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Energy and Economic Scenarios for Utah's Coal Country

The potential closure of coal-fired power plants and coal mines in Utah's East Central economic region would pose significant economic challenges for local communities, requiring targeted economic interventions in both energy and other sectors.

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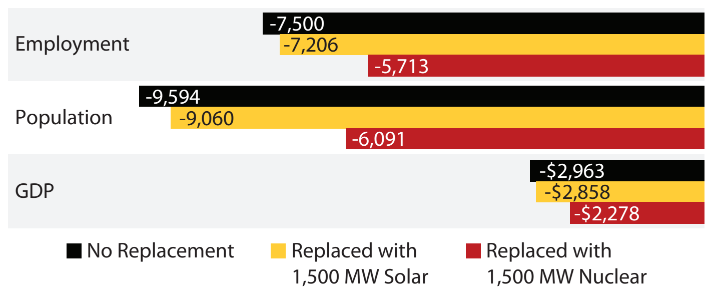
Analysis in Brief

The potential closures of the Hunter and Huntington power plants in Emery County would create substantial economic challenges at both the local and state levels. A strategic investment in nuclear development offers the strongest potential to offset these economic losses among energy pathways considered in this study. Replacing coal-fired power plants with alternative energy production serves as a critical first step, but long-term regional stability will depend on broader economic development. By investing in complementary industries such as advanced manufacturing, energy supply chains, and critical mineral development, communities can strengthen resilience, support workforce transition, and build a more diversified and sustainable economic future.

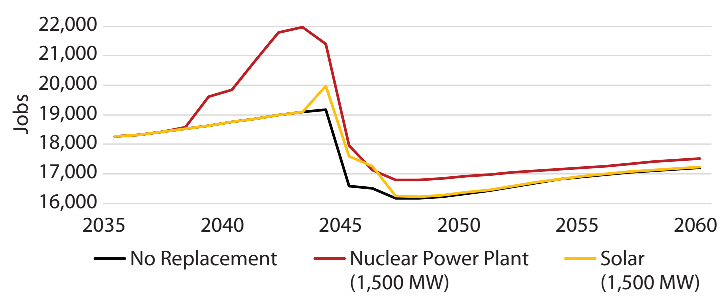
Projected Annual Statewide Economic Impacts Under Alternative Energy Transition Scenarios, 2042–2060

(Jobs, Persons, Millions of Constant 2025 Dollars)



Note: Employment, population, and GDP figures represent average deviations over the 2042-2060 study period and do not indicate job losses, population out-migration, and GDP losses in each year.
Source: Kem C. Garner Policy Institute analysis using REMI PI+ 3.3.0

Emery and Carbon County's Employment Net Impacts by Scenario, 2035–2060



Note: Net impacts reflect baseline employment levels plus the estimated changes under each scenario. This figure compares the economic impacts of installing the same nameplate capacity of coal, solar, and nuclear generation technologies. Because these technologies have different capacity factors, their actual electricity generation and utilization may vary despite having the same installed capacity.
Source: Kem C. Gardner Policy Institute analysis of REMI PI+

Key Findings

- **Economic losses of power plant and coal mine closures** – The potential closure of the Hunter and Huntington plants would likely lead to shutdowns of nearby coal mines. From 2042 to 2060, Utah could experience cumulative employment losses averaging about 7,500 jobs over the period. Emery and Carbon counties could each see average employment reductions of approximately 1,400-1,800 jobs, while statewide GDP may drop by $2.9 billion. Emery County may see out-migration of about 4,900 residents over this period if no new investment or replacement takes place.
- **Nuclear replacement mitigates impacts** – Replacing the plants with approximately 1,500MW of nuclear capacity, roughly equivalent to the existing capacity of Hunter Power Plant, offers the strongest economic offset at a comparable capacity among the replacement scenarios modeled. Although job losses will persist, the estimated negative impacts remain more favorable than in the no-replacement case. This scenario reduces estimated employment by about 5,700 statewide from 2042 to 2060. Emery and Carbon counties each lose roughly 1,100–1,300 jobs, and their combined GDP decreases by about $1.2 billion.
- **Fiscal impacts show trade-offs among scenarios** – All scenarios reduce expected state revenues, but outcomes vary by replacement strategy. The case of closures without replacement produces the largest tax loss (-$27.1 million) but also the greatest spending reductions due to outmigration (-$22.0 million), resulting in a smaller net loss (-$5.1 million). Nuclear replacement preserves more tax revenue (-$12.1 million loss) but yields minimal savings (-$1.8 million) due to less outmigration, leading to the largest net loss (-$10.3 million), while solar falls in between (-$5.6 million net loss).
- **Need for complementary investment** – Energy replacement alone will not sustain regional economic performance. Policymakers may consider prioritizing economic diversification by investing in advanced manufacturing, critical minerals, energy supply chains, and service sectors, while supporting workforce transitions.

Introduction

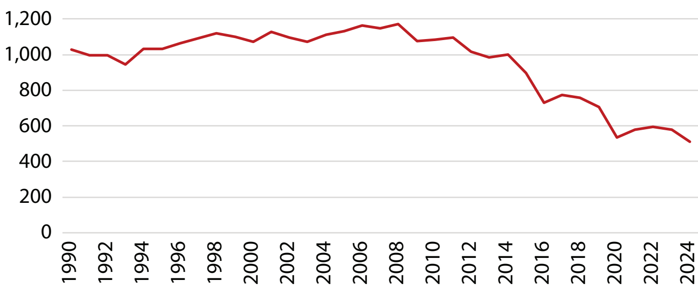
National and Local Energy Structural Changes

The U.S. energy sector continues to undergo structural changes, particularly in electricity generation. This shift reflects a combination of economic, technological, and environmental factors. Across the U.S., coal-fired power plant closures continue to accelerate, with nearly 30% of the existing fleet projected to shut down by 2035 (EIA, 2021). Coal production also declined significantly since 2007 (Figure 1), driven by market conditions, technological advances, and changing or new regulations.

As coal capacity declines, policymakers and utilities increasingly turn to alternative energy sources, including nuclear, wind, and solar, to replace it, each with different implications for reliability, cost, and regional economies. These changes affect local economies, particularly in regions where coal historically plays a central role in employment and public revenue. Regions pursue different energy pathways based on local economic conditions, resource availability, and community priorities. Utah reflects these broader trends, where coal plays a central role in electricity generation and regional economies.

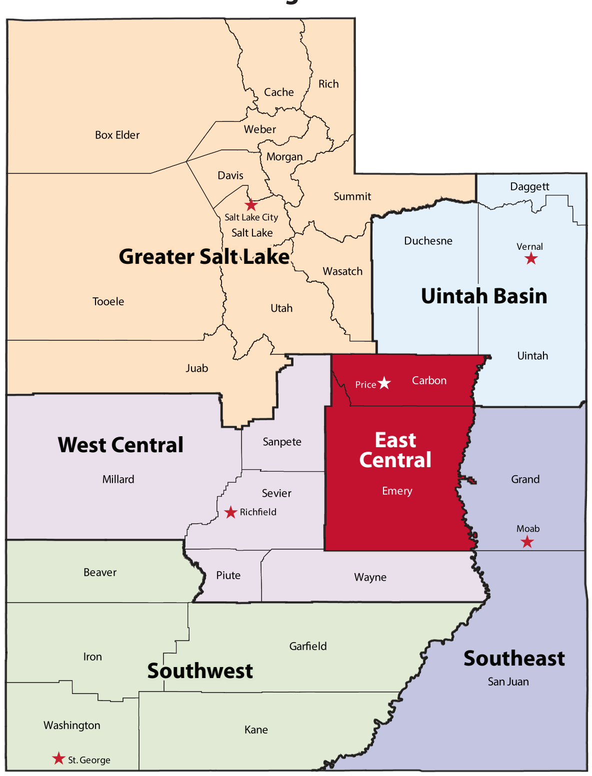
Figure 1: U.S. Coal Production, 1990–2024

(Million Short Tons)



Note: Total production includes bituminous coal, subbituminous coal, lignite, and anthracite.
Source: U.S. Energy Information Administration (EIA), 2024.

Figure 2: Utah's Economic Regions



Source: Hogue, 2020

Policymakers and industry stakeholders constantly evaluate alternative pathways to replace retiring coal capacity. Coal-to-nuclear (C2N) conversion provides an opportunity to repurpose existing infrastructure, potentially reducing capital costs while maintaining reliable baseload power and generating substantial regional economic activity. In Utah, recent research identified several coal plants, including the Hunter Power Plant, as strong candidates for conversion. However, Hunter's closure will not happen until at least after 2045, according to PacifiCorp's latest Integrated Resource Plan (PacifiCorp, 2025). At the same time, renewable energy options, particularly solar and wind, continue to gain cost-competitiveness, potentially strengthening their role in electricity generation. However, these resources require complementary investments in grid modernization and energy storage to address intermittency and reliability. These pathways reflect broader shifts in the energy sector and carry important implications for the timing and management of the coal plant retirement.

Economic Region

This study focuses on Carbon and Emery counties, where power plants and coal mines play a vital role in employment and the local economy. Using local commuting patterns and economic connections, the Kem C. Gardner Policy Institute designates these two counties as the East Central region (Hogue, 2020), one of six economic regions in Utah (Figure 2). Throughout this report, the research team sometimes refers to Carbon and Emery counties together as the East Central region.

Purpose and Scope of the Study

This report serves as the final deliverable for the U.S. Department of Energy–funded project DE-FE0032468, Charting a Path Forward: Energy and Economic Transition Pathways for Utah's Coal Country.

This project represents a collaborative effort between local community stakeholders, the Utah Southeastern Regional Development Agency (SERDA), and four teams at the University of Utah: the John and Marcia Price College of Engineering, the College of Mines and Earth Sciences, the Energy & Geoscience Institute, and the Kem C. Gardner Policy Institute. This report evaluates scenarios in which the Hunter and Huntington coal-fired power plants retire and associated demand declines.

These scenarios should not be interpreted as forecasts but rather as planning cases. The East Central economic region historically relies on coal mining and coal-fired power generation as central economic drivers. Coal-fired power plant retirements would threaten more than a thousand direct jobs in power generation and coal mining, as well as additional employment in supporting industries.

The study assesses regional assets and evaluates workforce impacts under various energy and economic scenarios. The study integrates technical analysis of the energy systems with economic impact modeling to examine multiple scenarios: closure of coal-fired power plants (1) without replacement, (2) with replacement from nuclear generation, and (3) with replacement from utility-scale solar development. The research team analyzes an additional scenario focused on advanced manufacturing investment and critical mineral exploration in separate reports. This report, with an emphasis on energy-related outcomes, presents findings for the first three scenarios.

This report evaluates implications of defined scenarios, focusing on the estimated economic and demographic consequences of coal plant and mine closures, as well as possible replacement paths. This report does not assess scenario likelihood, market feasibility, or financial viability, nor does it determine whether coal retirement is least-cost, reliable, or feasible from a power system planning perspective. While the report's scope does not include an analysis of environmental impacts, the closure of coal plants would likely reduce emissions and local pollution. The net environmental and health effects depend on replacement generation, transmission, energy imports, energy storage, and any continued industrial activity. These environmental and related impacts could add an important dimension alongside the analysis in this report.

Background and Literature Review

This section presents background information and a review of relevant peer-reviewed literature, both of which inform the development of the study's scenarios. The information and literature provide a foundation for the overall scenario design and highlight key factors that shape the analysis. The next section describes the specific assumptions for each scenario.

Economic Impacts of Coal Facility Closures

While coal facilities typically provide high-wage jobs and local tax revenues in the local economy, their closure creates concentrated economic disruption. Research shows coal-dependent regions experience job losses, wage declines, and reduced labor force participation following closures (Pham et al., 2025; Colmer et al., 2024). Because coal plants anchor local economies, closures also reduce tax revenues and significantly diminish public services (Tarekegne et al., 2021; Morris et al., 2019). These effects appear strongest in regions with limited diversification and often persist without targeted support such as retraining and fiscal assistance (Junod, 2024).

In Utah, approximately 0.7% of jobs lie in the energy sector, compared to 8.2% in the East Central economic region, highlighting the sector's importance to the regional economy. Coal-related industries play an important role in the East Central region. Coal mining and coal-fired power generation employment in these counties support local labor markets. The utility and mining sectors provide relatively high-wage jobs, while coal-related tax revenues contribute significantly to county budgets and to funding public services, including infrastructure, parks, health, and other services. Coal facility closures pose risks, including job loss, reduced fiscal capacity, and out-migration.

Figure 3: Energy Employment Share in East Central Region and Utah, 2024

Note: Energy employment is defined here as the sum of employment in the mining and utilities sectors (NAICS 21 and 22). Not all this employment directly relates to coal-fired power plants or coal mines and some energy-related employment is found in other sectors. Since the Salt Lake County mining sector largely relates to non-energy activity, these jobs are excluded from statewide energy employment. Otherwise, the state's energy employment share would reach 0.9%.
Source: Kem C. Gardner Policy Institute analysis of U.S. Bureau of Economic Analysis data

Coal-to-Nuclear Transition

Coal-to-nuclear (C2N) conversion offers a pathway to preserve economic activity by repurposing retired coal plant sites for nuclear energy. By leveraging existing infrastructure and grid connections, C2N projects can reduce costs while sustaining local employment. The Idaho National Laboratory (INL) finds that approximately 80% of U.S. coal plant sites meet basic siting requirements for advanced nuclear deployment (Hansen et al., 2022). Infrastructure reuse can reduce capital costs by 15–35%. INL's workforce analysis shows that nuclear facilities employ approximately 237 permanent workers per 1,000 MWe, more than double the coal industry rate.[1]

However, these estimates focus on the economic activity associated with the generating facilities and their supporting supply chains. In coal-dependent regions, the broader economic impacts of coal production, transportation, and related industries may exceed the employment effects associated with power generation alone. Consequently, regional outcomes depend not only on the replacement technology but also on the extent to which replacement activities offset employment and economic activity associated with the broader coal economy.

Beyond local economic benefits, nuclear energy provides reliable, low-carbon electricity. For example, nuclear plants in Illinois generate billions in GDP, support tens of thousands of jobs, and avoid significant emissions (Berkman & Murphy, 2019). Technical constraints, however, limit the full reuse of the infrastructure (Griffith, 2021). Differences in steam temperature and pressure between coal plants and conventional reactors restrict direct system integration, though advanced reactor designs may improve compatibility. Nevertheless, coal sites offer key advantages, including access to transmission lines, cooling systems, and industrial zoning (EPRI, 2023).

Recent projects demonstrate growing momentum. TerraPower's Natrium reactor in Wyoming and similar initiatives across multiple states reflect increasing policy and industry support. Recent federal policy increasingly supports advanced nuclear development. The ADVANCE Act[2] streamlines licensing and reduces regulatory barriers, while the Inflation Reduction Act provides tax credits, funding for fuel supply chains, and incentives for projects located in energy communities. More recent federal legislation maintains or strengthens nuclear incentives relative to other energy sources. Regulatory progress also appears evident, with new licensing frameworks and early project approvals supporting first-mover deployments. In Utah, state initiatives such as Operation Gigawatt aim to expand nuclear deployment.

In Utah, the Hunter and Huntington coal plants play a central role in Emery County's economy. Current utility plans indicate the plants will operate until at least 2045, providing a window for effective planning. Existing infrastructure, location, and water access position the Hunter site as a leading candidate for nuclear conversion, though transmission and site assets may limit conversion. Utah's favorable siting conditions, including relatively low seismic risk in the state's eastern regions, further support the feasibility of conversion. Partnerships between state agencies and developers, including TerraPower, indicate growing interest in nuclear deployment within the state.

Despite these advantages, nuclear expansion raises environmental and regulatory considerations associated with the broader uranium fuel cycle, including fuel supply and processing infrastructure that exists outside the primary study area. Although Utah's White Mesa Mill is located in San Juan County, outside the East Central region, it represents a key component of the regional and domestic uranium processing network that could support expanded nuclear generation. The facility faces ongoing scrutiny regarding its environmental impacts, particularly concerns raised by the nearby Ute Mountain Ute Tribe about potential effects on air quality, water resources, and ecosystems associated with mill operations and tailings management. These issues illustrate the broader environmental, regulatory, and community engagement challenges that may accompany increased reliance on nuclear energy and underscore the importance of robust oversight throughout the fuel supply chain.

Coal-to-Solar

Solar capacity in the U.S. continues to grow rapidly, with capacity reaching over 150 GW by 2025 and accounting for the majority of new generation additions. Costs also continue to decline significantly, though solar's lower capacity factors and intermittency require additional investments in storage and grid integration. Replacing coal with solar generation offers potential environmental and economic benefits. Global studies estimate large net gains from avoided emissions, while declining costs make solar increasingly affordable (Adrian et al., 2022; Webb et al., 2020). At the regional and state level, outcomes remain more mixed. Renewable deployment can create jobs and economic growth, but the loss of coal-related activity may limit gains in smaller coal-dependent regions (Kamidelivand et al., 2018). Case studies suggest that net benefits can occur but require targeted policy support (REMI, 2019; Ahern et al., 2025).

While increased deployment of renewable energy offers clear benefits, it also presents challenges related to energy storage, grid modernization, and labor market adjustments. Leonard et al. (2018) emphasizes the need for substantial energy storage to maintain grid reliability, while Nijsse et al. (2023) highlights ongoing challenges such as grid integration, financing, supply chains, and local resistance in regions facing employment losses.

Compared to coal-to-nuclear, coal-to-solar pathways offer less continuity in both infrastructure and workforce. From an infrastructure perspective, solar projects can take advantage of existing transmission access, grid interconnections, industrial land, and in some cases, established permitting pathways. However, solar facilities cannot reuse most coal plant infrastructure. From a workforce perspective, solar projects provide substantially fewer long-term employment opportunities than either coal or nuclear facilities. A typical 500 MW solar plant employs about 20 permanent workers, compared to hundreds at coal and nuclear facilities.

Federal policy, particularly the Inflation Reduction Act, supports solar deployment through tax credits and investment incentives. However, more recent legislation phases out some incentives and introduces stricter requirements, increasing uncertainty for future projects.[3] The recent restrictions on supply chain tariffs also affect the costs of solar facility construction.

Utah ranks 9th among the states with the highest solar energy potential in the nation, alongside other high-resource states in the Southwest. Utah's grid-connected photovoltaic (PV) capacity reached 2,783 MW in 2022, up from nearly zero in 2007.

Scenario Assumptions

This report uses assumptions to support scenario-based analysis and does not forecast or predict future conditions. The years referenced in these assumptions serve to illustrate the sequence and duration of developments within each scenario rather than precise timing forecasts. Therefore, readers could shift these years forward or backward without materially affecting the analytical framework or the study's conclusions. The analysis explores potential outcomes and system implications under specified assumptions, answering the question, "What if these conditions occur?" rather than addressing "How likely are these conditions to occur?" To facilitate a consistent comparison, the analysis assumes equivalent installed nameplate capacities for coal, solar, and nuclear generation technologies. However, because these technologies have different capacity factors, their actual electricity generation and utilization may vary despite having the same installed capacity.

Power Plant and Coal Mine Closures Assumptions

The latest Integrated Resource Plan (IRP) from Rocky Power Mountain indicates that the Hunter and Huntington plants will remain operational until at least 2045 (PacifiCorp, 2025). Congruent with the IRP, the economic impact model used in this report assumes employment at these plants begins to decline in 2042, with full closure occurring in 2046. The estimated annual wage for plant workers averages $82,929, based on 2024 Utah wage data and BLS staffing patterns for the nonrenewable fuel electricity generation industry. The analysis uses company-provided employment data for the power plants and adjusts it for projected workforce reductions. The analysis further assumes that six coal mines in Emery, Carbon, and Sevier Counties will close beginning in 2045 due to the plant shutdowns. These mines collectively employ more than 1,100 workers, with an average annual wage of $63,740 (Table 1). Appendix B includes more details of the wage calculation for each industry.

These closures will also generate spending on demolition, reclamation, water treatment, environmental studies, and other related expenses. Expenditures total approximately $160 million for power plant closures and $112 million for the closures of six coal mines (Table 2). Because the model operates at the county level, it includes a residence adjustment to account for commuting patterns. This adjustment reallocates income flows across counties based on employees' residences rather than their workplaces, using company- and mine-level data.

Although beyond the scope of the current analysis, future research could analyze supplemental coal-demand scenarios to examine the economic implications of higher coal utilization than assumed under the current closure scenarios. These scenarios could include the Intermountain Power Plant (IPP) returning to coal-fired operation, improved access to international coal markets, higher utilization rates at existing coal power plants, or a combination of these conditions. Evaluating such scenarios would provide insight into how renewed coal demand could affect regional production, employment, and fiscal outcomes.

Advanced Nuclear Power Assumptions

This analysis considers a scenario with one to five advanced nuclear reactors (based on TerraPower's Natrium design) at the Hunter site beginning in the late 2030s. Each reactor produces 345

Table1: Power Plants and Coal Mine Closure Employment Assumptions

Closure Assumptions	Time Period	Total Employment Loss (Jobs)	Average Wage Used
Hunter and Huntington Power Plants	2042–2046	322	$82,939
Six coal mines in Emery, Carbon, and Sevier counties	2045	1,115	$63,740

Table 2: Power Plants and Coal Mine Closure Capital Expenditure Assumptions

Closure Assumptions	Time Period	Total Capital Expenditure (Millions of Current Dollars)
Capital expenditures to close both power plants	2046–2047	$160.3
Capital expenditures to close six coal mines	2046–2056	$111.7

Table 3: Nuclear and Solar Employment Assumptions

Investment Assumptions	Time Period	Annual Employment Gains (Jobs)	Average Wage Used
500 MW – 2,500 MW Nuclear Power Plant	Beginning in 2044	236–588 (Operating Employment)*	$86,091
500 MW – 2,500 MW Solar Facility	Construction: 2044–2048 Operation: Beginning in 2045	459–591 (Construction) 20–99 (Operation)	$65,956 (Construction) $72,730 (Operation)

Table 4: Nuclear and Solar Capital Expenditure Assumptions

Investment Assumptions	Time Period	Total Amount
500 MW – 2,500 MW Nuclear Plant Capital Expenditures*	2038–2050	$4 – $16 billion
500 MW – 2,500 MW Solar Facility Capital Expenditures	2044–2048	$30 – $156 million†

Note: *Assumes less than 15% reuse of existing coal plant infrastructure, primarily water rights and grid interconnections.
† This amount represents spending on structural balance-of-system (BOS) components; most other materials originate from imports and therefore do not contribute to Utah's economic impacts.

MW continuously, with peak output up to 500 MW during peak demand using its built-in heat storage system. For comparison, the Hunter coal plant has a capacity of about 1,320 megawatts. Given the average capacity factor of coal plants in 2025 (50%), three to four Natrium reactors would replace its output.[4]

A single reactor takes about eight years to complete, while a five-reactor fleet takes roughly 12–13 years. Initial costs reach about $3.7 billion per reactor, with later units benefiting from shared infrastructure and reduced costs. Construction generates temporary employment, while operations provide stable, high-wage jobs at approximately $86,000 per person annually. Capital expenditures for a nuclear power plant include plant studies, structural improvements, reactor systems, energy conversion systems, electrical equipment, simulators, engineering services, and other related costs. In this study, the research team assumes the nuclear facility reuses less than 15% of the existing coal-fired plant infrastructure. This limited reuse primarily includes water rights and existing grid interconnections, while most major plant systems require replacement or new construction. Appendix B includes more details on the nuclear scenario assumptions.

Solar Energy Assumptions

EIA data indicate that the Hunter plant generates approximately 5,781,600 MWh annually at a 50% capacity factor. Replacing this output would require roughly 2,500 MW of solar capacity paired with battery storage, assuming a 30% capacity factor for the Hunter solar facility.[5]

The solar scenario evaluates one to five utility-scale solar farms, each approximately 500 MW. A single project typically takes about 14–15 months to complete, with a five-farm buildout completed in roughly 4.5 years. Solar construction creates short-term employment peaks around 460–590 jobs but limited long-term employment opportunities. A single facility supports about 20 permanent jobs, and even large deployments result in relatively few ongoing positions. Total capital expenditures include investment in modules, inverters, energy storage systems, structural balance-of-system components, electrical balance-of-system components, and other related equipment. However, the photovoltaic supply chain relies heavily on imports for most of these components. This study includes only spending on structural balance-of-system components in the economic impact model, as this category accounts for the largest share with potential domestic sourcing. Appendix B includes more detailed assumptions on the solar energy scenario.

Regional Economic and Fiscal Analysis

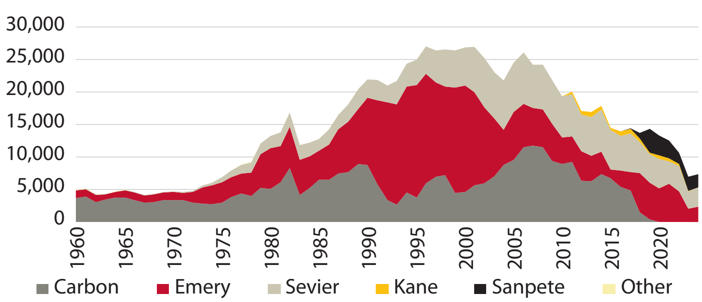
Economic and Demographic Profile of Affected Region

The development of coal and energy infrastructure in Carbon and Emery counties shaped the communities and economies of the East Central region. Settlement in the late 19th century coincided with the expansion of the railroad and the discovery of coal fields,[6] leading to the establishment of major mining operations in Carbon County by the 1890s. Emery County experienced rapid population growth during the 1970s energy crisis, driven by the construction of large-scale power generation facilities,[7] including the Huntington and Hunter power plants, which remain significant employers today. As of 2026, these facilities employ over 300 workers combined and continue to play a central role in the local economy, with Carbon County supporting related supply chain activities such as coal mining and equipment services.

Historically, mining, quarrying, and utilities served as dominant sectors in both counties. However, recent economic shifts reflect gradual diversification, particularly in Carbon County, where sectors such as finance, insurance, real estate, and educational services grew in relative importance. Finance and educational services accounted for approximately 17% of Carbon County's GDP in 2004, rising to about 28% by 2024. Carbon County's mining declined from 29% in 2004 to 14% in 2024 (Figure 6). In Emery County, the mining industry

Figure 4: Coal Production in Utah by County, 1960–2024

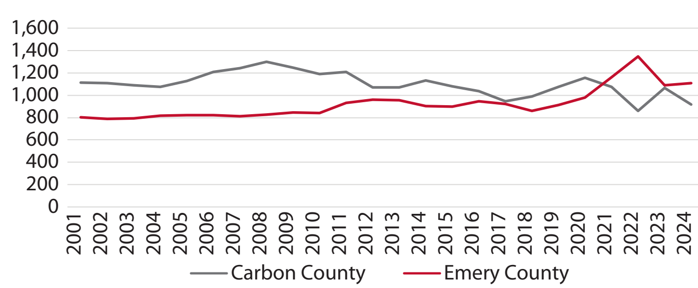
(Thousands of Short Tons)



Source: Utah Geological Survey, 2026

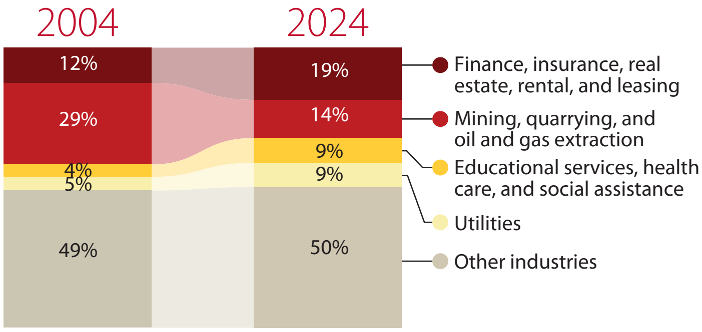
Figure 5: Real GPD in Carbon and Emery Counties, 2001–2024

(Millions of Chained 2017 Dollars)



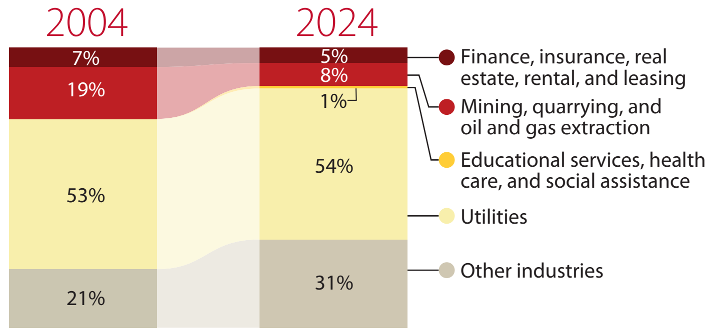
Source: U.S. Bureau of Economic Analysis, "CAGDP9 Real GDP by county and metropolitan area 1" (accessed Monday, April 20, 2026).

Figure 6: Carbon County Share of 2004 and 2024 GDP by Industry



Source: Kem C. Gardner Policy Institute analysis of BEA data (2026)

Figure 7: Emery County Share of 2004 and 2024 GDP by Industry

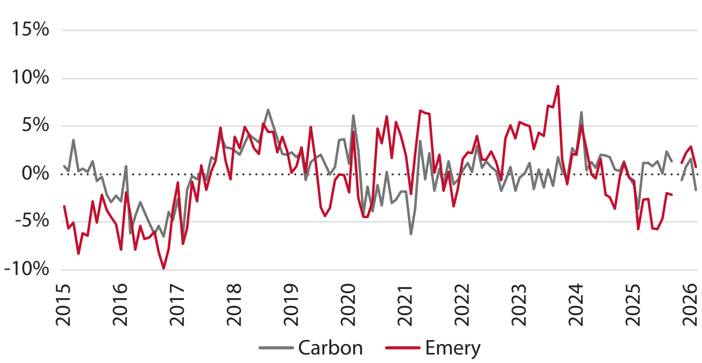


Note: Data for Educational services, health care, and social assistance are not available in 2004.
Source: Kem C. Gardner Policy Institute analysis of BEA data (2026)

represented 19% of GDP in 2004, but only 8% in 2024 (Figure 7). These changes coincide with a significant decline in coal production in Utah (Figure 4), driven by reduced coal consumption in the electric power sector at both national and state levels. Carbon County led production in earlier decades, while Emery County surged in the 1980s–1990s and became the dominant producer around the state's peak. Since the mid-2000s, production in both counties declined sharply, with especially steep drops in recent years.

The East Central economic region experienced limited economic growth over the past two decades, with real GDP exhibiting a volatile and cyclical pattern (Figure 5). Carbon County maintained a relatively higher level of economic activity in the early 2000s, peaking around 2008, followed by periods of fluctuations, including a notable decline in 2022 and a partial recovery thereafter. In contrast, Emery County's economy remained smaller and more stable through much of the period but began to grow more noticeably after 2010, with a sharp increase in 2022 that coincides with Carbon County's decline. This divergence suggests shifting in regional economic activities, particularly within energy-related sectors, rather than a uniform trend across both counties.

Figure 8: Year-Over Employment Growth in Carbon and Emery Counties, 2015–2025



Note: BLS could not collect October 2025 survey data due to a lapse in appropriations.
Source: U.S. Bureau of Labor Statistics (BLS): Local Area Unemployment Statistics (LAUS); Moody's Analytics

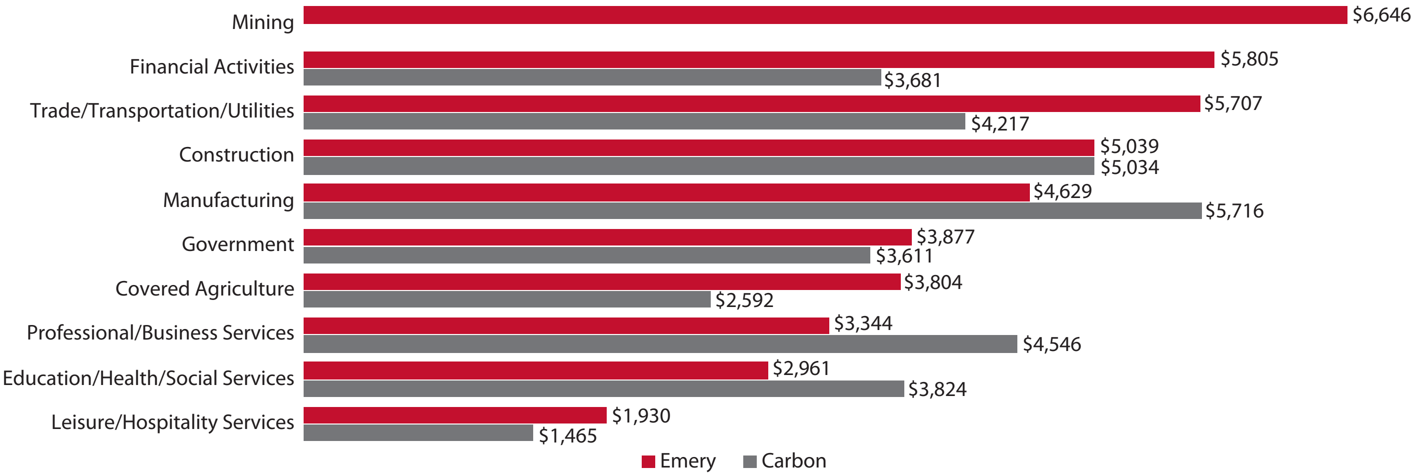
Median household income in 2023 in Carbon and Emery counties totaled $59,838 and $68,823, respectively. Median household incomes in both counties sit significantly below the state average ($93,030). Trade/transportation/utilities jobs account for the largest share of total nonfarm wages in Emery County, at 33%. In Carbon County, government jobs account for the largest share of total nonfarm wages at 27.2% (Utah Department of Workforce Services, 2026). Employment growth for the East Central economic region turned positive during 2025 (Figure 8).

The mining and utility industries remain among the highest-paying industries in the East Central economic region (Figure 9). Mining stands out as the highest-paying industry in Emery County, with an average monthly wage of approximately $6,646, substantially higher than other industries and reflecting the importance of coal-related employment to the local economy. The utilities industry (included within Trade/Transportation/Utilities) also represents a high-wage industry in both counties, especially in Emery County, where average monthly wages exceed $5,700.

Multiplier effects further illustrate this impact. According to the Bureau of Economic Analysis (2025), the coal mining industry in Utah recorded output and employment multipliers of 1.88 and 4.46, respectively, in 2023, while electric power generation recorded output and employment multipliers of 1.75 and 5.32, respectively. The output and employment multipliers capture the total change (in U.S. dollars or jobs) in economic output or employment resulting from a one-unit change in an industry's production, including indirect and induced effects throughout the supply chain and income effects. For example, the Utah employment multiplier suggests that the loss of a single job in the mining and electric power generation industries could result in approximately 4.5 and 5.3 lost jobs, respectively.

Figure 10 shows resident population trends for the East Central region over time. Both counties experienced population growth through the late 20th century, peaking around the early 1980s, followed by a period of decline and relative stagnation. Carbon County maintains a larger resident population overall,

Figure 9: Emery and Carbon County's Average Monthly Wage, 2024

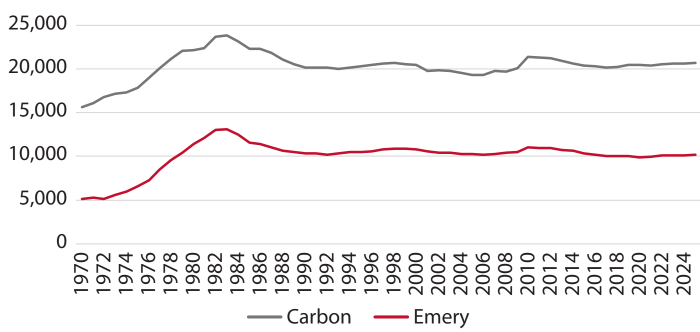


Note: Mining's average wage data in Carbon County are not available. Covered agriculture refers to agricultural businesses that meet the criteria for paying unemployment insurance tax.
Source: Utah Department of Workforce Services, 2026

with moderate fluctuations and slight recovery in recent years. Emery County follows the same general patterns. The latest population estimates from the Utah Population Committee (UPC) for 2025 show Carbon and Emery counties' populations increasing by 0.5% and 0.1%, respectively. Demographic trends in these counties reflect long-term population stagnation and gradual aging, consistent with patterns observed in resource-dependent regions. Backlund and Hogue (2022) find that net out-migration and job losses associated with changes in the energy sector partially drive recent population declines in these counties. Their projection indicates population decline in the 2030s, due to both out-migration and low natural increase, followed by a potential return to modest growth after 2040.

Figure 10: Resident Population in Emery and Carbon Counties, Utah, 1970–2025

(Persons)



Source: U.S. Census Bureau, Annual Estimates of the Population for Counties, 2026

Figure 11: Median Age for Selected Geographies, 2024

(Years)

Note: Margin errors for Carbon and Emery counties are 1.1 and 0.6, respectively.
Source: U.S. Census Bureau, 2024 American Community Survey 1-Year Estimates

Carbon and Emery counties both report older populations than the state average. As shown in Figure 11, median ages equal 38.8 and 39.1 in Carbon and Emery, respectively, compared to 31.7 statewide, suggesting a smaller and aging workforce that may constrain future labor supply and economic growth.

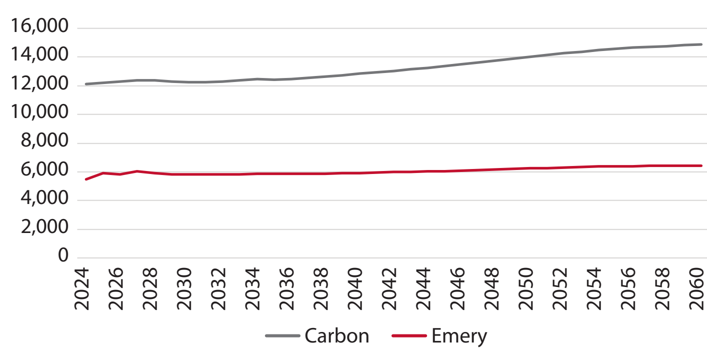
Baseline Scenario

The baseline scenario assumes no closure of coal-fired power plants or coal mines. It uses the REMI PI+ default regional control, with adjustments to employment projections for Carbon and Emery counties based on estimates from the Gardner Institute's Long-term Planning Projections. Under this scenario, projections indicate both counties will experience gradual long-term employment growth, though at different scales (Figure 12).

The population projection (Figure 13) shows year-over population growth rates for the statewide and both counties. Emery County begins with relatively strong growth, exceeding both Carbon County and the statewide average, but its growth declines steadily through the 2030s. In contrast, projections show Carbon County will experience negative growth before

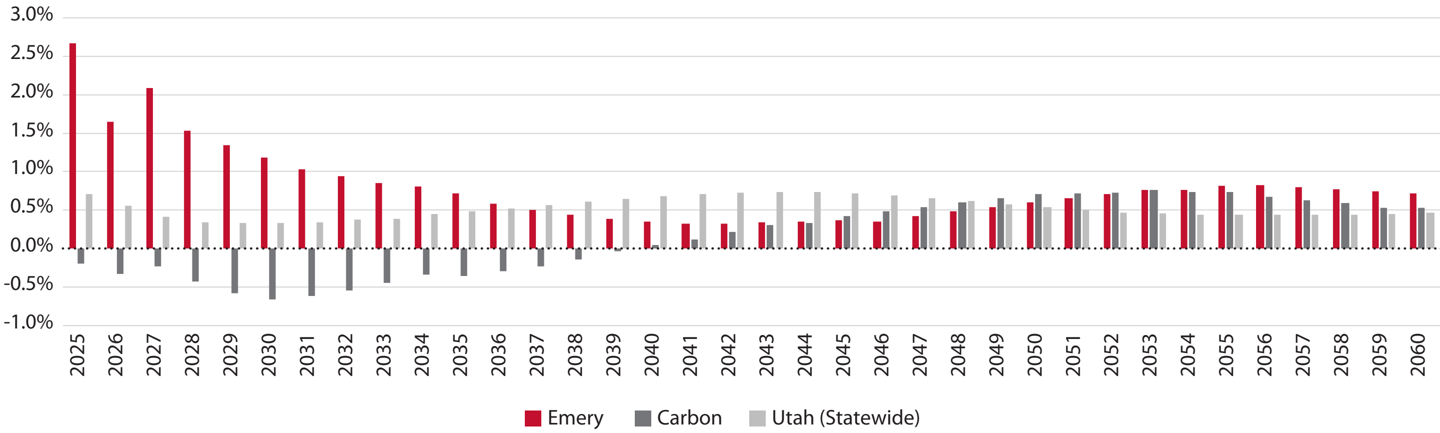
Figure 12: Employment Projections for the East Central Region, 2024–2060

(Jobs)



Source: REMI PI+ estimates based on county employment projection from the Kem C. Gardner Policy Institute

Figure 13: Projected Year-Over Population Growth in Selected Geographies, 2025–2060



Source: REMI PI+ estimates based on county employment projection from the Kem C. Gardner Policy Institute

gradually recovering in the 2040s. Utah's statewide population growth maintains more stable and moderate growth throughout the same period. By the end of the projection period, growth rates in both counties begin to converge toward the statewide trend.

Using this baseline scenario as a reference, the analysis simulates 11 alternative scenarios, ranging from plant and mine closure without replacement to replacement with nuclear and solar projects at varying capacities. Table 5 summarizes the scenarios analyzed.

Economic Impacts

Across all scenarios, the closure of coal-fired power plants results in negative economic impacts at both the state and local levels, though the magnitude varies by replacement strategy. The economic impact estimates assume equal installed nameplate capacity for coal, solar, and nuclear generation technologies. While all scenarios involve economic contraction, the nuclear pathway (scenario 2.3) provides the greatest offset to losses. Scenario 1 (closure without replacement) produces the largest losses, including a reduction of 7,500 jobs statewide

Table 5: Timelines and Key Variables of Scenarios in the Study

Scenario	Detail	Timeline	Key Variables
Baseline	No closure	N/A	N/A
Scenario 1	Closing power plants and coal mines	2042–2046, and 2045	· Employment losses · Wage losses · Capital expenditures for demolition and closures · Employee residence adjustment
Scenario 2.1	Closing power plants and coal mines, replaced by a 500MW nuclear power plant	2038–2045	· Employment losses/gains · Wage losses/gains · Capital expenditures for demolition and closures · Capital expenditure for building a nuclear power plant with different numbers of reactor
Scenario 2.2	Closing power plants and coal mines, replaced by a 1,000MW nuclear power plant	2038–2047	
Scenario 2.3	Closing power plants and coal mines, replaced by a 1,500MW nuclear power plant	2038–2048	
Scenario 2.4	Closing power plants and coal mines, replaced by a 2,000MW nuclear power plant	2038–2049	
Scenario 2.5	Closing power plants and coal mines, replaced by a 2,500MW nuclear power plant	2038–2050	
Scenario 3.1	Closing power plants and coal mines, replaced by a 500MW solar facility	2044	· Employment losses/gains · Wage losses/gains · Capital expenditures for demolition and closures · Capital expenditure for building a utility-scale solar facility
Scenario 3.2	Closing power plants and coal mines, replaced by a 1,000MW solar facility	2044–2045	
Scenario 3.3	Closing power plants and coal mines, replaced by a 1,500MW solar facility	2044–2046	
Scenario 3.4	Closing power plants and coal mines, replaced by a 2,000MW solar facility	2044–2047	
Scenario 3.5	Closing power plants and coal mines, replaced by a 2,500MW solar facility	2044–2048	

Table 6: Statewide and Local Economic Impacts Relative to the Baseline Scenario, Average Annual Difference (2042–2060)

(Jobs, Millions of Constant 2025 Dollars, Persons)

Scenario	Employment		GDP		Personal Income		Population	
	Statewide	Emery & Carbon	Statewide	Emery & Carbon	Statewide	Emery & Carbon	Statewide	Emery & Carbon
1	-7,500	-3,251	-$2,963	-$1,731	-$847	-$379	-9,594	-4,866
2.3	-5,713	-2,412	-$2,278	-$1,232	-$620	-$266	-4,882	-2,757
3.3	-7,206	-3,078	-$2,858	-$1,652	-$812	-$358	-9,060	-4,489

Note: The analysis uses 2042 as the starting point, assuming coal power plants begin reducing employment in that year.
Source: Kem C. Gardner Policy Institute analysis of REMI PI+

and 3,251 jobs in Emery and Carbon counties, along with substantial declines in GDP, personal income, and population. Scenario 2.3 (nuclear replacement) mitigates these impacts most effectively, reducing employment losses to 5,713 statewide and 2,412 locally, and significantly lowering declines in income and population. In contrast, Scenario 3.3 (solar replacement) shows outcomes closer to the closure scenario, with relatively larger losses across all metrics.

Given the number of scenarios evaluated, this section focuses on a subset of scenarios comparable to the existing capacity of the Hunter power plant (approximately 1,500 MW). Appendix A provides the results of the remaining scenarios. Appendix B provides details of the economic impact model and methodology. Table 6 shows average impact values of multiple scenarios from 2042 to 2060.

While this study's net negative results differ from results in other studies, important decisions explain these differences. For example, Evangelakis et al. (2019) show positive economic impacts of retiring and replacing the San Juan Generating Station (SJGS) in New Mexico. This critically relies on assumptions of electricity price declines for customers in the SJGS utility service area, belonging to Public Service Company of New Mexico (PNM). Here, project complexities, including future scenarios far into the future and other market effect uncertainties preclude researchers from including economic impact estimates derived from price declines. Another study by Ahern et al. (2025) yields net positive economic impacts from energy transition scenarios involving PacificCorp in Utah and Wyoming. However, the alternative energy scenarios assume wind and solar replacement between 4x and 6x the power capacity of the retiring coal-fired power plants. In this study, the research team follows conservative assumptions to understand the economic impacts in the absence of price declines for electricity consumers and using one-for-one electrical power replacement scenarios.

Employment Impacts

Figure 14 shows the projected net employment for Emery and Carbon counties under three scenarios: no replacement, nuclear replacement (1,500 MW), and utility-scale solar (1,500 MW). Prior to plant retirement, employment remains relatively stable across scenarios, with the nuclear case showing a temporary increase due to construction activity.

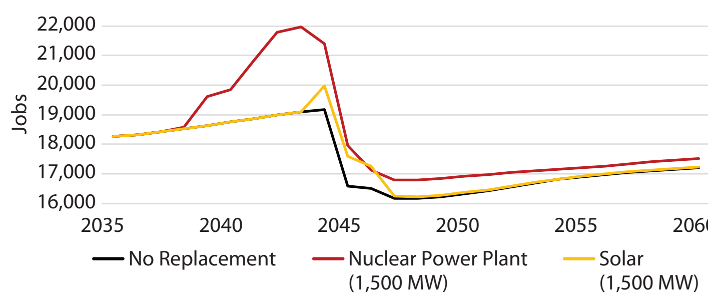
Following the potential retirement of the Hunter and Huntington power plants, employment declines sharply across all scenarios. Even in the nuclear scenario, employment does not fully recover to pre-closure levels. This outcome largely reflects the closure of the power plants, which also leads to the shutdown of six associated coal mines (by assumption), resulting in the loss of more than 1,000 mining jobs. The report models a case in which reduced coal demand contributes to closure of six coal mines. Actual outcomes would depend on contracts, quality of coal, alternative markets, reserves, and operating costs. While nuclear development generates new employment, including construction and operations, these jobs differ in scale, timing, and skill requirements and therefore do not fully offset the combined employment losses from power generation and mining (Figure 14).

Over the longer term, employment levels across scenarios begin to converge. This convergence reflects the regional economic adjustment captured in the model, including labor reallocation, population changes, and the influence of statewide economic growth trends. As displaced workers gradually transition to other sectors or leave the region, and as new economic activity stabilizes, the differences between scenarios narrow. However, the nuclear scenario consistently maintains higher employment levels than the alternatives, indicating a more favorable long-term outcome than no replacement or solar development.

GDP Impacts

The largest losses in GDP occur in the no-replacement case, reflecting the combined impact of the power plant and the associated coal mine shutdowns. Although the nuclear scenario mitigates these losses, it does not fully offset them. This outcome stems from the substantial economic output generated by coal

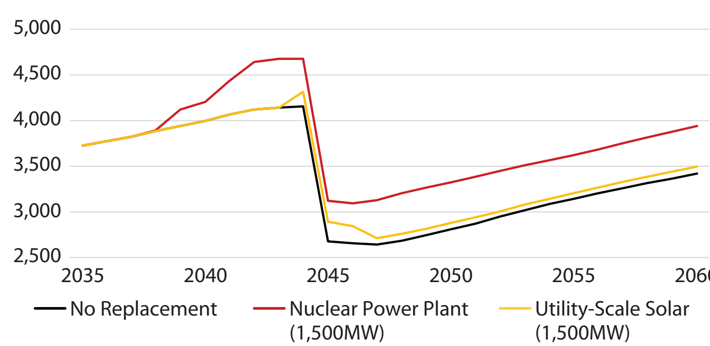
Figure 14: Emery and Carbon County's Employment Net Impacts by Scenario, 2035–2060



Note: Net impacts reflect baseline employment levels plus the estimated changes under each scenario.
Source: Kem C. Gardner Policy Institute analysis of REMI PI+

Figure 15: Emery and Carbon County's GDP Net Impacts by Scenario, 2035–2060

(Millions of Constant 2025 Dollars)



Note: Net impacts reflect baseline GDP levels plus the estimated changes under each scenario.
Source: Kem C. Gardner Policy Institute analysis of REMI PI+

mining and power generation, both capital- and supply-chain-intensive industries, and the loss of mining activity represents a significant reduction in regional output. While nuclear development introduces new economic activity, especially during construction, its long-term operational footprint remains smaller than the combined output of the existing coal-based system. The solar scenario shows a pattern like the no-replacement case, with only modest mitigation of GDP losses. This reflects the lower capital intensity and smaller ongoing operational output associated with solar facilities compared to both coal and nuclear generation.

Personal Income Impacts

Across all scenarios, personal income rises over time (Figure 16), reflecting overall economic growth in the baseline projection. However, differences emerge around the mid-2040s, with closure of the Hunter and Huntington power plants. At that point, income levels decline across all scenarios relative to the baseline trend, with the largest drop observed in the no-replacement case. The nuclear scenario shows higher income levels both before and after the closures, driven by construction activity in the early 2040s and higher-paying operational jobs thereafter. The solar scenario provides a smaller boost, remaining closer to the no-replacement case. Although all scenarios gradually recover and continue to grow over time, the gaps between them persist, with the nuclear scenario maintaining the highest income levels throughout the projection period.

Population Impacts

Across all scenarios, population trends remain relatively similar through the early 2040s, with a noticeable increase in the nuclear scenario due to in-migration associated with construction activity. Around 2045, when the Hunter and Huntington power plants assume retirement, population declines across all scenarios. The no-replacement case experiences the largest and most persistent decline, reflecting job losses and subsequent out-migration. The solar scenario shows a similar pattern, with only modest mitigation. The nuclear scenario maintains a higher population level throughout the period, as additional employment opportunities help retain and attract residents. However, it does not fully offset population losses, largely due to the closure of associated coal mines and the resulting reduction in high-paying jobs. Over time, population levels in all scenarios continue to decline, although at slowing rates, with the nuclear scenario consistently showing the least decline.

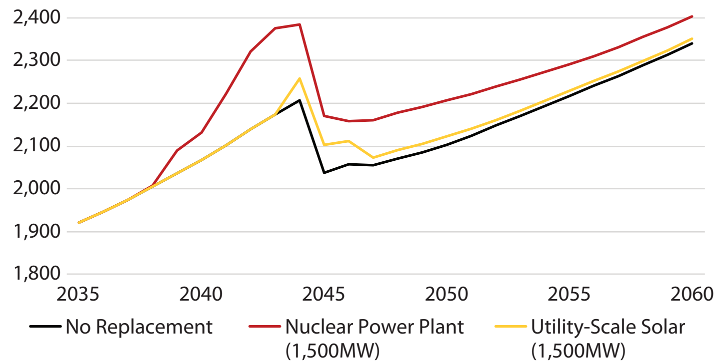
Fiscal Impacts

State Fiscal Impacts

This section examines how declines in employment, income, and population resulting from plant closures affect Utah state government revenues and expenditures. Table 7 summarizes the average annual statewide fiscal impacts of coal-fired power

Figure 16: Emery and Carbon County's Net Personal Income Impacts by Scenario, 2035–2060

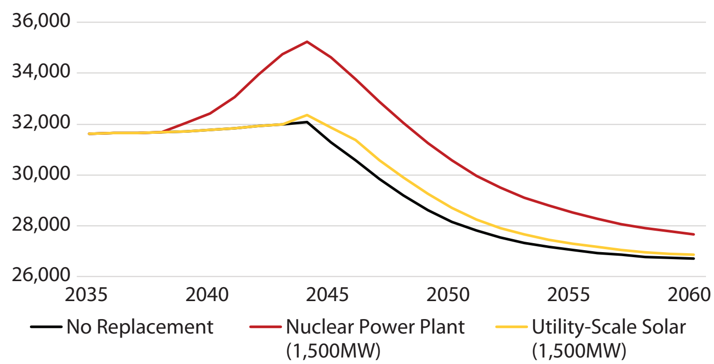
(Millions of Constant 2025 Dollars)



Note: Net impacts reflect baseline personal income levels plus the estimated changes under each scenario.
Source: Kem C. Gardner Policy Institute analysis of REMI PI+

Figure 17: Emery and Carbon County's Net Population Impacts by Scenario, 2035–2060

(Persons)



Note: Net impacts reflect baseline population levels plus the estimated changes under each scenario.
Source: Kem C. Gardner Policy Institute analysis of REMI PI+

plant and coal mine closures, along with the nuclear and solar replacement scenarios, over the 10-year period from 2042 to 2051, expressed in constant 2025 dollars. The fiscal analysis uses a shorter projection horizon to account for uncertainty in future state and local tax policies and other factors affecting fiscal outcomes.

Across all scenarios, coal plant closures reduce both state and local revenues, with the largest declines occurring under no replacement and the smallest under nuclear. Losses in individual income and sales taxes account for most of the decline in state revenue, while corporate tax losses are smaller by comparison. At the same time, lower population and economic activity reduce state and local expenditures, especially in education, partially offsetting revenue losses. Because nuclear replacement better preserves economic activity, it results in smaller revenue declines (-$12.1 million) but also much smaller expenditure savings (-$1.8 million), leading to the largest net state revenue loss (-$10.3

million). Local governments, including all counties and cities in Utah, experience substantial revenue and expenditure reductions in all scenarios, particularly under no replacement and solar.

Emery County and Carbon County Fiscal Impacts

This section focuses on how the closures may affect county and municipal government finances in Emery and Carbon counties. Table 8 shows that Emery County experiences declines in local revenues across all scenarios, with the largest revenue losses under no replacement (-$4.0 million) and the smallest under nuclear (-$0.3 million). Revenue losses will be even more extreme in the no replacement scenario once the coal-fired power plants and coal mines close in Emery County. In 2024, the Utah State Tax Commission reported $19.8 million in centrally assessed property taxes related to electric utilities and $0.6 million related to coal and coal load-outs in Emery County.

Changes in population and economic activity also affect projected local government expenditures. Under the solar scenario, modeled expenditure reductions exceed revenue losses, resulting in a positive net fiscal balance of $8.0 million. However, this positive balance should not be interpreted as an improvement in local fiscal conditions. Local government may continue to face budgetary challenges because of fixed public services and infrastructure costs, or services and costs only partially responsive to changes in population and economic activity. Under the nuclear scenario, stronger economic activity preserves a large revenue base but also increases projected demand for public services, resulting in an estimated fiscal deficit of $13.6 million. While estimating precise centrally assessed property tax numbers is beyond the scope of the Gardner Institute fiscal model, once accounting for centrally assessed property tax losses from power plant and mine closures, the no-replacement scenario will likely experience the largest fiscal deficit among considered scenarios.

In Carbon County, projections indicate more moderate fiscal impacts. All scenarios produce a small positive net fiscal balance because expenditure reductions slightly exceed revenue losses. Revenue losses persist across all scenarios, although both revenue and expenditure changes are smaller than those projected for Emery County, reflecting less pronounced changes in population and economic activity (Table 9).

The fiscal analysis results at the local level highlight a trade-off across both counties: scenarios with stronger economic activity reduce revenue losses but increase fiscal pressure through higher service demand. These results quantify how projected revenues and expenditures change within the modeling framework. However, they do not fully reflect the fiscal challenges that local governments may face. Counties must continue to fund infrastructure, public safety, and other essential services even as revenues decline. Appendix A includes details of the fiscal analysis for remaining scenarios.

Table 7: Statewide Average Annual Fiscal Impacts by 1,500 MW Scenarios, 2042–2051

(Millions of Constant 2025 Dollars)

Average Annual Impact	No Replacement	Replaced by Nuclear	Replaced by Solar
Individual Income Tax Revenues[1]	-$13.2	-$5.6	-$11.9
Corporate Income Tax Revenues[2]	-$3.2	-$2.0	-$3.0
State Sales Tax Revenues[3]	-$10.7	-$4.5	-$9.7
Estimated State Tax Revenue Changes	**-$27.1**	**-$12.1**	**-$24.7**
State Non-Education Expenditures	-$12.1	-$0.9	-$10.5
State Public Education Expenditures	-$6.2	$0.3	-$5.3
State Higher Education Expenditures	-$3.7	-$1.2	-$3.2
Estimated State Expenditure Changes[4]	**-$22.0**	**-$1.8**	**-$19.0**
Estimated Net State Revenues[6]	**-$5.1**	**-$10.3**	**-$5.6**
Total Local Revenues[5]	-$23.6	-$12.1	-$21.8
Local Operating & Capital Expenditures	-$35.8	-$2.6	-$31.0

Notes: 1. State income taxes are calculated based on the ratio of the county's state income tax liability (per State Tax Commission) to personal income resulting from the REMI PI+ estimation. 2. Corporate income taxes are estimated based on the ratio of corporate tax revenues (by industry) to GDP by industry. 3. Sales and gross receipts taxes. 4. Negative amounts in expenditure represent the decline in public expenditures from the population impacts. 5. Local sales tax revenues consist of total general sales and use taxes and the tourism restaurant tax. 6. Estimated Net State Revenues are the gap between the decline in revenue and the decline in expenditure.
Source: Kem C. Gardner Policy Institute analysis using the Gardner Institute fiscal model

Table 8: Emery County's Average Annual Fiscal Impacts, 2042–2051

(Millions of Constant 2025 Dollars)

Average Annual Impact	No Replacement	Replaced by Nuclear	Replaced by Solar
Total Local Revenues	-$4.0	-$0.3	-$3.3
Total Local Expenditures	-$16.5	$13.3	-$11.4
Net Local Revenues	**$12.5**	**-$13.6**	**$8.0**

Note: Local government revenue and expenditures include those of county, city, and town governments. Negative local expenditures reflect the decline in public expenditures resulting from population decreases. The replacement scenarios assume no change in centrally assessed property tax revenues between retired assets and new energy-generating assets. Under the no-replacement scenario, loss of centrally assessed property tax revenues could be significant, given 2024 reported charges of $19.8 million against electric utilities and $0.6 million against coal natural resources in Emery County.
Source: Kem C. Gardner Policy Institute analysis using the Gardner Institute fiscal model

Table 9: Carbon County's Fiscal Average Annual Impacts, 2042–2051

(Millions of Constant 2025 Dollars)

Average Annual Impact	No Replacement	Replaced by Nuclear	Replaced by Solar
Total Local Revenues	-$4.6	-$3.9	-$4.4
Total Local Expenditures	-$7.8	-$5.6	-$7.4
Net Local Revenues	**$3.3**	**$1.8**	**$3.0**

Note: Local government revenue and expenditures include those of county, city, and town governments. Negative local expenditures reflect the decline in public expenditures resulting from population decreases. The replacement scenarios assume no change in centrally assessed property tax revenues between retired assets and new energy-generating assets. Under the no-replacement scenario, loss of centrally assessed property tax revenues could be significant, given 2024 reported charges of $1.5 million against coal natural resources in Carbon County.
Source: Kem C. Gardner Policy Institute analysis using the Gardner Institute fiscal model

Policy Implications

This report's findings suggest that government leaders may consider a broader economic development strategy alongside energy replacement. Key considerations include:

1. **Diversification beyond energy production**: Investment in new industries would help offset losses from coal-related sectors. Opportunities may include critical mineral and advanced manufacturing, particularly industries that can leverage existing infrastructure, workforce skills, and proximity to energy resources.
2. **Development of energy-adjacent industries**: Rather than focusing solely on power generation, the region could benefit from attracting industries connected to the evolving energy sector, such as component manufacturing, supply chain services, or maintenance and support activities for nuclear or renewable energy systems. This report does not evaluate the economic impacts of advanced manufacturing investment in detail. The research team addresses this topic in a separate report.
3. **Expansion of service-based sectors:** Growth in sectors such as education, health care, and hospitality could help stabilize the local economy and support population retention. These industries prove less sensitive to commodity cycles and provide more diversified employment opportunities.
4. **Workforce transition and retention:** Policies that support workforce retraining, skills development, and job matching or re-skilling could play an essential role in helping displaced workers transition into new industries. Retaining skilled workers would help maintain the region's economic base.
5. **Coordinated regional investment strategy:** A combination of public and private investment, aligned with local economic strengths, would support long-term resilience. Regional leaders may integrate energy investments into a broader development strategy rather than viewing them as a standalone solution.

Conclusion

This study evaluates the economic and demographic impacts of coal plant closures in the East Central economic region of Utah under three primary scenarios: no replacement, nuclear replacement, and utility-scale solar replacement. Across all scenarios, the retirement of coal-fired power plants and associated coal mines results in significant declines in employment, GDP, personal income, and population. These impacts appear most pronounced in the no-replacement scenario and remain concentrated locally, reflecting the region's reliance on coal-related industries.

Replacement scenarios mitigate some of these losses but do not fully offset them. The nuclear scenario provides the greatest economic benefit among the alternatives, supporting higher employment, income, and population levels relative to the solar and no-replacement cases. However, even under the nuclear scenario, the combined loss of power plant and mining activity, particularly the closure of related coal mines, results in persistent economic and demographic declines. Over time, differences across scenarios narrow as the regional economy adjusts, but the long-term trajectory remains below the baseline.

The results indicate that replacing lost energy generation capacity proves necessary but not sufficient to sustain the local economy. While energy replacement, especially nuclear, can reduce the magnitude of economic losses, it cannot fully replicate the scale, wage levels, and supply chain linkages associated with the existing coal-based system. The closure of coal mines represents a substantial and difficult-to-replace source of employment and income. As a result, the East Central region faces a structural economic transition rather than a short-term adjustment. Without additional sources of economic activity, the region may experience continued declines in employment, income, and population, even under scenarios with new energy investments.

Fiscal impacts reinforce this conclusion. At the state level, all scenarios result in net revenue losses, although the nuclear scenario reduces these losses relative to the alternatives. At the local level, fiscal outcomes vary by county. In Emery County, replacement scenarios increase economic activity but also raise demand for public services, resulting in net fiscal deficits, while the no-replacement scenario produces a surplus driven by declining service needs. In Carbon County, projected fiscal impacts appear more balanced, with modest surpluses or small deficits across scenarios. Overall, while replacement investments help stabilize revenues, they do not fully offset the loss of coal-related tax bases, and in some cases increase fiscal pressure through higher expenditure demands.

Appendix A: Economic and Fiscal Impacts from All Scenarios

Appendix A includes the results of economic and fiscal impacts from all scenarios. Scenario 1 represents the case in which the power plants and coal mines close without replacement. Scenarios 2.1–2.5 examine replacement with nuclear power plants at capacities of 500 MW, 1,000 MW, 1,500 MW, 2,000 MW, and 2,500 MW. Scenarios 3.1–3.5 considers replacement with solar facilities across the same capacity range.

Table 10: Definition of Indicators

Indicators	Definition
Employment	Employment comprises estimates of the number of jobs, full-time plus part-time, by place of work for all industries. Full-time and part-time jobs are counted at equal weight. Employees, sole proprietors, and active partners are included, but unpaid family workers and volunteers are not included.
GDP	The market value of final goods and services produced by labor and capital within a defined geographical area, regardless of the ownership. At the state and county levels, GDP reflects the value of production occurring within those jurisdictions.
Personal Income	Income received by persons from all sources. It includes income received from participation in production as well as from government and business transfer payments. It is the sum of compensation of employees (received), supplements to wages and salaries, proprietors' income with inventory valuation adjustment and capital consumption adjustment (CCAdj), rental income of persons with CCAdj, personal income receipts on assets, and personal current transfer receipts, less contributions for government social insurance.
Population	Total number of residents in a region, including both the labor force and non-working individuals. In the REMI model, population includes all residents within a region and evolves endogenously based on economic attractiveness. Changes in employment opportunities, wage levels, and living costs influence migration patterns, while births and deaths contribute to overall population dynamics.

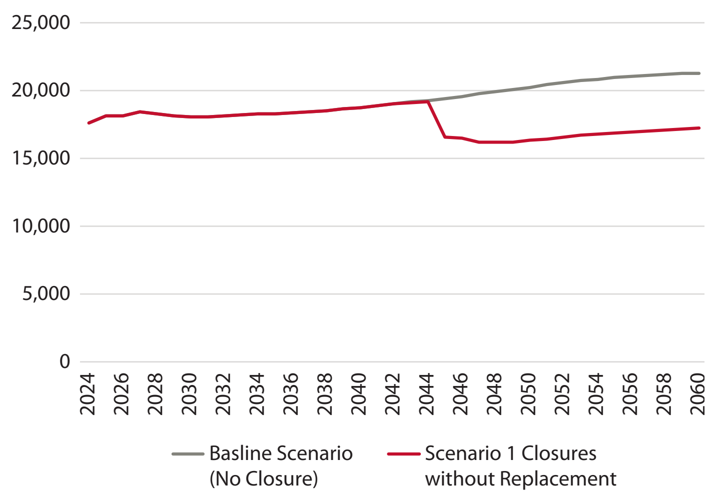
Source: REMI PI+, v.3.3.0, 2026

Economic Impacts, by Indicator

This section reports the impacts of employment, GDP, personal income, and population from 2035 to 2060 at the state and county levels across all scenarios. It presents the results as net values relative to the baseline scenario. For example, if baseline employment (with no closure) totals 100 jobs and a scenario reduces employment by 20 jobs, the table reports 80 jobs. Table 10 shows definitions of the selected economic indicators.

Figure 18: Estimated Net Employment Impacts of Emery and Carbon Counties (Combined) in Scenario 1 Compared to the Baseline

(Jobs)



Source: Kem C. Gardner Policy Institute analysis of REMI PI+

Table 11: Statewide and Local Economic Impacts Relative to the Baseline Scenario, Average Annual Change (2042–2060)

(Jobs, Millions of Constant 2025 Dollars, Persons)

	Employment		GDP		Personal Income		Population	
Scenario	Statewide	Emery & Carbon	Statewide	Emery & Carbon	Statewide	Emery & Carbon	Statewide	Emery & Carbon
1	-7,500	-3,251	-$2,963	-$1,731	-$847	-$379	-9,594	-4,866
2.1	-6,788	-2,930	-$2,624	-$1,467	-$752	-$330	-8,018	-3,922
2.2	-6,255	-2,678	-$2,454	-$1,353	-$685	-$298	-7,000	-3,305
2.3	-5,713	-2,412	-$2,278	-$1,232	-$620	-$266	-4,882	-2,757
2.4	-5,284	-2,208	-$2,134	-$1,133	-$570	-$243	-5,401	-2,357
2.5	-4,900	-2,029	-$1,998	-$1,038	-$525	-$223	-4,820	-2,030
3.1	-7,398	-3,192	-$2,927	-$1,704	-$835	-$372	-9,407	-4,735
3.2	-7,301	-3,134	-$2,892	-$1,677	-$824	-$365	-9,228	-4,608
3.3	-7,206	-3,078	-$2,858	-$1,652	-$812	-$358	-9,060	-4,489
3.4	-7,126	-3,030	-$2,828	-$1,629	-$803	-$353	-8,914	-4,385
3.5	-7,045	-2,982	-$2,798	-$1,607	-$793	-$348	-8,779	-4,291

Note: The analysis uses 2042 as the starting point, assuming that coal power plants begin reducing employment in that year.
Source: Kem C. Gardner Policy Institute analysis of REMI PI+

Table 12: Total Projected Employment of the East Central Region,* 2035–2060
(Jobs)

Scenarios	2035	2042	2050	2060	Absolute Change 2035-2042	Absolute Change 2042-2060	Percent Change 2035-2042	Percent Change 2042-2060	Average Annual Percent Change 2035-2060
1	18,278	19,000	16,316	17,204	722	-1,796	4%	-9%	-0.20%
2.1	18,278	20,567	16,636	17,378	2,288	-3,188	13%	-16%	-0.15%
2.2	18,278	21,493	16,767	17,444	3,215	-4,048	18%	-19%	-0.12%
2.3	18,278	21,773	16,913	17,527	3,495	-4,247	19%	-20%	-0.09%
2.4	18,278	21,598	17,038	17,559	3,320	-4,040	18%	-19%	-0.09%
2.5	18,278	21,439	17,146	17,611	3,161	-3,828	17%	-18%	-0.09%
3.1	18,278	19,000	16,344	17,219	722	-1,781	4%	-9%	-0.17%
3.2	18,278	19,000	16,373	17,232	722	-1,768	4%	-9%	-0.19%
3.3	18,278	19,000	16,402	17,247	722	-1,753	4%	-9%	-0.19%
3.4	18,278	19,000	16,433	17,252	722	-1,748	4%	-9%	-0.19%
3.5	18,278	19,000	16,466	17,267	722	-1,733	4%	-9%	-0.19%

Note: *Combined effects of Carbon and Emery counties
Source: Kem C. Gardner Policy Institute analysis of REMI PI+

Table 13: Total Projected GDP of the East Central Region, 2035–2060
(Millions of Constant 2025 Dollars)

Scenarios	2035	2042	2050	2060	Absolute Change 2035-2042	Absolute Change 2042-2060	Percent Change 2035-2042	Percent Change 2042-2060	Average Annual Percent Change 2042-2060
1	$3,819.0	$4,163.9	$2,775.2	$3,276.7	$344.9	-$887.2	9%	-21%	-0.22%
2.1	$3,819.0	$4,452.0	$3,068.5	$3,574.4	$633.0	-$877.6	17%	-20%	-0.16%
2.2	$3,819.0	$4,630.2	$3,174.6	$3,679.8	$811.3	-$950.5	21%	-21%	0.20%
2.3	$3,819.0	$4,686.1	$3,292.7	$3,798.6	$867.1	-$887.5	23%	-19%	0.31%
2.4	$3,819.0	$4,652.6	$3,399.6	$3,900.8	$833.6	-$751.8	22%	-16%	0.38%
2.5	$3,819.0	$4,621.9	$3,484.5	$4,022.0	$802.9	-$599.8	21%	-13%	0.47%
3.1	$3,819.0	$4,163.9	$2,799.0	$3,301.3	$344.9	-$862.6	9%	-21%	-0.16%
3.2	$3,819.0	$4,163.9	$2,822.9	$3,325.3	$344.9	-$838.6	9%	-20%	-0.20%
3.3	$3,819.0	$4,163.9	$2,846.1	$3,349.8	$344.9	-$814.1	9%	-20%	-0.18%
3.4	$3,819.0	$4,163.9	$2,870.1	$3,371.9	$344.9	-$792.0	9%	-19%	-0.16%
3.5	$3,819.0	$4,163.9	$2,895.2	$3,397.5	$344.9	-$766.4	9%	-18%	-0.13%

Source: Kem C. Gardner Policy Institute analysis of REMI PI+

Table 14: Total Projected Personal Income of the East Central Region, 2035–2060
(Millions of Constant 2025 Dollars)

Scenarios	2035	2042	2050	2060	Absolute Change 2035-2042	Absolute Change 2042-2060	Percent Change 2035-2042	Percent Change 2042-2060	Average Annual Percent Change 2035-2060
1	$1,870.1	$2,105.6	$2,066.9	$2,323.0	$235.5	$217.4	13%	10%	0.91%
2.1	$1,870.1	$2,218.4	$2,118.9	$2,357.2	$348.3	$138.8	19%	6%	0.97%
2.2	$1,870.1	$2,284.4	$2,148.5	$2,373.7	$414.3	$89.3	22%	4%	1.01%
2.3	$1,870.1	$2,105.6	$2,066.9	$2,323.0	$235.5	$217.4	13%	10%	1.04%
2.4	$1,870.1	$2,289.5	$2,203.2	$2,404.8	$419.4	$115.3	22%	5%	1.06%
2.5	$1,870.1	$2,278.0	$2,223.8	$2,421.2	$407.9	$143.2	22%	6%	1.08%
3.1	$1,870.1	$2,105.6	$2,073.6	$2,326.1	$235.5	$220.4	13%	10%	0.93%
3.2	$1,870.1	$2,105.6	$2,080.3	$2,329.2	$235.5	$223.6	13%	11%	0.92%
3.3	$1,870.1	$2,105.6	$2,087.3	$2,334.4	$235.5	$228.8	13%	11%	0.93%
3.4	$1,870.1	$2,105.6	$2,094.1	$2,335.2	$235.5	$229.5	13%	11%	0.93%
3.5	$1,870.1	$2,105.6	$2,100.6	$2,338.7	$235.5	$233.1	13%	11%	0.94%

Source: Kem C. Gardner Policy Institute analysis of REMI PI+

Table 15: Total Projected Population of the East Central Region, 2035–2060
(Persons)

Scenarios	2035	2042	2050	2060	Absolute Change 2035-2042	Absolute Change 2042-2060	Percent Change 2035-2042	Percent Change 2042-2060	Average Annual Percent Change 2035-2060
1	31,627	31,911	28,157	26,717	284	-5,194	1%	-16%	-0.64%
2.1	31,627	33,333	29,145	27,110	1,707	-6,223	5%	-19%	-0.58%
2.2	31,627	33,908	29,838	27,369	2,282	-6,540	7%	-19%	-0.54%
2.3	31,627	33,962	30,574	27,665	2,335	-6,296	7%	-19%	-0.50%
2.4	31,627	33,832	31,206	27,891	2,206	-5,941	7%	-18%	-0.47%
2.5	31,627	33,731	31,765	28,146	2,104	-5,584	7%	-17%	-0.44%
3.1	31,627	31,911	28,326	26,764	284	-5,147	1%	-16%	-0.63%
3.2	31,627	31,911	28,513	26,824	284	-5,087	1%	-16%	-0.63%
3.3	31,627	31,911	28,726	26,885	284	-5,026	1%	-16%	-0.62%
3.4	31,627	31,911	28,947	26,936	284	-4,975	1%	-16%	-0.61%
3.5	31,627	31,911	29,157	26,998	284	-4,913	1%	-15%	-0.60%

Fiscal Impacts

This section shows fiscal impact estimates at both the state (Table 16) and county levels (Tables 17 and 18). Negative amounts in expenditure reflect a decline in public expenditure due to population growth. Estimated net state revenues represent the difference between the declines in revenue and expenditure. The analysis estimates fiscal impacts over a ten-year period, from 2042 to 2051, capturing the most active investment phase across all scenarios. The fiscal analysis uses a shorter time horizon than the economic impact analysis due to greater uncertainty in future tax policies.

The Gardner Institute fiscal model uses the ratio of the state income tax liability (per the State Tax Commission) to personal income, derived from the REMI PI+ estimation, to estimate individual income tax revenues. For corporate income taxes, the fiscal model uses the ratio of corporate tax revenues (by industry) to GDP for each industry. Sales tax revenue numbers come from sales and gross receipts taxes. On the expenditure side, the estimated state expenditures equal the sum of education spending from public education and higher education, and non-education expenditures. At the county level, local revenues include local sales tax and locally assessed property taxes, and local expenditures include operating and capital expenditures. Although estimating precise centrally assessed property tax revenues falls outside the scope of the Gardner Institute fiscal model, incorporating the anticipated losses from power plant and mine closures indicates that the no-replacement scenario (Scenario 1) would likely to generate the largest fiscal deficit of the scenarios evaluated. For context, the 2024 centrally assessed property tax report allocated approximately $22 million in property tax revenue from electric utilities and coal natural resources to Emery and Carbon counties combined.

Table 16: Statewide Average Annual Fiscal Impacts by Scenario, 2042–2051
(Millions of Constant 2025 Dollars)

	Estimated Revenues				Estimated Expenditures				
Scenarios	Individual Income Tax Revenues[1]	Corporate Income Tax Revenues[2]	State Sales Tax Revenues[3]	State Tax Revenue Changes	State Non-Education Expenditures	State Public Education Expenditures	State Higher Education Expenditures	Estimated State Expenditure Changes[4]	Estimated Net State Revenues
1	-$13.2	-$3.2	-$10.7	-$27.1	-$12.1	-$6.2	-$3.7	-$22.0	-$5.1
2.1	-$10.0	-$2.7	-$8.2	-$20.9	-$7.0	-$3.1	-$2.7	-$12.7	-$8.2
2.2	-$7.7	-$2.3	-$6.3	-$16.3	-$3.6	-$1.2	-$1.9	-$6.7	-$9.6
2.3	-$5.6	-$2.0	-$4.5	-$12.1	-$0.9	$0.3	-$1.2	-$1.8	-$10.3
2.4	-$3.9	-$1.7	-$3.2	-$8.8	$1.0	$1.3	-$0.7	$1.6	-$10.4
2.5	-$2.7	-$1.5	-$2.2	-$6.3	$2.3	$2.0	-$0.3	$4.0	-$10.3
3.1	-$12.7	-$3.1	-$10.4	-$26.2	-$11.5	-$5.8	-$3.5	-$20.9	-$5.3
3.2	-$12.3	-$3.1	-$10.0	-$25.4	-$11.0	-$5.5	-$3.4	-$19.9	-$5.5
3.3	-$11.9	-$3.0	-$9.7	-$24.7	-$10.5	-$5.3	-$3.2	-$19.0	-$5.6
3.4	-$11.6	-$2.9	-$9.5	-$24.0	-$10.1	-$5.1	-$3.1	-$18.3	-$5.7
3.5	-$11.3	-$2.9	-$9.2	-$23.5	-$9.8	-$4.9	-$3.0	-$17.7	-$5.7

Notes: 1. State income taxes are calculated based on the ratio of the county's state income tax liability (per State Tax Commission) to personal income resulting from the REMI PI+ estimation. 2. Corporate income taxes are estimated based on the ratio of corporate tax revenues (by industry) to GDP by industry. 3. Sales and gross receipts taxes. 4. Negative amounts in expenditure represent the decline in public expenditures from the population impacts.
Source: Kem C. Gardner Policy Institute analysis using the Gardner Institute fiscal model

Table 17: Emery County's Average Annual Fiscal Impacts by Scenario, 2042–2051

(Millions of Constant 2025 Dollars)

Scenarios	Estimated Local Revenue Changes	Estimated Local Expenditure Changes	Estimated Net Local Revenues
1	-$4.0	-$16.5	$12.5
2.1	-$2.4	-$2.7	$0.3
2.2	-$1.3	$6.1	-$7.5
2.3	-$0.3	$13.3	-$13.6
2.4	$0.3	$17.9	-$17.5
2.5	$0.8	$20.9	-$20.1
3.1	-$3.7	-$14.5	$10.8
3.2	-$3.5	-$12.8	$9.3
3.3	-$3.3	-$11.3	$8.0
3.4	-$3.1	-$10.1	$6.9
3.5	-$3.0	-$9.1	$6.1

Note: Local government revenue and expenditures include those of county, city, and town governments. Negative local expenditures reflect the decline in public expenditures resulting from population decreases. The replacement scenarios assume no change in centrally assessed property tax revenues between retired assets and new energy-generating assets. Under the no-replacement scenario, loss of centrally assessed property tax revenues could be significant, given 2024 reported charges of $19.8 million against electric utilities and $0.6 million against coal natural resources in Emery County.
Source: Kem C. Gardner Policy Institute analysis using the Gardner Institute fiscal model

Table 18: Carbon County's Average Annual Fiscal Impacts by Scenario, 2042–2051

(Millions of Constant 2025 Dollars)

Scenarios	Estimated Local Revenue Changes	Estimated Local Expenditure Changes	Estimated Net Local Revenues
1	-$4.6	-$7.8	$3.3
2.1	-$4.3	-$6.8	$2.5
2.2	-$4.1	-$6.2	$2.1
2.3	-$3.9	-$5.6	$1.8
2.4	-$3.7	-$5.2	$1.5
2.5	-$3.5	-$4.9	$1.3
3.1	-$4.5	-$7.7	$3.2
3.2	-$4.5	-$7.6	$3.1
3.3	-$4.4	-$7.4	$3.0
3.4	-$4.4	-$7.3	$2.9
3.5	-$4.3	-$7.2	$2.9

Note: Local government revenue and expenditures include those of county, city, and town governments. Negative local expenditures reflect the decline in public expenditures resulting from population decreases. The replacement scenarios assume no change in centrally assessed property tax revenues between retired assets and new energy-generating assets. Under the no-replacement scenario, loss of centrally assessed property tax revenues could be significant, given 2024 reported charges of $1.5 million against coal natural resources in Carbon County.
Source: Kem C. Gardner Policy Institute analysis using the Gardner Institute fiscal model

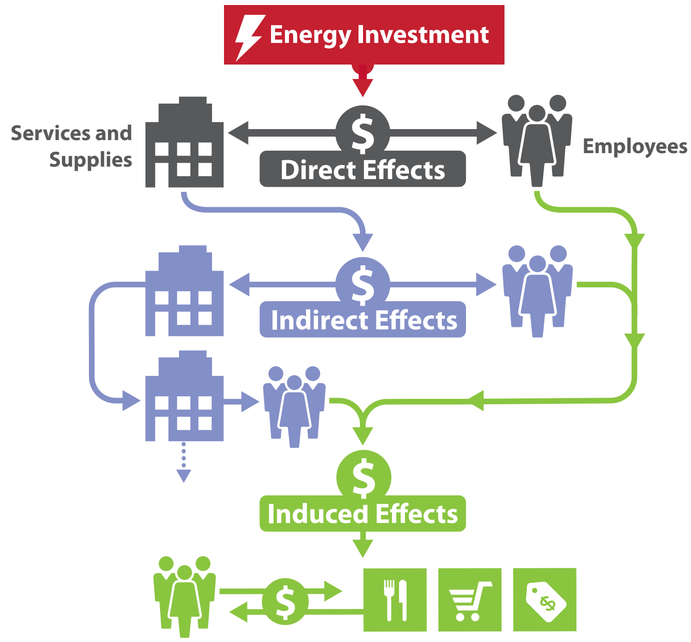
Appendix B: Economic and Fiscal Impact Model and Methodology

Economic Impact Model

This study applies an economic impact analysis framework to estimate changes in economic activity, such as employment, income, and output, associated with different energy scenarios in Utah's East Central economic region. The study categorizes economic impacts into three components: direct, indirect, and induced effects. Direct effects arise from on-site activities, including changes in employment, wages, and expenditures related to power plant and mine closures, as well as the construction and operation of new energy facilities. Indirect effects capture supply chain responses, as local businesses purchase goods and services from other regional firms. Induced effects reflect changes in household spending resulting from shifts in labor income. The total economic impact equals the sum of direct, indirect, and induced effects (Figure 19).

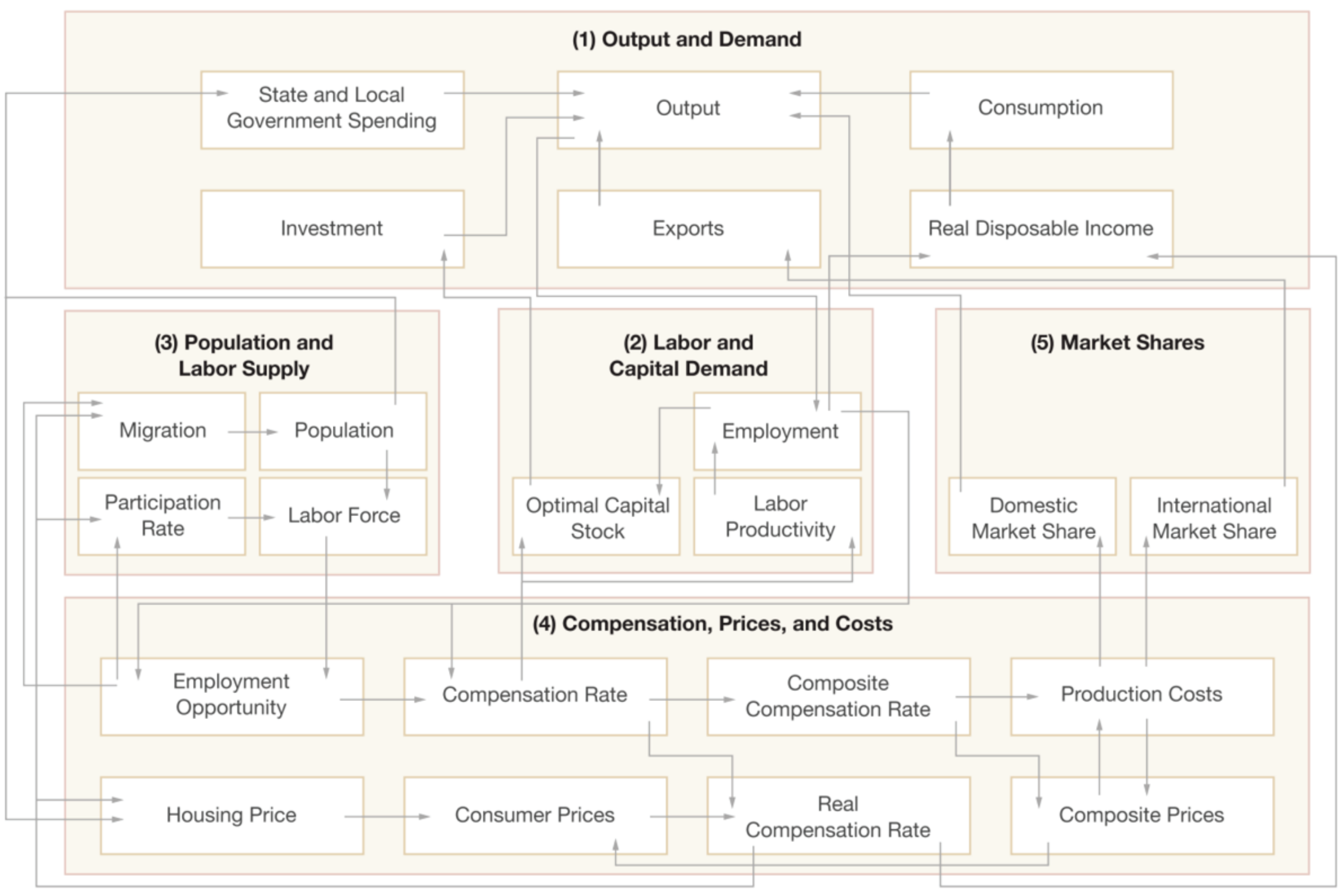
To estimate these impacts, the study uses the REMI PI+ version 3.3.0, a dynamic, multi-regional simulation model that integrates input-output relationships, general equilibrium effects, labor markets, and regional economic interactions. The study conducted an analysis at the county level using a 23-sector framework. The simulations generated by REMI PI+ include annual data as well as behavioral responses to compensation,

Figure 19: Economic Flow of Direct, Indirect, and Induced Economic Impacts from an Energy Investment Project



Source: Kem C. Gardner Policy Institute

Figure 20: REMI Model Linkages



Source: REMI PI+ v.3.3.0

prices, and other economic factors. The model consists of thousands of simultaneous equations. The model organizes its overall structure into five major blocks: (1) Output and Demand, (2) Labor and Capital Demand, (3) Population and Labor Supply, (4) Compensation, Prices, and Costs, and (5) Market Shares. Figure 20 illustrates the relationships among these components.

The changes in employment, wages, and capital expenditures affect multiple components of the REMI PI+ model, particularly the production, labor and capital demand, and market shares blocks (Blocks 1, 2, and 5). Changes in these inputs shape economic activity by affecting labor demand, income levels, and investment patterns. These changes then ripple through the regional economy, influencing migration patterns and overall population levels.

The REMI PI+ model calibrates its baseline using regional data from the U.S. Bureau of Economic Analysis (BEA), including employment, personal income, and population. For this study, researchers rebased the baseline using county-level employment projections for Emery and Carbon Counties developed by the Gardner Institute. These projections replace the default REMI baseline to better reflect local economic conditions. The model then endogenously adjusts employment, income, and population over time in response to changes in economic conditions, including shifts in industry activity, wages, and migration driven by economic opportunities.

Employment Estimation: Nuclear Plant

Nuclear construction, a labor-intensive process spread over many years, creates jobs that depend on capital expenditures across industries, including construction, manufacturing, transportation, warehousing, and professional, scientific, and technical services. In construction, a single reactor build employs hundreds of workers at peak, and the workforce stays on site for most of the eight-year construction window. When reactors come online in a sequence at the same site, overlapping construction windows keep a large workforce employed continuously for more than a decade.

For the operation and maintenance (O&M) jobs, the research team estimates the number of jobs based on Prosser et al. (2023). The O&M employment scales with the number of reactors. Administration, technical, and offsite employment consist of two components: one fixed and one proportional to O&M employment. Prosser et al. (2024) report workforce headcounts by job category for one-, four-, and ten-reactor configurations, drawing on Boardman et al. (2000) for the four-reactor baseline. This analysis uses the headcounts from this study for one- and four-reactor configurations to represent 500 MW and 2,000 MW scenarios, respectively. To estimate employment for intermediate configurations (two, three, and five reactors, corresponding to 1,000 MW, 1,500 MW, and 2,500 MW), the analysis specifies linear regressions for operations and maintenance employment as functions of reactor count. The model estimates employment as a linear function of reactor count (RT), with a fixed component of 141.7 jobs and an additional 89.6 jobs per reactor. Under a 15-month staggered construction schedule, reactors begin operation sequentially in 2044, 2045, 2046, 2047, and 2049. The analysis uses the resulting coefficients to interpolate O&M employment levels for these configurations. The following equation represents the resulting specification:

$$Emp = 141.7 + 89.6\ Reactors$$

Where *Emp* represents the number of O&M jobs in the nuclear power plant and *Reactors* represents the number of nuclear reactors.

Employment Estimation: Solar Facility

The research team estimates employment in construction and operations for utility-scale solar PV facilities. The model uses data on peak and mean construction full-time equivalent (FTE), construction duration, and operation and maintenance FTE from 50 utility-scale solar projects from the U.S. Bureau of Land Management, the Department of Energy's Loan Programs Office, and developers.

The analysis estimates construction employment in three steps. First, it scales workforce requirements with plant capacity using statistical relationships observed in existing projects, where larger facilities require more workers but at a decreasing rate. Second, it determines construction duration based on plant size and location using observed timelines, while enforcing a minimum duration to avoid unrealistically short schedules. Third, it models the monthly workforce profile, with employment ramping up, peaking construction, and declining as the project approaches completion. For multi-unit developments, the analysis applies the same employment profile to each unit and staggers construction start dates to reflect typical development practices and avoid excessive peak labor demand.

For operational employment, the study estimates staffing levels based on staffing levels observed at operating solar facilities, applying a median workers-per-megawatt ratio to determine baseline staffing for a single plant. For multiple units, staffing increases with total capacity but at a decreasing rate, reflecting shared functions such as maintenance, administration, and site monitoring across facilities.

Wage Estimation

The study estimates wages for each scenario by combining industry-specific occupational staffing patterns from the 2023 Bureau of Labor Statistics (BLS) with 2024 Utah-specific wage data from the Quarterly Census of Employment and Wages (QCEW). This approach generates weighted-average wages that reflect both occupational composition and regional wage levels for each scenario. The research team also cross-validated average wages with company-provided data. Table 19 shows an example of the average wage estimate for a power plant with 320 employees.

Because REMI PI+ reports income by place of residence, while employment data typically reflect place of work, the analysis adjusts for commuting patterns between counties using input from companies associated with power plants and coal mines. These residence adjustments account for the net flow of labor earnings across regions, ensuring a more accurate representation of local income impacts.

Capital Expenditures

Capital expenditures represent investment-driven economic activity. The analysis includes only spending expected through domestic vendors and converts all expenditures to nominal terms for the corresponding investment years. Table 20 provides detailed capital expenditure categories. The analysis groups these expenditures by the North American Industry Classification System (NAICS) code for input into the REMI model.

The first Natrium reactor built in Utah would cost roughly $3.7 billion. Building more reactors at the same site typically costs less per reactor because some costs, such as design work, licensing, simulator training, site preparation, and shared facilities, spread out across the fleet. Building five reactors together would cut the per-reactor cost by about 25% compared with building a single reactor. These cost savings align with what historical nuclear construction data show for multi-unit projects.

For a solar facility, the study includes only expenditures for the structural balance-of-system components. Other expenditures for building a solar facility, such as installation, warehousing, site preparation, inspection, shipping and logistics, permits, and engineering services, fall within the scope of employment at commercial solar contractor companies and are part of employment input. Other components, such as modules, inverters, and trackers, rely on imports.

Fiscal Impact Analysis

The research team uses the fiscal impact calculator developed by the Gardner Institute to estimate the statewide and county-level changes in revenues and expenditures in each scenario. The calculator uses personal income, population, value added of the production or GDP by industry from REMI PI+ economic impact results as the inputs.

At the statewide level, the analysis derives individual income and sales tax estimates from personal income. It estimates corporate income tax based on industry-level GDP impacts calculated by REMI. The research team applies multiyear average ratios of tax revenues to personal income or GDP to convert these impacts into tax estimates.

Table 19: Example of calculation of wages expected to be lost from closing power plants

Occupation Title	Estimated Employment in 2023	Utah Average Wage in 2024	Wages Paid
Power plant operators	53	$94,260	(53)x($94,260) = $4,995,780
Electrical power-line installers and repairers	27	$81,700	(27)x($81,700) = $2,205,900
Electrical engineers	16	$117,860	(16)x($117,860) = $1,885,760
…	…	…	…
Electrical and electronics repairers, powerhouse, substation, and relay	14	$101,770	(14)x($101,770) = $1,424,780
Total	320		$26,084,270
Average Wages			$26,084,270/320 = **$81,513**

Table 20: Details of capital expenditures in different scenarios

Activity	Capital Expenditures
Power Plant Closures	Demolition, environmental remediation, landfill closures, asbestos detection, groundwater monitoring, and contamination management.
Coal Mine Closures	Portal sealing, surface infrastructure removal, conveyor system decommissioning, methane management, land reclamation, water treatment, post-closure environmental monitoring, and planning, permits, and documentation
Nuclear Power Plant Investment	Plant studies and reports, pre-construction cost, structural improvement, reactor system, energy conversion system, electrical equipment, simulator, construction, and engineering services
Solar Facility Investment	Structural balance-of-system components

Centrally assessed real and personal property, largely related to utilities such as existing coal-fired power plants, represent a major proportion of the property tax base in the East Central economic region. For each scenario, the research team assumes a one-for-one replacement of centrally assessed property tax revenues when one centrally assessed facility closes and another centrally assessed facility replaces it, resulting in no net change in estimated centrally assessed property tax revenues.

On the expenditure side, the Gardner Institute estimates government spending on a per-capita basis using projected population changes. Non-education expenditures include all state operating budget items except higher education and public education. Higher education spending varies with changes in the college-age population, while public education spending depends on changes in the school-age population. The analysis applies a similar per-capita approach to estimate capital expenditures. All expenditure estimates rely on multiyear average per-capita spending levels.

At the county level, the analysis estimates local revenues from sales and property taxes and derives expenditures from local operating and capital spending using historical government data.

The fiscal impact estimates in this report represent broad approximations. The analysis reports average annual impacts over a ten-year period, a shorter timeframe than the economic impact horizon due to uncertainty in future tax policies. The methodology relies on historical relationships and assumes proportional (linear) links between tax revenues and personal income and industry GDP, as well as between government operating and capital expenditures and population levels. For example, the analysis uses average income tax rates from 2019–2023, although tax rates change over time.

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Endnotes

1. A representative case in the report estimates that a 924 GWe nuclear plant could generate up to $275 million annually in regional economic activity, create about 650 permanent jobs, and increase local tax revenues.
2. https://www.nrc.gov/about-nrc/governing-laws/advance-act/about-advance-act
3. The One Big Beautiful Bill Act significantly altered the solar policy landscape. Solar and wind tax credits now phase out under "safe harbor" provisions: projects must begin construction by June 2026 or come online by December 2027 to qualify for IRA-era credit rates. Expanded "foreign entity of concern" rules restrict participation by China, Russia, Iran, and North Korea in supply chains for qualifying projects.
4. https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_6_07_a
5. https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_6_07_a and https://geology.utah.gov/docs/statistics/electricity5.0/pdf/T5.19.pdf
6. https://www.carbon.utah.gov/ and https://www.uen.org/utah_history_encyclopedia/e/EMERY_COUNTY.shtml
7. https://ilovehistory.utah.gov/emery-county/

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