relocating Worker Grant is the only example of a state-administered and state-funded relocation program targeting skilled workers that offered cash benefits.

The majority of programs – those that did not operate at the state level – rarely received any government funding. Instead, they were more likely to be funded by local foundations, nonprofits, or local economic development organizations:

- Virginia’s TAP is funded by the Virginia Tobacco Region Revitalization Commission.
- Alabama’s Remote Shoals is funded by the Shoals Economic Development Authority and the local Chamber of Commerce.
- Ascend West Virginia is funded through a \$25M gift from former Intuit CEO Brad Smith, with private companies like Rocket Mortgage contributing to the mortgage assistance benefit.
- Northwest Arkansas’ Life Works Here is funded by the Walton Family Foundation.
- Savannah’s Technology Workforce Incentive program is funded by the Savannah Economic Development Authority.
- Mississippi’s Shift South is funded by Natchez, a regional public-private economic development partnership.
- Ohio’s Talent Attraction Program Scholarship is funded by the Hamilton Community Foundation, a public charity.
- Tulsa Remote is funded by The George Kaiser Family Foundation.
- Choose Topeka is funded by the Joint Economic Development Organization (JEDO), a partnership between Shawnee County and the City of Topeka. The employer pays the stipend for on-site employees upfront and is reimbursed by the city for 50% at the end of the first year if the worker is still employed.

Featured Case Study: New Relocating Worker Grant Program, Vermont



Vermont's New Relocating Worker Grant is the only example of a state-administered and state-funded relocation program targeting on-site workers, including skilled workers. As such, a closer look at this program is warranted.

Since 2018, Vermont has run three programs focused on attracting out-of-state talent to Vermont. The first program was the Remote Worker Grant Program, which was aimed at drawing remote workers to Vermont. The second program, Stay to Stay Weekends, funded exploratory vacations to help vacationers learn what it would be like to move to Vermont and connected them with employers, realtors, community leaders, entrepreneurs, and potential neighbors throughout a weekend. The third program, the New Relocating Worker Grant Program that we will

discuss below, targeted workers in a list of short-staffed industries to move to the state. All three programs have now ended, and all funds have been allocated.

The program launched in 2021 and was funded and administered by the state's Agency of Commerce and Community Development. Workers had to relocate to Vermont after July 1, 2021, and find full-time employment in Vermont in a role deemed in high demand. Vermont updated the list of qualifying occupations quarterly and included skilled workers such as carpenters and construction workers, as well as other high-demand roles such as teachers, child care workers, home health aides, and service and hospitality workers like bartenders and cashiers. (A full list of qualifying roles can be found at Short Term Occupational Projections: 2020–2022 Occupations with the Most Openings). Employers had to demonstrate that they were unable to fill the job from the pool of applicants inside the state and ensure that the employee received a minimum of \$13.39/hour, the Vermont living wage.

New workers received a \$7,500 award structured as reimbursement for expenses, which included moving costs, closing costs or lease deposits, and first month rent payments.

Across all three of its talent attraction programs, Vermont has spent almost \$2 million to attract 435 new workers and their families to the state. Most of these grants (over 300) went to remote workers, but around 100 were for on-site workers in short-staffed industries. Most grantees had some previous exposure to Vermont through a vacation, family living in the area, or having previously lived there.

The legislature commissioned a study indicating that the grants generated \$17 million for the economy and over \$1 million in tax revenue. However, these figures have been called into question by the state auditor. One major structural shortcoming of the program was that applicants were only eligible to apply once they had moved to Vermont and established residency. Because applicants had to move without knowing if they would receive grant funds, the grants were likely not the direct driver of the move.

The Think Vermont website and campaign accompanied the grant programs and served as a key source of information about the programs and the hub for all program applications. The website showcased the quality of life, community, and access to the outdoors in Vermont, as well as resources for those interested in learning more about the state and connecting with residents.

In June 2022, Vermont approved new legislation allocating an additional \$3 million of funding for a new relocation program. Details of this program and the type of worker it will target have not yet been announced.

Recommendations

Recommendations

It is clear from this research that no single initiative can fully address the skilled trades talent gap in Hampton Roads. Given the complexity of the demographic, economic, and social factors driving the talent gap, solving this problem will require a combination of initiatives targeting recruiting practices, training, wages, benefits, career paths, wraparound services, and worker retention alongside potential incentives for out-of-state talent attraction.

Although out-of-state talent attraction incentives could effectively address a small portion of the skilled trades worker talent gap for the maritime and offshore wind industries in Hampton Roads, the insights gleaned from the research and analysis conducted indicate several potential challenges that could arise should that pathway be pursued.

Given the nationwide demand for skilled trades workers, incentive programs targeted toward those workers might be less successful than programs targeting other types of workers.

In addition, literature on the topic suggests that skilled trades workers and other workers without college degrees tend to be less mobile and stay in the areas where they received training. Therefore, they may be less driven by these incentives than other more highly paid and educated workers.³⁸ Most skilled trades workers today are also older, making them less likely than younger workers to move.³⁹

Moreover, given that most benchmarked case studies are relatively recent, no retention data is available to indicate how long those workers will stay in Virginia, nor whether they will remain in the roles they were brought to the state to fill.

Finally, other programs have targeted and therefore only have seen success with small numbers of workers (typically 50–100), which is far fewer than will be required to meet the anticipated need in Hampton Roads.

Nonetheless, if the Commonwealth enacts an incentive program, we recommend a regionally designed, funded, and administered program in line with the best practice recommendations outlined in the table below in (1) program eligibility, (2) types of incentives offered, (3) incentive structure, (4) program funding and administration, and (5) program marketing and communication.

Table II highlights recommendations for each element of program design based on this research. The findings indicate that an incentive program alone is unlikely to make a significant dent in the talent gap that currently exists, but it could be one of myriad solutions that the region pursues.

Table 2
Program Considerations and Recommendations

Consideration	Recommendations
Program Eligibility	<ul style="list-style-type: none"> ▪ Program should target both experienced skilled workers as well as those who have not yet been trained in the trades but are ready to commit to working in the skilled trades in the region for a three-year period. Skilled workers and other community college graduates tend to stay in the area where they received training, so capturing workers before they have been trained, incentivizing them to relocate, and then training them and placing them in jobs will likely be effective. ▪ Consider offering certain incentives to worker segments at high risk of turnover or attrition to mitigate the risk of resentment and frustration with the existing workforce.
Incentives Offered	<ul style="list-style-type: none"> ▪ Financial incentives are powerful and a key driver for skilled workers in this sector. Direct cash payments and state income tax relief are both appealing, but workers prefer cash grants. ▪ A cash grant needs to be large enough to provide for a meaningful upfront payment to support relocation as well as for a sufficient balance to be spread over time to incentivize retention, so a total incentive cash payment on the order of \$10,000 would be necessary for effectiveness in this context. ▪ In addition to cash payments, wraparound services and support will be important to implement. Key services should include housing search assistance, employment support for family members, and community connection events and activities.
Incentive Structure	<ul style="list-style-type: none"> ▪ Given the high turnover rate of skilled workers in their first year and data from Hampton Roads employers that shows workers who stay in roles beyond three to five years have markedly lower attrition, incentives should be structured in a way that provides an upfront cash payment to offset relocation expenses (\$2,500) with the balance of \$7,500 paid in installments over a three-year period (\$2,500 per year paid monthly). These figures are indicative based on the \$10,000 range suggested for an overall incentive cash grant.
Program Funding and Administration	<ul style="list-style-type: none"> ▪ Program is likely to be most successful if funded and administered regionally, given the region’s specific needs and the necessity of involving and engaging local stakeholders. ▪ To drive employer engagement, it would be most effective if the employer pays the incentive upfront and is reimbursed a significant share (e.g. 50%) after the third year if the worker is still employed at the firm. This would also ensure that employers have a strong incentive to integrate these workers, create favorable working conditions, and build appealing career paths to retain talent. ▪ Before committing significant capital and resources to a large-scale, nationwide program, try implementing a small pilot targeting up to 100 workers.
Program Marketing and Communication	<ul style="list-style-type: none"> ▪ Program will need to be accompanied by targeted marketing and PR campaigns to reach this talent base, especially for categories of workers where there is high demand. Moreover, research indicates that more information about an area and the costs and benefits associated with a move can be a driver of migration. The target audience is high schools, community colleges, and trades schools across the country. ▪ Specifically targeting regions hit by economic hardship or natural disasters could drive significant migration. U.S. territories – such as Puerto Rico, where workers face both of these challenges – meet the citizenship requirements for many roles and are not widely targeted, so they could be fertile ground for successful campaigns. ▪ Also target populations that are historically underrepresented in the skilled trades, including women, people of color, and refugees.

Short-term financial incentives can undoubtedly be a key driver in influencing domestic migration, but for workers to be set up for success, a broader set of initiatives and services are necessary. These include higher wages as well as more benefits and wraparound services skilled workers commonly need, including child care, affordable housing, and transportation. Investing in wraparound services can be powerful in helping ensure skilled workers enter and stay in the workforce. This will support both the local labor force as well as out-of-state workers. Child care support, better transportation/parking, and affordable housing options close to job sites are of most value.

Targeting populations that have not historically entered the skilled trades or are otherwise underrepresented (both in-state and out-of-state) is also good practice. These may include women, people of color, and refugee populations.

Regarding military retention in Hampton Roads and attracting transitioning military from other states, programs like the Department of Defense's SkillBridge are highly valuable. Ensuring all local employers are SkillBridge partners and actively promoting openings to SkillBridge candidates is important, as is creating an effective training and onboarding experience for military workers. Offering additional support to active-duty military transitioning to civilian life (e.g., résumé writing, coaching on how to translate and transfer their military experience) could also be valuable.

Finally, although the scope of this study is on out-of-state talent attraction, other initiatives are critical to driving local talent attraction and reducing existing workforce attrition to decrease the talent gap. Further analysis should be conducted by the Virginia Office of Education Economics (VOEE) or another entity.

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Appendix I

Global Case Studies Evaluated

Appendix I: Global Case Studies Evaluated

1. **218 Relocate** | Minnesota
2. **Alaska Permanent Fund Dividend** | Alaska
3. **Ascend West Virginia** | West Virginia
4. **Bristol Ports** | UK
5. **Buying into Baltimore** | Maryland
6. **Free Lot Program** | Iowa
7. **Choose Noblesville** | Indiana
8. **Choose Topeka** | Kansas
9. **Costa Rica Income Tax Incentives** | Costa Rica
10. **Cyprus Income Tax Incentives** | Cyprus
11. **Distinguished Talent Visa** | Australia
12. **Educational Opportunity Tax Credit** | Maine
13. **Enterprise Ireland** | Ireland
14. **Employment Pass** | Singapore
15. **Explore Muncie** | Indiana
16. **Federal Skilled Trades Program Express Entry** | Canada
17. **Geek Move** | Tennessee
18. **Get to Know Newton** | Iowa
19. **Global Talent Visa** | UK
20. **Greater ROC Remote** | New York
21. **Harmony Home** | Minnesota
22. **Land in Lincoln** | Kansas
23. **Life Works Here** | Arkansas
24. **Maine Smart Buy Program** | Maine
25. **M.O.S.T. Nova Scotia** | Canada
26. **Move to Michigan** | Michigan
27. **Movers and Shakas** | Hawaii
28. **New Relocating Worker Grant** | Vermont
29. **Regione Calabria** | Italy
30. **Remote Shoals** | Alabama
31. **Re: New Haven** | Connecticut
32. **Revitalize Talent Attraction Program** | Virginia
33. **Savannah Technology Workforce Incentive** | Georgia
34. **Shift South** | Mississippi
35. **Special Incentives for Overseas Talent** | China
36. **Startup Chile** | Chile
37. **Talent Attraction Program Scholarship** | Ohio
38. **Tech.Pass** | Singapore
39. **Tech Visa Program** | France
40. **Tuition & Training Tax Credit** | Canada
41. **Tulsa Remote** | Oklahoma
42. **UAE Income Tax Incentive** | United Arab Emirates
43. **Vogtle Nuclear Power Plant** | Georgia
44. **Work from Purdue** | Indiana

Highlighted programs were benchmarked in detail. For details, reference Appendix II: Case Study Deep Dives

Appendix II

Case Study Deep Dives

Appendix II: Case Study Deep Dives

The following pages capture additional detail on the 14 case studies reviewed for this analysis.

CASE STUDY 1

Savannah Technology Workforce Incentive

Program Location

Savannah, Georgia

Target Worker Type

Remote workers in the technology space

Incentives Offered

Relocation reimbursement of up to \$2,000

Program Requirements

- Minimum three years of work experience; must be remote or self-employed (not eligible if locally employed)
- Must relocate and purchase property or sign a one-year minimum lease
- Must have resided in the county for 30+ days and have a Georgia license and Chatham County address to apply

Program Launch Year

2020

Program Targets and Outcomes

- Began in June 2020; cap of 50 per year
- As of May 2021, 72 people had moved and 32 more had applied

Program Funding and Administration

Funded and administered by the Savannah Economic Development Authority (SEDA)

Program Website

<https://seda.org/resources-and-data/incentives-database/creative-incentive/>

CASE STUDY 2

Shift South

Program Location

Natchez and Adams County, Mississippi

Target Worker Type

Remote workers only

Incentives Offered

- Relocation reimbursement of up to \$2,500
- \$300 monthly stipend for first year

Program Requirements

- Must be employed by an employer outside the Natchez region
- Must establish residency in the city and purchase a home valued at no less than \$150,000
- Maintain ownership and residency for no less than one year

Program Launch Year

2020

Program Targets and Outcomes

- 30 slots available in first year; first awards granted in Feb 2021
- Led to population increase of 23 and to increases in property and sales taxes in Natchez
- Expect a 12–18-month period for the economic value of the awardee to the region to equal the incentive paid.

Program Funding and Administration

Launched and managed by Natchez, a public-private economic development partnership for the region

Program Website

<https://natchezinc.com/images/uploads/ShiftSouth-Application.pdf>

CASE STUDY 3

Talent Attraction Program Scholarship

Program Location

Hamilton, Ohio

Target Worker Type

Both on-site and remote workers with a focus on Science, Technology, Engineering, Arts, and Mathematics (STEAM) graduates

Incentives Offered

- \$300 per month for repayment of student loan debt
- Maximum award of \$10,000 per person

Program Requirements

- Must have graduated from a program in a STEAM field within the last seven years
- Not currently living in Hamilton and must relocate to the city
- Local employment or a full-time remote position

Program Launch Year

2020

Program Targets and Outcomes

No available public data

Program Funding and Administration

Funded and run by the Hamilton Community Foundation, a public charity

Program Website

<https://www.hamiltonfoundation.org/scholarships/scholarships-for-recent-college-graduates-tap-scholarship/>

CASE STUDY 4

Tulsa Remote

Program Location

Tulsa, Oklahoma

Target Worker Type

Remote workers only

Incentives Offered

- Up to \$10,000, split between relocation support and monthly stipend with the balance of the payment at end of first year
- Free desk space at a local co-working center
- Workshops and networking events

Program Requirements:

- Not currently living in Oklahoma and must relocate to the Tulsa area
- Self-employment or full-time remote employment outside of Oklahoma (not eligible if locally employed)
- Multiple people in household can apply and qualify

Program Launch Year

2018

Program Targets and Outcomes

- Received 10,000 applications in the first 90 days
- 1,700 people accepted and relocated
- For every \$1 spent on the program, nearly \$14 was generated in local labor income (average income of \$104,000)
- For every two household members brought, one new local job was created
- \$62 million contributed in new labor income to local economy in 2021

Program Funding and Administration

Funded by the George Kaiser Family Foundation

Program Website

<https://tulsaremote.com/>

CASE STUDY 5

Choose Topeka

Program Location

Topeka, Kansas

Target Worker Type

Both on-site and remote workers

Incentives Offered

- Local workers are eligible for a stipend of \$10,000 for a home rental or \$15,000 for a home purchase in their first year
- Remote workers are eligible for a stipend of \$5,000 for a home rental or \$10,000 for a home purchase in their first year

Program Requirements

- Local workers must move to Topeka for a full-time position with a qualified local employer and rent or purchase a home within Shawnee County
- Remote workers (only one individual per household can apply) must move to Topeka with a full-time remote position outside the county and rent or purchase a home within Shawnee County

Program Launch Year

2019

Program Targets and Outcomes

- 40% of people working in Topeka do not live there; the program intends to bring more talent, diversity, and vibrancy into the city
- Will select up to 60 candidates a year
- Received 60,000 applications by July 2022
- The first wave brought 40 people
- Relocated workers have an average income of \$80,000/year
- Generated \$3.2 million in economic impact

Program Funding and Administration

- Funded by the Joint Economic Development Organization (JEDO), a partnership between Shawnee County and the City of Topeka
- For local workers, the employer pays the incentive upfront and is reimbursed 50% after a year if the worker is still employed

Program Website

<https://choosetopeka.com/>

CASE STUDY 6

Life Works Here

Program Location

Northwest Arkansas

Target Worker Type

Remote workers in STEAM

Incentives Offered

- \$10,000 paid out over the first year
- Free mountain or road bike
- Free annual membership to local arts or cultural institute

Program Requirements

- Must relocate to Arkansas within six months of being accepted into the program
- Must remain in Northwest Arkansas for at least one year

Program Launch Year

2020

Program Targets and Outcomes

- Began in November 2020 and closed in 2021
- 66,000 applicants and 100 recipients in 2020
- 65% of applicants had no connection to Northwest Arkansas
- 100 recipients brought 89 trailing partners and children

Program Funding and Administration

- Funded by the Walton Family Foundation
- Administered by the Northwest Arkansas Council

Program Website

<https://findingnwa.com/incentive/>

CASE STUDY 7

Ascend West Virginia

Program Location

Morgantown, Lewisburg, and Shepherdstown, West Virginia

Target Worker Type

Remote workers only

Incentives Offered

- \$10,000 for relocation expenses over the first year
- \$2,000 bonus at the end of year two
- One year of free recreational activities
- Free networking events
- Free co-working space
- All applicants are eligible for \$2,500 in mortgage assistance if they move to the state and purchase a home, whether or not they are accepted into the program

Program Requirements

Evidence of full-time remote or self-employment outside West Virginia

Program Launch Year

2021

Program Targets and Outcomes

- Began in Morgantown and is adding new cities each year across the state
- Estimated total value of incentives is \$20,000
- 7,500 applicants by September 2, 2021
- 53 recipients in the first year to Morgantown; 33 to Lewisburg in its first year
- 1,000 remote-working members projected over five years
- Attracted workers from 18 states; 85% are not native to West Virginia
- Average annual salary for a recipient is \$126,000

Program Funding and Administration

- Funded by a \$25 million gift from former Intuit CEO Brad D. Smith
- \$2,500 mortgage assistance funded by Rocket Mortgage
- Partnership between the West Virginia Department of Tourism, WVU, and the Brad and Alys Smith Outdoor Economic Development Collaborative

Program Website:

<https://ascendwv.com/>

CASE STUDY 8

Remote Shoals

Program Location

The Shoals, Alabama

Target Worker Type

Remote workers only

Incentives Offered

\$10,000 cash incentive in four allotments: 25% upfront for relocation costs, 25% after six months, and the remaining 50% at the end of the first year

Program Requirements

- Minimum annual income of \$52,000
- Must relocate to The Shoals within six months
- Evidence of full-time remote or self-employment outside Colbert and Lauderdale Counties

Program Launch Year

2019

Program Targets and Outcomes

- To increase sales tax revenues and the local labor workforce
- 10 spots in the first year; now increased to 50 to keep up with demand
- Projects \$6M increase in GDP

Program Funding and Administration

Funded by the Shoals Economic Development Authority and the local Chamber of Commerce

Program Website

<https://remoteshoals.com/>

CASE STUDY 9

Educational Opportunity Tax Credit

Program Location

Maine

Target Worker Type

Both on-site and remote workers who are college graduates

Incentives Offered

- \$2,500 annual reimbursement of student loan repayments through refundable state tax credit, up to \$25,000 lifetime value
- If the credit is more than state taxes owed, balance is given in cash

Program Requirements

- Any worker with a bachelor's or associate's degree
- Program requirements vary by graduation year and type of degree
- For recent graduates (2016+), they must:
 - Be a Maine resident for the tax year
 - Work in Maine (includes on-site, remote, and self-employed workers)
 - Have a bachelor's or associate's degree from an accredited U.S. school or a graduate degree from a Maine school

Program Launch Year

2008

Program Targets and Outcomes

- When initially launched, open only to those who graduated from a school in Maine, but it has been expanded since to include any U.S. school
- About 13,000 Maine residents qualify for the program each year
- Program simplification and expanded reach in 2022 mean that up to 40,000 Maine residents may now qualify

Program Funding and Administration

State-government funded and administered

Program Website

<https://www.liveandworkinmaine.com/opportunity-maine/>

CASE STUDY 10

New Relocating Worker Grant

Program Location

Vermont

Target Worker Type

On-site workers in short-staffed industries

Incentives Offered

\$7,500 reimbursement for expenses, including moving costs, closing costs, lease deposits, and first month's rent

Program Requirements

- Must have moved to the state after July 1, 2021
- Must find full-time work in Vermont
- Must work in high-demand roles (<https://thinkvermont.com/wp-content/uploads/2021/08/Short-Term-Occupational-Projections.pdf>) including cashiers, bartenders, home health aides, laborers, landscapers, carpenters, farmers, construction, child care, and more
- Must be paid a minimum of \$13.39/hr (Vermont living wage)
- Limited to one grant per household
- Employers must be able to show they could not fill the job from applicants inside the state within a reasonable period

Program Launch Year

2021

Program Targets and Outcomes

- Vermont has a significant worker shortage, with three jobs open for every person looking for work
- The state has run three separate relocation incentive programs since 2018, awarding nearly \$2 million to attract new residents to the state
- Across the three programs, 435 new workers and their families have moved to the state
- The New Relocating Worker Grant was the third program; the first, which focused on remote workers, awarded over 300 grants, and the second was an exploratory vacation program
- New legislation in June 2022 approved \$3 million of funding for a fourth relocation program
- The legislature commissioned a study that showed half of grant recipients said the incentive they received was not an important part of their decision to relocate; however, others who were considering multiple locations said it was a factor
- The same study indicated that the grants generated \$17 million for the economy and \$1 million in tax revenue, but findings were questioned by a state auditor

Program Funding and Administration

State-government funded and administered

Program Website

<https://thinkvermont.com/relocation-incentives/>

CASE STUDY 11

Alaska Permanent Fund Dividend

Program Location

Alaska

Target Worker Type

Both on-site and remote workers

Incentives Offered

- Annual Permanent Fund Dividend payout: amount varies each year, but is expected to be \$3,284 per recipient in 2022 (highest ever)
- 2021 dividend was \$1,114

Program Requirements

- Must have been a resident of Alaska for the entire previous calendar year
- Cannot have been sentenced or incarcerated as part of a felony conviction in the previous year
- Every member of a family is eligible to receive payment, including children

Program Launch Year

1976

Program Targets and Outcomes

- Dividends paid each year based on the fund's performance
- Not explicitly focused on attracting out-of-state talent, but that has been a by-product of the program
- Anecdotal evidence that it helps incentivize skilled trade workers, particularly in the oil and gas industry, and military veterans to go to or stay in the state

Program Funding and Administration

- The Alaska Permanent Fund Corporation, a quasi-independent state entity, manages the fund's investments
- The State Department of Revenue is responsible for implementing the program

Program Website

<https://pfd.alaska.gov/>

CASE STUDY 12

Revitalize Talent Attraction Program

Program Location

40 localities in Southern and Southwestern Virginia

Target Worker Type

On-site workers in targeted, hard-to-fill occupations

Incentives Offered:

Provides up to \$12,000 annually in student loan repayment reimbursements for up to two years for a maximum benefit of \$48,000 per person

Program Requirements

- Must be a recent college graduate (between December 2020 and December 2022)
- Must commit to work for 24 months in one of the following hard-to-fill occupations: public school teacher in science, math, technology/computer science, or career and technical education (grades 6–12); speech language pathologist; physical or occupational therapist; industrial or electrical engineer; information security, network, or computer systems analyst
- Must demonstrate civic engagement by volunteering with local nonprofits or the government for at least 50 hours a year

Program Launch Year

2019

Program Targets and Outcomes

- To encourage recent graduates to live in the Tobacco Region and work in targeted, hard-to-fill occupations
- In 2022, 104 applications were received, and 77 were awarded loan repayment reimbursement
- 2022 cost was \$1.4 million
- Since 2019, 299 people have received awards

Program Funding and Administration

Funded and coordinated by the Virginia Tobacco Region Revitalization Commission

Program Website

<https://www.revitalizeva.org/grant-loan-program/student-loan-repayment/>

CASE STUDY 13

M.O.S.T. Nova Scotia

Program Location

Nova Scotia, Canada

Target Worker Type

On-site workers in the skilled trades

Incentives Offered

- Provincial tax rebate on the first \$50,000 of income earned through work in eligible skilled trades
- Average rebate amount expected to be \$2,700

Program Requirements

- Must be under 30 years of age
- Must be employed in one of the skilled trades in demand in the province (<https://novascotia.ca/budget/docs/Tax-measures-More-Opportunity-for-Skilled-Trades.pdf>)

Program Launch Year

2022

Program Targets and Outcomes

- Expected to apply to 7,500 workers
- To attract and retain more young people in the skilled trades because many older workers are retiring
- Will be implemented for the first time for the 2022 tax year
- Budget included \$750,000 for skilled trades recruiting in school programs, including promotion efforts to double the number of students in the programs and provide them with more supplies and resources
- Nova Scotia also launched a promotional campaign to recruit skilled trades and healthcare workers from other provinces alongside this rebate

Program Funding and Administration

Provincial-government funded and administered

Program Website

<https://novascotia.ca/budget/docs/Tax-measures-More-Opportunity-for-Skilled-Trades.pdf>

CASE STUDY 14

Tuition and Training Tax Credit

Program Location

Canada

Target Worker Type

Any workers that pay for training, including on-site skilled trades workers

Incentives Offered

- Tax credit increases by \$250 each year a worker files taxes and can go to a maximum of \$5,000
- 50% of tuition costs can be claimed

Program Requirements

- Must be between 26 and 65 years of age
- Training must be from a certified institution
- Fees must be greater than \$100
- Licensing exam fees may be eligible for the tuition tax credit if they exceed \$250

Program Launch Year

2020

Program Targets and Outcomes

- To support training for workers across Canada; in particular, vocational training programs
- Canada concurrently introduced a federal labor mobility tax deduction for skilled trades workers to get a tax deduction of up to \$4,000 for travel costs if their work site is more than 80 km from their place of residence (will be effective as of tax year 2022)

Program Funding and Administration

Federal-government funded and administered

Program Website

<https://www.canada.ca/en/revenue-agency/services/child-family-benefits/canada-training-credit.html>

Appendix III

Interviewed Companies & Individuals

Appendix III: Interviewed Individuals and Companies Represented

The following organizations and individuals are acknowledged for their time and contribution to this research and analysis.

A particular thanks to the Hampton Roads Workforce Council for facilitating interviews with the skilled trades workers.

Business Network for Offshore Wind | Workforce Development & HSE Director

Colonna's Shipyard | President and CEO

Dominion Energy | Corporate Public Policy, Senior Advisor for Policy and External Affairs

Fairlead Integrated | President

Hampton Roads Alliance | CEO

Hampton Roads Community College Workforce Cooperative | CEO

Hampton Roads Workforce Council | CEO, Chief Innovation Officer

Kemper Consulting | Consultant

Newport News Shipbuilding | Head of Government Relations. Head of Trade Recruiting

Virginia Maritime Association | VP of Industry and Government Affairs, Executive Director

Virginia Ship Repair Association | President

Skilled Trades Workers | Electrician, Welder, Welder

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