Study of the Feasibility of a Transition to Retirement Program for Workers Close to Retirement Facing Job Loss or Transition Due to Energy Technology Sector Changes

Prepared by BERK Consulting

June 2025



EXECUTIVE SUMMARY

As Washington state implements policies to move away from dependence on traditional energy sources to renewable or cleaner forms of energy, some current energy workers may be displaced from their jobs. To address potential hardship experienced by displaced workers, the 2023 Legislature passed HB 1176, creating a Clean Energy Technology Workforce Advisory Committee (CETWAC) to work collaboratively with business and labor interests to support workforce development to train and develop the workers needed in clean energy careers.

As part of this initiative, the Workforce Training & Education Coordinating Board contracted with BERK Consulting to fulfill one of the mandates outlined in HB 1176: conducting a study of the feasibility of a "transition to retirement" program that preserves income, medical, and retirement benefits for workers close to retirement who face job loss or transition due to energy sector changes.

Affected Workers Near Retirement: We estimate a net loss of approximately 13,000 direct jobs from 2021 to 2050, with 17% of the workforce in affected sectors between the ages of 55 and 64, and 6% age 65 or older. The number of workers near retirement age varies depending on workforce retirement age for a given sector and occupation.

For a workforce retirement age of 65 or under and a near retirement threshold of 18 months, approximately 330 total workers would be eligible for the program. This corresponds to a range from 11 workers per year if job losses occurred steadily every year from 2021 to 2050, to 55 workers per period if job losses occurred periodically every five years.

For a workforce retirement age over 65, approximately 120 total workers would be eligible, which corresponds to a range from 4 workers per year if job losses occurred annually to 20 workers per period if job losses occurred every five years.

Potential Transition to Retirement Program Components: A key concern of Washington workforce stakeholders is the lack of options that older workers have when faced with job loss at no fault of their own. As a result, the program design included in this study allows individuals to seek reemployment through retraining or to pursue early retirement while preserving the income and benefits they expected to have at retirement age.

The potential program provides wage subsidies and healthcare premium subsidies to support eligible workers. It also supports eligible workers who seek reemployment or retraining by connecting them to existing programs that provide training cost assistance and job search services. Federal laws protect retirement income benefits, such as Social Security and retirement savings, and do not require additional program costs to be preserved.

Estimated Program Costs: The estimated costs of this program are sensitive to program design factors that impact the number of eligible workers and per-worker costs, illustrated on the following page. Per-worker costs may vary for contract workers and unionized workers. There may also be additional administrative factors to consider, such as the potential costs of certifying workers for eligibility.

Illustration 1. Transition to Retirement Cost Factors



Source: BERK, 2025.

To account for the variation in wages across affected sectors, legislative requirements for workforce pay in high-risk settings, and workforce tenure of eligible workers, we estimated eligible worker wages based on an employment-weighted 75th percentile wage. With 100% coverage of wage subsidies, the average annual cost to the program to provide wage subsidies is \$76,648 per worker. Adding in the costs to provide healthcare premium subsidies, we estimated that the annual program cost per worker ranges from \$76,648, assuming Medicare eligibility (which incurs no additional cost to the program), to \$93,784, assuming a family healthcare plan.

With 100% wage subsidies, the program costs for a workforce retirement age of 65 or under range from \$1,177,980 per year, assuming job losses occur steadily every year, to \$5,693,572 per period, assuming job losses occur periodically every five years. For a workforce retirement age over 65, the program costs range from \$339,791 per year with a steady pattern of job losses to \$1,652,324 per period assuming a periodic pattern of job losses.

The feasibility of implementing a Transition to Retirement program involves both policy and cost considerations. On the policy side, public interest, societal costs, and equity concerns are central. On the cost side, while per-participant costs may exceed those of other worker benefit programs, they reflect comprehensive benefits designed to support workers after job loss, ensuring no significant loss of income or benefits. This standard surpasses all other identified displaced-worker programs. In contrast to other industries impacted by policy changes, the domestic energy sector remains profitable and growing. The cost to implement a Transition to Retirement program represents a small portion of the annual GDP of affected energy sectors.

The Transition to Retirement program model can be instructive for managing the economic and social externalities associated with significant episodic shifts like the closing of a facility. Regardless of whether the state of Washington decides to pursue a public program to reduce the hardships associated with structural unemployment of near-retirement workers, the Transition to Retirement program design and cost estimates can help identify the impacts on workers who lose their jobs due to energy sector changes and inform negotiations between government, industry, and labor.

TABLE OF CONTENTS

Introduction
Policy Precedents
Transition to Retirement7
Example Programs and Frameworks8
Program Eligibility10
Transition to Retirement Options
Program Components
Program Costs
Program Feasibility27
Appendix A: HB 1176
Appendix B: Per-Worker Cost Calculations

INTRODUCTION

Washington state has implemented policies to move away from dependence on traditional energy sources, which will create job impacts on its energy workforce. In 2023, the Washington State Legislature passed House Bill (HB) 1176 to "[develop] opportunities for service and workforce programs to support climate-ready communities."¹ As directed by the Legislature, the Clean Energy Technology Workforce Advisory Committee (CETWAC) will lead the work outlined in HB 1176 with staff support from the Washington State Workforce Training and Education Coordinating Board (Workforce Board).

The Workforce Board contracted with BERK Consulting to address one mandate in HB 1176, specifically a study of the feasibility of a "transition to retirement" program that preserves income and benefits for workers close to retirement who face job loss or transition due to energy technology sector changes (see *Appendix A: HB 1176*). This study complements additional analysis and recommendations to support the expansion of the clean energy technology workforce, to transition the existing skilled workforce to new industry sectors, and to provide training opportunities needed to address gaps and mitigate the impact of climate change policy transitions on workers, employers, and communities.

Study Organization

Policy Precedents: This section reviews research and policy precedents in the United States focused on support for worker groups similar to the population that energy industry changes may impact. The body of literature on workers who face job loss due to structural industry changes is broad and spans decades of policy responses and research studies. However, little research and few policy responses specifically address the hardships experienced by workers close to retirement age.

Transition to Retirement: This section describes the eligibility criteria and components of a potential program to preserve income and benefits for workers close to retirement age who face job loss due to changes in the energy technology sector. Eligibility and criteria components include estimations of the number of eligible workers in Washington, the average annual cost per eligible worker for each program component, and the total annual program costs.

Program Feasibility: This section discusses the policy and cost feasibility of the potential program.

Appendices: These appendices provide additional context on the study guidance from HB 1176 and illustrations of per-worker cost calculations for an example occupation.

¹ Washington State Legislature, <u>HB 1176</u>, Regular Session 2023-2024.

POLICY PRECEDENTS

Policy responses to mitigate the hardships faced by workers and communities resulting from policy decisions are not new. This section reviews workforce policies in the United States that address the hardships of workers who have been significantly impacted by structural changes in their industry. This review will help contextualize the current policy challenge for energy workers. These policy precedents span decades and various industries. This section also examines the existing research on the experiences of workers close to retirement age who face job loss.

Examples of Policy Responses to Remedy Hardships on Workers Impacted by Industry Structural Changes

Unlike unemployment resulting from voluntary transitions or cyclical business fluctuations, workforce disruptions due to structural impacts by policy decisions can have profound and lasting effects on individual workers and communities that depend on impacted industries for economic stability. Property value declines, prolonged unemployment, sinking morale, and increased stress-related healthcare costs can accompany this kind of workforce restructuring.² In the United States, examples of policy responses to address workforce impacts of structural changes in industry include those from the manufacturing, forestry and timber, nuclear defense, military, and energy industries.

Manufacturing

In 1962, the Kennedy Administration established the Trade Adjustment Assistance (TAA) program to support workers who lost income or work due to offshoring manufacturing and increased competition from imports. The program became more utilized following the Trade Act of 1974 during the Ford Administration, which loosened the eligibility criteria, streamlined the application process, raised potential income support, and expanded benefits.³

The TAA program aims to help eligible workers return to employment with benefits and services, including employment and case management services, training opportunities, wage subsidy and income support, and job search and relocation cash allowances. Groups of workers are certified for the TAA program by the U.S. Department of Labor (DOL), after which workers in Washington state may apply for individual services through the Washington State Employment Security Department (ESD), which is the State Workforce Agency for Washington.

Later additions of the Alternative Trade Adjustment Assistance (ATAA) and Reemployment Trade Adjustment Assistance (RTAA) provided additional subsidies for some older TAA-certified workers.⁴ The

² David Lewis, Michael Frisch, & Michael Greenberg, 2004, "<u>Downsizing and Worker Separations: Modelling the Regional</u> <u>Economic Impacts of Alternative Department of Energy Workforce Adjustment Policies</u>," *Regional Studies*.

³ Joanne Guth and Jean Lee, 2017, "<u>A Brief History of the U.S. Trade Adjustment Assistance Program for Workers</u>," USITC *Executive Briefings on Trade*.

⁴ In addition to the ATAA and RTAA income subsidies described in this section, the Health Coverage Tax Credit subsidized a portion of healthcare insurance premiums for eligible workers, including ATAA/RTAA recipients, until its sunset in 2022. See *Example Frameworks and Programs* for more information about this program.

ATAA provides income that bridges the gap between a worker's wage when they leave their tradeaffected job and their new wage. To be eligible, the worker must be TAA-certified, get a new job by the 26th week after they leave their TAA-certified job, be at least 50 when they are reemployed, be employed full time, and expect to earn no more than \$50,000 in their new job. Eligibility for RTAA is similar, except there is no deadline for when the worker gets a new job, and the worker may receive RTAA for part-time jobs if enrolled in TAA-approved training.⁵ Since 1974, the TAA program has served more than 5 million American workers.⁶

Termination provisions for the TAA program took effect on July 1, 2022. This means that the DOL cannot conduct new investigations or issue new certifications of eligibility for new groups of workers. However, workers who were certified and separated from their jobs on or before June 30, 2022, may still be eligible for benefits and services.⁷ Additionally, workers who were certified before July 1, 2022, but were not separated from their trade-affected job before that date may be eligible for TAA benefits or services.⁸

Forestry and Timber

In the early 1990s, various factors led to the halting of timber sale programs by the USDA Forest Service and the USDI Bureau of Land Management in the Pacific Northwest. This significantly impacted Pacific Northwest communities whose economies depended on timber harvesting and management. Over 20,000 direct and indirect jobs were lost, and the poverty rate in impacted rural areas rose to 50 percent higher than in urban regions. The economic development component of the 1993 Northwest Forest Plan, the Northwest Economic Adjustment Initiative (NWEAI), emphasized support for workers and families to mitigate the impact of reduced timber harvests in parts of Oregon, Washington, and California.⁹ NWEAI projects were diverse, supporting community infrastructure like sewer and drinking water systems, industrial parks, and business incubators. They also provided loan guarantees to small businesses, strategic planning assistance, ecosystem restoration, and worker retraining programs.¹⁰

Nuclear Defense

The Worker and Community Transition program, operated through the Department of Energy (DoE) from 1994 to 2004, provided grants and additional assistance for communities affected by the shutdown of nuclear facilities. The program aimed to assist displaced workers and support the economic recovery of affected communities. Starting in 1992, DoE eliminated nearly 50,000 contractor

⁵ See "Wage subsidies for older TAA-certified workers."

⁶ Joanne Guth and Jean Lee, 2017, "A Brief History of the U.S. Trade Adjustment Assistance Program for Workers."

⁷ See "<u>TAA Termination Impacts: By the Numbers</u>" for more information on the impacts of the TAA program termination.

⁸ As of January 21, 2025, 1, 117 Washington workers across eighteen firms had TAA Petitions Pending or Received during termination. See "<u>TAA Termination Impacts: By the Numbers</u>," by the U.S. Department of Labor, last updated January 21, 2025.

⁹ Harriet H. Christensen, Terry L. Raettig, & Paul Sommers, 1999, "<u>Northwest Forest Plan: Outcomes and Lessons Learned From the Northwest Economic Adjustment Initiative</u>," United States Department of Agriculture.

¹⁰ Terry L. Raettig & Harriet H. Christensen, 1999, "<u>Timber Harvesting, Processing, and Employment in the Northwest Economic Adjustment Initiative Region: Changes and Economic Assistance</u>," *United States Department of Agriculture.*

personnel at 13 major sites.¹¹ In 1998, DoE issued guidance to help field organizations address and mitigate the impacts of changes in the contractor workforce. The guidance recommended programs to reduce involuntary separations (such as early retirement, voluntary separation incentives, and retraining) and advises that affected individuals receive as much notice as possible about termination, along with access to educational, relocation, and outplacement assistance.¹²

Military / Defense

As the United States transitioned out of the Cold War between 1987 and 1996, the defense and aerospace industries lost 1.4 million jobs, an approximately 40% decline.¹³ In response, the federal government implemented transition programs to help ease the displacement caused by the downsizing of the defense sector. The Defense Reinvestment and Conversion Initiative was established in 1993 and combined a few different programs, including separation benefits, education and training, assistance to companies to develop technologies with both military and civilian applications, and support for the defense industrial base.¹⁴

Energy

Across the United States, as well as globally, governments have been adopting net-zero policies and reforms to reduce carbon emissions. These policies, along with other contextual factors, are triggering a significant restructuring of local and national economies away from the use of fossil fuels to greater efficiencies and renewable energy sources. The transition is expected to lead to the loss of some jobs in some fossil fuel-based industries and the creation of new jobs in emerging sectors. Interest groups and researchers are currently investigating potential federal policies and programs to reduce hardships associated with this transition.

In 2023, the Washington state legislature enacted legislation to develop opportunities for service and workforce programs. HB 1176 directs the Washington State Workforce Training and Education Board to establish clean energy technology advisory committee to evaluate clean energy technology workforce needs; advise on how to expand clean energy technology sectors and jobs; strategies to prevent workforce displacement; a prioritization of transitioning existing skilled workforce to new industry sectors; and a study of the feasibility of a transition to retirement program to preserve income, medical, and retirement benefits for workers close to retirement who face job loss or transition because of energy sector changes.

¹¹ Jeremy Brecher, 2015, "How to Promote a Just Transition and Break Out of the Jobs vs. Environment Trap," Dollars & Sense; Robert Pollin & Brian Callaci, 2019, "The Economics of Just Transition: A Framework for Supporting Fossil Fuel-Dependent Workers and Communities in the United States," Labor Studies Journal; Lucy Stone & Catherine Cameron, 2018, "Lessons for a Successful Transition to a Low Carbon Economy: A Report by Agulhas Under a Grant From the Children's Investment Fund Foundation," Agulhas Applied Knowledge.

¹² United States Department of Energy, 1998, "Planning Guidance for Contractor Work Force Restructuring."

¹³ Laura Powers & Ann Markusen, 1999, "<u>A Just Transition? Lessons from Defense Worker Adjustment in the 1990s</u>," *Economic Policy Institute*.

¹⁴ United States General Accounting Office, 1995, "<u>Defense Sector: Trends in Employment and Spending</u>"; Pollin & Callaci, 2019, "The Economics of Just Transition"; Powers & Markusen, 1999, "A Just Transition?"

Washington is not alone in its efforts to address the needs of workers and communities impacted by policies designed to reduce the reliance on carbon-based energy. *Exhibit 1* lists examples of other energy transition initiatives in the United States that may offer early lessons.

Location or Organization	Legislative Action	Year	Description
Colorado	HB19-1314: Just Transition From Coal-based Electrical Energy Economy	2019	Office of Just Transition (OJT): The OJT is developing a program to support coal transition workers in affected communities throughout the state. That includes helping workers and their families prepare for closures and explore their future options as well as whatever assistance may be appropriate when the closures happen later this decade.
Midwestern Governors Association (MGA)	N/A	2021	Preparing Midwestern Communities for Power Plant Closures: The MGA hosted quarterly public meetings and collaborated with the Just Transition Fund to engage utilities, community leaders, workers, and energy advocates to discuss the impacts of power plant closures and plan for a just transition.
Michigan	Community and Worker Economic Transition Act	2023	<u>Community & Worker Economic Transition Office:</u> The Office has a mandate to address shifts to renewable energy in both the utility and auto sectors, making up more than 20% of the state's economy. The office will address the impacts of economic transitions by ensuring displaced workers have access to high quality jobs, employers increase their resiliency, and communities develop proactive, comprehensive strategies to mitigate transition risks.
Minnesota	Minn. Stat. 116J.5491 establishes the Energy Transition Office.	2021	<u>Energy Transition Office:</u> For communities and workers impacted by fossil fuel- based power plant closures in Minnesota, the office aims to help minimize the negative consequences from closures and maximize opportunities for future economic growth and community wellbeing.
National Association of Counties (NACo)	N/A	2022	Building Resilient Communities in Coal Communities (BRECC): BRECC connects coal communities across the nation, supports local leaders, and builds capacity in under-resourced communities.
New York	<u>Climate</u> Leadership and	2019	Office of Just Energy Transition (OJET): OJET will connect workers to opportunities for quality jobs, upskilling, and training.
	<u>Community</u> <u>Protection Act</u>		New York State Energy Research and Development Authority (NYSERDA): NYSERDA has dedicated more than \$170 million in funding to support clean energy workforce development and training.
			<u>Scoping Plan</u> : The Plan highlights the need to create a bridge to retirement for displaced workers nearing retirement age at the time of a plant or facility closure, along with other initiatives to support these workers.

Exhibit 1. United States Energy Workforce Transition Initiatives Across the United States

Sources: See links in exhibit; BERK, 2025.

Older Workers with Involuntary Job Loss

Research on involuntarily displaced workers reveals significant disparities in outcomes for older individuals, including fewer job opportunities, lower wages, and negative health impacts. An evaluation of TAA's effectiveness indicated that negative employment and earnings impacts for older workers persisted over a four-year follow-up period.¹⁵ In part to remedy the negative income impacts on older adults after involuntary displacement, the ATAA and RTAA programs offer wage subsidies to close the gap between the wage when the person left their trade-affected job and the wage at their new job. However, an evaluation of the ATAA program found that many older workers did not receive the program's benefits because they failed the program's eligibility requirement to secure new employment within six months of their layoff.¹⁶

Cases in the energy industry suggest similar patterns of impact. A study of the closure of the Marathon Martinez oil refinery in 2020 found that former workers experienced a 24% pay cut in their new jobs due to loss of seniority and non-union status. Many reported worse working conditions at their new jobs, including poor safety practices.¹⁷ It has also been found that older workers are less likely to transition into green jobs and more likely to stay in carbon-intensive roles.¹⁸ Evaluations of refinery closures in other states have shown that workers often struggle to identify or compete for new opportunities. This is due to several factors, including the lack of formal certifications for their skills and experience.¹⁹ These examples indicate that older workers face distinct needs that existing policy models often overlook.

In addition, research indicates that while a significant number of workers are receptive to job training (particularly when securing a new job proves difficult), older workers often exhibit greater hesitation. Alongside concerns about cost and the necessity of earning an income while training, the length of training may exceed the impacted worker's remaining years in the workforce.²⁰ However, as the energy sector undergoes structural changes, the demand for skills related to traditional energy sources may decrease. Older workers who choose to rely on their current skillset rather than retrain could find that

¹⁵ Ronald D'Amico & Peter Z. Schochet, 2012, "<u>The Evaluation of the Trade Adjustment Assistance Program: A Synthesis of Major Findings</u>," *Mathematica Policy Research*.

¹⁶ US Government Accountability Office, 2006, "<u>Trade Adjustment Assistance: Most Workers in Five Layoffs Received Services,</u> <u>But Better Outreach Needed on New Benefits.</u>"

¹⁷ Virginia Parks & Ian Baran, 2023, "<u>Fossil Fuel Layoff: The Economic and Employment Effects of a Refinery Closure on Workers</u> <u>in the Bay Area</u>," *UC Berkeley Labor Center.*

¹⁸ E. Mark Curtis, Layla O'Kane, & R. Jisung Park, 2024, "Workers and the Green-Energy Transition: Evidence from 300 Million Job <u>Transitions.</u>"

¹⁹ Parks & Baran, 2023, "Fossil Fuel Layoff."

²⁰ Parks & Baran, 2023, "Fossil Fuel Layoff"; US Government Accountability Office, 2006, "Trade Adjustment Assistance"; Powers & Markusen, 1999, "A Just Transition?"; Steven E. Daniels, Corinne L. Gobeli, & Angela J. Findley, 2000, "<u>Reemployment</u> <u>Programs for Dislocated Timber Workers: Lessons from Oregon</u>," *Society & Natural Resources*.

job opportunities are more limited than the demand and that policy precedents tailored to adults near retirement, such as bridge-to-retirement programs, are rare.²¹

Beyond income, older workers who face involuntary unemployment may lose not only their jobs and healthcare insurance if the cost of continuing existing plans becomes too expensive. but also their occupational identities and a sense of purpose. Addressing these barriers is crucial to better support this demographic in their transition to new employment opportunities. To better support these individuals, research suggests that crucial assistance includes, but is not limited to, job training, career services, a strong economic development strategy to create quality jobs, and financial support to bridge income gaps.²²

TRANSITION TO RETIREMENT

To assess the feasibility of a potential Transition to Retirement program, this section discusses examples of existing programs and policies, including a discussion of those programs' eligibility criteria and components. We then consider what additional program elements would be needed to preserve income and benefits for workers close to retirement age who face job loss or transition due to energy sector technology changes. To meet the legislative direction to assess the feasibility of a program to "preserve income, medical, and retirement benefits," we design a program that includes wage and healthcare premium subsidies for eligible workers. Other benefits, such as Social Security and retirement savings, are protected by federal laws and do not require additional program costs to be preserved. Program costs vary depending on the program design factors that impact the number of eligible workers and per-worker costs.

A primary concern of Washington workforce stakeholders is the lack of options that older workers have when faced with job loss through no fault of their own. As a result, the Transition to Retirement program allows individuals to choose to seek reemployment, with the option of retraining, or to retire early while preserving the income and benefits they expected to have at retirement age. Providing these options can minimize the negative economic and public health impacts that accrue when older adults lose work and are forced to retire before they are ready, as well as keeping the talent, skills, and experience of older adults engaged in Washington's workforce and supporting Washington's economy. The program includes support for workers who seek reemployment or retraining by connecting workers to existing programs and providing wage and healthcare premium subsidies during the training and job search periods.

²¹ Daniels, Gobeli, & Findley, 2000, "Reemployment Programs for Dislocated Timber Workers"; Parks & Baran, 2023, "Fossil Fuel Layoff"; United States General Accounting Office, 1995, "<u>Workforce reductions: Downsizing Strategies Used in Selected</u> <u>Organizations</u>."

²² Parks & Baran, 2023, "Fossil Fuel Layoff"; and Wesley Look, Daniel Raimi, Molly Robertson, Jake Higdon, & Daniel Propp, 2021, "<u>Enabling Fairness for Energy Workers and Communities in Transition: A Review of Federal Policy Options and</u> <u>Principles for a Just Transition in the United States</u>," *Resources for the Future and Environmental Defense Fund*.

Example Programs and Frameworks

We identified no existing programs that preserve all wage, healthcare, and retirement benefits for workers near retirement who face job loss and do not seek reemployment or retraining.²³ However, some programs and research have focused on income support for older adults and workers in fossil fuel industries, which have components that could be included in a Transition to Retirement program. We draw upon features of these frameworks in the program design. These include ATAA/RTAA, the federal Health Coverage Tax Credit program, unemployment benefits and related programs administered by the ESD, programs that have been proposed by labor and climate policy researchers, and recommendations from a study of refinery workers laid off at the Marathon Martinez plant.

Trade Adjustment Assistance Program

As discussed above, in *Policy Precedents*, the federal TAA program was established to support workers who became unemployed due to increased imports within their industry or shifts to overseas production associated with trade liberalization.

In 2002, Congress established the parallel ATAA program, which offers wage subsidies to eligible workers at least 50 years of age who accepted lower-wage reemployment. Through this program, workers are eligible to receive half the difference between their wage in the lost job and the new wage, if the new job is obtained within a certain time frame and earns less than \$50,000 a year. In 2009, the RTAA program was enacted, which is similar to the ATAA program but does not have a deadline for re-employment.²⁴ ATAA/RTAA wage subsidy payments are payable for up to two years from the first qualifying re-employment or \$10,000, whichever comes first. On July 1, 2022, termination provisions for the TAA program took effect, meaning that DOL has not been able to conduct new investigations or issue certifications of eligibility for new groups of workers, though workers who were certified and separated from their job on or before June 30, 2022, may still be eligible for benefits and services.

Healthcare Coverage Tax Credit

The Health Coverage Tax Credit (HCTC) was a federal tax credit program administered by the Internal Revenue Service.²⁵ Up until the sunset date of January 1, 2022, HCTC subsidized 72.5% of healthcare insurance premiums for eligible taxpayers, including ATAA/RTAA recipients and individuals 55 to 64 years old receiving payments from the Pension Benefit Guaranty Corporation (a federal organization that becomes the trustee of defined benefit or pension plans if the employer faces financial difficulty paying all of the promised benefits).

²³ There are some programs that have components targeted to older adults, such as the RTAA and an example from British Columbia, Canada, focused on supporting retirement for older workers to ease community adjustments to changing forestry employment patterns. See "<u>Bridging to Retirement Program</u>" at <u>gov.bc.ca</u>.

²⁴ See "Side-by-Side Comparison of TAA Program Benefits under the 2002 Program, 2009 Program, 2011 Program, 2015 Program, and Reversion 2021" for a comparison of TAA program benefits.

²⁵ See "<u>The Health Coverage Tax Credit (HCTC): In Brief</u>" for more details about the HCTC program.

Unemployment Benefits and Related Programs

The Washington State Employment Security Department (ESD) administers unemployment income benefits for workers who lose their jobs through no fault of their own. These benefits are intended to provide temporary support during the job search period and are not based on financial need. The total amount of unemployment benefits per claimant is the lesser of 26 times the weekly benefit amount or one-third of total gross wages.²⁶ Individuals who pursue job training may also qualify for the Training Benefits program which provides additional weeks of unemployment benefits.

ESD also operates the SharedWork program, which is an unemployment insurance (UI) short-term compensation program that provides an opportunity for employers to retain workers at reduced hours with UI backfilling the wages lost to reduced hours of work.²⁷

Additional Proposals and Models

In "Employment Support for the Transition to Retirement," researcher David Stapleton proposes an initiative to mitigate the negative effects of increasing the earliest eligibility age for Social Security benefits.²⁸ In this proposal, benefits are designed to support and subsidize older workers who can work and to expedite entry into Social Security Disability Insurance for those who cannot. These benefits target individuals who are fully insured for Social Security benefits and experience a broader set of adverse consequences than the eligibility criteria for our program. Stapleton also proposes policy and budgetary changes that would necessitate federal action, which is not an avenue explored in this study.

In "A Green New Deal for Washington State," researchers Robert Pollin, Heidi-Garrett-Peltier, and Jeannette Wicks-Lim present a framework for supporting workers impacted by a statewide contraction in fossil fuel consumption.²⁹ Their framework includes guaranteeing pensions for impacted workers who have reached retirement age, providing full wage replacement for impacted workers near retirement age, and providing income, retraining, and relocation support for younger workers. In their program model, Pollin et al. assume that workers near retirement age do not seek reemployment.

In 2020, the Marathon Martinez oil refinery in Contra Costa County, California, was permanently shut down, laying off 345 unionized refinery workers and several hundred management employees and contract workers. In a study prepared for the UC Berkeley Labor Center, researchers Virginia Parks and Ian Baran surveyed and interviewed refinery workers to document their post-layoff experiences.³⁰ The study recommendations included "bridge-to-retirement funding" to provide full retirement benefits for workers eligible for early retirement within one year following a layoff.

²⁶ See "Estimate your benefit" for the formula used to calculate a claimant's weekly benefit amount.

²⁷ See "<u>About SharedWork</u>" for more information about this program.

²⁸ David Stapleton, 2009. "Employment Support for the Transition to Retirement: Can a New Program Help Older Workers Continue to Work and Protect Those Who Cannot?" AARP Public Policy Institute.

²⁹ Robert Pollin, Heidi Garrett-Peltier, & Jeannette Wicks-Lim, 2017. "<u>A Green New Deal for Washington State: Climate Stabilization, Good Jobs, and Just Transition</u>," University of Massachusetts-Amherst Political Economy Research Institute.

³⁰ Parks & Baran, 2023, "Fossil Fuel Layoff."

Program Eligibility

Assessing the feasibility of a Transition to Retirement program requires estimating the number of eligible workers. In this study, we incorporated three considerations for establishing program eligibility requirements:

Identifying workers in affected sectors: The first step in establishing program eligibility will be to define a mechanism to determine which job losses are due to energy sector changes. For example, to be eligible for the federal TAA program, petitions submitted by parties such as workers, unions, employers, and local workforce boards are reviewed by the Department of Labor, which then reviews and certifies that the lost job was due to international competition impacts on manufacturing. We do not estimate the administrative costs associated with the eligibility certification process, as this mechanism remains to be seen at the time of this study. To estimate the number of direct jobs facing job loss due to energy technology sector changes, we used data from the Clean Energy Transition Institute and the Washington State Office of Financial Management (OFM) Input-Output Model.

Defining "near retirement": A Transition to Retirement program will also need to define the minimum and maximum age for eligibility. There are several factors to consider when defining this window. For example, a "typical" retirement age varies across industries and occupations. In addition, some training programs may require a retraining period that exceeds the time the worker has remaining before they reach retirement age. In this study, we estimated the number of workers near retirement based on a threshold or maximum number of months before retirement age. We used data from the Current Population Survey and the Washington State Employment Security Department to illustrate how the number of eligible workers varies depending on the retirement age and the near retirement threshold.

Estimating annual eligibility: The number of eligible workers per year depends on the pattern of job losses over time.³¹ In this study, we estimated a range for the number of eligible workers based on the frequency of job loss between 2021 and 2050 (the timeframe of the Clean Energy Transition Institute analysis).

Retirement Age

In other retirement income benefit programs, "full retirement" is defined as the age at which a worker can access retirement income benefits without a reduction in benefit amount or penalty for early withdrawal. This age varies depending on the type of retirement income:

- The full retirement age for **Social Security** is 67 for individuals born in 1960 or later.
- **Pension** payments normally begin at age 65 but may be earlier depending on the "typical retirement age for the industry in which the covered workforce is employed" according to 72 Federal Register 28604.
- In a defined contribution plan, such as a 401(k), workers can access benefits at age 59 ¹/₂ without an early withdrawal penalty, or as early as age 55 if the worker separated from employment at age 55 or older.

See *Retirement Income Benefits* for more details about these programs.

³¹ In "A Green New Deal for Washington State" (2017), Pollin and colleagues discussed that a probable pattern of job losses would involve "periods of steady annual job losses which are then punctuated by sporadic periods of larger job losses."

Affected Sectors

The Clean Energy Transition Institute's "Net-Zero Northwest: Technical and Economic Pathways to 2050" (NZNW) is a study that assesses pathways, health impacts, and workforce implications of achieving economy-wide net-zero emissions by 2050 in four Northwest states: Idaho, Montana, Oregon, and Washington. The workforce analysis portion of the NZNW study projected employment by sector for the years 2021 (baseline), 2025, 2030, 2035, 2040, 2045, and 2050.

The employment projections were provided by BW Research, a research firm that partnered with the U.S. Department of Energy to estimate the number of new jobs generated through the conversion to non-carbon-based energy sources as well as the jobs lost in the fossil-fuel-dependent parts of the energy workforce. Estimates were based on employment estimates from the U.S. Energy and Employment Report (USEER) with supplemental information from relevant complementary labor market data, transition scenario-specific investment data, and sub-sector-specific literature reviews and industry research.³² USEER was based on data from the Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), which collects data on workers covered by unemployment insurance laws. Generally, this includes permanent workers at a firm and contract workers employed through a staffing agency but does not include independent contractors.

Contract Workers

There are a significant number of contract workers in affected sectors who are hired for a limited term. These workers are typically affiliated with staffing agencies or self-employment contracts. The 2025 Washington State Refinery Economic Impact Study, prepared by the Western Washington University Center for Economic and Business Research, reports that contractors can double or triple the number of workers on site during large-scale maintenance periods.

In our program model, contract workers would be eligible for a Transition to Retirement program but may not be fully represented in our program cost estimates due to characteristics that vary from worker to worker and influence prevailing wages and benefits (such as whether the worker belongs to a union, is employed through a staffing agency, or works as an independent contractor). The administrative costs of including contract workers in a Transition to Retirement program could be higher on a per capita basis compared to permanent workers due to these characteristics.

In addition, contract workers employed through a staffing agency are typically captured in covered employment data under the industry code for professional services. When calculating weighted-average wages, we did not include professional services in our subset of representative occupation groups, as this group also includes business services such as law and accounting, which are not the focus of this study.

If there are recommendations for a Transition to Retirement program to be funded through, for example, a targeted employer tax or surcharge, employers may be incentivized to shift to workforce models relying on more contract workers to avoid these costs.

³² See "<u>CETI: Net-Zero Northwest Workforce Analysis Methodology Overview</u>" for more details about BW Research's employment modeling process.

Exhibit 2 shows the sub-sectors projected in the NZNW workforce analysis to experience a net loss in direct and indirect jobs by 2050 in Washington state. Energy production, transportation, and delivery were projected to have different impacts across sub-sectors and projection periods.³³ For example, fossil fuel generation was projected to face net job loss from 2021 to 2030, while vehicle manufacturing faced net losses in the short term, but net gains were projected from 2021 to 2050.³⁴



Exhibit 2. Affected Sectors Facing Job Loss

Notes: Direct employment refers to the number of jobs at an establishment (such as workers at refineries), while indirect employment refers to the number of supporting or supply chain jobs outside that establishment (such as construction workers who go to refineries for plant maintenance and repair). Sources: BW Research, 2024; BERK, 2025.

Sources. DVV Research, 2024, DERK, 2025.

³³ See "<u>Energy Subsector Descriptions and Example Jobs</u>" for the 26 sub-sectors defined in the NZNW analysis. Each of these sub-sectors is mapped to a crosswalk developed by BW Research of North American Industry Classification System codes.

³⁴ The Vehicle Manufacturing sub-sector includes electric vehicles so the job loss projections from 2021 to 2050 for gas engine workers is likely greater than shown. For additional context, see the following article that estimates "high" job disruption for workers in the motor vehicle gasoline engine industry: <u>https://www.wri.org/insights/ev-transition-auto-manufacturing-jobs</u>.

To estimate the number of workers who may be eligible for a Transition to Retirement program, we first isolated the number of direct jobs from total employment estimates that combine direct, indirect, and induced jobs. We estimated direct employment from total employment using employment multipliers from OFM's 2012 Washington Input-Output Model. These multipliers represent the total (direct, indirect, and induced) number of jobs created by each direct job, which is differentiated by sector.³⁵ We used the following multipliers in our analysis:

- For Electricity Natural Gas Gen, Fuels Natural Gas, and Fuels Natural Gas Generation, we used the multiplier for the Gas Utilities sector (2.07 total jobs per direct job).
- For Electricity Other Fossil Gen, we used the multiplier for the Electric Utilities sector (4.43 total jobs per direct job).
- For Fuels Other Fossil Fuels, we used the multiplier for the Petroleum and Coal Products Manufacturing sector (11.21 total jobs per direct job).³⁶
- For Transportation Conventional Fueling Stations, we used the multiplied for the Non-Store Retail sector (1.42 total jobs per direct job).
- For Transportation Vehicle Manufacturing and Transportation Vehicle Maintenance, we used the multiplier for the Other Transportation Equipment Manufacturing sector (3.28 total jobs per direct job).

Across the sub-sectors expected to face job losses, we estimated a net loss of approximately 13,000 direct jobs from 2021 to 2050, or a 41% net loss across affected sub-sectors (*Exhibit 3*).

Metric	2021	2025	2030	2035	2040	2045	2050
Direct and Indirect Employment	56,165	57,815	53,636	47,042	41,818	38,730	38,279
Induced Employment	17,945	18,242	16,960	14,950	13,347	12,351	12,203
Total Employment	74,110	76,057	70,596	61,991	55,164	51,081	50,482
Estimated Direct Employment	31,817	32,404	29,299	24,751	21,253	19,263	18,831
Projected Net Job Change from 2021		587	-2,517	-7,066	-10,564	-12,554	-12,986
Net Impacted Share from 2021		+2%	-8%	-22%	-33%	-39%	-41%

Exhibit 3. Estimated Direct Jobs in Affected Sectors Facing Impacts in Washington State

Notes: Only includes estimated employment in affected sub-sectors (see *Exhibit 2*). Induced employment refers to the number of jobs created when direct and indirect employees purchase goods and services (such as workers at a convenience store that refinery and construction workers go to for lunch break).

Sources: BW Research, 2024; Washington State Office of Financial Management, 2012; BERK, 2025.

³⁵ See the <u>2012 Washington Input-Output Study</u> for the sector definitions used in that model.

³⁶ The 2025 Washington State Refinery Economic Impact Study, prepared by the Western Washington University Center for Economic and Business Research, estimates that "each direct refinery job is estimated create 12.28 total jobs elsewhere in the economy, whether indirectly or through induction."

Near Retirement

The number of workers near retirement age varies depending on the sector and occupation. As shown in *Exhibit 4*, the 55- to 64-year-old share of the workforce ranges from 4% for Automotive and Watercraft Service Attendants to 40% for Engine and Other Machine Assemblers.

Exhibit 4	Share of U.S. Workforce 55-64 Years and 65 and Older for Example Occupations in
	Affected Sectors

Sub-Sector	Example Occupation	55 to 64 Years	65 Years and Older
Electricity - Natural Gas Generation	Gas Plant Operators (SOC 51-8092)	22%	3%
Electricity - Other Fossil Generation	Boilermakers (SOC 47-2011)	31%	8%
Fuels - Natural Gas	Gas Compressor and Gas Pumping Stations (SOC 53-7071)	22%	3%
Fuels - Natural Gas Distribution	Control and Valve Installers and Repairers, Except Mechanical Door (SOC 49-9012)	23%	8%
Fuels - Other Fossil Fuels	Petroleum Pump System Operators, Refinery Operators, and Gaugers (SOC 51-8093)	22%	3%
Transportation - Conventional Fueling Stations	Automotive and Watercraft Service Attendants (SOC 53-6031)	4%	5%
Transportation - Vehicle Manufacturing	Engine and Other Machine Assemblers (SOC 51-2031)	40%	
Transportation - Vehicle Maintenance	Bus and Truck Mechanics and Diesel Engine Specialists (SOC 49-3031)	13%	4%

Notes: Dash indicates no data or data that do not meet publication criteria (values not shown where base is less than 50,000). SOC refers to the Standard Occupational Classification System.

Sources: BW Research, 2024; U.S. Census Bureau & U.S. Bureau of Labor Statistics Current Population Survey, 2024; BERK, 2025.

To account for the variation in age distribution by occupation, we calculated an employment-weighted average share of workers near retirement in affected sectors based on the age distribution in the four occupation groups shown in *Exhibit 5*. We estimated that 17% of the workforce in affected sectors are ages 55 to 64 and 6% are 65 years and older. We assumed an even distribution of workers in each age year within these age groups.³⁷

³⁷ The age group 65 years and older does not have a maximum age in the Current Population Survey. We calculated the estimated share in each age year assuming an even distribution of workers 65 to 74 years old. The <u>Bureau of Labor Statistics</u> estimated that 5.5% of the national civilian labor force was 65 to 74 years old and 1.2% was 75 years and older in 2023.

Exhibit 5. Estimated Sha	re of Workers Near	Retirement in Affec	ted Sectors
---------------------------------	--------------------	----------------------------	-------------

SOC	Description	2023 WA Employment	55 to 64 Years (U.S. Share)	65 Years and Older (U.S. Share)
47-0000	Construction and Extraction Occupations	173,070	17%	5%
49-0000	Installation, Maintenance, and Repair Occupations	134,130	18%	5%
51-0000	Production Occupations	161,720	17%	6%
53-0000	Transportation and Material Moving Occupations	285,510	14%	7%
	Employment-Weighted	Average Share:	17%	6%
	Estimated Share in	ו Each Age Year:	1.7%	0.6%

Note: SOC refers to the Standard Occupational Classification System.

Sources: Washington State Employment Security Department, 2024; U.S. Census Bureau & U.S. Bureau of Labor Statistics Current Population Survey, 2024; BERK, 2025.

Annual Eligibility

The estimated number of eligible workers per year for a Transition to Retirement program will also depend on the magnitude and frequency of job losses over time. To illustrate an estimated range of annual eligibility for the program, we modeled two job loss scenarios:

- **Steady:** Job losses occurring steadily every year from 2021 to 2050.
- Periodic: Job losses occurring periodically every 5 years from 2021 to 2050.

In both scenarios, we assumed that job losses were involuntary. Research has found that natural attrition (workers moving to other jobs by choice) and voluntary retirement may be greater than those who experience involuntary job loss, indicating that our estimate is on the higher end.³⁸

For a retirement age under 65 and near retirement threshold of 18 months, we estimated that the annual number of eligible workers for a Transition to Retirement program ranges from 11 workers if job losses occur steadily every year to 55 workers per period if job losses occur periodically every five years (*Exhibit 6*). Raising the near-retirement threshold to 24 months increases the estimated number of eligible workers, while lowering it to 12 months decreases the estimated number of eligible workers. Increasing the retirement age to 65 and over also decreases the estimated number of eligible workers (*Exhibit 7*). For these estimates, we assumed that the share of the population that is near retirement remains at 17% (for the workforce 55-64 years) or 6% (for the workforce 65 years and older), regardless of when job losses occur.³⁹ *Exhibit 8* illustrates the population served by the program.

³⁸ In "A Green New Deal for Washington State" (2017), Pollin and colleagues estimated that annual voluntary retirements were greater than the estimated number of workers near retirement age who would face job loss.

³⁹ The <u>Bureau of Labor Statistics</u> estimates that the share of the national civilian labor force that is 55 to 64 years old will decrease from 16.3% in 2023 to 15.2% in 2033, while the share that is 65 years and older will increase from 6.7% to 8.6%.

Exhibit 6. Estimated Number of Eligible Workers for Retirement Age 65 or Under

	Near Retirement Threshold			
Retirement Age 65 or Under	12 Months	18 Months	24 Months	
Earliest Age of Eligibility	64	63 1⁄2	63	
Near Retirement Share of Workforce	1.7%	2.6%	3.4%	
Net Direct and Indirect Job Losses in Affected Sectors from 2021 to 2050	12,986	12,986	12,986	
Total Workers in Affected Sectors Near Retirement	220.8	331.1	441.5	
Annual Eligible Workers if Job Losses Occur Steadily Every Year:	7.6	11.4	15.2	
Eligible Workers Per Period if Job Losses Occur Every 5 Years:	36.8	55.2	73.6	

Sources: BW Research, 2024; Washington State Office of Financial Management, 2012; U.S. Census Bureau & U.S. Bureau of Labor Statistics Current Population Survey, 2024; BERK, 2025.

Exhibit 7. Estimated Number of Eligible Workers for Retirement Age Over 65

	Near Retirement Threshold			
Retirement Age Over 65	12 Months	18 Months	24 Months	
Earliest Age of Eligibility	66	65 1⁄2	65	
Near Retirement Share	0.6%	1.2%	1.8%	
Net Job Losses in Affected Sectors from 2021 to 2050	12,986	12,986	12,986	
Total Workers in Affected Sectors Near Retirement	77.9	116.9	155.8	
Annual Eligible Workers if Job Losses Occur Steadily Every Year:	2.7	4.0	5.4	
Eligible Workers Per Period if Job Losses Occur Every 5 Years:	13.0	19.5	26.0	

Sources: BW Research, 2024; Washington State Office of Financial Management, 2012; U.S. Census Bureau & U.S. Bureau of Labor Statistics Current Population Survey, 2024; BERK, 2025.

Exhibit 8. Illustration of Eligibility for a Transition to Retirement Program

Energy Workforce in Sub-Sectors Projected to Shrink Due to Energy Sector Changes

Workers Facing Job Loss Due to Energy Sector Changes (40%)

Workers Near Retirement

Source: BERK, 2025.

Transition to Retirement Options

The program allows eligible workers the choice of seeking reemployment or retraining if they desire, or to retire early. *Exhibit 9* illustrates three options available to eligible workers. The following discussion presents estimated program costs for workers who choose to retire early and describes the relative costs for workers who choose to seek reemployment or retraining. All program cost estimates assumed that workers previously received healthcare insurance and retirement benefits in their lost job.



Exhibit 9. Options for Eligible Workers

Source: BERK, 2025.

Program Components

The program provides wage subsidies and healthcare premium subsidies to support eligible workers. In this section, we discuss the estimated costs per worker served for each of these components. Retirement income benefits such as Social Security and retirement savings are protected by federal laws and do not require additional program costs to be preserved. The program also supports eligible workers who seek reemployment or retraining by connecting workers to existing programs that provide training cost assistance and job search services, while providing wage subsidies and healthcare premium subsidies during the training and job search periods.

Exhibit 10 summarizes the existing benefits or services, the cost to the program, and the cost to the worker for each program component.

Component	Existing Benefits or Services	Cost to Program	Cost to Worker
Wage Subsidy	Unemployment Benefits (if worker seeks reemployment)	Varies depending on eligible worker wages	None
Healthcare Premium Subsidy	COBRA; Medicare	Varies depending on eligible worker age and coverage type	Employee premium if worker elects to continue coverage through COBRA
Retirement Income Benefits	Social Security Act; ERISA	None	Potential reduction in total benefits due to fewer years of working years and tenure
Reemployment Support	CTC Worker Retraining Program; WIOA Dislocated Worker Program; Employer Relocation Packages	None	Costs beyond financial assistance provided through existing programs

Source: BERK, 2025.

Wage Subsidies

The program's wage subsidies preserve lost income from regular wages. As shown in *Exhibit 11*, hourly and annual wages vary by occupation. To account for the variation in wages across occupations, we calculated an employment-weighted average for the four occupation groups shown in *Exhibit 12*. We estimated the annual costs to provide wage subsidies per eligible worker based on an average 75th percentile hourly wage to account for legislative requirements for workforce pay in high-risk settings and workforce tenure of those who would be eligible for the program.⁴⁰ With these considerations, we estimated that the average annual wage for an eligible worker is \$76,648 per year.

⁴⁰ RCW 49.80 describes workplace requirements for workers in high hazard facilities. <u>RCW 49.80.10(ii)</u> states that "[in] no case may the worker be paid at a rate less than an hourly rate consistent with the seventy-fifth percentile in the applicable occupation and geographic area in the most recent occupational employment statistics published by the employment security department."



Exhibit 11. Hourly Regular Wage Distribution for Example Occupations in Affected Sectors

Note: Wage estimates are in 2023 dollars and represent regular wages only, not including nonproduction bonuses or employer costs of nonwage benefits.

Sources: Washington State Employment Security Department, 2024; BERK, 2025.

Exhibit 12. Estimated Annual Pay for Eligible Workers

SOC	Description	2023 WA Employment	75th Percentile Hourly Wage
47-0000	Construction and Extraction Occupations	173,070	\$48.24
49-0000	Installation, Maintenance, and Repair Occupations	134,130	\$40.59
51-0000	Production Occupations	161,720	\$31.99
53-0000	Transportation and Material Moving Occupations	285,510	\$30.95
	Employment-Weighted Average 75th Pe	rcentile Hourly Wage:	\$36.85
	Estimated A	Average Annual Wage:	\$76,648

Notes: SOC refers to the Standard Occupational Classification System. Wage estimates are in 2023 dollars and represent regular wages only, not including nonproduction bonuses or employer costs of nonwage benefits. Estimated Average Annual Wage assumes 2080 hours worked in a year.

Sources: Washington State Employment Security Department, 2024; BERK, 2025.

Exhibit 13 shows our estimates of the average annual cost to the program to provide wage subsidies for an eligible worker at 50%, 75%, and 100% wage subsidy coverage factors. We also estimated the loss of wages to the worker. An eligible worker seeking reemployment would be eligible for unemployment insurance, which reduces the wage subsidy needed to match the worker's prior wages. In addition, the wage subsidy would end or be reduced once the eligible worker becomes reemployed.

Wage Subsidy Coverage Factor	Average Annual Cost to Program	Average Annual Loss to Worker
50%	\$38,324	\$38,324
75%	\$57,486	\$19,162
100%	\$76,648	\$0

Exhibit 13. Estimated Program Wage Subsidy Cost by Subsidy Coverage Factor

Note: Costs are in 2023 dollars. Source: BERK, 2025.

Healthcare Premium Subsidies

The program's healthcare premium subsidies preserve healthcare insurance coverage for eligible workers. To account for the variation in healthcare premium costs by coverage type, we estimated the average annual costs to provide healthcare premium subsidies per eligible worker based on the worker's age. Other factors that may differentiate employer-sponsored healthcare premium costs but are not included in our cost estimates include plan tier, geography, and union participation and protections.

For eligible workers under age 65, the program subsidies cover the full amount of the employer premium and administrative costs of continuing the prior healthcare insurance plan through COBRA, which is a federal program that allows for the continuation of healthcare insurance coverage under an existing plan after a qualifying event such as a layoff. The duration of continuation through COBRA usually lasts for 18 months. With COBRA, costs to workers to preserve their healthcare insurance are typically higher because individuals must cover the employer premium as well as a 2% administrative cost. Some employers may offer temporary coverage of the employer premium as part of a severance package, but this is not guaranteed, and severance packages vary by employer and layoff event.

Exhibit 14 shows our estimates of healthcare premium subsidy costs differentiating by coverage type. These estimates were based on the average healthcare premium for employer-based plans in Washington in 2023. The eligible worker is still responsible for the employee premium consistent with their contribution before job loss. The healthcare premium subsidy would end if an eligible worker became reemployed.

Exhibit	14. Estimate	d Program H	lealthcare P	remium Su	ıbsidv Costs fo	or Workers	Under 65 Years
		· · · · · · · · · · · · ·					•

	Healthcare Insurance Coverage Type					
Cost Description	Single	Employee-Plus-One	Family			
Average Annual Employee Premium	\$1,201	\$4,071	\$7,706			
Average Annual Employer Premium	\$6,694	\$11,637	\$16,649			
Average Annual Combined Premium	\$7,895	\$15,708	\$24,355			
Estimated COBRA Administrative Cost (2%)	\$158	\$314	\$487			
Estimated Total COBRA Premium	\$8,053	\$16,022	\$24,842			
Cost to Worker:	\$1,201	\$4,071	\$7,706			
Cost to Program:	\$6,852	\$11,951	\$17,136			

Note: Costs are in 2023 dollars.

Sources: U.S. Department of Health & Human Services Agency for Healthcare Research and Quality, 2024; U.S. Department of Labor, 2024; BERK, 2025.

We assume that eligible workers 65 years and older enroll in Medicare, which requires no healthcare premium subsidy by the program as Medicare is a federal health insurance program funded through sources including payroll taxes, enrollee premiums, and funds authorized by Congress. The eligible worker who enrolls in Medicare has an estimated annual cost of \$230 per year to cover Part A, Part B, and Part D premiums (*Exhibit 15*). Beyond Medicare, workers aged 65 and older may incur additional healthcare coverage costs. A 2024 analysis from the Kaiser Family Foundation found that approximately 90% of beneficiaries enrolled in traditional Medicare (Part A and Part B) also had additional coverage through Medigap (42%), employer plans (31%), Medicaid (16%), or some other coverage (1%).⁴¹

Exhibit 15. Estimated Program Healthcare Premium Subsidy Costs for Workers 65 Years and Older

Cost Description	Average Annual Cost
Part A Premium (Hospital Insurance)	\$0
Part B Premium (Medical Insurance)	\$175
Part D Premium (Drug Coverage)	\$56
Total	\$230
Cost to Worker:	\$230
Cost to Program:	\$0

Note: Costs are in 2023 dollars.

Sources: Centers for Medicare and Medicaid Services, 2024; BERK, 2025.

⁴¹ See "<u>A Snapshot of Sources of Coverage Among Medicare Beneficiaries</u>."

Retirement Income Benefits

The program has no costs to preserve Social Security and retirement savings benefits, as eligible workers retain access to these benefits under federal laws.

Social Security

The federal Social Security Act provides monthly retirement income benefits for retired workers and dependents, workers with disabilities and dependents, and surviving eligible family members of a worker who worked and paid Social Security taxes before they died. Benefits are calculated based on the average monthly salary (over a maximum of 35 years of earnings), as well as the age when benefits are accessed. If a worker is terminated before reaching the Social Security full retirement age (67 for individuals born in 1960 or later), monthly benefits may be reduced due to fewer working years and salary. Benefits may be accessed as early as age 62, but there is a reduction in benefits for early access.

Retirement Savings Plans

The federal Employee Retirement Income Security Act (ERISA) sets minimum standards for private industry retirement plans, which includes requiring accountability for plan fiduciaries. ERISA regulates two types of retirement savings plans: defined benefit plans and defined contribution plans. In 2024, defined benefit plans were offered by 7% of private industry establishments in the U.S., with 70% of private industry workers participating in these plans, while defined contribution plans were offered by 51% of private industry establishments, with 71% participation of private industry workers.⁴² If a worker is terminated before retirement, monthly benefits may be reduced due to fewer years of tenure and salary, but the benefits already accrued in the plan may not be reduced.

In a defined benefit plan, such as a pension plan, workers receive specified monthly benefits upon retirement, where the monthly benefit amount is typically calculated based on a combination of tenure at the company and salary received in the highest years of compensation. Payments from these plans typically begin at age 65 or the "earliest age that is reasonably representative of a typical retirement age for the covered workforce."⁴³ Some plans may have provisions for earlier payment without penalty. Through ERISA, the federal Pension Benefit Guaranty Corporation (PBGC) becomes the trustee of a pension plan to pay for benefits up to the limits set by law if an employer faces financial difficulty paying all of the committed benefits.

In a defined contribution plan, such as a 401(k) plan, workers hold individual investment accounts with employee and employer contributions through paycheck deductions. Account values vary depending on how much is contributed and how well the investments perform. Workers can access benefits without an early withdrawal penalty once the worker reaches age 59 ¹/₂. In addition, the IRS "Rule of 55" allows for withdrawal without penalty for workers who separate from employment at age 55 and older.

⁴² See Bureau of Labor Statistics National Compensation Survey, <u>Employer Benefits in the United States</u>, March 2024.

⁴³ See <u>72 Federal Register 28604</u>.

Though the PBGC does not guarantee benefits for defined contribution plans, the plan fiduciaries are responsible for providing benefits and face personal liability if they breach their duties under ERISA.

Reemployment Support

If an eligible worker wants to find a new job or retrain, the program connects workers to existing programs that support reemployment while providing wage and healthcare premium subsidies during the training and job search periods. As discussed in *Wage Subsidies* and *Healthcare Premium Subsidies*, the estimated costs of wage and healthcare premium subsidies for a worker who seeks reemployment are expected to be lower than a worker who does not seek reemployment due to eligibility for unemployment benefits and subsidies ending once the worker becomes reemployed. We assumed no additional costs to the program to support workers with reemployment due to existing programs that provide training cost assistance and job search services.

SBCTC Worker Retraining Program

The Washington State Board for Community and Technical Colleges (SBCTC) Worker Retraining (WRT) Program funds community and technical colleges to support job retraining through basic skills courses and professional-technical programs. The duration of certificate programs is typically six months to two years. Students may also pursue degree programs, including Bachelor of Applied Science degrees, with WRT support. Degree programs typically take two years to complete for full-time students. Individuals eligible for the WRT program include those receiving unemployment benefits and workers at risk of being unemployed due to declining job demand or skills.

In the 2024-2025 program year, 66% of WRT participants completed the program, and 77% of these participants were employed within four quarters after leaving the program.⁴⁴ WRT funding is allocated per full-time equivalent student, with \$1,505 allocated per student for financial and/or training and completion aid in the 2024-2025 program year.⁴⁵

WIOA Dislocated Worker Program

The federal Workforce Innovation and Opportunity Act (WIOA) is the primary funding source for the statewide WorkSource system, which provides workforce services for job seekers and businesses. Within this Act, the WIOA Dislocated Worker Program supports individuals who have lost their job due to plant closure, company downsizing, or some other significant change in market conditions. Many services are provided at no charge to job seekers. Services include career services, such as skills assessments and counseling, and training services, such as on-the-job training.

In the 2024-2025 program year, 71% of participants in the WIOA Dislocated Worker Program were employed (including out-of-state employment) within four quarters after leaving the program and the

⁴⁴ See "State Core Indicator Results for Worker Retraining at Community and Technical Colleges."

⁴⁵ See "<u>Worker Retraining for Community and Technical Colleges: 2024-25 Program Guidelines.</u>"

10-year taxpayer return on investment of the program was \$4.60 to 1.⁴⁶ In the 2023-2024 program year, there were 5,166 participants in this program at a cost of \$16,571,580, or \$3,208 per participant.⁴⁷

Relocation Assistance

The program does not provide financial assistance for relocation costs. Stakeholder feedback and a review of other dislocated worker programs for older adults suggest that relocation assistance is unlikely to be a priority benefit for workers near retirement.⁴⁸ In addition, workers who find a new job that requires relocation may be offered or may negotiate a relocation package with the employer to offset the costs of relocation to the worker. The amount offered in a relocation package varies by employer and job offer.

Program Costs

The costs for a Transition to Retirement program are sensitive to program design factors that impact the number of eligible workers and per-worker costs (*Exhibit 16*). In this section, we illustrate a range of estimated program costs given example assumptions about eligibility and worker characteristics.

Eligible Worker Waterfall Diagram	Per-Worker Cost Factors
Energy Workforce Inpacted Workers Stimated as percent of jobs projected to dose jobs by energy technology sector changes. Image Near Retirement Workers Stimated based on the percent of the workforce that is within a threshold number of months before retirement age. Image Workers Eligible for a Transition to Retirement Program The annual number of eligible workers depends on pattern of job losses over time.	 Figible Workers Fransition to Retirement Options Whether the worker chooses to retrain, seek reemployment, or regard and benefit subsidies on top of existing retirement income benefits and reemployment support to ensure no loss of income or benefits to the worker. Wage Subsidy Coverage Factor The percent of regular wages from the worker's lost job that are covered. Healthcare Premium Subsidy Hoadinistrative costs of the worker's health plan prior to job loss. Maximum duration that the worker can receive subsidies through a Transition to Retirement program. This parameter could be set to equal the threshold number of months before retirement age, or a fixed duration such as 1 year or 2 years.

Exhibit 16. Summary of Transition to Retirement Cost Factors

Source: BERK, 2025.

⁴⁶ See "State Core Indicator Results for Workforce Innovation and Opportunity Act Title I-B Program for Dislocated Workers."

⁴⁷ See "Washington State WIOA Annual Performance Narrative Report: Program Year 2023."

⁴⁸ In "<u>Domestic Migration of Older Americans: 2015-2019</u>" (2022), Peter J. Mateyka and Wan He estimated that people aged 55 to 64 had a mover rate of 7.4% compared to 6.2% for adults aged 65 and older and 16.5% for people aged 1 to 54. Among older adults who moved, about 58% of moves were shorter distance moves to another residence within the same county.

Per-Worker Costs

Exhibit 17 shows the estimated range of annual per-worker costs with variation in the wage subsidy factor and healthcare insurance coverage type. These estimates were based on the employment-weighted 75th percentile wage discussed in *Wage Subsidies* and the healthcare premium subsidy costs discussed in *Healthcare Premium Subsidies*. If the length of benefits were increased from one to two years, the cost to provide these benefits would approximately double. The cost per worker may be less than double if the worker becomes eligible for Medicare during the second year of receiving benefits. In addition, per-worker costs may vary for contract workers and union-represented workers. See *Appendix B: Per-Worker Cost Calculations* for an illustration of costs per worker if the worker chooses to retrain or seek reemployment or retrain after job loss.

Healthcare Insurance Coverage Type							
Wage Subsidy Coverage Factor	Medicare (\$0)	Single (\$6,852)	Employee-Plus-One (\$11,951)	Family (\$17,136)			
50% (\$38,324)	\$38,324	\$45,176	\$50,275	\$55,460			
75% (\$57,486)	\$57,486	\$64,338	\$69,437	\$74,622			
100% (\$76,648)	\$76,648	\$83,500	\$88,599	\$93,784			

Exhibit 17. Estimated Annual Program Costs Per Worker

Note: Costs are in 2023 dollars. Source: BERK, 2025.

Total Program Costs

Our total program cost estimates assume that program administration costs are 10% of program expenditures, which was based on the maximum percentage of funds that states could typically use towards the administration of TAA programs.⁴⁹ Funding for program administration would support staffing for the program and services such as outreach activities to potentially eligible workers. There may also be additional administrative factors to consider such as the potential costs of certifying workers for eligibility.⁵⁰ *Exhibit 18* illustrates an estimated range of total program costs for a workforce retirement age of 65 or under, near retirement threshold of 18 months, and one year of subsidies offered through the program. *Exhibit 19* illustrates an estimated range of total program costs for a workforce retirement age over 65, which assumes that eligible workers qualify for Medicare.

⁴⁹ See "<u>TAA Financial Reporting: Financial Reporting Basics</u>." From 2017-2022, average annual administrative costs (not adjusted for inflation) for the TAA program in Washington State were approximately \$1.0 million while program costs ranged from \$3.3 million to \$13.5 million during this period.

⁵⁰ To receive TAA benefits and services, the U.S. Department of Labor must first determine if an identified group of workers meets TAA eligibility criteria. See "<u>Petition Filing FAQ</u>" for more information about the TAA certification process.

Exhibit 18. Estimated Annual Total Program Costs with Retirement Age 65 or Under

	Wage Subsidy Coverage Factor					
Cost Factor	5	0%	75	%	10	0%
Per-Worker Wage Subsidy Annual Pay Based on Employment-Weighted 75 th Percentile Hourly Wage	\$38,3	324	\$57,4	86	\$76,0	548
Per-Worker Healthcare Premium Subsidy Family Plan	\$17,136		\$17,136		\$17,136	
Total Per-Worker Cost	\$55,460		\$74,622		\$93,784	
Pattern of Job Losses 2021 to 2050	Steady	Periodic	Steady	Periodic	Steady	Periodic
Eligible Workers Near Retirement Threshold of 18 Months	11.4	55.2	11.4	55.2	11.4	55.2
Subtotal	\$633,281	\$3,060,861	\$852,086	\$4,118,417	\$1,070,891	\$5,175,974
Program Administrative Cost 10% of Subtotal	\$63,328	\$306,086	\$85,209	\$411,842	\$107,089	\$517,597
Total Cost	\$696,610	\$3,366,947	\$937,295	\$4,530,259	\$1,177,980	\$5,693,572

Notes: Costs are in 2023 dollars. Steady assumes that job losses occur steadily every year from 2021 to 2050, while Periodic assumes that job losses occur every 5 years from 2021 to 2050 (see *Program Eligibility*). Source: BERK, 2025.

Exhibit 19. Estimated Annual Total Program Costs with Retirement Age Over 65

	Wage Subsidy Coverage Factor						
Cost Factor	50	0%	75	5%	10	0%	
Per-Worker Wage Subsidy Annual Pay Based on Employment-Weighted 75 th Percentile Hourly Wage	\$38,32	24	\$57,	.486	\$76,64	18	
Per-Worker Healthcare Premium Subsidy <i>Medicare</i>	\$0		\$0		\$0		
Total Per-Worker Cost	\$38,324		\$57,	\$57,486		\$76,648	
Pattern of Job Losses 2021 to 2050	Steady	Periodic	Steady	Periodic	Steady	Periodic	
Eligible Workers Near Retirement Threshold of 18 Months	4.0	19.5	4.0	19.5	4.0	19.5	
Subtotal	\$154,450	\$746,511	\$231,676	\$1,119,766	\$308,901	\$1,493,021	
Program Administrative Cost 10% of Subtotal	\$15,445	\$74,651	\$23,168	\$111,977	\$30,890	\$149,302	
Total Cost	\$169,896	\$821,162	\$254,843	\$1,231,743	\$339,791	\$1,642,324	

Notes: Costs are in 2023 dollars. Steady assumes that job losses occur steadily every year from 2021 to 2050, while Periodic assumes that job losses occur every 5 years from 2021 to 2050 (see *Program Eligibility*). Source: BERK, 2025.

With 100% wage subsidies, the program costs for a workforce retirement age of 65 or under range from \$1,177,980 per year, assuming job losses occur steadily every year, to \$5,693,572 per period, assuming job losses occur periodically every five years. For a workforce retirement age over 65, the program costs range from \$339,791 per year with a steady pattern of job losses to \$1,652,324 per period assuming a periodic pattern of job losses. Total program costs decrease if the wage subsidy factor is decreased to 75% or 50% of the worker's prior wages.

PROGRAM FEASIBILITY

The feasibility of implementing a Transition to Retirement program includes both policy and financial dimensions. The policy side considers the roles of government, industry, and labor, as well as an assessment of the balance of benefits and burdens from any policies or programs necessary to implement a Transition to Retirement program. The cost side considers the estimated costs of a Transition to Retirement program relative to other displaced worker benefit programs and the economic value of impacted energy sectors.

Overall, Washington state is not expected to suffer significant loss of jobs or productivity due to the policy-driven changes in the energy sector. The scale of projected job losses in natural gas, natural gas distributions, and other fossil fuels is much smaller than the anticipated job growth in biofuels and hydrogen fuels associated with the conversion to renewables and other technologies.⁵¹ However, there are likely to be localized costs and benefits of the energy transition on specific workers and communities. Some workers and communities may reap the economic benefits from the transition through new job opportunities, new investment, and the indirect and induced impacts of those changes, while others may bear significant losses in income and economic security.

Policy Feasibility

There is a public interest in mitigating the economic hardships on workers and communities that are more severely impacted by state policy decisions that lead to structural employment changes, as illustrated by the policy precedents reviewed above. This is true for energy sector transitions as well. An example of the community impacts of large fossil fuel refineries that have closed is the lessons learned from a refinery closure in Contra Costa County, California a few years ago. Without a strategy to support workers and communities affected by energy sector transitions, such as refinery closures, these communities face the loss of tax revenue generated from refineries and related industries; limited options for laid-off workers seeking jobs with comparable pay and benefits; and public health impacts that may perpetuate environmental injustice in the area.⁵²

There may also be greater societal costs when the job impacts are imposed on older workers who have fewer working years left to recover from the negative effects of an involuntary job loss. Older workers

⁵¹ The Clean Energy Transition Institute's *Net-Zero Northwest* analysis forecasts net job growth Washington's energy sector by 2030. See <u>https://www.nznw.org/workforce</u>.

⁵² Jessie HF Hammerling, Will Toaspern, & Laura Schmahmann, 2025, "Refining Transition: A Just Transition Economic Development Framework For Contra Costa County, California," UC Berkeley Labor Center.

are more likely to remain unemployed for longer and have greater reductions in income.⁵³ There are also indirect and induced impacts associated with the forced retirement of older workers. For example, when older workers leave the labor force, the growth of GDP may slow and there may be more strains on government budgets to support health and retirement programs.⁵⁴ Moreover, Washington benefits from the skills and experience that older workers offer by keeping them engaged in the workforce. Involuntary job losses among this population would diminish the pool of workers with critical expertise, restricting overall productivity and weakening the knowledge base.

In addition, there are equity dimensions that will play into the policy feasibility of a Transition to Retirement program for energy sector workers. Existing research suggests that gender and ethnic disparities may arise as the fossil fuel industry shrinks and clean energy sectors expand.⁵⁵ Currently, Washington's fossil fuel industry is dominated by white men, meaning they will be disproportionately impacted by industry decline but also likely to benefit from clean energy policies, as many new jobs in the industry are in traditionally male-dominated fields like manufacturing and construction.⁵⁶

Cost Feasibility

Our cost estimate for a potential Transition to Retirement program that layers on top of existing worker benefits to prevent significant loss of wages, health care, and retirement benefits for near-retirement workers who lose their jobs due to energy sector changes is \$93,784 per eligible worker (assuming a family healthcare insurance plan) or \$1,177,980 annually with job losses occurring steadily every year from 2021 to 2050, a workforce retirement age of 65 or under, near retirement threshold of 18 months, one year of subsidies, and administrative costs that are 10% of program expenditures. These estimated annual costs are less than those associated with the WIOA Dislocated Worker program, which cost \$16,571,580 for the 2023-2024 program year. However, the per-participant cost for 5,166 WIOA program participants was \$3,208, significantly less than the Transition to Retirement program per-participant estimated costs.⁵⁷

The higher per-participant costs for a Transition to Retirement program is driven by the comprehensiveness of the benefits designed to keep the worker whole after being laid off, ensuring minimal loss of income and benefits. This standard is higher than any other displaced-worker program we were able to identify.

The estimated costs of the potential program are small relative to the profitability of affected energy sectors. The annual estimated cost is less than one one-hundredth of a percent (0.001%) of the Gross Domestic Product (GDP) of petroleum and coal products manufacturing in Washington state, estimated

⁵³ Drystan Phillips, 2023, "<u>Hidden and Persistent Unemployment Among Older Workers</u>," Schwartz Center for Economic Policy Analysis and Department of Economics, The New School for Social Research, Research Note Series; Richard W. Johnson & Peter Gosselin, 2018, "<u>How Secure Is Employment at Older Ages?</u>" Urban Institute Program on Retirement Policy.

⁵⁴ Ronald Lee & Andrew Mason, 2017, "Cost of Aging," IMF Finance & Development.

⁵⁵ Pollin & Callaci, 2019, "The Economics of Just Transition."

⁵⁶ Pollin, Garrett-Peltier, & Wicks-Lim, 2017, "A Green New Deal for Washington State."

⁵⁷ See "Washington State WIOA Annual Performance Narrative Report: Program Year 2023."

to be \$8.7 billion in 2023.⁵⁸ Furthermore, unlike other industries that shrank after policy changes, such as the domestic manufacturing and domestic defense industries, the energy sector has continued to grow in recent years, and the growth has been in cleaner sources of energy. The GDP of petroleum and coal products manufacturing in Washington state more than doubled between 2018 and 2023.⁵⁹

Additional review and policy development work will be needed to resolve questions regarding strategies to identify which lost jobs are tied to state-legislated emission targets. The eligibility criteria and process of determining eligibility will be important for distinguishing between job loss due to state policy decisions to justify the government-paid benefits versus job loss from technological or other structural changes. This process will likely involve administrative costs that are not incorporated into the program cost estimates presented in this study.

The Transition to Retirement program model can be instructive for managing the economic and social externalities associated with significant episodic shifts like the closing of a facility. Other transition plans that seek to minimize economic hardships from energy sector changes on workers in overburdened communities include the community grant program established after the closing of the TransAlta coal-fired power plant in Centralia, Washington and the Contra Costa Refinery Transition Partnership established after the closing of the Marathon Martinez oil refinery in California.⁶⁰ Regardless of whether the state of Washington decides to pursue a public program to reduce the hardships associated with structural unemployment of near-retirement workers, the Transition to Retirement program design and cost estimates can help identify the impacts on workers who lose their jobs due to energy sector changes and inform negotiations between government, industry, and labor.

 ⁵⁸ U.S. Bureau of Economic Analysis, "SAGDP2N Gross domestic product (GDP) by state 1," accessed February 28, 2025.
 ⁵⁹ Ibid.

⁶⁰ TransAlta funds the <u>Centralia Coal Transition Grants</u> program for businesses, nonprofit organizations, and local governments in Lewis County and south Thurston County. This program was created to help the community as it transitions away from coal-fired electric power generation. The <u>Contra Costa Refinery Transition Partnership</u> was formed after the Marathon Martinez layoffs in 2020. The Partnership involves local labor and community groups and is supported by the <u>California</u> <u>Workforce Development Board's High Road Training Partnerships</u> program. Transition priorities for Contra Costa County include increasing access to quality jobs, improving the environment and public health, particularly for overburdened areas, diversifying the local economy, and increasing other sources of tax revenue to support economic resilience.

APPENDIX A: HB 1176

On May 3, 2023, Governor Inslee signed into law House Bill 1176. The following text is from Section 6 of the bill, which provided guidance for the structure of this feasibility study.

HB 1176, Section 6

A new section is added to chapter 28C.18 RCW to read as follows:

(1) Each biennium, the board shall develop recommendations for necessary steps to support workforce training required for clean energy technology occupations. The board shall consult with impacted postsecondary training partners, including higher education providers and apprenticeship programs, and consider the following parameters in the development of their analysis and recommendations, including identifying:

- (a) Occupational training and skills already covered in existing training programs;
- (b) New skills that can be integrated into existing training programs;
- (c) Occupations and skillsets that require new training programs to be developed; and

(d) Resources needed to deliver training programs and support workers in the transition to clean energy technology.

(2) The board shall conduct a study of the feasibility of a transition to retirement program to preserve income, medical, and retirement benefits for workers close to retirement who face job loss or transition because of energy technology sector changes. The board may contract with an organization to complete the study.

APPENDIX B: PER-WORKER COST CALCULATIONS

This appendix illustrates the per-worker cost calculations for an eligible worker who chooses to retrain and seek reemployment (Option 1), seek reemployment without retraining (Option 2), or transition to retirement (Option 3). The characteristics of this example worker are:

- Age: 63 years
- Occupation: Gas Compressor and Gas Pumping Stations (SOC 53-7071)
- Hourly wage prior to job loss: \$24.68 per hour (75th percentile in Washington in 2023)
- Healthcare insurance coverage type: Single coverage continued through COBRA

Option 1

In this option, the eligible worker chooses to enter a retraining program for an Occupational Safety and Health Certificate with a program duration of 36 weeks and total tuition of \$4,646. This program qualifies for the CTC Worker Retraining Program, which covers part of the tuition. During the retraining period, the worker receives unemployment insurance for 26 weeks. After the retraining program, the eligible worker enters the job search period for 5 weeks, during which they receive unemployment insurance and job search services through the WIOA Dislocated Worker Program. The cost responsibilities to the worker are the remaining costs of the retraining program and the employee premium of their prior healthcare insurance plan. The cost responsibilities to the program are the amount of lost wages not covered by unemployment insurance and the costs of continuing the eligible worker's healthcare insurance plan through COBRA (less the employee premium costs) during the retraining and job search periods. Assuming that the new employer provides healthcare insurance and the worker's new job pays more than their prior job, there are no costs to the program in the reemployment period.

Worker Chooses to Retrain and Seek Reemployment							
Component	Estimated Cost	Estimated Cost for Period	Amount Covered by Existing Service	es Cost to Worker Ren	naining Amount		
		Duration: 36	weeks				
Lost income (regular wages)	\$994 per week	\$35,798	\$11,376 ESD UI (max. 26 weeks)	\$0	\$24,422		
Healthcare premium cost	\$168 per week	\$6,040	\$0 None	\$901 Employee premium	\$5,139		
Retraining cost	\$4,646 total tuition	\$4,646	\$0 SBCTC WRT	\$4,646	\$0		
Retraining period subtotal		\$46,484	\$11,376	\$5,547	\$29,561		
		Duration: 5	weeks				
Lost income (regular wages)	\$994 per week	\$4,972	\$2,188 ESD UI (max. 26 weeks)	\$0	\$2,784		
Healthcare premium cost	\$168 per week	\$839	\$0 None	\$125 Employee premium	\$714		
Job search services cost	\$2,540 total	\$2,540	\$2,540 WIOA Dislocated	\$0	\$0		
Job search period subtotal		\$8,351	\$4,728	\$125	\$3,498		
		Duration: 12	months				
Lost income (regular wages)	\$0 per month	\$0	\$0 None	\$0	\$0		
Healthcare premium cost	\$658 per month	\$7,895	\$6,694 Employer	\$1,201 Employee premium	\$0		
Reemployment period subtota	I	\$7,895	\$6,694	\$1,201	\$0		
Total per worker		\$62,730	\$22,798	\$6,873	\$33,059		

Source: BERK, 2025.

Option 2

In this option, the eligible worker chooses to find a new job without retraining. The eligible worker is in the job search period for 10 weeks, during which they receive unemployment insurance and job search services through the WIOA Dislocated Worker Program. The cost responsibility to the worker is the employee premium of their prior healthcare insurance plan. The cost responsibilities to the program are the amount of lost wages not covered by unemployment insurance and the costs of continuing the eligible worker's healthcare insurance plan through COBRA (less the employee premium costs) during the job search period. During the reemployment period, the cost to the program is the difference between the worker's regular wages in the new job and their prior job (assuming that the new job pays less than the prior job). Assuming that the new employer provides healthcare insurance, there are no additional costs to the program in the reemployment period.

Worker Chooses to Seek Reemployment without Retraining								
Component	Estimated Cost	Estimated Cos	t for Period	Amount Co	overed by Existing Services	Cost to Worker	Rema	ining Amount
		Duration:	10 v	weeks				
Lost income (regular wages)	\$994 per week		\$9,944	\$4,375	ESD UI (max. 26 weeks)	\$0		\$5,569
Healthcare premium cost	\$168 per week		\$1,678	\$0	None	\$250	Employee premium	\$1,427
Job search services cost	\$2,540 total		\$2,540	\$2,540	WIOA Dislocated	\$0		\$0
Job search period subtotal			\$14,162	\$6,915		\$250		\$6,996
		Duration:	12 r	months				
Lost income (regular wages)	\$646 per month		\$7,757	\$0	None	\$0		\$7,757
Healthcare premium cost	\$658 per month		\$7,895	\$6,694	Employer	\$1,201	Employee premium	\$0
Reemployment period subtotal			\$15,652	\$6,694		\$1,201		\$7,757
Total per worker			\$29,813	\$13,609		\$1,451		\$14,753

Source: BERK, 2025.

Option 3

In this option, the eligible worker chooses to retire early. The cost responsibility to the worker is the employee premium of their prior healthcare insurance plan. The cost responsibilities to the program are the amount of lost wages and the costs of continuing the eligible worker's healthcare insurance plan through COBRA (less the employee premium costs).

Worker Chooses to Transition to Retirement							
Component	Estimated Cost	Estimated Cost for Period	Amount Covered by Existing Services	Cost to Worker	Remaining Amount		
		Duration: 12 months					
Lost income (regular wages)	\$3,978 per month	\$47,731	\$0 None	\$0	\$47,731		
Healthcare premium cost	\$671 per month	\$8,053	\$0 None	\$1,201 Employee	premium \$6,852		
Total per worker		\$55,784	\$0	\$1,201	\$54,583		

Source: BERK, 2025.