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Measuring the Economic Impacts of Public Service New Hampshire Electric Generation Asset Divestiture Options

PREPARED BY

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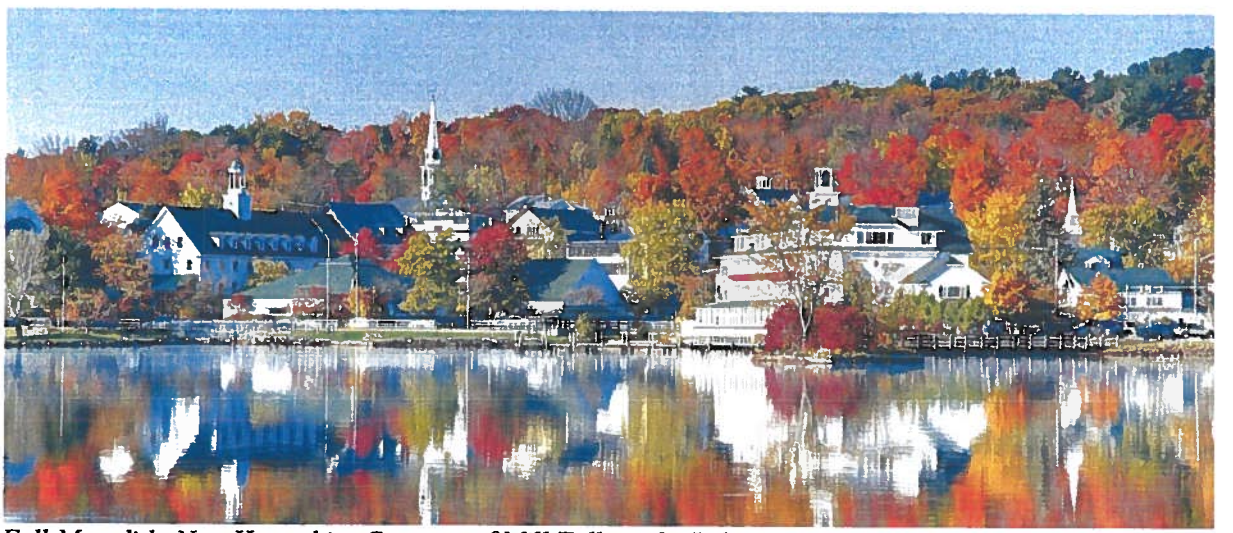

Fall Meredith, New Hampshire Courtesy of Mill Falls at the Lake

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Executive Summary

Public Service of New Hampshire ("PSNH"), now known as Eversource Energy ("Eversource"), has signed and filed with the New Hampshire Public Utilities Commission a formal Settlement Agreement with various other parties, under which it has agreed to sell all of its remaining electric generation facilities. The purpose of divesting all of its electric generation assets is to accomplish the long-term goal of fully deregulating the electricity industry, so no electric utility entity can own generation and distribution assets within New Hampshire. Once the divestiture is complete, PSNH will only own and operate electricity transmission and distribution infrastructure within New Hampshire.

New Hampshire Senate Bill 221 passed both the New Hampshire Senate and House of Representatives during the 2015 legislative session and was signed into law by the Governor on July 9, 2015. The bill allows securitization of any stranded costs that result from the divestiture of PSNH's remaining generation facilities. The intent of Senate Bill 221 is to provide the authority to enable a cost-effective, expedient solution that is in the economic interest of PSNH ratepayers to complete the divestiture of the remaining generation assets in New Hampshire. PSNH customers account for about 72 percent of all rate payers in the state and the PSNH service territory spans over most of the state. Thus, the economic interest of PSNH ratepayers, businesses and consumers across New Hampshire are interconnected.

Regional Economic Models, Inc. (REMI) was engaged by the parties signing the divestiture Settlement Agreement (filed with the Commission on June 10, 2015) (the "Settling Parties") to model the economic and demographic effects of potential divestiture scenarios, which include a Settlement scenario that allows for securitization of all stranded costs (excluding $25 million in foregone deferred equity return related to the Merrimack Station scrubber).–Eversource provided REMI the annual changes in electricity costs for the New Hampshire economy for years 2015 through 2031. The electricity cost changes are categorized into the customer classes of Residential, Commercial, Industrial and Public Street Lighting. The cost changes entered as inputs to the REMI PI^+ model account for the potential energy cost savings for each proposed scenario. The scenario input data accounts for the difference in energy costs between the Status Quo scenario and the four applicable scenarios modeled in this report. PI^+ simulation results illustrate how the relative energy cost savings would influence the New Hampshire economy as a whole, changes to specific industries, residential consumer benefits and the potential fiscal impact to state revenues.

In the Status Quo case, where no settlement is reached, PSNH continues to own and operate their electricity generation plants, litigation fees are incurred, and PSNH does not forego $25 million in scrubber related costs. In that situation, the temporary scrubber rate of 0.98 cents/kWh would be replaced upon Commission order by a permanent contribution to PSNH's Default Energy

Service rates. About 40% of PSNH's retail customers currently avoid this cost because they have moved to a competitive supplier. If those customers select another supplier, the current ratepayers are still required to cover the full cost of the scrubber. This would cause rates to rise even higher for the majority of the PSNH customers who do not choose another supplier. The no settlement scenario spreads stranded costs evenly across all ratepayers classes and would significantly impact not only residential and small commercial businesses across New Hampshire, but also large industrial customers who have migrated to competitive suppliers.

The PSNH Settlement Agreement scenario and the New Hampshire Public Utilities Commission (PUC) Ordered Divestiture scenario both save the ratepayer substantial money. Based on information provided by PSNH for this analysis, the PSNH settlement scenario would result in approximately $379 million of ratepayer savings through 2021. The proposed Settlement Agreement scenario resolves concerns about rate impacts on large industrial and commercial users through the use of a stipulated rate design, as allowed by Senate Bill 221. The Settlement scenario enables PSNH to refinance the stranded costs at a lower interest rate, also as authorized by Senate Bill 221. In the PUC-OD scenario, in which it is assumed that stranded costs are not financed at a low securitization rate and additional savings from the Settlement Agreement are not realized, PSNH customers save approximately $114 million dollars through 2021 or $265 million less than in the Settlement scenario.

Separate analyses were carried out for four stranded cost recovery scenarios. The generation facility sale proceeds of $225 million, which come from the La Capra Associates study conducted for PUC staff in early 2014, were changed to $150 million (low-case) and $450 million (high-case) to gain a rudimentary understanding of the robustness of the analysis results under a range of sale proceeds. In accordance with other testimony presented to the PUC, the results focus on the first five years and fifteen years of impacts to the New Hampshire economy following divestiture. All the scenarios aggregate impacts create jobs, output, and gross state product (GSP). The economic activity generated from the relative cost savings also drive savings in state tax revenues. A summary of these results are presented in the tables on the next page. The employment estimates are in individual jobs and the monetary results are reported in nominal dollars.

Table 1: Summary Results Total Impact 2015-2031

Scenario	Energy Cost Savings ($Bil)	Jobs Created	Output ($Bil)	GSP ($Bil)	Disposable Personal Income ($Bil)	Static Fiscal Impact ($Mil)
Settlement Agreement	$ 1.211	8,912	$ 2.065	$ 1.393	$ 1.451	$ 55
PUC-Ordered Divestiture	$ 0.841	5,165	$ 1.187	$ 0.831	$ 0.963	$ 37
Settlement Low-Case	$ 1.119	8,163	$ 1.880	$ 1.272	$ 1.344	$ 51
Settlement High-Case	$ 1.486	11,178	$ 2.626	$ 1.761	$ 1.776	$ 68

Table 2: Summary Results Total Impact 2015-2021

Scenario	Energy Cost Savings ($Mil)	Jobs Created	Output ($Mil)	GSP ($Mil)	Disposable Personal Income ($Mil)	Static Fiscal Impact ($Mil)
Settlement Agreement	$ 379	3,239	$ 605	$ 406	$ 372	$ 14
PUC-Ordered Divestiture	$ 114	638	$ 134	$ 95	$ 91	$ 4
Settlement Low-Case	$ 344	2,927	$ 547	$ 368	$ 341	$ 13
Settlement High-Case	$ 482	4,181	$ 781	$ 522	$ 469	$ 18

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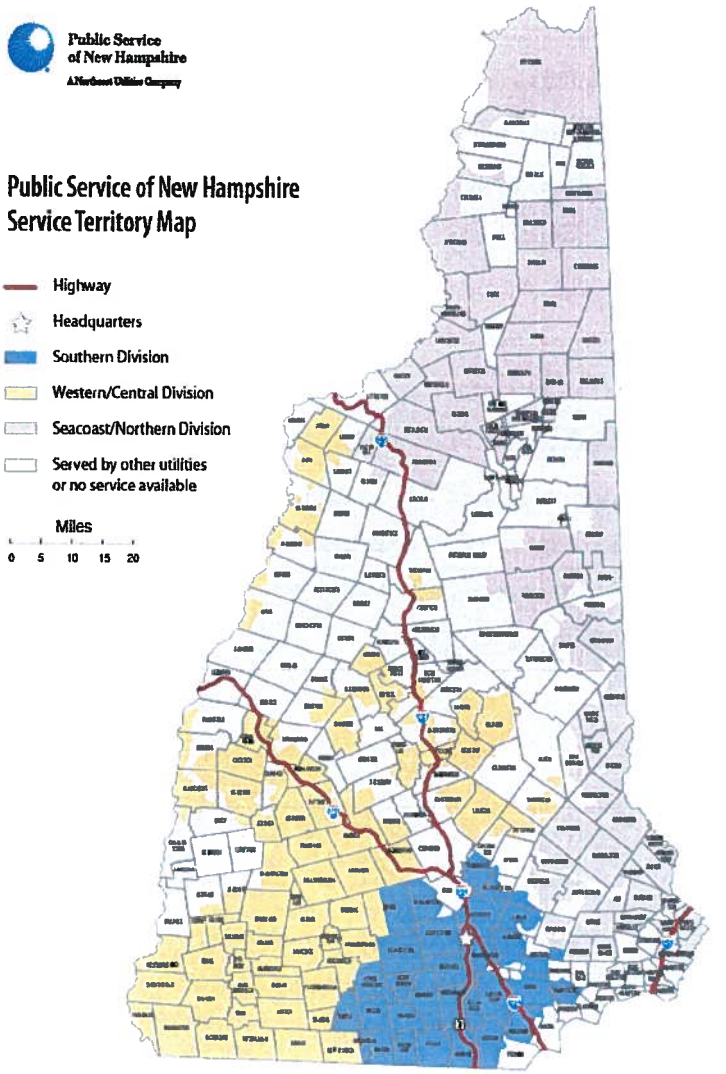
Introduction

PSNH is a New Hampshire public utilities company that provides transmission, distribution and generation that services communities across New Hampshire. Within New Hampshire, PSNH currently services approximately 510,000 electric customers. The PSNH customer service territory is distributed across most of the state, as it covers the most northern town of Pittsburg, down to the majority of central, southern and eastern border towns. In total, PSNH customers account for about 72 percent of all ratepayers in the state. [1]Figure 1 below depicts the current service territory of PSNH. All blue, yellow and pink areas are served by PSNH.

Figure 1: PSNH Service Territory Map



[1] Public Service of New Hampshire Service Territory Map, https://www.eversource.com/Content/docs/default-source/nh---pdfs/psnh-service-territory.pdf?sfvrsn=2

REMI is an independent company with offices in Amherst, MA and Washington, DC that provides economic analysis and dynamic macroeconomic models to clients globally. Clients include federal and state government agencies, non-profit organizations, and private companies. REMI models have been applied to various policy areas including taxation, environment, economic development, health care, transportation, energy, and immigration.

For the economic benefit of its customers and the state of New Hampshire overall, PSNH has agreed to divest its generation fleet as part of a broader Settlement Agreement that was submitted in June 2015 for Public Utilities Commission approval. An overarching purpose of divesting all generation owned by PSNH in New Hampshire is to complete the deregulation process originally established in the late 1990s. After divestiture is complete, PSNH would only own and operate electricity transmission and distribution infrastructure in the state. By divesting its generation assets and allowing for a competitive procurement process to take place, customers within the PSNH service territory, which includes businesses and consumers across the state, will benefit from lower electricity prices. Lower electricity prices associated with securitized divestiture of PSNH assets are possible for two primary reasons. First, all electric generators would be subject to full competition for electricity at market-established rates yielding lower costs of electricity for customers. Secondly, the securitization of stranded costs allow for savings via financing at lower market interest rates. The process of refinancing a utility's stranded costs using asset-backed securities in a structured financing is known as securitization. The securitization processes enable the issuance of Triple-A rated bonds backed by a property right in securitized property and a state pledge not to interfere with the obligation of customers to repay the debt; the bonds are not state loan guarantees nor are they obligations of the state.

There are two primary scenarios of how divestiture of the remaining PSNH generation assets will occur. PSNH is proposing what is referred to as the Settlement Agreement scenario. An alternative resolution could be a PUC-ordered divestiture situation, where the Settlement Agreement is not approved as is by the PUC, and the PUC otherwise requires a divestiture of PSNH assets in order to complete electric restructuring in New Hampshire. Both scenarios create energy cost savings relative to what will continue to occur (Status Quo) if no divestiture settlement is reached.

The Settlement Agreement (SA), in concert with the passage of Senate Bill 221, allows for securitization when divesting the remaining generation assets under the PSNH umbrella and incorporates cost recovery for the Merrimack Station scrubber. PSNH will forego $25 million in scrubber-related costs, while the remainder will be included in Default Energy Service rates starting January 1, 2016. If the Settlement Agreement is not approved, the full cost of the scrubber is expected to be included as part of Default Energy Service rates in the Status Quo case, with the temporary scrubber rate of 0.98 cents/kWh being replaced by a permanent contribution to Default Energy Service rates reflecting full scrubber recovery. Based on estimates published in Docket No. DE 11-250, that contribution is approximately 1.9 cents/kWh. If the Settlement Agreement is passed, ratepayers are expected to benefit from the distribution

rate case stay-out provision in the Settlement Agreement, and divestiture is assumed to be completed by January 1, 2017.

The PUC-Ordered Divestiture (PUC-OD) scenario assumes the PUC would order divesture upon completion of both the scrubber litigation and a PSNH generation divesture adjudicative proceeding. These proceedings would be finalized and implemented into the rates as of January 1, 2020. In this scenario, the scrubber cost recovery decision is litigated before the New Hampshire Supreme Court, creating additional delays, legal fees and cost deferrals ultimately to be paid by customers. The PUC-OD scenario would also not favorably support commercial and industrial businesses, and the stranded costs would be financed at the Company's weighted average cost of capital (WACC), instead of at a lower securitized market rate.

PSNH provided REMI detailed annual electricity cost changes from 2015-2031 for four different scenarios. The two primary scenarios are the Settlement Agreement scenario and the PUC-Ordered Divestiture. Within the context of the Settlement Agreement scenario, PSNH suggested two additional scenarios based on a modification of the estimated sale proceeds provided by La Capra Associates as part of its 2014 report completed at the request of PUC staff. The two additional scenarios provide a basic sensitivity analysis to help inform what the potential economic impacts are under the Settlement Agreement if sale proceeds are lower than forecast by La Capra (Settlement Agreement Low-Case) or higher than forecast by La Capra (Settlement Agreement High-Case) when the divestiture of the PSNH generation assets becomes finalized. The Settling Parties asked REMI to model the macroeconomic impacts of the four scenarios on the state of New Hampshire. For more information on the assumptions behind the four divestiture scenarios, see *Appendix III: Key Assumptions for REMI Scenarios.* At REMI's request and in order to fulfill its objective, PSNH disaggregated its savings data into the customer categories of Residential, Commercial, Industrial and Public Street Lighting. For a table including the costs savings by ratepayer class, by year for each scenario, see *Appendix IV: Estimated Energy Cost Reductions by Customer Accounting Class.* By using energy cost change data provided by the client as inputs for the current REMI v.1.7 PI^+ 70 sector model of New Hampshire, simulations gauged how the energy cost changes have influenced New Hampshire's economy and state tax revenues. The simulation results from PI^+ include both demographic and economic impacts of the program on an annual basis.

The following report begins with the methodology, documenting the steps taken in modeling the energy cost changes, then provides economic impact results and observations, and is supported by additional documentation in the *Appendix*.

Policy Designs

In designing the simulations, the input data on electric cost changes for each project during the period of 2015-2031 were formatted in a spreadsheet, and then inputted into the REMI PI$^+$ model for analysis. First, REMI input cost changes for the industrial, commercial and residential sectors, and accounted for cost changes to public street lighting as an adjustment to government spending. REMI was able to capture the net economic impact of each potential outcome. The policy variables (assumptions) entered into the model are explained below. For a full list of the policy variable inputs, see *Appendix V: Assumptions Entered into REMI PI$^+$*.

Policy Variables

Electricity Fuel Cost (Both Commercial and Industrial)

Electricity fuel costs reflect both the specific commercial and industrial fuel costs for all private, non-farm industries in the model. This change was modeled as a cost decrease for the four divestiture scenarios. The industrial and commercial electricity fuel cost policy variables will change the demand for electricity as a function of the individual industries' production over time, and is a factor of production cost change. A decrease in electricity fuel costs would make companies in New Hampshire more competitive, as their relative cost of electricity has decreased compared to rest of the nation.

Consumer Price of Electricity (Household Operations)

The analysis included a change in electricity cost for residential consumers. This was reflected as a cost decrease for the four divestiture scenarios. The consumer price of electricity policy variable reflects both the demand for electricity and impact on disposable income.

Government Spending (Household Operations)

The analysis included a change in government spending in response to cost savings for public street lighting. Local and state government entities that provide public lighting across the PSNH service territory would benefit from lower energy bills. Over a sixteen-year period, governments would save a total of $3.13 million under the Settlement Scenario and $2.18 million under the Ordered Divestiture scenario. In reality, the government savings would not likely be paid back to residents, but rather used to pay down debt or added back into a government expenditure fund. Given there is no definitive answer to support how the money will be spent, and the relatively small amount of money over the time period, REMI assumed it would be added back into the general fund.

REMI used the methodology described above to model the economic and demographic impacts on the New Hampshire economy. The four scenario results are categorized into two different time periods, 2015-2021 and 2015-2031. The first time period, 2015-2021, was selected to reflect the first five years of impacts beyond the divestiture date, while the 2015-2031 analysis period was selected to cover the first fifteen years of impacts beyond the divestiture date. The analysis over these two time periods complies with other reports and documentation provided to the Public Utilities Commission. To provide additional context behind the various economic and demographic indicators, the results tables include average annual percentage change in respect to the New Hampshire across the same time period.

After running the simulations, REMI estimated the impact to state tax revenues using the change in personal income multiplied by an effective tax rate generated by the Federal Tax Administration[2]. The static fiscal estimate is included in the analysis to provide a sense of what would be lost if the Status Quo scenario is upheld and what potential revenues could be created if a divestiture agreement is reached.

Settlement Agreement Scenario

Over the sixteen-year period, the total cost savings to PSNH ratepayers is approximately $1.21 billion dollars. Of those savings, about $892 million goes towards residential customers, almost $293 million benefits commercial customers, over $32 million is saved by industrial customers, and over $3 million is saved by local and state government entities. The industrial customers receive a relatively smaller amount of the cost savings, as they would not have to pay as much of the cost for the scrubber and only demand about 15.2 percent of the total electricity generated from PSNH. Residential customers of PSNH demand about 44.7 percent, commercial customers demand about 39.8 percent, and the remaining less than .28 percent goes towards public lighting.

Both the industrial and commercial sectors play a pivotal role as the business activity generated demands, employment, and interwoven supply chains across the region. Under the Agreement Scenario, both the commercial and industrial sectors directly benefit from lower electricity costs. The cost savings in electricity has become paramount especially as industrial consumers are having a difficult time competing with other regions. New England is witness to some of the highest electricity costs in the nation. The electricity cost savings allow the industrial and commercial sectors to further sustain and expand their businesses as they become more competitive with the rest of nation.

In addition to lower electricity costs, the commercial sector and select industrial sector industries benefit from increased local demand for their goods and services, as consumers receive

[2] Source: Federal Tax Administration (FTA), http://www.taxadmin.org/fta/rate/14taxbur.html

significantly higher disposable income from the energy cost savings and increased employment opportunities. Personal consumption expenditures makes up about 77 percent of the overall New Hampshire economy, and consumers demand many locally supplied goods and services, which are labor intensive and also require locally sourced supply-chains. With the New Hampshire economy being so intertwined with personal consumption, as many of the commercial sectors support the demands of the consumers, residential energy cost savings can play a pivotal role in supporting the local economy.

The simulation results are presented in the tables and graphs below. The results highlight the aggregate impacts of the Settlement Scenario. Additional results can be found under, *Appendix IV: Additional Results Tables.*

Table 3: Difference from Baseline – Settlement Scenario Results

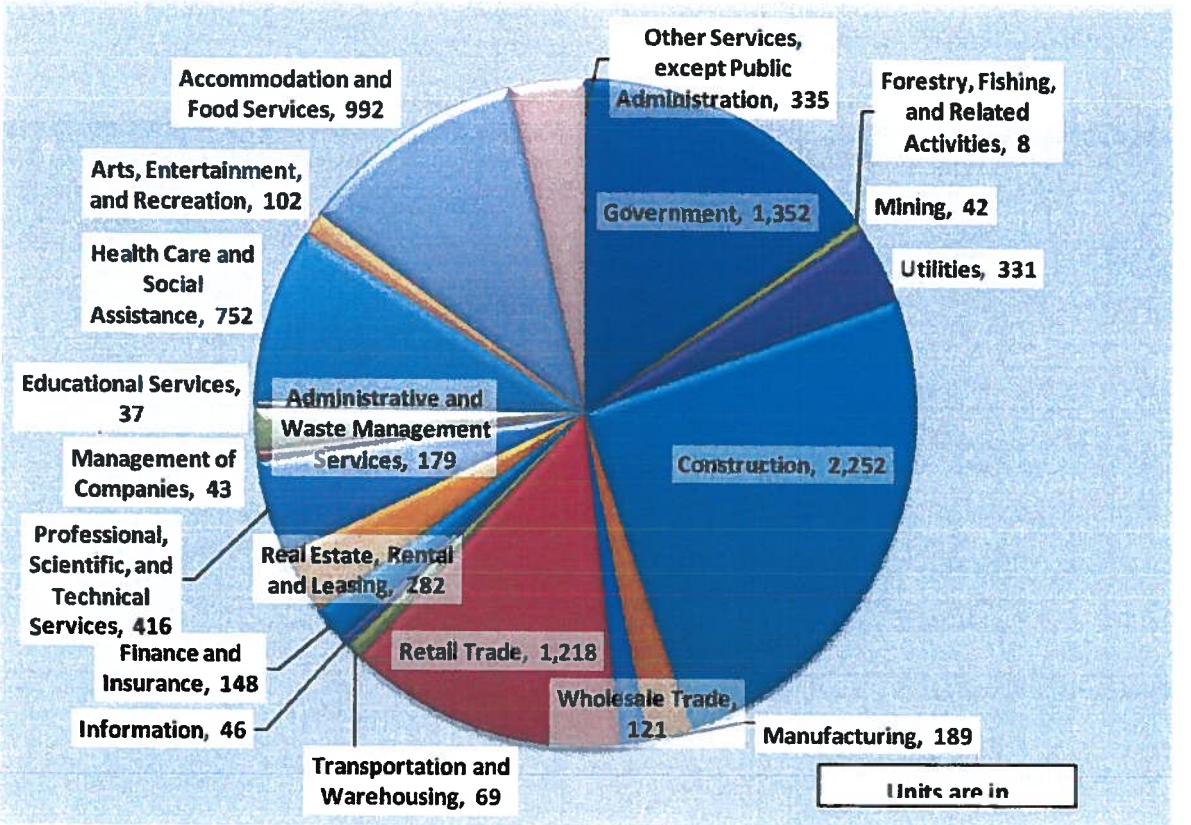
Category	Units	2015-2021	2015-2031
Electricity Cost Savings	Nominal Millions	$ 379	$ 1,211
Total Employment	Individuals (Jobs)	3,239	8,912
Total Employment	Average Annual Percent Change	0.05%	0.06%
Private Non-Farm Employment	Individuals (Jobs)	2,869	7,560
Output (Industry Sales)	Nominal Millions	$ 605	$ 2,065
Gross State Product (GSP)	Nominal Millions	$ 406	$ 1,393
Gross State Product (GSP)	Average Annual Percent Change	0.06%	0.06%
Disposable Personal Income	Nominal Millions	$ 372	$ 1,451
Personal Income	Nominal Millions	$ 421	$ 1,631
State Static Fiscal Impact (Revenue Gain)	Nominal Millions	$14	$ 55
Personal Consumption Expenditures Index	Average Annual Percent Change	-0.07%	-0.08%
Population	Individuals	5,959	27,446
Population	Average Annual Percent Change	0.06%	0.11%

The Settlement Scenario created positive economic impacts on New Hampshire's economy. 8,912 jobs are anticipated through the 2015-2031 simulation period. On average, about 1 job was created for every $136 thousand in energy cost savings. $2.01 billion dollars in industry sales is estimated to be generated from the $1.21 billion dollars in energy cost savings, giving us an average output multiplier of just under 1.71. In other words, based on timing and industries impacted from the energy cost savings for ratepayers, for every $1 million dollars in energy cost savings, it is estimated to generate $1.7 million dollars in output. This includes the direct (jobs needed to satisfy increased demand for businesses), in-direct impacts (supply chain), and induced effects (increased income). Based on the FTA static ratio cited above, using an effective tax rate

of only 3.4 percent multiplied by the change in personal income generates a total state revenue estimated gain of $55.46 million dollars. The Personal Consumption Expenditures Index (PCE Index) is negative in all the simulations results, as it reflects the change in reduced electricity costs and real increased purchasing power of consumers across New Hampshire. A PCE Index reduction reflects an average cost decrease in goods and services.

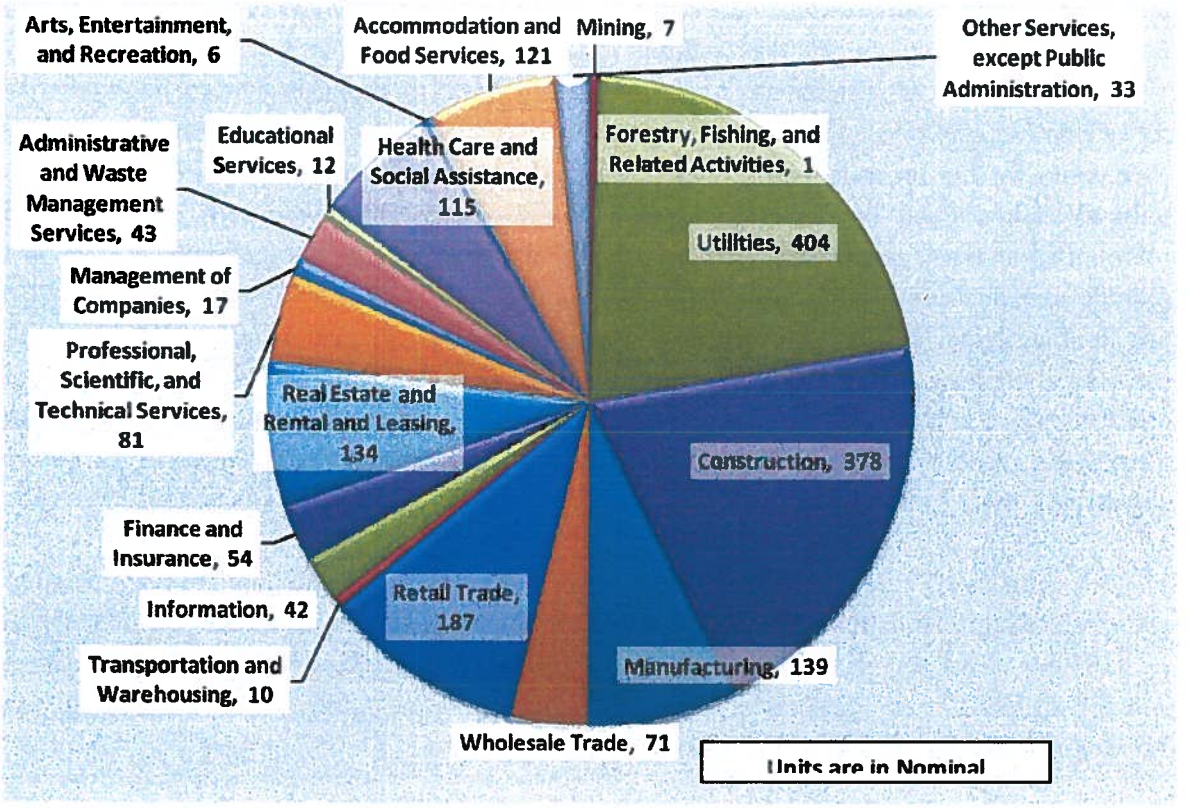
The following pie charts illustrate the total jobs and output by industry REMI anticipates will be created from the Settlement Agreement Scenario.

Graph 1: Total Change in Employment by Major Industry Sector 2015-2031 – Settlement Scenario



Over the sixteen-year period, a total of 8,912 jobs are anticipated to be created. The construction industry is the single greatest contributor, generating 2,252 jobs over the same period. This is followed by state and local government, creating 1,352 jobs and 992 jobs in the accommodation and food services industry. The majority of the employment created is within the commercial sector as many of the industries within the commercial sector are labor intensive and is in response to both the direct energy cost savings and the induced spending of the increased population and disposable income of New Hampshire residents.

Graph 2: Total Change in Output by Major Industry Sector 2015-2031 – Settlement Scenario



Over the sixteen-year period, a total of almost $2.07 billion dollars in output (industry sales) is anticipated to be created. The utilities industry is the greatest contributor, generating $404 million dollars over the time period. The increase in utility output is driven by increased demand for electricity due to lower energy prices and a stimulated economy. This is followed by construction at $378 million in output. Construction is not a large direct consumer of electricity; however, it largely benefits from the lower electricity costs due to increased demand for residential and non-residential capital and infrastructure improvements. Retail trade comes in third at $187 million driven primarily by the increased demand of consumers across New Hampshire. Although manufacturing was not one of the largest individual job creating industries, in terms of output it came in fourth at $139 million. Manufacturing and the industrial sector as a whole tends to be very capital intensive, and thus demands a relatively large amount of electricity as an intermediate input or factor of production.

The analysis depicts an interesting conclusion on the manufacturing industry. Although manufacturing does not directly create a large amount of jobs located within the manufacturing facility itself, it does create demand for employment in key labor-intensive supporting industries. For example, in 2014, for every one dollar of output, the top three suppliers of goods and services to the computer and electric product manufacturing industry aside from the industry itself are in order, professional, scientific and technical services at 3.5 cents, wholesale trade at

3.1 cents and management of companies and enterprises at 2.6 cents. Under the Settlement Agreement scenario, between 2015 and 2031, REMI estimates the computer and electric product manufacturing industry will increase output in response to these energy cost savings by about $11 million dollars. This translates to an average of $385 thousand dollars in output for the professional, scientific and technical services industry. REMI estimates the current average labor productivity for the professional, scientific and technical services industry is just under $130 thousand dollars. Over the sixteen-year period, the average labor productivity for the same professional services industry is $172 thousand. This would imply the computer and electric products manufacturing industry would create a total of 2.2 indirect jobs just to support that individual industry. REMI estimates, on average, about 57 percent of the demand for the professional services industry is satisfied within New Hampshire. This similar effect is played out through all the industries across New Hampshire and illustrates how a cost savings leading towards a more competitive industry, driving higher output, causes industries across the state to benefit from lower energy prices.

The following two Settlement Agreement outcomes cover the potential economic impacts if lower and higher than anticipated sale proceeds are realized from the divesture of PSNH assets. There are slight differences in how the cost savings will be appropriated between the residential, commercial, industry and government sector ratepayers. The outcomes follow the same general relative impacts as the Settlement Agreement results.

Settlement Agreement Low-Case

Table 4: Difference from Baseline – Settlement Scenario Low-Case Proceeds Results

Category	Units	2015-2021	2015-2031
Electricity Cost Savings	Nominal Millions	$ 344	$ 1,119
Total Employment	Individuals (Jobs)	2,927	8,163
Total Employment	Average Annual Percent Change	0.05%	0.05%
Private Non-Farm Employment	Individuals (Jobs)	2,589	6,916
Output (Industry Sales)	Nominal Millions	$ 547	$ 1,880
Gross State Product (GSP)	Nominal Millions	$ 368	$ 1,272
Gross State Product (GSP)	Average Annual Percent Change	0.05%	0.06%
Disposable Personal Income	Nominal Millions	$ 341	$ 1,344
Personal Income	Nominal Millions	$ 385	$ 1,511
State Static Fiscal Impact (Revenue Gain)	Nominal Millions	$ 13	$ 51
Personal Consumption Expenditures Index	Average Annual Percent Change	-0.06%	-0.07%
Population	Individuals	5,494	25,424
Population	Average Annual Percent Change	0.06%	0.10%

The Settlement Scenario Low-Case is estimated to create 8,163 jobs through the 2015-2031 simulation period, 749 fewer jobs than in the more anticipated Settlement Agreement scenario outcome. On average, about 1 job was created for every $137 thousand in energy cost savings. $1.88 billion in industry sales is estimated to be generated from the $1.12 billion dollars in energy cost savings, giving us an average output multiplier of just under 1.68. The Low-Case scenario is estimated to generate about $51 million in state tax revenues, just under $4.5 million less than the anticipated Settlement Agreement scenario.

Settlement Agreement High-Case

Table 5: Difference from Baseline – Settlement Scenario High-Case Proceeds Results

Category	Units	2015-2021	2015-2031
Electricity Cost Savings	Nominal Millions	$ 482	$ 1,486
Total Employment	Individuals (Jobs)	4,181	11,178
Total Employment	Average Annual Percent Change	0.07%	0.07%
Private Non-Farm Employment	Individuals (Jobs)	3,718	9,506
Output (Industry Sales)	Nominal Millions	$ 781	$ 2,626
Gross State Product (GSP)	Nominal Millions	$ 522	$ 1,761
Gross State Product (GSP)	Average Annual Percent Change	0.07%	0.08%
Disposable Personal Income	Nominal Millions	$469	$ 1,776
Personal Income	Nominal Millions	$ 530	$ 1,995
State Static Fiscal Impact (Revenue Gain)	Nominal Millions	$18	$ 68
Personal Consumption Expenditures Index	Average Annual Percent Change	-0.08%	-0.09%
Population	Individuals	7,368	33,562
Population	Average Annual Percent Change	0.08%	0.13%

The Settlement Scenario High-Case is estimated to create 11,178 jobs through the 2015-2031 simulation period, 276 more jobs than in the more anticipated Settlement Agreement scenario outcome. On average, about 1 job was created for every $133 thousand in energy cost savings. $2.65 billion in industry sales is estimated to be generated from the $1.49 billion dollars in energy cost savings, giving us an average output multiplier of just over 1.76. The High-Case scenario is estimated to generate about $68 million in state tax revenues, over $12 million more than the anticipated Settlement Agreement scenario.

PUC – Ordered Divestiture Scenario

Over the sixteen-year period, the total cost savings to PSNH ratepayers is approximately $841 million, over $369 million less than the Settlement scenario. Of those savings, almost $724 million (86% of total savings) goes towards residential customers, almost $167 million (20%) benefits commercial customers, the industrial sector would experience a net cost increase of over $51 million (-6% of savings) and over $2 million (less than 1%) is saved by local and state government entities. In this scenario, the industrial customers would be found responsible for covering a significant portion of the costs of the scrubber. The aggregate manufacturing industry would lose over $23 million dollars in output between 2020 and 2031. Computer and electronic

production manufacturing and chemical manufacturing within the state would be the biggest losers from this scenario, as they would lose almost $21 million and over $15 million respectively. The two manufacturing industries exceed the aggregate loss in output to the manufacturing sector as a whole, as some manufacturing sectors marginally benefit from providing a significant amount of their goods to local commercial industries and to meet consumer demands.

The simulation results are presented in the tables and graphs below. The results highlight the aggregate impacts of the PUC-Ordered Divestiture Scenario. Additional results can be found under, *Appendix VI: Additional Results Tables.*

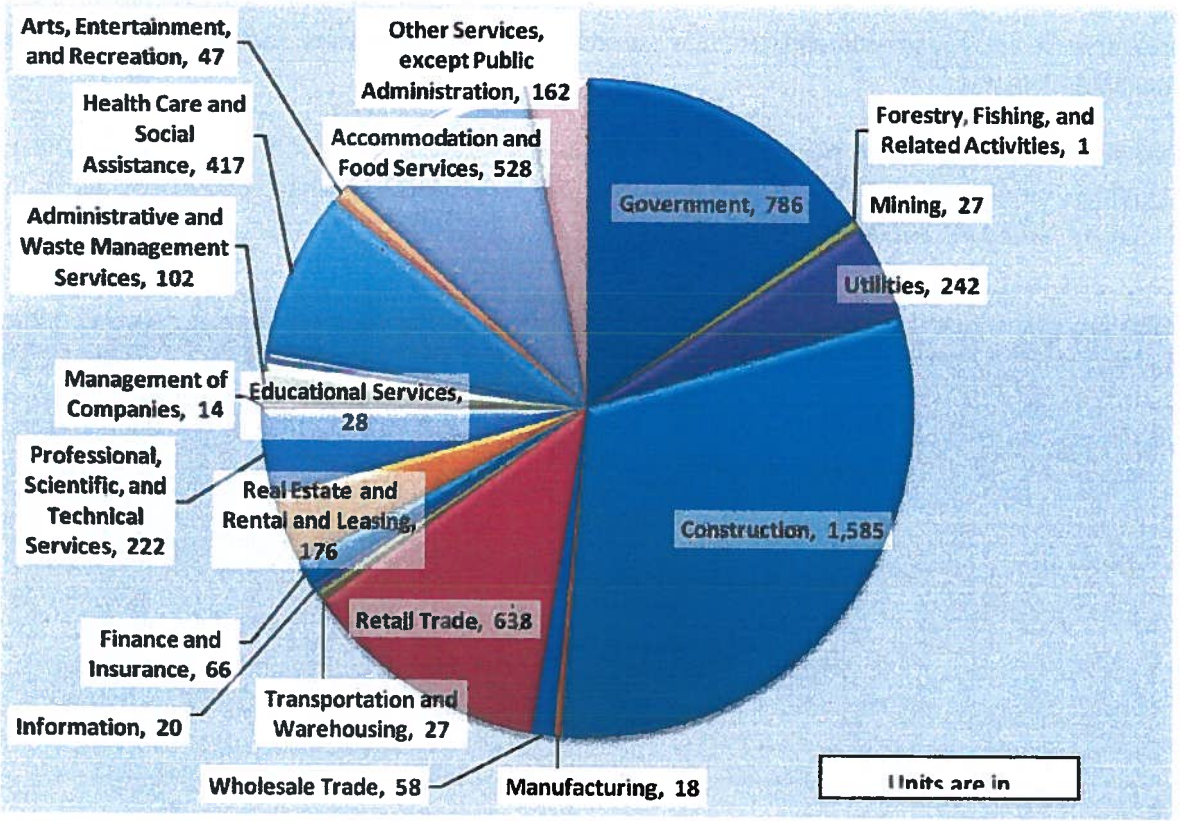
Table 6: Simulation Results - Difference from Baseline - PUC-Ordered Divestiture

Category	Units	2015-2021	2015-2031
Electricity Cost Savings	Nominal Millions	$ 114	$ 841
Total Employment	Individuals (Jobs)	638	5,165
Total Employment	Average Annual Percent Change	0.04%	0.05%
Private Non-Farm Employment	Individuals (Jobs)	572	4,379
Output (Industry Sales)	Nominal Millions	$ 134	$ 1,187
Gross State Product (GSP)	Nominal Millions	$ 95	$ 831
Gross State Product (GSP)	Average Annual Percent Change	0.05%	0.05%
Disposable Personal Income	Nominal Millions	$ 91	$ 963
Personal Income	Nominal Millions	$ 103	$ 1,086
State Static Fiscal Impact (Revenue Gain)	Nominal Millions	$ 4	$ 37
Personal Consumption Expenditures Index	Average Annual Percent Change	-0.08%	-0.07%
Population	Individuals	978	16,290
Population	Average Annual Percent Change	0.04%	0.10%

The PUC-OD Scenario will still create positive economic impacts on the New Hampshire economy. However, the impacts will not be as beneficial as any of the Settlement Agreement scenarios. 5,165 jobs would be created through the 2015-2031 simulation period. On average, about 1 job was created for every $163 thousand in energy cost savings. In terms of energy cost savings per job created, that is over 16.6 percent less efficient than the Settlement Agreement scenario. $1.19 billion dollars in industry sales is estimated to be generated from the $841 million dollars in energy cost savings, giving us an average output multiplier of just under 1.41. This is over 17 percent less effective in terms of industry sales creation than the Settlement Scenario. The PUC-OD scenario is estimated to generate about $37 million in state tax revenues, over $18.5 million less than the Settlement Agreement scenario.

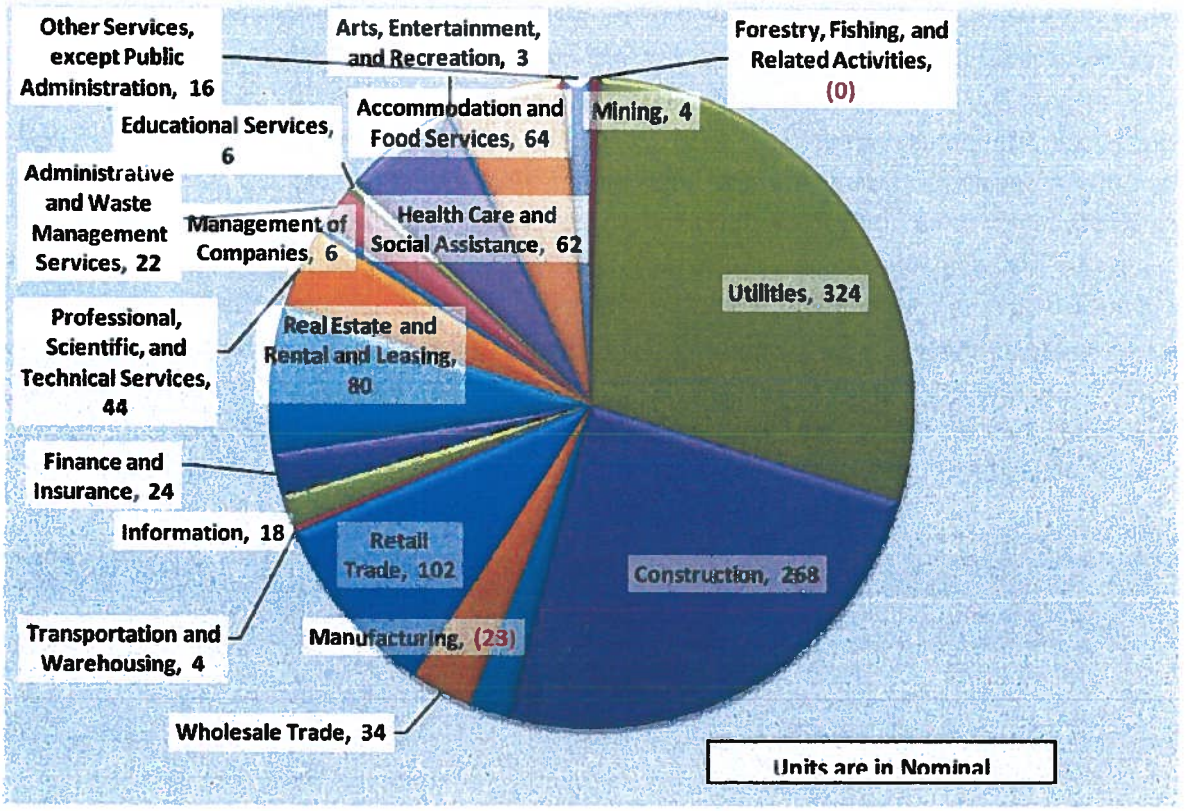
The following pie charts illustrate the total jobs and output by industry REMI anticipates will be created from the Settlement Agreement Scenario.

Graph 3: Total Change in Employment by Major Industry Sector 2015-2031 – PUC-OD Scenario



Over the sixteen-year period, a total of 5,165 jobs are anticipated to be created. The construction industry is the single greatest contributor, generating 1,585 jobs over the same period. As cited previously, construction is a major contributor to satisfy demand for new buildings, improvements and infrastructure across the state. State and local government spending comes in second, creating 1,352 jobs and 992 jobs in the accommodation and food services industry. Similar to the Settlement Agreement industry employment impacts, the majority of the employment created is within the commercial sector. Many of the industries within the commercial sector are relatively labor intensive and benefit from both the direct energy cost savings, indirect demands from the other industries and the induced spending of the increased population and disposable income of New Hampshire residents.

Graph 4: Total Change in Output by Major Industry Sector 2015-2031 – PUC-OD Scenario



Over the sixteen-year period, a total of almost $1.19 billion nominal dollars in output (industry sales) is anticipated to be created. The utilities industry is the greatest contributor, generating $324 million dollars over the time period. Similar to the Settlement Agreement scenario, the increase in utility output is driven by increased demand for electricity due to lower energy prices and a stimulated economy. This growth in output is followed by construction at $268 million. Retail trade comes in third at $102 million, driven primarily by the increased demand from consumers across New Hampshire. Unlike the Settlement Agreement scenario where the aggregate manufacturing industry was the fourth largest industry in terms of new industry sales, in this scenario it lost $23 million dollars, a net loss of $162 million when compared to the Settlement Agreement scenario. There was not a single industry both in terms of employment or output that created a larger positive impact than in the Settlement Agreement scenario.

Conclusion

When compared to a Status Quo baseline economy of New Hampshire, both the Settlement Agreement and Public Utilities Commission-Ordered Divestiture scenarios address the stranded costs created by divestiture of PSNH remaining generation assets and cost recovery of the Merrimack Station scrubber. The analysis shows that the Settlement Agreement Scenario provides a greater economic return, whereas the PUC-Order Divestiture scenario increases electricity costs to industrial consumers and generates lower positive benefits to the New Hampshire economy. Furthermore, the additional Settlement Agreement Low and High-Case scenarios, which in combination reflect the concept of uncertain sale proceeds, suggest that even under a wide range of sale outcomes, New Hampshire's economy is better off under the Settlement Agreement than in a PUC-Ordered Divestiture. The table below reports the difference between the Settlement Agreement and PUC-Ordered Divestiture simulation results on variety of different indicators.

Table 7: Simulation Results – SA Impact Compared with PUC-OD Scenario

Category	Units	2015-2021	2015-2031
Electricity Cost Savings	Nominal Millions	$ 265	$ 369
Energy Cost Savings Per Job Created Efficiency	Percent Difference	52.6%	19.9%
Total Employment	Individuals (Jobs)	2,601	3,747
Private Non-Farm Employment	Individuals (Jobs)	2,297	3,181
Output (Industry Sales)	Nominal Millions	$ 471	$ 878
Gross State Product (GSP)	Nominal Millions	$ 311	$ 563
Disposable Personal Income	Nominal Millions	$ 282	$ 489
Personal Income	Nominal Millions	$ 318	$ 545
State Static Fiscal Impact (Revenue Gain)	Nominal Millions	$ 11	$ 19
Population	Individuals	4,982	11,156

Settlement Agreement Scenario creates a larger output and employment multiplier. In terms of employment, almost 20 percent more jobs per dollar in electricity cost savings and over 17 percent more output per dollar saved. The impacts between the 2015 and 2021 period are even more pronounced. The first year of energy cost savings realized under the PUC-OD scenario doesn't occur until 2020, whereas ratepayers receive benefits starting in 2015 under the SA scenario. Between 2015 and 2021, the large difference in energy cost savings impact on employment is due to the multiple years of savings that would already have been received in the direct cost savings to Industrial ratepayers that would only be realized in the SA scenario. There is not one industry on aggregate that witnesses a net employment or sales increase in the PUC-Ordered Divestiture Scenario when compared to the Settlement Agreement Scenario. The only industry to have any noticeable relative increase in employment beginning in 2024, is anticipated to be construction. For example in year 2031, REMI estimates the construction industry would have 24 more jobs than the SA Scenario would create in the same year. When the construction industry employment impacts are compared as a whole, due to significant relative construction

job losses between 2015 and 2023, the construction sector would still be worse off under the PUC-OD scenario, losing 667 construction jobs when compared to the SA Scenario.

To further support the differences in types of employment created and the various impacts on the New Hampshire economy, the following tables highlight the different types of employment by type. Note, in the PUC-Ordered Divestiture, direct employment is negative due to the cost increase of electricity fuel for the industrial sector.

Table 8: Settlement Scenario Results: Employment by Type – Difference from Baseline

Category	Units	2015-2031
Total Employment	Individuals (Jobs)	8,912
Government Employment	Individuals (Jobs)	1,352
Private Non-Farm Employment	Individuals (Jobs)	7,560
Direct Employment	Individuals (Jobs)	269
Indirect Employment	Individuals (Jobs)	996
Induced Employment	Individuals (Jobs)	6,295

Table 9: PUC-Ordered Divestiture Results: Employment by Type – Difference from Baseline

Category	Units	2015-2031
Total Employment	Individuals (Jobs)	5,165
Government Employment	Individuals (Jobs)	786
Private Non-Farm Employment	Individuals (Jobs)	4,379
Direct Employment	Individuals (Jobs)	-115
Indirect Employment	Individuals (Jobs)	502
Induced Employment	Individuals (Jobs)	3,992

The increase in government employment is largely driven by supporting the demands of the increased population in New Hampshire and a small increase due to the increased government spending associated with the public lighting cost savings. The majority of the private, non-farm employment created was induced employment, as almost 73 percent of the SA scenario and 86 percent of the PUC-OD electricity cost savings where received by the residential sector. Induced employment reflects employment required to satisfy demand for consumer goods, services and capital investment. The induced employment effects are further increased by the income earned from the new employment opportunities created within the state. The direct employment response is due to the changes in the relative fuel costs and cost of production relative to rest of nation and rest of world. As businesses become more competitive, they are able to provide goods and services to market at a lower cost and thus gain market share, driving demand for increased direct employment and intermediate inputs. The indirect employment is driven by demand to satisfy inputs for production of the various final goods and services in the New Hampshire economy. In other words, the indirect employment is employment associated with businesses' supply chains, as the supply chains provide intermediate inputs to create final goods and services that may be consumed locally or exported.

Disclosure

The state static fiscal impacts in this report do not account for the direct energy savings in public street lighting. There are other ancillary impacts that are not included in this study due to lack of data, limited potential economic impacts or requested scope of work. For example, we did not include any potential economic impacts of the $5 million PSNH contribution to the Clean Energy Fund or employee protection.

Appendices

Appendix I: REMI PI+ Methodology

REMI used a one-region, 70-sector version of the PI+ model configured to the state of New Hampshire for this study. PI+ is a fully dynamic macroeconomic model of the state economy that can be utilized at a sub-state level. The current version PI+ model used in this study is v.1.7 and is calibrated to the last history year of 2013. The REMI model relies on four different quantitative methodologies in its framework, which allows them to highlight each other's strengths while compensating weaknesses. These methodologies include:

Input/output tabulation (IO) – IO modeling is sometimes called "social accounting" because it shows the interrelationships between different industries and households in the economy. This includes the flow of goods and services between firms in supply chains, final sales to households, and wages paid to and spent by individuals. These interconnections create multipliers. The data for the table comes from the Bureau of Labor Statistics (BLS)[3] and the theoretical underpinnings for IO modeling come from the Nobel laureate Wassily Leontief.

Econometrics – The REMI model includes statistical parameters for behavior of firms and households based on historical data. In modeling terms, this is the source of our elasticities and parameters. This includes how actors respond to changes in prices or wages and the "rate of adjustment" from a shock until the economy returns to a new balance.

Computable General Equilibrium – This is a broad class of models. Computable general equilibrium modeling adds market concepts and the principles of equilibrium economics to the REMI algorithm. This includes markets for housing, labor, consumer goods, and importantly, a concept of market shares and competitiveness for businesses. For example, consumers in the state of New Hampshire may demand automobiles, but in all likelihood those cars come from plants in Michigan or the Southeast, or even overseas. This flow of goods and services can change over time, and with it the attractiveness of the state for labor and capital, given changes in economic conditions.

Economic Geography – Geography gives the REMI model a sense of agglomeration, labor pooling, and economies of scale. Labor-intensive industries, such as healthcare or professional services, tend to cluster in urban centers where specialized pools of educated workers are easy to obtain. Manufacturers tend to do the same thing given their tendency to locate near their input suppliers, customers, and transportation hubs. This allows them to lower their costs and increase their productivity.

REMI began as a research inquiry, and the literature behind PI+ is public and oftentimes appears in peer-reviewed journals. These include the *Journal of Regional Science*, *American Economic*

[3] For the most recent BLS make and use table, which we then transform into an IO table from there, see, <http://www.bls.gov/emp/ep_data_input_output_matrix.htm>.

Review, and *the Review of Economics and Statistics*.[4] REMI only uses data from public sources. Our references include the Bureau of Economic Analysis (BEA), Bureau of Labor Statistics (BLS), the Census Bureau, and the Energy Information Administration (EIA) at the Department of Commerce and Department of Energy.[5] The REMI model exists in a block structure of simultaneous equations. Each of the five blocks in the figure below adds its own perspective on the economy. Block 1 is final demand and final production; it is the "macroeconomy" in terms of its total aggregates. That includes consumer spending, investment, net exports, government spending, and a subtraction for intermediate inputs in a local area. Block 2 is the business perspective on the economy; sales orders come in from Block 1, and industries have to make production decisions (in terms of hiring workers and investing in capital) to eventually generate their needed output. Block 3 is the demographic portion of the model, which includes births and deaths, how intra-national migration changes a state-level economy over time, and how the regional population chooses to participate in the labor force. Block 4 introduces equilibrium concepts to the REMI model: households appraise the labor market, housing, and the cost of living when making location decisions. For businesses, they make an analogous consideration about their costs for labor, capital, intermediates, and fuel. Block 5 quantifies regional competitiveness, which means how much an area will export and displace imports when competing on a domestic and international marketplace against other states and nations. The blocks and their key interactions are shown in Figures 1 and 2. This is the overall structure of REMI's representation of the state economy. Each rectangle is a "stock," a finite concept such as population or the number of jobs. Each arrow shows an equation that links them together. For example, the population times the participation rate equals the labor force; government spending, plus capital investment, plus net exports, plus consumption, and minus intermediates, then equals GDP.

[4] For journal citations from the above publications, see p. 46 of our equations document online, <www.remi.com/download/documentation/pi+/pi+_version_1.4/PI+_v1.4_Model_Equations(2).pdf>.

[5] For a full listing of data sources and types, see our document online of data sources and procedures, <www.remi.com/download/documentation/pi+/pi+_version_1.4/Data_Sources_and_Estimation_Procedures.pdf>.

Figure 1: REMI Model Linkages

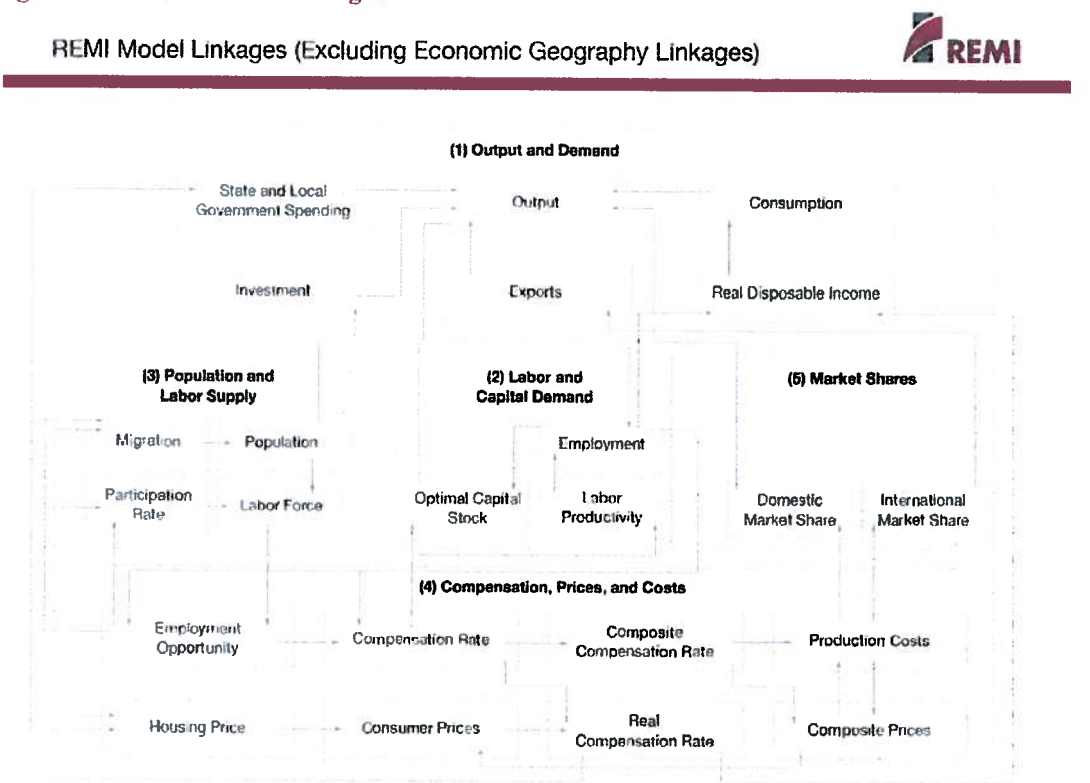
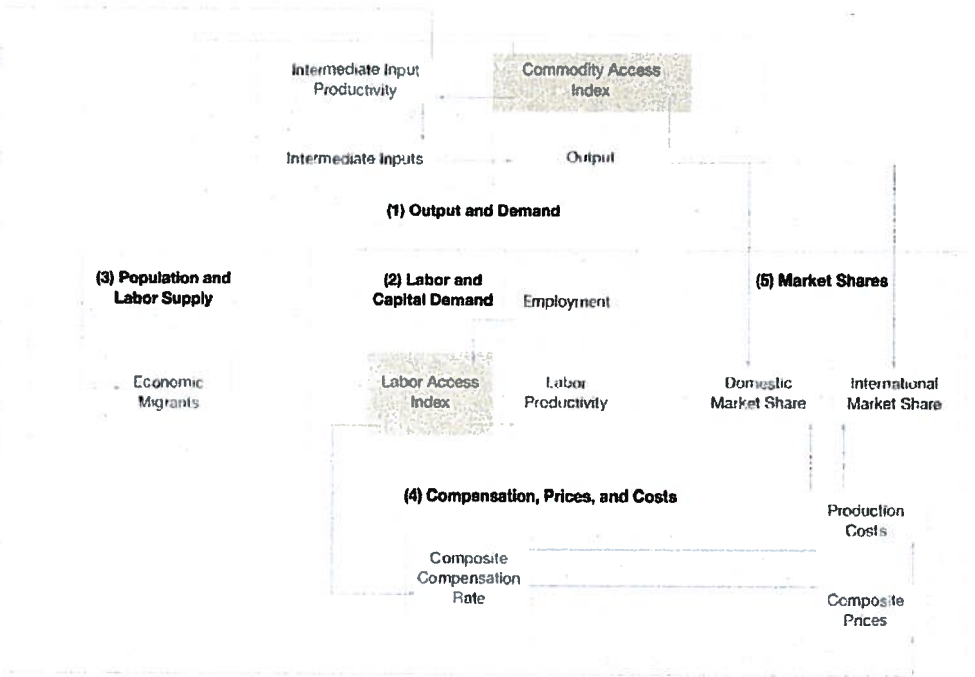


Figure 2: Economic Geographic Linkages



PI+ has two purposes: forecasting and policy analysis by examining alternative policy scenarios. The model has an underlying forecast based on the government data. To use the model to simulate the demographic and economic change due to energy cost changes, we introduced "exogenous" changes to the REMI variables as presented in *Appendix I*. They are called "policy variables" in the PI+ system, and they represent the direct effect of policies or projects on the New Hampshire and other regional economies. From there, the model automatically passes these changes through the rest of the economic structure until the model system reaches a new equilibrium at some point in the future after adjusting over time.

Appendix II: Contact Information

Please contact REMI if you have any questions regarding the model or methodology behind the analysis.

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Appendix III: Key Assumptions for REMI Scenarios

Units are in Nominal Millions

Assumption	Settlement Agreement	PUC-Ordered Divestiture
Expected divestiture date (1)	January 1, 2017	January 1, 2020
Generation net book value (2)	$636.2 million	$572.5 million
Sale proceeds	$225 million	$225 million
Low Sales Proceeds Estimate	*$150 million*	
High Sales Processes Estimate	*$450 million*	
Scrubber disallowance	$25 million	-
Scrubber deferral to recover from customers (3)	$103.2 million	$150.0 million
Stranded cost financing rate (4)	3.00%	8.05%
Stranded cost rate design (i.e. allocation across customer classes) (5)	Allocated per settlement	Allocated per currently approved allocation
Potential two-year savings due to rate case stay-out (5)	$61 million	-
Potential additional scrubber litigation costs to be recovered from customers (6)	-	$2 million
Annual financing costs (7)	$890,000	-
Tax stabilization payments, Year 1 (5)	$3.5 million	-

Other key assumptions

1. Energy sales and annual migration by customer class are based on actual 2014 billed sales per the Company's quarterly migration reports filed with the Commission.
2. Calculations of net energy savings were provided to REMI by customer accounting class (Residential, Commercial, Industrial, and Public Street Lighting) and were calculated in a manner consistent with that shown in Exhibit EHC-1, filed on July 6, 2015 in Docket DE 14-238.

Footnotes

(1) Assumes protracted litigation leads to three-year delay of divestiture.
(2) Generation net book value for PUC-Ordered Divestiture scenario is estimated as of January 1, 2020.
(3) Scrubber deferral for PUC-Ordered Divestiture scenario is estimated as of July 1, 2017.
(4) Interest rate for PUC-Ordered Divestiture scenario reflects non-securitized financing using stipulated WACC for stranded costs.
(5) This benefit was removed for PUC-Ordered Divestiture scenario, as it applies to the settlement only.
(6) Additional legal fees estimated based on additional years of litigation.
(7) Financing costs not incurred for PUC-Ordered Divestiture scenario.

Appendix IV: Estimated Energy Cost Reductions by Customer Accounting Class

Units are in Nominal Millions

SCENARIO 1: SETTLEMENT	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
Overall energy (reductions) / increases related to generation	**(16.5)**	**(30.5)**	**(65.9)**	**(50.3)**	**(63.8)**	**(73.6)**	**(78.3)**	**(79.4)**	**(80.4)**	**(80.4)**	**(81.5)**	**(82.5)**	**(83.5)**	**(84.5)**	**(85.5)**	**(86.5)**	**(87.5)**	**(1,210.6)**
Residential	(6.9)	(12.8)	(48.7)	(41.5)	(49.7)	(55.6)	(58.5)	(59.0)	(59.5)	(59.5)	(60.0)	(60.5)	(61.0)	(61.5)	(62.0)	(62.5)	(63.0)	(882.0)
Commercial	(6.9)	(12.7)	(15.1)	(9.0)	(13.4)	(16.6)	(18.2)	(18.6)	(19.0)	(19.0)	(19.4)	(19.8)	(20.3)	(20.7)	(21.1)	(21.5)	(21.9)	(292.9)
Industrial	(2.7)	(4.9)	(1.9)	0.3	(0.5)	(1.2)	(1.5)	(1.6)	(1.7)	(1.7)	(1.8)	(1.9)	(2.0)	(2.1)	(2.3)	(2.4)	(2.5)	(32.5)
Public Street Lighting	(0.0)	(0.1)	(0.2)	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(3.1)

SCENARIO 2: PUC-ORDERED DIVESTITURE	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
Overall energy (reductions) / increases related to generation	-	-	-	-	-	**(53.8)**	**(60.0)**	**(62.5)**	**(64.9)**	**(66.4)**	**(68.9)**	**(71.3)**	**(73.8)**	**(76.3)**	**(78.7)**	**(81.2)**	**(83.6)**	**(841.5)**
Residential	-	-	-	-	-	(52.9)	(56.3)	(57.3)	(58.3)	(58.9)	(59.9)	(60.9)	(61.9)	(62.8)	(63.8)	(64.8)	(65.8)	(723.6)
Commercial	-	-	-	-	-	(7.4)	(9.6)	(10.7)	(11.7)	(12.3)	(13.3)	(14.4)	(15.4)	(16.4)	(17.5)	(18.5)	(19.5)	(166.8)
Industrial	-	-	-	-	-	6.7	6.1	5.6	5.2	4.9	4.5	4.1	3.7	3.2	2.8	2.4	1.9	51.2
Public Street Lighting	-	-	-	-	-	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(2.2)

SCENARIO 3: SCENARIO WITH LOW-CASE PROCEEDS	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
Overall energy (reductions) / increases related to generation	**(16.5)**	**(30.5)**	**(58.7)**	**(43.2)**	**(56.9)**	**(66.8)**	**(71.8)**	**(72.9)**	**(74.1)**	**(74.3)**	**(75.5)**	**(76.6)**	**(77.8)**	**(79.0)**	**(80.1)**	**(81.3)**	**(82.5)**	**(1,118.6)**
Residential	(6.9)	(12.8)	(45.2)	(38.1)	(46.4)	(52.3)	(55.3)	(55.8)	(56.4)	(56.5)	(57.1)	(57.6)	(58.2)	(58.8)	(59.3)	(59.9)	(60.5)	(837.2)
Commercial	(6.9)	(12.7)	(12.2)	(6.1)	(10.6)	(13.9)	(15.5)	(16.0)	(16.4)	(16.5)	(17.0)	(17.5)	(17.9)	(18.4)	(18.9)	(19.4)	(19.8)	(255.6)
Industrial	(2.7)	(4.9)	(1.2)	1.1	0.2	(0.5)	(0.8)	(0.9)	(1.1)	(1.1)	(1.2)	(1.3)	(1.5)	(1.6)	(1.7)	(1.8)	(1.9)	(22.9)
Public Street Lighting	(0.0)	(0.1)	(0.1)	(0.1)	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(2.9)

SCENARIO 4 - SETTLEMENT WITH HIGH-CASE PROCEEDS	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
Overall energy (reductions) / increases related to generation	**(16.5)**	**(30.5)**	**(87.4)**	**(71.4)**	**(84.4)**	**(93.7)**	**(98.1)**	**(98.7)**	**(99.2)**	**(98.8)**	**(99.4)**	**(100.0)**	**(100.5)**	**(101.1)**	**(101.7)**	**(102.2)**	**(102.8)**	**(1,486.5)**
Residential	(6.9)	(12.8)	(59.2)	(51.8)	(59.8)	(65.4)	(68.1)	(68.4)	(68.7)	(68.5)	(68.7)	(69.0)	(69.3)	(69.6)	(69.8)	(70.1)	(70.4)	(1,016.6)
Commercial	(6.9)	(12.7)	(23.8)	(17.5)	(21.7)	(24.8)	(26.2)	(26.4)	(26.6)	(26.5)	(26.7)	(26.9)	(27.2)	(27.4)	(27.6)	(27.8)	(28.1)	(404.8)
Industrial	(2.7)	(4.9)	(4.2)	(1.9)	(2.7)	(3.3)	(3.6)	(3.6)	(3.7)	(3.6)	(3.7)	(3.8)	(3.8)	(3.9)	(3.9)	(4.0)	(4.0)	(61.2)
Public Street Lighting	(0.0)	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(3.9)

EXM 46

Appendix V: Assumptions Entered Into REMI PI+

Settlement Scenario PI+ Inputs

Category	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Consumer Price (amount)	Electricity	NH	Nominal $ (000s)	-6.936522144	-12.82246995	-48.70523128	-41.49835605	-49.73766876	-55.58692144	-58.47173103	-58.96648058	-59.46123014	-59.49829682	-59.99304638	-60.48779594	-60.98254549	-61.47729505	-61.97204461	-62.46679416	-62.96154372
Electricity (Commercial Sectors) Fuel Cost (amount)	All Commercial Sectors	NH	Nominal $ (000s)	-6.855162367	-12.67207278	-15.0817239	-8.989566683	-13.37064369	-16.58763966	-18.16303356	-18.57435065	-18.98566657	-19.01648146	-19.42779652	-19.83911157	-20.25042663	-20.66174168	-21.07305673	-21.48437179	-21.89568684
Electricity (Industrial Sectors) Fuel Cost (amount)	All Industrial Sectors	NH	Nominal $ (000s)	-2.667362357	-4.930738048	-1.914959046	0.333869256	-0.533652255	-1.187930236	-1.506585814	-1.611997861	-1.717409907	-1.725307388	-1.830719434	-1.936131481	-2.041543528	-2.146955575	-2.252367622	-2.357779668	-2.463191715
State Government Spending (amount)	Total	NH	Nominal $ (000s)	0.047453132	0.087719226	0.168709	0.1245303	0.161475177	0.188205684	0.201336246	0.204252438	0.207168631	0.207387111	0.210303303	0.213219494	0.216135686	0.219051878	0.221968069	0.224884261	0.227800453

PUC-Ordered Divestiture Scenario PI+ Inputs

Category	Detail	Region	Units	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Consumer Price (amount)	Electricity	NH	Nominal $ (000s)	-52.92792748	-56.30657882	-57.29517012	-58.28376142	-58.89435871	-59.88295002	-60.87154132	-61.86013262	-62.84872393	-63.83731523	-64.82590654	-65.81449784
Electricity (Commercial Sectors) Fuel Cost (amount)	All Commercial Sectors	NH	Nominal $ (000s)	-7.432827765	-9.626096871	-10.6552851	-11.68447333	-12.32014505	-13.34933328	-14.37852151	-15.40770973	-16.43689796	-17.46608619	-18.49527442	-19.52446264
Electricity (Industrial Sectors) Fuel Cost (amount)	All Industrial Sectors	NH	Nominal $ (000s)	6.711527983	6.068736739	5.639189025	5.209641312	4.944333383	4.514786116	4.085238402	3.655690688	3.226142974	2.796595261	2.367047547	1.937499833
State Government Spending (amount)	Total	NH	Nominal $ (000s)	0.136115716	0.153244358	0.160158584	0.167072811	0.171343434	0.178257567	0.185171793	0.192086026	0.199000246	0.205914473	0.212828699	0.219742926

EXM 47

Settlement Scenario PI+ Inputs Low-Case

Category	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Consumer Price (amount)	Electricity	NH	Nominal $ (000s)	-6.936522144	-12.82246995	-45.20272211	-38.06900634	-46.38147851	-52.30389065	-55.2618597	-55.82976872	-56.39767773	-56.50790388	-57.07581289	-57.64372191	-58.21163093	-58.77953995	-59.34744896	-59.91535798	-60.48326700
Electricity (Commercial Sectors) Fuel Cost (amount)	All Commercial Sectors	NH	Nominal $ (000s)	-6.855162367	-12.67207278	-12.16987744	-6.138542226	-10.58044094	-13.85825878	-15.49447657	-15.96661348	-16.43875039	-16.53038801	-17.00252492	-17.47466183	-17.94679874	-18.41893566	-18.89107257	-19.36320948	-19.83534639
Electricity (Industrial Sectors) Fuel Cost (amount)	All Industrial Sectors	NH	Nominal $ (000s)	-2.667362357	-4.930738048	-1.168709442	1.0645314	0.18142243	-0.48844301	-0.82268047	-0.94368555 2	-1.06468505 8	-1.08816999 8	-1.20916950 4	-1.33016900 9	-1.45116851 5	-1.57216802 1	-1.69316752 7	-1.81416703 3	-1.93516653 9
State Government Spending (amount)	Total	NH	Nominal $ (000s)	0.047453132	0.087719226	0.148064235	0.104316757	0.141692857	0.168854586	0.182416371	0.185763785	0.189111199	0.189760902	0.193108316	0.196455573	0.199803144	0.203150558	0.206497972	0.209845386	0.213192800

Settlement Scenario PI+ Inputs High-Case

Category	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Consumer Price (amount)	Electricity	NH	Nominal $ (000s)	-6.936522144	-12.82246995	-59.21275878	-51.78640518	-59.80623951	-65.43601380	-68.10134501	-68.37661619	-68.65188736	-68.46947566	-68.74474684	-69.02001801	-69.29528919	-69.57056036	-69.84583154	-70.12110271	-70.39637389
Electricity (Commercial Sectors) Fuel Cost (amount)	All Commercial Sectors	NH	Nominal $ (000s)	-6.855162367	-12.67207278	-23.81726329	-17.54264064	-21.74125192	-24.77578233	-26.16871269	-26.39756216	-26.62641164	-26.47476183	-26.70361131	-26.93246079	-27.16131027	-27.39015975	-27.61900922	-27.84785870	-28.07670818
Electricity (Industrial Sectors) Fuel Cost (amount)	All Industrial Sectors	NH	Nominal $ (000s)	-2.667362357	-4.930738048	-4.153707856	-1.858117177	-2.678876311	-3.286391915	-3.558285115	-3.616934785	-3.675584454	-3.636719557	-3.695369227	-3.754018896	-3.812668566	-3.871318235	-3.929967905	-3.988617575	-4.047267244
State Government Spending (amount)	Total	NH	Nominal $ (000s)	0.047453132	0.087719226	0.230643293	0.185170926	0.220822137	0.246258977	0.258095873	0.259718398	0.261340923	0.260265737	0.261888262	0.263510787	0.265133312	0.266755837	0.268378362	0.270000887	0.271623412

EXM 48

Appendix VI: Additional Results Tables

Settlement Scenario PI+ Results: Detailed Employment Results -*Units are in Individual Jobs*

Category	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Government	7	19	46	57	69	81	90	95	99	101	101	101	100	99	97	96	94
Forestry and logging; Fishing, hunting, and trapping	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture and forestry support activities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil and gas extraction	0	0	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1
Mining (except oil and gas)	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Support activities for mining	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Utilities	4	7	26	21	24	25	25	24	23	22	21	20	19	18	18	17	16
Construction	29	66	157	167	186	199	200	189	174	156	139	124	111	100	91	84	80
Wood product manufacturing	0	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1
Nonmetallic mineral product manufacturing	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Primary metal manufacturing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fabricated metal product manufacturing	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2
Machinery manufacturing	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Computer and electronic product manufacturing	1	2	2	1	1	0	0	0	0	0	0	0	1	1	1	2	2
Electrical equipment and appliance manufacturing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Motor vehicles, bodies and trailers, and parts manufacturing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other transportation equipment manufacturing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Furniture and related product manufacturing	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Miscellaneous manufacturing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food manufacturing	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Beverage and tobacco product manufacturing	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
Textile mills; Textile product mills	0	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1
Apparel manufacturing; Leather and allied product manufacturing	0	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	0
Paper manufacturing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Printing and related support activities	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1
Petroleum and coal products manufacturing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemical manufacturing	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Plastics and rubber product manufacturing	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wholesale trade	2	5	8	7	8	9	9	9	8	8	8	7	7	7	7	7	7
Retail trade	21	40	70	58	71	80	84	85	85	83	82	80	78	77	76	74	74
Air transportation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail transportation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Water transportation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck transportation	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Couriers and messengers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transit and ground passenger transportation	1	1	2	1	2	2	2	2	1	1	1	1	1	1	1	1	1
Pipeline transportation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scenic and sightseeing transportation; Support activities for transportation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Warehousing and storage	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Publishing industries, except Internet	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Motion picture and sound recording industries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Internet publishing and broadcasting; ISPs, search portals, and data processing; Other information services	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Broadcasting, except Internet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Telecommunications	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Monetary authorities - central bank; Credit intermediation and related activities; Funds, trusts, & other financial vehicles	1	3	5	4	4	4	4	4	4	3	3	3	3	3	3	3	3
Securities, commodity contracts, investments	1	2	4	3	3	4	4	4	4	4	4	4	5	5	5	5	5
Insurance carriers and related activities	0	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
Real estate	3	6	12	12	15	17	18	19	19	19	19	18	18	18	18	18	18
Rental and leasing services; Lessors of nonfinancial intangible assets	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Professional, scientific, and technical services	5	10	20	20	23	26	28	28	29	29	28	28	28	28	28	29	29
Management of companies and enterprises	1	2	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3
Administrative and support services	4	8	13	12	13	14	14	14	13	11	10	9	8	7	6	5	5
Waste management and remediation services	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Educational services	1	2	4	3	3	4	4	3	3	3	2	2	1	1	1	0	0
Ambulatory health care services	6	11	20	15	18	20	21	21	22	21	21	22	22	22	23	23	24
Hospitals	1	2	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4
Nursing and residential care facilities	1	3	5	5	5	6	7	7	8	8	8	8	8	8	8	8	8

Social assistance	3	6	12	10	13	15	16	17	17	17	17	17	17	17	17	17	17	17
Performing arts and spectator sports	1	3	5	4	4	5	5	5	4	4	4	4	4	4	4	4	4	4
Museums, historical sites, zoos, and parks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amusement, gambling, and recreation	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Accommodation	3	6	9	8	9	11	12	12	12	12	12	12	12	12	11	11	11	11
Food services and drinking places	11	22	37	34	43	50	55	57	58	58	58	58	57	56	55	54	53	53
Repair and maintenance	2	4	6	4	5	6	6	5	5	5	5	4	4	4	4	4	4	4
Personal and laundry services	3	6	10	7	8	8	8	8	8	7	7	7	6	6	6	6	6	6
Membership associations and organizations	2	4	7	6	7	7	7	7	7	7	6	6	6	6	6	6	6	6
Private households	1	2	3	2	3	3	3	3	2	2	2	2	2	2	2	2	2	2

PUC- Ordered Divestiture Scenario PI^{+} Results: Detailed Employment Results -*Units are in Individual Jobs*

Category	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Government	24	41	53	62	67	71	74	76	78	79	80	80
Forestry and logging; Fishing, hunting, and trapping	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture and forestry support activities	0	0	0	0	0	0	0	0	0	0	0	0
Oil and gas extraction	1	1	1	1	1	1	1	1	1	1	1	1
Mining (except oil and gas)	1	1	1	1	1	1	1	1	1	1	1	1
Support activities for mining	0	0	0	0	0	0	0	0	0	0	0	0
Utilities	23	24	23	22	21	20	20	19	18	18	17	17
Construction	95	142	162	165	159	150	139	129	120	113	107	103
Wood product manufacturing	1	1	1	1	1	1	1	1	1	1	1	1
Nonmetallic mineral product manufacturing	1	1	1	1	1	1	1	1	1	1	1	1
Primary metal manufacturing	0	0	0	0	0	0	0	0	0	0	0	0
Fabricated metal product manufacturing	0	0	0	0	0	0	0	0	0	1	1	1
Machinery manufacturing	0	0	0	0	0	0	0	0	0	1	1	1
Computer and electronic product manufacturing	0	-1	-2	-2	-2	-3	-2	-2	-2	-1	-1	-1
Electrical equipment and appliance manufacturing	0	0	0	0	0	0	0	0	0	0	0	0
Motor vehicles, bodies and trailers, and parts manufacturing	0	0	0	0	0	0	0	0	0	0	0	0

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Other transportation equipment manufacturing	0	0	0	0	0	0	0	0	0	0	0	0
Furniture and related product manufacturing	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous manufacturing	0	0	0	0	0	0	0	0	0	0	0	0
Food manufacturing	0	0	0	0	0	0	0	0	0	1	1	1
Beverage and tobacco product manufacturing	0	0	0	0	0	0	0	1	1	1	1	1
Textile mills; Textile product mills	0	0	-1	-1	-1	-1	-1	-1	-1	-1	0	0
Apparel manufacturing; Leather and allied product manufacturing	0	0	-1	-1	-1	-1	-1	-1	0	0	0	0
Paper manufacturing	0	0	0	0	0	0	0	0	0	0	0	0
Printing and related support activities	0	0	0	0	0	0	0	0	0	0	0	0
Petroleum and coal products manufacturing	0	0	0	0	0	0	0	0	0	0	0	0
Chemical manufacturing	0	0	-1	-1	-1	-1	0	0	0	0	0	0
Plastics and rubber product manufacturing	0	0	0	0	0	0	0	0	0	1	1	1
Wholesale trade	3	4	4	5	5	5	5	5	5	5	5	6
Retail trade	33	41	47	51	53	55	57	58	59	60	61	63
Air transportation	0	0	0	0	0	0	0	0	0	0	0	0
Rail transportation	0	0	0	0	0	0	0	0	0	0	0	0
Water transportation	0	0	0	0	0	0	0	0	0	0	0	0
Truck transportation	0	1	1	1	1	1	1	1	1	1	1	1
Couriers and messengers	0	0	0	0	0	0	0	0	0	0	0	0
Transit and ground passenger transportation	1	1	1	1	1	1	1	1	1	1	1	1
Pipeline transportation	0	0	0	0	0	0	0	0	0	0	0	0
Scenic and sightseeing transportation; Support activities for transportation	0	0	0	0	0	0	0	0	0	0	0	0
Warehousing and storage	0	0	1	1	1	1	1	1	1	1	1	1
Publishing industries, except Internet	0	0	0	0	0	0	0	0	0	0	1	1
Motion picture and sound recording industries	0	0	0	0	0	0	0	0	0	0	0	0
Internet publishing and broadcasting; ISPs, search portals, and data processing; Other information services	0	0	0	0	0	0	0	0	0	0	0	0
Broadcasting, except Internet	0	0	0	0	0	0	0	0	0	0	0	0
Telecommunications	1	1	1	1	1	1	1	1	1	1	1	1
Monetary authorities - central bank; Credit intermediation and related activities; Funds, trusts, & other financial vehicles	2	3	3	3	2	2	2	2	2	2	2	2
Securities, commodity contracts, investments	1	1	2	2	2	2	2	2	3	3	3	3

EXM 52

Insurance carriers and related activities	1	1	1	1	1	1	1	1	1	1	2	2
Real estate	7	10	12	13	14	15	15	16	16	16	17	17
Rental and leasing services; Lessors of nonfinancial intangible assets	0	1	1	1	1	1	1	1	1	1	1	1
Professional, scientific, and technical services	9	14	16	18	18	19	20	20	21	22	22	23
Management of companies and enterprises	1	1	1	1	1	1	1	1	1	1	2	2
Administrative and support services	6	7	8	9	9	9	8	8	8	8	8	7
Waste management and remediation services	0	0	1	1	1	1	1	1	1	1	1	1
Educational services	2	2	3	3	3	3	3	2	2	2	2	2
Ambulatory health care services	11	12	13	14	14	15	15	16	17	18	18	20
Hospitals	1	2	2	3	3	3	3	3	4	4	4	4
Nursing and residential care facilities	2	3	3	4	4	5	5	5	6	6	6	7
Social assistance	7	8	10	11	11	12	13	13	13	14	14	15
Performing arts and spectator sports	2	2	2	3	2	2	3	3	3	3	3	3
Museums, historical sites, zoos, and parks	0	0	0	0	0	0	0	0	0	0	0	0
Amusement, gambling, and recreation	1	1	1	1	1	1	1	1	1	2	2	2
Accommodation	3	4	5	6	7	7	7	8	8	9	9	9
Food services and drinking places	17	24	29	33	36	39	41	43	44	45	46	47
Repair and maintenance	2	3	3	3	3	3	3	3	3	3	3	3
Personal and laundry services	4	4	5	5	4	4	4	4	4	5	5	5
Membership associations and organizations	4	4	4	5	4	4	4	4	4	4	4	5
Private households	2	2	2	2	2	2	2	2	2	2	2	2

Settlement Scenario PI+ Results: Detailed Industry Output Results –*Units are in Thousands of Nominal Dollars*

Category	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Forestry and logging; Fishing, hunting, and trapping	21	48	76	62	67	70	71	69	66	62	59	57	56	56	57	58	60
Agriculture and forestry support activities	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	4
Oil and gas extraction	31	61	191	163	193	216	229	234	237	238	239	239	239	238	237	235	234
Mining (except oil and gas)	26	60	129	123	140	153	159	157	152	146	139	134	129	125	122	120	119
Support activities for mining	18	41	97	99	111	119	120	114	105	94	84	74	66	59	52	47	43
Utilities	3,149	5,892	22,187	18,754	22,591	25,327	26,680	26,911	27,193	27,250	27,515	27,768	28,018	28,268	28,517	28,764	29,017
Construction	3,445	8,265	20,113	22,355	25,905	28,865	30,322	30,020	28,931	27,257	25,522	23,876	22,432	21,250	20,339	19,699	19,333
Wood product manufacturing	102	243	500	519	593	658	694	695	681	655	629	607	589	579	574	575	582
Nonmetallic mineral product manufacturing	96	231	446	452	509	562	591	591	577	553	529	508	491	479	472	469	471
Primary metal manufacturing	141	353	418	334	314	320	330	336	342	347	354	364	376	392	410	430	450
Fabricated metal product manufacturing	171	420	619	553	577	616	642	648	648	645	650	663	686	718	758	804	855
Machinery manufacturing	169	402	626	585	629	688	737	770	804	837	878	928	986	1,053	1,126	1,205	1,287
Computer and electronic product manufacturing	373	874	1,036	561	360	210	84	(18)	(45)	(12)	113	319	608	968	1,382	1,835	2,317
Electrical equipment and appliance manufacturing	52	128	163	129	123	125	128	129	131	133	140	150	164	181	200	220	241
Motor vehicles, bodies and trailers, and parts manufacturing	29	64	110	101	117	132	144	153	162	170	179	187	196	206	216	226	237
Other transportation equipment manufacturing	8	19	24	18	16	16	17	17	18	19	21	24	28	32	37	41	46
Furniture and related product manufacturing	31	66	115	100	121	138	150	156	161	163	167	172	177	184	191	199	207
Miscellaneous manufacturing	36	78	107	78	79	82	85	88	93	98	105	116	128	142	158	174	190
Food manufacturing	105	242	382	349	413	476	528	564	597	623	647	669	692	714	735	756	773
Beverage and tobacco product manufacturing	144	306	575	572	735	877	990	1,071	1,139	1,189	1,230	1,262	1,288	1,310	1,328	1,343	1,352

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Textile mills; Textile product mills	119	276	327	232	217	214	214	211	214	218	227	241	259	280	302	326	348
Apparel manufacturing; Leather and allied product manufacturing	31	74	88	62	58	60	63	68	76	86	100	117	137	160	173	196	20
Paper manufacturing	46	116	139	112	109	115	122	128	133	137	143	148	155	162	169	177	184
Printing and related support activities	35	82	122	106	119	132	143	150	157	163	169	175	182	191	199	208	216
Petroleum and coal products manufacturing	148	340	686	691	810	911	972	989	993	980	964	947	934	925	920	920	923
Chemical manufacturing	225	589	665	516	479	493	523	552	584	611	642	677	715	755	797	841	883
Plastics and rubber product manufacturing	131	305	473	424	468	511	541	551	558	558	561	566	576	589	606	625	644
Wholesale trade	682	1,523	2,676	2,495	3,090	3,628	4,038	4,299	4,562	4,767	4,976	5,177	5,382	5,600	5,820	6,045	6,262
Retail trade	1,937	4,016	7,319	6,491	8,343	9,848	10,935	11,598	12,226	12,685	13,153	13,587	14,021	14,476	14,932	15,398	15,849
Air transportation	6	11	22	16	18	19	19	19	17	15	13	12	12	12	12	13	14
Rail transportation	2	5	7	5	4	3	3	2	1	-	(1)	(1)	(1)	(1)	(1)	-	-
Water transportation	-	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Truck transportation	53	118	205	183	211	235	250	255	262	267	276	288	303	323	344	368	392
Couriers and messengers	27	58	91	68	75	80	82	81	82	84	89	98	110	125	141	159	178
Transit and ground passenger transportation	36	68	131	97	114	120	120	114	110	104	100	97	96	97	98	101	106
Pipeline transportation	1	1	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4
Scenic and sightseeing transportation; Support activities for transportation	9	19	30	20	20	19	17	14	10	6	3	-	(1)	(1)	(1)	-	2
Warehousing and storage	21	45	78	67	82	94	102	106	111	115	120	126	132	140	148	157	165
Publishing industries, except Internet	105	255	408	382	442	513	579	632	686	737	794	857	926	1,004	1,087	1,175	1,266
Motion picture and sound recording industries	5	12	17	15	17	19	20	21	22	22	23	24	26	28	30	32	35
Internet publishing and broadcasting; ISPs, search portals, and data processing; Other information services	73	145	266	229	280	320	348	365	380	392	405	418	432	450	468	489	511
Broadcasting, except Internet	15	32	55	49	59	67	73	76	79	80	82	84	86	89	92	95	98
Telecommunications	317	653	1,128	949	1,158	1,316	1,416	1,457	1,492	1,503	1,521	1,539	1,562	1,591	1,625	1,665	1,707

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Monetary authorities - central bank; Credit intermediation and related activities; Funds, trusts, & other financial vehicles	395	806	1,536	1,249	1,486	1,623	1,664	1,616	1,571	1,506	1,459	1,427	1,412	1,417	1,438	1,475	1,526
Securities, commodity contracts, investments	195	457	773	701	823	956	1,078	1,177	1,287	1,399	1,528	1,672	1,832	2,008	2,194	2,387	2,582
Insurance carriers and related activities	123	254	465	372	439	478	490	478	467	452	443	441	445	457	473	496	523
Real estate	1,115	2,457	5,098	5,214	6,425	7,431	8,138	8,506	8,744	8,829	8,878	8,888	8,899	8,929	8,974	9,045	9,121
Rental and leasing services; Lessors of nonfinancial intangible assets	98	214	417	399	482	552	597	616	626	628	631	635	641	650	663	678	695
Professional, scientific, and technical services	629	1,441	2,900	2,993	3,627	4,228	4,704	5,024	5,295	5,503	5,707	5,908	6,121	6,356	6,606	6,872	7,136
Management of companies and enterprises	153	359	600	562	661	768	859	929	997	1,059	1,127	1,199	1,278	1,365	1,456	1,550	1,641
Administrative and support services	346	795	1,420	1,399	1,705	2,004	2,250	2,421	2,571	2,686	2,797	2,901	3,006	3,116	3,226	3,341	3,448
Waste management and remediation services	37	87	166	169	201	231	253	267	276	280	284	287	290	293	296	300	304
Educational services	103	236	430	424	523	617	693	746	791	823	852	878	902	926	948	971	990
Ambulatory health care services	872	1,675	3,073	2,414	3,070	3,520	3,798	3,925	4,072	4,171	4,304	4,460	4,648	4,870	5,117	5,386	5,669
Hospitals	130	307	593	620	776	937	1,086	1,211	1,331	1,439	1,545	1,649	1,756	1,866	1,979	2,093	2,203
Nursing and residential care facilities	108	259	453	465	575	697	811	908	999	1,076	1,149	1,219	1,288	1,358	1,427	1,494	1,557
Social assistance	117	243	474	435	555	653	724	767	806	834	860	883	907	930	954	978	1,001
Performing arts and spectator sports	44	89	156	126	152	171	182	185	189	189	191	194	199	204	210	218	226
Museums, historical sites, zoos, and parks	6	14	23	23	28	34	39	43	47	50	53	55	58	60	63	65	67
Amusement, gambling, and recreation	34	73	120	103	123	141	155	163	170	176	181	187	193	200	207	214	222
Accommodation	300	698	1,161	1,127	1,401	1,686	1,937	2,133	2,313	2,459	2,599	2,729	2,855	2,979	3,100	3,218	3,324
Food services and drinking places	698	1,529	2,685	2,629	3,415	4,152	4,758	5,210	5,616	5,935	6,231	6,488	6,726	6,946	7,151	7,345	7,505
Repair and maintenance	248	496	822	652	777	859	894	889	884	867	860	859	865	880	900	926	955
Personal and laundry services	185	352	579	416	520	579	604	600	597	585	581	580	582	589	599	613	629
Membership associations and organizations	124	251	466	386	473	534	567	573	578	575	576	579	585	595	607	623	641
Private households	19	35	60	44	56	63	66	65	65	64	64	64	64	65	66	67	69

PUC- Ordered Divestiture Scenario PI+ Results: Detailed Industry Output Results -*Units are in Thousands of Nominal Dollars*

Category	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Forestry and logging; Fishing, hunting, and trapping	12	8	1	(7)	(15)	(21)	(25)	(27)	(27)	(25)	(22)	(18)
Agriculture and forestry support activities	1	-	-	-	-	-	-	-	-	1	1	1
Oil and gas extraction	176	193	201	207	209	213	215	217	219	221	221	223
Mining (except oil and gas)	73	90	95	93	88	84	80	77	75	74	74	76
Support activities for mining	58	83	92	93	88	82	76	70	65	60	56	53
Utilities	23,374	24,944	25,430	25,954	26,286	26,790	27,287	27,783	28,280	28,779	29,279	29,793
Construction	13,200	20,593	24,285	25,794	25,799	25,137	24,185	23,194	22,305	21,599	21,118	20,924
Wood product manufacturing	237	354	407	422	411	393	375	361	352	351	357	372
Nonmetallic mineral product manufacturing	170	248	278	279	262	241	222	208	200	198	203	215
Primary metal manufacturing	(174)	(307)	(404)	(474)	(526)	(555)	(563)	(555)	(534)	(501)	(459)	(409)
Fabricated metal product manufacturing	6	(36)	(87)	(139)	(191)	(224)	(239)	(233)	(210)	(170)	(115)	(46)
Machinery manufacturing	47	43	30	14	-	3	23	60	114	183	265	361
Computer and electronic product manufacturing	(323)	(850)	(1,348)	(1,764)	(2,108)	(2,326)	(2,414)	(2,382)	(2,242)	(2,004)	(1,682)	(1,288)
Electrical equipment and appliance manufacturing	(42)	(86)	(123)	(151)	(173)	(185)	(188)	(183)	(171)	(152)	(129)	(101)
Motor vehicles, bodies and trailers, and parts manufacturing	29	36	42	47	52	57	64	73	83	95	108	122

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Other transportation equipment manufacturing	(6)	(12)	(18)	(21)	(24)	(25)	(25)	(23)	(20)	(16)	(12)	(6)
Furniture and related product manufacturing	45	59	69	75	78	82	87	93	100	109	119	131
Miscellaneous manufacturing	1	(16)	(30)	(41)	(50)	(54)	(53)	(46)	(36)	(22)	(5)	15
Food manufacturing	60	61	69	81	94	115	141	173	209	248	291	335
Beverage and tobacco product manufacturing	263	388	499	595	672	743	807	867	922	974	1,024	1,069
Textile mills; Textile product mills	(103)	(202)	(272)	(327)	(367)	(387)	(391)	(382)	(361)	(331)	(295)	(252)
Apparel manufacturing; Leather and allied product manufacturing	(35)	(69)	(94)	(114)	(128)	(134)	(133)	(127)	(116)	(102)	(85)	(6)
Paper manufacturing	(60)	(107)	(142)	(165)	(181)	(188)	(188)	(182)	(171)	(157)	(139)	(119)
Printing and related support activities	8	1	(4)	(6)	(7)	(5)	-	8	19	31	45	61
Petroleum and coal products manufacturing	340	487	569	613	626	630	631	633	638	649	665	687
Chemical manufacturing	(462)	(816)	(1,081)	(1,275)	(1,422)	(1,511)	(1,550)	(1,548)	(1,512)	(1,446)	(1,356)	(1,244)
Plastics and rubber product manufacturing	61	63	55	42	26	18	18	29	47	74	107	147
Wholesale trade	1,113	1,534	1,873	2,180	2,423	2,677	2,937	3,215	3,513	3,829	4,161	4,511
Retail trade	3,795	5,002	6,033	6,929	7,614	8,305	8,976	9,661	10,369	11,096	11,847	12,623
Air transportation	12	13	13	12	10	8	7	6	6	6	7	8
Rail transportation	1	(1)	(3)	(4)	(6)	(7)	(8)	(9)	(9)	(9)	(9)	(8)
Water transportation	1	1	1	1	1	1	1	1	1	1	1	1
Truck transportation	80	103	113	119	120	124	132	144	161	181	205	233

Couriers and messengers	28	26	22	16	11	9	11	17	27	39	55	73
Transit and ground passenger transportation	69	71	72	71	67	64	61	61	62	64	68	73
Pipeline transportation	3	4	4	4	4	4	3	3	4	4	4	4
Scenic and sightseeing transportation; Support activities for transportation	11	10	8	4	(1)	(4)	(8)	(10)	(11)	(11)	(11)	(10)
Warehousing and storage	33	40	46	50	53	56	61	67	75	83	93	104
Publishing industries, except Internet	92	124	150	175	198	230	273	329	396	475	564	663
Motion picture and sound recording industries	3	4	4	5	5	6	7	8	10	13	15	18
Internet publishing and broadcasting; ISPs, search portals, and data processing; Other information services	134	172	201	225	241	257	274	292	313	336	361	390
Broadcasting, except Internet	22	29	33	36	38	41	43	46	50	54	59	64
Telecommunications	508	630	725	795	832	873	915	964	1,020	1,084	1,156	1,237
Monetary authorities - central bank; Credit intermediation and related activities; Funds, trusts, & other financial vehicles	829	940	995	1,005	970	939	918	912	925	955	1,003	1,076
Securities, commodity contracts, investments	269	353	421	490	555	642	751	884	1,041	1,218	1,413	1,623
Insurance carriers and related activities	223	240	245	240	225	215	210	212	221	237	261	292
Real estate	2,827	4,188	5,157	5,819	6,217	6,518	6,749	6,960	7,170	7,390	7,632	7,899
Rental and leasing services; Lessors of nonfinancial intangible assets	216	302	357	391	409	424	438	453	471	493	518	548
Professional, scientific, and technical services	1,455	2,189	2,701	3,087	3,364	3,617	3,864	4,123	4,408	4,717	5,053	5,419
Management of companies and enterprises	179	245	295	339	377	424	483	555	639	735	841	957

EXM 59

Administrative and support services	585	872	1,098	1,287	1,435	1,580	1,724	1,873	2,030	2,195	2,368	2,549
Waste management and remediation services	76	111	135	151	161	171	179	188	197	206	216	227
Educational services	192	281	354	416	465	511	554	596	637	679	721	762
Ambulatory health care services	1,785	2,079	2,340	2,557	2,698	2,860	3,038	3,247	3,487	3,755	4,051	4,379
Hospitals	279	421	548	667	774	883	993	1,110	1,232	1,360	1,494	1,631
Nursing and residential care facilities	171	273	366	455	534	614	695	779	866	955	1,046	1,137
Social assistance	273	357	426	484	529	571	610	649	688	727	768	809
Performing arts and spectator sports	75	87	95	101	103	106	111	117	124	133	144	156
Museums, historical sites, zoos, and parks	7	11	15	19	22	25	29	32	36	40	43	47
Amusement, gambling, and recreation	44	56	66	75	81	88	96	105	115	126	138	151
Accommodation	419	639	836	1,022	1,183	1,349	1,515	1,687	1,863	2,043	2,226	2,408
Food services and drinking places	1,268	1,902	2,455	2,962	3,389	3,806	4,200	4,582	4,954	5,316	5,673	6,011
Repair and maintenance	359	430	471	492	492	498	508	526	552	585	626	673
Personal and laundry services	274	295	316	329	329	335	344	357	374	395	420	450
Membership associations and organizations	257	305	336	357	365	374	385	399	416	437	461	489
Private households	35	40	43	45	46	47	48	50	52	54	57	59

EXM 60