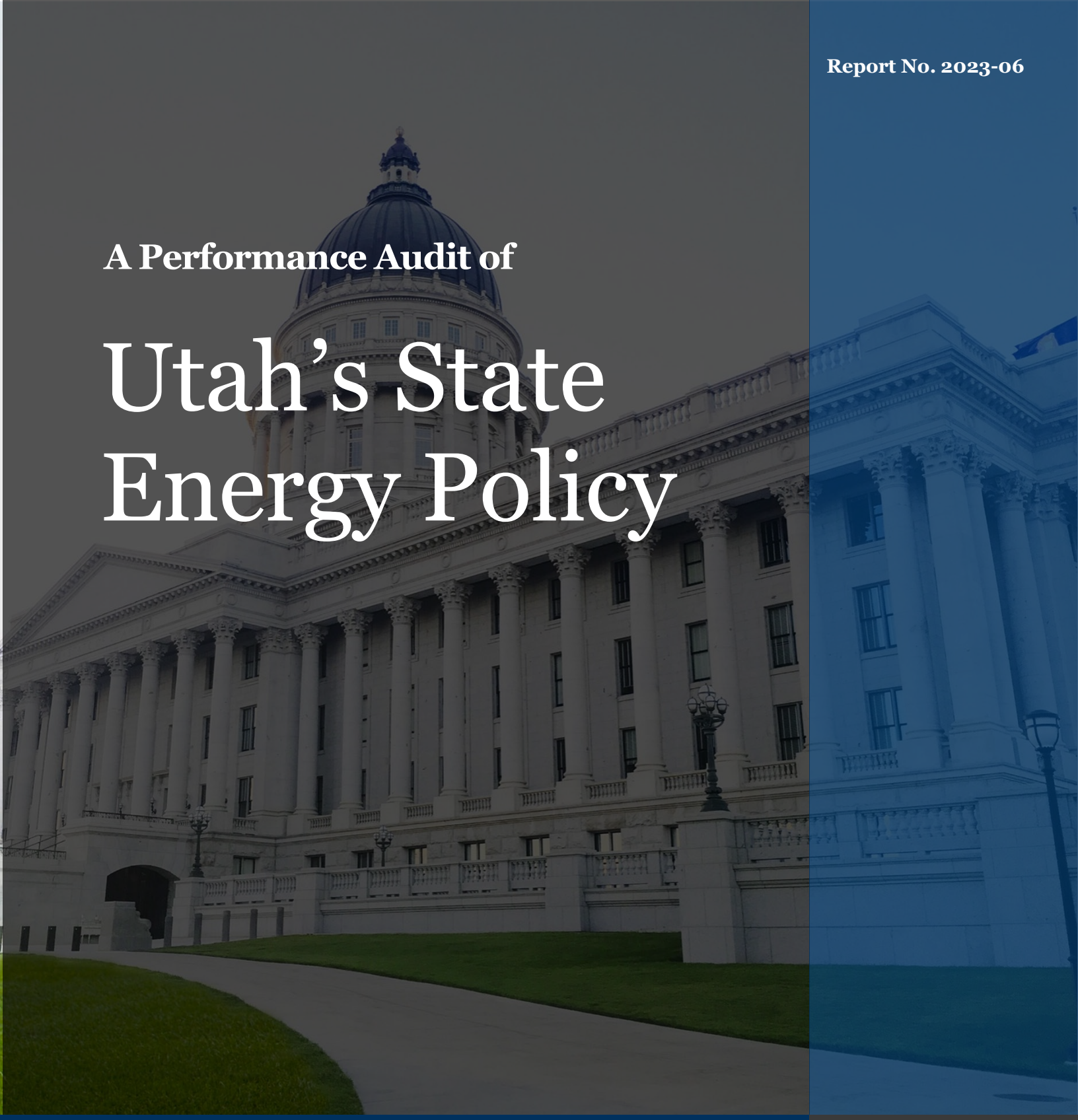
Report No. 2023-06



A Performance Audit of

Utah's State Energy Policy

Office of the Legislative Auditor General

Report to the **UTAH LEGISLATURE**

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June 13, 2023

TO: THE UTAH STATE LEGISLATURE

Transmitted herewith is our report:

"A Performance Audit of Utah's State Energy Policy" Report #2023 - 06.

An audit summary is found at the front of the report. The scope and objectives of the audit are included in the audit summary. In addition, each chapter has a corresponding chapter summary found at its beginning.

This audit was requested by President Adams.

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,

Kade Minchey

Kade R. Minchey, CIA, CFE

Auditor General

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LEGISLATIVE AUDITOR GENERAL

AUDIT SUMMARY
REPORT 2023-06 | June 2023

Office of the Legislative Auditor General | Kade R. Minchey, Auditor General

PERFORMANCE AUDIT

UTAH'S STATE ENERGY POLICY

AUDIT REQUEST

The Legislative Audit Subcommittee requested an audit of the state's policies on electricity generation. Through our audit work, we reviewed the State Energy Policy and the entity responsible for its implementation. We believe a review of the policy should also consider the strength of the planning and data used to make important energy related decisions. Despite great uncertainty within the industry, we found the state's planning for the energy future by the Office of Energy Development (OED) to be limited.

BACKGROUND

The Utah Energy Act created in 2006, maintains an "any of the above" State Energy Policy to provide energy that is *adequate, reliable, affordable, and sustainable*. The Utah Energy Act also codified the Office of Energy Development (OED) in 2011. The mandate of the office is to implement the State Energy Policy and serve as the primary resource for advancing energy and mineral development. The state energy plan, created by OED, has historically served to operationalize the State Energy Policy. Since its inception in 2011 the office has had five executive directors and various visions and direction for energy in the state.

KEY FINDINGS

- 1.1 The Energy System Is Changing and Transitions May Impact Resource Adequacy
- 1.2 Utah's Energy Is Heavily Influenced by Other States and the Federal Government
- 1.3 OED Can Do More to Understand Market Pressures and Risks with Existing Energy Sources
- 1.4 Utah's Energy Office Does Not Have Operational Goals, as Found in Other States
- 2.2 The Office of Energy Development Should Be More Proactive in Implementing the State Energy Policy
- 2.4 The Office of Energy Development Lacks Internal Governance to Fulfill Its Statewide Mandate

RECOMMENDATIONS

- We recommend that the Legislature consider amending the State Energy Policy to include data-driven modeling requirements by the Office of Energy Development at a statewide level.
- We recommend the Office of Energy Development include Legislative recommendations and long-term energy planning in their annual report to the Legislature.
- We recommend the Office of Energy Development develop goals, measures, and tracking to demonstrate accountability for office operations and to provide better direction moving forward.
- We recommend the Office of Energy Development establish stronger internal governance and inner-office continuity by updating job descriptions, policies and procedures, grant selection criteria, and standard operating procedures to better fulfill its mandate.

Summary continues on back >>

REPORT SUMMARY

Utah is at an Energy Crossroads and Needs Better Planning to Meet Future Energy Needs

International trends and pressures from the federal government and other states are driving an energy transition that impacts the state's "any of the above" energy policy. The Office of Energy Development will need to have a proactive plan that drives the state's specific energy priorities and alleviates impacts to affordability and reliability. To better mitigate risks presented in the future, we believe it is important for decision-makers to have a full understanding of the costs, benefits, and capabilities of energy sources.

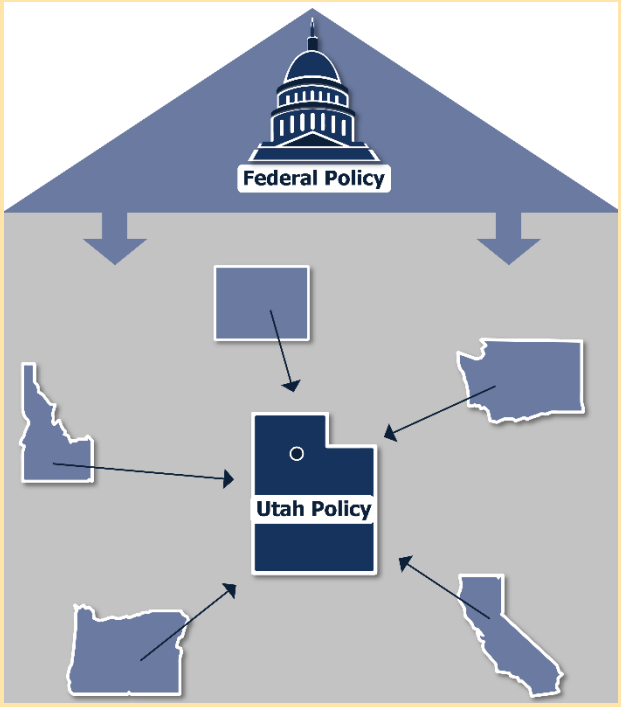
Utah's Office of Energy Development Needs to Provide Stronger Energy Direction to the State

OED can better serve its codified mission of implementing the State Energy Policy by being more proactive in promoting energy resources and providing research and information on emerging and current energy technologies for decision-makers. The office should develop better internal tracking and performance measures to ensure office accountability. OED's current administration should continue to create internal guidance documents to drive work for employees.

We recognize that the current administration of OED has inherited many issues highlighted in this report that have plagued the office since its inception. This administration has demonstrated a desire to address the concerns and recommendations identified in this audit.

Utah is One of Six PacifiCorp States

As an investor-owned utility, PacifiCorp must submit an Integrated Resource Plan (IRP) to the Public Service Commission (PSC) for approval. This allows the PSC to determine if PacifiCorp is complying with state energy policy, reliability standards, and other regulatory requirements. PacifiCorp provides electricity services to multiple states but submits only one IRP. This requires PacifiCorp to plan within the confines of six different state policy requirements in addition to federal requirements. Electricity planning in this environment is challenging and Utah's "any of the above" policy does not garner strong sway in the planning process.



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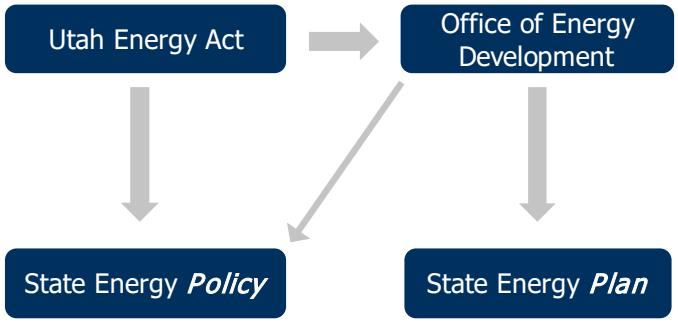
CHAPTER 1 Summary

Utah is at an Energy Crossroads and Needs Better Planning to Meet Future Energy Needs

BACKGROUND

The Utah Energy Act created in 2006, maintains an "any of the above" State Energy Policy to provide energy that is *adequate, reliable, affordable, and sustainable*. The Utah Energy Act also codified the Office of Energy Development (OED) in 2011. The mandate of the office is to implement the State Energy Policy and serve as the primary resource for advancing energy and mineral development. The state energy plan, created by OED, has historically served to operationalize the State Energy Policy.



FINDING 1.1
The energy system is changing, and transitions may impact resource adequacy.

NO RECOMMENDATION

FINDING 1.2
Utah's energy is heavily influenced by other states and the federal government.

NO RECOMMENDATION

FINDING 1.3
OED can do more to understand market pressures and risks with existing energy sources.

RECOMMENDATION 1.1
We recommend the Legislature consider amending the State Energy Policy to include data-driven modeling requirements for energy by the Office of Energy Development at a statewide level.

FINDING 1.4
Utah's energy office does not have operational goals, as found in other states.

RECOMMENDATION 1.2
We recommend the Legislature consider requiring the Office of Energy Development to develop actionable goals and recommendations for the state energy plan in line with best practices.

CONCLUSION

OED's planning for the energy future is limited. Pressures from federal and other state policies may create challenges to Utah's "any of the above" energy policy. Better information sharing, goal setting, and planning—which the Office of Energy Development says is something they are currently working on—can ensure Utah's energy systems remain affordable and reliable for generations to come.

Chapter 1
Utah Is at an Energy Crossroads and Needs Better Planning to Meet Future Energy Needs

1.1 The Energy System Is Changing and Transitions May Impact Resource Adequacy

Utah is at an energy crossroads. International trends and pressures from the federal government and other states are driving an energy transition that impacts the state's "any of the above" energy policy. As part of an interconnected power system, Utah's largest electric utility company (PacifiCorp) is working to balance the politically divergent legislation of several states. Some of these states prioritize non-carbon emitting sources at a pace that may impact Utah's affordability and reliability. Considering these competing priorities, many energy experts acknowledge uncertainty for the state's future energy portfolio. Utah will need to have a proactive plan that drives the state's specific energy priorities and alleviates impacts to affordability and reliability. To better mitigate risks presented in the future, we believe it is important for decision-makers to have a full understanding of the costs, benefits, and capabilities of energy sources. We believe such information can better support the current policy which states that *"Utah shall have adequate, reliable, affordable, sustainable, and clean energy resources."*[1]

The scope of this audit focuses on risks to the electricity sector with some mention of natural gas. However, OED's energy efforts cover additional areas of energy implementation.

The Legislative Audit Subcommittee requested an audit of the state's policies on electricity generation. Through our audit work, we reviewed the State Energy Policy and the entity responsible for its implementation. We believe a review of the policy should also consider the strength of the planning and data used to make important energy related decisions. Despite great uncertainty within the industry, we found the state's planning for the energy future by the Office of Energy Development (OED) to be limited and will be discussed further in Chapter 2 of this report with recommendations. This report focuses on the electricity energy sector and contains some details about natural gas planning and costs, but does not include an analysis of petroleum, both of which are focus areas of OED's energy efforts but fall outside the scope of this audit. This audit includes concerns with energy planning throughout the state but does not make suggestions about specific energy resources.

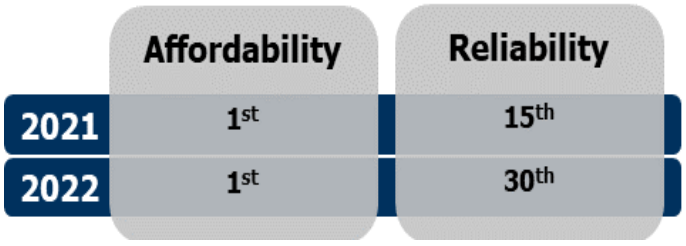
[1] ***Utah Code 79-6-301*** State Energy Policy

Changes in Energy Sources Put Utah at Risk For Decreased Reliability

The ability to reliably heat and light homes, businesses, and industry enables productive growth and economic development. Historically, Utah has been known for its affordable and reliable energy, which has fostered statewide growth. However, this status appears to be changing, according to reports from different industry-specific sources. Other states across the country, such as Texas and California have experienced unreliable delivery of energy to their citizenry resulting in overburdened grids and rolling blackouts. While Utah has not experienced widespread energy failures, there is potential risk to the energy system as reliability decreases and uncertainty increases. We did not find evidence that any Utah energy entity is reviewing these risks on a comprehensive, statewide level, which we believe should be occurring to ensure adequate planning. Further, we believe that the reported data presents uncertainty in Utah's current energy profile that should be accounted and planned for. For example:

- Utah's reliability ranking dropped 15 positions in one year according to a 2022 report by the Citizens Utility Board, which produces one of the only comparative analyses of state utilities. While Utah's electricity has remained affordable,[2] its reliability has decreased compared with other states due to increased outages and disruptions.

Utah's Electricity Reliability Dropped Significantly over the Past Year, According to a State-by-State Utility Analysis.



*Source: Citizens Utility Board of Illinois: Electricity Utility Performance A State-By-State Data Review, Second Edition. *The reliability measure is based on duration and number of utility outages.*

- Further risks to Utah's reliability were recently reported by the North American Electric Reliability Corporation (NERC).[3] In 2022, NERC reported Utah's long-term reliability to be at an elevated status for energy shortfalls due to retirements of coal and natural gas generation and the lack of available hydro power. The assessment also notes that some

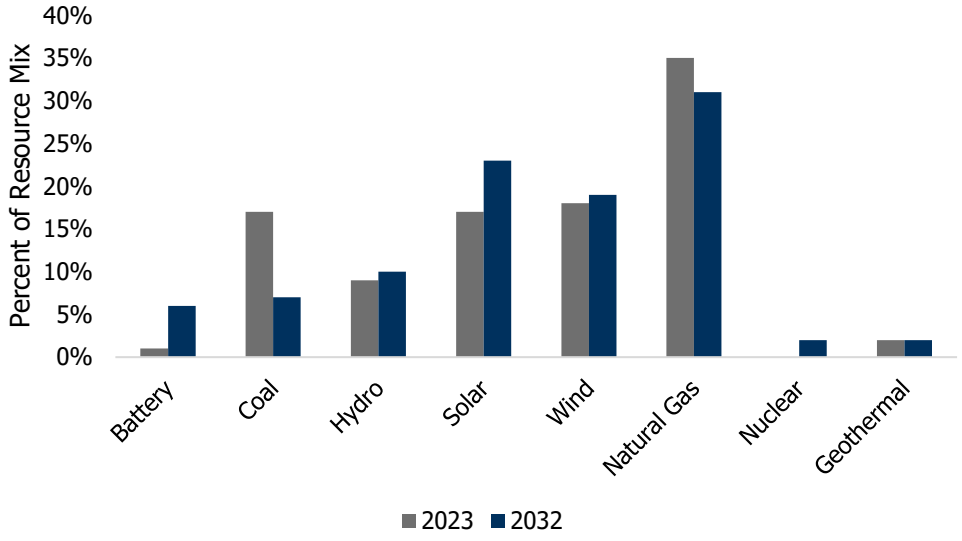
[2] The most recent US Energy Information Administration state ranking, places Utah as the sixth most affordable state for residential electricity prices, a decrease from the Citizens Utility Board ranking.

[3] NERC is a not-for-profit international regulatory authority with the mission to assure the reliability of the bulk power system in North America. It is the Electric Reliability Organization for North America and is subject to oversight by the U.S. Federal Energy Regulatory Commission (FERC).

regions, including Utah, are at risk for energy shortfall from long-duration heat events.

- In 2022, the Western Electricity Coordinating Council (WECC),[4] released its newest Western Assessment of Resource Adequacy report. The assessment forecasts the change in resources over the next ten years for regional states that include Utah (see Figure 1.1). These changes show a reduction in current baseload resources and an increase in the percentage of renewables and new firm resources, such as nuclear power.

Figure 1.1: WECC's Projections for Energy Sources for Utah's Region, 2023 – 2032. WECC estimates that over the next ten years, solar and battery storage will increase while coal and natural gas will decrease for the states of Utah, Colorado, Idaho, Nevada, and Wyoming.



Source: WECC's Western Assessment of Resource Adequacy—Northwest Power Pool Central

The assessment in the WECC study highlights several indicators of adequacy risk. Each of these reports demonstrates risks to Utah's energy, emphasizing the importance of current and future resource planning.

There are adequacy (lack of resources) and cost risks for the electric generation sector in Utah and surrounding regions.

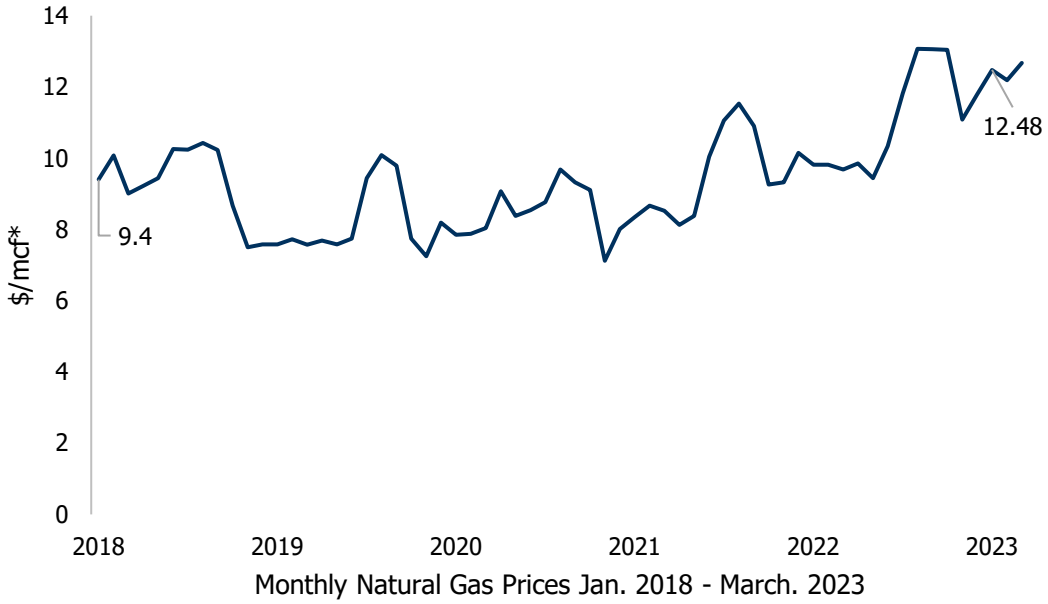
Natural Gas Costs Have the Potential to Increase Risk to Energy Affordability

Reliability risks are not the state's only concern. According to the U.S. Energy Information Administration (EIA), nine out of ten households in Utah use natural gas for their primary heating fuel, which is a higher proportion than that of any other state. This creates a risk, as natural gas prices are volatile and have trended upward over the past five years, increasing

[4] The Western Electricity Coordinating Council (WECC) is a regional entity for the Western Interconnection (comprised of fourteen Western states, northern Baja Mexico, and two Canadian provinces). WECC is approved by FERC and works to assure the reliability of the bulk electric power system for the Western Interconnection.

the financial burden on Utah energy users. For example, natural gas prices for residential users have increased 32 percent from January 2018 to January 2023.[5] Prices dropped again in February of 2023 and rose in March. Additional information on natural gas trends and prices can be found in Appendix A.

Figure 1.2: Average Natural Gas Prices (Monthly) for Residential Customers. In recent years, natural gas prices have risen for residential consumers.



Source: US Energy Information Administration
**The cost of natural gas is measured as dollars per cubic feet and has increased from 9.4 (January 2018) to 12.67 (March 2023) for the data available.*

Natural gas will continue to play a large role in Utah's resource mix (as seen in Figure 1.1), and pricing may impact the affordability of using this resource for electricity generation and home heating in the future. Having better state-specific data would help decision-makers assess the demand while mitigating the risk for price increases.

The National Energy Transition Away from Carbon Sources to Other Sources Creates Uncertainty

While there is evidence that power demand will be met by more options for renewable energy in the coming years, data projections among energy experts suggest great uncertainty for the range of significant use of many energy sources leading up to 2050. The US EIA Annual Energy Report demonstrates trends and ranges of shifting resources to understand how future power demand will be met. The developing nature of new energy resources creates uncertainty for planning, which is why the EIA uses a reference case and twelve side cases to forecast the

[5] While geopolitical and other events impact markets for resources including natural gas, Utah residential prices remain lower than monthly US averages.

range of possible generation projections. For more on EIA ranges of potential source generation, see Appendix B.

Pressures, trends, and forecasts from international, federal, and state entities seem to indicate a rapid transition of energy, at a pace that differs from historical precedent. For example, other transitions were often optional and occurred over decades with the addition of new technologies. A report released by Deloitte noted that current pressures to transition are mandated and driven by policy, advocacy, regulation, taxes, and pricing at a hurried pace. While previous transitions involved well-scaled and tested technologies, this current transition involves technologies that have not yet been demonstrated for utility-scale use. Because of this, it is important for industry and governments to take a measured approach to planning and investment in a diverse set of resources.

Although the state does not own power generating sources, it does play a significant role in regulating the development of sources and creating policies to manage energy direction. Several examples show that the Legislature has demonstrated investment in preparing for uncertainty:

- Passage of House Bill 426 from the 2023 General Session: Encourages energy-related research within the state by providing matching grants to applicants with federal or private energy projects.

- Passage of Senate Bill 62 from the 2023 General Session: Establishes a hydrogen advisory committee in the Department of Natural Resources.

- Supporting the San Rafael Energy Research Center: Provides state funds to encourage energy research including nuclear, power cycle, and other sources.

These investments and planning efforts indicate support for a market-driven approach. However, we believe more can be done. The Legislature has provided OED and other entities with resources to strengthen the state's ability to plan and develop energy sources. Despite uncertainty in emerging technologies and the market, we believe that OED can lead Utah to develop in ways that align with its priorities and that balance economic and environmental impacts.

1.2 Utah's Energy Is Heavily Influenced by Other States and the Federal Government

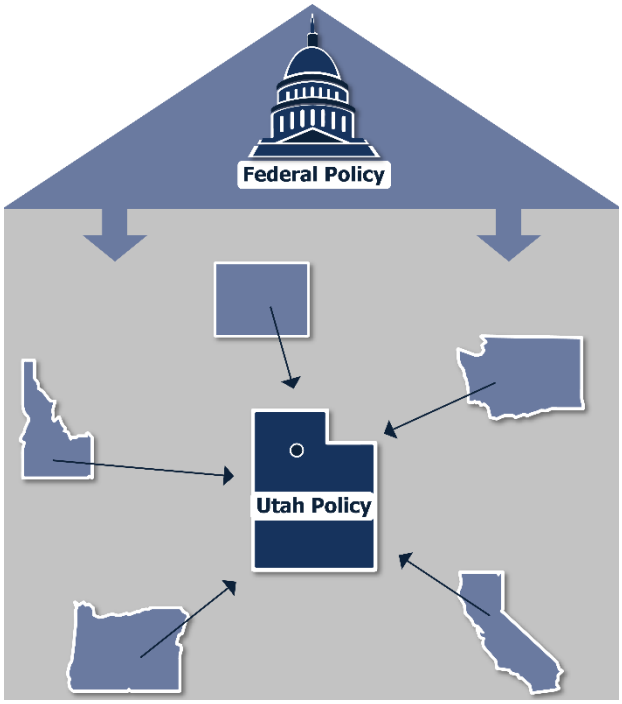
Most of the state is serviced by an electric utility (PacifiCorp)[6] that also serves five other states. These states are on different ends of the spectrum in terms of energy goals. Federal policies, regulations, treaties, and funding also place pressure on the types of resources states use for energy generation and

[6] The Utah subsidiary of PacifiCorp is Rocky Mountain Power.

consumption. These influences all interact within Utah's "any of the above" energy policy which supports efforts to provide affordable and reliable energy from a variety of tools and resources.

Utah Is One of Six PacifiCorp States

As an investor-owned utility, PacifiCorp must submit an Integrated Resource Plan (IRP)[7] to the Public Service Commission (PSC) for approval. This allows the PSC to determine if PacifiCorp is complying with the State Energy Policy, reliability standards, and other regulatory requirements. PacifiCorp provides electricity services to multiple states but submits only one IRP. This requires PacifiCorp to plan within the confines of six different state policy requirements in addition to federal requirements.



Source: Auditor generated

Utah may have less sway in the IRP process because of its "any of the above" policy.

For years, the utility has used a multistate collaborative process, but diverging state policies challenge PacifiCorp's ability to plan for a single, integrated system. Since Utah's energy policy promotes an "any of the above" approach, the state does not garner strong sway in the context of IRP formation and allows electric utilities planning in Utah to be more responsive to other states' policies. For example, some states within PacifiCorp's service area have renewable portfolio standards that require phasing out of carbon-emitting resources. Other states, including Utah, maintain policies that do not dictate specific resource generation. This planning environment creates challenges for PacifiCorp, as noted in its most recent IRP. Furthermore, 57 percent of in-state energy experts surveyed[8] by our office responded that Utah's energy policy does not drive their entity's work. In contrast, 90 percent responded that federal energy policies had moderate or strong impact on their

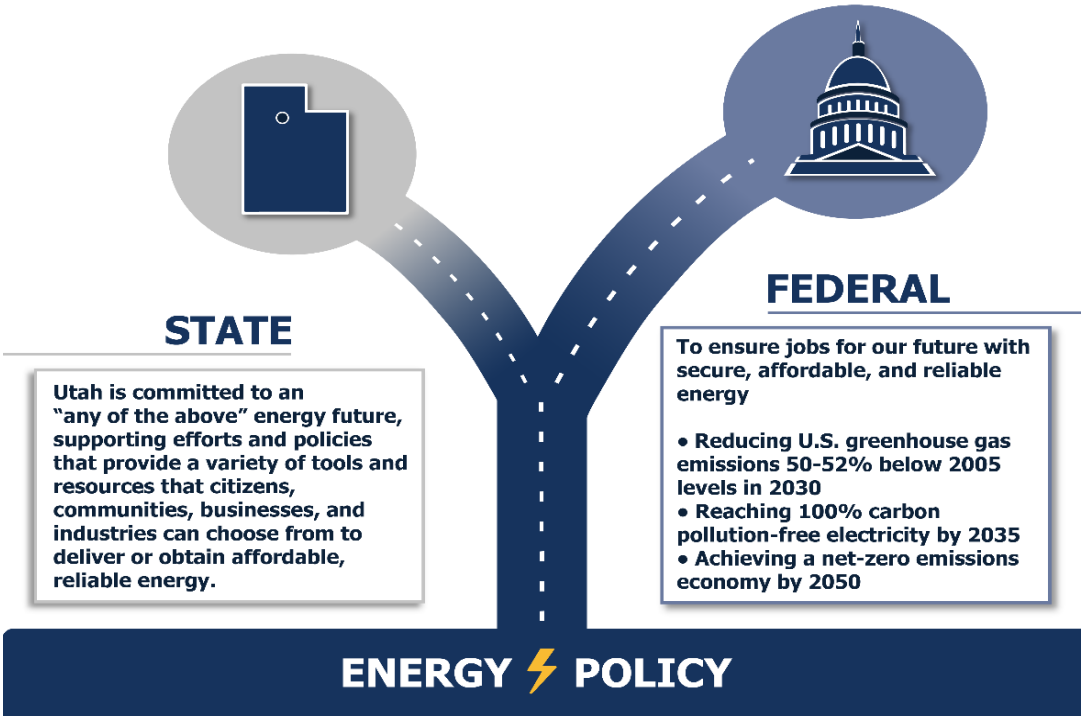
[7] An IRP is a decision-making tool and roadmap for meeting the utility company's objective of providing reliable and least-cost electric service. These plans are developed with public involvement from state utility commission staff, state agencies, customer and industry advocacy groups, project developers, and other stakeholders.

[8] We surveyed 41 energy stakeholders (industry experts, energy related government entities, energy non-profits, and advocacy groups) throughout the state, with various roles in the energy sector, and received a response rate of 76 percent.

work. These findings highlight the strong influence of governmental policies outside of Utah's borders on Utah's energy sector.

Federal Goals Diverge from Utah's Energy Policy

In some ways, state and federal policies are diverging. Recent investments have been made at the federal level for energy resources and policy focusing on new and developed energy types that differ from resources in Utah's current mix. Federal investment is moving in a direction that shifts Utah energy away from resources (e.g., coal) that have historically allowed the state to have sustained reliability and affordability. Utah's concern over the pace and uncertainty of federal direction is evidenced in the recent lawsuit against the ozone transport rule, which requires states to reduce emissions from coal-generated power plants.[9] The infographic highlights the diverging approaches to energy policy at the federal and state level.



Source: Auditor Generated

Several of the state energy entities we surveyed reported that federal policies have a moderate or strong impact on their work. We found that federal influence can come in different forms. Regulatory measures have guided energy processes for years, but recent federal investments in energy development have created opportunities to transition energy resources at a swift pace. For example,

[9] The "good neighbor" or "interstate transport" provision requires that the State Implementation Plan of each state contain adequate provisions to prohibit emissions from within the state from significantly contributing to nonattainment or interfering with maintenance of the National Ambient Air Quality Standards in other states.

- The federal Infrastructure Investment and Jobs Act (2021) provides nearly $5 billion for various energy related provisions.

- The federal Inflation Reduction Act (2022) is expected to provide nearly $369 billion for energy and climate related spending.

These federal-level investments could influence states' energy policies and priorities. OED should work to understand how outside influences are shaping the energy industry, which the Legislature envisioned to be market-driven,[10] and determine the risks of these impacts.

Despite the Legislative desire for the market to drive energy, we found there is disagreement among state energy stakeholders on whether the state's policies are market-driven or not. Government policies, and not just economics, appear to be the primary drivers of the energy transition. Understanding these forces, which may not be concerned with Utah's priorities or economy, is critical as the state moves to keep energy in Utah affordable, reliable, and sustainable.

Government policies are the primary drivers of the energy transition.

1.3 OED Can Do More to Understand Market Pressures and Risks with Existing Energy Sources

Various energy related entities in Utah provide piecemeal planning and risk assessment for the state's energy resources. However, we could not document statewide efforts to assess the risks, costs, and benefits of various energy resources or proactive planning to guide the state's direction. In some ways, most of Utah's energy direction is heavily influenced by the state's major public utility companies. In contrast, we found several states that have demonstrated a state-level ability to discern impacts of certain resources to their state, both economically and environmentally. As an "any of the above" state, Utah could benefit from better data and planning to help understand the risks and benefits of major and developing energy resources. We recommend that OED provide additional information on the risks and benefits of Utah's energy resources.

Utility Resource Planning Offers Insights but Does Not Contain a Statewide Perspective

As Utah's major investor-owned utility, PacifiCorp's "preferred" future portfolio shows the near elimination of carbon-emitting resources in favor of major expansion of solar and hydropower. The utility maintains its IRP every two years by developing a portfolio with the least cost and least risk. An important part of this process includes estimating the costs of different resources. In our audit process we spoke with PacifiCorp, the Public Service Commission, and the

[10] ***Utah Code*** 79-6-301 (1)(e) "Utah will allow market forces to drive prudent use of energy resources, although incentives and other methods may be used to ensure the state's optimal development and use of energy resources in the short- and long-term."

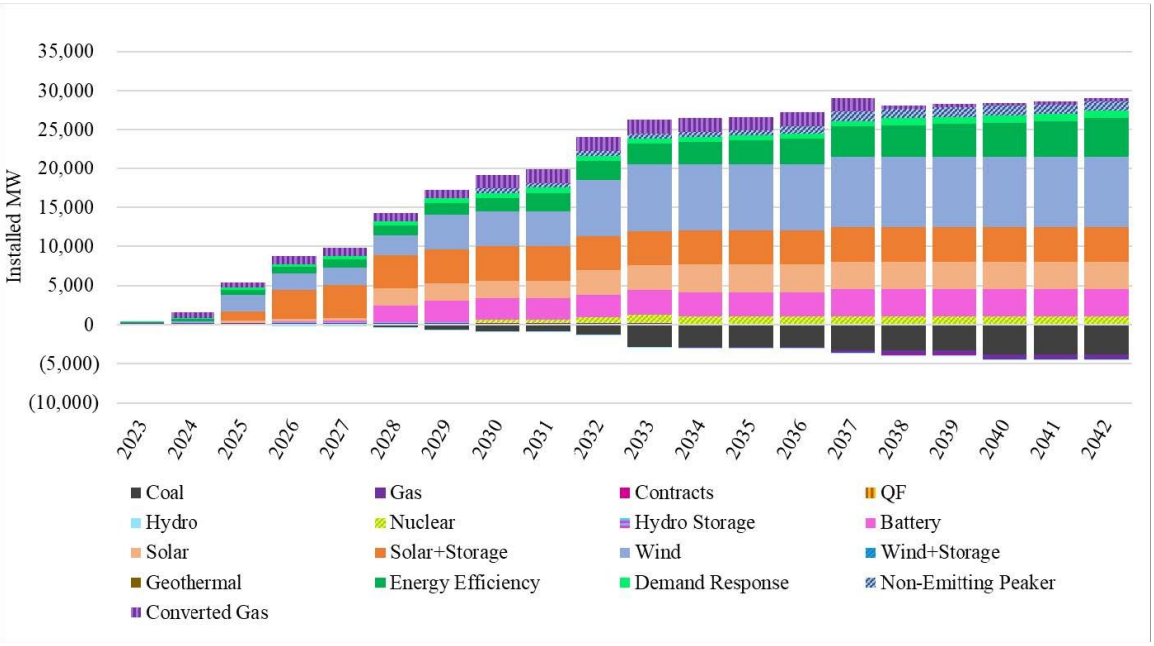
Division of Public Utilities about the challenges of assessing the true cost of resources given the different factors that can be included in valuing energy resources and technologies. PacifiCorp noted some of the uncertainty of modeling new and emerging technology costs in its portfolios.

PacifiCorp's Integrated Resource Plan

"Various factors contribute to this uncertainty including new and emerging technologies that have been built at a utility scale, technologies for which relatively few facilities have been built, and projects with multiple year lead times that are exposed to the risk of commodity price fluctuations and economic uncertainty."

After assessing stakeholder wants and the various factors included in the modeling process, PacifiCorp determines the preferred portfolio (shown in Figure 1.3).

Figure 1.3 PacifiCorp's 2023 Preferred Portfolio. PacifiCorp plans to invest heavily in wind, solar, and other resources for the future.[11]



Source: PacifiCorp IRP 2023

PacifiCorp's IRP anticipates a major shift away from carbon-emitting sources and toward more solar and wind. Meanwhile, a previous IRP of Utah's major natural gas utility, Dominion Energy, predicted a possible issue with supply reliability and began building a liquified natural gas facility near Salt Lake City in 2020. The facility went into use during the last quarter of 2022.

[11] The portfolio includes 500 megawatts of the advanced nuclear Natrium project and an additional 1000 megawatts of nuclear sources throughout the planning timeline.

Dominion Energy's IRP notes the difficulties of accurately modeling future natural gas prices, as prices are tied to multiple indices. However, Dominion maintains strong goals for its Utah IRP to ensure it complies with PSC standards to assess natural gas planning within an uncertain planning environment.

Other States' Modeling of Energy Resources Identifies and Plans for Resource Risks, While OED Does Not

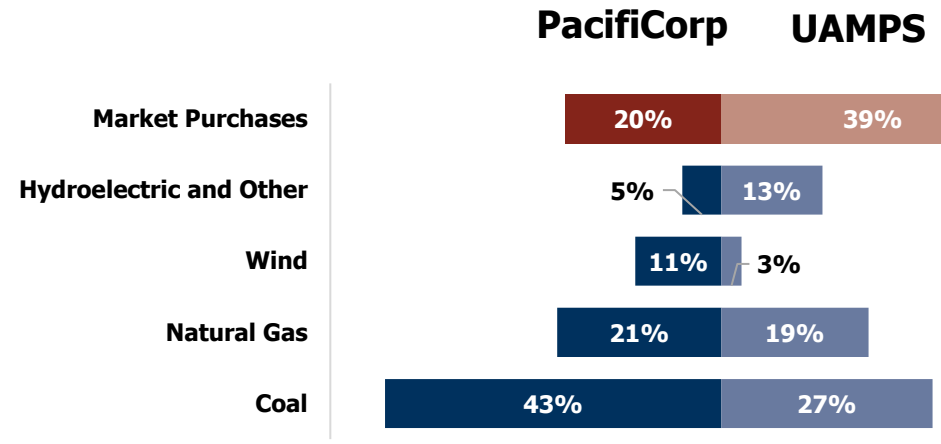
While Utah's utilities provide modeling and assessment of energy resources, we did not find comprehensive planning at the statewide level. OED's previous ten-year strategic plan mentions economic modeling as a tool that could be utilized but does not include any specific analyses. From our observation, OED does not utilize any form of modeling for predicting the impacts of energy sources on economic development and energy prices. However, other states have demonstrated the advantages of modeling for understanding and mitigating future risks. For example, the National Association of State Energy Officials recognizes several states that have led the way in energy modeling and data analytics. See Appendix C for a list of these states and their modeling practices and applications.

Utah's Resource Mix Needs Additional Consideration

Utah Code[12] notes that the state will promote the development of resources and infrastructure sufficient to meet the state's growing demand. In evaluating Utah's resource mix, we spoke with major utilities and wholesale power suppliers that provide electricity--PacifiCorp and Utah Associated Municipal Power Systems (UAMPS), [13] which service most of the state.

[12] ***Utah Code*** 79-6-301 (1)(c)
[13] Utah Associated Municipal Power Systems (UAMPS) is an energy services interlocal agency of the State of Utah. Its members serve 232,100 Utah customers.

Figure 1.4: 2022 Resource Mix for Utah's Largest Electric Providers, PacifiCorp (Utah) and Utah Associated Municipal Power Systems. Market purchases used to meet demand could incur additional risk. This information was gathered for the purpose of the audit to demonstrate how market purchases are utilized to fill demand gaps.



Source: UAMPS and Department of Public Utilities

We found the resources of PacifiCorp and UAMPS to be diverse particularly in the use of hydroelectric, coal, and market purchases as shown in Figure 1.4. No statewide entity is monitoring the risks to these major sources that Utah citizens are relying on. While it is statutorily unclear which entity should be tracking these risks, we believe OED's mandate is broad, and the office could provide value in this area. Figure 1.4 highlights in red, the percentages of market purchases. While market purchases are commonly utilized in portfolio mixes, we note the following disadvantages and potential risks for market purchases as an electricity source:

A better understanding of the implications of market purchases and the impacts of certain resources on the economy and state will help decision making for Utah's energy investments in the future.

- Operators do not have full control over the generation unit whose energy is being purchased.
- Short-term market transactions can unduly expose the purchaser to the risk of volatile electricity prices.
- Market purchases may not meet resource adequacy requirements and could affect availability and affordability.

Despite major uncertainty in how the state's energy portfolio should move forward, we believe a better understanding of the implications of market purchases and the impacts of certain resources on the economy and on the state as a whole will improve decision making for Utah's energy investments in the future. Our findings suggest that it is necessary for decision-makers to understand how various energy sources impact the affordability, reliability, and sustainability of Utah energy. Therefore, we recommend that the Legislature

consider requiring that a forward-thinking data-driven modeling approach be added to OED's statutory responsibilities.

RECOMMENDATION 1.1

We recommend that the Legislature consider amending the State Energy Policy to include data-driven modeling requirements by the Office of Energy Development at a statewide level.

1.4 Utah's Energy Office Does Not Have Operational Goals, as Found in Other States

Utah's Office of Energy Development's statewide energy innovation plan, in its current form, does not contain actionable components with goals and objectives. (This is discussed further in Chapter 2 of this report.) Prior to 2022, the state energy plan was a ten-year strategic plan with recommendations, goals, and guiding principles.[14] The newest iteration of the plan contains energy commitments but lacks operational measures to fulfill those commitments. Utah's plan does not follow best practices for strategic planning, including those identified by the National Association of State Energy Officials. Compared with other state energy plans, we found Utah's current plan to lack essential goals and actions necessary to meet the stated vision and provide direction.

During this audit we reviewed the energy plans of thirteen states, including neighboring states, PacifiCorp states, states with high reliability and/or affordability, and states with "any of the above" policies. We found some states that had specific plans.[15]

Common elements among energy plans of other states include:

- Measurable plans to achieve statewide energy goals
- Strategic planning and risk assessment
- Actionable recommendations for implementation and accountability

Utah's new plan does not contain metrics or a road map for how to achieve the state's six energy commitments. While we recognize that many of the goals articulated by other states do not align with Utah's energy policy, we identify the importance of creating a strategic plan that can be acted upon.

The new energy and innovation plan is not operational.

The Legislature acknowledged the importance of actionable energy strategies in House Bill 426 from the 2023 General Legislative Session which mandated that OED create a strategic energy plan to achieve the state's energy policy in collaboration with various entities within the state. Recommendation 1.2

[14] The first energy plan was created in 2011 to help operationalize the State Energy Policy.
[15] States with specific plans in our sample include Washington, Oregon, Nevada, Colorado, New Mexico, Nebraska, Delaware, North Dakota, Montana, and Virginia.

supports that mandate fully and highlights the necessity of planning in an uncertain environment. OED plans in the past have done this, but the current plan lacks actionable items needed to fully guide energy policy in the state. The findings in this chapter suggest that a lack of planning may lead to decreased reliability and affordability for Utah energy users. Mitigating such risks is essential for creating a stable economic and social environment.

The state's energy plan establishes a good foundation but needs goals to ensure progress. OED explained they are in the process of continuing to build out their plan in alignment with House Bill 426. The next chapter of this report focuses on OED as the entity responsible for advancing Utah's energy direction. We offer recommendations in Chapter 2 to ensure the state has pertinent information and expertise needed to plan and mitigate risks of uncertainty in the energy sphere for decades to come.

RECOMMENDATION 1.2

We recommend that the Legislature consider requiring the Office of Energy Development to adopt best practices in developing actionable goals and recommendations for the state energy plan.

CHAPTER 2 Summary

Utah's Office of Energy Development Needs to Provide Stronger Energy Direction to the State

BACKGROUND

The Office of Energy Development was created in 2011, under the State Energy Amendments (House Bill 475, 2011 General Session) to centralize energy related functions with other areas of state government. In 2021, OED was moved from the Governor's Office into the Department of Natural Resources to further increase collaboration among energy stakeholders.

FINDING 2.1
OED's mission is to implement the State Energy Policy but has lacked consistency since inception.

RECOMMENDATION 2.1
We recommend the Office of Energy Development balance energy policy staff expertise to better fulfill their mandate of implementing the State Energy Policy and the governor's energy goals.

FINDING 2.2
The Office of Energy Development should be more proactive in implementing the State Energy Policy.

RECOMMENDATION 2.2
We recommend the Office of Energy Development include Legislative recommendations and long-term energy planning in their annual report to the Legislature.

FINDING 2.3
The Office of Energy Development does not have measures to demonstrate impact and accountability.

RECOMMENDATION 2.3
We recommend the Office of Energy Development develop goals, measures, and tracking to demonstrate accountability for office operations and to provide better direction moving forward.

FINDING 2.4
The Office of Energy Development lacks the internal governance to fulfill its statewide mandate.

RECOMMENDATION 2.4
We recommend the Office of Energy Development establish stronger internal governance and inner-office continuity by updating job descriptions, policies and procedures, grant-selection criteria, and standard operating procedures to fulfill its state mandate.

CONCLUSION

The Office of Energy Development is crucial to providing energy direction to the state of Utah. We found the office lacked strategic direction, internal governance, and goals for accountability. However, the current administration inherited many of these issues and are committed to improving upon them. We recommend the office improve its planning and provide better data and analysis to policy makers. Doing so will provide them with the best information to maintain affordable and reliable energy in the state.

Chapter 2
Utah's Office of Energy Development Needs to Provide Stronger Energy Direction to the State

2.1 OED's Mission Is to Implement the State Energy Policy, but has Lacked Consistency Since Inception

The Utah Energy Act[16] specifies the roles and duties of the Office of Energy Development (OED) and the state energy advisor. While the section of statute dictating OED's role has not changed substantially in the 12 years since the office was created, OED has changed the mission statements on their website as it experienced numerous executive directors and differing visions. For example, there are seven different documented mission statements from the office since 2011. We recognize that the current administration has inherited many issues highlighted in this chapter that have plagued the office since its inception. The office has demonstrated a desire to address the concerns and recommendations identified in this audit.

Mission Evolution and Changes in Staff Focus Create Confusion and a Lack of Continuity

The mission statements of OED mirror the tenets of Utah's State Energy Policy, but show different directions initiated by the five executive directors of the office. This indicates a lack of focus and stability and a shift in priorities for an organization that should maintain its stated goal from the Legislature. Figure 2.1 shows a constantly changing mission. For example, OED's mission statement focused on advancing energy and minerals in 2020, to enhancing energy infrastructure in 2021, and then a shift back to energy and minerals in 2023.

[16] ***Utah Code*** 79-6-101

Figure 2.1: Varying Mission Statements of the Office of Energy Development Since 2011. Over the past twelve years OED has had many iterations of its mission statement while broadly supporting the goal of affordable, reliable, and sustainable energy**.**

Source: Historical OED webpages.

Further, while OED's historical mission statements align with best practices for simplicity and measurability, the frequent updating of the mission statement goes against best practices. For instance, missions should be changed only when big organizational shifts occur or with the start of new programs and resources. OED's frequent changes to its mission also indicates shifts in stability and direction throughout the history of the office.

High Turnover and Loss of Industry Expertise May Hinder Implementation of the State Energy Policy

There also have been widespread changes in OED's job titles and employment of industry experts. Our review of historical staffing positions indicates that the number of energy-industry policy experts at OED has waned, with the last four years having the lowest number of documented policy experts on staff. In 2014 and 2015, the office had the largest portion of staff in energy and policy specific roles, with seven staff dedicated to analyzing and developing energy.

OED had seven energy specific policy staff in the office in 2014 and 2015.

OED's new executive director appears to have the expertise and commitment to advance the office. However, while this audit is not recommending additional staff, we believe OED lacks some of the resource-specific focus to promote the development of any energy resource that could help maintain affordable, reliable, and sustainable energy in Utah. For example, over half of the current staff (non-management) work on federal programs. As energy technology continues to

progress, it is important for OED to retain policy experts to inform decision-makers on the benefits, costs, and risks as the state expands its energy portfolio.

Since 2021, OED has experienced 100 percent turnover.

Beyond energy-specific expertise, OED has lost a significant amount of institutional knowledge over the past two years through staff turnover. Since 2021, the office has experienced 100 percent turnover. Only one current employee has been employed at the office for more than two years. This turnover along with organization restructuring, lack of formalized internal documentation, and an ongoing merger (since 2021) under the Department of Natural Resources (DNR), has resulted in discontinuity in the state's energy office.[17]

RECOMMENDATION 2.1

We recommend the Office of Energy Development balance energy policy staff expertise to better fulfill their mandate of implementing the State Energy Policy and the governor's energy goals.

2.2 The Office of Energy Development Should Be More Proactive in Implementing the State Energy Policy

Throughout this audit we spoke to representatives of various entities that regulate, oversee, produce, and distribute energy. The energy sphere is complex and requires collaboration and innovation at all levels to ensure that energy remains affordable, reliable, and sustainable. OED historically and continuously plays an important role in Utah's energy sphere, building connections and providing information to industry, government, and research partners. A strong OED, with a defined role and expanded energy insight, can strengthen Utah's standing as a national energy leader. OED should improve its implementation of the State's Energy Policy by being more proactive in promoting energy resources and providing research and information on emerging and current energy technologies for decision-makers.

[17] As noted in the State Energy Policy and reiterated by OED staff, the office maintains two broad functions: (1) grants and programming administration, and (2) policy and outreach. In our analysis of current staff levels, we note that four of the seven non-management employees focus on federal grant-related work while three staff members work on state incentives and other energy-related policy matters. Federal grant staff are paid from federal monies which directs their work to those grants. This highlights a policy question for the Legislature to determine whether to better focus the direction of OED.

OED Should Provide Stronger Policy and Research To Better Inform Policy Makers

OED is seen as Utah's leader in energy, based on a survey of energy stakeholders in the state.[18] This credibility is encouraging as it allows OED to take the lead in energy initiatives and planning throughout the state. For example, OED has provided some work in transmission research, energy markets, and gas prices. These reports have provided information on pricing, electricity markets, and transmission challenges to policy and decision-makers. However, OED can do more to implement the State Energy Policy, as mandated in ***Utah Code***. During this audit, OED cited largely promotional activities as examples of its efforts to implement the policy. Often the same activity was reported to demonstrate different levels of policy implementation. Without performance measures to assess these initiatives (as discussed in this chapter) we believe OED was not able to fully demonstrate office impact toward implementing the State Energy Policy.

The state energy plan provides only some guidance to the majority of in-state energy experts that responded to our office survey.

While in-state industry experts look to OED for state energy leadership, some resources, groups, initiatives, and committees that were once created for OED to take the lead, are no longer operating. Some of these were mentioned in the state's 10-year energy vision as important resources designed to help guide energy in the state. Notable initiatives include:

- Guide to Permitting Transmission Lines in Utah: Mentioned in the 10-Year Strategic Vision and no longer utilized by OED.

- REMI modeling: Mentioned as a key element of the 10-year plan to evaluate resources, costs, and economic impact, but we found no evidence that this was utilized by the office (historical or current).

Beyond resources, initiatives, and committees,[19] OED has been inconsistent in the information they report to the Legislature in our review period from 2011 to 2022. For example, information historically presented by OED and the state energy advisor included Utah-specific energy trend data, long-term planning, and recommendations. With the OED director acting in both capacities we do not see that same level of reporting to the Legislature.

While ***Utah Code*** requires OED to provide an annual report, it does not require specific content about energy risk. We believe, given the crucial energy period we are now in, that it is important for the Legislature to be adequately informed of the risks and benefits of energy resources for the state. As technologies and

[18] We surveyed 41 energy stakeholders (industry experts, energy related government entities, energy non-profits and advocacy groups) throughout the state, with various roles in the energy sector, and received a response rate of 76 percent.

[19] The Electric Vehicle Steering Committee once spearheaded by OED, was moved to the ASPIRE Research Center by Senate Bill 125 in the 2023 General Session. Also, the Energy Infrastructure Board has not met in many years due to inactivity on the high-cost infrastructure tax credit.

policies continuously develop and change, it is crucial for policy makers to have the most up-to-date and forward-thinking information to make informed decisions. We therefore recommend that OED demonstrate consistent value by providing energy recommendations and long-term planning to the Legislature in its required annual report.

RECOMMENDATION 2.2

We recommend the Office of Energy Development include Legislative recommendations and long-term energy planning in their annual report to the Legislature.

2.3 The Office of Energy Development Does Not Have Measures to Demonstrate Impact and Accountability

Performance metrics and measurable goals are fundamental to establishing accountability and desired outcomes. Performance metrics also improve organizational effectiveness. We found that OED has few performance measures tied to its responsibility to implement the State Energy Policy. In fact, most of OED's internal tracking and measures are related to federal grant funding, education outreach, and incentives. We found no measures related to energy development or the state's six current commitments articulated in the office's state energy plan, released in 2022. The few performance measures that do exist were created within the last two years, but do not comprehensively assess the operations and activities of the office.

OED Largely Does Not Maintain Internal Tracking on Commitments and Priorities

As noted previously, in 2022 OED revised and published a new state energy plan. This document, the Utah Energy and Innovation Plan, replaced the 10-Year Strategic Plan, which had been in place until 2021. The new plan shifts away from specific recommendations, goals, measures, and actions, and instead relies on six commitments to drive energy policy. This approach counters some best practices as it does not have a strong accountability element or establish work-to-be-done by specific dates.[20]

[20] Historical documentation was difficult to track down during this audit. Staff turnover and leadership changes at OED resulted in a lack of continuity in internal tracking, and the current administration does not have any available metrics that were utilized by previous leadership or program directors. However, current OED staff have created some internal metrics for OED. The performance metrics used by the office include the percentage of RESTC applications processed, number of energy education and workforce development training opportunities provided, and percent of milestones achieved in the US D.O.E. funded programs.

While we found no documentable objectives to track accountability for the state commitments by OED, the state resource management plan contains several goals and objectives tied to various energy resources developed throughout the state. This management plan was published by the Utah Public Lands Policy Coordinating Office (PLPCO), another office within The Department of Natural Resources (DNR). These goals and strategies, while not internal to OED were formulated with the expertise from the PLPCO and other state agencies. We heard throughout this audit that promotional activities are hard to measure, yet PLPCO demonstrates actionable items to measure how well the state is promoting various energy resources under its "any of the above" policy. We believe that promotional activities can be measured via the fulfillment of strategic planning and the utilization of action plans and goals. Success is seen through the completion of goals and demonstration of impact.

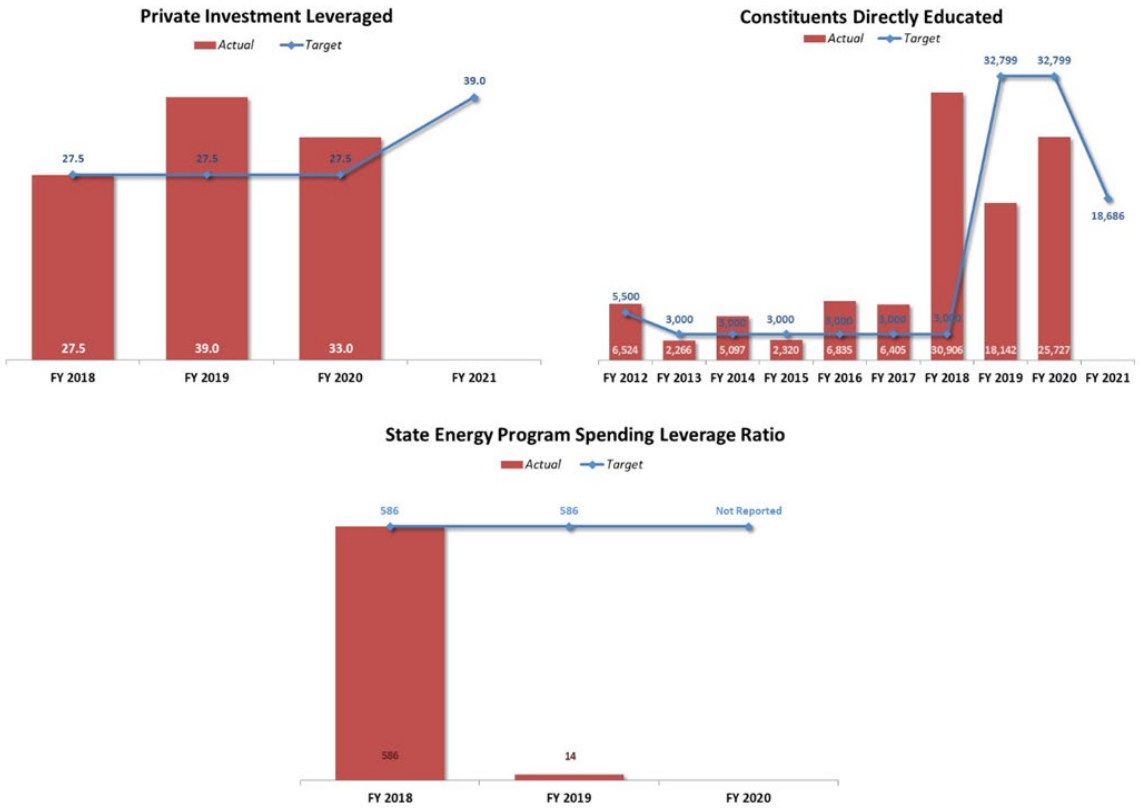
While OED does not have any documented actionable goals, the state's resource management plan highlights policies and objectives for the state's many energy resources.

The Office of Energy Development Needs to Improve Its Measures of Impact and Accountability

The audit team was able to document only one historic performance measure for OED, which was developed by the Governor's Office of Planning and Budget.[21] The measure is intended to gauge quality throughput/operating expenses. OED utilized the number of applications for the Renewable Energy Systems Tax Credit (RESTC) and its operating costs as a proxy for this measure. Although this method is one way to measure performance for government, it does not encapsulate the mission of OED to advance energy policy. Three other measures were created by OED at the request of the Office of the Legislative Fiscal Analysts (LFA) shown in Figure 2.2.

[21] Previously this agency was known as the Governor's Office of Management and Budget.

Figure 2.2: OED Legislative Performance Measures.[22] These measures were reported in the Compendium of Budget Information by OED. None of the measures have been tracked since 2020, demonstrating the need for updated and revised performance measures.



Source: Compendium of Budget Information

As shown in Figure 2.2, the performance measures created by OED for the Legislature did not create achievable benchmarks. Each performance measure has problematic targets, for various reasons and does not provide a value measure for OED to achieve. LFA does not believe these measures to be an accurate assessment of agency performance or outcomes.

Legislative tracking measures are no longer reported and lack meaningful insight into current office activities.

The current OED administration is making progress toward greater accountability for staff and programs. However, OED should make additional efforts to accomplish desired outcomes, and better demonstrate

[22] **Private Investment Leveraged**: This refers to the dollar amount of private investment for every tax credit dollar issued though OED incentive programs. The trend suggests the effectiveness of tax credits in driving investment in the state. This measure is directly related to OED's mission which is driven by State Energy Policy in ***Utah Code*** 63M-4-3. **Constituents Directly Educated**: This tracks participation in educational events where OED is responsible for all or majority of programming. The target is set at 3 percent above the previous year's actual results. **State Energy Program Spending Leverage Ratio**: This measures the relative funding match for the state's general fund into the State Energy Program (SEP).

how OED activities align with its mission to implement the State Energy Policy. During the 2023 Legislative session, the Legislature reinforced the need for strategic planning from the office through the passage of House Bill 426, requiring additional actions to ensure energy planning is moving in a measurable direction. Beyond strategic planning we encourage OED to develop operational goals and actions to demonstrate the impact of energy initiatives in the state.

RECOMMENDATION 2.3

We recommend the Office of Energy Development develop goals, measures, and tracking to demonstrate accountability for office operations and to provide better direction moving forward.

2.4 The Office of Energy Development Lacks Internal Governance to Fulfill Its Statewide Mandate

OED lacks formalized processes, procedures, and staffing documentation to guide office roles, actions, and responsibilities. This impacts office continuity. Recent leadership changes and staff turnover in the past four years further demonstrate the need for stronger stability through adequate policies, procedures, and internal governance standards. Best practices highlight the importance of internal written policies for staff success in the face of leadership changes. We believe the lack of guiding policies and standards has led to discontinuity, creating areas of inefficiency within the office.

Office Documents Are Inconsistent and Do Not Appear to Guide Work or Provide Continuity

Best practices demonstrate that policies and procedures, including employee manuals and job descriptions, are important for driving organizational effectiveness. However, we found that OED's policies and procedures, which often consist of a compilation of several administrations, were piecemeal and did not offer comprehensive guidance to employees. The internal governance standards and policies provided to the audit team were often disjointed, and we found only small efforts to update them. For example, the documentation provided to us showed that the last update to OED's policies and procedures occurred approximately five years ago, in 2018. Because of this, combined with the fact that the office has had three directors in this time period, we question whether policies are being used to guide the office or help in decision making.

Other internal guidance we requested was unavailable or was organized in a way that lacked clarity in its purpose or usefulness to employees. We reviewed OED's employee manual, which contains various editions of the same policy and does not specify the last amended date. Job descriptions are not updated and are not available for every position in the current office. Further, in response to an audit survey we issued to OED, many office staff responded[23] that they did not receive the training needed to do their job effectively. However, the State Energy Program (SEP)[24] handbook (given to all new SEP employees) is an example of the current administration making improvements to internal guidance. This handbook is the only document OED provided that offers employees standard information on job duties.

OED guiding documents are not updated and staff lack formal job descriptions.

We acknowledge that internal guidance structures are a remnant of OED's historical failure to maintain documentation. The current administration explained that they, in conjunction with DNR, are in the process of developing and adopting new internal guidance and documentation for employees and office functions.

The lack of internal guidance policies documented during this audit presented a problem when the office was without an executive director from June to September 2022. We were told that without leadership, the office existed without specific direction or clarity which did not allow staff to execute their duties as they should have. The current OED executive director, having been in the position for less than one year, inherited many of these problems. To establish office continuity, stability, and effectiveness, we recommend that OED develop resources and internal processes to strengthen office governance and direction. In doing so, OED employees can better fulfill their roles and duties regardless of leadership stability.

Although Federal Funds Are Tracked There Is a Lack of Formal Criteria for Grant Selection

One area in which OED's documentation is clear and consistent is the office's process for federal grants. We found that OED maintains several extensive metrics required by federal grants[25]. However, when asked about the selection mechanism for choosing federal grants, the current administration produced one based on how they thought grants aligned with the State Energy Policy but did not include specific criteria or assessment measures. Criteria for grant selection were not documented or handed down from a previous administration. Well maintained measures are important for strategic planning and allow the

[23] The Office of the Legislative Auditor General began administering a survey to audited entities in 2023 to better understand the culture of state organizations. The survey addresses seven different areas related to work culture: job satisfaction, communication, professional development, leadership, professional behavior, performance feedback, and overall improvements.
[24] The SEP is one of the original functions of the office.
[25] Federal grants are tracked historically; the office provided previous funding amounts, statewide matches, and deliverables for each grant.

Legislature to ensure accountability for the office and the state's energy direction by monitoring whether priorities are being met.

RECOMMENDATION 2.4

We recommend the Office of Energy Development establish stronger internal governance and inner-office continuity by updating job descriptions, policies and procedures, grant selection criteria, and standard operating procedures to better fulfill its mandate.

Integration into the Department of Natural Resources Has Been Drawn Out and Disconnected

Further adding to in-office turmoil, OED has slowly been integrating into DNR. In 2021, House Bill 346 moved OED from the governor's cabinet and placed the office under DNR to generate better collaboration among related agencies. OED leadership has stated that the integration process has been an additional challenge as the office (mainly promotional and policy based) moves into a regulatory body. Recently, OED failed to identify risks of the office as part of an internal audit risk assessment process, the only office of nine DNR divisions that failed to do so. Despite OED's significant transition over the last several years, we believe the office should do more to establish better continuity, stability, and effectiveness to better fulfill its role before the Legislature and the governor.

Although the Office of Energy Development has had periods of instability, the office is positioned to improve the state's energy strategic direction and goals. It is critical for the office to strengthen this function and lead the state through this crucial time in energy development. By providing expertise and guidance, the office can fulfill its role in ensuring the state has reliable and affordable energy resources for generations to come.

Complete List of Audit Recommendations

Complete List of Audit Recommendations

This report made the following six recommendations. The numbering convention assigned to each recommendation consists of its chapter followed by a period and recommendation number within that chapter.

Recommendation 1.1

We recommend that the Legislature consider amending the State Energy Policy to include data-driven modeling requirements by the Office of Energy Development at a statewide level.

Recommendation 1.2

We recommend that the Legislature consider requiring the Office of Energy Development to adopt best practices in developing actionable goals and recommendations for the state energy plan.

Recommendation 2.1

We recommend the Office of Energy Development balance energy policy staff expertise to better fulfill their mandate of implementing the State Energy Policy and the governor's energy goals.

Recommendation 2.2

We recommend the Office of Energy Development include Legislative recommendations and long-term energy planning in their annual report to the Legislature.

Recommendation 2.3

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Recommendation 2.4

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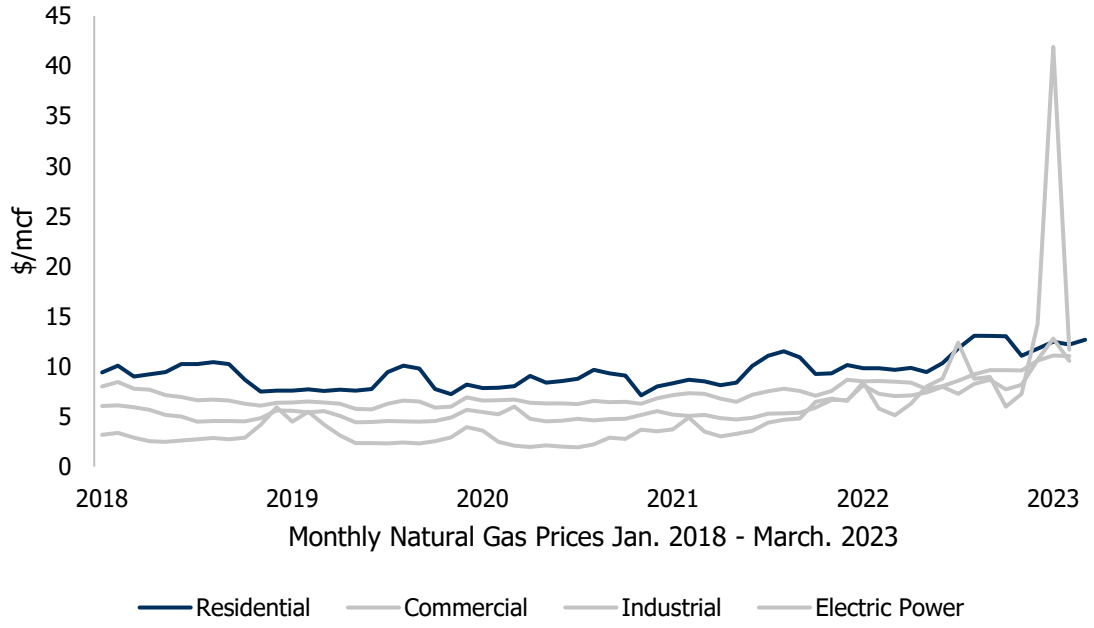
Appendices

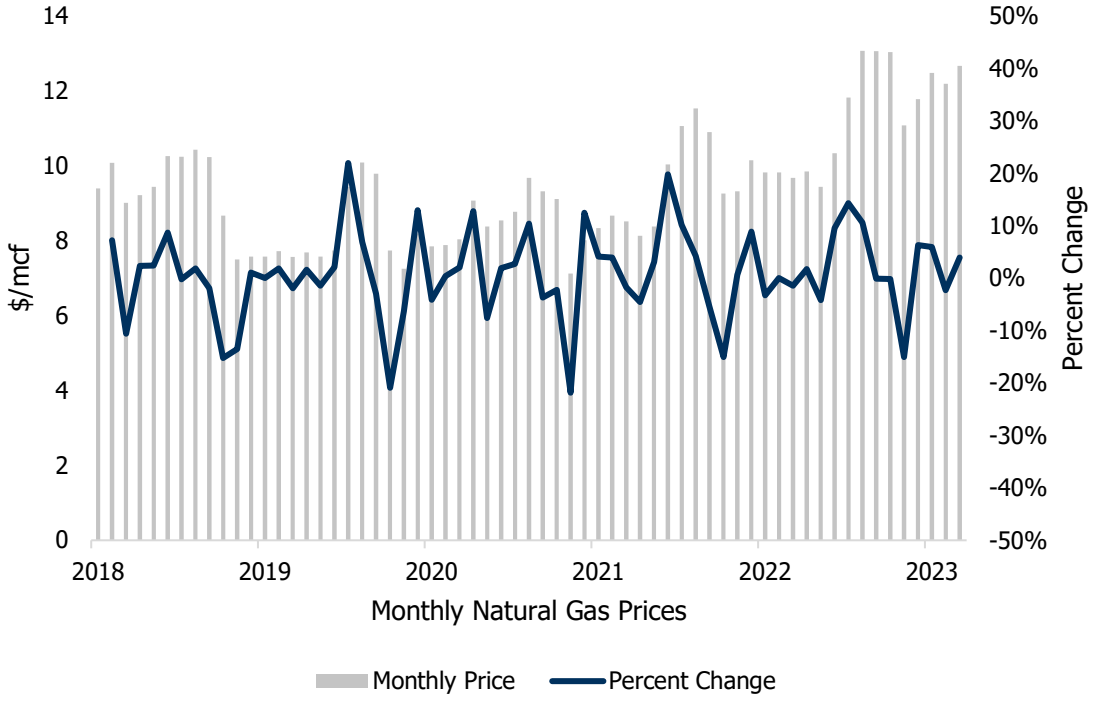
A. Natural Gas Costs and Trends

Appendix A: Average Natural Gas Prices by End-Use Consumer (monthly). In recent years natural gas prices have risen for all end use consumers.



Source: Energy Information Administration

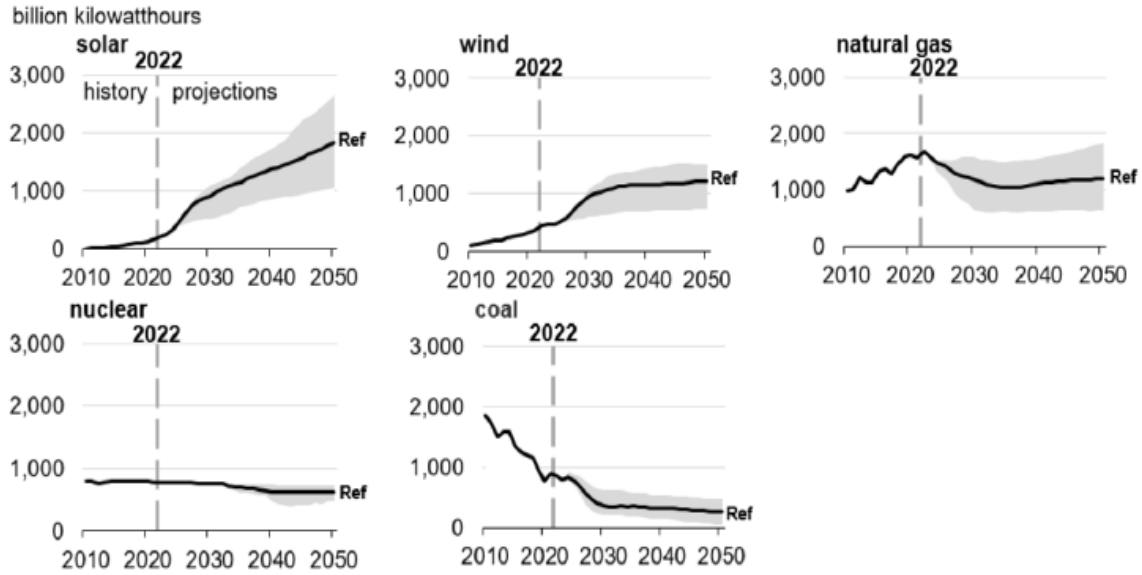
Appendix A: Average Natural Gas Prices for Residential Customers (monthly). This shows fluctuations in the monthly price in real dollars and percent change month over month.



Source: Energy Information Administration

B. U.S Energy Information Administration Annual Energy Outlook Projection

Appendix B: Forecasted U.S. Electricity Generation by Source. Solar and wind resources are projected to increase in generation, while natural gas, coal, and nuclear decrease. The gray range demonstrates the 12 side cases, and the middle line indicates the reference case.



Source: U.S. Energy Information Administration, Annual Energy Outlook 2023

C. Other State Energy Modeling Examples

Other State Modeling Examples				
State	Year	Title	Summary	State Utilization
Iowa	2022	Renewable Hydrogen in Iowa	Iowa uses cost viability modeling for the build-out of new natural gas infrastructure, financial projection modeling for renewable hydrogen projects, and web-based modeling to simulate winter weather events on electric lines to learn when to dispatch resources.	N/A
New Hampshire	2018	Study on the economic viability of renewable portfolio standard Class III biomass electric generation resources in New Hampshire	New Hampshire uses economic development modeling to determine the potential impact on a regional economy of proposed biomass electricity projects.	This study isn't directly referenced in their 10-year strategy, but the conclusions from the study are brought in. The study also helped legislators make decisions on HB 142, (2023), SB 577 (2018), NH. SB 365 (2018), This statute was challenged at FERC and FERC agreed that the statute was preempted by federal statute and therefore could not be implemented.
Virginia	2020	Modeling Decarbonization: Report Summary and Policy Brief for Virginia Governor's Office Administration and Policymakers	Virginia partnered with independent research institutions to complete legislation-mandated modeling to identify strategies to achieve least-cost elimination of CO2 emissions by 2045.	The incoming administration looked at this modeling as part of the Virginia energy plan review process. This report was one of the many resources used with respect to baseline analysis as well as energy plans looking forward.
New Jersey	2019	New Jersey Energy Plan Pathway to 2050	New Jersey utilizes modeling in its master plan to define the energy services required by the growing economy, calculate energy needs, and optimize investments to meet energy needs at least cost while meeting policy targets.	N/A

Agency Response

State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

Department of Natural Resources

JOEL FERRY
Executive Director

June 5, 2023

Kade R. Minchey
Legislative Auditor General
House Building, State Capitol Complex
Salt Lake City, UT 84114

Dear Mr. Minchey:

The Utah Department of Natural Resources (DNR) and the Office of Energy Development (OED) are grateful for the time and effort the Legislative Auditor's Office has dedicated to identifying opportunities for operational and policy improvements within OED.

This audit came at a time of significant transition with the appointment of a new energy advisor and office director. We believe we have the right leadership, staff and support in place today, and we look forward to implementing the recommendations outlined by your office.

Since its inception in 2011, seven directors have worked to advance the governor's energy vision, implement state energy policy, and enhance Utah's energy infrastructure, technology and workforce. Of course, different leadership has resulted in different priorities. The office structure has also changed, starting under the Governor's Office and now moving under DNR through legislation passed in 2021. We recognize there have been inconsistencies and uncertainty due to the transitory nature of OED's directors and structure, but the current administration is committed to establishing standards of operations to formalize processes that will create long-term stability.

Under new leadership, the integration with DNR is progressing successfully. A recently formed DNR Energy Collaborative Council has added depth and subject matter expertise to OED's planning efforts. This council helped inform a gasoline pricing study, along with policy recommendations, that our office completed at the request of Gov. Cox in November 2022. The information gathered from this report has helped us better understand the direct impacts of federal and regional policies on Utah's gasoline prices. We know similar impacts are occurring in other areas of energy as well.

We take our responsibilities seriously as we work to fulfill our legislative mandate to serve as the primary resource for advancing energy and mineral development. We have assembled a solid team, which we are continuing to build. We also have industry partnerships to help navigate the rapidly changing energy landscape.

As we continue to improve our internal processes and procedures, we will provide regular updates to your office on our progress in implementing your recommendations. We recognize good policy comes from good data. We are committed to proactively implementing data-driven policies and recommendations to move the state forward by maximizing the state's diverse energy and mineral resources.

We have and will continue to improve as our team and programs mature. We will work hard to implement the audit recommendations. Please see below for our proposed solutions.

Sincerely,

Joel Ferry
Executive Director
Department of Natural Resources

Greg Todd
Director
Office of Energy Development

Proposed Agency Solutions

The strategies and tactics outlined below will allow OED to directly and immediately begin to fulfill the recommendations outlined by the Legislative Auditor General's office. Regular progress updates will be provided to Gov. Cox, legislative leadership and the legislative auditor general's office beginning January 2024.

Recommendation 1.1 *We recommend the Legislature consider amending State Energy Policy to include data-driven modeling requirements for energy by the Office of Energy Development at a statewide level.*

- **Provide recommendations for changes to the state energy policy** based on data-driven research, market analysis, regulation and incentives.
    - Through the Strike Team created as a result of HB 426, determine what research and data need to be processed to determine Utah's best path forward
    - Create a team to identify recommended changes to the state energy policy based on the work being completed through HB 426
- **Develop an annual "State of Energy" report** to drive policy recommendations based on applicable modeling that evaluates trends (federal and regional), associated capacity/demand types, risks, opportunities, and policy recommendations specific to Utah
    - Include energy (gasoline, natural gas, emerging technologies including renewable and non-renewable sources, and nuclear) and strategic minerals (including critical minerals and rare earth elements)
    - Report to Public Utilities Energy and Technology Committee and the executive branch
- **Hire an emerging technologies expert** to help develop a structure for data-driven policy recommendations
    - FTE funding was requested and received in the 2023 legislative session

Recommendation 1.2 *We recommend that the Legislature consider requiring the Office of Energy Development to develop actionable goals and recommendations for the state energy plan in line with best practices.*

- **Accelerate and expand state energy planning** efforts that began in 2021 and see them through to completion with measurable, actionable goals and recommendations that are in line with best practices
    - Phase 1: Establish the framework and vision for the new state energy plan (completed May of 2022)

    - Phase 2: Research, data collection and stakeholder meetings.
        - Update Energy Resource Story Map: OED is partnering with UGS to update data and resources on Utah's total energy and minerals resource mix, which will be completed fall 2023 and updated annually
        - Audit Utah's current energy needs and identify current generation being used to meet existing and future demand (capacity/demand types, cost lifecycles, resource mix percentages)
    - Phase 3: Complete the state energy plan with measurable, actionable goals and recommendations
- **Leverage industry subject matter experts** by incorporating the experience of the recently formed DNR Energy Collaborative Council and Strike Team (created previous to audit findings) to expand data gathering and modeling that will inform policy and actions

Recommendation 2.1 *We recommend the Office of Energy Development balance energy policy staff expertise to better fulfill their mandate of implementing state energy policy and the governor's energy goals.*

- **Expand the bench** by focusing renewed emphasis on energy policy and research
    - Move immediately to hire an emerging technologies expert, which is in addition to the four experts already on staff
    - Reorganize the existing leadership structure so policy staff is reporting directly to OED's director/state energy advisor
    - Leverage stakeholder and partner cooperation, particularly with energy economic subject matter experts across the state and the DNR Energy Collaborative Council
- **Satisfy the requirements in SB 62** to establish the hydrogen advisory council to keep the director informed on hydrogen policy decisions and technology developments
- **Modify the state energy policy** based on the results from the work of the Strike Team and the State Energy Plan

Recommendation 2.2 *We recommend the Office of Energy Development include Legislative recommendations and long-term energy planning in their annual report to the Legislature.*

- **Include long-term forecasts and energy planning** recommendations in the new annual State of Energy report as referenced in recommendations 1.1 and 1.2. This information will also be provided in OED's annual report to the legislature

Recommendation 2.3 *We recommend the Office of Energy Development develop goals, measures, and tracking to demonstrate accountability for office operations and to provide better direction moving forward.*

- **Increase office accountability** by launching new meaningful performance measures in partnership with DNR's director of enterprise solutions. This process will allow OED to create clearly defined, consistent and meaningful measurement standards within all programs. This process will include the following:
    - Redefine systems and programs that fulfill OED's stated purpose
    - Create measurements to determine the effectiveness of said programs and systems
    - Determine the specific key results and outcomes
    - Create measurements to determine if desired outcomes are achieved

Recommendation 2.4 *We recommend the Office of Energy Development establish stronger internal governance and inner-office continuity by updating job descriptions, policies and procedures, grant selection criteria, and standard operating procedures to fulfill their state mandate.*

- **Overhaul OED policies and procedures**, operating procedures, job descriptions, onboarding and offboarding best practices and the employee manual, and bring them into compliance with DNR's standard practices
- **Implement standardized performance plans** for all staff with quarterly performance reviews as outlined in SB 104 pay for performance standards
- **Overhaul grant selection criteria** and structure for prioritizing and determining which federal grants to pursue