

Utah Governor's Office
of Energy Development

ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact
Assessment



May 2015



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



TABLE OF CONTENTS

Executive Summary	5
Economic Impacts	5
Fiscal Impacts	5
Methodology	5
Market & Economic Impact of Energy	7
Summary of Impacts	8
Coal Mining	9
Oil & Gas Development	11
Refineries	15
Electricity Production	16
Solar Panel Installation.....	18
Electricity Distribution and Transmission	19
Wholesale and Retail Energy Trade.....	19
Uranium Mining and Processing	20
Energy Distribution.....	22
Fiscal Impacts.....	24
Summary of Fiscal Impacts.....	25
Property Taxes.....	25
Sales Taxes.....	27
Federal Rents and Royalties Distributed to State	27
Rents and Royalties for Production on SITLA Lands	28
Oil and Gas Severance Taxes and Conservation Fees.....	28
State Income Taxes.....	29
Appendices	30
Oil Extraction and Drilling Impact by Company	31
Statewide Output Impact by Company.....	31
Statewide Labor Income Impact by Company	32
Statewide Employment Impact by Company.....	33
Statewide Impacts of Power Plants by County	34
Statewide Output by County	34
Statewide Labor Income by County	37
Statewide Employment by County.....	40



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



TABLE OF EXHIBITS

Exhibit 1 - Impact of Energy Industries in Utah, Various Years	8
Exhibit 2 - Coal Production Value	9
Exhibit 3 - Coal Production Value per Ton	9
Exhibit 4 - Impact of Coal Mining in Utah, 2013	9
Exhibit 5 - Impact of Oil & Gas Development in Utah, 2013	11
Exhibit 6 - Production Value of Oil and Gas Development in Utah	11
Exhibit 7 - Impact of Refineries in Utah, 2013	15
Exhibit 8 - Utah Refinery Direct Output by Year	15
Exhibit 9 - Utah Refinery Production	15
Exhibit 10 - Impact of Electricity Generation in Utah, 2012	16
Exhibit 11 - Utah Average Electric Rates	16
Exhibit 12 - Utah Generation by Type	18
Exhibit 13 - Impact of Solar Panel Installation in Utah, 2013	18
Exhibit 14 - Impact of Electricity Transmission and Distribution in Utah, 2013	19
Exhibit 15 - Wholesale and Retail Energy Trade by Year	19
Exhibit 16 - Impact of Wholesale and Retail Energy Trade in Utah, 2012	20
Exhibit 17 - Uranium Spot Price	20
Exhibit 18 - Utah Uranium Output by Year	22
Exhibit 19 - Impact of Uranium Mining in Utah, 2013	22
Exhibit 20 - Utah Energy Distribution Output by Year	23
Exhibit 21 - Impact of Energy Distribution in Utah, 2013	23
Exhibit 22 - Estimated Annual Fiscal Impact	25
Exhibit 23 - Energy Industry Property Value by Year	26
Exhibit 24 - Energy Industry Share of Statewide Total Property Value in Utah	26
Exhibit 25 - Energy Industry Property Taxes by Year	26
Exhibit 26 - Energy Industry Sales Taxes by Year	27
Exhibit 27 - ONRR Energy Revenue Distributions in Utah by Source	27
Exhibit 28 - Energy Industry Public Revenue from SITLA	28
Exhibit 29 - Oil and Gas Taxes and Fees	29
Exhibit 30 - Direct Employee Income Taxes by Source, Various Years	29



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



EXECUTIVE SUMMARY

Applied Analysis ("AA") was retained by the Utah Governor's Office of Energy Development to review and analyze the economic and fiscal impacts sourced to Utah's energy sector, including mining development. Utah's energy sector is a vibrant and material component of the state's economic and fiscal structure. The industry provides a significant portion of the state's jobs, personal income for its residents, economic activity and public revenues.



39,719 JOBS
\$20.9 B in output

Economic Impacts

Currently, the output of the energy sector totals \$20.9 billion when direct, indirect, and induced impacts are considered. In total, this represents 14.8 percent of the state's gross domestic product. The energy industry directly accounts for 10,673 jobs, and another 29,046 jobs are supported throughout the economy when considering indirect and induced impacts. In total, the energy industry accounts for a total of 39,719 jobs in the State of Utah.

The state's oil production was a large creator of jobs within the energy industry, with oil and gas development creating 6,976 jobs and Utah's refineries producing 9,522 jobs throughout the economy. In total, the oil industry is responsible for the creation of 16,498 jobs in the Beehive State. Utah's position as a net electricity exporter also helped in generating a total of 16,804 jobs throughout the state.

Fiscal Impacts

The energy sector in Utah is also responsible for considerable revenues for state and local governments. In total, approximately \$655.6 million was generated by the energy industry by way of taxes, fees, and federal government distributions. With an estimated \$15.8 billion in property value, the sector generates approximately \$189 million in annual property taxes for state and local governments. Notably, these revenues continued increasing throughout the Great Recession, a time when government revenues were declining and demand for services increased. The energy sector provided increased stability for the state's finances during a challenging period in history.



\$655.6
Million for Utah

METHODOLOGY

Included in this report is an overview and analysis of the economic impact of the Utah energy sector, including coal and uranium production, oil and gas development, refining, power production, infrastructure, and support services. Data used in this analysis were obtained from the Utah Governor's Office of Energy Development and third-party data providers, including federal and state governments and agencies. While we have no reason to doubt the accuracy of the information referenced herein, we have neither audited these data nor performed thorough review and assurance procedures, and as such, AA can make no representations or assurances as to their completeness or usefulness for all purposes.

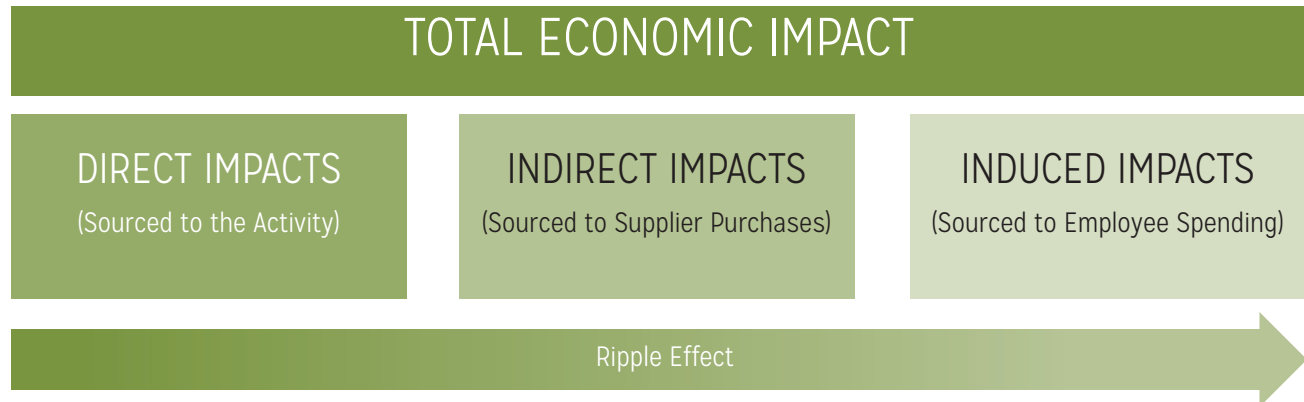


ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



To identify and model the interrelationships in the Utah economy, IMPLAN (Impact Analysis for Planning) software and databases were used. IMPLAN is an input-output model (or econometric system). It utilizes complex economic equations to explain how the “outputs” of one industry become the “inputs” of others, and vice versa. This relationship is sometimes referred to as the “multiplier effect,” illustrating how changes in one sector of the economy can affect other sectors.



The notion of multipliers rests upon the difference between an “initial effect” and the “total effects” of that change or stimulus. Generally speaking, these effects are segmented into direct impacts, indirect impacts and induced impacts. Each is described below.

- ◆ **DIRECT IMPACTS** measure the effects of the specific impacting force being considered. In this case, for example, plant maintenance jobs generated by a power plant in the state are considered direct jobs and the wages and salaries they are paid are considered direct personal income.
- ◆ **INDIRECT IMPACTS** consider how other businesses respond to the impacting condition. Employees of oil drilling support, for example, are considered indirect employees to the extent their jobs are dependent, in full or in part, on the suppliers’ income generated by the project-related purchases.
- ◆ **INDUCED IMPACTS** measure the effects of increased (or decreased) consumer expenditures resulting from wage and salary payments sourced to an impacting condition. In the present case, for example, if a new person were to be employed by the energy industry, she might be expected to spend a portion of her monthly salary at the supermarket, the local movie theater or at a restaurant. Induced effects capture the impacts of this spending as it “ripples” through the local economy.
- ◆ **TOTAL EFFECTS** are the sum of direct, indirect and induced effects.

Input-output models, as is the case with all econometric models, are not without their limitations. The statistical model used in this analysis, IMPLAN, for example, assumes that capital and labor are used in fixed proportions. This means that for every job created or lost, a fixed change in investment, income and employment results. In reality, developers, consumers and governments respond to stimuli in complex ways, including changing the mix of capital or labor as well as the types and frequencies of investment. Importantly, each impacting force has its own unique characteristics, affecting how consumers and businesses respond to the given change.



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



GOVERNOR'S OFFICE OF
ENERGY DEVELOPMENT
Advancing Utah's Energy Future



MARKET & ECONOMIC IMPACT OF ENERGY



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



MARKET AND ECONOMIC IMPACT

SUMMARY OF IMPACTS

In total, the energy industry in Utah accounts for \$20.9 billion of the state's output after indirect and induced impacts were considered. In total, this represents 14.8 percent of the state's gross domestic product. In addition to overall economic output, the energy industry supported approximately 39,700 jobs and generated a total of \$2.9 billion in personal income.¹

Exhibit 1 - Impact of Energy Industries in Utah (\$ in Millions, Except Employment)

	Output	Labor Income	Employment
Direct	\$15,501.1	\$1,318.3	10,673
Indirect	\$3,449.3	\$937.6	13,426
Induced	\$1,936.4	\$597.1	15,620
Total	\$20,886.8	\$2,853.1	39,719

The subsections that follow highlight the economic impacts sourced to each key segment of the energy industry in the State of Utah.

¹ In general, economic impacts are considered for the most recent year of information available, 2012 or 2013 for all series. This methodology does not account for any changes that have taken place within the energy market since that time.



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



COAL MINING

Coal mining in the state accounted for \$579 million of production in 2013, which was 15.3 percent below the peak production value in 2009 of \$684 million.² The price per ton increased 9.5 percent during this time as the amount of coal mined in the state fell 22.7 percent, leading to the decreased total value of production. Overall, the state's coal mines face weaker demand in the face of growing energy alternatives.

Exhibit 2 - Coal Production Value (\$ in Millions)

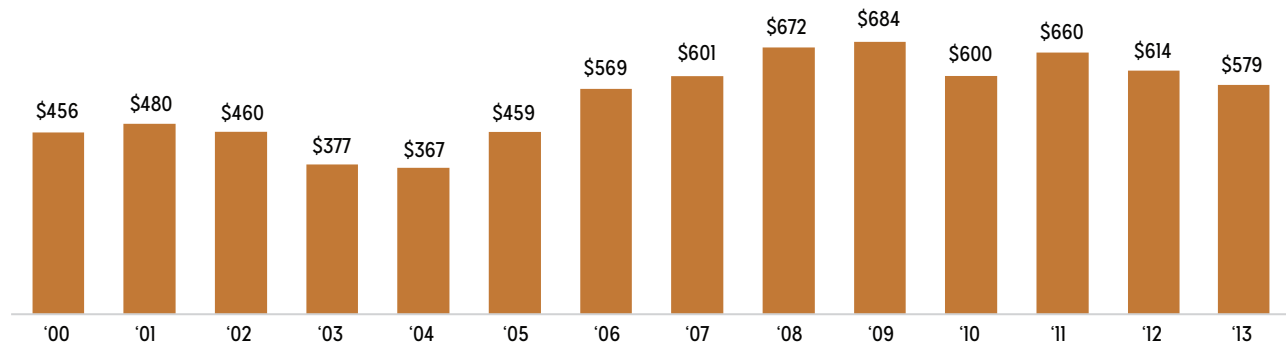
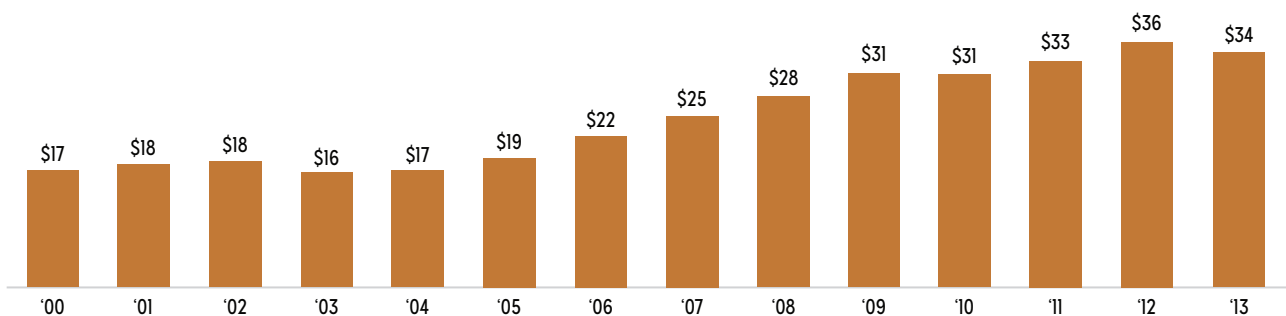


Exhibit 3 - Coal Production Price per Ton



Production in the coal mining industry still accounted for a total impact of \$887.0 million after indirect and induced impacts were considered. This industry supported approximately \$173.3 million in labor income for a work force of 2,949 employees.

Exhibit 4 - Impact of Coal Mining in Utah, 2013 (\$ in Millions, Except Employment)

	Output	Labor Income	Employment
Direct	\$579.3	\$132.8	1,605
Indirect	\$188.1	\$59.4	979
Induced	\$119.5	\$36.9	964
Total	\$887.0	\$229.0	3,548

² Utah's Extractive Resource Industries 2011, Utah Geological Survey a division of the Utah Department of Natural Resources.



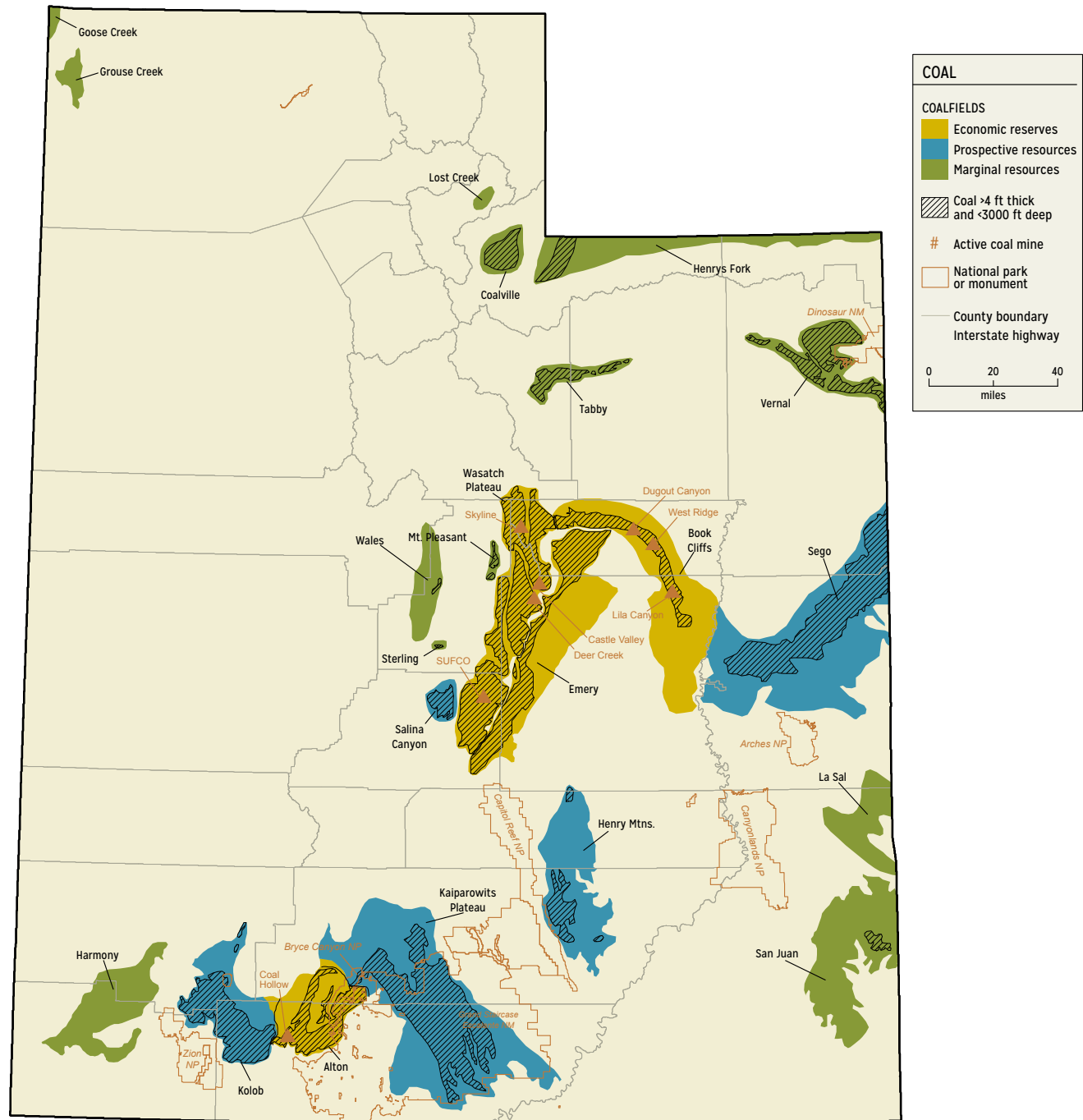
ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



GOVERNOR'S OFFICE OF
ENERGY DEVELOPMENT
Advancing Utah's Energy Future

Coal Mining Resources in Utah



Data Source: Utah Geological Survey



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



OIL & GAS DEVELOPMENT

Oil and gas operators across the state account for 2,638³ direct jobs (2013). The two largest operators in the industry are Anadarko and Newfield, each accounting for 250-499 employees across the state⁴ (See Appendix – Oil Producer Impact by Company for a list of companies' economic impact in the state). Overall, this translated into a total output across the state of \$5.2 billion, \$503.9 million in labor income, and 6,976 jobs during the year.

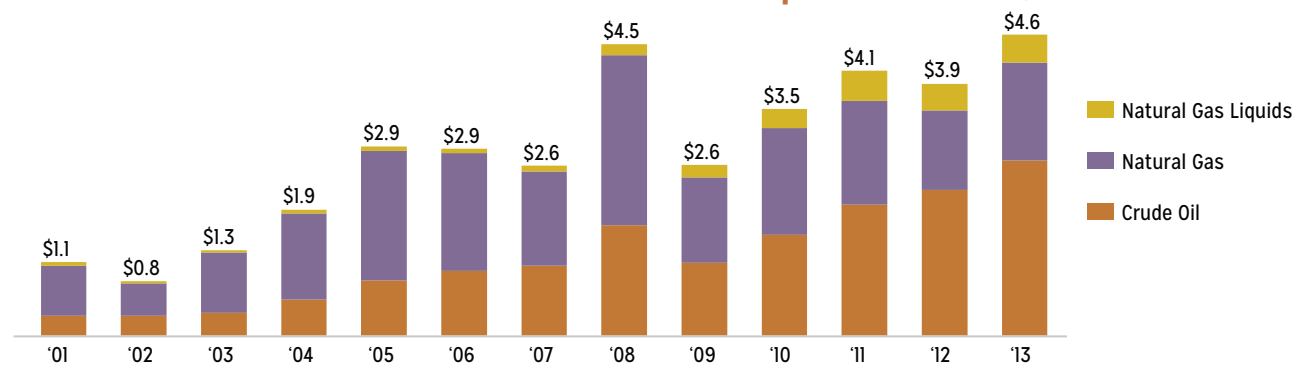
Exhibit 5 – Impact of Oil & Gas Development in Utah, 2013

(\$ in Millions, Except Employment)

	Output	Labor Income	Employment
Direct	\$4,636.2	\$300.5	2,638
Indirect	\$254.0	\$95.2	1,506
Induced	\$350.8	\$108.2	2,832
Total	\$5,241.0	\$503.9	6,976

The value of production plunged in the immediate aftermath of the Great Recession, falling from \$4.5 billion in 2008 to \$2.6 billion in 2009.⁵ In 2013, the value of production reached an all-time high of \$4.6 billion.

Exhibit 6 – Production Value of Oil and Gas Development in Utah (\$ in Billions)



Further developments in the oil and gas industry are possible, as the Utah Geological Survey estimates roughly 77 billion barrels of potential economic oil shale resource, and billions more of oil sands. The cost of these projects continues to decline as technology is developed, so that the energy in Utah's oil shale and oil sands will likely play a significant role in the future energy economy.

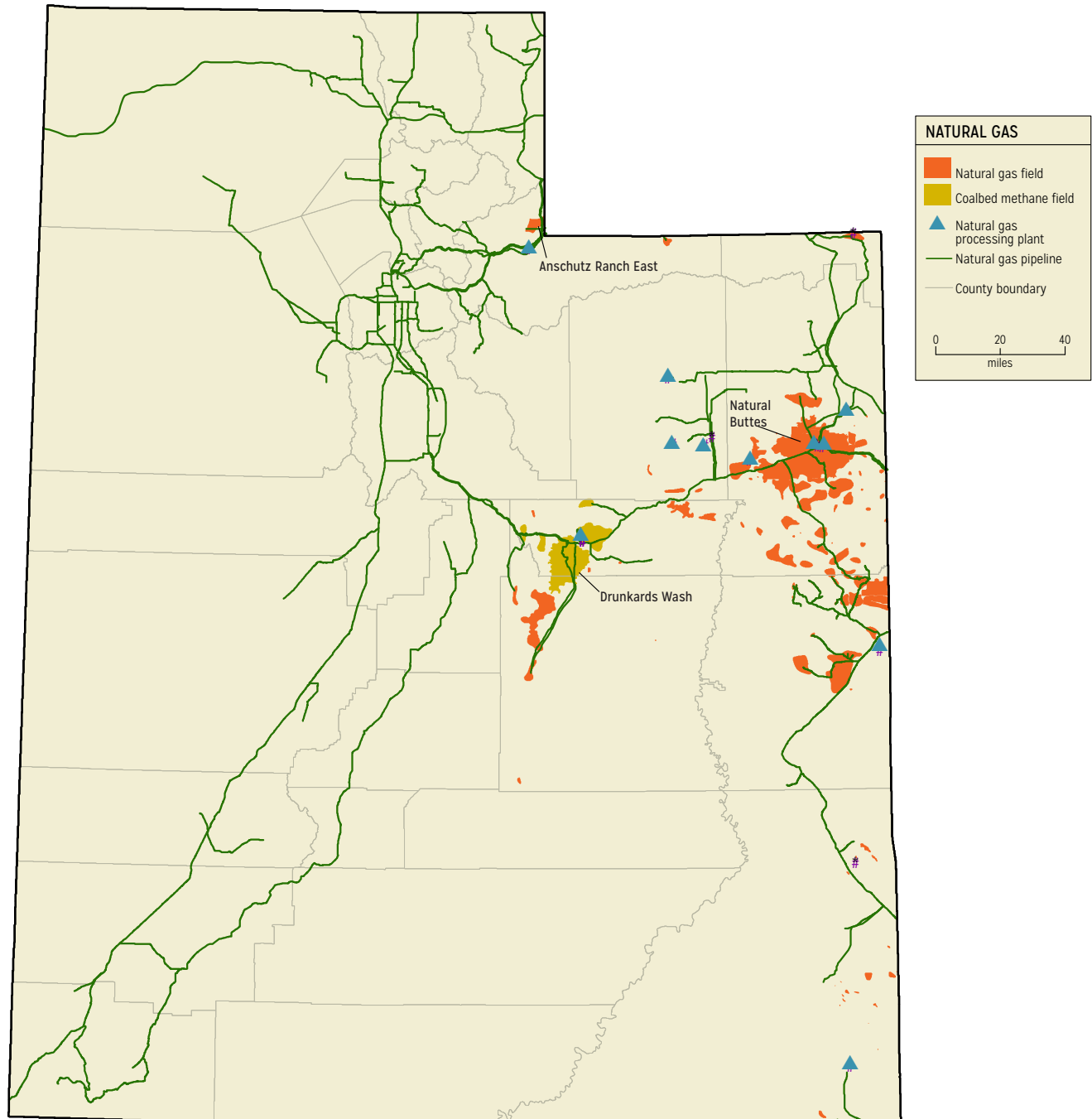
³ Utah Department of Workforce Services and IMPLAN.

⁴ Utah Division of Oil Gas and Mining, the Utah Department of Workforce Services, and IMPLAN.

⁵ Utah Oil and Gas Program within the Division of Oil, Gas, and Mining. http://oilgas.ogm.utah.gov/Statistics/PROD_Value.htm.



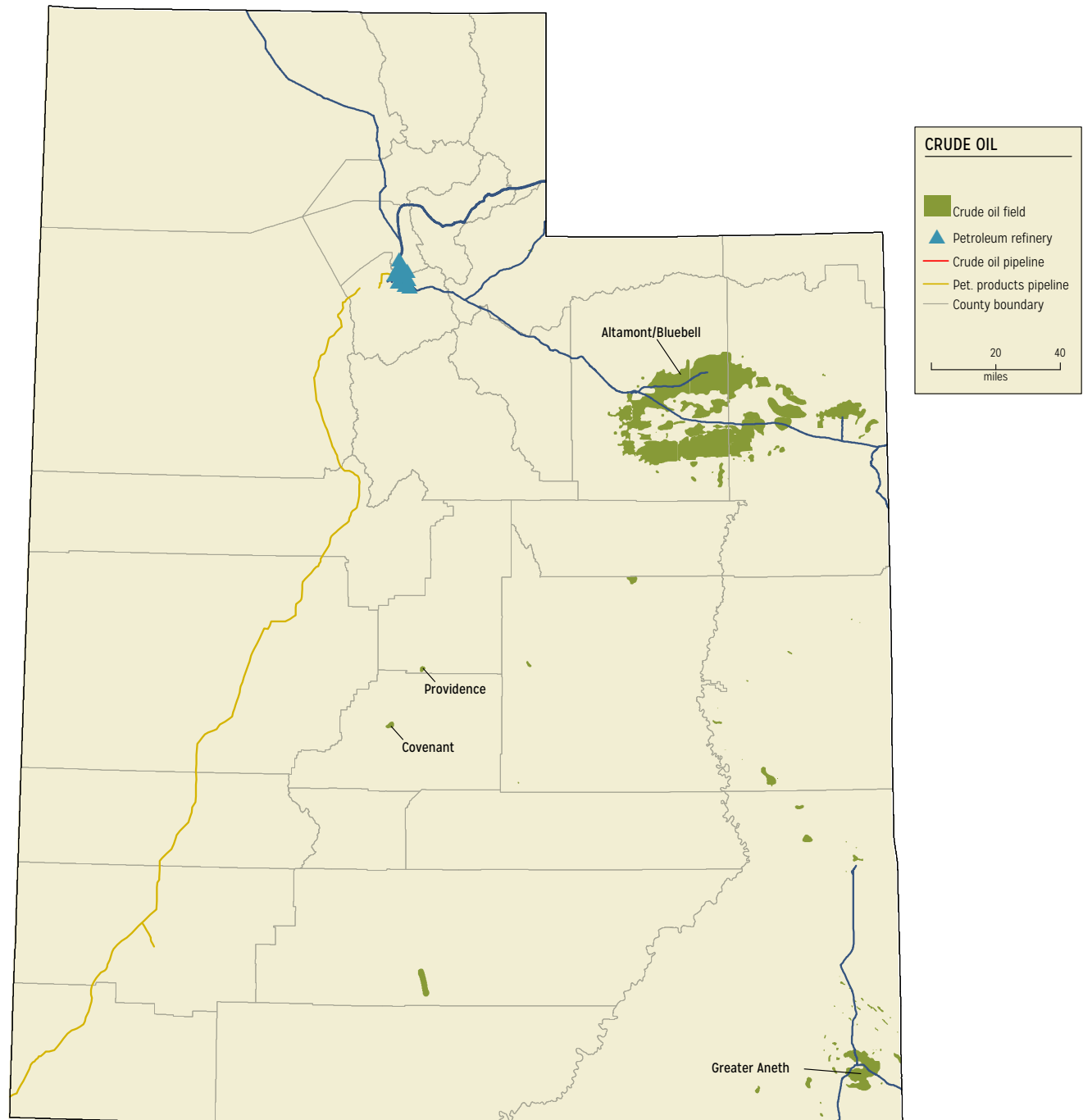
Natural Gas Resources in Utah



Data Source: Utah Geological Survey and the Division of Oil, Gas, and Mining



Oil Resources in Utah



Data Source: Utah Geological Survey and the Division of Oil, Gas, and Mining



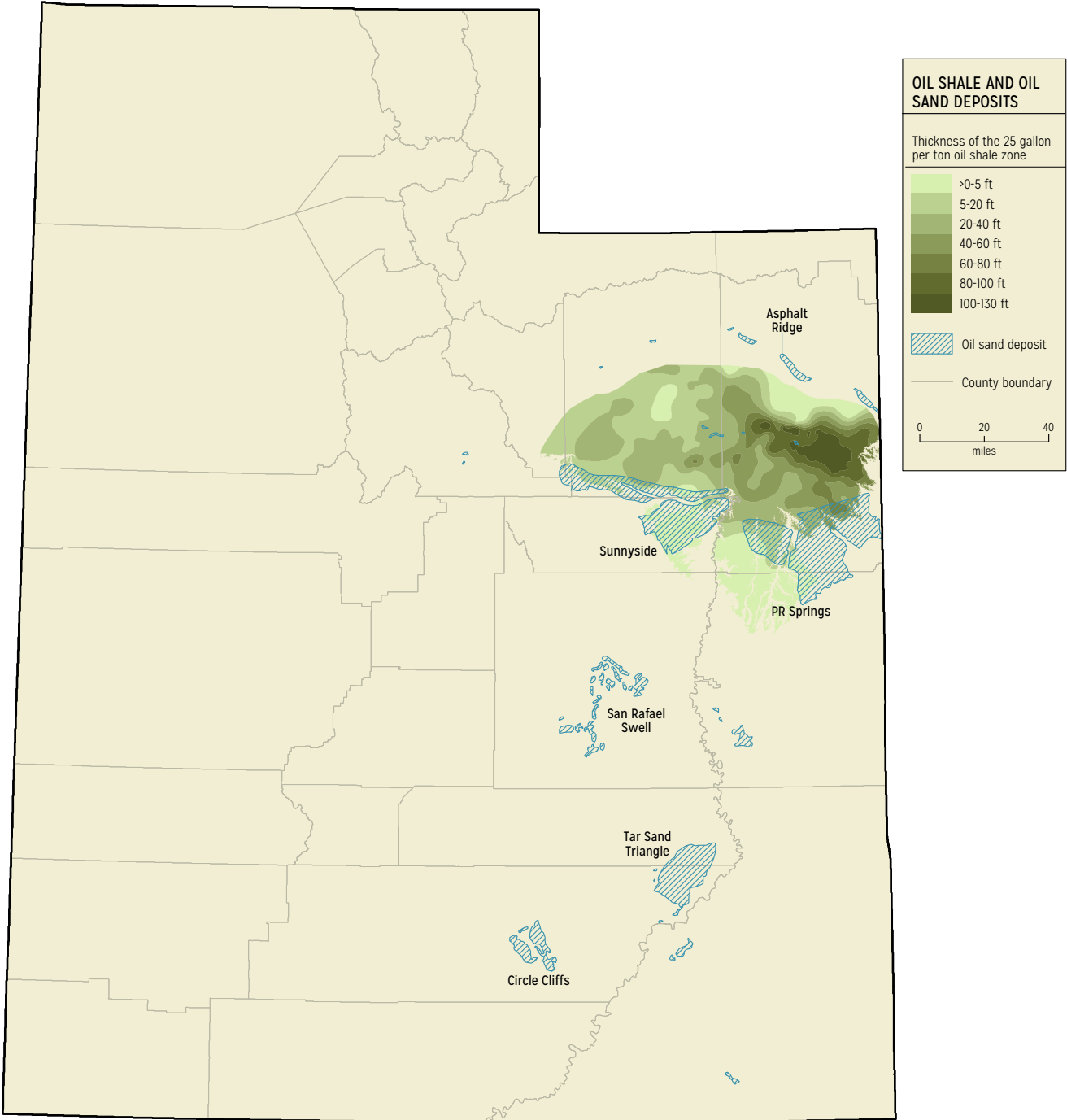
ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



GOVERNOR'S OFFICE OF
ENERGY DEVELOPMENT
Advancing Utah's Energy Future

Shale and Oil Sand Resources in Utah for Potential Development



Data Source: Utah Geological Survey



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



REFINERIES

Petroleum refineries in the state generate an estimated \$5.46 billion in direct economic output (2013), paying wages of \$133.5 million⁶, and employing 571 workers during the year.

Exhibit 7 - Impact of Refineries in Utah, 2013 (\$ in Millions, Except Employment)

	Output	Labor Income	Employment
Direct	\$5,462.3	\$133.5	571
Indirect	\$1,269.9	\$398.8	5,154
Induced	\$470.4	\$145.1	3,796
Total	\$7,202.6	\$677.4	9,522

Refineries in the state have also recorded incredible growth in the past decade, with production more than doubling in value during the past decade.

Exhibit 8 - Utah Refinery Direct Output by Year (\$ in Billions)⁶

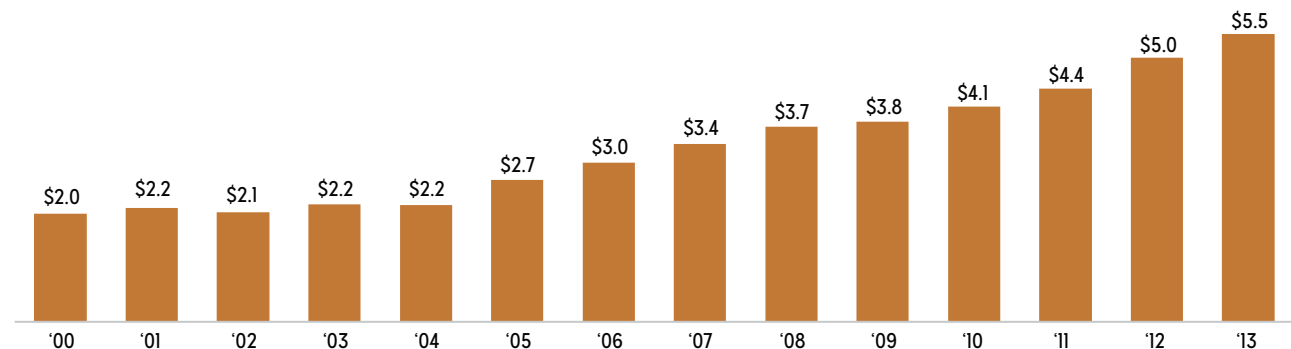
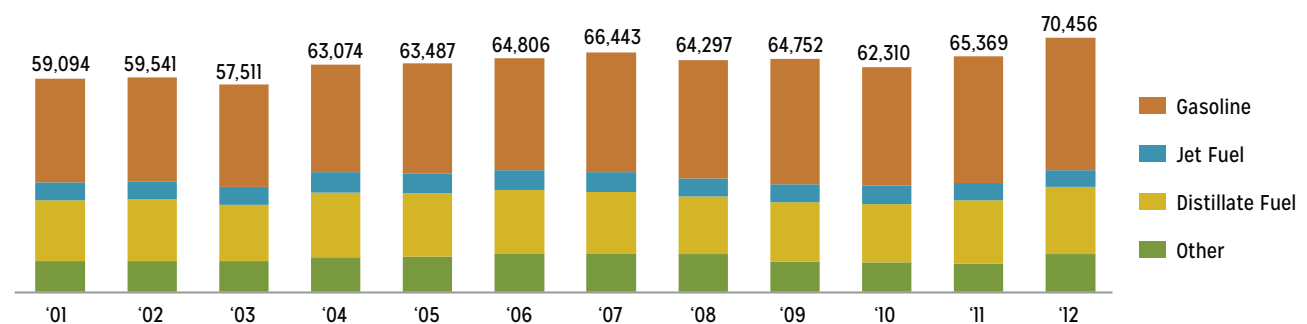


Exhibit 9 - Utah Refinery Production (Thousand Barrels)⁷



⁶ Utah Department of Workforce Services and IMPLAN.

⁷ Utah Geological Survey, available at <http://geology.utah.gov/resources/energy/utah-energy-and-mineral-statistics> as table 3.15



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



ELECTRICITY PRODUCTION

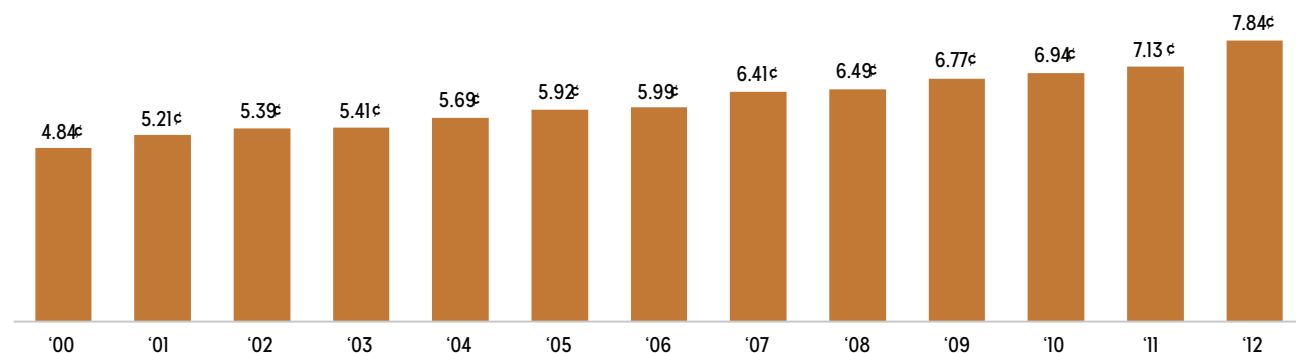
Electricity production in 98 generating units across the state account for a total of \$4.2 billion of total output statewide (2012).⁸ The bulk of generation impacts came from fossil fuel impacts, which produced \$3.9 billion of output across the state, or 93.9 percent of the overall market. Hydroelectric, wind, solar, biomass, and all other power accounted for approximately \$254.8 million of output. Utility-scale solar and biomass plants in the state are burgeoning fields, with indirect and induced impacts that have yet to be reported by IMPLAN. In 2014, Utah produced 145.6 percent of the demand for electricity,⁹ meaning that nearly one-third of production could be exported to other states. It is also important to note that four-fifths of Utah's electric production is generated by one company, PacifiCorp.

Exhibit 10 - Impact of Electricity Generation in Utah, 2012 (\$ in Millions, Except Employment)

	Output	Labor Income	Employment
Direct	\$3,089.2	\$487.4	3,476
Indirect	\$552.6	\$146.3	2,537
Induced	\$555.6	\$171.3	4,480
Total	\$4,197.4	\$805.0	10,493

Average state-wide power rates in the past 10 years through 2012 also increased considerably, with rates growing at an average annualized rate of 3.8 percent per year. Prices have risen from 5.39 cents per kilowatt hour to 7.84 cents during this period.¹⁰

Exhibit 11 - Utah Average Electric Rates for All Sectors (per kWh)



⁸ U.S. Energy Information Administration and IMPLAN.

⁹ U.S. Energy Information Administration.

¹⁰ Ibid.

¹¹ Ibid.



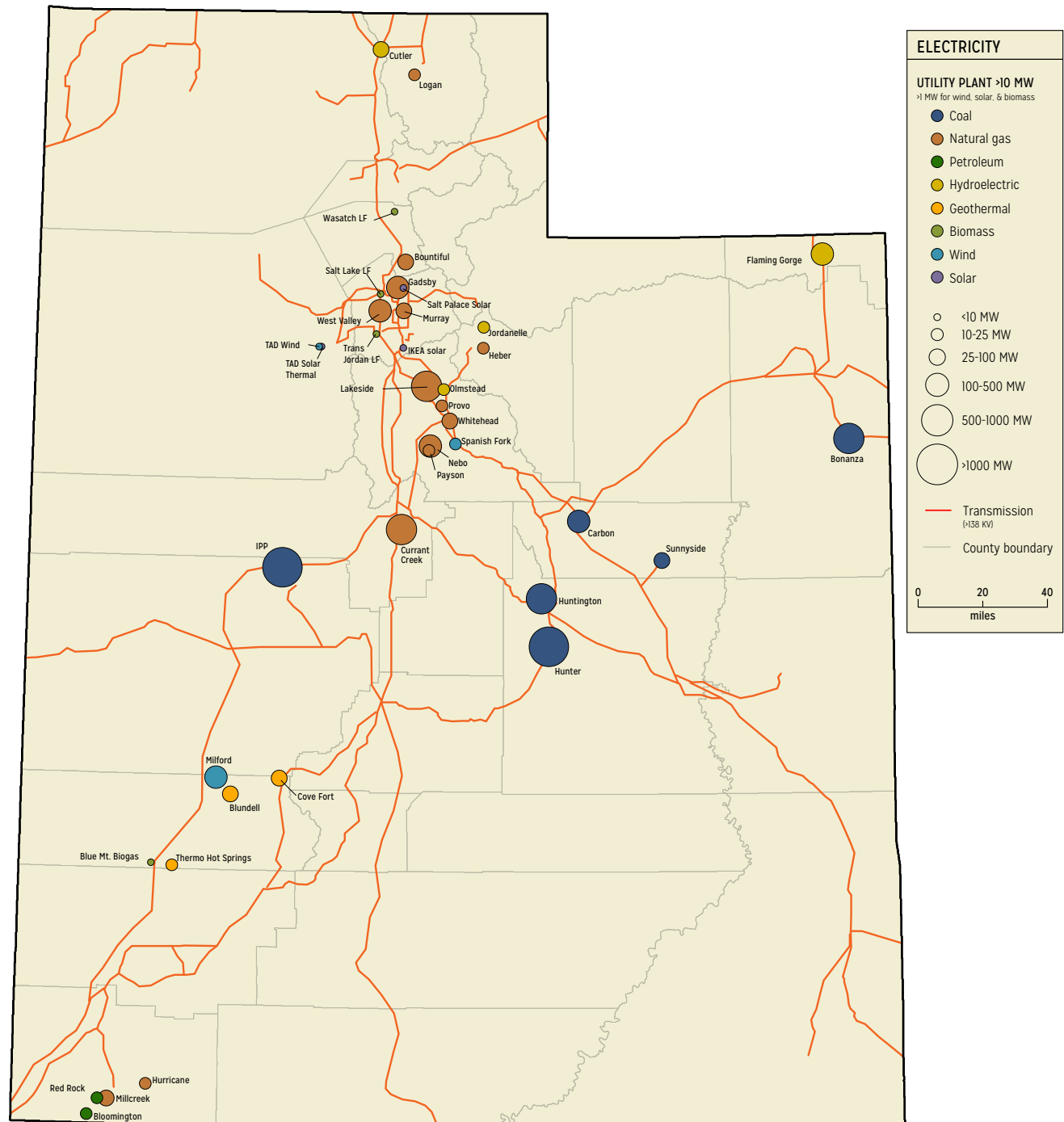
ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



GOVERNOR'S OFFICE OF
ENERGY DEVELOPMENT
Advancing Utah's Energy Future

Electric Resources and Distribution in Utah



Data Source: Utah Geological Survey and U.S. Energy Information Administration



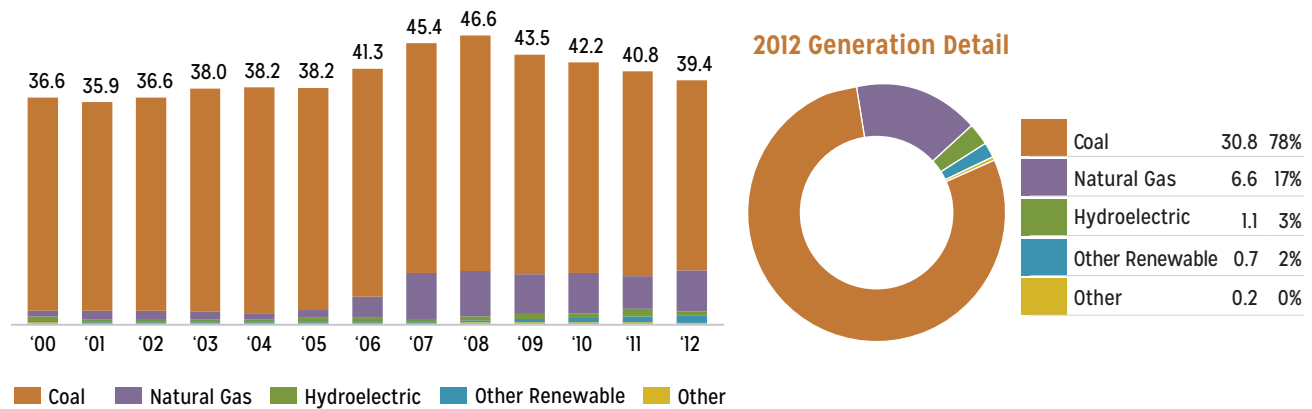
ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



Production in the past 10 years been mixed increasing at an annualized rate of 0.7 percent. Since peak production in 2008, power generation in Utah has fallen 15.4 percent.¹¹ The state's dominant form of power generation, coal, bore the brunt of this decline, with its share of power generation falling from 81.6 percent in 2008 to 78.2 percent in 2012.

Exhibit 12 - Utah Generation by Type (Millions mWh)



SOLAR PANEL INSTALLATION

Utah's solar panel installers represent a new and rapidly growing industry. The installation of small solar systems for homes, businesses, schools, and others has allowed Utah's residents to not only generate electricity and trim electric bills, but also to reduce greenhouse gas emissions statewide. In total, the installation of these panels accounted for a direct output of \$19.8 million with indirect and induced impacts adding another \$20.9 million. In total, impacts for the solar panel industry generated \$40.7 million in output.¹²

Exhibit 13 - Impact of Solar Panel Installation in Utah, 2013 (\$ in Millions, Except Employment)

	Output	Labor Income	Employment
Direct	\$19.8	\$7.2	116
Indirect	\$11.5	\$3.4	85
Induced	\$9.4	\$2.9	76
Total	\$40.7	\$13.5	277

¹² Utah Department of Workforce Services and IMPLAN. Due to the lack of solar-specific codes in the North American Industry Classification System (NAICS), these estimates rely on an estimation approach that may not capture the entire impact of this growing sector.



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



ELECTRICITY DISTRIBUTION AND TRANSMISSION

In addition to the power plants, Utah also has substantial infrastructure and resources in the state dedicated to the transmission and distribution of electricity in order to deliver Utah's energy needs and exports. The industry directly accounted for 1,223 jobs that paid \$168.6 million in wages.¹³ In total, the industry accounted for \$2.8 billion of output in 2013.

Exhibit 14 - Impact of Electricity Transmission and Distribution in Utah, 2013

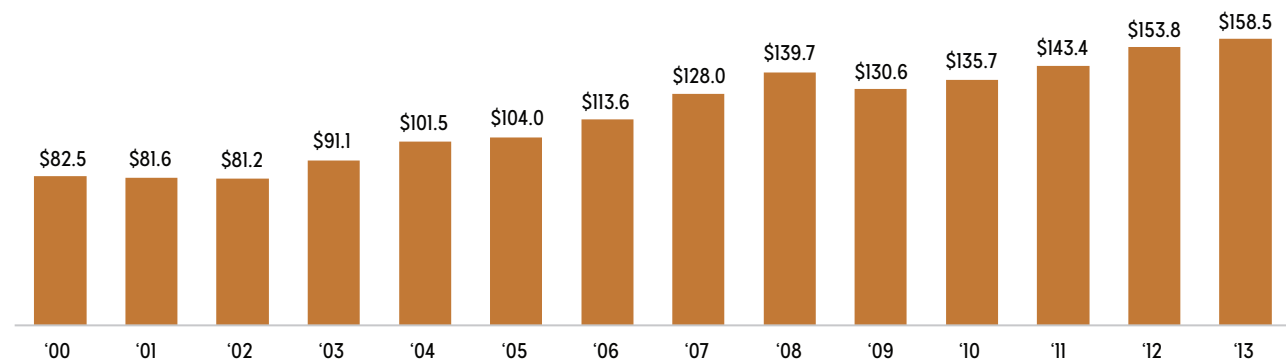
(\$ in Millions, Except Employment)

	Output	Labor Income	Employment
Direct	\$1,453.4	\$168.6	1,223
Indirect	\$1,069.9	\$200.5	2,480
Induced	\$323.4	\$99.7	2,608
Total	\$2,846.7	\$468.9	6,311

WHOLESALE AND RETAIL ENERGY TRADE

Utah's wholesale and retail energy traders, which includes bulk oil stations, wholesalers, and fuel dealers, grew at an average annualized growth of 5.7 percent in the past decade.¹⁴ Overall, the state's energy trade reported steady and considerable growth for all years in the past decade except 2008-2009 during the Great Recession.

Exhibit 15 - Wholesale and Retail Energy Trade by Year (\$ in Millions)



¹³ Utah Department of Workforce Services and IMPLAN.

¹⁴ Utah Department of Workforce Services and IMPLAN.



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



Wholesale and retail energy generated a direct output impact of \$158.5 million. When indirect and induced impacts were considered, the economic output reached \$293.8 million. Wholesale and retail energy supported 1,794 jobs throughout the economy that paid \$97.4 million in wages.

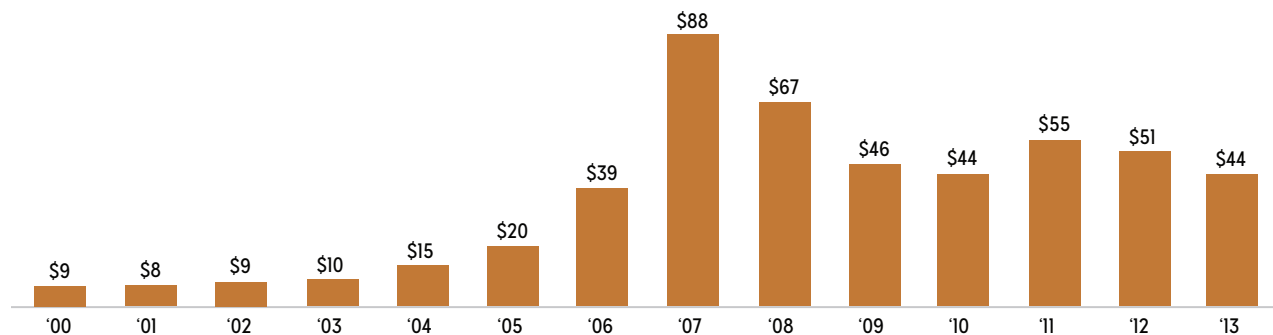
Exhibit 16 – Impact of Wholesale and Retail Energy Trade in Utah, 2012 (\$ in Millions, Except Employment)

	Output	Labor Income	Employment
Direct	\$158.5	\$54.9	767
Indirect	\$68.1	\$21.8	485
Induced	\$67.2	\$20.7	542
Total	\$293.8	\$97.4	1,794

URANIUM MINING AND PROCESSING

Though uranium mining has a history of more than a century in Utah, the mineral is not currently being produced. In 2002, uranium sold for less than \$10 per pound, which made mining the resource in Utah cost prohibitive.¹⁵ In 2007 production of the mineral increased considerably as prices spiked at \$88 per pound during that year. Since then, the price for uranium has fallen, leading to the closure of the state's last uranium mine in 2013. The nation's only uranium milling facility is in Utah, however, a related manifestation of the uranium industry. Prices since 2007 have continued to languish, leaving the future of uranium mining and milling in the State uncertain.

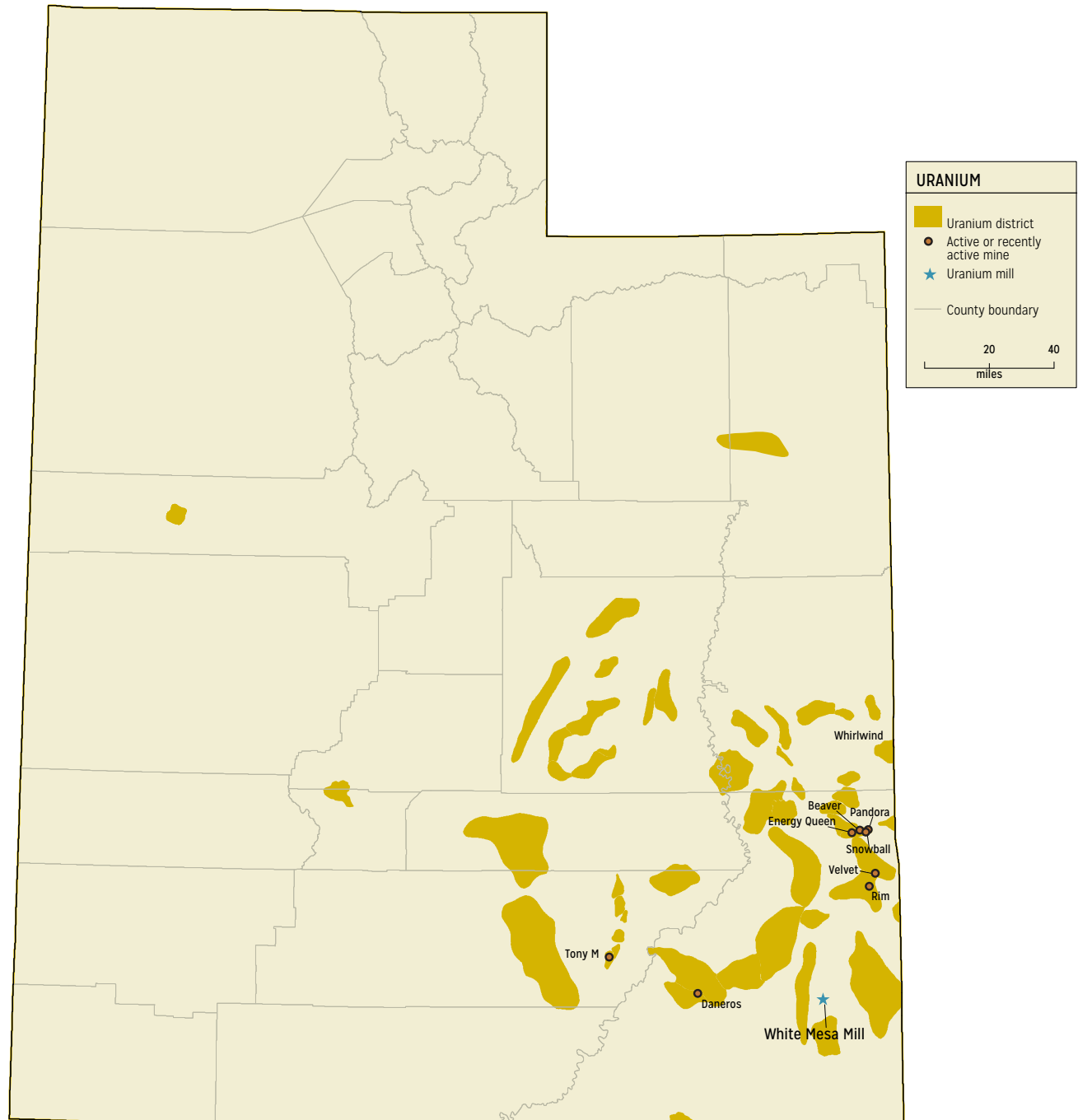
Exhibit 17 – Uranium Spot Price (\$ per pound)



¹⁵ US Energy Information Administration, available at: <http://www.eia.gov/uranium/marketing/html/summarytable1b.cfm>

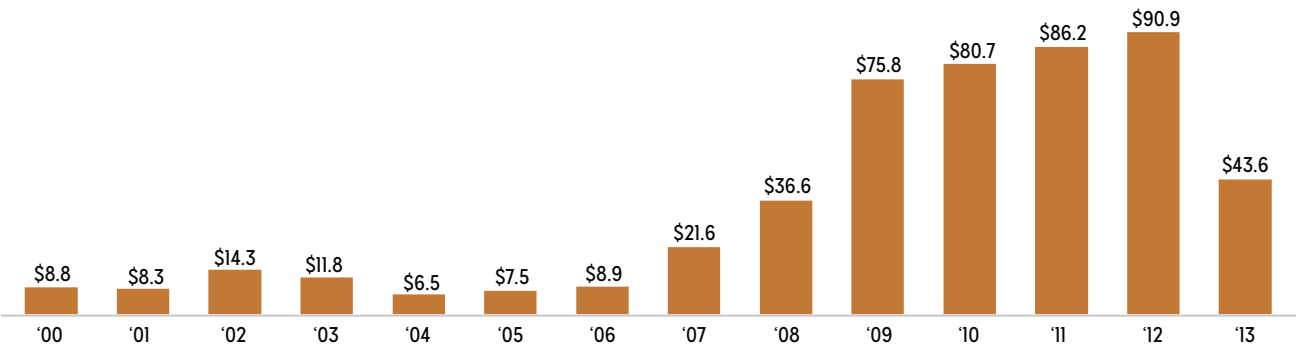


Uranium Resources in Utah



Data Source: Utah Geological Survey

Exhibit 18 - Utah Uranium Output by Year (\$ in Millions)



Uranium milling and mining in 2013 generated a direct output impact of \$43.6 million. When indirect and induced impacts were considered, the total output impact was \$72.2 million. Uranium activities supported 272 jobs throughout the economy that paid \$15.0 million in wages.¹⁶

Exhibit 19 - Impact of Uranium Milling and Mining in Utah, 2013 (\$ in Millions, Except Employment)

	Output	Labor Income	Employment
Direct	\$43.6	\$5.1	100
Indirect	\$18.3	\$6.7	89
Induced	\$10.3	\$3.1	83
Total	\$72.2	\$15.0	272

ENERGY DISTRIBUTION

Utah’s energy distribution output, which consists of all pipeline industries in the state, has grown at an annualized pace of 1.7 percent in the past decade.¹⁷ Overall, the distribution of Utah’s energy has not grown much faster than the pace of inflation, and has reported declines in the past two years.

¹⁶ Utah Department of Workforce Services and IMPLAN.
¹⁷ Utah Department of Workforce Services and IMPLAN.



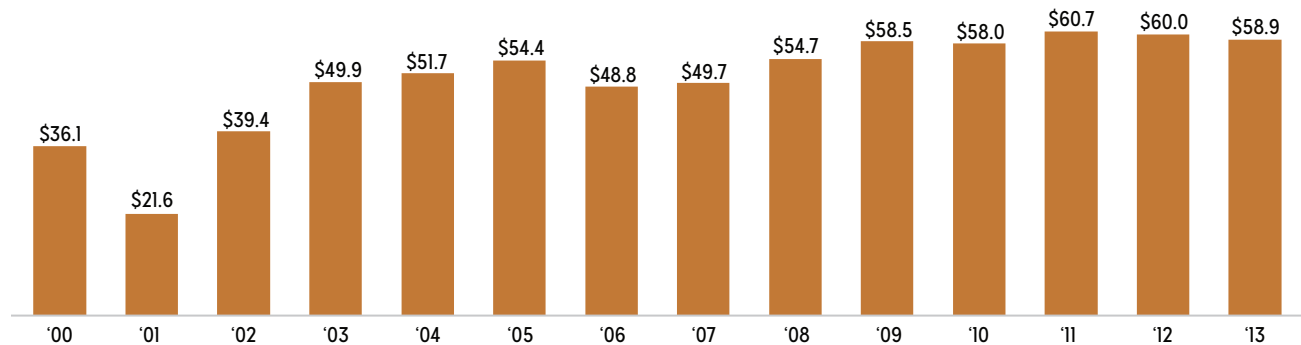
ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



GOVERNOR'S OFFICE OF
ENERGY DEVELOPMENT
Advancing Utah's Energy Future

Exhibit 20 - Utah Energy Distribution Output by Year (\$ in Millions)



Distribution of Utah's energy generates direct output impact of \$58.9 million. When indirect and induced impacts are considered, the total output impact is an estimated \$105.5 million. The distribution sector supported 527 jobs throughout the economy that paid \$43.0 million in wages.

Exhibit 21 - Impact of Energy Distribution in Utah, 2013 (\$ in Millions, Except Employment)

	Output	Labor Income	Employment
Direct	\$58.9	\$28.4	178
Indirect	\$16.9	\$5.5	109
Induced	\$29.8	\$9.2	240
Total	\$105.5	\$43.0	527



FISCAL IMPACTS



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



FISCAL IMPACTS

SUMMARY OF FISCAL IMPACTS

In total, fiscal impacts of Utah's energy sector accounted for \$655.6 million of public revenues for the state.

Exhibit 22 - Estimated Annual Fiscal Impact (\$ in Millions)¹⁸

Property Taxes	\$188.9
Sales Taxes	\$148.8
Federal ONRR Revenues	\$146.8
SITLA Revenues	\$76.8
Oil and Gas Severance Taxes and Conservation Fees	\$59.0
Direct Employee Income Tax	\$35.3
ANNUAL TOTAL FISCAL IMPACT	\$655.6

The subsections that follow highlight the fiscal impacts of each major public revenue sourced to the energy industry in the State of Utah.

PROPERTY TAXES

Property utilized by energy projects throughout the state have a significant fiscal impact on the state and local property tax revenue. In total, the land and infrastructure used by Utah's coal mines, oil and gas development, pipelines, and utilities account for \$15.8 billion of taxable value in fiscal year 2013.¹⁹ This represented 8.1 percent of the state's total taxable property. From 2007 to 2013, in spite of a decline in property values throughout the state, the property values in the state's energy sector continued to climb, providing increased stability for the state while dealing with declining revenues in other segments during the Great Recession.

¹⁸ The revenues listed below are mostly from FY 2013, except the estimates of direct employee income tax which are from the latest year of information available (Varies by industry, 2012-2013).

¹⁹ <http://propertytax.utah.gov/generalinformation/reporting-and-statistics/annual-statistical-report>.



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



Exhibit 23 - Energy Industry Property Value by Year (\$ in Billions)

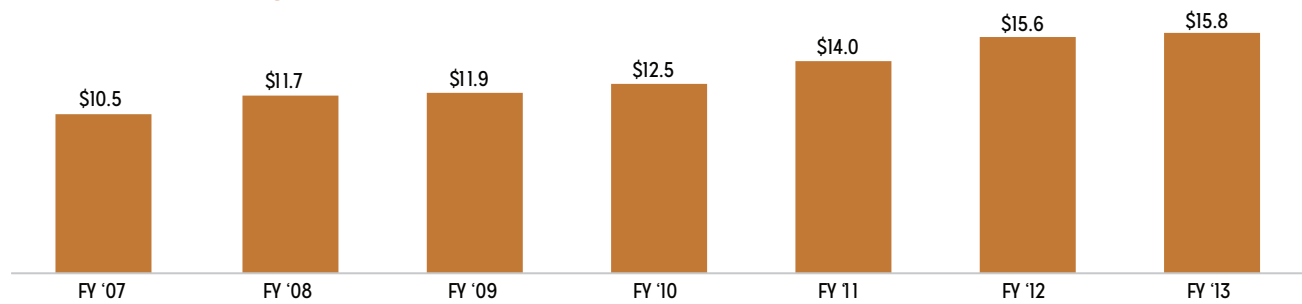
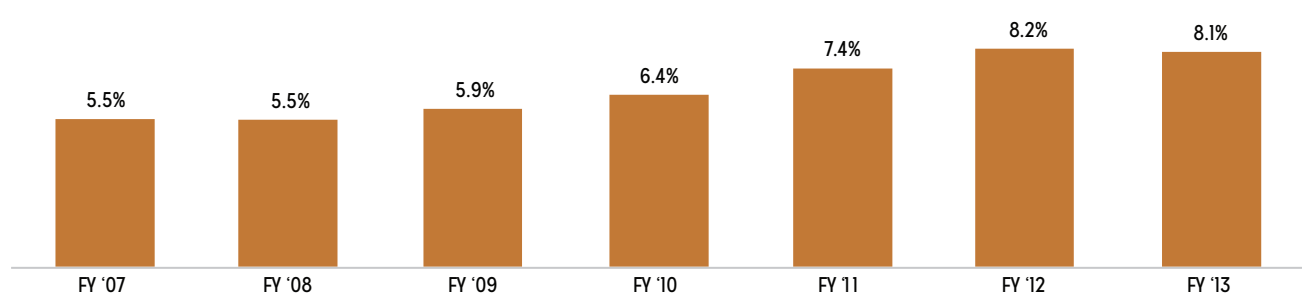
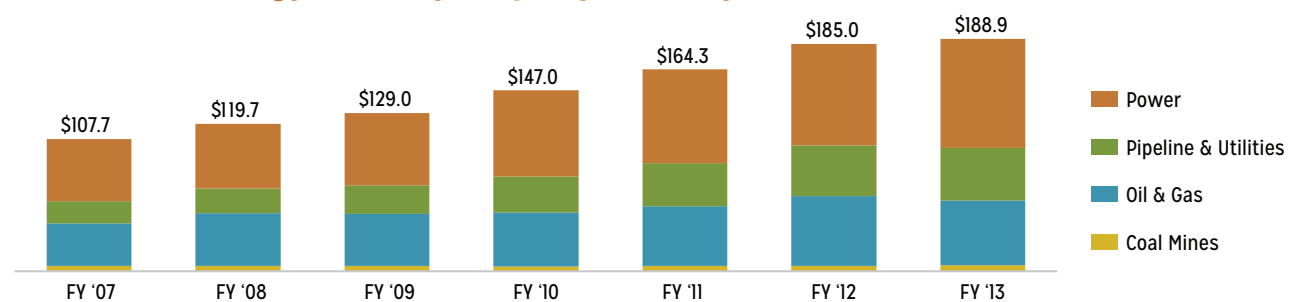


Exhibit 24 - Energy Industry Share of Statewide Total Property Value in Utah



In total, an estimated \$188.9 million in property taxes were raised in 2013 as a result of the energy sector.²⁰ The largest portion of these revenues was raised by the power industry, which accounted for 46.7 percent of the state's energy revenue.

Exhibit 25 - Energy Industry Property Taxes by Year (\$ in Millions)



²⁰ Assumes an average property tax rate of 1.25 percent.



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



SALES TAXES

Taxable sales purchases by energy industries in the state provided an estimated \$148.8 million in revenue during FY 2013.²¹ This level of spending represented 7.1 percent of all sales tax collected during the year. Electric power accounted for the largest portion (58.3 percent) of energy sales tax revenues.

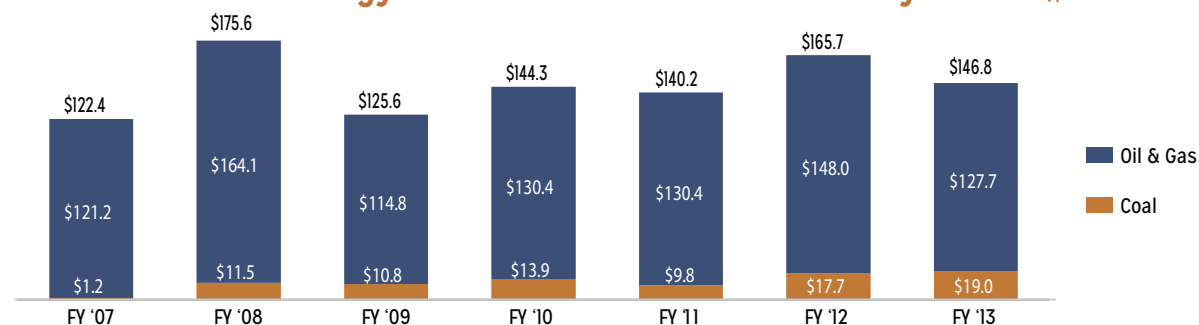
Exhibit 26 – Energy Industry Sales Taxes by Year (\$ in Millions)

	FY 2013	FY 2014
Electric Power	\$85.2	\$89.8
Natural Gas Distribution	\$47.7	\$49.4
Oil and Gas Production	\$9.2	\$8.8
Refineries	\$6.6	\$6.0
Total	\$148.8	\$153.9

FEDERAL RENTS AND ROYALTIES DISTRIBUTED TO STATE

The Office of Natural Resources Revenues (ONRR) collects rents and royalties for production on Federal lands throughout Utah. These funds are then distributed by the Office to various entities, including the State of Utah. In FY 2013, the amount of revenue distributed from coal, oil, and gas operations on federal land in the state led to the distribution of \$146.8 million, with the vast majority of those revenues coming from the production of oil and gas.²²

Exhibit 27 – ONRR Energy Revenue Distributions in Utah by Source (\$ in Millions)



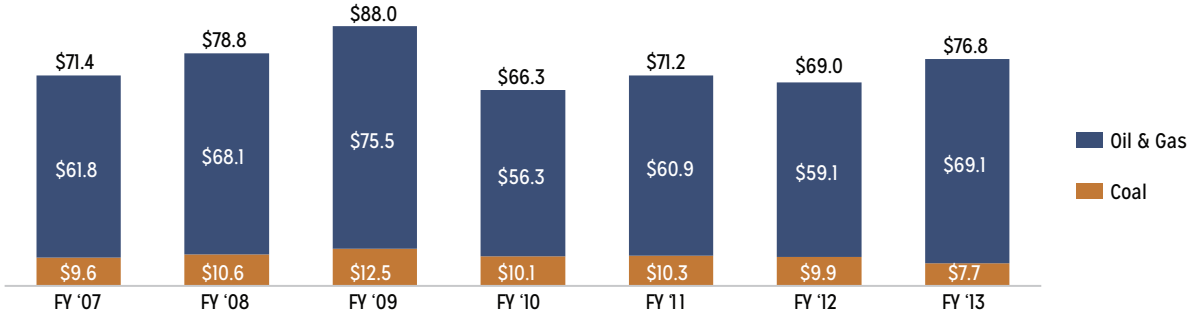
²¹ Taxable sales from <http://tax.utah.gov/econstats/sales/quarterly> with an assumed tax rate of 6.0 percent.

²² ONRR.

RENTS AND ROYALTIES FOR PRODUCTION ON SITLA LANDS

The Utah School and Institutional Trust Lands Administration (SITLA) collects rents and royalties on state lands for production on behalf of institutions throughout the state, primarily schools. Oil, gas, and coal mining generated the majority of these revenues, with an estimated \$76.8 million generated in FY 2013.²³

Exhibit 28 – Energy Industry Public Revenue from SITLA (\$ in Millions)



OIL AND GAS SEVERANCE TAXES AND CONSERVATION FEES

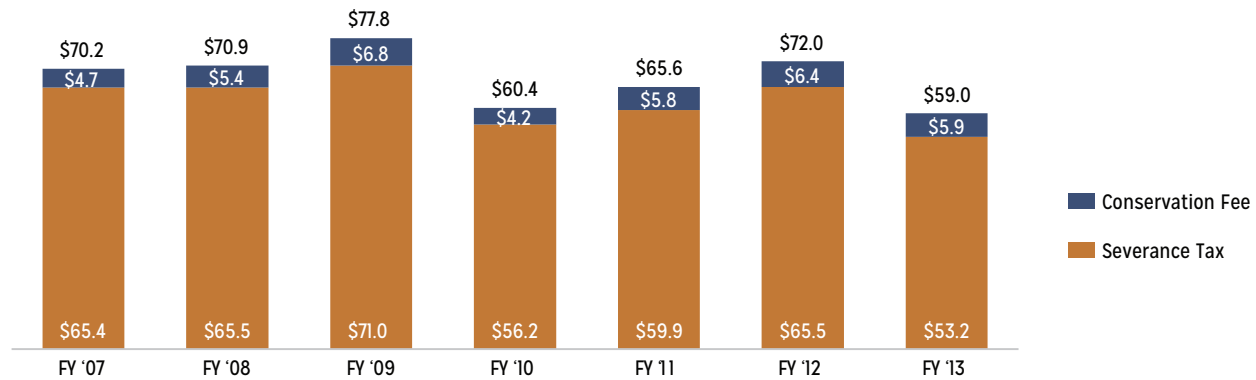
Oil and gas severance taxes are taxes due on oil, gas, and natural gas extracted in Utah. The rate varies from 1.5 percent to 5.0 percent of the net revenue after allowing for a variety of exemptions. Revenue from this tax is allocated to the state general fund.²⁴

The oil and gas conservation fee is a 0.2 percent tax assessed on net production of oil and gas wells after allowing for processing, transportation, and exemption deductions. The revenue is used for plugging or reclaiming abandoned wells, boring holes, and natural resources as well as industry education programs throughout the state.²⁵

In total, these fees raised \$59.0 million for the state in 2013, with \$53.2 million from the severance tax going to the general fund and \$5.9 million raised by the conservation fee being used to assist in securing oil and gas extraction’s resources in the state.²⁶

²³ Total revenues from <http://trustlands.utah.gov/our-agency/financial-reports-statistics/> with assumptions made on the fraction collected from coal and oil based on conversations with SITLA employees.
²⁴ <http://tax.utah.gov/utah-taxes/oil-gas-severance>
²⁵ <http://tax.utah.gov/utah-taxes/oil-gas-conservation>
²⁶ <http://tax.utah.gov/esu/revenue-reports/summary2013.pdf>

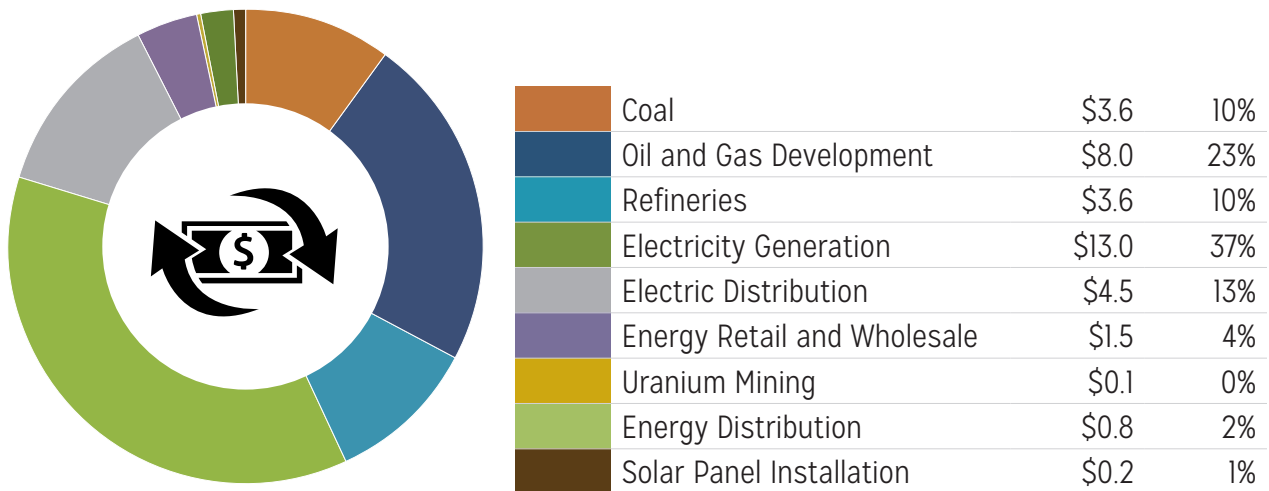
Exhibit 29 - Oil and Gas Taxes and Fees (\$ in Millions)



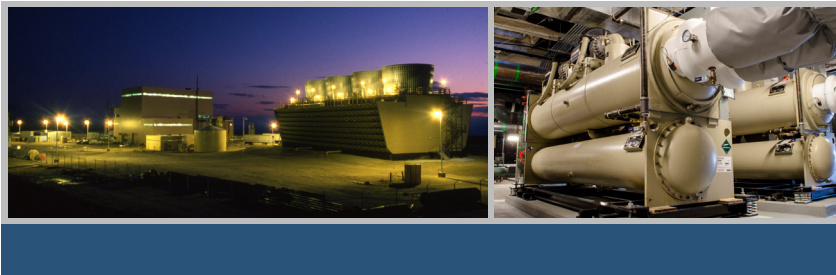
STATE INCOME TAXES

Taxes on incomes of those directly employed by energy industries in the state accounted for approximately \$35.3 million in revenue.²⁷ Though not considered for the total fiscal impacts, income taxes on indirect and induced employment amount to a substantial \$41.0 million as well.

Exhibit 30 - Direct Employee Income Taxes by Source, Various Years (\$ in Millions)



²⁷ Income tax impacts are calculated from multiplying direct labor income by an assumed average income tax rate of 2.67 percent after deductions and exemptions are considered. To arrive at this assumed rate, total taxes collected in 2013 were divided by the total wages and salaries reported in Utah in the IMPLAN model.



APPENDICES



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



OIL EXTRACTION AND DRILLING IMPACT BY COMPANY

Below is a company-by-company estimate of impact of the oil industry in Utah. Information at the company level is presented as a range of values in order to preserve anonymity of their production and employment information. Totals reflect the sum of the actual figures for each company.²⁸

Statewide Output Impact by Company (\$ in Millions)

Company	Direct	Indirect	Induced	Total
Anadarko	\$350.0-\$900.0	\$24.1-\$48.2	\$34.3-\$68.4	\$350.0-\$900.0
Berry	\$150.0-\$349.9	\$4.8-\$9.6	\$6.9-\$13.6	\$150.0-\$349.9
Bill Barrett	\$150.0-\$349.9	\$4.8-\$9.6	\$6.9-\$13.6	\$150.0-\$349.9
Citation	\$10.0-\$49.9	\$0.5-\$0.9	\$0.7-\$1.2	\$10.0-\$49.9
Cochrane	\$0.0-\$0.9	\$0.0-\$0.4	\$0.0-\$0.5	\$0.0-\$0.9
ConocoPhillips	\$50.0-\$149.9	\$1.9-\$4.7	\$2.7-\$6.7	\$50.0-\$149.9
Crescent Point	\$50.0-\$149.9	\$1.9-\$4.7	\$2.7-\$6.7	\$50.0-\$149.9
Emery Resources	\$0.0-\$0.9	\$0.0-\$0.4	\$0.0-\$0.5	\$0.0-\$0.9
Encana	\$0.0-\$0.9	\$0.0-\$0.4	\$0.0-\$0.5	\$0.0-\$0.9
Enduring Resources	\$3.0-\$9.9	\$0.0-\$0.4	\$0.0-\$0.5	\$3.0-\$9.9
EOG Resources	\$150.0-\$349.9	\$4.8-\$9.6	\$6.9-\$13.6	\$150.0-\$349.9
Gordon Creek	\$1.0-\$2.9	\$0.0-\$0.4	\$0.0-\$0.5	\$1.0-\$2.9
IACX Energy	\$0.0-\$0.9	\$0.0-\$0.4	\$0.0-\$0.5	\$0.0-\$0.9
Koch	\$3.0-\$9.9	\$0.0-\$0.4	\$0.0-\$0.5	\$3.0-\$9.9
Newfield	\$350.0-\$900.0	\$24.1-\$48.2	\$34.3-\$68.4	\$350.0-\$900.0
Parker Energy	\$0.0-\$0.9	\$0.0-\$0.4	\$0.0-\$0.5	\$0.0-\$0.9
Petroglyph	\$10.0-\$49.9	\$1.9-\$4.7	\$2.7-\$6.7	\$50.0-\$149.9
Pioneer	\$0.0-\$0.9	\$0.0-\$0.4	\$0.0-\$0.5	\$0.0-\$0.9
QEP	\$150.0-\$349.9	\$9.7-\$24.0	\$13.7-\$34.1	\$150.0-\$349.9
Resolute	\$150.0-\$349.9	\$4.8-\$9.6	\$6.9-\$13.6	\$150.0-\$349.9
Seeley	\$1.0-\$2.9	\$0.0-\$0.4	\$0.0-\$0.5	\$1.0-\$2.9
Summit	\$3.0-\$9.9	\$0.0-\$0.4	\$0.0-\$0.5	\$3.0-\$9.9
US Oil and Gas	\$3.0-\$9.9	\$0.5-\$0.9	\$0.7-\$1.2	\$3.0-\$9.9
WexPro	\$3.0-\$9.9	\$1.9-\$4.7	\$2.7-\$6.7	\$10.0-\$49.9
Whiting	\$10.0-\$49.9	\$0.0-\$0.4	\$0.0-\$0.5	\$10.0-\$49.9
Wold	\$1.0-\$2.9	\$0.0-\$0.4	\$0.0-\$0.5	\$1.0-\$2.9
Wolverine	\$50.0-\$149.9	\$1.0-\$1.8	\$1.4-\$2.6	\$50.0-\$149.9
XTO Energy	\$50.0-\$149.9	\$9.7-\$24.0	\$13.7-\$34.1	\$50.0-\$149.9
Other Companies	\$350.0-\$900.0	\$24.1-\$48.2	\$34.3-\$68.4	\$350.0-\$900.0
Drilling and Misc.	\$1,095.4	\$78.1	\$101.2	\$1,274.7
TOTAL	\$4,636.2	\$254.0	\$350.8	\$5,241.0

²⁸ Utah Division of Oil Gas and Mining, the Utah Department of Workforce Services, and IMPLAN.



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



Statewide Labor Income Impact by Company (\$ in Millions)

Company	Direct	Indirect	Induced	Total
Anadarko	\$29.6-\$59.1	\$8.9-\$17.7	\$10.6-\$21.1	\$49.1-\$98.0
Berry (LINN)	\$5.9-\$11.7	\$1.8-\$3.5	\$2.1-\$4.2	\$9.8-\$19.4
Bill Barrett	\$5.9-\$11.7	\$1.8-\$3.5	\$2.1-\$4.2	\$9.8-\$19.4
Citation	\$0.6-\$1.1	\$0.2-\$0.3	\$0.2-\$0.4	\$1.0-\$1.8
Cochrane	\$0.0-\$0.5	\$0.0-\$0.1	\$0.0-\$0.2	\$0.0-\$0.8
ConocoPhillips	\$2.4-\$5.8	\$0.7-\$1.7	\$0.8-\$2.1	\$3.9-\$9.6
Crescent Point	\$2.4-\$5.8	\$0.7-\$1.7	\$0.8-\$2.1	\$3.9-\$9.6
Emery Resources	\$0.0-\$0.5	\$0.0-\$0.1	\$0.0-\$0.2	\$0.0-\$0.8
Encana	\$0.0-\$0.5	\$0.0-\$0.1	\$0.0-\$0.2	\$0.0-\$0.8
Enduring Resources	\$0.0-\$0.5	\$0.0-\$0.1	\$0.0-\$0.2	\$0.0-\$0.8
EOG Resources	\$5.9-\$11.7	\$1.8-\$3.5	\$2.1-\$4.2	\$9.8-\$19.4
Gordon Creek	\$0.0-\$0.5	\$0.0-\$0.1	\$0.0-\$0.2	\$0.0-\$0.8
IACX Energy	\$0.0-\$0.5	\$0.0-\$0.1	\$0.0-\$0.2	\$0.0-\$0.8
Koch	\$0.0-\$0.5	\$0.0-\$0.1	\$0.0-\$0.2	\$0.0-\$0.8
Newfield	\$29.6-\$59.1	\$8.9-\$17.7	\$10.6-\$21.1	\$49.1-\$98.0
Parker Energy	\$0.0-\$0.5	\$0.0-\$0.1	\$0.0-\$0.2	\$0.0-\$0.8
Petroglyph	\$2.4-\$5.8	\$0.7-\$1.7	\$0.8-\$2.1	\$3.9-\$9.6
Pioneer	\$0.0-\$0.5	\$0.0-\$0.1	\$0.0-\$0.2	\$0.0-\$0.8
QEP	\$11.9-\$29.5	\$3.6-\$8.9	\$4.2-\$10.5	\$19.6-\$48.9
Resolute	\$5.9-\$11.7	\$1.8-\$3.5	\$2.1-\$4.2	\$9.8-\$19.4
Seeley	\$0.0-\$0.5	\$0.0-\$0.1	\$0.0-\$0.2	\$0.0-\$0.8
Summit	\$0.0-\$0.5	\$0.0-\$0.1	\$0.0-\$0.2	\$0.0-\$0.8
US Oil and Gas	\$0.6-\$1.1	\$0.2-\$0.3	\$0.2-\$0.4	\$1.0-\$1.8
WexPro	\$2.4-\$5.8	\$0.7-\$1.7	\$0.8-\$2.1	\$3.9-\$9.6
Whiting	\$0.0-\$0.5	\$0.0-\$0.1	\$0.0-\$0.2	\$0.0-\$0.8
Wold	\$0.0-\$0.5	\$0.0-\$0.2	\$0.0-\$0.2	\$0.0-\$0.8
Wolverine	\$1.2-\$2.3	\$0.4-\$0.7	\$0.4-\$0.8	\$2.0-\$3.7
XTO Energy	\$11.9-\$29.5	\$3.6-\$8.9	\$4.2-\$10.5	\$19.6-\$48.9
Other Companies	\$29.6-\$59.1	\$8.9-\$17.7	\$10.6-\$21.1	\$49.1-\$98.0
Drilling and Others	\$84.6	\$30.4	\$31.2	\$146.2
Total	\$300.5	\$95.2	\$108.2	\$503.9



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



Statewide Employment Impact by Company

Company	Direct	Indirect	Induced	Total
Anadarko	250-499	138-276	277-552	665-1,327
Berry (LINN)	50-99	28-55	55-110	133-263
Bill Barrett	50-99	28-55	55-110	133-263
Citation	5-9	3-5	6-10	13-24
Cochrane	0-4	0-2	0-4	0-11
ConocoPhillips	20-49	11-27	22-54	53-130
Crescent Point	20-49	11-27	22-54	53-130
Emery Resources	0-4	0-2	0-4	0-11
Encana	0-4	0-2	0-4	0-11
Enduring Resources	0-4	0-2	0-4	0-11
EOG Resources	50-99	28-55	55-110	133-263
Gordon Creek	0-4	0-2	0-4	0-11
IACX Energy	0-4	0-2	0-4	0-11
Koch	0-4	0-2	0-4	0-11
Newfield	250-499	138-276	277-552	665-1,327
Parker Energy	0-4	0-2	0-4	0-11
Petroglyph	20-49	11-27	22-54	53-130
Pioneer	0-4	0-2	0-4	0-11
QEP	100-249	55-138	111-276	266-662
Resolute	50-99	28-55	55-110	133-263
Seeley	0-4	0-2	0-4	0-11
Summit	0-4	0-2	0-4	0-11
US Oil and Gas	5-9	3-5	6-10	13-24
WexPro	20-49	11-27	22-54	53-130
Whiting	0-4	0-2	0-4	0-11
Wold	0-4	0-2	0-4	0-11
Wolverine	10-19	6-11	11-21	27-51
XTO Energy	100-249	55-138	111-276	266-662
Other Companies	250-499	138-276	277-552	665-1,327
Drilling and Others	816	498	816	2,130
Total	2,638	1,506	2,832	6,976



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



STATEWIDE IMPACTS OF POWER PLANTS BY COUNTY

The following section presents the summed value of the statewide impact of all plants in a county (2012). Note that industries in some counties do not have enough data to create an economic multiplier, for these areas, only a local direct output is provided for these areas, the remainder is not measured (reported as "NM" below) by IMPLAN.

Statewide Output by County

	Direct	Indirect	Induced	Total
Beaver	\$79,023,202	\$21,374,409	\$17,646,601	\$118,044,212
Biomass	\$41,317	NM	NM	\$41,317
Geothermal	\$26,235,619	\$5,833,280	\$8,385,346	\$40,454,245
Hydroelectric	\$694,938	\$424,514	\$187,188	\$1,306,639
Wind	\$52,051,328	\$15,116,615	\$9,074,068	\$76,242,011
Box Elder	\$4,492,320	\$2,744,205	\$1,210,049	\$8,446,574
Hydroelectric	\$4,492,320	\$2,744,205	\$1,210,049	\$8,446,574
Cache	\$4,429,992	\$1,391,071	\$917,684	\$6,738,747
Fossil fuel	\$2,965,245	\$496,307	\$523,141	\$3,984,692
Hydroelectric	\$1,464,747	\$894,764	\$394,544	\$2,754,055
Carbon	\$133,709,240	\$22,379,538	\$23,589,537	\$179,678,315
Fossil fuel	\$133,709,240	\$22,379,538	\$23,589,537	\$179,678,315
Daggett	\$36,619,150	\$22,369,386	\$9,863,719	\$68,852,255
Hydroelectric	\$36,619,150	\$22,369,386	\$9,863,719	\$68,852,255
Davis	\$3,491,495	\$985,676	\$595,581	\$5,072,752
Biomass	\$739,263	NM	NM	\$739,263
Fossil fuel	\$1,568,392	\$262,509	\$276,702	\$2,107,603
Hydroelectric	\$1,183,840	\$723,167	\$318,879	\$2,225,886
Duchesne	\$499,878	\$305,359	\$134,647	\$939,884
Hydroelectric	\$499,878	\$305,359	\$134,647	\$939,884
Emery	\$1,243,662,019	\$208,157,503	\$219,411,997	\$1,671,231,520
Fossil fuel	\$1,243,662,019	\$208,157,503	\$219,411,997	\$1,671,231,520
Garfield	\$1,819,115	\$1,111,235	\$489,996	\$3,420,347
Hydroelectric	\$1,819,115	\$1,111,235	\$489,996	\$3,420,347
Juab	\$167,189,803	\$27,983,336	\$29,496,317	\$224,669,456
Fossil fuel	\$167,189,803	\$27,983,336	\$29,496,317	\$224,669,456



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



	Direct	Indirect	Induced	Total
Millard	\$765,468,514	\$128,120,029	\$135,047,121	\$1,028,635,664
Fossil fuel	\$765,468,514	\$128,120,029	\$135,047,121	\$1,028,635,664
Morgan	\$864,830	\$528,295	\$232,950	\$1,626,076
Hydroelectric	\$864,830	\$528,295	\$232,950	\$1,626,076
Salt Lake	\$104,966,546	\$19,808,853	\$20,300,016	\$145,075,415
All other	\$10,065,619	\$3,861,867	\$4,162,804	\$18,090,291
Biomass	\$4,250,848	NM	NM	\$4,250,848
Fossil fuel	\$88,728,965	\$14,850,980	\$15,653,931	\$119,233,876
Hydroelectric	\$1,794,184	\$1,096,006	\$483,281	\$3,373,470
Solar	\$126,930	NM	NM	\$126,930
Sanpete	\$934,058	\$570,584	\$251,597	\$1,756,239
Hydroelectric	\$934,058	\$570,584	\$251,597	\$1,756,239
State of Utah ²⁹	\$199,136	\$33,330	\$35,132	\$267,599
Fossil fuel	\$199,136	\$33,330	\$35,132	\$267,599
Summit	\$987,448	\$603,198	\$265,979	\$1,856,625
Hydroelectric	\$987,448	\$603,198	\$265,979	\$1,856,625
Tooele	\$19,137,391	\$3,203,114	\$3,376,298	\$25,716,803
Fossil fuel	\$19,137,391	\$3,203,114	\$3,376,298	\$25,716,803
Uintah	\$242,289,951	\$40,553,197	\$42,745,795	\$325,588,943
Fossil fuel	\$242,289,951	\$40,553,197	\$42,745,795	\$325,588,943
Utah	\$265,910,613	\$45,927,393	\$47,123,354	\$358,961,360
Fossil fuel	\$260,441,742	\$43,591,347	\$45,948,209	\$349,981,299
Hydroelectric	\$2,333,576	\$1,425,502	\$628,571	\$4,387,649
Wind	\$3,135,294	\$910,544	\$546,573	\$4,592,412
Wasatch	\$3,686,133	\$1,712,941	\$879,989	\$6,279,063
Fossil fuel	\$1,214,886	\$203,341	\$214,335	\$1,632,563
Hydroelectric	\$2,471,246	\$1,509,600	\$665,654	\$4,646,500
Washington	\$7,979,787	\$1,617,492	\$1,466,896	\$11,064,175
Fossil fuel	\$7,344,198	\$1,229,233	\$1,295,694	\$9,869,125
Hydroelectric	\$635,589	\$388,259	\$171,202	\$1,195,050
Weber	\$1,831,502	\$1,118,802	\$493,333	\$3,443,637
Hydroelectric	\$1,831,502	\$1,118,802	\$493,333	\$3,443,637
Grand Total	\$3,089,192,123	\$552,598,948	\$555,574,589	\$4,197,365,661

²⁹ Plants that cannot be traced to a particular county are included in the statewide category.



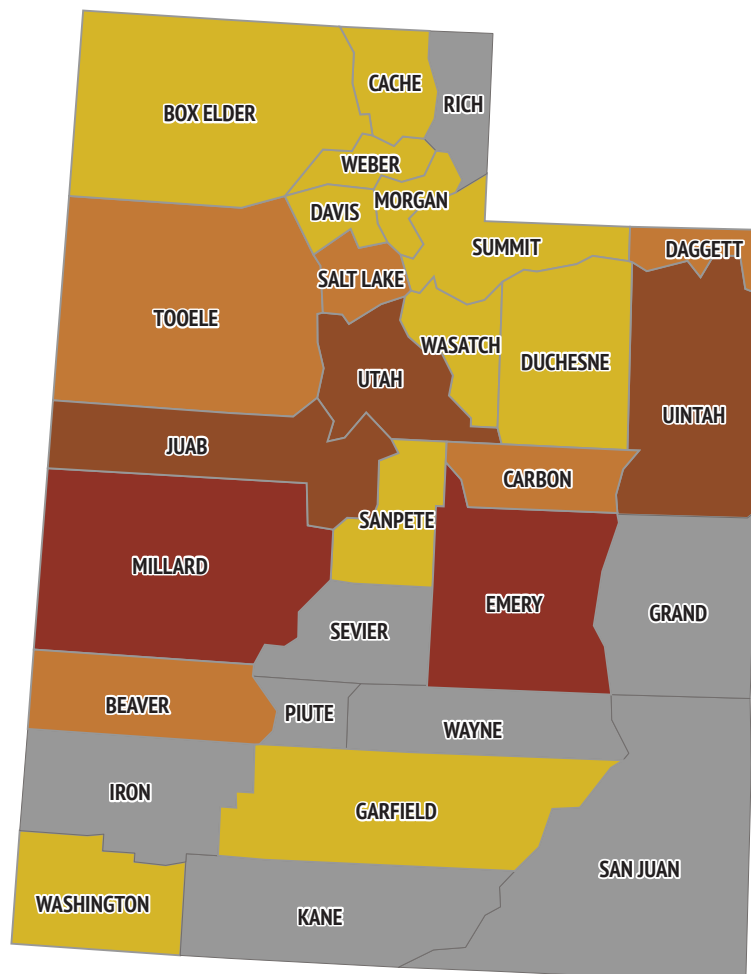
ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



GOVERNOR'S OFFICE OF
ENERGY DEVELOPMENT
Advancing Utah's Energy Future

Statewide Output Impacts of Power Generation





ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



Statewide Labor Income by County

	Direct	Indirect	Induced	Total
Beaver	\$14,810,957	\$5,335,194	\$5,440,235	\$25,586,386
Biomass	NM	NM	NM	NM
Geothermal	\$8,102,880	\$1,456,032	\$2,585,310	\$12,144,222
Hydroelectric	\$107,688	\$105,963	\$57,709	\$271,360
Wind	\$6,600,389	\$3,773,199	\$2,797,217	\$13,170,804
Box Elder	\$696,131	\$684,985	\$373,049	\$1,754,164
Hydroelectric	\$696,131	\$684,985	\$373,049	\$1,754,164
Cache	\$691,292	\$355,704	\$282,921	\$1,329,917
Fossil fuel	\$464,315	\$132,361	\$161,286	\$757,962
Hydroelectric	\$226,977	\$223,343	\$121,635	\$571,955
Carbon	\$20,936,951	\$5,968,432	\$7,272,748	\$34,178,131
Fossil fuel	\$20,936,951	\$5,968,432	\$7,272,748	\$34,178,131
Daggett	\$5,674,509	\$5,583,655	\$3,040,906	\$14,299,070
Hydroelectric	\$5,674,509	\$5,583,655	\$3,040,906	\$14,299,070
Davis	\$429,036	\$250,520	\$183,616	\$863,172
Biomass	NM	NM	NM	NM
Fossil fuel	\$245,588	\$70,009	\$85,308	\$400,905
Hydroelectric	\$183,448	\$180,511	\$98,308	\$462,267
Duchesne	\$77,461	\$76,221	\$41,511	\$195,193
Hydroelectric	\$77,461	\$76,221	\$41,511	\$195,193
Emery	\$194,739,655	\$55,513,828	\$67,645,588	\$317,899,071
Fossil fuel	\$194,739,655	\$55,513,828	\$67,645,588	\$317,899,071
Garfield	\$281,890	\$277,377	\$151,062	\$710,329
Hydroelectric	\$281,890	\$277,377	\$151,062	\$710,329
Juab	\$26,179,528	\$7,462,917	\$9,093,831	\$42,736,276
Fossil fuel	\$26,179,528	\$7,462,917	\$9,093,831	\$42,736,276
Millard	\$119,861,403	\$34,168,518	\$41,635,562	\$195,665,483
Fossil fuel	\$119,861,403	\$34,168,518	\$41,635,562	\$195,665,483
Morgan	\$134,014	\$131,869	\$71,817	\$337,700
Hydroelectric	\$134,014	\$131,869	\$71,817	\$337,700
Salt Lake	\$17,956,624	\$5,198,165	\$6,258,556	\$29,413,346
All other	\$3,784,913	\$963,960	\$1,283,395	\$6,032,268
Biomass	NM	NM	NM	NM
Fossil fuel	\$13,893,685	\$3,960,630	\$4,826,169	\$22,680,483
Hydroelectric	\$278,027	\$273,576	\$148,992	\$700,594
Solar	NM	NM	NM	NM



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment

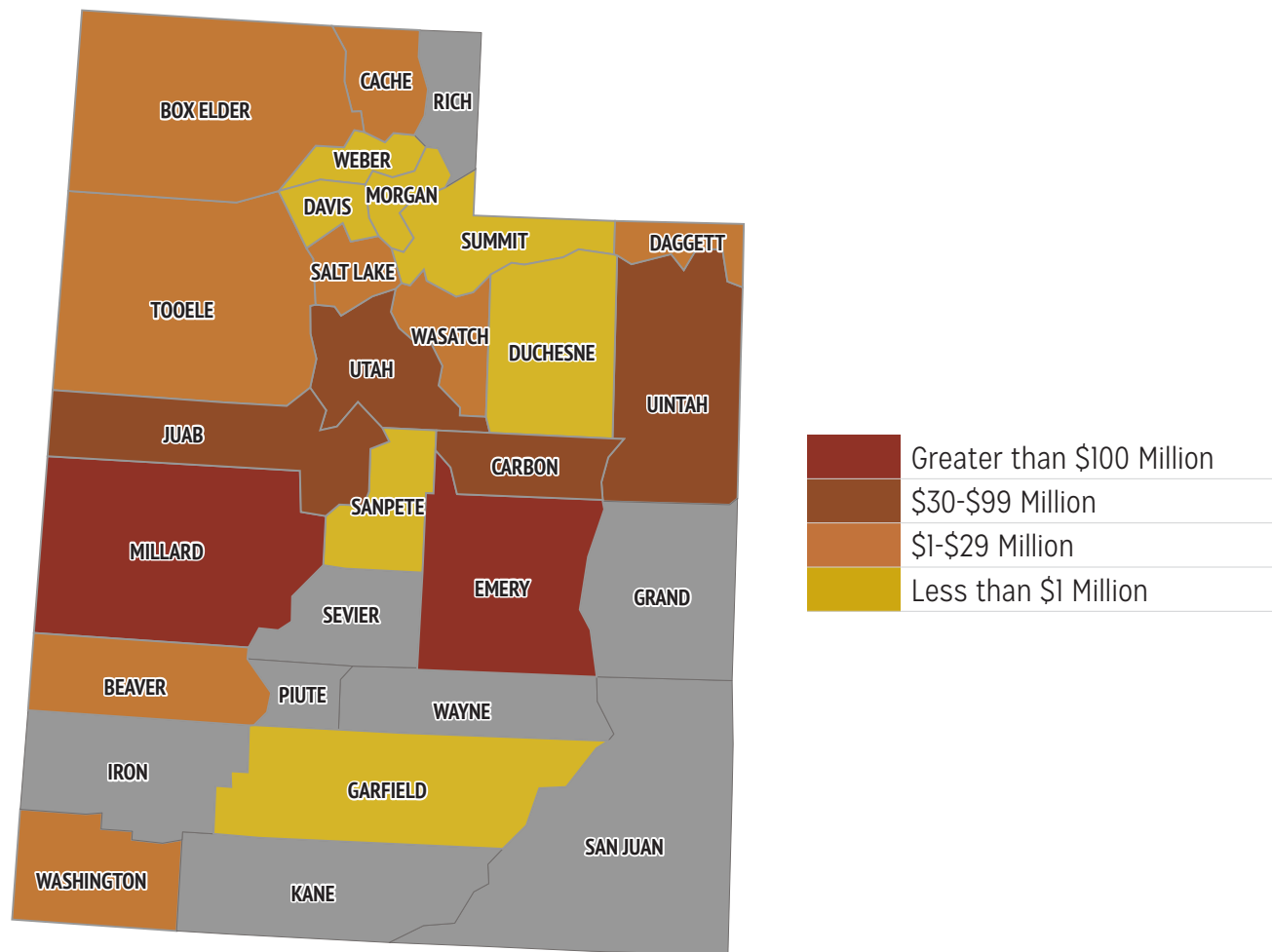


	Direct	Indirect	Induced	Total
Sanpete	\$144,742	\$142,424	\$77,565	\$364,731
Hydroelectric	\$144,742	\$142,424	\$77,565	\$364,731
State of Utah ³⁰	\$31,182	\$8,889	\$10,831	\$50,902
Fossil fuel	\$31,182	\$8,889	\$10,831	\$50,902
Summit	\$153,015	\$150,565	\$81,999	\$385,579
Hydroelectric	\$153,015	\$150,565	\$81,999	\$385,579
Tooele	\$2,996,641	\$854,243	\$1,040,926	\$4,891,810
Fossil fuel	\$2,996,641	\$854,243	\$1,040,926	\$4,891,810
Uintah	\$37,939,135	\$10,815,191	\$13,178,698	\$61,933,024
Fossil fuel	\$37,939,135	\$10,815,191	\$13,178,698	\$61,933,024
Utah	\$41,540,629	\$12,208,539	\$14,528,288	\$68,277,456
Fossil fuel	\$40,781,446	\$11,625,440	\$14,166,015	\$66,572,901
Hydroelectric	\$361,611	\$355,822	\$193,783	\$911,216
Wind	\$397,572	\$227,277	\$168,489	\$793,339
Wasatch	\$573,179	\$431,043	\$271,296	\$1,275,518
Fossil fuel	\$190,234	\$54,229	\$66,080	\$310,544
Hydroelectric	\$382,945	\$376,813	\$205,216	\$964,974
Washington	\$1,248,487	\$424,740	\$452,248	\$2,125,475
Fossil fuel	\$1,149,996	\$327,826	\$399,468	\$1,877,290
Hydroelectric	\$98,491	\$96,914	\$52,780	\$248,185
Weber	\$283,810	\$279,266	\$152,091	\$715,166
Hydroelectric	\$283,810	\$279,266	\$152,091	\$715,166
Grand Total	\$487,380,272	\$146,322,284	\$171,285,344	\$804,987,900

³⁰ Plants that cannot be traced to a particular county are included in the statewide category.



Statewide Labor Income Impacts of Power Generation by County





ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



GOVERNOR'S OFFICE OF
ENERGY DEVELOPMENT
Advancing Utah's Energy Future

Statewide Employment by County

	Direct	Indirect	Induced	Total
Beaver	96.6	112.3	142.3	351.3
Biomass	NM	NM	NM	NM
Geothermal	49.4	30.7	67.6	147.7
Hydroelectric	1.6	2.2	1.5	5.3
Wind	45.6	79.5	73.2	198.2
Box Elder	10.4	14.4	9.8	34.6
Hydroelectric	10.4	14.4	9.8	34.6
Cache	6.6	6.9	7.4	21.0
Fossil fuel	3.3	2.2	4.2	9.7
Hydroelectric	3.4	4.7	3.2	11.3
Carbon	146.7	100.9	190.2	437.8
Fossil fuel	146.7	100.9	190.2	437.8
Daggett	84.8	117.6	79.5	281.9
Hydroelectric	84.8	117.6	79.5	281.9
Davis	4.5	5.0	4.8	14.2
Biomass	NM	NM	NM	NM
Fossil fuel	1.7	1.2	2.2	5.1
Hydroelectric	2.7	3.8	2.6	9.1
Duchesne	1.2	1.6	1.1	3.8
Hydroelectric	1.2	1.6	1.1	3.8
Emery	1,364.7	938.3	1,769.3	4,072.3
Fossil fuel	1,364.7	938.3	1,769.3	4,072.3
Garfield	4.2	5.8	4.0	14.0
Hydroelectric	4.2	5.8	4.0	14.0
Juab	183.5	126.1	237.8	547.4
Fossil fuel	183.5	126.1	237.8	547.4
Millard	840.0	577.5	1,089.0	2,506.5
Fossil fuel	840.0	577.5	1,089.0	2,506.5
Morgan	2.0	2.8	1.9	6.7
Hydroelectric	2.0	2.8	1.9	6.7



ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



GOVERNOR'S OFFICE OF
ENERGY DEVELOPMENT
Advancing Utah's Energy Future

	Direct	Indirect	Induced	Total
Salt Lake	124.4	93.0	163.7	381.1
All other	22.9	20.3	33.6	76.8
Biomass	NM	NM	NM	NM
Fossil fuel	97.4	66.9	126.2	290.5
Hydroelectric	4.2	5.8	3.9	13.8
Solar	NM	NM	NM	NM
Sanpete	2.2	3.0	2.0	7.2
Hydroelectric	2.2	3.0	2.0	7.2
State of Utah ³¹	0.2	0.2	0.3	0.7
Fossil fuel	0.2	0.2	0.3	0.7
Summit	2.3	3.2	2.1	7.6
Hydroelectric	2.3	3.2	2.1	7.6
Tooele	21.0	14.4	27.2	62.7
Fossil fuel	21.0	14.4	27.2	62.7
Uintah	265.9	182.8	344.7	793.4
Fossil fuel	265.9	182.8	344.7	793.4
Utah	293.9	208.8	380.0	882.7
Fossil fuel	5.4	7.5	5.1	18.0
Hydroelectric	2.7	4.8	4.4	11.9
Wind	7.1	8.9	7.1	23.0
Wasatch	1.3	0.9	1.7	4.0
Fossil fuel	5.7	7.9	5.4	19.0
Hydroelectric	9.5	7.6	11.8	28.9
Washington	8.1	5.5	10.4	24.0
Fossil fuel	1.5	2.0	1.4	4.9
Hydroelectric	4.2	5.9	4.0	14.1
Weber	4.2	5.9	4.0	14.1
Hydroelectric	96.6	112.3	142.3	351.3
Grand Total	3,475.8	2,537.0	4,479.9	10,492.8

³¹ Plants that cannot be traced to a particular county are included in the statewide category.



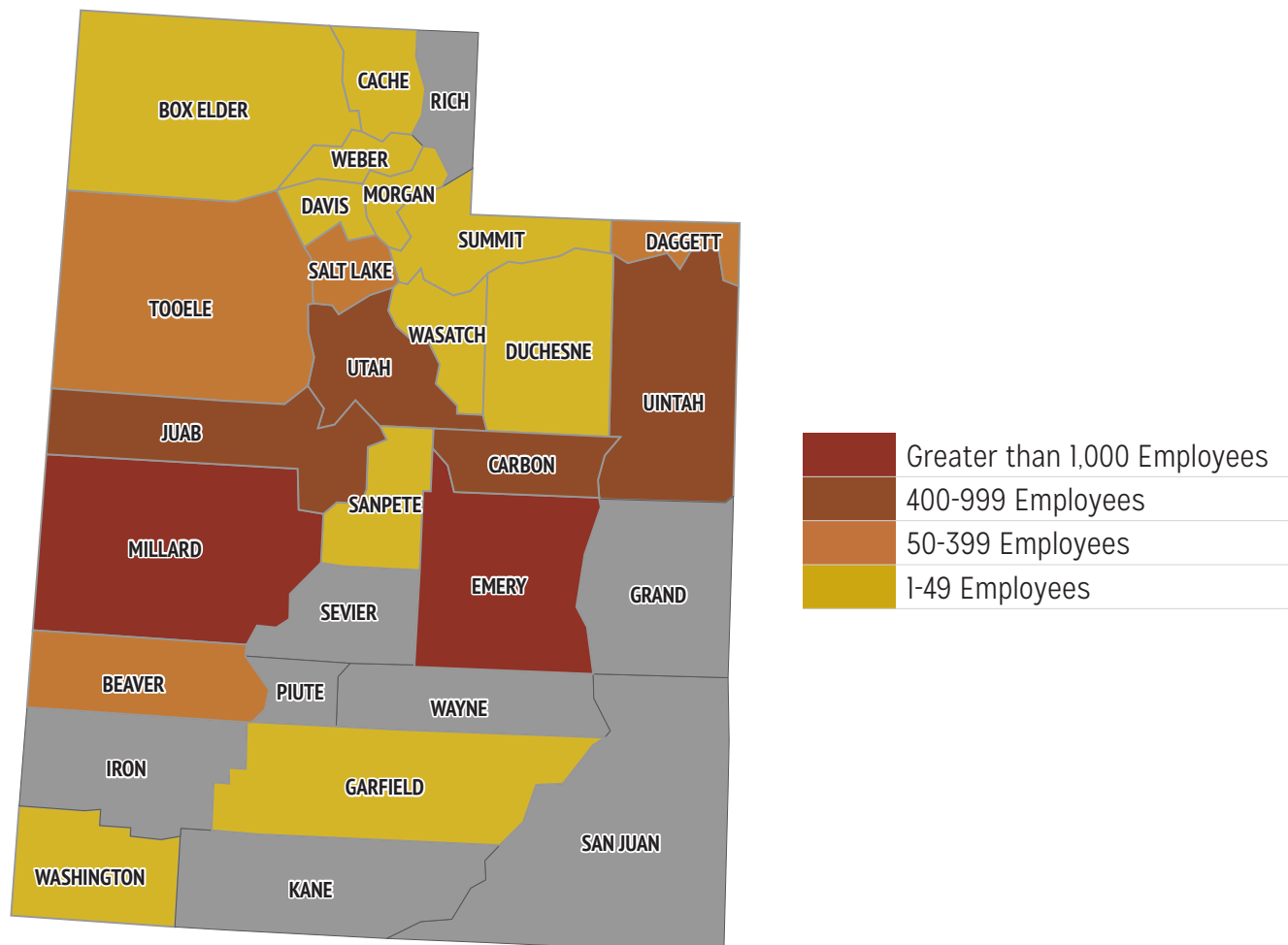
ENERGY AND ENERGY-RELATED MINING IN UTAH

An Economic and Fiscal Impact Assessment



GOVERNOR'S OFFICE OF
ENERGY DEVELOPMENT
Advancing Utah's Energy Future

Statewide Employment Impacts of Power Generation by County





GOVERNOR'S OFFICE OF
ENERGY DEVELOPMENT

Advancing Utah's Energy Future