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Electric Utilities and the IRA/IIJA:

Ensuring Maximum Benefits for Consumers from New Federal Funding Opportunities

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About Analysis Group

Analysis Group is one of the largest economics consulting firms, with over 1,200 professionals across 14 offices in North America, Europe, and Asia. Since 1981, Analysis Group has provided expertise in economics, finance, analytics, strategy, and policy analysis to top law firms, Fortune Global 500 companies, government agencies, and other clients. The firm's energy and climate practice area is distinguished by its expertise in economics, finance, market modeling and analysis, economic and environmental regulation, analysis and policy, and infrastructure development. Analysis Group's consultants have worked for a wide variety of clients, including energy suppliers, energy consumers, utilities, regulatory commissions, other federal and state agencies, tribal governments, power system operators, foundations, financial institutions, start-up companies, and others.

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I. Executive Summary

The 2021 Infrastructure Investment and Jobs Act ("IIJA") and the 2022 Inflation Reduction Act ("IRA") (together, the "Acts") provide billions in combined federal funding for a wide variety of actions supporting transitions in the electric sector. The two new laws offer extraordinary financial incentives and programmatic funding across the energy supply chain, with implications for a myriad of players in the energy industry. This is particularly true for the electric industry in general, and for electric utilities specifically.

Beyond the normal contractual obligations that energy companies have in the regular course of their businesses, utilities have well-established legal and regulatory requirements that are relevant in the context of the opportunities afforded by the new Acts. Utilities have a duty to reliably meet the current and future demand of their customers at the lowest possible cost, in exchange for the opportunity to recover costs and earn a fair return on their investments. This obligation entails prudent planning and investment, efficient operation of the utility's system and resources, and pursuit of relevant opportunities that support their provision of service reliably at lowest cost.

In the years ahead, utilities face important investment decisions, such as transitioning their generation portfolios and transmission and distribution systems to replace aging equipment and take advantage of advanced technologies to support the changing needs of the grid, such as meeting changes in demand due, in part, to increased electrification of the transportation and building sectors.

The IIJA and IRA represent a once-in-a-lifetime opportunity for utilities to meet these obligations more cost-effectively for their customers. The Acts provide federal funding and tax-benefit opportunities across all segments of utility service – generation, transmission, distribution, and distributed energy resources ("DERs") (including DERs on their customers' premises), offering significant options for utilities to satisfy their public service obligations with federal funding that can lower the costs borne by electricity consumers.

Many federal and state agencies, trade associations, and others are actively supporting potential recipients' access to information about funding opportunities. Many utilities understand these opportunities and are pursuing them. Taking full advantage of such opportunities, however, requires that utilities overcome some practical obstacles and challenges to fully capture the benefits available to them. For example, many of the opportunities under the Acts are time-limited in nature, and/or are subject to competitive procurements with deadlines. Yet utility decisions regarding resource and reliability planning, and investments or co-investments in technologies and programs, are subject to specific public utility commission ("PUC") guidelines, time-consuming proceedings, and/or PUC precedent that can induce caution in utility investment practices. While these proceedings and precedent are necessary elements of public utility regulation, they can slow, delay or prevent the expeditious action needed to ensure utility consumers benefit from the federal funding opportunities afforded by the IIJA and IRA.

Two basic strategies can help to address such impediments: (1) proactive utility action, and (2) proactive PUC action. Both are necessary.

Utility consideration of the funding available through the IRA and IIJA should be viewed as an obligation tied to prudent utility management. Regulatory precedent and practice require that every utility comprehensively and expeditiously evaluate the Acts' opportunities, incorporate the relevant incentives and funding benefits into their resource and system planning exercises, and transparently demonstrate that they have prudently taken full advantage of the Acts' provisions into investment and operational decisions (or explain why they have not pursued or implemented such opportunities).

And of course, many regulators have already instituted processes and directives to encourage utilities to make the most of the Acts' opportunities relevant to their states, utilities, and consumers. Best practices suggest that every regulator should hold utilities accountable for their efforts to access the Acts' provisions and can do so through careful review of utility planning, analysis, investment decisions, and operations. These reviews can take place in the context of existing regulatory dockets, such as integrated resource plan ("IRP") processes, reliability performance reviews, and rate cases or other ratemaking dockets.

Regulators can also facilitate proactive utility action through special one-off inquiries and requirements for utility filings related to the Acts. As described below, many states have done this, to make clear their expectations for utilities. Through such proactive general inquiries and utility-specific dockets, regulators can provide clear guidance and regulatory incentives for proactive utility action. Regulators can require utility evaluation of the Acts, provide clear statements of PUC expectations, and send signals that investments that take advantage of federal funding opportunities are an expectation of prudent management and have a rebuttal presumption of favorable consideration from a ratemaking perspective.

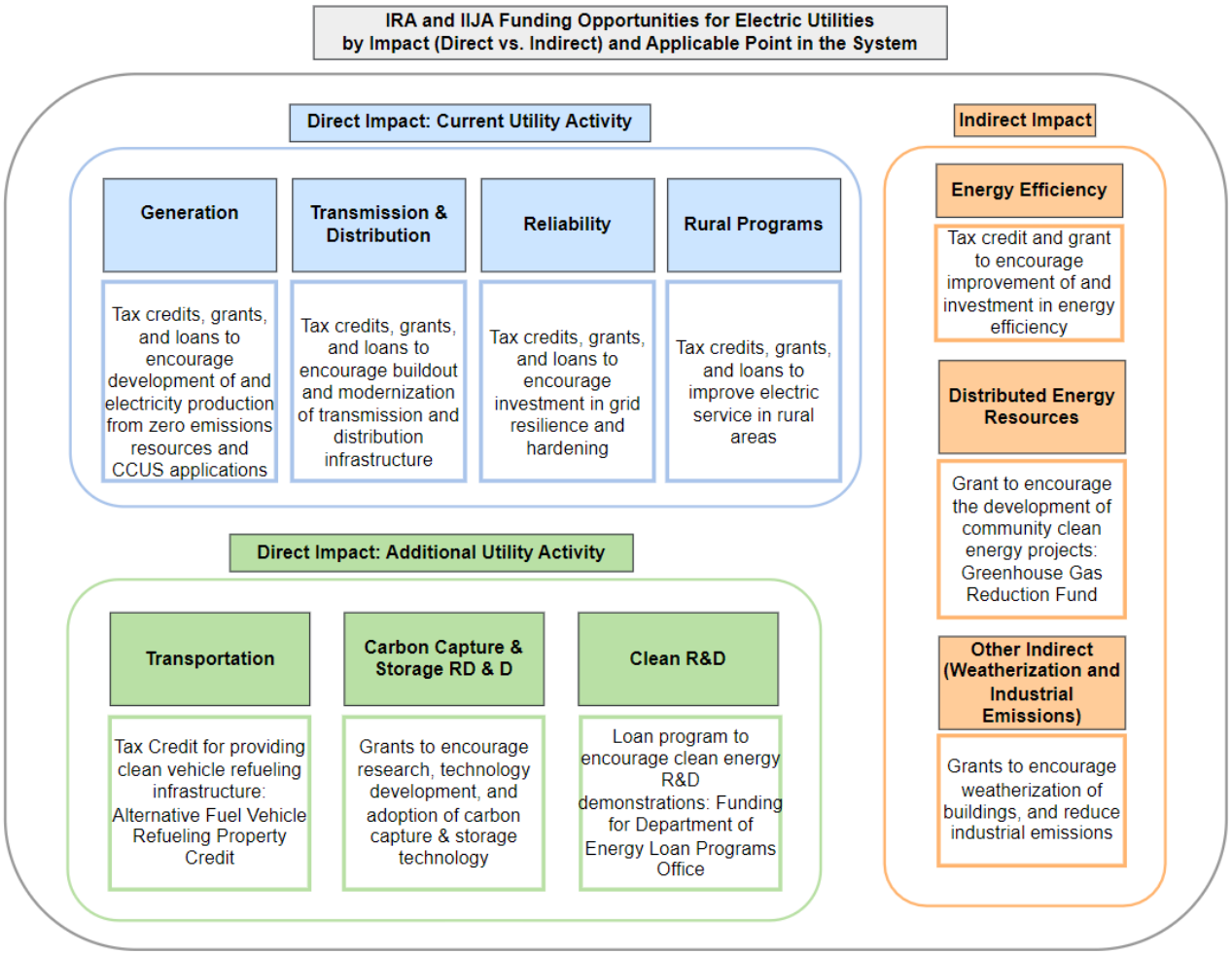
In this report, we describe the utility and regulatory context for considering funding opportunities under the Acts, summarize the scope of electric utility funding opportunities in the Acts, discuss specific utility processes and filings that can incorporate and capture the benefits of the Acts' potential contributions, and develop observations to be considered by electric utilities, regulators, and stakeholders. We focus on opportunities for action by regulated utilities (especially ones that are vertically integrated, with responsibilities for generation, transmission and distribution assets) as opposed to the full array of electric industry players.

Time is of the essence for utilities and regulators to consider and pursue these opportunities. The transitions already underway in the electric industry across the country, combined with the provisions in the Acts, drive the need for timely action.

The Acts provide significant utility funding and co-funding opportunities for investments and operational technologies through a mix of grants, loans, and tax benefits. These opportunities fall into at least the following functional buckets, as further depicted in **Figure ES-1**:

- Direct funding opportunities related to the supply-side of electricity service, notably for the development, maintenance, and operation of generation (including carbon capture, usage, and storage ("CCUS") by generation resources), transmission, and distribution assets. These opportunities include funding for reliability and resilience (e.g., investment in grid hardening), and certain funding programs specific to improving electric service in rural service territories. (These opportunities are outlined in blue in the figure below.)
- Direct funding opportunities related to changing utility operations such as: the development of electric vehicle charging infrastructure to support the electrification of transportation, investment in carbon capture and storage research, development, and demonstration ("RD&D"), and other clean energy research and development to encourage investment in new technologies and clean energy demonstrations. (These opportunities are highlighted in green in the figure below.)
- Indirect funding opportunities related to electric utilities' need to meet future changes in the shape, levels, and peaks of electricity demand (e.g., through demand-side investments in measures such as energy efficiency, vehicle electrification, building electrification, distributed energy resources, increased manufacturing, and data centers). These funding opportunities include incentives that encourage customers' adoption of distributed energy resources, and other programs such as for weatherization of buildings and reduction of industrial emissions. (These opportunities are highlighted in orange in the figure below.)

Figure ES-1. Categorization of IRA and IIJA Funding Opportunities for Electric Utilities



In addition to these being funding opportunities in the Acts, these categories of investment are ones that utilities must make in their normal course of business to maintain efficient operations, satisfy traditional growth in demand, and meet the needs of the changing electric industry. Moreover, in many service territories, the pace of investment will need to increase even more as demand on utility systems changes due to new loads from vehicle charging, other electrification technologies (e.g., heat pumps), increased deployment of distributed technologies such as rooftop solar and battery storage, new manufacturing, and data centers.

Each of these funding areas offers the potential for utility companies to adopt technologies, strategies, and investments to help meet their service reliability and resilience obligations with a lower level of revenue collected in rates than would otherwise be required. These funding areas also provide opportunities for utilities to meet demand in a way that lowers the GHG impact of operations, in a manner consistent with utility commitments and/or state and federal climate goals.

Our review of the Acts' opportunities and the context for utility action and PUC review has led to the following summary observations that represent best practices for states and utilities to consider *today* to ensure that electricity consumers achieve the maximum possible benefit from the funding opportunities in the Acts:

The IIJA and IRA present an unprecedented opportunity for utilities to achieve reliability, cost, and policy objectives at the lowest possible cost to ratepayers. Most of the investment, co-investment, tax benefits, and other opportunities under the Acts relate to things that affect electric utility demand, customer service, transmission and distribution, and the addition or replacement of generating resources. These Acts' opportunities can help reduce the total customer-funded costs of reliable electric service and help with maintaining the affordability of electricity service.

Prudent management of utility planning and investment requires a comprehensive assessment of the Acts' opportunities specific to utility circumstances and needs. Utilities are granted exclusive, franchised service territories and an opportunity to recover their costs and a competitive return on investments in exchange for the obligation to reliably meet current and future demand of all customers within their service territory at the lowest possible cost. Utility regulators ensure these service obligations through requirements that utilities prudently plan for and undertake investments and operations in ways designed to benefit consumers – and make ratemaking decisions consistent with those requirements. Viewed through this lens, utility regulators should expect, and utilities must execute, forward-looking and expeditious evaluation of, pursuit of, and execution on the once-in-a-lifetime opportunities available under the Acts.

The Acts' opportunities support the kinds of new investments that should be built into utility planning for integrated resource portfolios and transmission and distribution system modernization. The starting point for prudent utility management is well-informed and comprehensive advance planning for meeting future customer demand. This involves utilities availing themselves of relevant data on resource costs, new and emerging power production, transmission and distribution technologies, cost-reduction opportunities, and a full awareness of how customer demand is likely to evolve in the years ahead. The grant, loan and tax-benefit provisions in the Acts clearly offer cost-reducing opportunities for electric companies to plan investments to manage the level and shape of electricity demand over time. Utilities that expeditiously and proactively understand the beneficial implications of the Acts for their customers stand to best avail themselves of these opportunities.

Utilities should transparently describe their assessments of the Acts' opportunities and the resource planning decisions in their planning and other informational filings with their regulators. Such transparency is vital for regulators and the public to be able to assess and determine whether utility investments and operational expenses are the result of prudent utility management and thus recoverable in rates charged to customers. Given the potential benefits afforded by the Acts, regulators should require that utilities explicitly describe how they have taken advantage of the Acts' opportunities (and explain their rationale for not doing so, in instances where that is the case).

Regulators should make clear their expectations that utilities undertake the analytic, planning, and other steps needed to fully avail themselves of the opportunities under the Act as part of prudent utility management. Utilities appropriately follow the decisions and guidance provided by commissions. Thus, commission decisions are critical waypoints to guide the focus of utilities in carrying out appropriate and prudent planning and investment. As discussed in Section V of this report, many states have initiated or completed commission-initiated dockets to review opportunities available to utilities under the Acts, and to provide guidance where possible. Regulators in other states may consider such proceedings to help ensure a common base of information about the Acts' opportunities, and ensure clear expectations for what utilities should be doing to take advantage of these funding opportunities in their planning going forward.

There are several types of utility processes and proceedings where regulators and stakeholders should routinely review the actions taken by utilities to ensure maximum participation in appropriate opportunities afforded by the Acts' provisions. Given the short and near-term timelines of funding availability (*see* Section III), the IIJA and IRA opportunities may not yet be incorporated into standard utility regulatory processes, such as formal rate cases, which have their own timing rhythms. Relevant proceedings could include: special PUC inquiries or proceedings into the funding opportunities and utility actions to take advantage of them, and utility-specific IRP and similar planning processes and proceedings. As utilities incorporate relevant funding from the Acts into their planning and investment processes – e.g., by taking advantage of tax credits or winning grants – the implications of these funding strategies will eventually roll into future rate filings. At that stage, regulators will need to determine the extent to which utilities have appropriately mined these once-in-a-lifetime federal funding options for the benefit of their customers.

The unprecedented size and time-limited nature of the Acts' funding opportunities call for bold action by regulators and utilities alike. In certain circumstances, failure to adequately incorporate funding from the Acts into utility planning and operations could result in utilities not being allowed by PUCs to recover their full costs of service. And, conversely, regulators' hesitation to allow utilities to take full advantage of time-limited federal funding opportunities afforded by the Acts could mean that they are foregoing support that could save consumers' energy costs over time. Proactive utility action must be combined with proactive PUC action to maximize the benefits of these Acts' funding opportunities.

II. Introduction

In 2021 and 2022, the federal government enacted two landmark laws – the 2021 Infrastructure Investment and Jobs Act and the 2022 Inflation Reduction Act – that provide billions in combined federal funding for infrastructure modernization and resilience, clean energy resources, and associated technologies and manufacturing. These statutes aim to enhance U.S. economic competitiveness and help to put the nation on target to reduce its net economy-wide greenhouse gas ("GHG") emissions by 50-52 percent below 2005 levels in 2030 as part of its nationally determined contribution ("NDC") under the Paris Agreement.[1]

The Acts together introduce funding opportunities related to clean energy and electric-system infrastructure in at least the following areas:

- Direct funding opportunities related to the supply-side of electricity service, and notably for the development, maintenance, and operation of generation (including CCUS by generation resources), transmission, and distribution assets. These opportunities include funding for reliability and resilience (e.g., investment in grid hardening), and certain funding programs specific to improving electric service in rural service territories.
- Direct funding opportunities related to changing utility operations such as: the development of electric vehicle charging infrastructure to support the electrification of transportation, investment in carbon capture and storage RD&D, and other clean energy research and development to encourage investment in new technologies and clean energy demonstrations.
- Indirect funding opportunities related to electric utilities' need to meet future changes in the shape, levels and peaks of electricity demand (e.g., through demand-side investments in measures such as energy efficiency, vehicle electrification, building electrification, distributed energy resources, increased manufacturing, and data centers). These funding opportunities include incentives that encourage customers' adoption of distributed energy resources, and other programs such as for weatherization of buildings and reduction of industrial emissions.

The IIJA and IRA provide novel financial incentives in unprecedented amounts to support action across the supply chain for the manufacture and deployment clean energy technologies, with implications for all major producers and consumers of energy, particularly in the electricity sector. In many ways, these federal financial incentives can support numerous benefits for utilities and their consumers. The Acts are key enablers of: (1) the obligation of utilities to reliably and economically satisfy current and future demand for electricity in their service territories; (2) utilities' responsibility to prudently plan for and manage their investments and operations in order to minimize the cost to customers to meet their obligations; and (3) the ability of many utility companies to modernize and decarbonize their supply portfolios in the years ahead in support of utility and state climate policy goals.[2] Many of

[1] The White House, "Fact Sheet: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies," April 22, 2021, available at: https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/; UNFCCC, "The United States of America Nationally Determined Contribution," available at: https://unfccc.int/sites/default/files/NDC/2022-06/United%20States%20NDC%20April%2021%202021%20Final.pdf.

[2] Smart Electric Power Alliance, "Utilities' path to a carbon-free energy system," available at: https://sepapower.org/utility-transformation-challenge/utility-carbon-reduction-tracker/.

these commitments are voluntary, while others aim to align utility portfolios with state and federal requirements (including controls on carbon dioxide ("CO_2") emissions from power plants).[3]

These federal financial incentives can change the cost of technology adoption for parties (like utilities) that take advantage of the Acts' provisions. For utilities, this means lowering costs for customers. The provisions will alter the cost of zero-emission generating technology relative to traditional fossil fueled generating units, and will introduce or improve the economics of other technologies associated with the reliability and resilience of transmission and distribution infrastructure. For electric utilities, taking full advantage of these funding opportunities is important for their customers gaining the benefits offered by this unprecedented set of laws. For utility regulators, having complete information on the available funding opportunities and utilities' thorough consideration of and actions on tapping into these opportunities is similarly essential to ensuring that consumers get the most value that they can from these federal funds. Specifically, failure to take full advantage could result, in certain circumstances, of PUCs determining utilities should not be able to recover full costs of service filed in ratemaking proceedings that lack adequate and appropriate funding support from the IRA and IIJA. And regulators' hesitation to allow utilities to take full advantage of time-limited federal funding opportunities afforded by the Acts could mean that they are foregoing support that could save consumers' energy costs over time.

In the next section of this report (Section III), we first place potential Act-funded investment opportunities in the context of utility obligations to prudently plan for, invest in, and manage power supply and power system operations, and discuss how these obligations should translate into specific utility actions needed to meet their least-cost obligations. In Section IV, we focus on various provisions in the Acts that can have a profound impact on the cost and configuration of utility resources and system operations. We then illustrate (in Section V) the types of steps that have been taken in several states and utilities to incorporate the Acts' opportunities into utility planning and investment practices through public utility commission investigations and utility planning activities. Appendix A offers detail on the relevant highlighted provisions of the IIJA and IRA, and Appendix B provides information on recent actions taken by PUCs in various states to encourage consideration of the funding opportunities available to electric utilities.

[3] National Regulatory Research Institute, "State Energy Clean Policy Tracker," available at: https://www.naruc.org/nrri/nrri-activities/clean-energy-tracker/. "On May 11, 2023, EPA issued proposed Clean Air Act emission limits and guidelines for carbon dioxide (CO_2) from fossil fuel-fired power plants based on cost-effective and available control technologies." EPA, "Clean Air Act Section 111 Regulation of Greenhouse Gas Emissions from Fossil Fuel-Fired Electric Generating Units," available at: https://www.epa.gov/system/files/documents/2023-05/111%20Power%20Plants%20Stakeholder%20Presentation2_4.pdf.

III. Regulatory Policy and Precedent Require Timely Action by Utilities to Take Advantage of IRA/IIJA Opportunities, and Capture Important Benefits for Consumers

A. Overview

The Acts provide opportunities for a wide range of investments by electric utilities in ways that promise to support or improve reliability, meet future demand, and minimize ratepayer costs. Yet taking advantage of these opportunities requires action in the near term, and there are some practical impediments to utilities taking action quickly enough maximize the ultimate benefits of the Acts from the ratepayer's perspective. Given these circumstances, utilities can and should take proactive steps to try to reduce or eliminate barriers to action, particularly given their traditional obligations to ensure reliable service at the lowest possible cost. In this section we set the stage for utility action by describing the structures under which utilities make decisions related to current and future investments. These set the context for utilities' consideration of opportunities under the Acts, and how such investments are included in rates.

Utility obligations related to resource adequacy, reliability, resilience, environmental compliance, and cost minimization flow from foundational regulatory and ratemaking laws and precedent established at the federal and state levels over the past century. At the federal level, the Federal Energy Regulatory Commission ("FERC") regulates the terms and conditions of interstate transmission and wholesale sales of electricity in interstate commerce.[4,5] At the state level, PUCs are primarily responsible for establishing the framework for the structure of the electric industry within the state, determining whether to approve the siting of electric generation, transmission and distribution facilities, for approving the portfolio of generation and other sources of electricity (in some states), and the prices and other terms of bundled retail electricity service and unbundled delivery service provided by investor-owned utilities ("IOUs") to end users.[6] Finally, in many states, electricity service to some customers is provided through municipal electric light companies ("municipals" or "munis") or electric cooperatives

[4] FERC, "What FERC Does," available at: https://www.ferc.gov/about/what-ferc/what-ferc-does; "Electricity Markets: A Primer for State Legislators," National Conference of State Legislatures, available at https://www.ncsl.org/research/energy/electricity-markets-a-primer-for-state-legislators.aspx.

[5] Interstate transmission includes the movement of electricity on transmission lines that are above a certain voltage and are generally part of a transmission network that crosses state lines. Wholesale sales of electricity, also known as sales for resale, include, in effect, any transactions that are not sales of electricity to end-use customers (i.e., homes and businesses that are the customers of record for the local utility). FERC, "Glossary," available at: https://www.ferc.gov/about/what-ferc/about/glossary; California Public Utility Commission, "Electric Transmission Rates and FERC Proceedings," available at: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/electric-transmission-rates-and-ferc-proceedings.

[6] The Regulatory Assistance Project, "Electricity Regulation in the US: A Guide", March 2011, pp. 10-11, 24; National Conference of State Legislatures, "Electricity Markets: A Primer for State Legislators," available at: https://www.ncsl.org/research/energy/electricity-markets-a-primer-for-state-legislators.aspx.

("cooperatives" or "co-ops"), with the terms and conditions of such service overseen by each municipal's or cooperative's elected or appointed board of directors.[7]

States vary in terms of their industry structure, with approximately a third of the states having changed their vertically integrated utilities with the introduction of competition in the generation segment of the industry approximately two decades ago. In the other states, electric companies continue to operate as "vertically integrated" utility companies, with responsibilities for meeting retail customers' bundled electricity requirements within their franchised service territories.[8] In such states, IOU's generation portfolio, among other things, are subject to supervision by utility regulators. In restructured states, the generation/supply responsibilities have been removed from IOUs, so that customers may select the provider of electricity supply,[9] while transmission and distribution are still supplied by the IOU, and regulated by FERC and the state PUC, respectively.[10]

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[7] The Regulatory Assistance Project, "Electricity Regulation in the US: A Guide", March 2011, pp. 9-10, 13, 23; National Conference of State Legislatures, "Electricity Markets: A Primer for State Legislators," available at: https://www.ncsl.org/research/energy/electricity-markets-a-primer-for-state-legislators.aspx.
In addition to IOUs, munis, and co-ops, customers in several states are served by the four federal power authorities (the Bonneville Power Administration, the Southwestern Power Administration, the Southeastern Power Administration, and the Western Area Power Administration) or the Tennessee Valley Authority, which operates similarly to the federal power authorities. *See* The Regulatory Assistance Project, "Electricity Regulation in the US: A Guide", March 2011, p. 12; U.S. Energy Information Administration, "Federal Power Marketing Administrations Operate Across Much of the U.S.," June 12, 2013, available at: https://www.eia.gov/todayinenergy/detail.php?id=11651; Tennessee Valley Authority, "TVA at a Glance," available at: https://www.tva.com/about-tva/tva-at-a-glance.

[8] The Regulatory Assistance Project, "Electricity Regulation in the US: A Guide", March 2011, pp. 10, 54, 119; National Conference of State Legislatures, "Electricity Markets: A Primer for State Legislators," available at: https://www.ncsl.org/research/energy/electricity-markets-a-primer-for-state-legislators.aspx; McDermott, Karl, "Cost of Service Regulation in the Investor-Owned Electric Utility Industry," Edison Electric Institute, June 2012, p. vii.

[9] The Regulatory Assistance Project, "Electricity Regulation in the US: A Guide", March 2011, pp. 8, 14-15, 116; National Conference of State Legislatures, "Electricity Markets: A Primer for State Legislators," available at: https://www.ncsl.org/research/energy/electricity-markets-a-primer-for-state-legislators.aspx.

[10] The Regulatory Assistance Project, "Electricity Regulation in the US: A Guide", March 2011, pp. 8, 14-15, 116; National Conference of State Legislatures, "Electricity Markets: A Primer for State Legislators," available at: https://www.ncsl.org/research/energy/electricity-markets-a-primer-for-state-legislators.aspx. States allow for charges for energy supply by competitive suppliers to be billed to customers directly by the competitive supplier or to be included on utility bills. *See, e.g.,* U.S. Energy Information Administration, "Can electric utility customers choose their electricity supplier?," Frequently Asked Questions, available at: https://www.eia.gov/tools/faqs/faq.php?id=627&t=3.
By and large, munis and co-ops have not unbundled their generation supply services from their distribution services (though they may purchase their energy supply from third-party entities). *See, e.g.,* The Regulatory Assistance Project, "Electricity Regulation in the US: A Guide", March 2011, pp. 13-15; American Coalition of Competitive Energy Suppliers, "State-by-State Information," available at:https://competitiveenergy.org/consumer-tools/state-by-state-links/.
In addition, in deregulated states, the regulated utility often serves as the default service provider or "provider of last resort" ("POLR") for customers who do not choose a competitive supplier of generation services. In these cases, the PUC oversees and regulates the process by which the utility procures generation services on behalf of POLR customers within their franchised service territory. *See, e.g.,* California Public Utilities Commission, "Order Instituting Rulemaking to Implement Senate Bill 520 and Address Other Matters Related To Provider of Last Resort," Rulemaking 21-03-011, March 18, 2021, Section 2.1; Public Utility Commission of Texas, "Provider of Last Resort," available at: https://www.puc.texas.gov/consumer/electricity/polr.aspx; McDermott, Karl, "Cost of Service Regulation in the Investor-Owned Electric Utility Industry," Edison Electric Institute, June 2012, p. x.

Significant costs are incurred by utility companies in the provision of utility service. These include capital costs associated with generation facilities, high-voltage transmission lines and substations, lower-voltage distribution lines and related equipment, and associated power system operational, communications, safety, and customer service infrastructure (e.g., control centers, meters).[11] Utility companies' costs also include fixed annual costs associated with equipment maintenance, personnel, taxes, insurance, etc., and variable costs that can depend on the ultimate level of sales to consumers (e.g., the cost of power plant fuel or purchases of energy, emissions allowances, and other variable operation and maintenance costs).[12] Whether a utility remains vertically integrated is now focused primarily on transmission and distribution services, with these expenditures directly affecting the rates charged to customers and the affordability of electric service.

Federal and state regulators have established a robust framework of statutes, rules and regulations that place obligations on utilities to comprehensively plan for reliably meeting customer needs in the lowest-cost manner, and to prudently manage planning, operational, and investment practices to ensure least-cost outcomes for consumers. In short, utilities are obligated to provide service at reasonable rates through careful planning, prudent investment and financial management, and efficient operational practices.

This provides the baseline responsibility of utilities to actively review the Acts' opportunities and take advantage of their provisions to the extent that they can help to lower the cost of electric service.

As discussed further in Section IV, there are numerous financial incentives in the Acts that could potentially support utility investment in various generation, transmission, distribution, and information technology equipment and systems needed to reliably meet current and forecasted customer demand. These incentives – whether through grants, subsidies like loan guarantees, or tax benefits – could have the practical effect of improving system reliability, ensuring resource adequacy, decreasing the carbon intensity of electricity generation, ensuring the sufficiency and resilience of the utility's transmission and distribution systems, and/or decreasing the costs the utility may otherwise incur to achieve these objectives.

All of these practical effects align with the obligations utilities take on in exchange for the granting of an exclusive, franchised service territory, and the opportunity to earn a fair return on investments. There are at least two areas where the Act's opportunities are inherently relevant to utilities' analyses and filings and associated regulatory review: first, in *resource planning* – i.e., those processes by which utilities forecast resource and infrastructure needs and develop plans to meet them (and in commissions' review of such plans); second, in *ratemaking* – i.e.,

[11] *See, e.g.,* The Regulatory Assistance Project, "Electricity Regulation in the US: A Guide", March 2011, p. 36; U.S. Energy Information Administration, "Electricity Explained: Factors Affecting Electricity Prices," available at: https://www.eia.gov/energyexplained/electricity/prices-and-factors-affecting-prices.php; "Decision Authorizing Pacific Gas and Electric Company's General Rate Case Revenue Requirement for 2014-2016," Application of Pacific Gas and Electric Company for Authority, Among Other Things, to Increase Rates and Charges for Electric and Gas Service, Effective on January 1, 2014, CPUC, Application 12-11-009, Decision 14-08-032, August 14, 2014.

[12] *See, e.g.,* The Regulatory Assistance Project, "Electricity Regulation in the US: A Guide", March 2011, p. 36; Phillips, Jr., Charles F. (1993), *The Regulation of Public Utilities*, 3rd ed., Public Utilities Reports, Inc., pp. 255, 260-269; U.S. Energy Information Administration, "Electricity Explained: Factors Affecting Electricity Prices," available at: https://www.eia.gov/energyexplained/electricity/prices-and-factors-affecting-prices.php.

in any utility filings to change rates (and in commission rate case proceedings). Each of these is discussed in the sections that follow.

B. Resource Planning

There are long-standing policies and practices in place to ensure timely planning for and development of the infrastructure needed to ensure system reliability, including for generation, transmission, and distribution infrastructure, as well as other systems and programs that contribute to reliability needs (such as communications systems, metering and demand-side management programs and installations).

For many decades regulators have required (and electric companies have administered) comprehensive processes to maintain system reliability and assure that utility portfolios reflect needed and least-cost resource portfolios. Various processes include:

- Commission-reviewed periodic company forecasts of demand for electricity within their service territories including expected growth over time in the level of and changes in the shape of demand system-wide and at the distribution system feeder and circuit level. These forecasts tend to look ahead for periods of ten years or more, and typically probabilistically evaluate potential variations and uncertainties in demand associated with uncertain future economic, technological, weather, and policy circumstances.
- Commission-reviewed company plans for the development of new generation capacity, new energy efficiency and demand-side management technologies and programs, transmission system upgrades, distribution system upgrades and system monitoring installations to meet demand growth and increase the reliability and resilience of overall power system performance. Utility filings that contain system demand forecasts and resource plans together are often referred to as IRPs.
- Commission-initiated focused reviews of specific policies, regulations, or events that affect utility planning, system reliability, and/or ultimate costs to consumers. These one-time investigations have happened historically for a variety of reasons (e.g., the new Clean Air Act Title IV Acid Rain Program requirements in the 1980s, and major outage events). As discussed below, many states have initiated investigations or dockets to consider the opportunities available under the Acts and have required utilities to file specific responses evaluating potential opportunities.
- Utility assessment of the capability of existing distribution system components to reliably absorb additional growth in demand and/or additional installation of variable behind-the-meter solar PV resources, wind and/or storage facilities at the distribution level.
- Utility and regional transmission system operator (“RTO”) review of the need for new transmission system investments and upgrades, subject to review in some cases, by state utility commissions.
- Utility and RTO review of requests for major interconnections of new sources of electricity generation at the power system or distribution system levels, new sources of electricity demand (such as major housing projects, business centers, malls, data centers, etc.), the processing of those requests through system interconnection analyses and cost assessment, commission review and approval of the utility’s involvement and any associated cost-recovery issues, and utility coordination with developers to ensure timely installation of any needed system upgrades and interconnection of the new load.
- Continuous utility collection, evaluation, and reporting of metrics that track the performance of the distribution system and individual feeders and circuits, and PUC review of filings, including the assessment of performance penalties for – and orders for utility mitigation of – poorly performing circuits.

- Utility and commission review of distribution-system emergency operational plans and response and recovery operations and procedures to ensure that the system can withstand severe weather events and that the utility has in place a plan for rapid recovery in the event of system outages.

A number of trends underway in the electric industry are dramatically increasing the importance of proactive resource and system planning for utilities. These trends include the proliferation of distributed solar PV and energy storage systems, the increase in customer adoption of electric vehicles, the continued improvement in the economics of large-scale variable resources connected to the grid (e.g., wind and solar), upcoming changes in federal and state environmental standards, and proliferation of new efficient building heating technologies run on electricity (e.g., electric heat pumps).[13]

Thus, in this respect, proactive policymaking and planning are important, as is taking full advantage of federal dollars available to support resources and technologies that are potentially relevant to the costs and capabilities of options available to utilities. As discussed elsewhere in this report, there are many categories of potential federal grants and tax benefits in the Acts related to generation resources and transmission and distribution investments and operations that should be proactively considered by utilities (and reviewed by regulators) in the integrated resource and other planning processes. Provisions in the IRA, for example, such as its Energy Infrastructure Reinvestment Financing program (IRA section 50144) (discussed further below in Section IV.C.1), may provide options and opportunities for financial assistance to utilities as they plan for how they will comply with upcoming Environmental Protection Agency regulations and State Implementation Plans to control GHG emissions from new, reconstructed, modified, and existing fossil fuel power plants.[14]

IRP processes are instances where utilities, stakeholders and PUCs establish the “blueprint” for utility resource and system investments and analysis; indeed, it is difficult for utilities to justify many of the major investments and expenses included in rates without demonstration that they result from a careful and robust planning process. It is at this stage in utility planning that companies should be expected to develop a comprehensive understanding of potential opportunities, specifically link them to future resource and system needs, and most importantly, act expeditiously to capitalize on available opportunities. This suggests that regulators establish their clear expectations for utilities’ actions to ensure that the opportunities available under the Acts are not lost through delay or poorly timed schedules for regular IRP reviews.

C. Prudent Management and Investment

[13] Hibbard, Paul, Susan Tierney, Grace Howland, and Daniel Stuart, “Massachusetts’ Energy Transition: Innovation for Electric Utility Regulation,” Analysis Group, September 11, 2023, available at: https://www.analysisgroup.com/globalassets/insights/publishing/2023_ma_energy_transition-innovation_for_electric_utility_regulation.pdf

[14] EPA, “Greenhouse Gas Standards and Guidelines for Fossil Fuel-Fired Power Plants,” available at: https://www.epa.gov/stationary-sources-air-pollution/greenhouse-gas-standards-and-guidelines-fossil-fuel-fired-power.

Ultimately, rates charged to customers are determined in rate cases where the utility is expected to justify any changes in the rates it proposes to charge customers for electricity service.[15] PUC reviews involve consideration of the utility's proposal, along with evidence provided by other parties, with a commission's ultimate decision based on the application of laws and commission precedent governing the prudence of the actions and decisions of utility management, review of the expenses and investments incurred for the provision of electric service, determination of the utility's allowed return on equity and cost of debt, and various principles used to guide the rate setting process including, for example, fairness, reasonableness, rate continuity, and cost causation. Overall, the rate-setting process aims to ensure the utility is taking actions consistent with robust planning practices, making prudent investment decisions, operating efficiently, and ensuring consideration of all ways to minimize charges to customers for reliable service.

While these principles are generally applied across most states, the actual structure, design, and level of rates across states, utilities, and over time can vary significantly. This is because the process of ratemaking for each utility in any rate period must proceed with a unique case-by-case evaluation of a range of factors that vary substantially for different locations, different customer mixes, different cost drivers, and a disparate set of state economic, energy, and environmental policy objectives.

The ultimate result of a utility rate case is the set of rates charged to different classes of customers, sufficient to allow the utility to recover annually a "revenue requirement." Through an adjudicated rate case, commissions review the components of the utility's proposed revenue requirement, including (1) annual fixed and variable operating expenses, (2) recovery of depreciation expense related to the assets resulting from the utility's past and current investments, and (3) a commission-determined return on the undepreciated portion of the utility's investments. These components are reviewed in detail by the commission, commission staff, and intervenors in the rate case proceeding.

The core principles considered in the review of the utility's expenses and investments is whether they are needed to provide electric service (the "used and useful" standard), and whether the expenditures and investments result from prudent utility management (referred to as the "prudence" standard). In order for utility expenses and investments to be allowed by the commission and recovered in rates, the commission must find that they were prudently incurred, and are used and useful in providing electric service to its customers.

Given the extraordinary economic value potentially available to utilities from the provisions of the IIJA and IRA, there are important questions that are now inherently part of a commission's consideration and determination of whether a utility's proposed rates meet the used-and-useful and prudence standards. For example:

- Were the new investments made by the company and for which it seeks to recover needed to meet an appropriate forecast of the electrical demand of its customers?

[15] Rate cases for investor-owned utilities occur when the utility proposes to change the price and other terms and conditions of service, and the PUC reviews the rate proposal in a formal docketed rate case proceeding. Period rate reviews also occur for publicly owned for munis and co-ops as they seek approval from their governing boards. The Regulatory Assistance Project, "Electricity Regulation in the US: A Guide", March 2011, pp. 23, 25, 31-35; National Conference of State Legislatures, "Electricity Markets: A Primer for State Legislators," available at: https://www.ncsl.org/research/energy/electricity-markets-a-primer-for-state-legislators.aspx.

- Did the company consider and compare appropriate alternatives to meet customer demand through a sufficiently robust planning process that included not only new generating resources and the going-forward costs of existing generating resources but also energy efficiency, distributed resource investments, and demand-side management?
- With respect to investment in new generating assets (or even the continued recovery of prior investment in poorly performing existing assets), did the utility's planning process fully consider the economics of alternatives, taking into account (for example) full consideration of federal and state subsidies, grants, and tax incentives affecting the ultimate cost of such resources?
- Did the company consider the relevant price and non-price factors (e.g., reliability considerations, climate and environmental impacts, other state and federal policy considerations) when evaluating and selecting from among competing resources and approaches that could meet company demand over time?
- With respect to new investments related to the grid, did the company conduct a transmission system planning process (on its own or in concert with regional power system operators) that anticipates and economically addresses changes in the system's needs in light of such things as unit retirements or new grid-connected variable renewable resources?
- Has the company implemented a distribution system planning process that anticipates and economically addresses the impacts of current as well as anticipated customer-sited distributed resources, such as rooftop solar and energy storage?
- In the company's transmission and distribution system planning, has it considered and taken advantage of available federal or state subsidies, grants, and tax incentives to reduce the cost of transmission and distribution system investments and/or improve the reliability and efficiency of power grid operations?
- Has the company otherwise fully considered the availability of federal or state subsidies, grants, and tax incentives that could reduce customer costs, improve reliability, or help meet climate and environmental policy objectives related to renewable generation, customer installation of electric technologies (such as electric vehicle charging, electric heat pumps, and electric appliances), and improvements in the reliability and efficiency of electric service?

The IIJA and IRA introduce new opportunities that a utility should be tapping into, and ratemaking should take these opportunities into account as regulators review whether a utility's actions meet the prudence standard for cost recovery. In certain circumstances, failure to adequately incorporate funding from the Acts into utility planning and operations could result in a penalty to utilities in the ratemaking process where the full cost of service lacking appropriate Act funding support is not allowed to be recovered. Determination of the rate levels that qualify as just and reasonable now should take into account whether the utility has actively and appropriately considered the extensive funding opportunities available through the IIJA and IRA. (While the prior discussion has been framed as applicable to PUCs' reviews of IOUs' rates, these concepts and questions are equally relevant in how the boards of munis and coops should hold management accountable as well.)

IV. Funding Opportunities in the IIJA/IRA that are Relevant to Utility Planning, Investment and Operations

A. Overview: Affordable Electric Service With Help From the IIJA and IRA

The IIJA was enacted on November 15, 2021,[16] and includes over $840 billion in federal funding for infrastructure.[17] The IRA was enacted on August 16, 2022, and includes grants, programs and advantageous tax provisions recently projected to be $1,045 billion in federal support for energy and climate investment.[18]

A subset of the funding in the two acts applies to activities along every segment of energy supply and delivery (generation, transmission, and distribution), as well as programs that will ultimately affect the drivers of grid-supplied energy demand. It is thus critical for vertically integrated electric utilities to consider these funding opportunities, since their fundamental responsibility is to plan for, directly invest in, and reliably operate power supply and distribution systems to reliably meet the changing patterns and shapes of customers' demand for electricity.

The supply side of utility operations involves investment in, modifications to and other changes in generation, transmission and distribution infrastructure as load grows or as relatively economic sources of supply become available (whether, for example, through technological change or availability of subsidies provided by entities other than a utility's customers). Funding in the Acts relevant to electric utility supply supports (1) the manufacturing and development of generation technologies including solar panels, wind turbines, and energy storage, (2) reinvestment funding to "retool, repower, repurpose, or replace"[19] existing fossil fuel generation, (3) upgrades to the bulk transmission system with new authorities enabling the Department of Energy ("DOE") to facilitate and overcome permitting challenges, particularly to connect rural areas with abundant renewable resources to urban areas with high load, and (4) distribution system planning, including investment in smart grids and upgrading of local substations, feeders, and circuits. These investments in distribution will be critical to meet higher levels of

[16] The White House, "Building a Better America: A Guidebook to the Bipartisan Infrastructure Law for State, Local, Tribal, and Territorial Governments, and Other Parties, May 2022, p. 5, available at: https://www.whitehouse.gov/wp-content/uploads/2022/05/BUILDING-A-BETTER-AMERICA-V2.pdf.

[17] The White House, "Building a Better America: A Guidebook to the Bipartisan Infrastructure Law for State, Local, Tribal, and Territorial Governments, and Other Parties, May 2022, pp. 13, 57, 65, 93, 117, 138, 154, 228, 269, 372, 386, and 400, available at: https://www.whitehouse.gov/wp-content/uploads/2022/05/BUILDING-A-BETTER-AMERICA-V2.pdf.

[18] Penn Wharton Budget Model, "Update: Budgetary Cost of Climate and energy provisions in the Inflation Reduction Act," April 27, 2023, available at: https://budgetmodel.wharton.upenn.edu/estimates/2023/4/27/update-cost-climate-and-energy-inflation-reduction-act; The White House, "Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action," Version 2, January 2023, p. 5, available at: https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf.

[19] The White House, "Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action," Version 2, Section 50144, Energy Infrastructure Reinvestment Financing January 2023, p. 31, available at: https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf.

both total and peak demand and accommodate the increased deployment of decentralized utility-scale and consumer-installed DERs such as behind-the-meter solar, battery storage, small wind systems, and cogeneration.

Electrification of buildings and vehicles, increased manufacturing, and the establishment of data centers are all anticipated to have significant implications for the demand side of utility operations.[20] Specifically, the energy required to serve end-use activities that once relied on fossil fuels - such as the electrification of vehicles, buildings, and the industrial sector – will spill over to electric utility operations. These spillover impacts on electric utility operations include elevated total and peak demand or load, and shifting load patterns. The funding available through the Acts can enable utilities to make anticipatory investment to meet this increasing load on the supply-side, hedging the regulatory risk of recovering those costs. This supply-side hedge, paired with investment in energy efficiency on the demand-side, can help to simultaneously manage the uncertainty of the pace and timing of electric load growth. It is critical that electricity utilities anticipate these changes in the magnitude and shape of electricity demand in supply-side infrastructure planning.

Altogether, the IIJA and IRA funding provides broad and deep financial support for utility provision of least cost electric service. Given the financial incentives tied not only to support electricity supply-side investments but also for investments by customers on their own side of the meter, utilities need to plan for the potential opportunities and impacts of both types of activity.

B. Summary of the Acts' Utility Impacts

This section summarizes the Acts' provisions with a focus on their relevance for electric utility operations and investment, and presents the funding opportunities using different lenses relevant to where they intersect with utility regulatory obligations and practices. Specifically, we break down funding opportunities in the following categories, illustrated in Figure 1:[21]

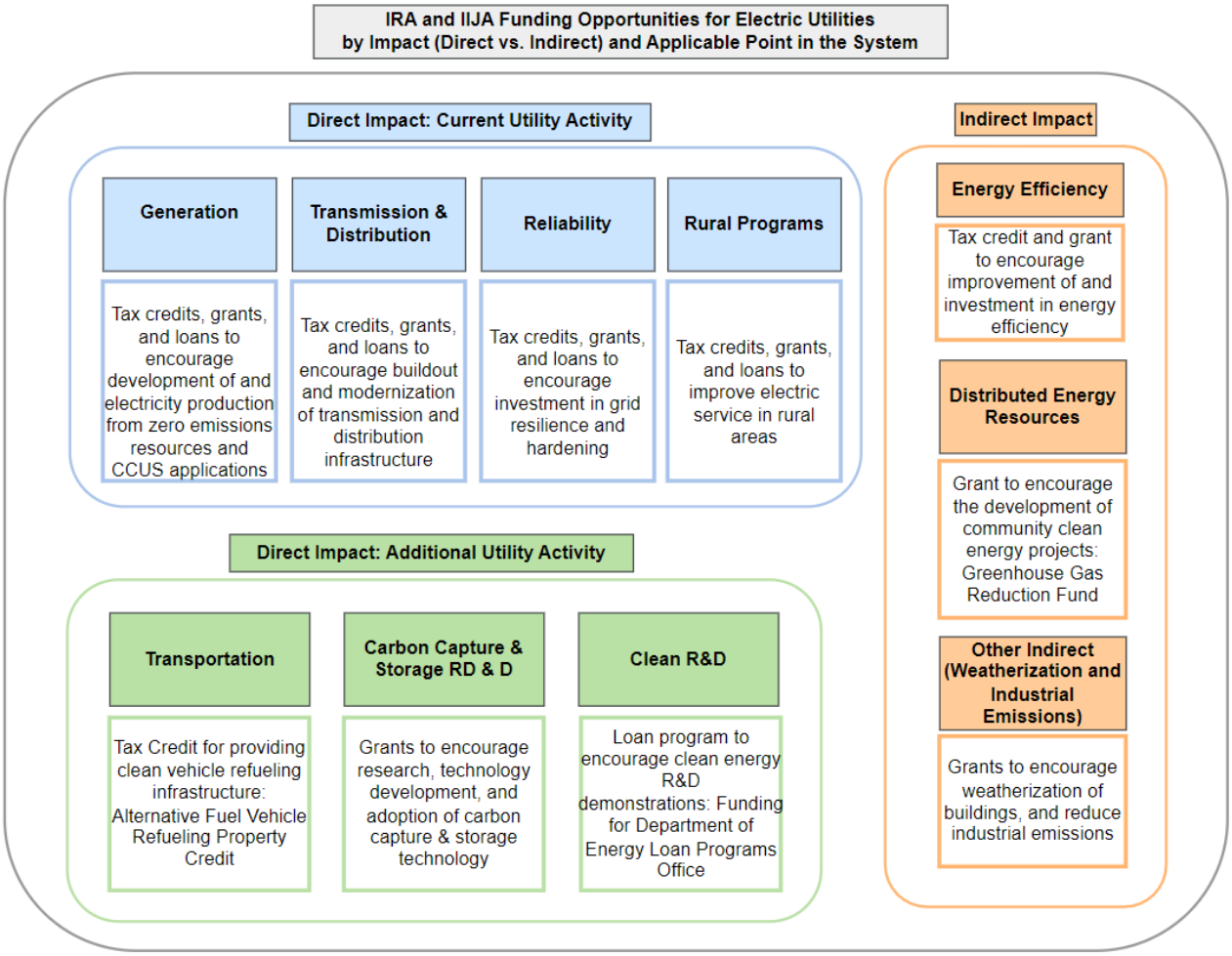
- First, outlined in blue in Figure 1, we categorize the funding available by identifying those direct funding programs that are related to current electric company supply-side resources and operations (e.g., generation, transmission, distribution, reliability, and resilience);
- Second, outlined in green, we summarize the direct funding opportunities related to changing electric utility operations (e.g., assistance with electric vehicle charging infrastructure, carbon capture and storage RD&D and other clean R&D);
- Third, outlined in orange, we identify funding opportunities that will have an indirect impact on utilities (or spillover impact) through changing customer demand (e.g., through investments in measures such as

[20] See, for example, National Academies of Sciences, Engineering and Medicine, "Accelerating Decarbonization of the United States: Technology, Policy and Societal Dimensions," 2023, available at: https://www.nationalacademies.org/our-work/accelerating-decarbonization-in-the-united-states-technology-policy-and-societal-dimensions; National Academies of Sciences, "Future of Electric Power in the U.S.," 2021, available at: https://nap.nationalacademies.org/catalog/25968/the-future-of-electric-power-in-the-united-states.

[21] The presentation in this section represents a high-level functional summary of the Acts' aggregate funding opportunities. More detail on program funding mechanisms and the magnitude of funding available is provided and illustrated in Appendix A.

energy efficiency, vehicle electrification, building electrification, distributed energy resources, increased manufacturing, and data centers).

Figure 1. Categorization of IRA and IIJA Funding Opportunities for Electric Utilities



Thus, the Acts' funding opportunities can affect electric utilities both directly (through supply-side investment) and indirectly (through changing patterns in demand). The financial incentives in the Acts tie into infrastructure investments, provision of programs and services and long-term planning that utilities need to carry out as part of their normal and routine utility planning and operation.

In the following section, we describe in more detail these funding mechanisms and opportunities, and some practical implications for utilities to consider when pursuing them.[22]

C. IIJA and IRA Funding Opportunities Relevant to Electric Utilities

1. IRA Provisions

The IRA provides federal funding through tax credits, loans, and grants, and introduces novel elements into long-standing approaches to federal incentives of potential value to utilities and their consumers.

For example, prior to the enactment of the IRA, tax and accounting laws and practices (e.g., complex "normalization" rules[23]) created disincentives for utility investment in renewable projects (like solar facilities) relative to third-party investment in such facilities. The IRA modified tax-credit rules for solar and storage facilities so that there are incentives for utilities to invest in solar facilities (e.g., through application of the Production Tax Credit ("PTC") rather than the Investment Tax Credit ("ITC")) and stand-alone storage facilities (which are new technologies supported by the ITC and now enable utilities to opt out of normalization rules).[24]

Another important provision in the IRA related to tax credits is that it changed eligibility for non-taxable entities (like munis and co-ops) seeking to access these financial incentives. Prior to the IRA, non-profit and government entities (such as publicly owned utilities) could not take advantage of clean energy tax credits, because they did

[22] We note that in this report, we identified provisions in the Acts to highlight through the lens of funding programs relevant to all utilities generally. We observe that individual utilities, as exemplified in some of the case studies in Section V, may have used different lenses specific to individual circumstances to identify relevant funding provisions in the Acts. Therefore, the universe of funding programs highlighted in this report may be different from the universes identified by various individual utilities.

[23] *See*, RMI and Evergreen Collaborative, "Implementation Guidance for States and Public Utility Commissions: Electricity Incentives in the Inflation Reduction Act," February 2023, available at: https://rmi.org/wp-content/uploads/dlm_uploads/2023/02/electricity_provisions_ira_memo.pdf. *See also,* "Yet there's something keeping utilities from investing in solar and missing from current discussions about extending the solar ITC. Solar could be the most profitable resource for utilities, if not for an obscure requirement associated with the ITC called 'tax normalization.' The requirement prevents for-profit utilities from maximizing the value of solar and encourages them to keep existing uneconomic coal plants open or build new natural gas because they are more profitable, despite being more expensive for consumers.... For many years, unregulated energy companies, financial investors, and tax equity investors have partnered to efficiently finance and construct new solar facilities, leveraging the ITC and other depreciation benefits. afforded by solar. Asset owners can utilize the full benefit of the solar ITC in the first year when the project is placed in service. Regulated electric investor-owned utilities (IOU), however, are subject to tax normalization rules, which require the tax credits to be realized over the operating life of the solar assets (30+ years). This limits IOUs' ability to efficiently monetize the ITC and depreciation benefits and increases costs to customers of utility-owned solar by as much as 20-30 percent..." Blank, Eric and D.R. Richardson," ITC tax normalization limits solar growth and favors fossil fuels," *Utility Dive*, May 14, 2020, available at: https://www.utilitydive.com/news/itc-tax-normalization-limits-solar-growth-and-favors-fossil-fuels/577920/.

[24] EY, "Inflation Reduction Act of 2022 substantially changes tax code provisions related to energy transition and renewable energy," August 16, 2022, available at: https://taxnews.ey.com/news/2022-1236-inflation-reduction-act-of-2022-substantially-changes-tax-code-provisions-related-to-energy-transition-and-renewable-energy; Eversheds Sutherland, "Inflation Reduction Act of 2022: The energy tax provisions you need to know about," August 4, 2022, available at: https://us.eversheds-sutherland.com/NewsCommentary/Legal-Alerts/252759/Inflation-Reduction-Act-of-2022-The-energy-tax-provisions-you-need-to-know-about.

not have a federal tax liability against which to claim the credits.[25] For-profit clean energy developers often relied on traditional tax equity financing to be able to benefit from ITC and PTC opportunities, where the tax credits functioned as credit to federal income tax liability.[26] Yet tax equity financing introduces complications to the clean infrastructure development process.[27] The IRA lifts these challenges and complications associated with tax equity financing by introducing beneficial[28] direct pay (aimed at tax-exempt entities)[29] and transferability (aimed at for-profit entities, such as for-profit project owners and developers)[30] funding mechanisms. The removal of the barriers and complications of tax equity financing is expected to spur access to, and growth in, clean energy investment by making the tax credit provisions available in the Act more easily accessible at their full value.

Figure 2 shows tax credit opportunities in the IRA relevant to electric utilities, with the majority being eligible for direct pay and transferability.[31] The opportunities span a range of production resource, research and development ("R&D"), and demand-side activities. In terms of period of availability, the tax credits are generally available through the early 2030s.

[25] Penrod, Emma, "IRS guidance on renewable tax credit transferability, direct-pay provisions of IRA, garners mixed reviews," *Utility Dive*, June 15, 2023, available at: https://www.utilitydive.com/news/irs-tax-credit-guidance-transferablity-direct-pay-renewable-energy/653052/.

[26] Chang, Rachel, "Understanding Direct Pay and Transferability for Tax Credits in the Inflation Reduction Act," Center for American Progress, June 5, 2023, available at: https://www.americanprogress.org/article/understanding-direct-pay-and-transferability-for-tax-credits-in-the-inflation-reduction-act/.

[27] From a technical point of view, these complications include: (1) requiring a partnership with an investor whose tax equity appetite matches the requirements of the project; (2) reducing the benefit to the developer relative to the full value of the credit (for example, the cost of establishing a tax equity financing partnership with an investor can cost, "up to 15 percent of the value of the original tax credit," in accounting, legal, and consulting fees; and (3) requiring that developers give up project equity at the start, and if they opt to buy back the equity, creating an additional expense once the project is in operation. Chang, Rachel, "Understanding Direct Pay and Transferability for Tax Credits in the Inflation Reduction Act," Center for American Progress, June 5, 2023, available at: https://www.americanprogress.org/article/understanding-direct-pay-and-transferability-for-tax-credits-in-the-inflation-reduction-act/.

[28] The benefits of these payment mechanisms include removing the complication and cost of establishing tax equity financing partnerships, and allowing the developers to retain full equity on their projects. Chang, Rachel, "Understanding Direct Pay and Transferability for Tax Credits in the Inflation Reduction Act," Center for American Progress, June 5, 2023, available at: https://www.americanprogress.org/article/understanding-direct-pay-and-transferability-for-tax-credits-in-the-inflation-reduction-act/.

[29] Elective pay, or direct pay, allows non-profit and public entities to file for direct payment of the value of a given IRA tax credit from the Internal Revenue Service (IRS) to support the development of renewable energy resources. IRS, "Elective Pay and Transferability," available at: https://www.irs.gov/credits-deductions/elective-pay-and-transferability.

[30] "Transferability allows entities that qualify for a tax credit but are not eligible to use elective pay to transfer all or a portion of the credit to a third-party buyer in exchange for cash. The buyer and seller would negotiate and agree to the terms and pricing." IRS, "Elective Pay and Transferability," available at: https://www.irs.gov/credits-deductions/elective-pay-and-transferability.

[31] The two funding programs highlighted that are not eligible for direct pay and transferability are the Extension of Second-Generation Biofuel Incentives program (IRA Section 13202) in the Generation category, and the Energy Efficiency Home Improvement Credit to homeowners (IRA Section 13301) in the Indirect, Energy Efficiency category.

Figure 2. Categorize IRA Tax Opportunities Relevant to Electric Utilities[32, 33]

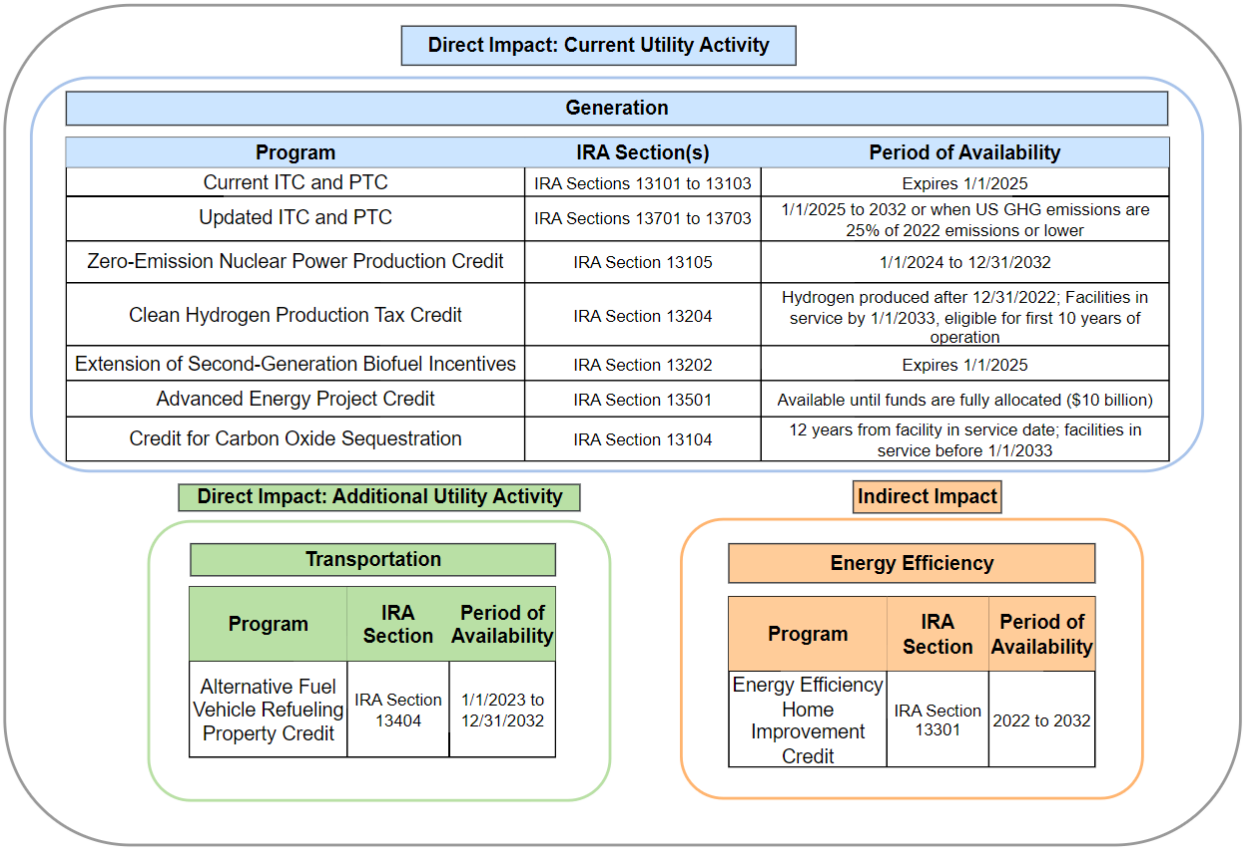


Table 1 shows specific base and bonus credit amounts available through the ITC and the PTC, highlighting the magnitude and structure of the two tax credit funding programs.[34] The requirement for claiming the full value of the new and revised tax credits varies by project size.[35] All eligible parties can claim the base tax credit. For projects larger than one megawatt, in order to claim the full value of the credit, eligible parties must meet the established wage and apprenticeship requirements.[36] On top of the wage and apprenticeship requirement, there are additional

[32] The White House, "Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action," Version 2, January 2023, available at: https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf.

[33] IRS, "Clean Energy Tax Incentives: Elective Pay Eligible Tax Credits," available at: https://www.irs.gov/pub/irs-pdf/p5817g.pdf.

[34] See Appendix A for additional detail on the other tax credit funding programs listed in Figure 2.

[35] DOE, "Overview of Inflation Reduction Act Incentives for Federal Decarbonization," available at: https://www.energy.gov/femp/overview-inflation-reduction-act-incentives-federal-decarbonization.

[36] The wage and apprenticeship requirement ensures that all laborers and mechanics employed by the project are paid a fair wage, as defined by the Department of Labor, and that 12.5 to 15 percent, "of the total labor hours performed in the construction, alteration, or repair of the facility are performed by qualified apprentices from a registered apprenticeship program." IRS, "Frequently asked questions about the prevailing wage and apprenticeship under the Inflation Reduction Act," available at: https://www.irs.gov/credits-deductions/frequently-asked-questions-about-the-prevailing-wage-and-apprenticeship-under-the-inflation-reduction-act.

bonus credits available to increase the value of the tax credit and relate to: domestic content minimums,[37] siting in an energy community,[38] siting in a low-income community or on Indian land, and qualified low-income residential building projects or economic benefit projects.[39]

Eligibility to claim these tax credits is being simplified. The currently active PTC for Electricity from Renewables and ITC for Energy Property (which will expire at the end of 2024) have resource-specific eligibility requirements, where specific resource types qualify for either the ITC, PTC, or both.[40] As of January 1, 2025, the updated Clean Electricity ITC and PTC are technology agnostic, simplifying eligibility. Specifically, "Starting in 2025, the ITC and PTC will be available for any zero-greenhouse-gas-emitting technology,…including those that use carbon capture."[41]

[37] The domestic content requirement includes (1) a steel and iron requirements ("all manufacturing processes for structural steel and iron occur in the United States (except for metallurgical processes for refinement of steel additives)"); (2) a manufactured products requirement ("40% of the value of manufactured products and components will have to originate in the United States, scaling up to 55% after 2026. Offshore wind projects start lower at 20% and scale to 55% after 2027"); and (3) a certification requirement ("To claim the Domestic Content Bonus Credit, taxpayers should include a Domestic Content Certification Statement."). Bond, David E., Jeffrey Davis, Michael Rodgers, Ian Saccomanno, "US Treasury Releases Domestic Content Guidance for Renewable Energy Tax Credits," White & Case, May 23, 2023, available at: https://www.whitecase.com/insight-alert/us-treasury-releases-domestic-content-guidance-renewable-energy-tax-credits.

[38] "The IRA defines energy communities as: 1A. 'brownfield site'; 2A. "metropolitan statistical area" or "non-metropolitan statistical area" that has (or had at any time after 2009): 0.17% or greater direct employment or 25% or greater local tax revenues related to the extraction, processing, transport, or storage of coal, oil, or natural gas; and has an unemployment rate at or above the national average unemployment rate for the previous year; 3A. census tract (or directly adjoining census tract): in which a coal mine has closed after 1999; or in which a coal-fired electric generating unit has been retired after 2009." Interagency Working Group on Coal & Power Plant Communities & Economic Revitalization, "Energy Community Tax Credit Bonus," available at: https://energycommunities.gov/energy-community-tax-credit-bonus/.

[39] "The Low-Income Communities Bonus Credit Program increases the amount of energy investment tax credits for clean-energy investments in low-income communities, on Indian land, as part of affordable housing developments, and benefitting low-income households. The Department of Energy's Office of Economic Impact and Diversity will administer the program and evaluate submitted applications. The IRS will issue award letters or denials based on the eligibility of the facilities." IRS, "Low-Income Communities Bonus Credit," available at: https://www.irs.gov/credits-deductions/low-income-communities-bonus-credit.

[40] Resources eligible for the ITC include: Energy Storage, Fuel cell, Geothermal (heat pump and direct use), Combined Hat & Power, Microturbines, Interconnection property, and Microgrid controller; Resources eligible for the PTC include: Biomass, Landfill gas, Hydroelectric, and Marine and hydrokinetic; Resources eligible for both include: Solar, Municipal solid waste, Wind, Geothermal (electric), and Tidal. DOE, "Overview of Inflation Reduction Act Incentives for Federal Decarbonization," available at: https://www.energy.gov/femp/overview-inflation-reduction-act-incentives-federal-decarbonization.

[41] DOE, "Overview of Inflation Reduction Act Incentives for Federal Decarbonization," available at: https://www.energy.gov/femp/overview-inflation-reduction-act-incentives-federal-decarbonization.

Table 1. ITC and PTC Base and Bonus Credit Magnitudes by Project Capacity[42]

Credit Category	*Projects < 1 MW AC*		*Projects > 1 MW AC*	
	ITC	**PTC**	**ITC**	**PTC**
Base Credit	30%	2.75 ¢/kWh	6%	0.5 ¢/kWh
Wage & Apprenticeship Requirement Met	N/A	N/A	+24%	+2.25 ¢/kWh
Full Credit Value	**30%**	**2.75 ¢/kWh**	**30%**	**2.75 ¢/kWh**
Bonus Credits				
Domestic Content Minimums	+10%	+0.3 ¢/kWh	+10%	+0.3 ¢/kWh
Siting in Energy Community	+10%	+0.3 ¢/kWh	+10%	+0.3 ¢/kWh
Siting in Low-income Community or on Indian Land (< 5MW AC)	+10%	N/A	+10%	N/A
Qualified Low-income residential Building Project or Economic Benefit Project	+20%	N/A	+20%	N/A

Note: "The ITC amount is a percentage of the total qualifying project cost basis." DOE, "Overview of Inflation Reduction Act Incentives for Federal Decarbonization," available at: https://www.energy.gov/femp/overview-inflation-reduction-act-incentives-federal-decarbonization.

In addition to these tax provisions, the IRA contains numerous grant and loan funding vehicles. Figure 3 shows these opportunities relevant to electric utilities. Highlighted funding available totals $49.2 billion, and the expiration of fund availability ranges from 2024 to 2031. Of particular note, in the generation category, the IRA not only provides funding for the development of new renewable generation resources, but also includes reinvestment provisions for fossil generation. Specifically, the Energy Infrastructure Reinvestment Financing program (IRA section 50144) provides reinvestment funding for resources that either (1) have ceased operations to, "'retool, repower, repurpose, [or] replace energy infrastructure that has ceased operations,' rather than simply shutting the plants down,"[43] or (2) for resources that are still operating to, "'enable operating energy infrastructure to avoid, reduce, utilize, or sequester' emissions from fossil plants that continue to run."[44] Additionally, the USDA Assistance for Rural Electric Cooperatives program (IRA Section 22004) was established to assist rural cooperative utilities that are particularly reliant on coal generation to deploy renewable and zero energy generation, and/or to add carbon capture and storage for fossil generation.[45] It is thus important for utilities not

[42] DOE, "Overview of Inflation Reduction Act Incentives for Federal Decarbonization," available at: https://www.energy.gov/femp/overview-inflation-reduction-act-incentives-federal-decarbonization; IRS, "Clean Energy Tax Incentives: Elective Pay Eligible Tax Credits," available at: https://www.irs.gov/pub/irs-pdf/p5817g.pdf.

[43] O'Boyle, Mike, Dan Esposito, and Michelle Solomon, "Implementing the Inflation Reduction Act: A Roadmap for State Electricity Policy, Energy Innovation, October 2022, available at: https://energyinnovation.org/wp-content/uploads/2022/10/Implementing-the-Inflation-Reduction-Act-A-Roadmap-For-State-Policy.pdf.

[44] O'Boyle, Mike, Dan Esposito, and Michelle Solomon, "Implementing the Inflation Reduction Act: A Roadmap for State Electricity Policy, Energy Innovation, October 2022, available at: https://energyinnovation.org/wp-content/uploads/2022/10/Implementing-the-Inflation-Reduction-Act-A-Roadmap-For-State-Policy.pdf.

[45] O'Boyle, Mike, Dan Esposito, and Michelle Solomon, "Implementing the Inflation Reduction Act: A Roadmap for State Electricity Policy, Energy Innovation, October 2022, available at: https://energyinnovation.org/wp-content/uploads/2022/10/Implementing-the-Inflation-Reduction-Act-A-Roadmap-For-State-Policy.pdf.

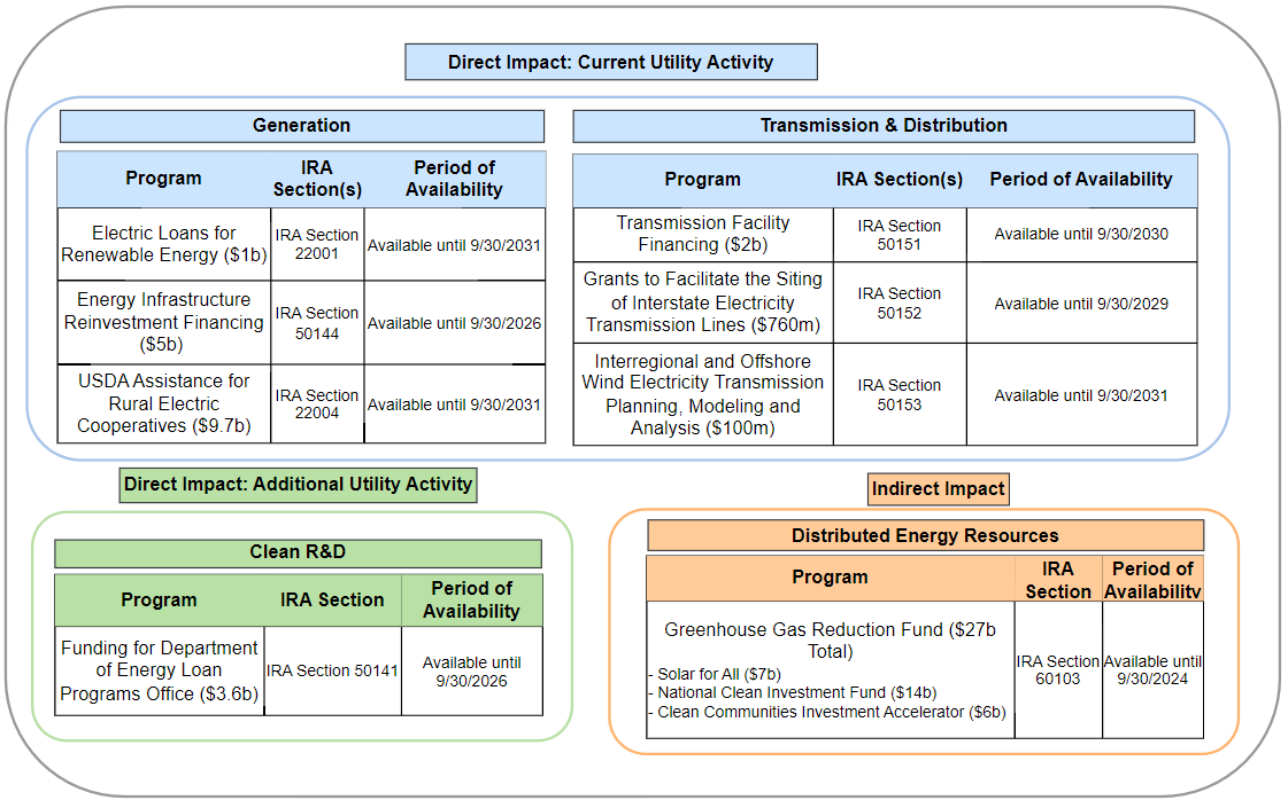
only to consider the buildout of new clean generation, but also to take advantage of available reinvestment funding where relevant to address existing fossil generation assets. Prudent supply-side investment and planning involves both adding new renewable and zero-emission resources, as well as reinvesting in and retooling existing fossil units (whether driven by fundamental economic realities when such units no longer operate at reasonable capacity factors, by new environmental regulations, by customer preferences, or by other factors).

Other direct grant and loan funding opportunities include transmission infrastructure development and clean energy R&D. For transmission, financing is available for transmission facility construction or modification to facilitate the siting of interstate transmission, and to study and plan for the interconnection of offshore wind. For clean energy R&D, funding for the DOE Loan Programs Office (IRA Section 50141) supports, "the cost of loans for innovative clean energy technologies."[46] Eligible technologies include anything to "'avoid, reduce or sequester air pollutants or anthropogenic emissions of greenhouse gases; and employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued.'"[47]

[46] The White House, "Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action," Version 2, January 2023, p. 24, available at: https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf.

[47] Section 1703 of Title 17 of the Energy Policy Act of 2005, which established the DOE's Loan Guarantee Program. DSIRE, "U.S. Department of Energy - Loan Guarantee Program, Last updated September 8, 2022, available at: https://programs.dsireusa.org/system/program/detail/3071.

Figure 3. Categorize IRA Grant/Loan Funding Opportunities Relevant to Electric Utilities[48,49]



2. IIJA

The IIJA's funding is distributed largely through either formula funding or competitive grants, with approximately 60 percent administered through formula funding, and the remaining 40 percent through competitive grants.[50] Figure

[48] The White House, "Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action," Version 2, January 2023, available at: https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf.

[49] The total $27 billion of the Greenhouse Gas Reduction Fund is broken down into three funding opportunities: Solar for All, National Clean Investment Fund, and Clean Communities Investment Accelerator (EPA, "Greenhouse Gas Reduction Fund, General Program Resources," available at: https://www.epa.gov/greenhouse-gas-reduction-fund/general-program-resources). The $7 billion Solar for All fund, "will award up to 60 grants to states, territories, Tribal governments, municipalities, and nonprofits to expand the number of low-income and disadvantaged communities primed for residential solar investment—enabling millions of low-income households to access affordable, resilient, and clean solar energy." (EPA, "Greenhouse Gas Reduction Fund, Solar for All," available at: https://www.epa.gov/greenhouse-gas-reduction-fund/solar-all). The $14 billion National Clean Investment Fund, "will provide grants to 2–3 national nonprofit clean financing institutions capable of partnering with the private sector to provide accessible, affordable financing for tens of thousands of clean technology projects across the country." (EPA, "Greenhouse Gas Reduction Fund, National Clean Investment Fund," available at: https://www.epa.gov/greenhouse-gas-reduction-fund/national-clean-investment-fund). Finally, the $6 billion Clean Communities Investment Accelerator, "will provide grants to 2–7 hub nonprofits that will, in turn, deliver funding and

4 shows funding opportunities in the IIJA relevant to electric utilities, with the majority being funded through a competitive grant process or through cooperative agreements. The highlighted available funding totals $43.7 billion. Most of the funding programs' period of availability is listed as "available until expended." Funding programs with a set date range are available until 2026.

As of the one-year anniversary of the signing of the IIJA, $1.7 billion total energy funding had been dispersed, specifically $1.2 billion from the Advanced Reactor Demonstration Program (IIJA Section 41002) and $377 million from the Preventing Outages and Enhancing the Resilience of the Electric Grid/Hazard Hardening program (IIJA Section 40101, part of the Grid Resilience and Innovation Partnerships Program ("GRIP") funding programs).[51] Additional recent examples of IIJA funding being committed include the Regional Clean Hydrogen Hubs program (IIJA Section 40314), and additional GRIP funding (IIJA sections 40101, 40103, and 40101).[52]

GRIP is a collection of funding programs aimed at accelerating the "deployment of transformative projects that will help to ensure the reliability of the power sector's infrastructure, so all American communities have access to affordable, reliable, clean electricity anytime, anywhere."[53] Specifically, the funding is geared towards grid resilience and hazard hardening, and investments in smart grid technology to enable demand flexibility.[54] A portion of the allocated GRIP funding has already been allocated.[55] Just recently, "[o]n October 18, 2023, the U.S. DOE announced up to $3.5 billion in GRIP Program investments for 58 projects across 44 states to strengthen electric grid resilience and reliability across America."[56]

Second, the Regional Clean Hydrogen Hubs funding program is aimed at creating "networks of clean hydrogen producers, consumers, and connective infrastructure that will help accelerate the large-scale production and use of

technical assistance to build the clean financing capacity of local community lenders working in low-income and disadvantaged communities—so that underinvested communities have the capital they need to deploy clean technology projects." (EPA, "Greenhouse Gas Reduction Fund, Clean Communities Investment Accelerator," available at: https://www.epa.gov/greenhouse-gas-reduction-fund/clean-communities-investment-accelerator).

[50] Ghosh, Aimee P., Johnna Purcell, Nancy A. Fischer, Elizabeth Vella Moeller, Lee G. Petro, "The Infrastructure Investment and Jobs Act (IIJA): An Anniversary Report," Pillsbury Law, November 16, 2022, available at: https://www.pillsburylaw.com/en/news-and-insights/iija-update-report.html.

[51] Ghosh, Aimee P., Johnna Purcell, Nancy A. Fischer, Elizabeth Vella Moeller, Lee G. Petro, "The Infrastructure Investment and Jobs Act (IIJA): An Anniversary Report," Pillsbury Law, November 16, 2022, available at: https://www.pillsburylaw.com/en/news-and-insights/iija-update-report.html.

[52] National Energy Technology Laboratory, "Draft BIL FOA DE-FOA-0002740, Draft Funding Opportunity Announcement for Public Comment Only," available at: https://netl.doe.gov/node/12008.

[53] Department of Energy, Grid Deployment Office, "Grid Resilience and Innovation Partnerships (GRIP) Program," available at: https://www.energy.gov/gdo/grid-resilience-and-innovation-partnerships-grip-program.

[54] The White House, "Building a Better America: A Guidebook to the Bipartisan Infrastructure Law for State, Local, Tribal, and Territorial Governments, and Other Parties, May 2022, available at: https://www.whitehouse.gov/wp-content/uploads/2022/05/BUILDING-A-BETTER-AMERICA-V2.pdf.

[55] DOE, "Biden-Harris Administration Announces $3.5 Billion for Largest Ever Investment in America's Electric Grid, Deploying More Clean Energy, Lowering Costs, and Creating Union Jobs," October 18, 2023, available at: https://www.energy.gov/articles/biden-harris-administration-announces-35-billion-largest-ever-investment-americas-electric.

[56] Department of Energy, Grid Deployment Office, "Grid Resilience and Innovation Partnerships (GRIP) Program Projects," available at: https://www.energy.gov/gdo/grid-resilience-and-innovation-partnerships-grip-program-projects.

clean hydrogen,"[57] and includes a total of $8 billion in funding that is available until expended.[58] On October 13, 2023, DOE allocated $7 billion of the total program funding to seven hydrogen hub projects.[59] Collectively, these examples of IIJA funding being allocated further emphasize the importance of utilities taking swift action to apply for and take advantage of the available funding prior to the funding deadlines.

[57] DOE, Office of Clean Energy Demonstrations, "Regional Clean Hydrogen Hubs Selections for Award Negotiations," available at: https://www.energy.gov/oced/regional-clean-hydrogen-hubs-selections-award-negotiations.

[58] The White House, "Building a Better America: A Guidebook to the Bipartisan Infrastructure Law for State, Local, Tribal, and Territorial Governments, and Other Parties, May 2022, available at: https://www.whitehouse.gov/wp-content/uploads/2022/05/BUILDING-A-BETTER-AMERICA-V2.pdf.

[59] The White House, "Biden-Harris Administration Announces Regional Clean Hydrogen Hubs to Drive Clean Manufacturing and Jobs," October 13, 2023, available at: https://www.whitehouse.gov/briefing-room/statements-releases/2023/10/13/biden-harris-administration-announces-regional-clean-hydrogen-hubs-to-drive-clean-manufacturing-and-jobs/.

Figure 4. Categorize IIJA Grant/Loan Funding Opportunities Relevant to Electric Utilities[60]

Direct Impact: Current Utility Activity

Generation

Program	IRA Section(s)	Period of Availability
Clean Hydrogen Electrolysis Program ($1b)	IIJA Section 40314	Available until expended
Regional Clean Hydrogen Hubs ($8b)	IIJA Section 40314	Available until expended
Hydroelectric Production Incentives ($125m)	IIJA Section 40331	Available until expended
Maintaining and Enhancing Hydroelectricity Incentives ($554m)	IIJA Section 40333	Available until expended
Pumped Storage Hydropower and Solar Integration and System Reliability Initiative ($10m)	IIJA Section 40334	$2 million per year, fiscal years 2022 to 2026
Clean Energy Demonstrations on Current and Former Mine Land ($500m)	IIJA Section 40342	Available until 2026
Energy Storage Demonstration and Pilot Grant Program ($355m)	IIJA Section 41001	Available until expended
Long-Duration Energy Storage Demonstration Initiative and Joint Program ($150m)	IIJA Section 41001	Available until expended
Advanced Reactor Demonstration Program ($2.5b)	IIJA Section 41002	Available until expended
Marine Energy Research, Development, and Demonstration ($70m)	IIJA Section 41006	Available until expended
Carbon Capture Demonstration Projects Program ($2.537b)	IIJA Section 41004	Available until expended

Transmission & Distribution

Program	IRA Section(s)	Period of Availability
Purchase of Power and Transmission Services ($500m)	IIJA Division J, Title III	Available until expended
Transmission Facilitation Program ($2.5b)	IIJA Section 40106	Available until expended
Energy Efficient Transformer Rebates ($10m)	IIJA Section 40555	Available until expended
The Middle Mile Grant Program ($1b)	IIJA Section 60401	Fiscal years 2022-2026

Reliability

Program	IRA Section(s)	Period of Availability
Preventing Outages and Enhancing the Resilience of the Electric Grid / Hazard Hardening (GRIP, $5b)	IIJA Section 40101	Available until expended
Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency (GRIP, $5b)	IIJA Section 40103	$200 million per fiscal year 2022 to 2026 (or until total funding expended)
Smart Grid Investment Matching Grant Program (GRIP, $3b)	IIJA Section 40107	$600 million per fiscal year 2022 to 2026 (or until total funding expended)
Cybersecurity for the Energy Sector Research, Development, and Demonstration Program ($250m)	IIJA Section 40125	Available until expended
Energy Sector Operational Support for Cyber Resilience Program ($50m)	IIJA Section 40125	Available until expended
Advanced Energy Security Program ($50m)	IIJA Section 40125	Available until expended

Rural Programs

Program	IRA Section(s)	Period of Availability
Energy Improvement in Rural or Remote Areas ($1b)	IIJA Section 40103	$200 million per fiscal year 2022 to 2026 (or until total funding expended)
Rural and Municipal Utility Advances Cybersecurity Grant and Technical Assistance Program ($250m)	IIJA Section 40124	Available until expended

Direct Impact: Additional Utility Activity

Carbon Capture & Storage

Program	IRA Section	Period of Availability
Carbon Utilization Program ($310m)	IIJA Section 40302	Available until expended
Four Regional Clean Direct Air Capture Hubs ($3.5b)	IIJA Section 40308	$700 million per fiscal year 2022 to 2026 (or until total funding expended)
Carbon Capture Large-Scale Pilot Programs ($937m)	IIJA Section 41004	Available until expended

Indirect Impact

Energy Efficiency

Program	IRA Section	Period of Availability
Energy Efficiency and Conservation Block Grant Programs ($550m)	IIJA Section 40552	Available until expended

Other Indirect

Program	IRA Section	Period of Availability
Industrial Emission Demonstration Projects ($500m)	IIJA Section 41008	Available until expended
Weatherization Assistance Program ($3.5b)	IIJA Section 40551	Available until expended

[60] The White House, "Building a Better America: A Guidebook to the Bipartisan Infrastructure Law for State, Local, Tribal, and Territorial Governments, and Other Parties, May 2022, available at: https://www.whitehouse.gov/wp-content/uploads/2022/05/BUILDING-A-BETTER-AMERICA-V2.pdf.

3. Implications for Electric Utilities Accessing Funding

Given the large magnitude of relevant funding available, there are some practical considerations for utilities seeking to apply for, or otherwise take advantage of the funding, including: (1) the ease of access to, and competitiveness of the funding; (2) any relevant cost-sharing provisions; and (3) the timelines and periods of availability of the funding.

First, the IRA has increased ease of access to funding in several ways – such as through the direct (or elective) pay and transferability provisions that lower the barriers to accessing tax credit benefits, relative to the pre-IRA tax credit structure.

While some grants are non-competitive formula funding, many operate as competitive programs that require an application with selection and approvals subject to agency action. Grant application writing can be a time, labor, and resource-intensive process. Utilities will need to consider allocating the right resources to a strategic selection of grant applications. While utilities should take advantage of funding opportunities through these Acts by submitting applications for applicable and eligible competitive funding opportunities, a utility's success in winning a competitive grant is not entirely in its own control, a factor that should be considered when evaluated by a PUC in resource planning and/or ratemaking processes. PUCs can't evaluate every utility grant application. However, there should be ongoing monitoring and oversight by PUCs of the quality and effort put into utility applications to pursue funding through the Acts while it remains available.

Second, a practical consideration for utilities pursuing grant and loan funding opportunities is cost sharing requirements. Specifically, "[c]ost [s]hare, also known as "match" and "non-Federal share," is the portion of the costs of a federally assisted project or program not borne by the Federal government. Cost-sharing augments and leverages federal funding to increase the project's impact. It also ensures that recipients have a financial stake in the project's success."[61] Take for example a $100,000 project grant with an 80 percent federal to 20 percent non-federal cost-share requirement. Given $100,000 in federal funding under that cost-share agreement, the total project cost is $125,000, with $25,000 being contributed by the grant recipient.[62] Cost-share conditions will ultimately affect the viability and cost benefits of utility co-investment.

Finally, utilities need to be aware and keep track of the timing for funding availability, and expiration. Swift action needs to be taken for utilities to be able to fully benefit from some of the opportunities. The expiry dates for funding programs highlighted in this paper with specifically defined availability periods range from 2024 to the early 2030s. Notably, the availability period for many IIJA programs is defined as, "available until

[61] Department of Energy, Office of Clean Energy Demonstrations, "Cost Sharing Guidance," May 5, 2023, available at: https://www.energy.gov/sites/default/files/2023-05/OCED%20Cost%20Sharing%20Guidance.pdf.

[62] $100,000 federal funding / 80% federal cost share = $125,000 total project cost. $125,000 total project cost - $100,000 federal fund contribution = $25,000 grant recipient cost contribution. The Office of Justice Programs Territories Financial Support Center, "Matching or Cost Sharing Requirements Guide Sheet," available at: https://www.ojp.gov/tfsc/matching_or_cost_sharing_requirements_guide_sheet_508.

expended." In some instances, such type of funding has already started to be allocated, as evidenced by the recent GRIP and the Regional Clean Hydrogen Hubs funding awards.

Time is of the essence for utilities to submit applications and incorporate tax credits into planning to take full advantage of the funding available. Utilities giving adequate consideration and care to accessing the relevant funding available through the IRA and IIJA can substantially benefit electricity customers by allowing utilities to invest in necessary infrastructure, while maintaining least-cost of service rates. Such funding benefits can be observed in the estimates of different electric resources' levelized costs of energy ("LCOE"), including those for renewable generation, storage, and hydrogen, when the federal subsidies are taken into account.

Lazard annually estimates the expected range of LCOEs for each technology with and without relevant subsidies – in this case, IRA tax credit provisions.[63] Table 2 illustrates the reduced developer/ratepayer cost impact of energy generation resources leveraging IRA ITCs and PTCs from Lazard's LCOE analysis by utility technology type. For each technology type, the table summarizes Lazard's range of LCOE estimates from lowest to highest, with and without an IRA tax credit. The "% Decrease Range" metric illustrates the percent decrease in the low to high estimates, comparing the with-the-tax versus without-the-tax-credit financing.

In summary, IRA tax credit benefits reduce LCOEs for the development of renewable energy resources anywhere from 10 to 100 percent, depending upon the application and technology. Although this is a wide range of impact, the analysis clearly shows that for different resource types, and under different development cost assumptions, leveraging the tax credits available through the IRA can significantly reduce the cost of developing funding-eligible energy resources included in a utility's generation portfolio, and thus produce savings for ratepayers.

[63] Lazard, "Levelized Cost of Energy+, April 2023, p. 3, available at: https://www.lazard.com/research-insights/2023-levelized-cost-of-energyplus/.

Table 2. Summary of Lazard Levelized Cost of Energy Analysis, With and Without IRA Tax Credit Funding[64]

Utility-Scale Resource	LCOE Range No Funding ($/MWh)	LCOE Range With Funding ($/MWh)	% Decrease LCOE Range
Solar PV (ITC)	$24 to $96	$16 to $80	-33% to -17%
Solar PV (PTC)	$24 to $96	$0 to $77	-100% to -20%
Solar PV + Storage (ITC)	$46 to $102	$31 to $88	-33% to -14%
Geothermal	$61 to $102	$37 to $87	-39% to -15%
Onshore Wind (PTC)	$24 to $75	$0 to $66	-100% to -12%
Onshore Wind + Storage	$42 to $114	$12 to $103	-71% to -10%
Offshore Wind (PTC)	$72 to $140	$56 to $114	-22% to -19%

Notes:
[1] Analysis assumes the full ITC/PTC (i.e., meeting wage and apprenticeship requirements for projects greater than 1 MW) and includes the domestic content bonus credit.
[2] Lazard reports that: "Unless otherwise indicated, this analysis does not include other state or federal subsidies (e.g., energy community adder, etc.). The IRA is comprehensive legislation that is still being implemented and remains subject to interpretation—important elements of the IRA are not included in our analysis and could impact outcomes."

[64] Lazard, "Levelized Cost of Energy+, April 2023, p. 3, available at: https://www.lazard.com/research-insights/2023-levelized-cost-of-energyplus/.

V. Lessons From Across the States

Compared to business-as-usual situations where utility investment is paid for by the utility's customers, the IIJA and IRA present significant external funding opportunities for utilities to develop, modify and/or add generation, transmission, and distribution infrastructure, and support for consumers' own deployment of distributed, customer-sited technologies (which affect demand for utility service).

Clearly, however, there are timing issues; the IIJA and IRA are relatively new, and in many cases, efforts to access funding must be undertaken expeditiously. Conversely, utility processes for planning for and investing in supply and delivery infrastructure are typically more measured and subject to potentially lengthy regulatory proceedings. State regulatory action and proactive utility steps to quickly capitalize on funding opportunities are a must.

Many entities – such as the DOE,[65] National Governors Association ("NGA"),[66] the National Association of Regulatory Utility Commissioners ("NARUC"),[67] the National Association of State Energy Offices ("NASEO"),[68] law firms and consultants,[69] and think tanks,[70] for example – have provided information and resources to help stakeholders navigate new federal funding opportunities provided by the IIJA and/or IRA.

Not surprisingly, there is a wide range of attention to this in utility planning processes and state regulatory proceedings. Some examples of such action are useful (and described below) to give a sense of where states

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[65] U.S. Department of Energy, "Clean Energy Infrastructure Program and Funding Announcements," available at: https://www.energy.gov/infrastructure/clean-energy-infrastructure-program-and-funding-announcements; Office of the Under Secretary for Infrastructure, "Clean Energy Infrastructure Funding Opportunity Exchange," available at: https://infrastructure-exchange.energy.gov/.

[66] National Governors Association, "IIJA Implementation Resources," November 27, 2023, available at: https://www.nga.org/iija-implementation-resources/.

[67] National Association of Regulatory Utility Commissioners, "Staff 'Surge Call' – Tuesday, March 14th, 2023: Federal Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA)," March 14, 2023, available at: https://pubs.naruc.org/pub/CE050DF0-0C9E-0B02-9A0D-31B55C4A2046.

[68] Terry, David, and Paul Kjellander, "IRA-IIJA Funding," Public Utilities Fortnightly, June 12, 2023, available at: https://www.fortnightly.com/fortnightly/2023/06-0/ira-iija-funding-david-terry; National Association of State Energy Officials, "Infrastructure Act Resource Hub," available at: https://www.naseo.org/issues/infrastructure-act.

[69] *See* for example: O'Boyle, Mike, Dan Esposito, and Michelle Solomon, "Implementing the Inflation Reduction Act: A Roadmap for State Electricity Policy," Energy Innovation Policy & Technology LLC, October 2022, available at: https://energyinnovation.org/wp-content/uploads/2022/10/Implementing-the-Inflation-Reduction-Act-A-Roadmap-For-State-Policy-1.pdf; Lyons, Cristin, and Josh Kmiec, "Five Keys to Successful IIJA and IRA Applications," available at: https://www.scottmadden.com/insight/five-keys-to-successful-iija-and-ira-applications/; Utility Dive, "The Utility of Now: How Utilities Can Maximize IIJA and IRA Benefits," November 7, 2022, available at: https://www.utilitydive.com/spons/the-utility-of-now-how-utilities-can-maximize-iija-and-ira-benefits/635304/.

[70] Goldenberg, Cara, and Rachel Gold, "For Ratepayers to Realize Savings from Clean Energy, Utility Business Models Need an Update," Rocky Mountain Institute September 14, 2023, available at: https://rmi.org/for-ratepayers-to-realize-savings-from-clean-energy-utility-business-models-need-an-update/.

and utilities stand in their consideration of the funding opportunities under the Acts, and to indicate activities that might be considered best practices or otherwise productive avenues for consideration by other states and utilities. This set of examples is not exhaustive, but does provide a relatively wide and diverse range of responses underway.

Here, we specifically consider (1) special PUC inquiries or proceedings into the funding opportunities and utility actions to take advantage of them, and (2) utility-specific IRP and similar planning processes and proceedings.

(1) Special PUC Inquiries

In several states, the PUC has asked for reporting on utility actions or opened proceedings to take comments on utility opportunities under the IRA and IIJA. The value of PUCs in taking proactive steps is that they can provide guidance and certainty around the need for utilities to apply for funding and incorporate funding assumptions into future planning processes.

We reviewed eight states and the District of Columbia with inquiries underway or completed, including (listed in order of more to less detailed inquiries): Minnesota, Michigan, Nevada, Missouri, North Dakota, North Carolina, the District of Columbia, Maryland, and South Carolina. Additional detail is included in Appendix B, which also illustrates the range of approaches and detail through which these PUCs are currently inquiring about the availability of IRA and IIJA funding. The themes below summarize the types of questions and inquiries that PUCs are making at this stage, which include:

1. A need for utilities to actively identify funding programs under the IRA and IIJA that may be available to utilities in general, and relevant to their own particular circumstances.
2. Explicitly identify the actions and processes needed to obtain funds.
3. Identify ways in which PUCs can facilitate receipt and deployment of funding.
4. Seek to coordinate across state agencies to access funding that may be cross-jurisdictional or cross-industries.
5. Regular reporting on progress in applying for, receiving, and deploying federal funding.

(2) IRPs

As discussed above, utilities have an obligation to take full advantage of the funding opportunities to ensure they are providing electric service at least cost. The IRP planning processes and investments and programs that result from them will ultimately be evaluated in rate cases when a utility requests to recover costs from customers, with PUCs determining whether the investments were appropriate and result from a prudently administered and well-informed planning process. It is at the IRP stage that utilities can and should understand and evaluate federal funding opportunities to ensure their provision of reliable service comes at the lowest cost to consumers.

In addition to our review of special PUC proceedings related to IRA and/or IIJA funding options, we evaluate IRP filings where the sponsoring utility has considered the availability of funding opportunities. We reviewed the filings of a geographically diverse selection of 40 vertically integrated utilities. Among these, 15 IRPs or

similar resource planning documents were filed or drafted since the passage of the IRA and IIJA: Duke Energy Carolinas; PacifiCorp (OR, UT, WA, and WY); AES Indiana; Ameren Missouri; Cleco Power (LA); Dominion Energy South Carolina; DTE (MI); Entergy Louisiana; Florida Power & Light; Southwest Electric Power Company (LA); Nebraska Public Power District; Pacific Gas & Electric (CA); Virginia Electric and Power Company; Alabama Power Company; and MidAmerican Energy Company (IA). Of the sample of IRPs reviewed for this report, there was a wide range of approaches for integrating the IRA and IIJA.

The five case studies described below were selected to reflect a mix of cases that (a) cover utility consideration of IRA and IIJA funding in special PUC inquiries and IRP and similar planning documents, as well as (b) capture a geographically diverse group of vertically integrated IOUs. The five cases involve: Duke Energy Carolinas; Ameren Missouri; DTE (MI); Florida Power & Light; and Alabama Power.

A. Duke Energy

Duke Energy Carolinas and Duke Energy Progress (together, "Duke Energy") operate power plants with total capacity of approximately 35,000 MW in a territory of over 52,000 square miles across North and South Carolina.[71]

(1) PUC Inquiry

The North Carolina Utilities Commission ("NCUC") has taken several steps to encourage utilities to consider and plan for the implementation of the IIJA. On February 1, 2022, the NCUC issued an order soliciting comments from utilities regarding the IIJA.[72] Specifically, the NCUC asked for comments on the identification of available programs, actions needed to access funds, entities with which utilities should coordinate, processes established by other agencies, and actions that may be appropriate for the NCUC to consider to facilitate receipt and deployment of funds. (See Appendix B for inquiry language and additional detail.)

Duke Energy submitted comments on March 15, 2022.[73] The company emphasized the importance of coordination among various federal, state, and local government agencies and noted uncertainty related to the specific processes and eligibility criteria for IIJA funding.

[71] Duke Energy, "Executive Summary," Carolinas Resource Plan, 2023, (hereafter "Duke Energy Executive Summary"), available at: https://www.duke-energy.com/-/media/pdfs/our-company/carolinas-resource-plan/executive-summary.pdf?rev=4fe8de0be9954e8fbf1d93a2af45fbf4.

[72] North Carolina Utilities Commission, "In the Matter of Consideration for the Federal Funding Available Under the Infrastructure Investment and Jobs Act," Case No. M-100, SUB 164, Order, February 1, 2022, available at: https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=ee9659cf-dbd6-4ce6-b34f-e8073fcf744e.

[73] Duke Energy Carolinas, LLC and Duke Energy Progress, LLC, "In the Matter of Consideration for the Federal Funding Available Under the Infrastructure Investment and Jobs Act," Case No. M-100, SUB 164, Comments, March 15, 2022, available at: https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=11285551-54ee-4320-bc87-85073a3f178a.

Duke Energy indicated that it was evaluating the following IIJA funding opportunities:

- Climate Change
  - Section 11109 – Surface Transportation Block Grant Program
  - Section 11401 – Grants for Charging and Fueling Infrastructure
  - Section 11403 – Carbon Reduction Program
- Grid Modernization, Resilience and Transmission Facilitation
  - Section 40101 – Preventing Outages and Enhancing the Resilience of the Electric Grid
  - Section 40103 – Electric Grid Reliability and Resilience Research, Development, and Demonstration
  - Section 40107 – Deployment of Technologies to Enhance Grid Flexibility/Smart Grid Investment Matching Program
- Emerging technologies
  - Section 41201 – Office of Clean Energy Demonstrations
  - Section 40314 – Clean Hydrogen Hubs
  - Section 40314 - Electrolyzer RD&D
  - Sections 40302, 40303, 40304, 40305, 40308,41202 - Carbon Capture, Utilization and Storage
- Cybersecurity
  - Section 40125 - Enhanced Grid Security
- Energy Efficiency
  - Section 40541 - Grants for Energy Efficiency and Renewable Energy at Schools
  - Section 40502 - Energy Efficiency Revolving Loan Fund Capitalization Program
  - Section 40511 - Cost-effective Codes Implementation for Efficiency and Resilience
  - Section 40551 – Weatherization Assistance Program
  - Section 40552 – Energy Efficiency and Conservation Block Grants
  - Section 40555 - Energy Efficient Transformer Rebate Program

Duke Energy also explained that it was creating “internal processes” to systematically identify those IIJA programs the company might be eligible for. Further, the company expressed its commitment to prioritizing funding that has a significant impact on the clean energy transition.

Duke Energy submitted reply comments on April 14, 2022, stating that the NCUC should avoid prematurely determining the prudence of utility actions related to the IIJA.[74] The company asserted that requirements for

[74] Duke Energy Carolinas, LLC and Duke Energy Progress, LLC, “In the Matter of Consideration for the Federal Funding Available Under the Infrastructure Investment and Jobs Act,” Case No. M-100, SUB 164, Reply Comments, April 14, 2022, available at: https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=860272a8-a64e-49b7-b5e7-199b17c86005.

utilities seeking federal funds under the IIJA should align with existing North Carolina law. Overall, the NCUC's inquiry resulted in active response from utilities and shined a spotlight on IIJA funding opportunities.

(2) IRP

Pursuant to the laws and regulations of both North and South Carolina, Duke Energy submitted its joint Carolinas Resource Plan in May of 2023. Key components of this plan include the goal of retiring coal by 2035, carbon neutrality by 2050, and a "most reasonable, least cost" approach to reducing emissions at the lowest cost to customers.[75]

With these goals in mind, driven in part by a consumer advocate filing in the state pushing utilities to consider relevant federal funding in future resource portfolio plans, Duke Energy discusses the implications of the IRA in detail.[76] They note that, "the passage of the IRA and IIJA provides a unique opportunity to capture historic time-bound production, tax, investment, and programmatic incentives that directly benefit customers. The IRA provides for extended clean energy production and investment tax credits that are aimed at assisting customers with the transition to clean energy."[77] Duke Energy reports that it plans to take advantage of tax incentives, particularly the PTC and ITCs.[78]

Duke Energy provides a comprehensive outline of the IRA's opportunities to earn bonus credits for meeting specific criteria, including meeting wage and apprenticeship guidelines, utilization of domestic content, and siting of projects in regions historically associated with fossil fuel industries that currently experience high unemployment rates. Duke Energy expresses confidence in achieving the wage and apprenticeship bonuses for all sites. Additionally, the company states that it has identified certain sites that may qualify for the energy communities bonus, but do not include it as a baseline assumption because of its project-specific nature, and given uncertainty at the moment about the character of individual projects. Duke Energy's filing noted that the domestic content bonus would require clarification from the Treasury Department regarding its application and thus refrained from including it in the company's baseline model. The resulting assumption is that the baseline

[75] Duke Energy Executive Summary, p. 3.

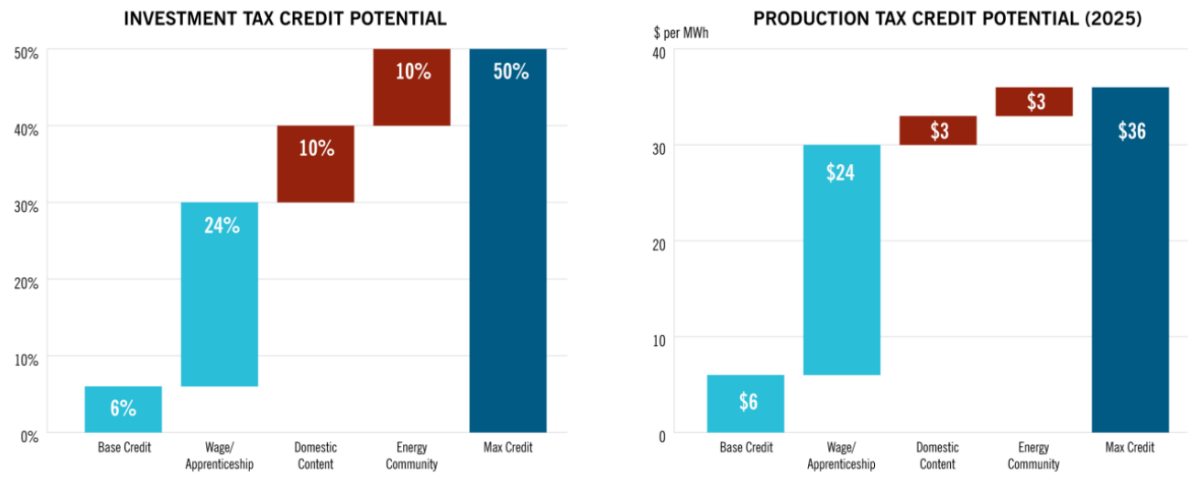
[76] On September 2, 2022, Dr. Uday Varadarajan of Rocky Mountain Institute testified on behalf of various North Carolina stakeholders on the importance of the IRA and IIJA. He stated that, "any future resource portfolio developed for North Carolina ratepayers using clean energy asset costs estimated without considering the IRA's provisions should be reevaluated to see if reliable transition pathways that are both cheaper and cleaner are feasible." See, Direct Testimony and Exhibits of Dr. Uday Varadarajan on Behalf of North Carolina Sustainable Energy Association, Southern Alliance for Clean Energy, Natural Resources Defense Council, and the Sierra Club, Docket No. E-100, SUB 179, September 2, 2022, available at https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=64eb001c-1329-499c-ad5b-36cf78c0fec9.

[77] Duke Energy Executive Summary, p. 9.

[78] "PTCs are a 10-year, inflation adjusted United States federal income tax credit for each kilowatt-hour ("kWh") of electricity generated. ITCs are a United States federal income tax credit based on a percentage of the capital investment and can be taken immediately upon facility completion." Duke Energy, "Chapter 2: Methodology and Key Assumptions," Carolinas Resource Plan, 2023, p. 40, (hereafter "Duke Energy Chapter 2"), available at: https://www.duke-energy.com/-/media/pdfs/our-company/carolinas-resource-plan/chapter-2-methodology-and-key-assumptions.pdf?rev=44036eb8cc98429c92e7ac00bea5f445.

for all eligible projects will be 30% ITC or $30/MWh PTC after combining the base credit and wage and apprenticeship bonus, relative to the maximum credits available, as illustrated below in Figure 5.

Figure 5. Duke Energy Carolinas Summary of IRA Tax Credits[79]



In addition to tax credits, Duke Energy assumes that all projects eligible for the IRA will qualify for 5-year modified accelerated cost recovery system ("MACRS"), meaning the company can earn a tax deduction for the recovery of the cost of the project.[80] Duke Energy also provides specific details related to the phase-out assumptions for various components of the IRA, and indicated an assumption that the applicable tax credits will not phase out during the resource plan study which ends in 2050. This assumption is based on the IRA provision that phase outs will occur either in 2033 or once GHG emissions achieve a 75% reduction relative to 2022 levels. Duke Energy states, "With uncertainty in the date in which the energy sectors GHG emissions achieve 75% reduction and safe harbor provision extending the availability for tax credit eligibility, the Plan assumes no phase out of IRA credits over the planning horizon."[81] Figure 6 outlines the IRP modeling assumptions.

[79] Duke Energy Chapter 2, p. 41.
[80] SEIA, "Depreciation of Solar Energy Property in MACRS," available at: https://www.seia.org/initiatives/depreciation-solar-energy-property-macrs.
[81] Duke Energy Chapter 2, p. 42.

Figure 6. Duke Carolinas Resource Plan Modeling Assumptions[82]

Table 2-24: Carolinas Resource Plan Modeling Assumptions

Generation Alternatives	IRA Incentives Modeled in Resource Plan	Incentive Phase Out
Standalone Solar (45Y) **Onshore Wind (45Y)** **Offshore Wind (45Y)** **Advanced Nuclear (45Y)**	PTC for 10 Years 5 Year MACRS	No Credit Phase Out During Study Period
Standalone Storage (48E)	40% of MW @ 30% ITC 60% of MW @ 40% ITC 98.5% Project Eligibility 5 Year MACRS	No Credit Phase Out During Study Period
Solar Paired with Storage (45Y+48E) **Advanced Nuclear (45Y+48E)**	PTC for 10 Years (Solar/Nuclear) 30% ITC (Storage) 98.5% Project Eligibility 5 Year MACRS	No Credit Phase Out During Study Period
Pumped Storage (48E)	30% ITC 98.5% Project Eligibility 5 Year MACRS	No Credit Phase Out During Study Period
Hydrogen (45V)	$3/kg PTC for 10 Years	End Year After 2032 if not yet under construction

In addition to discussion of the IRA, Duke Energy describes the company's plans to take advantage of the IIJA. Duke Energy states that it has "implemented a rigorous prioritization methodology with specific criteria developed by the Companies to identify IIJA programs that align with the Companies' objectives of providing reliable and affordable energy to their customers."[83] As a result, Duke Energy has submitted 17 IIJA-funded applications for projects related to advancing hydrogen, energy storage, grid resilience and technology, and hydropower.

In conclusion, Duke Energy has followed through on NCUC requests for consideration of the funding available to utilities through the Acts, has outlined how the company plans to pursue IIJA funding through application submissions, and has described the consideration of IRA tax credits in the company's latest IRP.

B. Ameren Missouri

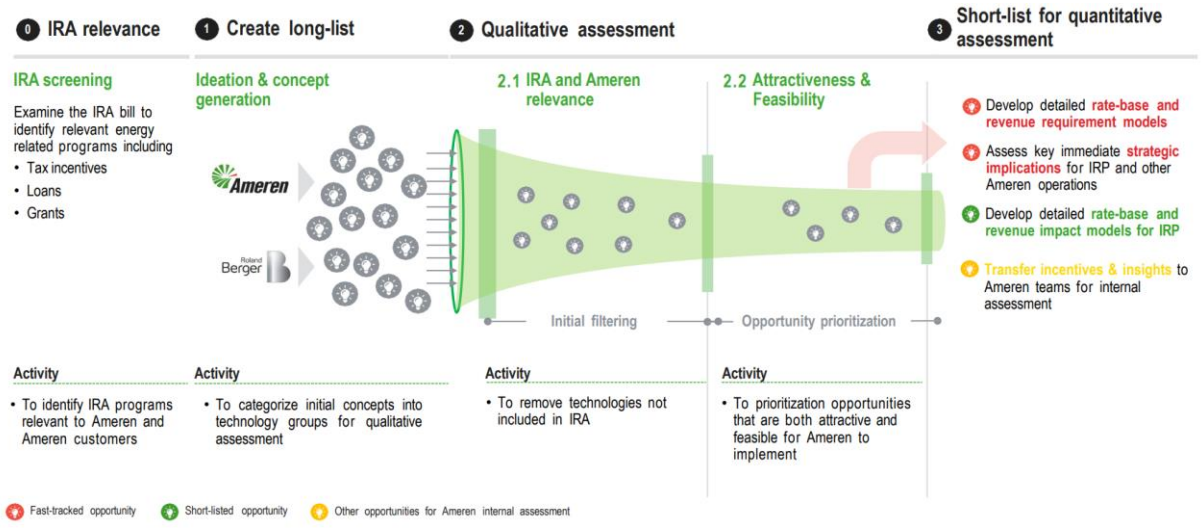
[82] Duke Energy Chapter 2, p. 42.
[83] Duke Energy Chapter 2, p. 43.

Ameren Missouri ("Ameren"), part of Ameren Corporation, has a generating capacity of 10,500 megawatts and serves 1.2 million customers in central and eastern Missouri.[84]

(1) PUC Inquiry

On November 30, 2022, the Missouri Public Service Commission ("Missouri PSC") ordered a working group to create a repository of utility actions related to securing funding from the IIJA and IRA.[85] Ameren Missouri presented its information on April 21, 2023. The company first outlined opportunities available through the IRA,[86] sharing a proposed assessment process (see Figure **7**). The main steps the company outlined were to screen the IRA for relevant funding, create a long list of potential ideas, then to qualitatively assess the relevance and feasibility of ideas, resulting in a short-list of ideas for quantitative assessment. These quantitative assessments include assessing strategic implications, developing rate-base and revenue impact models for the IRP, and further investigation of transfers and incentives.

Figure 7. Ameren Missouri IRA Investment Opportunities Assessment Process[87]



[84] Ameren Missouri, "About Ameren Missouri," available at: https://www.ameren.com/missouri/company/about-ameren.
[85] State of Missouri Public Service Commission, "In the Matter of a Working Case Regarding Utility Actions Related to Securing Funding from the Infrastructure Investment and Jobs Act of 2021 and the Inflation Reduction Act of 2022," Case No. AW-2023-0156, Order, available at: https://efis.psc.mo.gov/Document/Display/34216.
[86] Ameren Missouri, "Inflation Reduction Act (IRA) & Infrastructure Investment and Jobs Act (IIJA)," Case No. AW-2023-0156, April 21, 2023, p. 4, available at: https://efis.psc.mo.gov/Document/Display/11616.
[87] Ameren Missouri, "Inflation Reduction Act (IRA) & Infrastructure Investment and Jobs Act (IIJA)," Case No. AW-2023-0156, April 21, 2023, p. 3, available at: https://efis.psc.mo.gov/Document/Display/11616.

Ameren Missouri included the following list of IRA funding opportunities in its assessment process:[88]

- Energy Systems
  - 45/45Y: Clean Electricity Production Tax Credit
  - 48/48E: Clean Electricity Investment Tax Credit
  - 48(e)/48E(h): Credit for Renewables in Low-income Areas
  - 45U: Zero-Emission Nuclear Power Production Tax Credit
  - 45V: Clean Hydrogen Production Tax Credit
  - 22001: Electric Loans for Renewable Energy
  - 50141: Funding for Department of Energy Loan Programs Office
  - 50144: Energy Infrastructure Reinvestment
  - 50151: Transmission Facility Financing
  - 13302: Residential Clean Energy Credit (relevant to customers)
- Advanced Manufacturing
  - 48C: Advanced Energy Project Credit
  - 45X: Advanced Manufacturing Production Credit (relevant to customers)
- CCUS
  - 45Q: Credit for Carbon Oxide Sequestration
- EV & Fuels
  - 13404: Alternative Fuel Vehicle Refueling Property Credit
  - 50142: Advanced Technology Vehicle Manufacturing Loan Program
  - 50143: Domestic Manufacturing Conversion Grants
  - 13401: Clean Vehicle Credit (relevant to customers)
  - 13402: Credit for Previously-Owned Clean Vehicles (relevant to customers)
  - 13403: Credit for Qualified Commercial Clean Vehicles (relevant to customers)
  - 60101: Clean Heavy-Duty Vehicles (relevant to customers)
- EE & Smart Load (relevant to customers)
  - 13301: Energy Efficient Home Improvement
  - 13304: New Energy Efficient Homes Credit
  - 50121: Home Energy Performance-based Rebates
  - 50122: High-efficiency Electric Home Rebate
- Other Programs
  - 50145: Tribal Energy Loan Guarantee Program

[88] Ameren Missouri, "Inflation Reduction Act (IRA) & Infrastructure Investment and Jobs Act (IIJA)," Case No. AW-2023-0156, April 21, 2023, p. 4, available at: https://efis.psc.mo.gov/Document/Display/11616.

Ameren Missouri also presented the opportunities available through the IIJA, listing out the company's priority programs (See Figure 8). Of specific interest are the Grid Improvement Programs, Energy Improvements for Remote Areas, and potential hydroelectric incentives.

Figure 8. Ameren Priority IIJA Programs[89]

	Primary Applicant	IIJA Program	Program Overview *AMO Proposal For Applications*	Program Category	FOA 1st Round / Due Date Timeline	Total Federal Funding / Cost-Share	Max AMO Award / Cost-Share
In-Scope	AMO	GRIP Topic Area 1: Grid Resilience Grants[1]	Grants for grid resiliency efforts *Undergrounding of distribution lines in STL*	T&D	Paper Due: December 16th App Due: April 6th	$2.5B / 50%	$100M / 50%
	AMO	GRIP Topic Area 2: Smart Grid Grants[1]	Expanding smart grid investments & functions *Rural substation upgrades and line conversions*	T&D	Paper Due: December 16th App Due: March 17th	$3B / 50%	$50M / 50%
	AMO	Energy Improvements in Rural or Remote Areas (ERA) Topic 2[2]	Funds for large projects that improve or develop energy systems in rural/ remote communities *Rural substation upgrades*	T&D	Paper Due: April 14th App Due: June 28th	$1B / 50%	$100M[5] / 50%
Potentially Pursuing	AMO	Hydroelectric Efficiency Improvement Incentives[3]	Incentive program to finance improvements the efficiency of hydro assets *TBD*	Hydro	App Opened: March 22nd App Due: June 20th	$75M / 30%	$5M / 70%
	AMO	Maintaining & Enhancing Hydroelectric Incentives	Incentive program to upgrade existing hydroelectric generation assets *TBD*	Hydro	App Opens[4]: May 26th App Due[4]: July 18th	~$553M / 30%	$5M / 70%
					Total Funding Available:	**~$7.13B**	**~$260M**

On September 27th, 2023, the Missouri PSC ordered utilities to provide status updates on attempts to obtain federal funding through the IIJA and IRA.[90] On October 31, 2023, Ameren Missouri submitted a status report describing their applications for IIJA and IRA funding.[91] Specifically, they submitted two applications under the IIJA: a Smart Undergrounding Program application for the St. Louis Metropolitan area, and two Rural Revitalization and Modernization Program applications for rural Missouri. They also discuss their preparation of two applications under the IRA: one for the Low-Income Communities Bonus Credit Program, and one for the Title 17 financing under the IRA Section 50141, Funding for Department of Energy Loan Programs Office. They also note their plan to utilize IRA tax incentives for upcoming renewable energy projects. These applications are all pending.

(2) IRP

Ameren Missouri filed its most recent IRP in 2023, stating that the company had "accelerated planned investments in renewable resources and energy storage resources to take advantage of tax incentives in the

[89] Ameren Missouri, "Inflation Reduction Act (IRA) & Infrastructure Investment and Jobs Act (IIJA)," Case No. AW-2023-0156, April 21, 2023, p. 10, available at: https://efis.psc.mo.gov/Document/Display/11616.

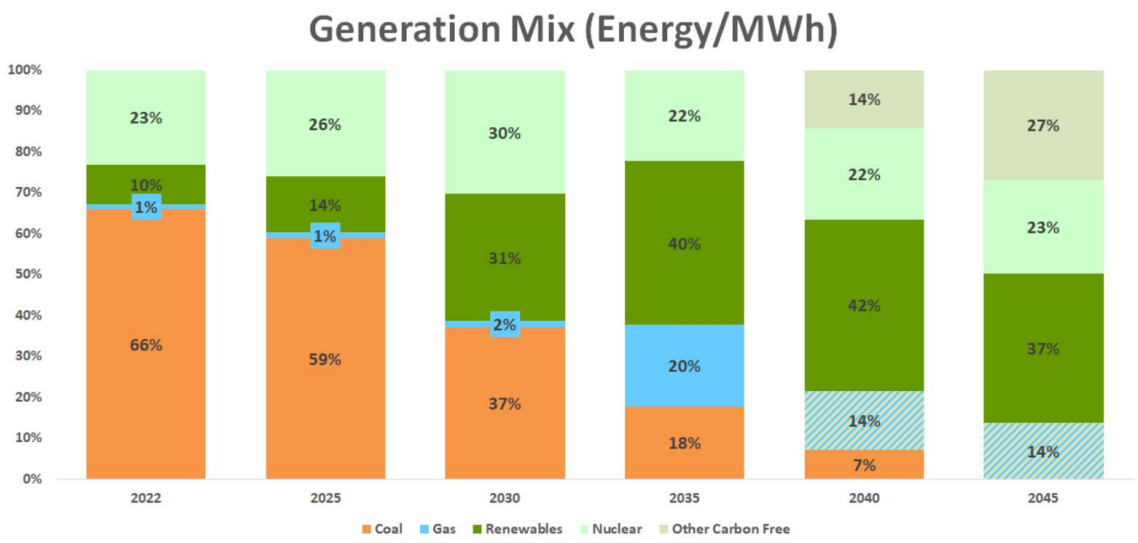
[90] State of Missouri Public Service Commission, "In the Matter of a Working Case Regarding Utility Actions Related to Securing Funding from the Infrastructure Investment and Jobs Act of 2021 and the Inflation Reduction Act of 2022," Case No. AW-2023-0156, September 27, 2023, available at: https://efis.psc.mo.gov/Document/Display/756486.

[91] Ameren Missouri, "In the Matter of a Working Case Regarding Utility Actions Related to Securing Funding from the Infrastructure Investment and Jobs Act of 2021 and the Inflation Reduction Act of 2022," Case No. AW-2023-0156, Status Report, October 31, 2023, available at: https://efis.psc.mo.gov/Document/Display/760301.

IRA that reduce costs to customers while also providing greater energy diversity and availability."[92] Ameren Missouri also discussed the implications of the IRA in terms of new supply-side resources.

Ameren Missouri outlined the various tax incentives available through the IRA, specifically highlighting the 30-percent ITC and wind and solar PTC, along with the available bonuses for using U.S.-manufactured materials and placing projects in qualified communities. While Ameren Missouri described tax credit bonuses, the company did not include them in its assumptions or outline plans to obtain them. Ameren Missouri included a PTC for wind and solar, and a 30-percent ITC for batteries and pumped storage in its LCOE model.[93] The LCOE model does not include the benefit of available funding through the IIJA.[94] With regard to new supply-side resources, Ameren Missouri provided the following chart (shown here as Figure 9), illustrating the company's planned changes to its resource mix, which includes a steady increase in renewables and other carbon-free resources.

Figure 9. Ameren Missouri: Planned Generation Mix[95]



While Ameren Missouri expressed interest in leveraging the IRA, a comparison between the company's 2022 and 2023 preferred plans reveals minimal changes in renewable energy investments (See Figure 10). The

[92] Ameren Missouri, "Executive Summary," Integrated Resource Plan, p. 1, (hereafter, "Ameren Executive Summary"), available at: https://www.ameren.com/-/media/missouri-site/files/environment/irp/2023/ch1.ashx.
[93] Ameren Missouri, "Chapter 6 – Appendix A," Integrated Resource Plan, p. 10, available at: https://www.ameren.com/-/media/missouri-site/files/environment/irp/2023/ch6-appendixa.ashx.
[94] Ameren Missouri, "New Supply-Side Resources," Integrated Resource Plan, p. 14, (hereafter "Ameren New Supply-Side Resources"), available at: https://www.ameren.com/-/media/missouri-site/files/environment/irp/2023/ch6.ashx.
[95] Ameren Executive Summary, p. 8.

company's primary updates involve a condensed timeline, with the quantity of renewable and battery storage additions remaining the same. Additionally, Ameren Missouri *decreased* its cumulative near-term 2030 planned coal retirements by 1,000 MW from the 2022 preferred plan to the one produced in 2023. While coal retirements are delayed, Ameren maintains its goal to have all coal resources retired by 2042.

Figure 10. Ameren Preferred Plan Updates from 2022 to 2023[96]

	2023 Preferred Plan	2022 Preferred Plan
Coal Retirements	**2,000 MW by 2030** 3,000 MW by 2035 5,400 MW by 2042	3,000 MW by 2030 3,000 MW by 2035 5,400 MW by 2042
Natural Gas Retirements	500 MW by 2030 1,800 MW by 2040	500 MW by 2030 1,800 MW by 2040
Natural Gas Additions	**1,200 MW (2033)**	1,200 MW (2031)
Dispatchable Peaking (Gas/Oil) Generation Addition	**800 MW (2027)**	None
Renewable Additions	2,800 MW by 2030 **4,700 MW by 2036**	2,800 MW by 2030 4,300 MW by 2035 4,700 MW by 2040
Battery Storage Additions	**400 MW by 2030** **800 MW by 2035**	400 MW by 2035 800 MW by 2040
Other Clean Dispatchable Additions	**1,200 MW (2040)** 1,200 MW (2043)	1,200 MW (2043)
Carbon Emission Reduction (CO_2e)	60% by 2030 85% by 2040 Net Zero by 2045	60% by 2030 85% by 2040 Net Zero by 2045

Note: Additions and retirements in this figure are cumulative.

Finally, in its IRP, Ameren Missouri discusses some qualitative considerations for the adoption of renewable energy, the potential for the role of hydrogen, and the impact of DERs. First, with regard to the buildout of renewable energy resources, Ameren Missouri noted that solar capacity additions throughout the U.S. may exacerbate existing supply chain challenges. Additionally, the company expressed concerns regarding potential constraints on the deployment of PV and wind resources caused by limitations in the transmission system and the growing number of generator interconnection submissions to the Midcontinent Independent System Operator ("MISO").[97]

Second, Ameren Missouri analyzed the economics of hydrogen fuel and, as a result, stated that it "expects that hydrogen could play a limited role in abatement of carbon emissions from gas generation if hydrogen

[96] Ameren Executive Summary, p. 6.
[97] Ameren New Supply-Side Resources, pp. 5-6.

production for industrial uses can also produce economic green hydrogen for electric generation as an ancillary benefit."[98]

Third, Ameren considered how IRA funding for DERs might impact the company's demand-side management strategies.[99] The company noted that some federal funds, such as tax credits, are easily integrated into its analysis, while other funding, such as the Home Energy Rebate program, require more guidance before the company can analyze the implications of the funding. Ameren Missouri's 2023 Market Potential Study ("MPS") includes assumptions about the IRA in the base case for energy efficiency and demand response, with additional participation in energy efficiency programming and adoption rates as a result of IRA funding. For distributed energy resources, Ameren Missouri factored tax credits into the cost-effectiveness screening.[100]

In summary, Ameren Missouri provided detailed comments to the Missouri PSC regarding the IRA and IIJA, and in its IRP, showed consideration of the potential impacts of federal funding on their resource mix.

C. DTE Electric

DTE Electric ("DTE") is the largest electric utility in Michigan, serving 2.3 million customers with a generating capacity of 11,084 megawatts.[101]

(1) PUC Inquiry

The Michigan Public Service Commission ("Michigan PSC") sent out a request for comments from stakeholders on May 12, 2022.[102] DTE submitted its response on June 30, 2023,[103] in which the company recognized the IIJA's potential to support decarbonization objectives, improve grid reliability and resiliency, benefit customers, and support progress towards climate goals. As a result, DTE "identified IIJA as a top priority,"[104] explaining that the company has established a program-management office with the specific purpose of evaluating IRA

[98] Ameren New Supply-Side Resources, p. 24.
[99] Ameren Missouri, "Demand-Side Resources," Integrated Resource Plan, p. 7 (hereafter, "Ameren Demand-Side Resources"), available at: https://www.ameren.com/-/media/missouri-site/files/environment/irp/2023/ch8.ashx.
[100] Ameren Demand-Side Resources, p. 37.
[101] DTE, "About DTE," available at: https://www.dteenergy.com/us/en/residential/about-dte/about-dte/about-dte.html.
[102] Michigan Public Service Commission, "In the matter, on the Commission's own motion, to seek comments from rate-regulated electric, steam, and natural gas utilities regarding potential utility infrastructure improvements in the state of Michigan from the federal funding available under the Infrastructure Investment and Jobs Act of 2021," Case No. U-21227, Order, May 12, 2022, available at: https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000002tmfNAAQ.
[103] DTE, "Infrastructure Investment and Jobs Act and Inflation Reduction Act Biannual Update Report for DTE Electric and DTE Gas, Case No. U-21227, June 30, 2023, (hereafter, "DTE 2023 Biannual Update Report"), available at: https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000008KywpAAC.
[104] DTE 2023 Biannual Update Report, p. 3.

and IIJA funding, exploring projects, and requesting approval.[105] DTE noted the following list of IIJA programs for company evaluation:

- Energy Storage Demonstration & Pilot Projects (41001a)
- Smart Grid Grants (40107)
- Grid Resilience Grants (40101c)
- Regional Clean Hydrogen Hubs (40314)
- Buses & Bus Facilities [Federal Transit Authority for No-Low Emissions] (30018)
- Clean School Bus Program (71101)
- Carbon Reduction Program (11403)
- RAISE (Rebuilding American Infrastructure with Sustainability and Equity)
- Carbon Storage (40305)
- Community-Scale Geothermal (41007)
- Resilience for States & Tribes (40101d)
- Grid Innovation (40103b)
- National Electrical Vehicle Infrastructure - NEVI (Division J)
- Urban & Community Program (23003)
- Charging & Fueling Infrastructure (11401)
- Energy Efficiency and Conservation Block Grant [EECBG] (40552)
- Weatherization (40551)
- Energy Improvement at Public K-12 School Facilities (40541)

DTE concludes that, "both pieces of legislation – IIJA and IRA – represent an important opportunity to rebuild America's infrastructure, tackle the climate crisis, while investing in urban and rural communities. For its customers, DTE is looking at all possible opportunities that improve the customer experience, contribute to decarbonization, expand electrification, improve grid reliability and resiliency, as well as strengthen relationships with its community stakeholders."[106]

(2) IRP

DTE Electric was one of the first energy companies in the nation to set carbon reduction goals in 2017, and in 2019 announced plans to achieve net zero emissions by 2050.[107] The company's 2022 Integrated Resource Plan goes further, proposing an acceleration of DTE's decarbonization goals. DTE stated that its proposed

[105] DTE 2023 Biannual Update Report, p. 3.
[106] DTE 2023 Biannual Update Report, p. 9.
[107] DTE Electric, "IRP Executive Summary," p. 3 (hereafter, "DTE IRP Executive Summary"), available at: https://dtecleanenergy.com/downloads/IRP_Executive_Summary.pdf.

plan “increases investment in solar and wind energy, accelerates the retirement of coal plants, and includes the development of new energy storage – all reinforcing DTE Electric’s environmental leadership.”[108]

To meet these goals, DTE discussed the company’s plans to “leverage the Inflation Reduction Act to benefit [their] customers.”[109] DTE conducted a new scenario analysis to assess the potential impacts of the IRA’s tax credit provisions and updated the company’s proposed plan to include additional clean energy, calling the scenario the “Refresh” scenario.[110] Specifically, this scenario’s assumptions include updated tax credits for wind, solar, batteries, new nuclear, and carbon capture and storage (“CCS”).[111] Through further analysis, DTE found that, with the new federal tax provisions, most proposed resource portfolios are more economic in the “Refresh” scenario relative to the base scenario.[112] As a result, the Refresh scenario changed DTE’s proposed course of action for renewable asset buildout (see Figure 11). This amounts to 1,153 MW of additional solar, 1,272 MW of additional wind, and 1,200 MW of additional storage.[113] In summary, in its IRP, DTE makes an effort to account for the impact of IRA tax credits in the company’s proposed renewable resource portfolio buildout, and the company’s reply to the PUC inquiry further illustrates DTE’s consideration of both IRA and IIJA funding.

Figure 11. DTE Changes in Resource Additions After Consideration of IRA[114]

Years	Solar	Wind	Storage
Total change 2023-2028 (ICAP)		+100 MW	
Total change 2023-2028 (UCAP)		+12 MW	
Total change 2029-2035 (ICAP)	+1,153 MW	+1,172 MW	+1,200 MW
Total change 2029-2035 (UCAP)	+358 MW	+141 MW	+435 MW

[108] DTE IRP Executive Summary, p. 3.
[109] DTE IRP Executive Summary, p. 6.
[110] DTE IRP Executive Summary, p. 16; DTE Electric, “In the Matter of the Application of DTE Electric Company for Approval of its Integrated Resource Plan Pursuant to MCL 460.0t, and for other relief, Case No. U-21192, Application, November 3, 2022, p. SDM-77, (hereafter, “DTE Application”), available at: https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000004qW9sAAE.
[111] DTE Electric, p. 20.
[112] DTE Application, p. SDM-81.
[113] Installed capacity (ICAP) values reported.
[114] DTE Application, p.LKM-52.

D. Florida Power & Light

Florida Power & Light ("FPL"), a subsidiary of NextEra Energy, is one of the country's largest electric utilities, serving over 12 million people in a substantial portion of Florida.[115]

(1) PUC Inquiry

The Florida Public Service Commission ("Florida PSC") has not requested comments on the implementation of the IRA or IIJA.

(2) IRP

In compliance with Florida Statutes, in April 2023 FPL submitted a Ten-Year Power Plant Site Plan to the Florida PSC. This Site Plan estimates the utility's future generating needs, provides a plan for how these estimates can be met, and discloses information related to preferred and potential power plant sites.[116] FPL states that it has, "one of the cleanest emissions profiles of any electric utility in the U.S." and that the company's emissions will continue to drop with the planned actions outlined in the Site Plan.[117]

Specifically, between 2023 and 2032, FPL projects an increase of 19,966 MW of new solar PV generation and 2,000 MW of battery storage (See Figure 12).[118] Additionally, the company plans for early retirement of three coal-fueled generators.[119] FPL's plan highlights the impacts of the IRA on the company's procurement of low-emission electricity. FPL states that changes in tax policy for new utility-owned batteries, solar, and hydrogen are of most interest to the company.[120] These tax incentives were included in the resource plan presented as part of the Site Plan.[121] FPL accounts for a 30-percent ITC for standalone batteries, and a 26-percent ITC for new utility-owned solar through 2025, dropping to a 10-percent ITC for several years thereafter. Additionally, FPL notes that the PTC for hydrogen will benefit the company's planned hydrogen pilot project.[122]

[115] Florida Power and Light, "Company Profile," available at: https://www.fpl.com/about/company-profile.html.
[116] FPL, "Ten Year Power Plant Site Plan 2023 – 2032," April 2023, p. 1, (hereafter, "FPL TYPPSP") available at: https://www.fpl.com/content/dam/fplgp/us/en/about/pdf/10-year-site-plan.pdf.
[117] FPL TYPPSP, p. 5.
[118] FPL TYPPSP, pp. 7-8.
[119] FPL TYPPSP, p. 16.
[120] FPL TYPPSP, p. 11.
[121] FPL TYPPSP, p. 12.
[122] FPL TYPPSP, p. 12.

Figure 12. Resource Additions/Subtractions in FPL's Resource Plan[123]

Year	Changes to Existing Generation	Retirements	New Generation Additions	Summer RM%
2023	+195 MW CC Upgrades	Shell PPA (885 MW)	745 MW Solar* 447 MW SolarTogether Extension*	21.9
2024	+27 MW CC Upgrades	Daniel 1&2 (502 MW)	894 MW SOBRA* 745 MW SolarTogether Extension*	22.3
2025	+29 MW CC Upgrades	GCEC 4 (75 MW) Pea Ridge (12 MW)	894 MW SOBRA* 596 MW SolarTogether Extension*	22.9
2026	+20 MW CC Upgrades		2,235 MW Solar	23.3
2027		GCEC 5 (75 MW) Broward South (4 MW)	2,235 MW Solar	22.9
2028		Lansing Smith 3A (32 MW)	2,235 MW Solar	22.0
2029		Scherer 3 (215 MW)	2,235 MW Solar 100 MW Battery Storage	20.0
2030		Perdido 1&2 (3 MW)	2,235 MW Solar 600 MW Battery Storage	20.0
2031			2,235 MW Solar 500 MW Battery Storage	20.0
2032		Palm Beach SWA 1 (40 MW)	2,235 MW Solar 800 MW Battery Storage	20.0
		Nameplate Solar Additions (2023-2032):	**19,966**	
		Nameplate Storage Additions (2023-2032):	**2,000**	

Regarding IRA tax credit opportunities, FPL's plan does not mention pursuing bonus tax credits such as domestic content minimums, siting in energy communities, and siting in low-income communities. FPL also does not discuss any applications for, or incorporation of, IRA grant and loan program funding opportunities. Further, FPL makes no mention of the IIJA in their plans to incorporate additional renewable resources.

E. Alabama Power

Alabama Power Company ("Alabama Power"), a subsidiary of Southern Company, serves approximately 1.5 million customers and has over 15,000 MW of planning resource capability in Alabama.[124]

(1) PUC Inquiry

The Alabama Public Service Commission ("Alabama PSC") has not requested comments on the implementation of the IRA or IIJA.

[123] FPL TYPPSP, p. 16.

[124] Alabama Power, "2022 Integrated Resource Plan Summary Report," 2022, p. 3, (hereafter, "Alabama Power IRP"), available at: https://www.alabamapower.com/content/dam/alabama-power/pdfs-docs/company/compliance---regulation/IRP.pdf

(2) IRP

Alabama Power is obligated to submit an IRP Summary Report to the Alabama PSC every three years.[125] The company's most recent IRP was submitted in December of 2022.

In that IRP, Alabama Power details its commitment to "maintaining a diverse supply-side generating portfolio, along with cost-effective demand-side resources that benefit all customers."[126] However, there is only one brief mention of the IRA in the IRP, where Alabama Power states that the "Inflation Reduction Act represents the first federal legislation with provisions intentionally designed to reduce GHG emissions, but the scope and impact of that legislation remains under evaluation."[127] Moreover, the IRP makes no mention of available funding through the IIJA.

F. Case Study Discussion

These case studies illustrate the range of ways in which both regulators and utilities have begun to address the IRA and IIJA. PUC inquiries have served to prompt public discussions on the availability of funding and potential avenues for new projects and can stimulate more fulsome consideration of the IRA and IIJA in utility IRPs and other planning efforts.

The highlighted IRPs and commission orders to date serve as examples of utilities' efforts to incorporate the Acts' funding into the development and implementation of utility plans and resource commitments. Inquiries, such as those led by regulators in Michigan, Missouri and North Carolina, have served as platforms for public consideration of utility efforts to pursue IRA and IIJA funding opportunities.

Based on this review, best practices indicate that:

- Utility resource and financial planning processes should fully consider the funding opportunities in both Acts, and report publicly on the utility's analysis of opportunities with explanations of decisions about which opportunities to pursue (and those that will not be pursued).
- For utilities that own generating assets, these evaluations should include discussion of the availability of reinvestment funding, and whether such opportunities are appropriate to pursue in the context of a given utility's specific resource portfolio. The Energy Infrastructure Reinvestment Financing program provides significant opportunities to upgrade existing power resources.
- Plans should evaluate and incorporate tax credit bonus provisions as relevant so as to best leverage opportunities under the Acts.

[125] Alabama Power IRP, p. 1.
[126] Alabama Power IRP, p. 1.
[127] Alabama Power IRP, p. 12.

- Utility plans and public communication should also provide customers with information about the Acts' funding opportunities targeted to individual taxpayers and instructions on how companies and homeowners can access such funding.

The case studies illustrate possible ways for utilities and commissions to take advantage of the Acts' opportunities in resource and grid planning processes. Given that the enactments of the IRA and IIJA occurred at times that did not necessarily coincide with the regular planning processes and IRP filing obligations of utilities, there are many utilities that may be only just beginning to publicly report upon the potential impact of the Acts' funding on their planning, investment, and operations. Yet the compressed timeframes for capitalizing on the Acts' opportunities mean that every utility should be working expeditiously – even if outside normal planning cycles – to incorporate into their grid and resource planning the financial options available through IRA and IIJA provisions. Utilities should also provide regular updates on their efforts to obtain federal funding and consideration of how that funding will impact customers.

Such efforts should be viewed as part of the utility's obligation to reliably meet customer demand at the lowest possible cost. Regulators can clarify such expectations by requiring that utilities evaluate opportunities, and develop and publicly report on plans to maximize the Acts' benefits for ratepayers. The action of the North Carolina, Missouri, and Michigan regulators serve as constructive examples of providing guidance to utilities in their consideration of the IRA and IIJA.

VI. Appendix A: Detail on IRA/IIJA Funding Opportunities

Appendix A Table 1. Categorized IRA Tax Opportunities Relevant to Electric Utilities

Priority Level	Categories	Funding Mechanism	Program	Total Additional Funding	Legislation	Period of Availability
Direct Impact: Current Utility Activity	Generation	Tax Credit	Production Tax Credit for Electricity from Renewables[1]	See Report Table 1	IRA Section 13101	Expires 1/1/2025
		Tax Credit	Investment Tax Credit for Energy Property[1]	See Report Table 1	IRA Section 13102	Expires 1/1/2025
		Tax Credit	Increase in Energy Credit for Solar and Wind Facilities Placed in Service in Connection with Low-Income Communities[1]	See Report Table 1	IRA Section 13103, 13702(h)	Expires 1/1/2025
		Tax Credit	Zero-Emission Nuclear Power Production Credit[1]	0.3 cents/kWh for electricity generated and sold after 12/31/2023 by eligible existing nuclear facilities - 5x adder for meeting prevailing wage requirements	IRA Section 13105	1/1/2024 to 12/31/2032
		Tax Credit	Clean Hydrogen Production Tax Credit[1]	0.6 cents/kg of hydrogen produced after 12/31/2022 - 20%-100% multiplier based on the lifecycle of GHG emissions released in the production process - 5x adder for meeting prevailing wage requirements	IRA Section 13204	Hydrogen produced after 12/31/2022; Facilities must be in service by 1/1/2033, and are eligible for the credit for the first 10 years of operation
		Tax Credit	Extension of Second-Generation Biofuel Incentives	$1.01 per gallon income tax credit to eligible producers of second-generation biofuels	IRA Section 13202	Expires 1/1/2025
		Tax Credit	Advanced Energy Project Credit[1]	$10 billion administered by the DOE and the Department of the Treasury - 6% base credit, +24% for meeting prevailing wage and apprenticeship requirements	IRA Section 13501	Available until funds are fully allocated
		Tax Credit	Clean Electricity Production Tax Credit[1]	See Report Table 1	IRA Section 13701	1/1/2025 to 2032 or when US GHG emissions are 25% of 2022 emissions or lower
		Tax Credit	Clean Electricity Investment Tax Credit[1]	See Report Table 1	IRA Section 13702	1/1/2025 to 2032 or when US GHG emissions are 25% of 2022 emissions or lower
		Tax Credit	Cost Recovery for Qualified Facilities, Qualified Property, and Energy Storage Technology	Tied to the updated ITC (IRA Section13702) and PTC (IRA Section 13701) provisions starting 1/1/2025: Deduction of depreciation from taxable income for ITC and PTC eligible facilities	IRA Section 13703	1/1/2025 to 2032 or when US GHG emissions are 25% of 2022 emissions or lower
		Tax Credit	Credit for Carbon Oxide Sequestration[1]	$17 per metric ton of carbon dioxide captured and sequestered ($36 for direct air capture facilities) $12 per metric ton of carbon dioxide injected for enhanced oil recovery or utilized ($26 for direct air capture facilities) - 5x adder for meeting prevailing wage requirements	IRA Section 13104	12 years from facility in service date; facilities must be in service before 1/1/2033

Priority Level	Categories	Funding Mechanism	Program	Total Additional Funding	Legislation	Period of Availability
Direct Impact: Additional Utility Activity	Transportation	Tax Credit	Alternative Fuel Vehicle Refueling Property Credit[1]	6% base credit for businesses (limited to $100,000); 30% base credit for individuals (limited to $1,000) - +24% for businesses meeting prevailing wage and apprenticeship requirements	IRA Section 13404	1/1/2023 to 12/31/2032
Indirect Impact on Utilities through Demand Shifts	Energy Efficiency	Tax Credit	Energy Efficiency Home Improvement Credit[2]	30% of the cost of each improvement, with limits by type of investment	IRA Section 13301	2022 to 2032

Notes:
[1] Tax credit programs eligible for direct pay. IRS, Clean Energy Tax Incentives: Elective Pay Eligible Tax Credits, available at: /https://www.irs.gov/pub/irs-pdf/p5817g.pdf.
[2] Targeted at homeowners, however utilities have the opportunity to sponsor this program to encourage uptake. Not eligible for direct pay or transferability.

Source:
[1] The White House, "Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action," Version 2, January 2023, available at: https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf.

Appendix A Table 2. Categorized IRA Grant/Loan Funding Opportunities Relevant to Electric Utilities

Priority Level	Categories	Funding Mechanism	Program	Total Additional Funding	Legislation	Period of Availability
Direct Impact: Current Utility Activity	Generation	Loan/Loan Forgiveness	Electric Loans for Renewable Energy	$1 billion administered by the Dept. of Agriculture	IRA Section 22001	Available until 9/30/2031
		Loan Guarantee	Energy Infrastructure Reinvestment Financing	$5 billion administered by the DOE	IRA Section 50144	Available until 9/30/2026
		Loans and Grants	USDA Assistance for Rural Electric Cooperatives	$9.7 billion administered by the Dept. of Agriculture	IRA Section 22004	Available until 9/30/2031
	Transmission & Distribution	Loan	Transmission Facility Financing	$2 billion administered by the DOE	IRA Section 50151	Available until 9/30/2030
		Competitive Grant	Grants to Facilitate the Siting of Interstate Electricity Transmission Lines	$760 million administered by the DOE	IRA Section 50152	Available until 9/30/2029
		Direct Federal Funding	Interregional and Offshore Wind Electricity Transmission Planning, Modeling and Analysis	$100 million administered by the DOE	IRA Section 50153	Available until 9/30/2031
Direct Impact: Additional Utility Activity	Clean R&D	Loan Guarantee	Funding for Department of Energy Loan Programs Office	$3.6 billion administered by the DOE	IRA Section 50141	Available until 9/30/2026
Indirect Impact on Utilities through Demand Shifts	Distributed Energy Resources	Competitive Grant	Greenhouse Gas Reduction Fund	$27 billion administered by the EPA	IRA Section 60103	Available until 9/30/2024
			Total Funding Highlighted:	**$49.2 billion**		

Source:

[1] The White House, "Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action," Version 2, January 2023, available at: https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf.

Appendix A Table 3. Categorized IIJA Grant/Loan Funding Opportunities Relevant to Electric Utilities

Priority Level	Categories	Funding Mechanism	Program	Total Additional Funding	Legislation	Period of Availability
Direct Impact: Current Utility Activity	Generation	Grant/Contract/Cooperative Agreement	Clean Hydrogen Electrolysis Program	$1 billion administered by the DOE	IIJA Section 40314	Available until expended
		Grant/Contract/Cooperative Agreement	Regional Clean Hydrogen Hubs	$8 billion administered by the DOE	IIJA Section 40314	Available until expended
		Incentive Payment to qualified facilities	Hydroelectric Production Incentives	$125 million administered by the DOE	IIJA Section 40331	Available until expended
		Incentive Payment to qualified facilities	Maintaining and Enhancing Hydroelectricity Incentives	$553.6 million administered by the DOE	IIJA Section 40333	Available until expended
		Cooperative Agreement	Pumped Storage Hydropower and Solar Integration and System Reliability Initiative	$10 million administered by the DOE	IIJA Section 40334	$2 million per year, fiscal years 2022 to 2026
		Grant/Cooperative Agreement	Clean Energy Demonstrations on Current and Former Mine Land	$500 million administered by the DOE	IIJA Section 40342	Available until 2026
		Grant/Cooperative Agreement	Energy Storage Demonstration and Pilot Grant Program	$355 million administered by the DOE	IIJA Section 41001	Available until expended
		Grant/Cooperative Agreement	Long-Duration Energy Storage Demonstration Initiative and Joint Program	$150 million administered by the DOE	IIJA Section 41001	Available until expended
		Cooperative Agreement	Advanced Reactor Demonstration Program	$2.477 billion administered by the DOE	IIJA Section 41002	Available until expended
		TBD	Marine Energy Research, Development, and Demonstration	$70.4 million administered by the DOE	IIJA Section 41006	Available until expended
		Cooperative Agreement	Carbon Capture Demonstration Projects Program	$2.537 billion administered by the DOE	IIJA Section 41004	Available until expended
	Transmission & Distribution	Federal Expenditure at Discretion of Western Area Power Administration Administrator	Purchase of Power and Transmission Services	$500 million administered by the DOE	IIJA Division J, Title III	Available until expended
		Loan, Direct Financing, or Capacity Purchase	Transmission Facilitation Program	$2.5 billion administered by the DOE	IIJA Section 40106	Available until expended
		Rebate/Grant	Energy Efficient Transformer Rebates	$10 million administered by the DOE	IIJA Section 40555	Available until expended
		Grant	The Middle Mile Grant Program	$1 billion administered by the Dept. of Commerce	IIJA Section 60401	Fiscal years 2022-2026
	Reliability	Formula Grants for States, Territories and Tribes; Grants or Cooperative Agreements for other eligible entities	Preventing Outages and Enhancing the Resilience of the Electric Grid / Hazard Hardening [1]	$5 billion administered by the DOE	IIJA Section 40101	Available until expended
		Grant/Cooperative Agreement	Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency [1]	$5 billion administered by the DOE	IIJA Section 40103	$1 billion per fiscal year 2022 to 2026 (or until total funding expended)
		Grant	Smart Grid Investment Matching Grant Program [1]	$3 billion administered by the DOE	IIJA Section 40107	$600 million per fiscal year 2022 to 2026 (or until total funding expended)
		Contract/Cooperative Agreement	Cybersecurity for the Energy Sector Research, Development, and Demonstration Program	$250 million administered by the DOE	IIJA Section 40125	Available until expended
		National Laboratory Funding	Energy Sector Operational Support for Cyber Resilience Program	$50 million administered by the DOE	IIJA Section 40125	Available until expended
		National Laboratory Funding, with Dept. of Commerce	Advanced Energy Security Program	$50 million administered by the DOE	IIJA Section 40125	Available until expended

Priority Level	Categories	Funding Mechanism	Program	Total Additional Funding	Legislation	Period of Availability
Direct Impact: Current Utility Activity	Rural Programs	Grant/Cooperative Agreement	Energy Improvement in Rural or Remote Areas	$1 billion administered by the DOE	IIJA Section 40103	$200 million per fiscal year 2022 to 2026 (or until total funding expended)
		Grant/Contract/Cooperative Agreement	Rural and Municipal Utility Advances Cybersecurity Grant and Technical Assistance Program	$250 million administered by the DOE	IIJA Section 40124	Available until expended
Direct Impact: Additional Utility Activity	Carbon Capture & Storage	Grant	Carbon Utilization Program	$310 million administered by the DOE	IIJA Section 40302	Available until expended
		Grant/Cooperative Agreement	Four Regional Clean Direct Air Capture Hubs	$3.5 billion administered by the DOE	IIJA Section 40308	$700 million per fiscal year 2022 to 2026 (or until total funding expended)
		Cooperative Agreement	Carbon Capture Large-Scale Pilot Programs	$937 million administered by the DOE	IIJA Section 41004	Available until expended
Indirect Impact on Utilities through Demand Shifts	Other Indirect	Grant/Cooperative Agreement	Industrial Emission Demonstration Projects	$500 million administered by the DOE	IIJA Section 41008	Available until expended
		Formula Grant	Weatherization Assistance Program	$3.5 billion administered by the DOE	IIJA Section 40551	Available until expended, beginning fiscal year 2022
	Energy Efficiency	Block and Competitive Grants	Energy Efficiency and Conservation Block Grant Programs	$550 million administered by the DOE	IIJA Section 40552	Available until expended
			Total Funding Highlighted:	**$43.7 billion**		

Note:
[1] Part of the Grid Resilience and Innovation Partnerships (GRIP) Program.

Source:
[1] The White House, "Building a Better America: A Guidebook to the Bipartisan Infrastructure Law for State, Local, Tribal, and Territorial Governments, and Other Parties, May 2022, available at: https://www.whitehouse.gov/wp-content/uploads/2022/05/BUILDING-A-BETTER-AMERICA-V2.pdf.

VII. Appendix B: Special PUC Inquiries

This Appendix includes recent actions taken by public utilities commissions ("PUCs") to encourage consideration of the funding available to utilities through the IRA and IIJA. The most common actions taken by PUCs is to request utilities to submit information regarding the impacts of this federal funding, along with plans to obtain funding. The state PUCs highlighted include:

1. District of Columbia Public Service Commission
2. Maryland Public Service Commission
3. Michigan Public Service Commission
4. Minnesota Public Utilities Commission
5. Missouri Public Service Commission
6. Public Utility Commission of Nevada
7. North Carolina Utilities Commission
8. North Dakota Public Service Commission
9. South Carolina Public Service Commission

1. District of Columbia Public Service Commission
On July 8, 2022, the Commission initiated a proceeding to identify funding sources that may be available for utilities under the IIJA. [128]
The Commission directed utilities to file monthly reports containing information related to funding for which the utilities applied for and the intended purposes of that funding.
The commission later required the utilities to provide information regarding the IRA and track costs related to the federal legislation.[129]

2. Maryland Public Service Commission[130]
In June 2022, the Commission opened a conference to address issues related to the IIJA and IRA.
Utilities are required to file monthly reports regarding their plans to pursue the grants and funding available in the statute.
Government agencies and interested parties may file written comments identifying program opportunities available to utilities on the act.

[128] Public Service Commission of the District of Columbia, "Formal Case No. 1172, In the Matter of the Consideration of Federal Funding Under the Infrastructure Investment and Jobs Act, Order No. 21176," July 8, 2022, available at https://edocket.dcpsc.org/apis/api/Filing/download?attachId=170572&guidFileName=1c7b095a-ff80-4151-9e54-7ab591f80dbb.pdf.
[129] Public Service Commission of the District of Columbia, "Formal Case No. 1172, In the Matter of the Consideration of Federal Funding Under the Infrastructure Investment and Jobs Act, Order No. 21542," October 18, 2022, available at https://edocket.dcpsc.org/apis/api/Filing/download?attachId=182598&guidFileName=8fb7a5e5-74f0-4145-8407-797cf220e923.pdf.
[130] Maryland Public Service Commission, Order on Petition, PC56, June 29, 2022, available at https://webpsc.psc.state.md.us/DMS/pc/PC56.

3. Michigan Public Service Commission[131]

The Michigan Public Service Commission send out a request for comments from stakeholders on May 12, 2022. They asked for input on the following:

1. Identification of all federal programs, private-public partnerships, grants, loans, contract opportunities, and funding available to public utilities pursuant to the IIJA, as well as an explanation of the actions or processes public utilities must complete to access those opportunities. Comments may also identify additional funding and assistance opportunities available under other new or existing federal programs.
2. Identification of any entity or federal or state agency with which coordination may be necessary to access the funding and assistance opportunities available in the IIJA.
3. A description of the actions taken or anticipated to be taken by rate-regulated utilities to access the grants, loans, contract opportunities, funding, and other benefits identified as being available to public utilities pursuant to the IIJA.
4. An explanation of any actions or considerations the Commission should take to facilitate the state's public utilities in taking advantage of the funding and assistance opportunities available under the IIJA.
5. Identification of any actions or considerations required of the Commission by the IIJA, as well as any impact on the Commission's regulatory authority.
6. A description of any other impacts of the IIJA relative to the delivery of safe, reliable, and affordable energy as well as investments in and improvements to public utility infrastructure.

[131] Michigan Public Service Commission, "In the matter, on the Commission's own motion, to seek comments from rate-regulated electric, steam, and natural gas utilities regarding potential utility infrastructure improvements in the state of Michigan from the federal funding available under the Infrastructure Investment and Jobs Act of 2021," Case No. U-21227, Order, May 12, 2022, available at: https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000002tmfNAAQ.

4. Minnesota Public Utilities Commission[132]

In December of 2022, the Minnesota Public Utilities Commission issued a notice of a comment period as part of their joint investigation into the impacts of the IRA

The PUC required that Utilities, telecom carriers, official parties, and state agencies file documents. The following questions were asked to utilities:

1. How does the IRA enable or accelerate your transformation toward Minnesota's renewable energy and greenhouse gas emission goals? How will it be done in an equitable way?
2. Provide preliminary, pro-forma estimates of the effect of the IRA on the company's Minnesota jurisdictional revenue requirement and rates for the next ten years.
3. How does the IRA support diversity, equity, and inclusion in the energy sector, including but not limited to:
    a. How can the IRA benefit communities that host generators proposed for retirement, and how will you maximize those benefits?
    b. How can the IRA be used to improve programming for underserved or marginalized communities and populations? How should these communities and populations be further identified?
    c. How will equity be explicitly considered in any application or distribution of IRA funding that you make?
4. Does your organization have a workforce development plan? How are you planning for any IRA funding received to enhance workforce development, specifically for underrepresented populations?
5. How does the IRA impact both short- and long-term planning, including but not limited to:
    a. Does the IRA impact any current, ongoing, or planned IRPs, and are any changes warranted?
    b. Does the IRA impact forecasting for DERs or electrification? If so, how does the company plan to handle increased interconnection volume?
    c. Are the impacts of the IRA fully incorporated into any ongoing resource procurements?
    d. Are there any Non-Wires Alternatives under consideration that are likely to be eligible for IRA funding or tax credits?

[132] Minnesota Public Utilities Commission, "In the Matter of a Joint Investigation into the Impacts of the Federal Inflation Reduction Act," Case No. E,G999/CI-22-624, Notice of Comment Period, December 14, 2022, available at: https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={40211185-0000-C813-BE5B-1737A98A7873}&documentTitle=202212-191308-01.

6. How does your utility intend to maximize the benefits of the IRA for its customers and system, such as:
    - **a.** Through investment in new or improved infrastructure?
    - **b.** Through new or improved technologies that can benefit operations such as carbon capture or hydrogen?
    - **c.** Do you anticipate utilizing financing opportunities through the IRA and how will that money be deployed?
    - **d.** Are there opportunities within the IRA to bolster physical and cyber security of your system?
    - **e.** Do you anticipate any public or private partnerships to better access IRA benefits or implement programs enabled by the IRA?
    - **f.** How do you anticipate the IRA will impact any current or future tax-equity partnerships?
7. What provisions in the IRA will you be pursuing to stimulate transmission buildout, and how can these funding opportunities be combined with other resources, such as the Infrastructure Investment and Jobs Act, to maximize benefits for Minnesotans?
8. How will the IRA impact electric vehicle use in in your service territory, including both for the company and ratepayers? What, if any, barriers to deployment do you anticipate addressing with IRA funding?
9. Please provide the following information related to tax benefits from the IRA:
    - **a.** Identify all tax benefits and credits, describe how they work, and what criteria are needed to qualify or maximize the benefits or credits;
    - **b.** Quantify the benefits on a jurisdictional basis, and explain what assumptions were used;
    - **c.** Explain the company's plan for capturing these benefits and passing the benefits to ratepayers;
    - **d.** Do you anticipate trading tax credits, how will the market work, and how will the benefits be returned to ratepayers?
10. Does the IRA require updates or changes to any existing utility plans or programs, or any existing laws, to ensure that its benefits are maximized?
    - **a.** Do any Minnesota laws, rules, or regulations adversely impact or inhibit your ability to access or utilize incentives or potential benefits created by the IRA? Could creation or modification of any Minnesota laws, rules, or regulations create additional opportunities to access benefits of the IRA?
    - **b.** Is there a need for state matching funds for any IRA programs and by what date are those funds required?

11. What impact, if any, do you anticipate from IRA funding on Commerce-administered existing programs such as Weatherization, Conservation Improvement Programs, and Energy Assistance Program?
12. What role do you envision for the PUC in enabling utilities to maximize the beneficial opportunities created by the IRA? How can the PUC best enable access to benefits created by the IRA?
13. Please provide copies of any information (including SEC disclosure filings) provided to shareholders and other stakeholders related to the effects of the 2022 Inflation Reduction Act.
14. Is there a need for any reporting requirements related to the IRA, and if so what should they include and how often should they be filed?

5. Missouri Public Service Commission[133]
On November 30, 2022, The Commission ordered a working group to create a repository of utility actions related to securing funding from the IIJA and IRA.
Utilities presented plans and proposals for IRA and IIJA funding on April 21, 2023.
On September 27, 2023, the Commission order utilities to file status reports explaining all attempts to obtain funding through the IIJA and IRA, the success in obtaining those funds, and plans to utilize those funds.
Specifically, each utility must provide the following:
1. The IOU's reason or plan for the funds requested; 2. The application's date; 3. The application's status; 4. The dollar amount requested; 5. If applicable, the dollar amount received; 6. Any future applications the IOU plans to pursue; and 7. What, if any, feedback or guidance each IOU is waiting for the federal government to provide.

[133] State of Missouri Public Service Commission, "In the Matter of a Working Case Regarding Utility Actions Related to Securing Funding from the Infrastructure Investment and Jobs Act of 2021 and the Inflation Reduction Act of 2022," Case No. AW-2023-0156, Order, November 30, 2022, available at: https://efis.psc.mo.gov/Document/Display/34216; State of Missouri Public Service Commission, "In the Matter of a Working Case Regarding Utility Actions Related to Securing Funding from the Infrastructure Investment and Jobs Act of 2021 and the Inflation Reduction Act of 2022," Case No. AW-2023-0156, Order, September 27, 2023, available at: https://efis.psc.mo.gov/Document/Display/756486.

6. The Public Utility Commission of Nevada[134]

On April 19, 2022, the PUC of Nevada opened an investigation on the funding available under the IIJA. On August 16, 2022 the investigation was expanded to include funding available under the IRA

By November 1, 2022, Southwest Gas, NV Energy, and any other interested parties, were ordered to file comments for the following topics:

1. The identification of all federal programs under the IRA that are available to Nevada public utilities to assist them in meeting their obligations under the NRS and the NAC;
2. The identification of actions that are reasonable and appropriate for Nevada's public utilities to take to access available federal funds;
3. The identification of the entities, public or private, with which Nevada public utilities should coordinate in order to access available federal funds;
4. The identification of the processes that have been either established or contemplated by other agencies of Nevada to access available federal funds; and
5. The identification of actions that may be appropriate for this Commission to consider taking to facilitate appropriate receipt and deployment of available federal funding within Nevada.

The Commission also asked these parties to provide comments on who will be responsible for researching this funding, what projects may be eligible for funding, and how many applications they have already submitted.

[134] Public Utilities Commission of Nevada, “Investigation regarding funding available under the Infrastructure Investments and Jobs Act and the Inflation Reduction Act of 2022,” Docket No. 22-04022, Procedural Order No. 3, August 30, 2022, available at: https://pucweb1.state.nv.us/PDF/AxImages/DOCKETS_2020_THRU_PRESENT/2022-4/20641.pdf.

7. North Dakota Public Service Commission[135]

On March 9, 2022, the North Dakota Public Service Commission ordered a request for comments on the IRA

The Commission stated, “it is in the public interest for North Dakota gas and electric investor-owned public utilities to fully consider opportunities that the IIJA may provide to promote safe, reliable, and affordable service.”

the Commission requested that utilities file initial written comments that identify the following:

1. Opportunities to capture benefits of IIJA financing, contracts, grants, loans, private-public partnerships, cooperative agreements;
2. Entities with which coordination may be necessary to access available funding, financing, and opportunities;
3. Current and anticipated coordination with State agencies to access available funding, financing, and opportunities;
4. Which actions are appropriate for North Dakota gas and electric investor-owned public utilities to take to access available funding, financing, and opportunities;
5. Actions that may be appropriate for this Commission to consider ensuring receipt and deployment of funding or financing for the benefit of the State or ratepayers; and
6. Other information or impacts that the Commission should be aware of because of the IIJA.

[135] State of North Dakota Public Service Commission, “Public Service Commission Infrastructure Investment and Jobs Act Investigation, Order Requesting Comment Regarding the Infrastructure Investment and Jobs Act,” Case No. PU-22-143, March 9, 2022, available at: https://www.psc.nd.gov/database/documents/22-0143/002-020.pdf.

8. North Carolina Utilities Commission[136]
The Commission issued an order for comments from Utilities on the IIJA on February 1, 2022
The Commission stated that it is in the public interest for the public utilities of the state to fully and carefully consider take advantage of federal grants and loans available in the IRA in order to "promote adequate, reliable, and economical utility service to the citizens and residents of the state."
The commission requested comments on the following: 1. The identification of all federal programs under the IIJA that are available to North Carolina public utilities to assist them in meeting their obligations under the North Carolina General Statutes and the Rules of the Commission; 2. The identification of actions that are reasonable and appropriate for North Carolina's public utilities to take to access those funds; 3. The identification of the entities, public or private, with which North Carolina public utilities should coordinate in order to access available federal funds; 4. The identification of the processes that have been either established or contemplated by other agencies of the State; 5. The identification of actions that may be appropriate for this Commission to consider taking in order to facilitate appropriate receipt and deployment of available federal funding within the State.

[136] State of North Carolina Utilities Commission, "In the Matter of Consideration of the Federal Funding Available Under the Infrastructure Investment and Jobs Act, Order Allowing Comments Regarding Federal Funding for Utility Service in North Carolina," Docket No. M-11, Sub 164, February 1, 2022, available at: https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=ee9659cf-dbd6-4ce6-b34f-e8073fcf744e.

9. South Carolina Public Service Commission[137]
In May 2022, the Commission opened a proceeding to investigate the IIJA and IRA funding available for utilities, requiring utilities to submit comments.
The Office of Regulatory Staff encouraged utilities to take reasonable and prudent actions to obtain federal funding under the act that reduces costs to customers and improves the provision of reliable and high-quality utility service.
Utilities recommended that the Commission direct the utilities to include information in future applications detailing how funds have been leveraged on behalf of customers.

[137] Public Service Commission of South Carolina, "Directive Order Establishing Procedural Schedule for Written Comments and Reply Comments," Docket No. 2022-168-A, Order No. 2022-412, June 9, 2022, available at https://dms.psc.sc.gov/Attachments/Matter/3f9d6c58-65f7-41c5-989c-7de70ef7cd2c.