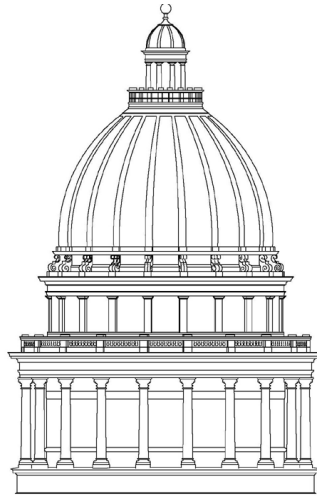


REPORT TO THE  
**UTAH LEGISLATURE**

Number 2017-14



**A Performance Audit of  
State Energy Incentives**

November 2017

Office of the  
**LEGISLATIVE AUDITOR GENERAL**  
State of Utah





STATE OF UTAH

# Office of the Legislative Auditor General

315 HOUSE BUILDING • PO BOX 145315 • SALT LAKE CITY, UT 84114-5315  
(801) 538-1033 • FAX (801) 538-1063

## Audit Subcommittee of the Legislative Management Committee

President Wayne L. Niederhauser, Co-Chair • Speaker Gregory H. Hughes, Co-Chair  
Senator Gene Davis • Senator Ralph Okerlund • Representative Brian S. King • Representative Brad R. Wilson

JOHN M. SCHAFF, CIA  
AUDITOR GENERAL

November 14, 2017

TO: THE UTAH STATE LEGISLATURE

Transmitted herewith is our report, **A Performance Audit of State Energy Incentives** (Report #2017-14). A digest is found on the blue pages located at the front of the report. The objectives and scope of the audit are explained in the Introduction.

We will be happy to meet with appropriate legislative committees, individual legislators, and other state officials to discuss any item contained in the report in order to facilitate the implementation of the recommendations.

Sincerely,

John M. Schaff, CIA  
Auditor General

JMS/lm



# Digest of A Performance Audit of State Energy Incentives

This audit was requested in the October 2016 Public Utilities, Energy, and Technology Interim Committee. The discussion at the interim committee centered on the total amount of state-funded and state-regulated subsidies, credits, and other incentives for energy-related activities. That knowledge is currently not held centrally by one group. Therefore, this audit's purpose is to communicate many of the state's funding activities when it comes to energy incentivization. We found that Utah's resources include both conventional and unconventional energy types. Revenues for incentive programs come from direct state funding and state-regulated funding.<sup>1</sup>

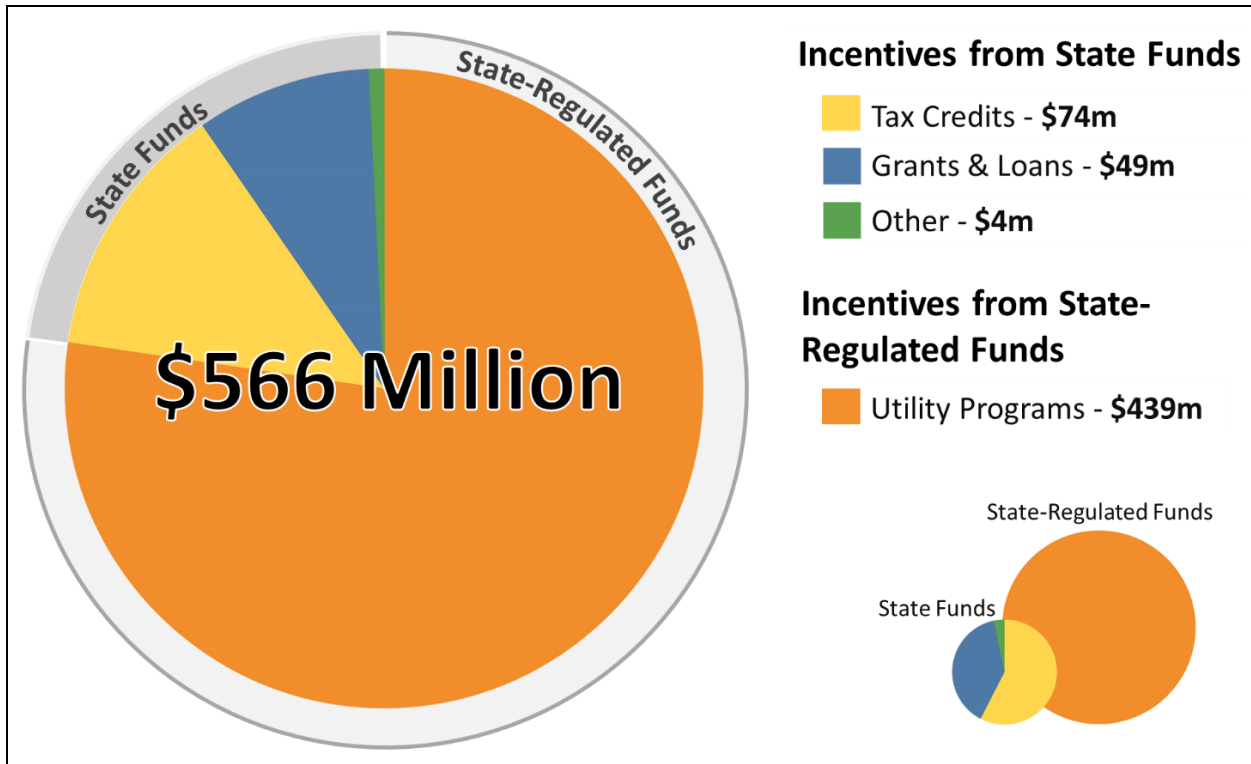
## Energy Incentives Stemmed From Many Program Types and Was Nearly \$566 Million

Figure 1.1 is a chart showing how funds have been allocated to incentivize energy programs. Public utility energy efficiency program costs have been included in the figure because the utilities have been granted a monopoly in the state to provide utility services. With this monopoly, or regulatory compact, the utility agrees to reliably serve all customers at prices approved by the state.

---

<sup>1</sup> At the time of this audit, the most recent five-year period of available data differed between the tax commission, the state agencies, and the utilities. For the utilities, the most recent data was calendar years 2012-2016; for state agencies, fiscal years 2012-2016; and for state tax data, calendar years 2011-2015.

**Figure 1.1 Over a Five-Year Period, \$566 Million Was Disbursed in Energy Incentives.** The largest portion came from utility programs that are funded by state-regulated monies.



Source: Auditor generated from Utah State Tax Commission reports and reports provided by the Public Service Commission from both Rocky Mountain Power and Dominion Energy (formerly "Questar Gas").

When looking for what programs could be considered as an energy incentive, we came across the DSIRE database. This database is funded by the U.S. Department of Energy to compile as many states' energy incentives as possible. DSIRE terms tax incentives (credits, deductions, and exemptions), grant programs, loan programs, rebate programs (including utility programs), and other financing mechanisms that promote energy to be types of financial energy incentives. This includes the promotion of energy efficiency, a type of energy, energy industry, energy research and development, energy technology, or energy use. Therefore, for the purposes of this audit, we will refer to all of the programs we identified that promote any type of energy-related activity as an "incentive."

## Chapter II

### Energy Incentives Through Tax Policies are Large and Growing With Many Unknowns

Tax credits, exemptions and deductions that incentivize energy programs have a significant financial impact on Utah's tax revenue. The type of tax policy through which an

energy incentive is offered will affect how the incentive impacts state revenue. Energy-incentivizing tax credits, which reduce both the Education and General Funds, are substantial (over \$74 million in the last five years) and still growing. In addition, large dollar amounts were claimed under three tax credits that may entice energy programs. A lack of controls may allow significant discrepancies between tax credits earned and claimed because certification is not verified when the credit is claimed. Finally, energy-incentivizing tax exemptions and deductions mostly reduce the General Fund and may exceed \$200 million. However, this estimate is not complete because taxpayers are not required to report these amounts.<sup>2</sup>

### **Chapter III**

## **Grant and Loan Programs Not Focused on Energy Provide More Incentives Than Those Focused on Energy**

In addition to energy-incentivizing tax credits and exemptions, several state agencies have various grant and loan programs that appear to provide incentives for energy activities.<sup>3</sup> Most of the value from these energy-incentivizing grants and loans come through programs where the main purpose of the program is not specific to energy. We found that non-energy specific grant and loan programs provided nearly \$45.7 million for energy incentives between 2012 and 2016. Whereas, energy-specific programs provided \$3.7 million during the same period.

### **Chapter IV**

## **Other Programs Play a Significant Role in Incentivizing Energy**

The Public Utilities, Energy, and Technology Interim Committee requested information about all types of energy incentive programs. Incentive programs significantly contribute to expanding and developing Utah's energy portfolio and span both state-regulated and state-funded programs. We found that utility programs, which are state-regulated, spent \$438.6 million on energy efficiency programs between years 2012 and 2016.<sup>4</sup> Other state programs offer specialized incentives. Identified administrative costs totaled at least \$3.4 million, while other programs' administrative costs were not quantified.

---

<sup>2</sup> The Utah State Tax Commission provides the estimates in their annual report with a note stating that because taxpayers are not required to report exempt amounts, "most exemption estimates are either based on a time adjusted fiscal note or estimated using publicly available, outside, data sources."

<sup>3</sup> Due to the time constraints of this audit we were unable to verify that every dollar allocated to an energy incentive program (listed in this chapter) directly applies as an energy incentive.

<sup>4</sup> These costs include the costs of program administration, management, and rebates/incentives paid to customers.

## **Chapter V**

### **Monitoring the Effectiveness of Energy Incentives Needs More Guidance**

As part of the audit request, Legislators expressed a desire to understand the qualitative nature of the energy incentives, questioning if some incentives have served their purpose and what metrics are available to evaluate the incentives. Although agencies may be internally tracking some program metrics, few of the energy incentives we reviewed have state reporting requirements that could monitor energy-related effectiveness. The lack of reporting requirements prohibits the state from monitoring the effectiveness of these energy incentives and if they are accomplishing any type of energy goal. We found that identifying program intent is critical to measuring its success. Once identified as energy-incentivizing, appropriate measures can be created to enable useful program evaluation.



# REPORT TO THE UTAH LEGISLATURE

Report No. 2017-14

## **A Performance Audit of State Energy Incentives**

November 2017

Audit Performed By:

Audit Manager	Brian Dean, CIA, CFE
Audit Supervisor	Deanna Herring, J.D.
Audit Staff	Matthew Taylor



# Table of Contents

Chapter I	
Introduction.....	1
State Programs Are Not Centrally Tracked.....	3
Utah’s Resources Include Both Conventional and Unconventional Energy .....	4
Revenues for Incentive Programs Come From Direct State Funding and State-Regulated Funding .....	6
Audit Scope and Objectives .....	8
Chapter II	
Energy Incentives Through Tax Policies are Large and Growing With Many Unknowns.....	9
The Type of Tax Policy Affects Incentive Impact.....	9
Energy-Incentivizing Tax Credits Are Substantial at \$74 Million, And Still Growing.....	10
Large Dollar Amounts Were Claimed Under Three Tax Credits That May Entice Energy Programs .....	18
Lack of Controls May Allow Significant Discrepancies Between Tax Credits Earned Versus Claimed.....	20
Energy-Incentivizing Tax Exemptions and Deductions Reduce the General Fund And May Exceed \$200 Million.....	23
Recommendations.....	27
Chapter III	
Grant and Loan Programs Not Focused on Energy Provide More Incentives Than Those Focused on Energy.....	29
Programs Not Specific to Energy Provided \$45.7 Million to Energy Incentives .....	30
Energy Focused Grant and Loan Programs Provided \$3.7 Million for Energy Incentives .....	36

Chapter IV	
Other Programs Play a Significant Role in Incentivizing Energy.....	41
Utilities' Energy-Incentivizing Programs Cost \$438.6 Million.....	42
Other State Programs Offer Specialized Incentives .....	45
Identified Administrative Costs Totaled At Least \$3.4 Million, While Others Were Not Quantified .....	47
Chapter V	
Monitoring the Effectiveness of Energy Incentives Needs More Guidance .....	50
Identifying Program Intent is Critical to Measuring Its Success .....	51
Once Identified as Energy-Incentivizing, Appropriate Measures Can Be Created to Enable Useful Program Evaluation .....	55
Appendix .....	61
Agency Responses .....	65

# Chapter I

## Introduction

This audit was requested in the October 2016 Public Utilities, Energy, and Technology Interim Committee. The discussion at the interim committee centered on the total amount of state-funded and state-regulated subsidies, credits, and other incentives for energy-related activities. That knowledge is currently not held centrally by one group. Therefore, this audit's purpose is to communicate many of the state's funding activities when it comes to energy incentivization. We found that Utah's resources include both conventional and unconventional energy types. Revenues for incentive programs come from direct state funding and state-regulated funding.<sup>1</sup>

### **Energy Incentives Stemmed from Many Program Types and Was Nearly \$566 Million**

Figure I.1 is a chart showing how funds have been allocated to incentivize energy programs. This figure does not include estimations from tax exemptions, which could be substantial (as discussed in Chapter II). Public utility energy efficiency program costs have been included in the figure because the utilities have been granted a monopoly in the state to provide utility services. With this monopoly, or regulatory compact, the utility agrees to reliably serve all customers at prices approved by the state.

---

<sup>1</sup> At the time of this audit, the most recent five-year period of available data differed between the tax commission, the state agencies, and the utilities. For the utilities, the most recent data was calendar years 2012-2016; for state agencies, fiscal years 2012-2016; and for state tax data, calendar years 2011-2015.

---

**State-funded and state-regulated subsidies, credits, and other incentives for energy-related activities is currently not held centrally by one group.**

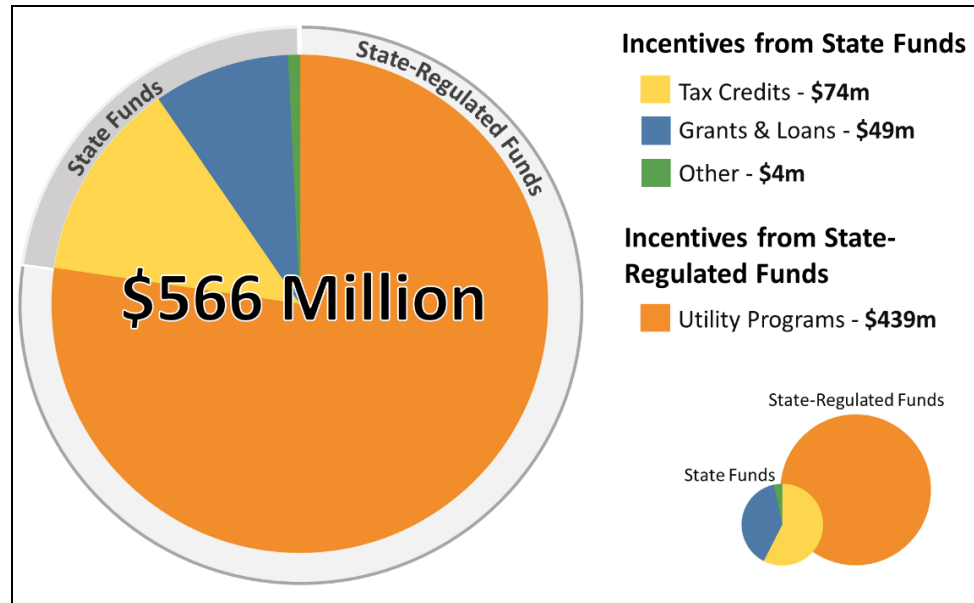
---

---

**Energy incentives are funded with both state funds and state-regulated funds**

---

**Figure 1.1 Over a Five-Year Period, \$566 Million Was Disbursed in Energy Incentives.** The largest portion came from utility programs that are funded by state-regulated monies.



Source: Auditor generated from Utah State Tax Commission reports and reports provided by the Public Service Commission from both Rocky Mountain Power and Dominion Energy (formerly "Questar Gas").

Figure 1.1 shows that the majority of the funds came from state-regulated utility rate monies for energy efficiency programs. The utilities referenced in this report refer to these types of programs collectively as demand side management (DSM) programs. *Utah Code* 54-7-12.8 defines demand side management as “an activity or program that promotes electric energy efficiency or conservation or more efficient management of electric energy loads.” These programs are discussed in Chapter IV of this report.

When looking for what programs could be considered as an energy incentive, we came across the DSIRE database. This database is funded by the U.S. Department of Energy to compile as many states’ energy incentives as possible. DSIRE terms tax incentives (credits, deductions, and exemptions), grant programs, loan programs, rebate programs (including utility programs), and other financing mechanisms that promote energy to be types of financial energy incentives. This includes the promotion of energy efficiency, a type of energy, energy industry, energy research and development, energy technology, or energy use. Therefore, for the purposes of this audit, we will refer to all of the programs we identified that promote an energy-related activity as an “incentive.”

**The utilities’ demand side management programs are state-approved energy efficiency programs.**

## State Programs Are Not Centrally Tracked

Because Utah does not have a centralized point of contact for all energy-incentivizing programs, we had to contact every state agency that we believe may offer an energy incentive (within audit time constraints). It required a search of both the *Utah Code* and the internet in an attempt to find programs that no one else directed us to. We do not believe this report contains a complete list of all energy-incentivizing programs in the state. For example, we believe there may be water resource and higher education programs that we did not capture. However, we believe it is the most comprehensive report available.

We purposely did not contact any municipalities to learn about local programs. This would have extended the scope of the audit beyond our time constraints. In addition, this report does not include federal incentives that we believe may entice taxpayers even more than some state-paid incentives.

Because the interim committee was interested in all energy incentives, including incentives for energy efficiency as well as energy development, we reviewed as many energy-related incentives as we could identify.<sup>2</sup> During this audit, we found that some incentives that encourage energy-related activities come under the pretext of environmental or economic development incentives. For instance, an incentive with the end goal of reducing pollution for cleaner air (an environmental focus) might do this by incentivizing energy-efficient activities (and would then be included in this audit). This added complexity caused some agencies to initially tell us that they did not have any energy incentives when in reality they administered programs that incentivized energy-related activities.

We found that the agencies listed in Figure 1.2 are involved in some form of energy incentive program. The details of how each agency is involved is discussed in-depth in each of the pertinent chapters of this report.

---

<sup>2</sup>This audit may touch on some energy program regulations but does not provide a thorough review of the state regulations which, by their nature, may discourage particular energy programs.

---

**We believe there may be other energy incentive programs in the state that we did not capture in this report.**

---

---

**Energy-incentivizing programs come in many forms, including those with an environmental or economic focus.**

---

**Figure 1.2 We Identified Thirteen Agencies Involved in Energy Incentive Programs.** The agencies and programs differ significantly, showing the varying types of programs throughout the state.\*

Utah Agencies Involved in Energy Incentive Programs	
• Community Impact Board (CIB) <sup>3</sup>	• Public Service Commission (PSC)
• Division of Air Quality (DAQ)	• Utah Department of Agriculture and Food (UDAF)
• Division of Drinking Water (DDW)	• Utah Department of Environmental Quality (UCAIR program)
• Division of Facilities Construction and Management (DFCM)	• Utah Department of Transportation (UDOT)
• Division of Oil, Gas and Mining (DOGGM)	• Utah Science Technology and Research Initiative (USTAR)
• Governor’s Office of Economic Development (GOED)	• Utah State Tax Commission (USTC)
• Governor’s Office of Energy Development (OED)	

Source: Auditor generated

\*The Appendix lists additional agencies with programs that may offer additional energy incentives.

The scope of the audit was to provide a comprehensive review of how much money the state spends on incentivizing both conventional and unconventional (or alternative) energy,<sup>4</sup> which also includes renewables.

## Utah’s Resources Include Both Conventional and Unconventional Energy

Utah’s resources are plentiful in both conventional and unconventional energy. Utah’s conventional energy is a valuable resource to the state. Unconventional energy options in Utah are vast.

<sup>3</sup> The CIB is under Housing and Community Development Division (HCD), which is under the Department of Workforce Services (DWS).

<sup>4</sup> Utah Code 59-12-102(9) defines alternative energy as biomass, geothermal, hydroelectric, solar, wind, coal-to-liquids, nuclear fuel, oil-impregnated diatomaceous earth, oil sands, oil shale, petroleum coke, or waste heat from an industrial facility or power station in which an electric generator is driven through a process in which water is heated, turns to steam, and spins a steam turbine.



## Utah's Conventional Energy Is a Valuable Resource

Conventional energy includes coal, natural gas, and oil. According to the Governor's Office of Energy Development (OED), among the states Utah ranks

- 14<sup>th</sup> in coal production with roughly 75 percent of the electricity generated in Utah coming from coal.
- 11<sup>th</sup> in oil; because of the nature of Utah's "waxy crude."<sup>5</sup>
- 10<sup>th</sup> in natural gas production "and holds roughly two percent of the nation's reserves supply."

Therefore, conventional energy is a vital resource in Utah.

## Unconventional Energy Options Are Vast

Unconventional energy includes oil shale, oil sands, and renewable energy. OED explains that oil shale is a fine-grained sedimentary rock, containing kerogens. "The kerogen found in oil shale requires thermal and/or chemical processing to release liquid oil and gas compounds." Oil sands are sandstones that are saturated with heavy hydrocarbons, called bitumen, which adheres directly to the sand grains. The oil is released from the sand when heat is applied.

The Utah Energy Efficiency & Conservation Plan defines renewable energy as "energy that comes from resources which are replenished on a human – as opposed to geologic – timescale." This includes:

- Solar energy - the ability to collect the sun's energy and convert it into electricity or power-generating heat
- Wind energy - the ability to harness energy from the wind through the use of turbines
- Geothermal energy – energy in the form of heat from within the earth, such as steam or hot water, that requires a heat

---

<sup>5</sup> Waxy crude are, "thick crude oils that contain significant amounts of paraffin. Black and yellow waxy crudes are viscous, have a high pour point, and are semi-solid at room temperatures."

---

**Utah's conventional energy strengths include coal, oil, and natural gas.**

---

---

**Unconventional energy includes oil shale, oil sands, and renewable energy sources such as solar and wind power.**

---

transfer using mechanical systems to generate electricity or heating processes

- Hydro energy - comes from moving water through hydroelectric power plants
- Biomass energy - comes from the organic material in plants and animals, such as the heat that is generated from a plant during the process of photosynthesis. Other examples include wood processing wastes, agricultural crop waste materials, and animal manure and human sewage.

### **Revenues for Incentive Programs Come From Direct State Funding and State-Regulated Funding**

Over the last five years of available data, state and state-regulated funding used to incentivize energy programs was nearly \$566 million. State funds discussed in this report are divided into six groups. Funds authorized through the rates established in utility tariffs are not included as state funds, but are instead state-regulated funds. For all incentives, we reviewed the most recent five-year periods of available data.

The 2016 tax information will not be available until November 2017. Therefore, all references to tax incentives is reflective of the calendar tax years 2011 through 2015. In addition, due to the way the utilities track their data, the most recent was calendar years 2012 through 2016. In order to provide the most up-to-date data, we chose to review the most recently completed years of information available for each program, as opposed to cutting all data off at 2015 to match tax information or calendar year 2016 to match utility data.

### **State Funds Are Divided into Six Groups**

The issue of energy incentives discussed during the interim committee meeting included both agency and public utility offered programs. The programs are supported by state funds and monies paid through utility tariffs (which are state-regulated funds).

State funds can be separated into six groups:

---

**The data in this report covers the most recent five years, depending on the type of data.**

---

1. Unrestricted revenue: these are also called “state funds” and are operating funds from state taxes. These are discretionary funds that the Legislature can spend as they decide.
2. Restricted funds: revenue that has certain management and/or spending requirements. These include state-only resources, such as petroleum violation escrow monies and mineral lease revenues.
3. Special revenue funds: this is revenue collected from a specific source for a specific purpose.
4. Proprietary funds: these are funds from business-like activities of the state, such as internal service funds and enterprise funds.
5. Trust and agency or fiduciary funds: these funds are held in trust on behalf of some other group, such as the Navajo Trust Fund.
6. Capital project funds: these are bonds and specific proceeds.

State funds used for incentivizing energy come from these sources.

### **Utility Tariffs Authorize State-Regulated Funds**

Funds collected through utility tariffs are not state funds but are state-regulated funds. The Public Service Commission (PSC), which has been given authority to supervise and regulate the public utilities discussed in this report<sup>6</sup>, must approve all rates and those rates must be just and reasonable. According to PSC representatives, the tariff is the utilities’ contract with their customers. All utility rates are listed in the tariff. According to the PSC, “DSM tariff rates cover the costs of program administration, management, and rebates/incentives paid to customers.”

---

**State funds come from many sources and may be restricted in their use.**

---

---

**Utility rates paid by customers are approved by the Public Service Commission.**

---

---

<sup>6</sup> The Public Service Commission does not regulate rural cooperative utilities, which we did not review.

## Audit Scope and Objectives

As previously discussed, this audit was requested by the Public Utility, Energy, and Technology Interim Committee. To address their questions, the report is organized as follows:

- Chapter II addresses the energy incentives offered through tax policies.<sup>7</sup>
- Chapter III addresses energy incentives offered through grant and loan programs.
- Chapter IV addresses other programs that play a significant role in incentivizing energy.
- Chapter V addresses a lack of reporting requirements specific to energy incentives.

---

<sup>7</sup> In Chapter II we discuss the tax credits and amounts claimed but we do not address the beneficial revenue that was generated by the activities invoking the credits. Neither this chapter, nor the report, is intended to criticize the incentives, and any in-depth analysis should be weighed with the respective benefits to Utah's economic environment.

## Chapter II

# Energy Incentives Through Tax Policies are Large and Growing With Many Unknowns

Tax credits, exemptions and deductions that incentivize energy programs have a significant financial impact on Utah's tax revenue. The type of tax policy through which an energy incentive is offered will affect how the incentive impacts state revenue. Energy-incentivizing tax credits, which reduce both the Education and General Funds, are substantial (over \$74 million in the last five years) and still growing. In addition, large dollar amounts were claimed under three tax credits that may entice energy programs. A lack of controls may allow significant discrepancies between tax credits earned and claimed because certification is not verified when the credit is claimed. Finally, energy-incentivizing tax exemptions and deductions mostly reduce the General Fund and may exceed \$200 million. However, this estimate is not complete because taxpayers are not required to report these amounts.<sup>8</sup>

### The Type of Tax Policy Affects Incentive Impact

Energy incentives offered through tax policies will affect state revenue differently, depending on whether the incentive is through a tax credit, exemption, or deduction. Unless specifically directed otherwise in statute, both corporate and individual income tax revenue is distributed to the Education Fund. Also, unless specifically directed otherwise, sales and severance tax<sup>9</sup> are distributed to the General Fund<sup>10</sup>.

---

<sup>8</sup> The Utah State Tax Commission provides the estimates in their annual report with a note stating that because taxpayers are not required to report exempt amounts, "most exemption estimates are either based on a time adjusted fiscal note or estimated using publicly available, outside, data sources."

<sup>9</sup> Severance tax is tax levied on the extraction of oil, gas, and minerals in the state. In Utah, it does not include the extraction of coal.

<sup>10</sup> For example, sales tax and exemptions may also be distributed to municipalities.

---

**Energy incentives funded through tax credits and exemptions reduce both the Education and General Funds.**

---

---

**In Utah, tax policies offering energy incentives include credits, exemptions, and deductions.**

---

These tax policies (credits, exemptions, and deductions) are common in every state.

- A tax credit is an amount that offsets or reduces tax liability and is a dollar-for-dollar reduction on income tax liability.
- An exemption either reduces or eliminates a tax obligation entirely.
- A deduction is an amount that is subtracted from the tax base before tax liability is calculated, lowering the taxable income.

The Internal Revenue Service states that a tax credit is always worth more than a dollar-equivalent tax deduction.

In Utah, tax *credits* incentivizing energy come from both income and severance tax revenues that would normally be distributed to either the Education or General Funds. Alternately, tax *exemptions* and *deductions* incentivizing energy come from the sales and severance tax revenue that would normally be distributed to the General Fund. Each tax policy type affects state revenue; however, tax credits are easier to track because they are quantified.

### **Energy-Incentivizing Tax Credits Are Substantial at \$74 Million, And Still Growing**

In working with the Utah State Tax Commission (USTC) and other state agencies, we identified eleven tax credits that either currently have a substantial impact on the Education and General Funds or may in the future. Of the eleven, seven energy-incentivizing tax credits totaled \$74.1 million from 2011 to 2015.<sup>11</sup> The other four energy-incentivizing tax credits have only been claimed for about \$20,000, but have the potential to exceed \$97 million in future tax credit growth.

---

<sup>11</sup> At the time of this audit, the most current available data was calendar years 2011 through 2015. Individual and corporate tax information for 2016 is not available until November 2017.

**Seven Energy-Incentivizing Tax Credits  
Totalled \$74.1 Million from 2011 to 2015**

The seven tax credits that have had a substantial impact on both the Education and General Funds have provided incentives to many types of energy, including both conventional and unconventional. Figure 2.1 explains each of the seven credits, their name, statutory reference and definition, and applicability to the audit.

---

**Tax credits provide incentives for both conventional and unconventional types of energy.**

---

**Figure 2.1 Seven Tax Credits Reduced the General and Education Funds from 2011 – 2015 By Incentivizing Energy.**  
 Two credits come from Utah’s severance tax while the other five come from corporate and individual income tax.

**Both corporate and individual taxpayers benefit from energy-incentivizing tax credits.**

Name & Contact Agency	Utah Code Authority & Basic Explanation	Applicability to Audit
<i>Well Workover</i> - Division of Oil, Gas and Mining (DOGM)	59-5-102(7): allows a tax credit of up to 20% of costs or \$30,000 per well for well overhaul or repair	Makes wells more efficient in extracting oil and gas to obtain more product out of the ground
<i>Enhanced Oil Recovery</i> – (DOGM)	59-5-102(9): allows a 50% reduction in the tax rate for increased oil production	Incentivizes an oil producer to implement a strategy* to force more oil out, making the well more efficient
<i>Renewable Commercial Energy System</i> – Office of Energy Dev. (OED)	59-7-614 & 59-10-1106: credit for both small & large <i>commercial</i> energy systems;** ranges from 10% of costs, up to \$50,000 per unit; or .35 cents for each kilowatt hour of electricity produced	Installing renewable power-generating equipment (such as solar panels on commercial buildings) or generating more than 660 kilowatts of energy
<i>Renewable Residential Energy System</i> – (OED)	59-7-614 & 59-10-1014: for <i>residential</i> energy systems;** allowing 25% of costs for each system, up to \$2,000 per unit	Installing renewable power-generating equipment (such as solar panels on residential homes); 4-year phase out beginning January 2018 for solar panel installation
<i>Clean Fuel Vehicle</i> – Division of Air Quality (DAQ)	59-10-1009 & 59-7-605: credit allowed for the purchase of electric, plug-in hybrid, natural gas or propane, or electric motorcycle vehicle; credit ranges from \$750 to \$1,500 or 35% of the purchase price	Incentivizing taxpayers to buy (or convert) clean fuel vehicles expired on 12/31/16.
<i>Qualifying Solar Projects</i> –	59-10-1024 (59-7-614.3 for corporate, repealed in 2015); taxpayer that purchases 1 or more solar units from a qualifying political subdivision may claim 25% of the purchase price, not to exceed \$2,000	We believe most of these credits were taken inaccurately under individual income tax returns and should have been under the renewable residential energy system credit (discussed later)
<i>Natural Gas Heavy Duty Vehicle</i> – (DAQ)	59-10-1033 & 59-7-618: for the purchase of a new heavy-duty vehicle fueled by natural gas, limited to an aggregate annual amount of \$500,000, stepping down each year from 2015 to 2020	Commercial category 7 or 8 vehicle; includes 4 or more axles with a single unit or 4 or less axles in a single trailer; only a few taxpayers have taken this credit

Source: Auditor generated from **Utah Code**  
 \*Such as flooding an oil field with water or carbon dioxide, increasing pressure in the ground to force more oil out.  
 \*\* Defined as an active solar, biomass, direct use geothermal, geothermal heat pump, hydro-energy, passive solar, or wind system.

Although income tax credits come from the Education Fund, two of the credits (the Clean Fuel Vehicle and the Natural Gas Heavy



Duty Vehicle tax credits) employ a transfer mechanism from the General Fund that caps or eliminates the amount that may be drawn from the Education Fund as follows:

- *Utah Code* specifies that the Division of Finance shall transfer funds equal to the amount that the Clean Fuel Vehicle Tax Credit total exceeded \$500,000 from the General Fund to the Education Fund (thereby limiting the annual impact of this credit on the education fund to \$500,000).
- *Utah Code* specifies that the Division of Finance shall annually transfer funds equal to the total of Natural Gas Heavy Duty Vehicle Tax Credits from the General Fund to the Education Fund (thereby shifting all liability of that credit to the general fund).

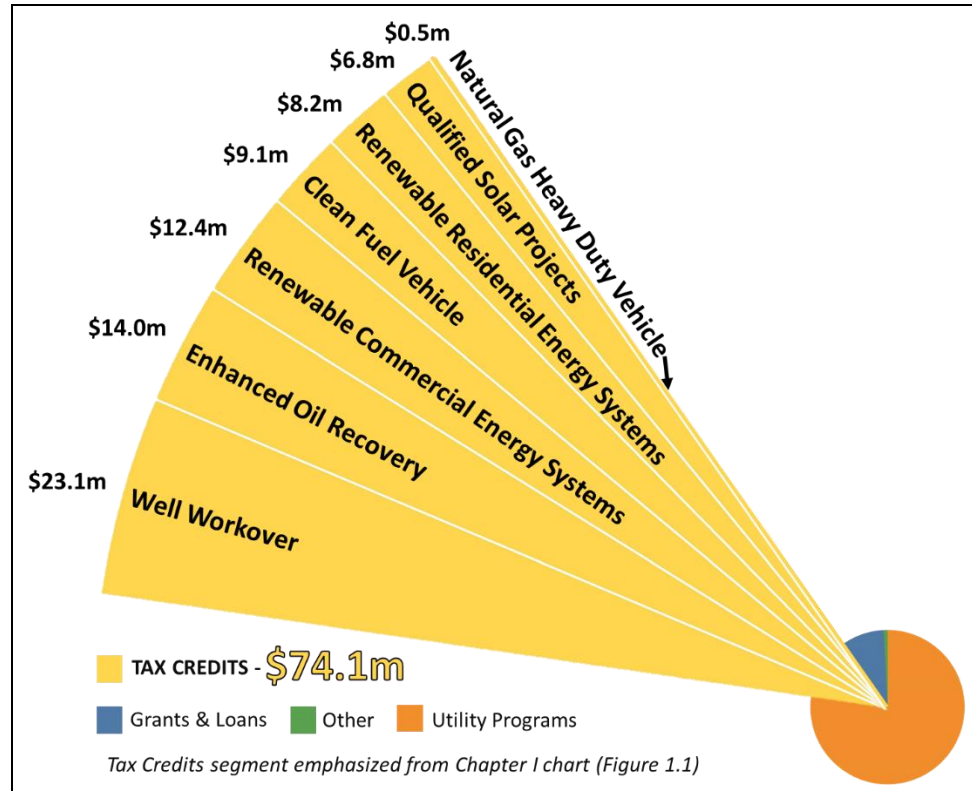
**Tax Credits Totaled \$74.1 Million.** Figure 2.2 shows the detail of the value of these tax policies on the incentives reviewed in this chapter.

---

**Two credits contain a buffer, limiting the Education Fund's liability to cover the cost of the credit taken.**

---

**Figure 2.2 From 2011-2015 Seven Energy-Incentivizing Tax Credits Totaled \$74.1 Million.** These tax credits make up 58 percent of direct state-funded energy incentives and 13 percent of all energy incentives discussed in this report.



Source: Auditor generated from USTC reports.

Figure 2.2 expands the section of Figure 1.1 in Chapter I showing tax credits. Tax credits from 2011 – 2015 make up 13 percent of the total value of programs we review in this report.<sup>12</sup> These seven credits were taken on 13,777 tax returns, with an average of \$5,376 per return over those five years.

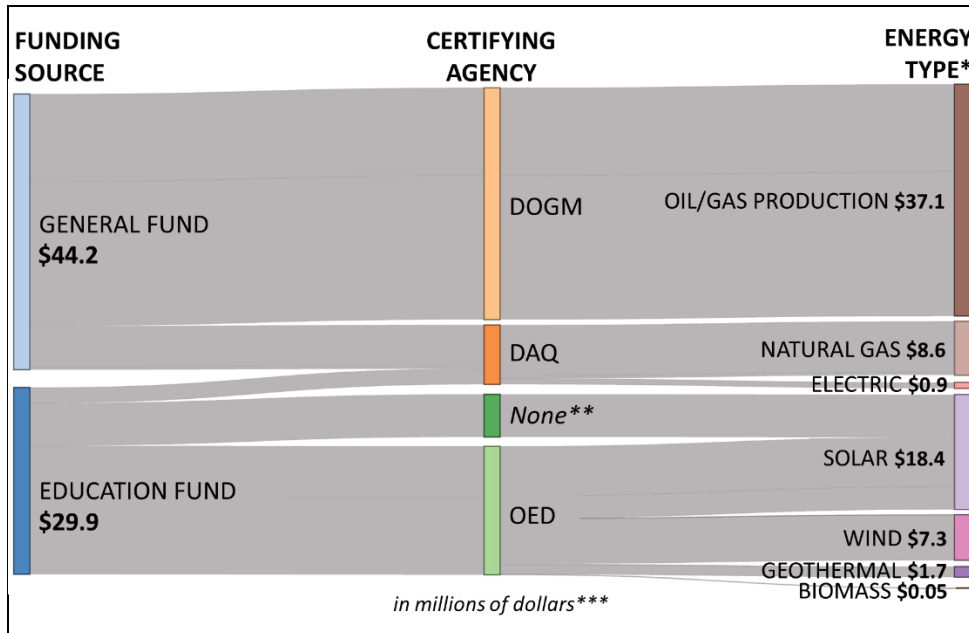
**The General Fund is Most Effected by These Tax Credits.**

Figure 2.3 explains the flow of energy-incentivizing tax credits from the Education and General Funds to the certifying agencies, then to the type of energy that benefits from the credits taken. The figure shows that the value of most of the funds paying for these tax credits have come from the General Fund and the value of most of the tax credit incentives go towards oil and gas production.

<sup>12</sup> \$74.1 million in tax credits out of \$566 million in all energy incentive programs is 13 percent.

**Energy-incentivizing tax credits were taken on 13,777 tax returns over the last five tax years.**

**Figure 2.3 Most of the Funds for the Seven Energy-Incentivizing Tax Credits Come from the General Fund.** While most energy-incentivizing credits by count come from income tax (and the Education Fund), the dollar value of these credits mostly reduces the General Fund due to large severance tax credits and statutory fund transfers.



Source: Auditor generated from USTC and agency reports

\*Because some of these tax credits can support multiple energy types, and because the energy type supported is not clarified when a taxpayer is claiming the credit, the amount of tax credit attributed to an energy type is estimated based on projects that the certifying agency approved.

\*\*The Qualified Solar Project Tax Credit does not require any certification from a state agency before being claimed. However, we believe that a majority of these credits were claimed incorrectly, and that the individuals who claimed them most likely should have claimed the Residential Renewable Energy Systems tax credit instead. However, the mistake is a technical one and we believe the dollar effect to be minimal.

\*\*\*Numbers in this figure may not add up due to rounding.

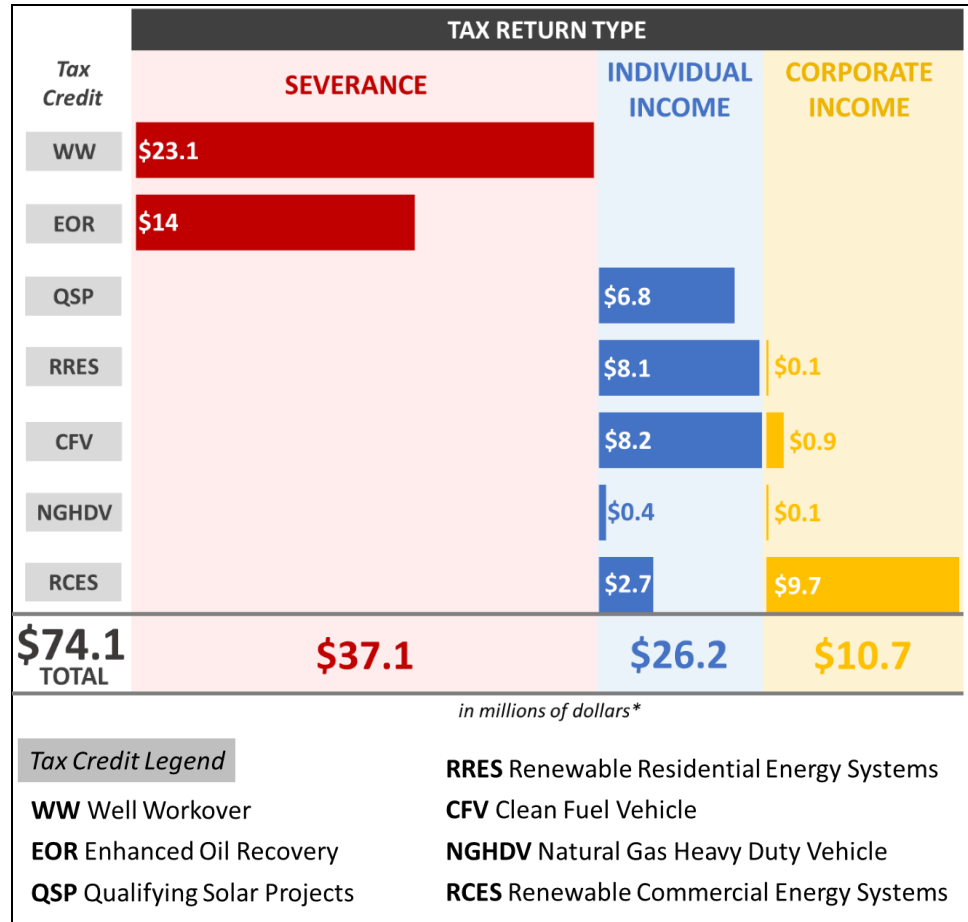
Although most of the value (dollar amount) of the credits goes towards oil and gas at \$45.7 million,<sup>13</sup> most of the number of credits taken come from renewable energy programs. From 2011 – 2015 a total of 13,777 tax returns took all seven types of credits. Of those, 8,474 (or 62 percent) were attributable to renewable energy programs, such as residential and commercial solar panels.

**Severance Tax Returns Claim Most Credits by Dollar Amount.** Figure 2.4 is a comparison of how the credits divide up between severance, individual income, and corporate income tax returns.

<sup>13</sup> The calculation is \$37.1 million for oil/gas production plus \$8.6 million for natural gas consumption.

**Most of the number of tax credits are taken for renewable energy incentive programs; however, the higher dollar value of credits taken comes for oil and gas programs.**

**Figure 2.4 Half of the Energy Incentive Tax Credit Dollars are Claimed on Severance Tax Returns.** The average amount claimed for the Well Workover and Enhanced Oil Recovery tax credits, per severance tax return, is large at almost \$450,000.



Source: Auditor generated from USTC report  
 \*Numbers in this figure may not add up due to rounding.

The greatest value of the tax credits is claimed by severance tax returns. All energy-incentivizing severance tax credits support conventional oil and gas. Of all the dollars claimed under individual income tax credits, most go toward credits that support renewable energy, including solar, wind, geothermal, and biomass.

**Four Additional Energy-Incentivizing Tax Credits Could Potentially Exceed \$97 Million**

We identified an additional four credits that have the potential for future growth in both number and value claimed. These credits are geared toward incentivizing energy. Figure 2.5 lists the four credits that are energy related.

**Four additional credits have the potential for significant growth.**

**Figure 2.5 Four Tax Credits That Incentivize Energy May Grow Very Large in the Near Future.** The first three credits come from income tax revenue (Education Fund). The fourth comes from severance tax revenue (General Fund).

Name & Contact Agency	Utah Code Authority & Basic Explanation	Applicability to Audit
Alternative Energy* Manufacturing – Governor’s Office of Economic Development (GOED)	59-7-614.8, 59-10-1030, 63N-2-7: a credit not to exceed 100% of new state revenues generated by an alternative energy manufacturing project; this credit commits the state to a credit for the life of the project, not to exceed 20 years	Project must be produced by an entity that enters into an agreement with GOED, for a project involving: a new/expanding operation of alternative energy and the manufacturing of machinery/equipment used directly to produce alternative energy
Alternative Energy Development – (OED)	59-7-614.7, 59-10-1029, 63M-4-501: credit is the lesser of the economic life of the project or 20 years and equal to 75% of new state revenues generated by the project	Entity must produce at least 2 megawatts of electricity, 1,000 barrels per day if oil, or 250 barrels per day if biomass <sup>14</sup> , and generate new state revenues
High Cost Infrastructure Development – (OED)	59-7-619, 59-10-1034, 63M-4-603: an entity <sup>15</sup> may claim a credit for developing a high cost infrastructure project <sup>16</sup> in an amount equal to 50% of the cost of the construction or 30% for a tier 3 fuel compliance project	Infrastructure includes an energy delivery system, railroad, fuel standard compliance project, or road improvement. Effective for the 2016 tax year. At this time, no credits have been taken but credits have been approved
Hydrogen Fuel Production –	59-5-102(8): a credit against severance tax owed equal to the amount of tax owed (up to \$5 million per year) if the taxpayer owns or operates a plant in Utah that converts natural gas to hydrogen fuel for use in zero emission vehicles	This credit was passed in the 2017 General Legislative Session; at this time no credits have been taken

Source: Auditor generated from **Utah Code**  
 \*See footnote 4 in Chapter I for the definition of alternative energy.

In the last five tax years, the first two credits in Figure 2.5 (the Alternative Energy Manufacturing and Alternative Energy Development credits) have had less than 50 taxpayers claim the credit for a total of about \$20,000. However, we believe these credits have

<sup>14</sup> **Utah Code** 59-12-102(17) defines biomass energy as material from a plant or tree or other organic matter that is available on a renewable basis, including slash and brush from forests and woodlands, animal waste, waste vegetable oil, methane or synthetic gas produced at a landfill as a byproduct of the treatment of wastewater residuals, aquatic plants, and agricultural products used as the primary source of energy to produce fuel or electricity.

<sup>15</sup> The applicable entity, as defined is **Utah Code** 63M-4-602, is an infrastructure cost-burdened entity that enters into an agreement with OED.

the potential of growing. Applicants have been approved to take over \$30 million in the Alternative Energy Development Tax Credit, but have not yet claimed it.

The last two credits in Figure 2.5 are new and have not yet been exercised. However, both credits could pose a significant obligation to the state in the future. OED has already approved High Cost Infrastructure Development credit that is expected to be claimed by an energy-related company for nearly \$67 million in the next seven years.

When exercised, the first three credits in Figure 2.5 will reduce the Education Fund and at this point there is no buffer with a transfer from the General Fund to reduce their impact (as discussed previously with other credits). The fourth credit reduces the General Fund. Finally, there is nothing to prohibit additional entities from requesting these credits in the future.

---

**These four additional credits will reduce both the Education and General Funds.**

---

### **Large Dollar Amounts Were Claimed Under Three Tax Credits That May Entice Energy Programs**

In our final review of tax credits, we found three additional credits that do not have a focus on incentivizing energy but may entice energy programs to rightfully claim the credit. Figure 2.6 explains these credits.

---

<sup>16</sup> *Utah Code* 63M-4-602 defines a high cost infrastructure project as a project that expands or creates new industrial, mining, manufacturing, or agriculture activity in the state, or involves new investment of at least \$50 million in an existing industrial, mining, manufacturing, or agriculture entity. The project must require or be directly facilitated by infrastructure construction and the cost must be greater than 10 percent of the total cost of the project or \$10 million.

**Figure 2.6 Three Tax Credits May Entice Energy Projects.**

Although not focused on incentivizing energy, these three tax credits offer benefits that could attract energy development and energy programs.

Name & Contact Agency	Utah Code Authority & Basic Explanation	Applicability to Audit
Enterprise Zone – (GOED)	59-7-614.10, 59-10-1037, 63N-2-213: this credit provides a tax incentive for the revitalization of blighted areas and areas of general distress	These credits have no specific energy-incentivizing principles; however, the qualifications and benefits of the credits may entice energy companies to take them
Research Activities -	59-7-612 & 59-10-1012: this provides a 5-7.5% credit for qualified research activity expenses that are technological or scientific in nature to develop a new or improved business component of the taxpayer	
Research Equipment –	59-7-613 & 59-10-1013: this provides a 6% credit for the purchase of machinery, equipment or both primarily used to conduct qualified, technological research	

Source: Auditor generated from **Utah Code**

While the Enterprise Zone tax credit does not specifically target energy-related companies, our review of the corporate tax returns that claimed the credit from 2011 to 2015 revealed that at least 40 percent (by dollar amount) of the credits were claimed by companies within the energy industry for significant dollar amounts.<sup>17</sup> We do not believe that all the credits were taken to incentivize energy, but since a significant portion of these credits were taken by energy companies, and for such large dollar amounts, we found it important to mention.

The two research credits in Figure 2.6 may also incentivize energy programs. From 2011 to 2015, about \$280 million was taken in research credits. From our cursory review of the taxpayers that took the credit, it does not appear that many energy programs were involved. However, we know of one energy company that took the credit and believe the nature of the credit may entice other energy groups.

---

**We believe that many companies are taking tax credits of substantial value which may be incentivizing energy programs.**

---

<sup>17</sup> During this time, \$3.5 million in Enterprise Zone credits were taken in corporate tax returns and nearly \$69 million in individual tax returns. Evidence suggests that those individuals claiming the tax credit may have been claiming it as pass-through from an energy-related business.

---

**The Legislature could require taxpayers taking these three additional credits to identify any of their energy programs as such.**

---

Our intention in addressing these three credits in the report is to bring it to the attention of the Legislature that there may be other credits that do not target energy but could entice energy programs anyway. If the Legislature desires to track all incentives that encourage energy programs, the law that establishes these credits could specifically require the taxpayer to identify energy programs that take the credit(s).

### **Lack of Controls May Allow Significant Discrepancies Between Tax Credits Earned Versus Claimed**

We briefly reviewed how some tax credits claimed compare to the number of tax credits authorized by state agencies. We found that tax credit certification is not verified when the credits are claimed and processed, which may result in credits being taken without appropriate certification. We also found that there is some overlap in incentives, which would permit more than one incentive for the same activity.

#### **Tax Credit Certification is Not Verified Before Credit is Allowed**

While we reviewed four state agencies that certify or approve eligibility for the tax credits mentioned in this report, USTC does not use these certifications at the time the credit is claimed to verify a taxpayer's eligibility to take the credit. Additionally, for certain tax credits, there may not be any process required to certify eligibility before the credit is taken. USTC processes tax credits according to filed tax returns and does not initially require any certificates of eligibility (even if the claimant is required by statute to be certified). USTC requests proof of certification if they audit a tax return after it has been filed. Because of the lack of controls at the time the credit is taken, we believe there may be discrepancies between credits processed and credits claimed, as follows:

**Clean Fuel Vehicle Tax Credit.** We reviewed the Division of Air Quality's (DAQ) 2015 report listing the individuals who received DAQ approval to take the credit for purchasing a clean fuel vehicle. DAQ reported to USTC that 247 individuals had been approved to take the Clean Fuel Vehicle Tax Credit. However, 645 individuals claimed this credit in their 2015 tax return. This equated to a one-year discrepancy of more than

---

**Failure to obtain the required certification for some energy-incentivizing tax credits may only be found upon audit.**

---



\$577,000. Some of this discrepancy may be due to taxpayers carrying forward credits from a previous tax year. However, in order for USTC to verify this, each tax return would have to be audited. If a tax return is selected for audit, USTC would then require the taxpayer to submit proper DAQ certification before the taxpayer would be allowed to retain the credit.

**Renewable Commercial Energy Systems Tax Credit.** Over \$12.4 million of Commercial Renewable Energy Systems Tax Credits were claimed between 2011-2015. However, at least \$500,000 of these credits were not authorized by OED. These may be corrected upon audits by USTC.

We found three additional credits with a number of discrepancies between how many credits were claimed and how many individuals were certified. However, we believe many of these discrepancies came from individuals selecting the wrong credit on their tax return; therefore, the dollar effect on the state is minimal. These additional discrepancies highlight the need for controls between credits being certified and credits being claimed.

A lack of internal controls can cause problems for the agencies that administer or approve these tax incentives. For example, during the years 2011-2015, OED authorized a Renewable Commercial Energy Systems tax credit in an amount just less than \$600,000 in error. The tax credit, which was authorized by a single employee, had been awarded based on only estimated data instead of required actual production data. OED reports that they are currently working with the company and the Attorney General's office to correct the error. OED reports that they have since implemented controls to prevent this from happening again. Because it was beyond the scope of this audit, we did not verify that proper controls exist in every agency.

The discrepancies mentioned above suggest a need for additional controls and better communication both internally and between certifying agencies and USTC. However, USTC told us that such communication regarding tax information is limited due to the confidentiality of tax records.

We recommend that the Legislature consider requiring certifying agencies to annually provide USTC with a list of taxpayers that have been approved for the applicable tax credits, complete with identifying taxpayer information (such as a social security number). USTC reports

---

**A lack of internal controls can cause problems for the agencies that administer or approve these tax incentives.**

---

---

**Communication between USTC and certifying agencies may be limited due to the confidential nature of tax records.**

---

that these two requirements would assist their auditing process to ensure the validity of the credit being claimed.

### **Overlapping Allows the Receipt Of More Than One Incentive**

One of the questions in the audit request was if any of the energy incentives overlap. We found that the opportunity for overlapping tax credits is available. We looked for programs that incentivized the same energy-related activity. For example, while a solar facility might be able to claim a High Cost Infrastructure Tax Credit and an Alternative Energy Development Tax Credit, one incentivizes building infrastructure and the other incentivizes generating alternative energy. Therefore, they would not be considered overlapping. However, we found that the Production Tax Credit (a segment of the Renewable Commercial Energy Systems Tax Credit) and the Alternative Energy Development Tax Credit provided incentives for the same activity.

The Production Tax Credit provides a .35 cent per kilowatt hour credit for a commercial energy system generating more than 660 kilowatts of electricity. The Alternative Energy Development Tax Credit provides a credit of 75 percent of new state revenues for an alternative energy facility generating two megawatts of electricity or more. Hence, a wind, geothermal, solar, or biomass plant generating more than two megawatts can receive both of these tax credits. We found that OED has previously approved both of these credits for the same project under a single company. In addition, there are two tax exemptions for facilities that generate electricity through alternative energy that may overlap these credits (see Figure 2.7 for a list of the energy-incentivizing tax exemptions). We recommend that the Legislature examine these policies to ensure the targeted activity should be eligible for multiple tax incentives.

**One Tax Credit and One Utility Rebate Program May Have Overlapped.** According to the PSC, a taxpayer who received a tax credit for installing solar panels could have also received a rebate from Rocky Mountain Power for installing those same panels. As shown in Figure 2.1, the Renewable Residential Energy System tax credit, which begins a four-year phase-out in January 2018 for the installation of solar panels, provides an incentive for taxpayers to install solar panels on their home. The Utah Solar Incentive Program (USIP) provided rebates through a lottery for residential and non-residential

---

**The Production Tax Credit and Alternative Energy Development Tax Credit provide overlapping incentives.**

---

customers. USIP will be discussed more in Chapter IV of this report; however, this program ended December 31, 2016.

## **Energy-Incentivizing Tax Exemptions and Deductions Reduce the General Fund And May Exceed \$200 Million**

In addition to tax credits, *Utah Code* also exempts certain activities from the sales and use and severance taxes. We found fourteen exemptions from the sales and use tax for activities that appear to incentivize energy. We also found seven exemptions and deductions from the severance tax that also may incentivize energy. Finally, two additional exemptions, outside of sales and use and severance tax are small but worth noting.

When an item is exempt or deducted from taxes, the taxpayer does not report the value of exempt amounts. Thus, the effect of exemptions on overall tax revenue is unknown. USTC attempts to estimate the value of some sales and use tax exemptions. USTC's 2016 annual report provides estimates on some of the sales and use tax exemptions. The report states, "These estimates are based on the best information available; however, in some cases, data is limited or unavailable." USTC does not provide estimates for severance tax exemptions or deductions.

### **Fourteen Energy-Incentivizing Exemptions Come from Sales Tax**

As discussed previously, sales tax revenue is distributed to the General Fund. Therefore, any revenue exempted from sales tax by state law reduces the General Fund. Figure 2.7 lists a description of the exemptions for fiscal year, *Utah Code* references, and estimated values if available.

---

**Tax exemptions reduce revenue in sales and use, severance, and other taxes.**

---

Sales tax exemptions reduce the General Fund by an unquantified amount.

**Figure 2.7 Overall, Sales Tax Exemptions Reduce the General Fund by an Unquantified Amount.** Of those estimated, sales tax exemptions that may provide an energy incentive appear to be substantial in value.

Description for the Sale, Use, or Lease of...*	Utah Code Authority	Estimated Value Fiscal Year 2016
Aviation, motor, and special fuel**	59-12-104(1)	\$182,000,000
Machinery/equipment (life of 3 or more years) for coal mining	59-12-104(14)(b)	The estimated value cannot be separated from other non-energy-incentivizing exemptions
Natural gas, heat, coal, fuel oil for industrial use**	59-12-104(39)	\$27,000,000
Electricity produced from alternative energy source	59-12-104(47)	Not available
Property by an alternative energy production facility	59-12-104(55)	Not available
Waste energy production facility	59-12-104(56)	Not available
Alternative energy property for producing methanol or ethanol	59-12-104(57)	Not available
Property/product transferred electronically used in the research and development of alternative energy	59-12-104-(62)	<\$500,000
Machinery/equipment used in qualified research, including energy research	59-12-104(74)	The estimated value cannot be separated from other non-energy-incentivizing exemptions
Fuel cells	59-12-104(80)	\$34,000
Molten magnesium	59-12-104(83)	<\$600,000
Heavy duty machinery/equipment or normal operating repair or replacement parts by a drilling equipment manufacturer	59-12-104(84)	<\$1,200,000
Hydrogen fuel manufacturing equipment	59-12-104(87)	Effective July 1, 2017
Machinery/parts for a refinery of Tier 3 gasoline	59-12-104(89)	Effective January 1, 2018

Source: Auditor generated from **Utah Code**

\*The exemption descriptions in the figure are abbreviated. A more detailed review of statute should be used when fully analyzing this issue.

\*\*According to USTC the intent behind these exemptions may have been to offset double taxation.

The exemption for molten magnesium was added in Figure 2.7 because as the development of solar batteries advances molten magnesium may play an important role. This exemption may provide a significant value to battery producers and may grow in the future.

## Seven Energy-Incentivizing Exemptions and Deductions Come from Severance Tax

Severance tax is levied on the extraction of oil, gas, and minerals in the state. It does not include the extraction of coal (as discussed later). Figure 2.8 lists the descriptions and *Utah Code* references for the seven severance tax exemptions and deductions.

---

**In Utah, the severance tax includes oil and gas, but not coal.**

---

**Figure 2.8 USTC Does Not Estimate Exemptions from Severance.** An exemption either reduces or eliminates entirely a tax obligation. A deduction is an amount that is subtracted from the tax base before the liability is calculated, lowering the taxable income.

Description of Activity Where No Severance Tax is Assessed On...	Utah Code Reference
Oil/gas produced, saved, sold, or transported if derived from coal-to-liquids technology, oil shale, or oil sands	59-5-120
The value of oil or gas produced from stripper wells*	59-5-102(2)(b)(ii)(A)
The value of oil or gas produced within the first 12 months of production from wildcat wells*	59-5-102(2)(b)(ii)(B)
The value of oil or gas produced in the first 6 months of production for development wells*	59-5-102(2)(b)(ii)(C)
Coal exemption is not specifically listed in tax code nor is it included in the definitions of minerals that are subject to severance tax; therefore, coal is not subject to severance tax	59-5-102 & 202
A deduction from the fair market value of oil and gas processing and transportation costs	59-5-103.1
A deduction from the fair market value of oil and gas of the royalties paid to the United States, the state or political subdivision, or Indian or Indian tribe	59-5-102(2)(b)(i)

Source: Auditor generated from *Utah Code*

\*Stripper wells are low producing wells. Wildcat wells are those drilled outside of a developed area. Development wells are new wells in an established area.

According to USTC, coal is subject to sales tax, as tangible personal property, but not severance tax. In a study of state severance taxes for 2016, the Council of State Governments found 13 states apply a severance tax to coal.

Although USTC does not estimate the value of severance tax exemptions, we calculated a potential baseline value for the coal exemption for 2016. According to the TC, the current mining

severance tax is based on the gross value of the mined mineral multiplied by 30 percent which produces the taxable value. To the taxable value, a tax rate of 2.6 percent is applied.

The 2016 value of coal produced was \$508.6 million. Multiplying this by 30 percent yields the taxable value to which the tax rate of 2.6 percent can be applied. The result is \$3,967,080. This would likely not be the additional tax revenue for coal because there is also an exemption for the first \$50,000 in gross value per mine. The Legislature could also apply other deductions. This simply shows what the baseline could be if there was a severance tax applied to coal.

### **Two Additional Energy-Incentivizing Exemptions Are Worth Noting**

The law provides two other exemptions incentivizing energy. One exemption is from motor fuel tax and the other is under the Utah Energy Infrastructure Authority Board.

*Utah Code 59-13-201(3)* exempts from the motor fuel tax “motor fuel or components of motor fuel that is sold and used in this state and distilled from coal, oil shale, rock asphalt, bituminous sand, or solid hydrocarbons located in this state.” USTC does not estimate a value of this exemption.

*Utah Code 63H-2-402* exempts the interest and income from an authority bond “from state taxes except the corporate franchise tax.” Under *63H-2-201(2)(e)*, an authority bond may be issued by the Energy Infrastructure Authority Board<sup>18</sup> to be used “to finance a qualifying energy delivery project.” This exemption is not listed in law with tax code exemptions.

We discussed this with a representative from USTC who stated the “state taxes,” in the exemption language would most likely be state income taxes. However, USTC was unaware of this exemption (probably because it is not listed in the tax code, *Utah Code* Title 59). The USTC representative also stated that a bond of this type would

---

<sup>18</sup> The Utah Energy Infrastructure Authority Board consists of nine members appointed by the Governor to assist the Governor’s Office of Energy Development in reviewing applications for the High Cost Infrastructure Development tax credit referenced in Figure 2.5.

---

**Fuel from coal, oil shale, rock asphalt, and other minerals are exempt from motor fuel tax.**

---

not be subject to federal or individual income tax; therefore, it does not have a tax consequence anyway.

Although this bond appears to have no tax consequences, and provides an exemption of no value, we are concerned that USTC was unaware of it. We recommend that all tax exemptions provided in all titles of *Utah Code* be reflected in *Utah Code* Title 59 to ensure it is on USTC's watch list.

## **Recommendations**

1. We recommend that the Legislature, working with the Utah State Tax Commission, consider requiring all agencies that certify energy-incentivizing tax credits to submit certification records, complete with identifying taxpayer information, to the Utah State Tax Commission.
2. We recommend that the Legislature, working with the Utah State Tax Commission, consider examining any overlapping credits to determine whether the incentivized energy activity should be eligible for multiple tax incentives.
3. We recommend that the Utah State Tax Commission and state agencies work with the Legislature to update statute and ensure that all tax exemptions are recorded in *Utah Code* Title 59 for tracking accuracy.

**This Page Left Blank Intentionally**



## **Chapter III**

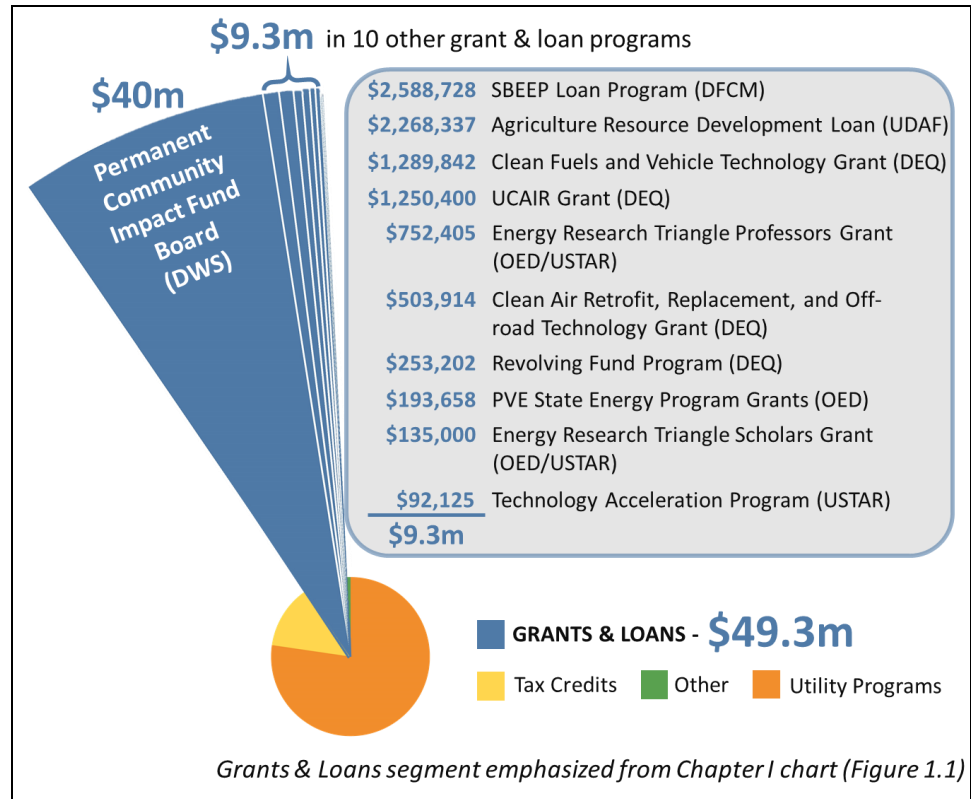
# **Grant and Loan Programs Not Focused on Energy Provide More Incentives Than Those Focused on Energy**

In addition to energy-incentivizing tax credits and exemptions, several state agencies have various grant and loan programs that appear to provide incentives for energy activities.<sup>19</sup> Most of the value from these energy-incentivizing grants and loans come through programs where the main purpose of the program is not specific to energy. We found that non-energy specific grant and loan programs provided \$45.7 million for energy incentives between 2012 and 2016. Whereas, energy-specific programs provided \$3.7 million during the same period. Figure 3.1 shows a breakdown of all grant and loan programs.

---

<sup>19</sup> Due to the time constraints of this audit we were unable to verify that every dollar allocated to an energy incentive program (listed in this chapter) directly applies as an energy incentive.

**Figure 3.1 Between 2012 and 2016, Eleven Energy-Incentivizing Grant and Loan Programs Disbursed \$49.3 Million.** Most of these funds are disbursed through the Permanent Community Impact Fund Board. The agency that oversees the corresponding program is listed in parenthesis.



Source: Auditor generated

### Programs Not Specific to Energy Provided \$45.7 Million to Energy Incentives

We identified four agencies that offer several programs that do not necessarily focus on incentivizing energy, but do appear to have provided \$45.7 million in funding for encouraging energy development or energy efficiency initiatives between fiscal years 2012 and 2016.

Most of this funding came from the grant and loan programs of the Utah Permanent Community Impact Fund Board (CIB). The CIB disbursed \$40 million to a road project that mainly serves the oil and gas industries.

The Department of Environmental Quality (DEQ) funded \$3.3 million in programs that provide energy incentives. A Department of Agriculture and Food (UDAF) loan program funded nearly \$2.3 million in energy projects. Finally, four Utah Science Technology and Research Initiative (USTAR) grant programs awarded over \$90,000 for energy projects.

### **The CIB Administers Grants and Loans On Projects That Incentivize Energy**

The CIB administers grants and loans to state agencies or local political subdivisions in Utah.<sup>20</sup> These grants and loans are not specifically for energy-incentivizing projects and can be administered from either of two funds: the Permanent Community Impact Fund (PCIF) or the Throughput Infrastructure Fund (TIF).

**The CIB Awarded At Least \$40 Million from the PCIF for Energy-Incentivizing Projects.** Between fiscal years 2012 and 2016, the CIB awarded \$40 million in grants and loans from the PCIF to help fund the Seep Ridge Road project. This road was primarily intended for the transport of oil and gas through an energy corridor in Uintah County. We believe there could be several other projects funded with PCIF monies that incentivize energy development; however, due to the time constraints of this audit, we were only able to review this one large project.

The total amount of PCIF funding that the Seep Ridge Road project received was \$55 million and was granted or loaned between the years 2009 and 2014; \$40 million of that \$55 million falls within the time period reviewed in this audit, 2012 to 2016. Of those funds, \$22 million was in the form of grants and \$18 million was in the form of loans.<sup>21</sup> These PCIF funds come from royalties collected by the federal government from mineral resource development on federal lands in Utah and disbursed back to the state.

The use of PCIF funds for energy development is not prohibited by federal or state law. Statements from CIB board members expressed the intent to facilitate mineral development (including oil

---

**The CIB funded the development of a road for the main purpose of transporting oil and gas.**

---

---

**The use of PCIF funds while incentivizing energy is not prohibited by law.**

---

---

<sup>20</sup> Political subdivisions include towns, cities, counties, and other local/interlocal entities.

<sup>21</sup> Of the \$18 million loaned, \$4 million was at zero percent interest, and \$14 million at 2.5 percent interest.

---

**We believe that Seep Ridge Road was paved with a primary purpose to encourage energy development.**

---

and gas development), as it will sustain the PCIF by helping generate mineral lease revenue.

While the CIB board considered the impact of the development of the road on other activities, such as tourism and hunting, after review of both written and audio minutes from board meetings, we believe that Seep Ridge Road was paved with a primary purpose to encourage energy development. Both a site visit to Seep Ridge Road and statements made at board meetings supports this belief. Almost all activity seen from the road is for energy development and resource extraction.<sup>22</sup>

---

**Figure 3.2 Observed Energy Development on Seep Ridge Road.** These are two examples of the activities as seen from Seep Ridge Road during a site visit.

---



*Source: Auditor generated*

---

**Interviewed oil industry representatives believe that paving the road served as an advantage for the industry.**

---

We interviewed oil industry representatives whose businesses are located on Seep Ridge Road. They expressed that the road being paved was clearly an advantage for them. Before it was paved, the road had been muddy, dusty, and unruly. These representatives stated that they also believe that one of the main reasons for the road was for the

---

<sup>22</sup> There were no residential residences seen from the newly paved sections of Seep Ridge Road. Additionally, there were a couple of corrals and some cattle seen from the road. There may be residences or other business not visible from the road.

oil and gas industry's transportation of their product . Figure 3.2 shows two examples of the activities on Seep Ridge Road.

**The TIF was Recently Created with \$53 Million and Focuses on Infrastructure Projects that Will Likely Incentivize Energy.**

The TIF was created in the 2016 General Legislative Session and is expected to be fully funded with a total of \$53 million in sales tax revenue by the end of fiscal year 2018. It was originally planned that mineral lease revenues would fund large infrastructure projects submitted to the CIB for funding. However, due to federal restrictions on how mineral lease revenue may be spent, sales tax revenue once allocated to the Transportation Fund has been transferred to the TIF. In return, mineral lease revenues totaling \$53 million have now been allocated to a new, restricted transportation development account.

The purpose of the TIF is to provide grants or loans, at the CIB's discretion, for statutorily defined infrastructure projects in or out of the state. *Utah Code* 35A-8-302 states that there are only six types of projects eligible for TIF funds. These project types, some of which are innately directed at energy development, include: electrical transmission lines, a shortline freight railroad, a bulk commodities ocean terminal, a hydrocarbon pipeline, a hydrogen fuel plant, or a hydrogen-fueled truck plant.

Although there are currently no approved projects for TIF funding, the CIB believes that a previously submitted project regarding a deep-water port in Oakland, California will be resubmitted. CIB board meeting minutes highlight that while the proposed deep-water port can be used to deliver various Utah commodities overseas, a primary commodity focus for this port will be Utah coal. In one board meeting, it was stated that the proposed deep-water port is an efficient, economical, clean way to deliver Utah coal. If a loan similar to a previously requested loan from the TIF is requested for the deep-water port project, it may exceed \$50 million.

**DEQ Funded Nearly \$3.3 Million in Programs Providing Energy Incentives**

The purpose of the Department of Environmental Quality (DEQ) is to provide effective management of state environmental concerns. However, DEQ also appears to provide energy incentives through programs aimed at providing environmental benefits within two of its

---

**The Throughput Infrastructure Fund (TIF) is expected to be funded with \$53 million in sales tax revenue by the end of fiscal year 2018.**

---

---

**Projects funded with TIF money may include a bulk commodities ocean terminal, hydrocarbon pipeline, and a hydrogen fuel plant.**

---

divisions and one partnership. Specifically, the Division of Air Quality (DAQ) manages two grants and one grant and loan program which provided almost \$1.8 million in energy incentives. The Utah Clean Air Partnership (UCAIR) also manages a campaign program that promotes energy efficiency. UCAIR received \$1.25 million in funds granted by DEQ for this program. Finally, the Division of Drinking Water (DDW) manages a loan program that provided \$253,000 in energy incentives.

**DAQ Grants and Loans Totaled Almost \$1.8 Million Between 2012 and 2016.** DAQ administers the following programs with the intent of reducing emissions and improving air quality.

- The Clean Fuels and Vehicle Technology Program awarded \$1,289,842 between fiscal years 2012 and 2015. This program allows a loan or grant for clean-fuel vehicle conversion or the purchase of clean fuel vehicles for both private business and public-sector vehicles. No grants or loans were awarded in fiscal year 2016.
- The Clean Air Retrofit, Replacement, and Off-Road program (CARROT) is intended to provide incentives to reduce emissions from small engines and heavy diesel equipment. CARROT disbursed about \$503,914 in fiscal years 2015 and 2016 to both private and public groups.
- The Conversion to Alternative Fuel Grant Program is designed to lower the price of the conversion of vehicles to alternative fuel technology. Grants may not exceed \$2,500. The program did not disburse any funds between fiscal years 2012 and 2016 (the program began in 2016). However, at least \$7,500 in grants has been disbursed in fiscal year 2017.

**DEQ Grants to UCAIR Totaled \$1.25 Million Between Fiscal Years 2012 and 2016.** UCAIR is a nonprofit that promotes improvement to Utah's air quality and is housed in DEQ. Using grants from DEQ, UCAIR leads the "Show UCAIR" campaign that focuses on improving the air quality in Utah. While not every grant dollar expended may be attributed as an energy incentive, the campaign tries to accomplish its environmental goals by largely promoting energy-efficient activities. Some of the activities promoted include using electric lawn tools, setting thermostats more energy-

---

**DAQ provides energy incentives through managing programs directed at providing environmental benefits.**

---

---

**UCAIR aims to accomplish its environmental goals while also promoting energy-efficient activities.**

---

efficiently, buying energy-efficient appliances, buying energy-efficient cars, installing LED lights, and other energy efficiency practices. These activities received \$1.25 million in granted funds from DEQ between fiscal years 2012 and 2016. Due to time constraints, we were not able to determine if every dollar of the granted funds could be considered an incentive for energy efficiency. The grant awarded in fiscal year 2016 is part of a five-year grant award extending until 2020. DEQ has already disbursed \$750,000 toUCAIR for FY 2017.

**DDW Provided \$253,000 in State Funds towards a Low-Cost Loan in Fiscal Year 2012.** DDW administers state-funded drinking water projects. The Drinking Water Board offers low-cost loans through a revolving loan fund to improve water quality projects. However, the Drinking Water Board may also provide low-cost loans from the fund to pursue energy-efficient water projects. The revolving loan program has only earmarked one project since 2012 as having an energy efficiency element. The project was funded 80 percent (\$1,024,798) with federal loans and 20 percent (\$253,202) through the revolving loan fund.

**UDAF’s Agriculture Resource Development Loan Program Funded \$2.3 Million for Energy Projects**

Under the Utah Department of Agriculture and Food’s (UDAF) Agriculture Development Loan Program (ARDL), nearly \$2.3 million has been loaned to Utah farms for energy efficiency projects between fiscal years 2012 and 2016. As reported by ARDL staff, these loans supported projects such as the installation of solar panels, or the replacement of diesel motors with electrical motors. The ARDL loan program operates under the direction of the Conservation Commission and awards low-interest loans (2.5 to 3 percent) to farms from the Agriculture Resource Development Fund. These loans are not restricted only to energy efficiency projects, as there are five different types of eligible projects (one being “programs designed to promote energy-efficient farming practices”).

---

**Utah farms received low-interest loans for energy-incentivizing projects.**

---

**One of Four USTAR Grant Programs That Could Incentivize Energy Provided Over \$90,000 in Fiscal Year 2016**

While the Utah Science Technology and Research Initiative (USTAR) has four non-energy specific grant programs that could

---

**USTAR grants for energy-related projects are expected to grow.**

---

support energy-related projects, only one of these programs disbursed grants to energy projects between fiscal years 2012 and 2016. This grant program, the Technology Acceleration Program (TAP), disbursed over \$90,000 in grants to two energy-related companies during fiscal year 2016.

**USTAR’s Support of Energy Projects Through These Grant Programs Will Most Likely Grow in the Near Future.** Aside from the TAP program, USTAR also has the following non-energy specific grant programs: University Technology Acceleration Grant, Industry Partnership Program, and Science & Technology Initiation Grant. Like TAP, these grant programs have energy-related technology as only one of their industry sectors of focus and are not limited to energy-related projects only. These grant programs are relatively new, with some not disbursing any monies towards any project until fiscal year 2017. However, according to records from USTAR, over \$1.1 million has been awarded from three of the four grant programs to energy-related companies or university research in fiscal year 2017.<sup>23,24</sup>

In total, we believe the grant and loan programs from non-energy specific programs provided a significant amount of funding to incentivize energy in Utah. In Chapter V we discuss reporting requirements for these programs.

### **Energy Focused Grant and Loan Programs Provided \$3.7 Million for Energy Incentives**

We identified three agencies that offer several programs where the focus of these programs is specifically to incentivize energy-related activities. These grants and loans disbursed \$3.7 million of funding for energy-incentivizing initiatives between fiscal years 2012 and 2016.

---

<sup>23</sup> While the increase in funding during fiscal year 2017 may signify incentive growth, due to the nature of the competitive grant and the fact that some years may not have any eligible energy-related projects, the amount of funding to energy-related projects from these programs over time may be sporadic.

<sup>24</sup> The fourth program, USTAR’s Science and Technology Grant Program (STIG), could possibly grant money toward energy-related projects. However, no energy-related projects have received grants from STIG.



Most funding came from the Division of Facilities Construction and Management's (DFCM) State Building Energy Efficiency Project loan program—a total of \$2.6 million. This funding assists state agencies to improve their facilities' energy efficiency. In addition, the Office of Energy Development (OED) and USTAR disbursed nearly \$890,000 in grants for energy research. OED also funded over \$194,000 in grants for energy efficiency projects and managed an energy efficiency loan program; however, the loan program disbursed no new loans in the years reviewed in this audit.

### **DFCM Disbursed \$2.6 Million in Zero Interest Loans For State Building Energy Efficiency Projects**

*Utah Code* 63A-5-701 authorizes DFCM to “develop and administer the state building energy efficiency program,” or SBEEP. Through SBEEP, DFCM provides information, assistance, and analysis to state agencies to help improve energy efficiency and reduce energy costs for state facilities. Between fiscal years 2012 and 2016, \$2.6 million has been loaned out for 12 projects. The terms of the loan are zero percent interest with an average payback of about four years.

The source of the funds is the State Facility Energy Efficiency Fund (SFEEF). SFEEF is funded with money, transferred from the Stripper Well-Petroleum Violation Escrow Fund and appropriated by the Legislature<sup>25</sup>, funds received from repayment of loans, and interest earned.

DFCM provides administrative services for managing this loan, as well as managing the rebate and incentives programs for state buildings through the utility companies' demand side management programs (DSM). A general discussion of utility DSM programs can be found in Chapter I. Chapter IV addresses both the administrative costs and provides additional DSM program details.

---

**The funding source for DFCM's energy projects comes from the Petroleum Violation Escrow (PVE) Fund.**

---

---

<sup>25</sup> The Stripper Well-Petroleum Violation Escrow Fund will be discussed later in this chapter.

---

Through two programs, OED and USTAR provided grants for research teams working on energy-related issues.

---

### OED and USTAR Disbursed Nearly \$890,000 in Grants Specific to Energy-Related Research

OED and USTAR jointly administered two energy-specific grant programs that disbursed nearly \$890,000 to researchers at three Utah universities between fiscal years 2012 and 2016. These two grant programs are the Energy Research Triangle Professors (ERT-P) Grant and the Energy Research Triangle Scholars (ERT-S) Grant.<sup>26</sup> These two programs provide grants to research teams at Utah’s universities, made up of either professors or students, who are working on energy-related issues. These grant programs began in fiscal year 2015. Funding for these grants initially came from state funds from USTAR, the Utah Cluster Acceleration Partnership (UCAP), and OED. As of fiscal year 2017, the ERT-P and ERT-S programs have since become mostly funded and fully administered by USTAR.

Figure 3.3 shows the disbursement of these grant monies throughout the programs’ histories through fiscal year 2016. Both programs have awarded grants for fiscal 2017 (a total of \$435,000) that are consistent with the programs’ previous annual disbursements.

---

**Figure 3.3 Funding Disbursed Through Energy Research Triangle Grant Programs.** The total amount of Energy Research Triangle grants are fairly consistent annually as there are set grant award amounts.

---

Grant Program Description	FY 2015	FY 2016
<b>ERT-P</b> Promotes collaboration between university researchers of at least three universities to collaborate on an issue specific to Utah’s energy and natural resource landscape	\$385,000	\$367,405
<b>ERT-S</b> Promotes collaboration among student researchers to engage in energy research related to Utah’s economy	\$60,000	\$75,000
<b>TOTAL</b>	<b>\$445,000</b>	<b>\$442,405</b>

Source: Auditor generated from USTAR records

---

<sup>26</sup> The two Energy Research Triangle grant programs were both administered jointly by OED and USTAR during fiscal years 2015 and 2016. Beginning fiscal year 2017, these grant programs are now fully under the management of USTAR.

## **OED Granted \$194,000 from PVE Funds to Energy Efficiency Projects**

OED has granted nearly \$194,000 of PVE money for energy efficiency and renewable energy projects through their state energy program. The use of PVE funds, which originated from settlements between the United States and oil companies, are overseen by the U.S. Department of Energy to ensure alignment with states' energy plans. PVE funds are considered a state resource and are restricted funds.

OED was given administration of the existing funds in 2014 with the direction to spend the funds on energy efficiency, renewable energy, and transportation projects. In 2016, OED was given direction again to spend the funds more specifically on energy efficiency and renewable energy projects. Since receiving the PVE funds, OED has provided grants for 14 energy efficiency and renewable energy projects for a total of \$193,658 to both public and private entities.

## **OED Manages the U-SAVE Loan Program That Incentivizes Energy Efficiency Projects**

While the U-SAVE loan program has issued federally-funded loans in recent years, no new state-funded loans have been disbursed since fiscal year 2010. However, this program has outstanding state-funded loans totaling \$308,721.<sup>27</sup> Once the loans are repaid, the program will continue to loan funds for energy-related projects. The U-SAVE loan program provides low-interest loans for energy-related retrofits and enhancements (such as funding efficient lighting and heating systems) of buildings owned by school districts, cities, and counties. All five outstanding loans have a zero percent interest rate and have no late fees.

Most state-funded grants and loans that incentivize energy projects came from grant and loan programs that are not specifically focused on energy. This highlights the indirect effects of these incentives, specifically on energy development or energy efficiency initiatives, and thereby the difficulty of tracking all energy incentives (discussed further in Chapter V of this report).

---

**PVE funds come from settlements between the U.S. and oil companies, to help fund state energy plan activities.**

---

---

**U-SAVE provides low or no interest loans for energy-related retrofits and enhancements to buildings.**

---

---

<sup>27</sup> These outstanding state-funded loans are applicable as of August 31, 2017.

**This Page Left Blank Intentionally**

## Chapter IV

# Other Programs Play a Significant Role in Incentivizing Energy

The Public Utilities, Energy, and Technology Interim Committee requested information about all types of energy incentive programs. Incentive programs significantly contribute to expanding and developing Utah's energy portfolio and span both state-regulated and state-funded programs. We found that utility programs, which are state-regulated, spent \$438.6 million on energy efficiency programs between years 2012 and 2016.<sup>28,29</sup> Other state programs offer specialized incentives. Identified administrative costs totaled at least \$3.4 million, while other programs' administrative costs were not quantified.

Figure 4.1 shows a total of \$442.5 million spent on other types of state-funded or state-regulated energy incentive programs.

---

**Incentive programs significantly contribute to expanding and developing Utah's energy portfolio and span both state-regulated and state-funded programs**

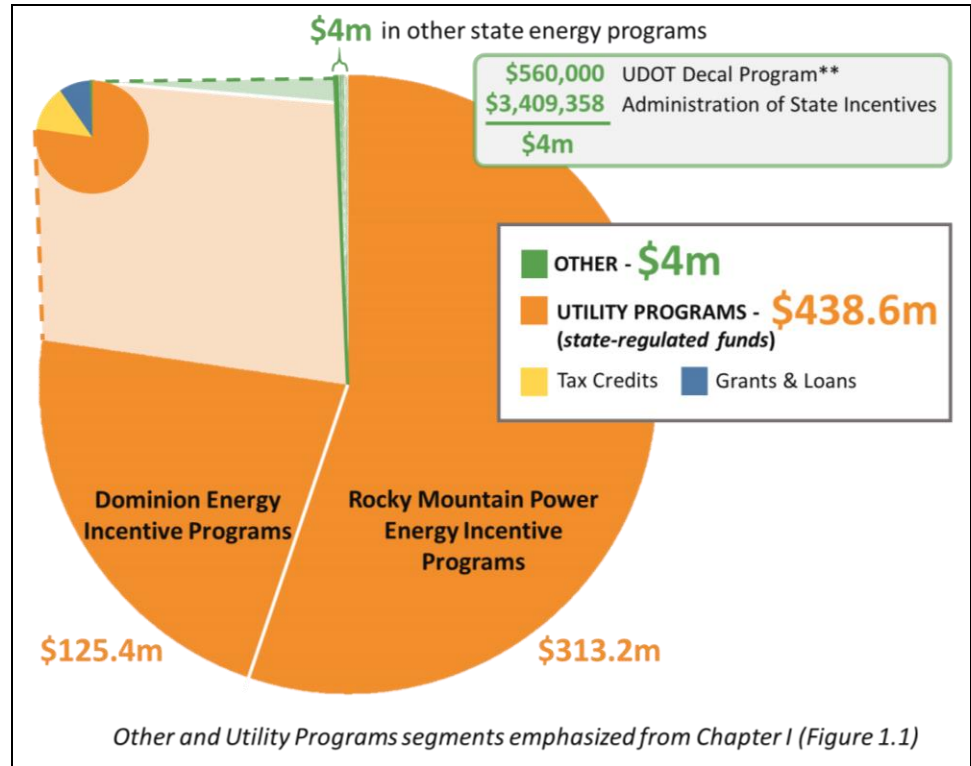
---

---

<sup>28</sup> At the time of this audit, the most recent five-year period of available data from the utilities was between *calendar years* 2012 and 2016. From state agencies, the most recent five-year period of available data was between *fiscal years* 2012 and 2016.

<sup>29</sup> These costs include the costs of program administration, management, and rebates/incentives paid to customers.

**Figure 4.1 Between 2012 and 2016, Other State-funded or State-regulated Energy Incentive Programs Spent \$442.5\* Million.** The state-regulated programs make up most of energy incentive totals.



Source: Auditor generated  
 \*Numbers in this figure may not add up due to rounding.  
 \*\*UDOT Decal Program figure only represents year 2016.

### Utilities’ Energy-Incentivizing Programs Cost \$438.6 Million

The two dominant statewide energy utilities, PacifiCorp and Dominion Energy,<sup>30</sup> spent \$438.6 million (\$313.2m + \$125.4m) on energy efficiency programs from years 2012 through 2016.<sup>31</sup> Utility

<sup>30</sup> PacifiCorp does business as Rocky Mountain Power (RPM) in Utah, and Dominion Energy was formerly Questar Gas.

<sup>31</sup> These energy efficiency programs are a part of long-term resource planning by the utilities to meet current and future energy needs at the lowest total cost. Before the Public Service Commission approves these energy efficiency programs as being in the public interest, they require that the cost-effectiveness of these programs is evaluated to ensure that ratepayers receive benefits that equal or exceed program costs.

companies pay for these programs from the revenues earned on the rates charged to customers through state-approved tariffs. Revenues received by the utility from customer rate charges are not considered state funds; however, they are state-regulated.

### **Public Service Commission Regulates the Utilities**

The Public Service Commission (PSC) regulates and approves all utility rates for utilities referenced in this report. Rates must be determined by the PSC to be in the public interest, just, and reasonable, and are established through a tariff (or contract) between the utility and the customer. Because of the monopoly power granted to these utility companies, the PSC must judge and approve any new or amended utility tariff or program to be in the interest of the public.

We included the utilities' energy efficiency program expenditures in this report because although these programs are not funded with state dollars, the rates charged to customers is reviewed, approved, and regulated by the state. These programs would not go forward without state approval and determination that the public's interest has been appropriately served.

There are additional, or recently enacted, utility energy efficiency programs that are not represented in this report.<sup>32</sup> For example, the Sustainable Transportation and Energy Plan Act, (Senate Bill or S.B. 115) was passed during the 2016 Legislative General Session. S.B. 115 is a comprehensive energy bill that authorizes additional requirements and flexibility for utilities pertaining to several programs. For example, S.B. 115 requires the PSC to authorize large-scale electric utilities to spend up to \$2 million annually for an electric vehicle incentive program. S.B. 115 also authorizes the utility to add a combined line item charge on customers' bills for a utility to recover certain costs including the costs of demand-side management programs. RMP's Wattsmart and Dominion Energy's Thermwise are examples of two programs that account for the utilities' energy efficiency programs.

---

**Rates charged of  
utility customers have  
been state-approved.**

---

---

<sup>32</sup> There are programs that have recently been adopted in legislation that have yet to be approved by the PSC.

---

**Rocky Mountain Power's energy efficiency programs have included Wattsmart and the Utah Solar Incentive Program.**

---

### **RMP's Energy Efficiency Programs Cost \$313.2 Million**

Between 2012 and 2016, RMP reports that energy efficiency programs cost \$313.2 million. This includes programs such as Wattsmart and the Utah Solar Incentive Program (USIP). Wattsmart offers cash and other incentives to customers (both residential and non-residential) to assist in saving energy and reducing environmental impact. Some of the cash discounts and incentives involve cash back and discounted prices for high-performance water heaters, qualified LED light bulbs, and other heating and cooling services and equipment.

Another incentive program offered by RMP during years 2012 through 2016 was USIP. This program was designed to incentivize the installation of roof-top solar panels through a rebate based on the wattage generated by the customer's panels. USIP cost RMP over \$12.5 million between 2012 and 2016. Nearly \$11.5 million of that cost was the incentive to customers who installed solar generation equipment after being accepted into the program. Through S.B. 115, USIP ended on December 31, 2016 and RMP is no longer accepting applications for the program.

### **Energy Efficiency Programs for Dominion Energy Cost \$125.4 Million**

Dominion Energy has demand side management (DSM) programs to encourage residential and commercial customers to purchase and install energy-efficient products and appliances. These programs cost \$125.4 million between 2012 and 2016. The programs include appliance, building, and weatherization rebates, and home energy plans. Much of the work of the Division of Facilities Construction and Management's (DFCM) energy program has been to process and collect on the rebate and incentive programs of both Dominion Energy and RMP.

---

**Dominion Energy's programs encourage customers to purchase and install energy-efficient products and appliances.**

---



**A Program to Recover the Cost of Natural Gas Fueling Stations Has Gone Unused but is Still Available.** Passed in the 2013 Legislative General Session, Senate Bill 275 (S.B. 275) provided an opportunity for gas corporations to recoup the cost of construction, operation, and maintenance of natural gas fueling stations. The intent of this bill was to “develop options and opportunities for advancing and promoting measures designed to result in cleaner air in the state through the enhanced use of alternative fuel vehicles.”

In general, an incremental surcharge will be assigned to all rate-paying customers of the gas corporation through a utility bill. The PSC determines the surcharge amount. The cost-recovery is capped at \$5 million per year, with the possibility to exceed that cap if the PSC approves a higher amount. However, this provision to exceed the \$5 million cap will sunset on July 1, 2018. This program has never been exercised by a gas corporation, but is still available.

---

**The \$5 million cap on cost-recovery for natural gas fueling stations will be lifted in 2018.**

---

### **Other State Programs Offer Specialized Incentives**

Two<sup>33</sup> additional programs that do not qualify as tax, grant, or loan incentives also provided energy incentives. During fiscal year 2016, the Utah Department of Transportation’s (UDOT) clean fuel vehicle decal program provided at least \$560,000 towards incentivizing energy. The Governor’s Office of Energy Development’s (OED) C-PACE<sup>34</sup> program provides finance mechanisms for energy-efficient upgrades. This audit’s Appendix addresses five additional programs that may also provide energy incentives; however, we did not specifically determine the programs’ contribution to incentivizing energy.

---

<sup>33</sup> We did not include one additional incentive administered by the Utah Department of Commerce’s Division of Occupational and Professional Licensing, due to its small purview. This incentive authorizes 16 contractor licenses to install solar panels without holding an electrician’s license.

<sup>34</sup> C-PACE stands for Commercial Property Assessed Clean Energy.

### **UDOT's Clean Fuel Vehicle Decal Program Provided an Energy Incentive Of \$560,000 in Fiscal Year 2016**

UDOT's clean fuel vehicle decal program allows a clean fuel vehicle to travel in lanes designated for the use of high occupancy vehicles (HOV) regardless of the number of occupants. Clean fuel vehicles must meet specified emission standards. Due to time constraints, we were only able to estimate the potential benefit received by decal holders for fiscal year 2016.

At the end of fiscal year 2016, there were 6,588 decal holders able to drive in the HOV lane without paying the toll.<sup>35</sup> To find the value of this benefit we reviewed the number of express lane toll customers (those who pay each time they use the HOV lane) to the revenue they generate when exercising the toll.<sup>36</sup> In 2016 there was an average of 13,056 express pass (toll) holders. \$1,108,526 in total revenue was collected from passholders in fiscal year 2016. Therefore, on average, each passholder paid about \$85<sup>37</sup> in 2016 to use the HOV lane. Therefore, extending the per customer cost to decal holders results in a benefit of about \$560,000 a year.<sup>38</sup>

### **OED's C-PACE Program Provides Finance Mechanism for Commercial Energy-Efficient Upgrades**

OED's C-PACE program provides personnel, training, and expertise for commercial property owners to secure funding for energy efficiency, renewable energy, or water conservation upgrades. OED's personnel costs to administer this program are covered mainly by federal monies. However, according to OED, within the next year there will be a one-time \$50,000 expenditure from Petroleum Violation Escrow funds (PVE) to help manage some recent program changes.

---

**The clean fuel vehicle decal program allows fuel-efficient cars to use the HOV lane with less than two occupants in the car.**

---

---

**The C-PACE program assists commercial property owners in securing funding for energy upgrades with mainly federal funds; however, PVE funds will be used in the future.**

---

---

<sup>35</sup> The price of the decal is a one-time purchase of \$10 each. Therefore, at some point (we are unsure of when each decal was purchased) UDOT recognized \$65,880 in revenue attributable to decal sales.

<sup>36</sup> For this calculation, we assumed that decal holders would have used the HOV lane with the same frequency as toll customers.

<sup>37</sup> The calculation is  $\$1,108,526 / 13,056 = \$84.91$ , rounded to \$85

<sup>38</sup> The calculation with rounding is  $\$85 * 6,588 = \$559,980$

## **Identified Administrative Costs Totalled At Least \$3.4 Million, While Others Were Not Quantified**

We compiled administrative costs associated with nine agencies that manage the energy-incentivizing programs we reviewed in this report. Costs to administer the energy incentive programs for these nine agencies was at least \$3.4 million. We were unable to determine the associated administrative expenses on five other agencies due to several factors, including the agencies' unique relationship to the programs, different agency funding mechanisms, or the size of the program was too small to allocate administrative costs.

### **Costs to Administer Energy-Incentivizing Programs for Nine Agencies Was At Least \$3.4 Million**

To capture as much of the cost of energy-incentivizing programs as possible, we collected the administrative costs attributable to nine agencies' management of the programs between 2012 and 2016. The following is a list of the agencies and respective administrative costs associated with their management of energy-incentivizing programs between fiscal years 2012 and 2016.

1. DFCM manages the State Building Energy Efficiency Program (SBEEP) as discussed in Chapter III. DFCM has maintained SBEEP administrative cost records separate from other division administrative costs. DFCM's actual expenditures to manage the SBEEP program were \$1,942,622. Among other duties, the SBEEP staff finds efficiencies in all state-owned facilities. Staff does the legwork necessary for state-owned buildings to be able to collect rebates and other incentives from the utility companies.<sup>39</sup>
2. The Division of Air Quality estimates administrative costs for the tax credit approvals and grants and loan administrative programs they manage to be about \$674,494.
3. OED manages multiple energy incentive programs. They report that much of the administrative expenses are covered by

---

**Administrative costs include staff time spent managing energy incentive programs.**

---

---

<sup>39</sup> The total rebates and incentives that DFCM attributes to the efforts of their SBEEP group, between fiscal years 2012 and 2016, are about \$5 million. This sum is reflected within the utility energy efficiency program costs shown in Figure 4.1.

federal funds. However, they estimated spending \$437,669 of state funds on OED energy incentive programs.

4. The Division of Oil, Gas and Mining (DOGGM) estimates the administrative costs associated with managing energy-incentivizing DOGM programs, such as enhanced oil recovery and wildcat well production (discussed in Chapter II), total about \$150,000.
5. The Utah Science Technology and Research Initiative (USTAR) estimated that \$98,344 was spent on the administration of grant incentives for energy-related projects.
6. The Permanent Community Impact Fund Board estimates the administrative costs to manage the energy-incentivizing Seep Ridge Road project (discussed in Chapter III) was approximately \$45,760.
7. UDOT's Clean Fuel Decal Program staff estimated that, for fiscal year 2016 (which is the only fiscal year we evaluated for this program), administrative costs to manage the program total about \$43,680.
8. The Division of Drinking Water (DDW) hired an intern for \$13,869 in fiscal year 2016 to assist in developing plans to implement energy efficiency strategies and other energy-related projects.
9. The Department of Environmental Quality estimates the costs of administering the grant to UCAIR to be \$1,800.

### **Some Applicable Administrative Costs Were Not Quantified**

We believe it would not be prudent, or may not be possible, to allocate the administrative cost of some agencies' involvement in energy-incentivizing programs. The following is a list of the agencies that we did not allocate administrative costs and the reasons why.

- The Utah State Tax Commission's management of programs that incentivize energy is no different from the duties they perform to administer and supervise all tax laws of the state.

- PSC administrative costs are funded by a fee paid for by the utilities and the utilities' DSM administrative costs are covered by tariff rates.
- We believe the administrative costs associated with managing the energy incentives for the following agencies are minimal: 1) DDW's loan program, and the 2) Governor's Office of Economic Development.
- The Utah Department of Agriculture and Food was unable to isolate the administrative costs associated with their loan program incentivizing energy.

**This Page Left Blank Intentionally**

## Chapter V

# Monitoring the Effectiveness of Energy Incentives Needs More Guidance

As part of the audit request, Legislators expressed a desire to understand the qualitative nature of the energy incentives, questioning if some incentives have served their purpose and what metrics are available to evaluate the incentives. Although agencies may be internally tracking some program metrics, few of the energy incentives we reviewed have state reporting requirements that could monitor energy-related effectiveness. The lack of reporting requirements prohibits the state from monitoring the effectiveness of these energy incentives and if they are accomplishing any type of energy goal.

The Governmental Accountability Office (GAO) states that “performance measurement is the ongoing monitoring and reporting of program accomplishments, particularly progress toward pre-established goals.” In order to do this, program intent must be identified as that is critical to measuring it against any goals. And, once the program’s purpose and goals are established, appropriate measures can then be created to enable useful evaluation. Due to the vast number of energy incentives reviewed, much of the time spent on this audit was spent simply identifying and understanding the programs. Once programs were identified, we struggled to find reporting requirements with metrics that isolate the value or benefit of the energy incentive. In part, this could be due to incentivizing energy not being identified as a program’s goal, as discussed next.

### Identifying Program Intent is Critical to Measuring Its Success

During the audit, we contacted some agencies that did not initially recognize their program as providing an energy incentive. However, most agencies were aware that incentivizing energy was a part of the nature of their program. The complication arose in determining programs that specifically track and measure outcomes relative to the program’s intent on providing an incentive specific to energy, such as, the effect of how the program influenced the use of a particular type of energy.

---

**Few of the energy incentives we reviewed have reporting requirements that could monitor energy-related effectiveness**

---

---

**Identifying that a program provides an energy incentive is critical to establishing performance metrics.**

---

GAO stresses that identifying an incentive's purpose is a necessary first step in determining how an incentive's performance should be assessed. Hence, identifying a program's goal of incentivizing energy is critical in order for energy-related performance metrics to be determined and monitored.

### **Tracking Energy Incentives Is Not Centralized**

Perhaps one reason why a program is not specifically measured for its value in incentivizing energy is that the energy incentives are managed under more than a dozen agencies. We believe that, in theory, it may be easier to identify energy incentives if they are all tracked by a centralized group. However, we contacted seven other states<sup>40</sup> and found that Utah is not unique in the lack of centralized energy incentive information. Six of the seven states explained that there is no central agency for managing energy incentives in their state, but rather that their energy incentives are fragmented over multiple agencies.

Nevada was the only state we contacted that has a more centralized knowledge base for energy incentives. However, Nevada differs from Utah in that they do not have an income tax. A large portion of state energy incentives reside with income tax for Utah. In addition, Nevada is not a petroleum producing state. Utah's incentives to the petroleum industry, through tax and other programs, are large. According to an economist from Utah State University, a lack of centralized energy incentive information and management is not uncommon nationwide. Therefore, we do not believe centralization is the main problem behind why these programs are difficult to track.

### **A Program May Have Multiple Purposes, Which Complicates Isolating Energy Incentive Outcomes**

Perhaps a greater influence on the difficulty of finding energy-incentivizing program metrics is that a program may have multiple purposes and incentivizing energy may not have been a primary goal. GAO, as well as an economist we spoke to from Utah State University, stated that programs may not have a clear purpose

---

<sup>40</sup> We contacted Colorado, Idaho, Montana, Nevada, New Mexico, Texas, and Wyoming.

---

**Utah is not uncommon in its decentralization of energy program monitoring.**

---



and may in fact have multiple desired outcomes, purposes, or priorities. For example, a single incentive may have been implemented for multiple purposes, such as economic relief for a particular industry, environmental impact, social impact, or others. Because the purpose or intended outcome of an incentive needs to be identified before accurate performance assessments can occur, programs with unclear purposes or unintended outcomes can complicate the effort to evaluate the performance of an incentive program.

For example, a tax credit for installing solar panels could have multiple differing purposes. Purposes could include supporting a specific energy industry (solar), creating jobs, general economic development, lowering carbon emissions, or some or all of the above. The desired purpose, identified at the program's commencement, will determine which kind of performance metrics will be used to monitor the incentive (companies created, jobs created, emissions reduced, etc.).

### **The Energy-Incentivizing Purposes Of a Program May Not Be Evident**

The energy-incentivizing aspects of a program may not be apparent. An example of this is the Permanent Community Impact Board (CIB), which is established to mitigate impacts of mineral development. There is nothing identifiable in *Utah Code*, administrative rules, or program description that would highlight CIB as having an energy-incentivizing purpose, and therefore may be overlooked as such. However, a review of projects and comments from CIB board members express an intended purpose to incentivize the energy development industry.

Providing an energy incentive might be what GAO terms a "side effect" of the main activities. Energy-incentivizing purposes can simultaneously operate with other purposes within a single program, and may not always be evident or determined as the main goal. If the energy-incentivizing purpose is not identified, it is unlikely that it will be monitored for energy-related performance.

Despite the complications in identifying an incentive program as energy-incentivizing, GAO suggests that performance measures can be responsive to multiple priorities, and that common evaluation questions should ask what the important side effects of their programs are to capture all potential outcomes. Once purposes or outcomes are

---

**Programs with energy incentives may serve multiple purposes.**

---

---

**Providing an energy incentive may be a side effect of a program's main activities.**

---

identified as energy-incentivizing, then useful performance monitoring can occur.

### **Some Energy Incentives Do Not Have State Reporting Requirements**

When programs are not specifically identified as providing an energy incentive, they lack specific requirements to report on outcomes relative to the incentive. For example:

- The Division of Air Quality is not required to report metrics on their loan and grant programs, but have voluntarily provided incentive information in their annual report. They have also periodically included information about their programs in reports to Legislative committees.
- The Division of Oil, Gas and Mining representatives have sent reports to their board and the Legislature when requested. They also publish monthly well production data, but create no specific reports to show the effect of the incentives.
- The Governor's Office of Energy Development (OED) reports that the U-Save, C-PACE, and State Energy Program PVE grants do not have specific state reporting requirements. However, they do report the impact and effect of these programs to the U.S. Department of Energy because of the programs' connection with federal monies and the State Energy Program.

Reporting requirements that allow ongoing measurement of performance are important. As GAO states, ongoing performance measurements,

[...] can serve as an early warning system to program management and as a vehicle for improving performance and accountability to the public. Information about the extent to which an intended purpose is being met can also contribute towards broader evaluations... of how well a program is working and actions that could be taken to improve results.

---

**Program performance measures can help improve accountability to the public.**

---

## Once Identified as Energy-Incentivizing, Appropriate Measures Can Be Created to Enable Useful Program Evaluation

We found that few of the energy-incentives we reviewed are required to report specific energy-incentivizing information. Performance metrics designed specifically for the type of energy-related activity that is being incentivized can begin to answer important questions, such as:

- Does the incentive accomplish its energy-incentivizing purpose?
- Does the energy incentive generate the desired benefits for society?
- Do the benefits exceed the costs of the incentive?
- Do the accomplishments of the incentive overlap, duplicate, or coordinate with other energy-related efforts?

These questions provide useful information that can aid policymakers in reviewing an incentive's effect. For example, providing a tax break or rebate for one industry may counter incentives for another industry. According to one economist, if these countervailing incentives are trying to change an industry's market share they generally net each other out. Similarly, regulation or taxation of an industry may be a negative incentive, but that is not always recognized.

GAO states that, "to appropriately assess program effectiveness, it is important, first, to select outcome measures that clearly represent the nature of the *expected program benefit* [and] cover key aspects of *desired performance*..." [emphasis added]. Thus, once incentives have been identified as having an energy-incentivizing purpose or outcome, effective performance metrics, specific to those energy-related purposes, can be assigned.

The Environmental Protection Agency's (EPA) publication on energy efficiency best practices emphasizes that "Program evaluation helps optimize program efficiency and ensure that energy efficiency programs deliver intended results." We believe this principle can be applied to energy-incentivizing programs. The EPA suggests that best practices for ensuring programs deliver results include: budgeting, planning, and evaluating from the beginning of the program;

---

**We found that few of the energy incentives we reviewed are required to report specific energy-incentivizing information.**

---

---

**The EPA states that program evaluation helps ensure intended results are delivered.**

---

---

**A lack of energy-related metrics prohibits the state from monitoring whether energy incentives are effectively accomplishing desired goals.**

---

developing program tracking systems; conducting process and impact evaluations; and communicating the results to key stakeholders.

### **Few Incentives Report Specific Energy-Related Information**

Few of the energy incentives we reviewed have reporting requirements that could monitor energy-related effectiveness. While some incentives may be required to report basic financial metrics, which is an important step to measuring the effectiveness of an incentive, most of the incentives lacked the requirement to report specific evaluative criteria or energy-related metrics. This lack of energy-related metrics may be due to a program having multiple purposes or having an energy-incentivizing side-effect, as discussed earlier. This prohibits the state from monitoring whether these energy-incentivizing programs are effective and accomplishing any type of energy goal. For example:

- House Bill 3001 (H.B. 3001) from 2016's Third Special Legislative Session requires some energy-incentivizing tax credits be regularly reviewed, on revolving three-year cycles, by the Revenue and Taxation Interim Committee. In addition to reviewing the cost of the credit to the state, the committee is also required to review the purpose, effectiveness, and extent to which the state benefits from the credit. While this requirement is more comprehensive than many others, if the Legislature desires to understand the credits' effect specifically on incentivizing energy, there are no specific metrics to do so. Several tax credits we reported in this audit are included in the committee's schedule of credits to be reviewed beginning on or before November 30, 2017, 2018, and 2019, respectively as required in law, including the commercial and residential renewable investment, clean fuel vehicle, qualifying solar project, and production tax credits.
- The CIB is required to report annually to the Governor and Legislature regarding their program's goals, challenges, achievements, and other relevant information. However, there are no energy-related measures required in this reporting.
- The Utah Science Technology and Research Initiative (USTAR) is required by statute to annually report on their grant programs. Some of the metrics required from these grant

programs for their annual report include: sales revenue from USTAR-supported products or technology, publications in which a USTAR-supported researcher participated, and number of jobs created by a private entity that receives USTAR support. While these metrics appear to measure the effectiveness of USTAR and its programs, they are not specific to energy-related activities. This is likely due to USTAR's grant programs not being specific to incentivizing energy. USTAR's annual report is required to be submitted to the Business, Economic Development, and Labor Appropriations Subcommittee; the Economic Development and Workforce Services Interim Committee; the Business and Labor Interim Committee; and the Governor.

We found that two programs do provide more evaluation of their energy-incentivizing program.

- OED is required to report the results of the Alternative Energy Development Tax Credit to the Public Utilities, Energy, and Technology Interim Committee. Part of this report is the economic impact to the state, including the resulting related state revenue from the alternative energy projects that received the credit. This metric is more of a direct evaluation of the impact of this specific energy-incentivizing tax credit. It attempts to evaluate the economic growth encouraged by the credit. This allows for a measure of effectiveness.
- The Division of Facilities Construction and Management annually reports to both the Infrastructure and General Government Appropriations Subcommittee, and the Government Operations Interim Committee. Reported items include the strategies, goals, and previous years' results of energy savings achieved on their grant and loan programs.

### **Examples from Two Other States' Programs Offer Some Guidance**

In reaching out to other states' energy offices, we found that two states have energy incentives which they collect very specific data on. These programs in Wyoming and Colorado offer examples of specific metric tracking for energy incentives.

---

**Two programs managed by OED and DFCM provide a more direct energy-incentivizing evaluation of effectiveness.**

---

- In Wyoming, the State Energy Office provides grants to local governments and small businesses to help pay for energy audits and energy retrofits (such as lighting upgrades, insulation upgrades, and more). Grantees are required to provide the office with their energy savings via kilowatt hours from recent years.
- Colorado's energy office provides grants for electric vehicle charging and compressed natural gas (CNG) fueling stations. From these stations, they track the number of charges, kilowatt hours dispensed, or gasoline gallon equivalents.

Metrics specific to these energy activities allow these states to better calculate performance of these incentives. We therefore recommend that if the Legislature desires more qualitative metrics, specific to energy incentives, it could consider encouraging agencies to develop metrics to help determine the effectiveness of their energy incentive programs.

### **Recommendation**

1. We recommend that if the Legislature desires more qualitative metrics, specific to energy incentives, it could consider encouraging agencies to develop metrics to help determine the effectiveness of their energy incentive programs.

# Appendix

**This Page Left Blank Intentionally**



## Appendix

During the audit we reviewed an additional five programs that we believe could be considered as offering energy incentives. However, we did not specifically determine the programs' contribution to incentivizing energy. These five programs are described in this Appendix.

### **First: UGS Spent Over \$15.5 Million Which May Facilitate Energy Development in Utah**

The Utah Geological Survey (UGS) is commissioned in *Utah Code* Title 79 to survey energy resources, including their economic contents, values, uses, kind, and availability in order to facilitate their economic use. Additionally, UGS receives about 20 percent of their revenue from mineral lease funds (as of fiscal year 2016), which carries a specific charge to use the funds for the development and exploitation of natural resources in the state. UGS provides many services that may promote energy development, such as:

- Mapping and evaluating oil shale deposits, shale oil reservoirs, coal deposits, geothermal resources, oil and gas reservoirs, and energy-related mineral deposits such as uranium
- Managing the Core Research Center, which provides drill hole samples to extractive resource companies for their surveying and research
- Training professionals in the energy development industry regarding Utah's energy resources and promoting information exchange between energy development companies.

UGS reported that between fiscal years 2012 and 2016, they spent over \$14 million on activities which may facilitate energy development in Utah. UGS also reports that over \$1.5 million was spent on the administration for these activities during the same time period.

### **Second: USTAR May Provide Additional Support to Energy Research**

USTAR also provides training and mentoring to Utah-based technology startup companies and research teams through their incubator program. However, USTAR reports that they have not keep track of mentoring/training hours per company. Therefore, we are unable to quantify any training/mentoring time that may have been directed toward energy-related research and companies.

### **Third: DFCM Has Spent \$1.5 Million Establishing Utility Metering for All State-Owned Buildings**

In the 2015 Legislative General Session, the Division of Facilities Construction and Management (DFCM) was directed to implement a process to begin measuring the utility usage and cost for state-owned facilities through a metering program. The intent is to allow DFCM to monitor the utility costs of each state-owned building, as well as the consumption and demand. It will also allow DFCM to determine how valuable the utilities', Rocky Mountain Power (PacifiCorp) and Dominion Energy (formerly Questar), energy efficiency programs are to the state.

According to DFCM representatives, the total cost of the program was expected to be around \$16 million. Total funding allocated for fiscal year 2016 (the first year of the program) was \$1.5 million. For fiscal years 2017 and 2018, a total of \$1.3 and about \$1.7 million, respectfully, has been allocated.

### **Fourth: SITLA's Royalty Rates for Oil Shale and Oil Sands are Encouraging for Development**

The Utah School and Institutional Trust Lands Administration (SITLA) has an established royalty program for oil shale and oil sands that may be seen as an incentive to the industry. SITLA, which manages 3.4 million acres of trust lands primarily for the support of Utah's public schools, requires royalties of the energy products developed on trust lands. Conventional oil development leases on SITLA have a minimum royalty rate of 12.5 percent (with most being around 16 percent). Royalty rates for oil sands and oil shale leases, however, have a minimum royalty rate of eight percent or five percent, respectively, and a maximum of 12.5 percent. Oil shale and oil sands leases reportedly have lower royalty rates due to higher upfront costs, despite having a similar end product as conventional oil development.

An extensive study by the BLM in 2008 regarding royalty rates for oil shale found that Utah's oil shale royalty structure to be the most compliant with the 2005 Energy Policy Act, in that the royalty rates encourage development of the oil shale resources. The study states that a flat 12.5 percent royalty rate may prohibit oil shale to be competitive with traditional oil development. Hence, SITLA's lower royalty structure, perhaps adapted in consideration for a costlier method of developing oil, may be considered an incentive. SITLA has issued 24 oil sands and 37 oil shale leases (as of June 2017). However, because there has been no commercial production of oil shale/sands, no royalties have ever been paid from these leases.

### **Fifth: Tar Sands Pilot Plant Act May Be Obsolete**

In 1980, the Utah Legislature created the Tar Sands Pilot Plant Act for the purpose of stimulating and encouraging the development and commercial production of tar sands. Along with the pilot's enactment was a \$500,000 appropriation. The act was renumbered in 2008 under *Utah Code* 63M-3. The act still exists in law today. However, we were not able to identify if any action resulted from the pilot program or the appropriation.

This project and the appropriated funding were placed under the management of the State Advisory Council on Science and Technology. We attempted to learn about the pilot project to see if there has been any recent activity. We contacted three former State Science Advisers (who were members of the council). However, none of the parties remembered the project or knew what became of the appropriation.

**This Page Left Blank Intentionally**

## **Agency Responses**

**This Page Left Blank Intentionally**



GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

## Office of the Governor

LAURA NELSON, Ph.D.  
Energy Advisor  
Executive Director

November 8, 2017

Mr. John M. Schaff  
Legislative Auditor General  
W315 State Capitol Complex  
Salt Lake City, Utah 84114

Dear Mr. Schaff,

The Governor's Office of Energy Development (OED) appreciates the opportunity to review and respond to A Performance Audit of State Energy Incentives (Report # 2017-14). OED's mission is to advance Utah's energy and minerals economy through effective implementation of State Energy Policy and other statutory obligations found generally in Utah Code Title 63M, Chapter 4. As part of these obligations, OED supports the development of Utah's abundant energy and minerals resources, and the effective delivery of affordable, reliable and stable energy sources to support the State's thriving economy. Recognizing the limited amount of time we were afforded to respond to the audit, our comments are intended to provide meaningful input and context to the Audit report assumptions and recommendations as they relate to evaluative measures, legal authority, and utility energy efficiency programs.

### *Evaluative Measures*

In implementing the statutory obligations for the incentive programs assigned to it, OED tracks a number of meaningful performance measures that provide important information regarding the achievement of statutory objectives. When appropriate, OED also tracks additional performance measures, such as jobs created. However, it is important to remember that in collecting information and tracking performance, a state agency is limited by its statutory authority in establishing its reporting requirements.

OED certifies that a variety of statutory requirements are met before an incentive is awarded. Depending on the incentive, OED certifies that new state tax revenues have been generated, qualifying energy systems have been installed, and/or qualifying power is being produced. OED provides annual reports to the State Legislature, which include performance measures of its incentive programs. Specifically, as part of its Compendium of Budget Information (COBI) reporting, OED reports on the private investment leveraged from OED administered incentives. OED's COBI performance measures can be found on the Utah Legislature's Website.



While the Audit is correct in recommending that the impact of incentive programs on future state revenues should be carefully considered, the Audit should also account for the new state revenues that these future incentives are based upon. The impact of these state incentive programs on future state budgets can only be fully understood when the future state revenues that may be generated by the state incentive programs are also considered. For example, the two tax credit programs identified by the Audit for impact on future revenues that OED administers: The Alternative Energy Development Incentive; and, the High Cost Infrastructure Development incentive; are non-refundable, post-performance tax incentives. Tax credits for these programs are generally based on new state tax revenues generated. Therefore, it is incomplete to forecast the impact of these programs future tax credits, unless the corresponding tax revenues, which provide the basis for the tax credits, is also considered.

### *Legal Authority*

OED recommends that any new objectives of state incentives be established when the state incentive is created in statute. It is critical that state programs are evaluated based on their statutory purpose rather than some non-statutory standard. Therefore, OED recommends that any new standards or tracking requirements be codified. This will aid OED and other agencies in staying within the limits of their statutory authority when administering state incentive programs. The Audit also recommends that state agencies administering state incentive programs collect sensitive tax-payer information. It is important that clear statutory authority to collect this information first be established.

### *Energy Efficiency: a Least-Cost Energy Resource in Utility Resource Portfolios*

As shown in the pie chart in Figure 1.1, \$439 million dollars of the \$567 million dollars of state incentives come from state regulated utility energy-efficiency programs. These energy efficiency programs are part of an overall utility rate setting, and rate recovery process that is overseen by the Public Service Commission (PSC). These programs represent cost-effective resource decisions to ensure energy affordability, availability and reliability. The PSC are economic regulators, and energy efficiency programs have to demonstrate cost effectiveness as compared with other potential energy resources, including coal, natural gas and renewables. These energy-efficiency programs are approved or not approved based on a thorough cost-benefit review to determine if ratepayers receive quantifiable benefits equaling or exceeding the cost of the energy efficiency programs.

### *Conclusion*

OED is committed to advancing Utah's energy and minerals economy through effective implementation of State Energy Policy and its statutory incentive programs. The impact of incentive programs on future state budgets can only be fully understood when incentive costs are evaluated against economic development outcomes with their accompanying projected benefit to future state revenues. OED appreciates the opportunity to inform the Audit regarding the key issues of evaluative measures, legal authority and utility energy efficiency programs. OED supports the ongoing discussion regarding the value of state energy incentive programs, including better measurement of the benefits, as well as the costs of incentive



programs; clarifying the primacy of state statutory purpose and statutory legal authority for agencies implementing state statutory incentive programs; and, clearly distinguishing utility energy efficiency programs as regulated energy resource.

Sincerely,

A handwritten signature in black ink, appearing to read "Laura Nelson", with a long horizontal flourish extending to the right.

Dr. Laura Nelson  
Energy Advisor  
Executive Director

**This Page Left Blank Intentionally**



State of Utah

GARY R. HERBERT  
*Governor*

SPENCER J. COX  
*Lieutenant Governor*

## Utah State Tax Commission

JOHN L. VALENTINE  
*Commission Chair*

MICHAEL J. CRAGUN  
*Commissioner*

ROBERT P. PERO  
*Commissioner*

REBECCA L. ROCKWELL  
*Commissioner*

BARRY C. CONOVER  
*Executive Director*

October 26, 2017

John M. Schaff, CIA  
Auditor General  
315 House Building  
PO Box 145315  
Salt Lake City, UT 84114

Dear Mr. Schaff:

The Utah State Tax Commission has reviewed *Chapter II, Energy Incentives Through Tax Policies are Large and Growing with Many Unknowns*, in your draft audit report. We appreciate the opportunity to comment on your recommendations contained in the draft report.

### Recommendations

- 1. We recommend that the Legislature, working with the Utah State Tax Commission, consider requiring all agencies that certify energy-incentivizing tax credits to submit certification records, complete with identifying taxpayer information, to the Utah State Tax Commission.**

We agree with this recommendation and believe that having this information will improve the efficiency of our audit efforts.

- 2. We recommend that the Legislature, working with the Utah State Tax Commission, consider examining any overlapping credits to determine whether the incentivized energy activity should be eligible for multiple tax incentives.**

We will work with the Legislature to analyze any overlapping credits and implement any statutory changes they approve.

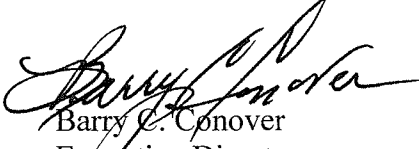
John M. Schaff  
October 26, 2017  
Page 2

- 3. We recommend that the Utah State Tax Commission and state agencies work with the Legislature to update statute and ensure that all tax exemptions are recorded in the tax code for tracking accuracy.**

We support the recording of all tax provisions in the tax code.

Again, we appreciate the opportunity to respond to the draft report and appreciate your efforts in improving state government.

Sincerely,



Barry C. Conover  
Executive Director



## State of Utah

GARY R. HERBERT  
*Governor*

SPENCER J. COX  
*Lieutenant Governor*

## Public Service Commission

THAD LeVAR  
*Chair*

DAVID R. CLARK  
*Commissioner*

JORDAN A. WHITE  
*Commissioner*

November 6, 2017

Mr. John M. Schaff  
Legislative Auditor General  
W315 State Capitol Complex  
Salt Lake City, Utah 84114

Dear Mr. Schaff,

Thank you for the opportunity to review and respond to the portions of “A Performance Audit of State Energy Incentives” (Report # 2017-14) that relate to the Public Service Commission of Utah (“PSC”). While the audit does not contain any specific recommendations directed to the PSC, I appreciate the opportunity to comment on the PSC approved programs discussed in the audit.

When looking at the pie chart in Figure 1.1, utility programs appear to eclipse all other state energy incentives. That pie chart must be considered in context of one important concept that underlies all the energy efficiency programs approved by the PSC: they must be justifiable based on cost-of-service principles. We require a robust review of the energy efficiency programs that applies multiple analyses to answer the single question: Do ratepayers receive quantifiable benefits equaling or exceeding the cost of the energy efficiency programs? If the required analyses do not answer that question in the affirmative, we cannot approve the program.

The PSC does not set policy; we are economic regulators. Absent a specific statutory mandate, we have no authority to use utility rates as a source of alternative tax revenue to implement or pursue policy goals. That axiom is crucial for these energy efficiency programs. While the utilities propose these programs to the PSC and implement them if approved, the utilities are not the source of the funding. Ratepayer funds are an initial source for the programs because ratepayers receive the benefits of the programs over time. Ultimately, though, the energy efficiency programs must pay for themselves.

As demonstrated in the required cost-of-service evaluations, the two utilities regulated by the PSC who implement energy efficiency programs in Utah utilize these programs as resources rather than solely as incentives. When planning for long-term resource needs, energy efficiency programs are evaluated similarly to resources such as electricity generating units or natural gas supply contracts.

The auditors have recognized and summarized these concepts in the following audit language:

“These energy efficiency programs are a part of long-term resource planning by the utilities to meet current and future energy needs at the lowest total cost. Before the Public Service Commission approves these energy efficiency programs as being in the public interest, they require that the cost-effectiveness of these programs is evaluated to ensure that ratepayers receive benefits that equal or exceed program costs.”

Thank you again for the opportunity to review and comment on portions of this audit.

Sincerely,



Thad LeVar, PSC Chair