PRACTICES STEERING COMMITTEE REPORT

This report summarizes key state commission actions and legislative developments during 2022.*

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* The Practices Steering Committee would like to recognize Traci Bone, Sylwia Dakowicz, Julia English, Lauren Evans, Amanda James, Lyle Larson, Joey Lee Miranda, Sandra Safro, and William Simmerson for their contributions to this report.
I. STATE COMMISSIONS

A. California

1. Electric Vehicle Submetering

On August 4, 2022, the California Public Utilities Commission (CA PUC) issued a decision (Rulemaking 18-12-006) adopting an electric vehicle submetering protocol and electric vehicle supply equipment communication protocols. Submetering allows electric vehicle customers to avoid installing a separate meter to measure the electricity use of their car. The order requires investor-owned “utilities to implement the submetering protocol for all customers with plug-in electric vehicles,” enabling special rate structures to apply to a customer’s vehicle charging load without the need for a separate meter to be installed.

In California, electric vehicles are subject to special rate structures, which permit more affordable electric vehicle charging to occur during off-peak hours. The decision allows owners in California of electric vehicles, as well as of electric buses and trucks, to avoid installing an additional meter to measure the electricity consumed by their vehicle.

2. Biomethane Standards

On February 24, 2022, the CA PUC issued order D.22-02.025, which set “biomethane (i.e., renewable natural gas and/or bio-synthetic natural gas) procurement targets for utilities to reduce short-lived climate pollutant emissions.” D.22-02-025 adopted short- and medium-term biomethane procurement targets for its four large investor-owned utilities (IOUs): Pacific Gas & Electric Company, Southern California Gas Company, San Diego Gas and Electric Company, and Southwest Gas Corporation. The biomethane procurement targets for the medium-term range will be an estimated twelve percent of core (residential and small business) gas customer demand in 2020, or approximately four percent of noncore (large commercial, industrial, cogeneration, utility electric generation, and wholesale customers) gas customer demand in 2020. Additionally, in D.22-02-025, the CA PUC committed to initiate a rate setting proceeding “to consider distributing above market biomethane procurement costs to noncore customers.”

2. Id. at 2.
3. Id.
4. Id. at 3.
7. Id. at 3.
8. Id. at 32, 34.
9. Id. at 71.
On December 21, 2022, the CA PUC issued an Order Instituting Rulemaking (OIR) to Address Biomethane Procurement Cost Allocation. The OIR states the CPUC plans “to consider cost allocation between core and noncore customer classes for biomethane procured under D.22-02-025.” The OIR states that comments on the OIR must be filed and served within 60 days of December 21, 2022.

3. Adoption of General Order 177 Relating to Construction of Gas Infrastructure

On December 8, 2022, the CA PUC issued a General Order (Appendix A to Decision 22-12-021) regarding long-term gas infrastructure planning, in its Rulemaking to Establish Policies, Processes, and Rules to Ensure Safe and Reliable Gas Systems in California and perform Long-Term Gas System Planning, docked as R.20-01-007 (GO 177).

GO 177 fills a regulatory gap by requiring “regulated gas corporations to file an application for a certificate of public convenience and necessity (CPCN) prior to commencing construction” for certain gas infrastructure projects. The new rule applies to projects that cost more than $75 million or that are located near specific areas and require certain air quality permits.

GO 177 also requires gas corporations to annually file a Report of Planned Gas Investments (Gas Reports), starting March 1, 2023. It also directs California’s three largest gas utilities to jointly convene a Planned Gas Investments Workshop in 2023, 2024, and 2025, and authorizes parties to file comments on those reports.

The Rulemaking remains open to address further issues.
4. Revisions to Net Metering Tariffs

On December 15, 2022, the CA PUC adopted Decision (D.) 22-12-056 revising its current net energy metering (NEM) tariff “to balance the multiple requirements of the Public Utilities Code and the needs of the electric grid, the environment, participating ratepayers, as well as all other ratepayers.”

The decision adopted on December 15, 2022 emphasizes California’s successful deployment of rooftop solar “resulting in the installation of over [twelve] gigawatts of clean distributed energy resources” while also recognizing the need for “changes [that] will help meet California’s climate goals and increase reliability, while promoting affordability across all income levels.” Voting in support of the new tariff, Commissioner John Reynolds explained:

Today’s decision will bring rooftop solar into a new and more sustainable age. NEM has left an incredible legacy and brought solar to hundreds of thousands of Californians, but it is also profoundly expensive for non-solar customers and was overdue for reform . . . . The future needs a solar program designed around the value of solar to the grid and one that encourages true carbon reductions at peak energy times, which is after the sun goes down, by creating better incentives for customers to pair solar with batteries. The Net Billing Tariff will sustain solar and reduce costs to non-solar customers while driving a new era of storage adoption.

B. Connecticut

In October 2019, in an Interim Decision in Docket No. 17-12-03, the Connecticut Public Utilities Regulatory Authority (CT PURA) voted to approve its plan to modernize the electric grid. The decision outlined the framework for investigating methods to achieve its goals. CT PURA identified eleven near-term topics to be investigated in three phases along with associated time frames: Energy Affordability, AMI, Electric Storage, Zero Emission Vehicles, Innovation Pilots, Interconnection Standards, Non-Wires Alternatives, Resilience and Reliability Standards and Programs, Distributed Energy Resources Analysis and Program Review and New Rate Designs.

In accordance with the Interim Decision in Docket No. 17-12-03, Docket 17-12-03RE08 was initiated on June 18, 2020 to examine Connecticut’s existing reliability and resilience programs and to develop frameworks to enhance the cost-benefit analysis of such programs.

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20. Id.
23. Id.
24. Id. at 6-7.
effectiveness of reliability and resilience investments moving forward, topics identified in the October 2019 Order. In this related docket, the CT PURA reviewed the electric distribution companies’ (EDC) emergency response plans (ERPs), incorporating key learnings from Tropical Storm Isaias. In the Docket 17-12-03RE08 Final Order, issued on August 31, 2022, the PURA established reliability and resilience frameworks by which the EDCs must plan and implement their reliability and resilience-based capital programs. The CT PURA directed the EDCs companies to develop programs in accordance with the frameworks and to submit them for approval by the CT PURA in the companies’ next general rate cases. It also reviewed the reports submitted by the electric distribution companies and found that line worker staffing levels must be considered in the context of an EDC’s reliability and resilience programming and decisions regarding line worker staffing increases must take place in each EDC’s next rate case. Last, the CT PURA directed revisions and plan modifications to the EDCs’ ERPs to reflect the updated storm performance standards via compliance filings and to comply with the statutory requirement to file an updated ERP every two years.

C. Hawaii

On April 18, 2018, the Hawaii Public Utilities Commission (HA PUC) “opened a proceeding to investigate performance-based regulation (PBR) for . . . Hawaiian electric companies . . . [including] a set of alternative regulatory mechanisms intended to focus utilities on performance and desired outcomes, such as increased renewable energy, lower cost, and improved customer service.”

The proceeding was divided into two phases, with Phase 1 focused on assessment and evaluation of the current regulatory framework in Hawaii, as well as identifying specific areas of utility performance that should be targeted for improvement. After having identified “areas of utility performance that should be improved, as well as metrics for measuring successful outcomes in those areas,” Phase 2 explored and developed new PBR frameworks, including performance incentives, to further enhance the alignment between the utilities’ financial interests and those of customers.

25. PURA Investigation into Distribution System Planning of the Electric Distribution Companies - Resilience and Reliability Standards and Programs, PUB. UTIL. REGUL. AUTH., Docket No. 17-12-03RE08 (Aug. 31, 2022).
26. Id. at 2.
27. Id.
28. Id. at 94.
29. PURA Investigation into Distribution System Planning of the Electric Distribution Companies - Resilience and Reliability Standards and Programs, supra note 25, at 94-95.
30. Id. at 2.
32. Instituting a Proceeding to Investigate Performance-Based Regulation, HAW. PUB. UTIL. COMM’N, Order No. 35411 (Apr. 18, 2018).
33. Id. at 55.
In its order issued June 17, 2022, in Docket No. 2018-0088, under Phase 2 of its proceeding, in its Decision and Order No. 38429, the HA PUC approved a suite of additional performance mechanisms. Specifically, it approved (1) a new Performance Incentive Mechanism (‘PIM’) to incentivize maintenance of reliable service associated with generation-based disruptions; (2) a new PIM to incentivize the timely completion of the interconnection requirements study (‘IRS’) process for large-scale renewable energy projects; (3) a new Shared Savings Mechanism (‘SSM’) to incentivize cost control over the Companies’ fossil fuel, purchased power, and Exceptional Project Recovery Mechanisms (‘EPRM’) costs . . . and (4) a modification and extension of the interim Grid Services PIM through December 31, 2023.

In its Order, the HA PUC directed the electric companies to prepare and submit a detailed fossil fuel retirement report outlining necessary steps to safely and reliably retire Waiau Units 3 & 4 and the Kahului Power Plant, as well as other potential plant and a functional integration plan for Distributed Energy Resources (DER) to increase transparency into the companies’ plans and progress for utilizing cost-effective grid services from DERs and ensure that the necessary functionalities and requisite technologies are in place to do so, to be filed in the DER docket. HA PUC also instructed the Performance Based Regulation (PBR) Working Group (Working Group) to continue collaborating on a number of issues prioritized by the Commission. Additionally, HA PUC ordered the electric companies to prepare, “review with the Consumer Advocate and Working Group . . . and present the Commission example worksheets consistent with the proposed tariffs that explain and demonstrate the calculation of the CSSM [Conjunctive Shared Savings Mechanism] parameters, including an example of an CSSM filing.” The Commission also noted that “the Working Group shall continue to serve ‘as a forum during the [Multi-Year Rate Period] to continuously introduce, examine and vet new [PBR] proposals, as well as explore modifications to existing PIMs.’”

D. Minnesota

The Natural Gas Innovation Act (NGIA), or “a bipartisan component of the Omnibus commerce, climate, and energy policy and finance bill at the Minnesota legislature . . . was signed into law by [Minnesota] Governor Walz on June 26, 2021.” The NGIA established methods to allow natural gas utilities to meet

34. Instituting a Proceeding to Investigate Performance-Based Regulation, HAW. PUB. UTIL. COMM’N, Order No. 38429 (June 17, 2022).
35. Id. at 2.
36. Id. at 22-23.
37. Id. at 71-72.
38. Instituting a Proceeding to Investigate Performance-Based Regulation, supra note 34, at 68.
39. Id. at 68.
Minnesota’s greenhouse gas (GHG) reduction and energy goals through innovative resources and plans. Innovative resources may include biogas, renewable natural gas, power-to-hydrogen, power-to-ammonia, carbon capture, strategic electrification, district energy and energy efficiency.\(^{42}\)

NGIA directed the Minnesota Public Service Commission (MN PSC), by June 1, 2022, to establish frameworks for (1) comparing the lifecycle GHG emissions intensities of innovative resources, and (2) cost-benefit analysis to compare the cost effectiveness of innovative resources and of innovation plans that natural gas utilities file, as well as reporting requirements.\(^{43}\) As specified in its Order issued on January 27, 2022, the MN PSC “encourage[d] CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Minnesota Gas” (CenterPoint) to continue working with its consultant and an independent neutral facilitator “to engage stakeholders in developing” frameworks for emissions intensity accounting and cost-benefit analysis.\(^{45}\) The MN PSC ordered CenterPoint and any other interested entities to file proposed frameworks by January 30, 2022.\(^{46}\) In early June 2022, the MN PSC implemented the first phase of NGIA.\(^{47}\) As part of its decision, the MN PSC approved frameworks that will be used to both analyze the lifecycle GHG intensity and allow for cost-benefit accounting to compare innovative resources and measure the cost-effectiveness of natural gas utilities’ innovation plans.\(^{48}\)

In its decision, the MN PSC adopted the methodology developed by Xcel Energy and supported a group of Joint Commenters\(^ {49}\) “for calculating the lifecycle [GHG] emissions intensity of electricity for strategic electrification.”\(^ {50}\) The Xcel methodology proposed the use of a blended generation mix which a gas utility could then run through a modeling tool to determine GHG emissions intensity, and

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43. Id.
44. Calendar of Upcoming Meetings and Events, MINN. PUB. UTIL. COMM’n (Nov. 18, 2021), https://mn.gov/puc/about-us/calendar/.
46. Id. at 4.
47. Id.
48. Id.
49. Id. at 9. The Joint Commenters are CenterPoint, CEE, Fresh Energy, Local 49, LIUNA, MERC, RNG Coalition, and Xcel. Id. at 2.
50. Id. at 9.
incorporate hourly data into its proxy blend. The MN PSC stated that the “proposed methodology offer[ed] a balanced approach to satisfying the statute’s policy goals and encouraging utilities to develop innovation plans.” The Commission further noted that “the proxy blend concept averages complex hourly data on the generation sources . . . serving added electrification load over [twenty] years distill[ing] it into a simple blend factor that gas utilities can run through the . . . model with little added administrative burden.” While the MN PSC noted that “complex modeling is needed to derive an appropriate blend factor, the result is a straightforward factor that is immediately available for use by any gas utility seeking to file an innovation plan.” The MN PSC further noted that “[t]he adoption of a clear, easy-to-use framework should encourage broader utility participation in voluntary NGIA programs, expanding opportunities to advance the state’s energy and climate goals.” Last, the MN PSC noted that it will now focus on the second phase of the NGIA, evaluating regulatory and policy changes needed to meet or exceed the state’s GHG emission reduction goals. Public input will be sought as the process moves forward.

E. Oklahoma

Due to record cold temperatures in February 2021, Public Service Company of Oklahoma (PSO) incurred extraordinary natural gas costs. In response, the Oklahoma legislature passed the Regulated Utility Consumer Protection Act (OK Act) to try to reduce the impact to ratepayers. The OK Act authorized the Oklahoma Development Finance Authority to file an application with the Supreme Court of Oklahoma “for approval of ratepayer-backed bonds” to finance the recovery of fuel costs incurred by PSO during the February 2021 weather event. In evaluating whether to approve the bonds, the only issues before the court were whether the bonds were: (a) properly authorized under the applicable law and (b) constitutional. The court found that the bonds were issued in accordance with the OK Act and were constitutional. Based on this, the court approved the bonds.

51. Id.
53. Id.
54. Id.
55. Id.
57. Id. at 16.
59. OKLA. STAT. ANN. TIT. 74, § 9070 (2021); In the Matter of Oklahoma Dev. Fin. Auth., 511 P.3d 1048.
61. OKLA. STAT. ANN. TIT. 74, § 9079.
63. Id. at 1051.
64. Id.
F. Texas

1. Emergency Weather Preparedness

On September 29, 2022, the Public Utility Commission of Texas (TX PUC) adopted a proposal from its staff that requires generation entities and transmission providers in Electric Reliability Council of Texas (ERCOT) to maintain preparation standards for winter and summer weather and to submit related preparedness declarations. This new rule represents the second phase of the two phases in the [TX PUC’s] development of robust weather emergency preparedness reliability standards [after Winter Storm Uri] to ensure that the electric industry is prepared to provide continuously reliable electric service. . . . The new rule requires ERCOT to conduct on-site inspections of every generation resource and transmission facility in [its] region. Additionally, the new rule requires new utilities who do not comply with weatherization preparedness standards to undergo an independent assessment by a qualified professional engineer.

Any entity that fails to comply with the requirements of this rule may be subject to a commission enforcement action resulting in a publicly available order imposing administrative penalties.

This new rule implements Senate Bill 3 §13 and §16 from the 87th Regular Session of the Texas Legislature, which amended Public Utility Regulatory Act (PURA) §35.0021 relating to Emergency Weather Preparedness and §38.075 relating to Emergency Weather Preparedness.

The effective date “is January 1, 2023, for all weatherization requirements or if the requirements are seasonally based,” the effective date “for summer preparedness” is June 1, 2023 “and December 1, 2023 for winter preparedness.”

The TX PUC also clarified several stakeholder concerns regarding the Phase I rule including: design limitations and warranties of equipment, ambient temperature requirements, and requirements for blackstart generation resources and transmission assets.

2. Sovereign Immunity

On September 2, 2022, the Texas Supreme Court granted the petitions for review addressing ERCOT and its operation of the electric grid in Texas in *Panda Power Generation Infrastructure Fund, LLC v. Elec. Reliability Council of Texas*,

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66. Order Repealing 16 TAC §25.55 and Adopting New 16 TAC §25.55, As Approved At the September 29, 2022, Open Meeting, supra note 65, at 1, 4.
67. Id. at 5.
68. Id. at 13, 90, 92.
The primary issue in this case was whether ERCOT was entitled to sovereign immunity in the suit over alleged false electric market report data.\(^{69}\)

Panda Power relied on ERCOT’s predictions for state capacity shortfall and demand for energy when it decided to construct and invest $2.2 billion in new power plants.\(^{71}\) ERCOT later revised its predictions to indicate an excess of energy instead of shortfall.\(^{72}\) Panda Power sued ERCOT for “fraud, negligent misrepresentations, and breach of fiduciary duty.”\(^{73}\) ERCOT filed a plea to the jurisdiction arguing that the TX PUC had exclusive jurisdiction over Panda Power’s claims and asserting governmental immunity.\(^{74}\) The trial court denied the plea.\(^{75}\) ERCOT appealed and filed a mandamus petition.\(^{76}\) The Court of Appeals reversed.\(^{77}\) Panda Power filed a mandamus petition in the state Supreme Court, and ERCOT filed a conditional petition for review.\(^{78}\)

Meanwhile, Panda Power also filed another petition for review in the court of appeals, which abated pending the state Supreme Court’s decision.\(^{79}\) But because of that appeal, the state Supreme Court dismissed both petitions before it as procedurally moot.\(^{80}\) The court of appeals reinstated Panda Power’s appeal and held, in an \textit{en banc} opinion, that ERCOT is not entitled to governmental immunity and that the TX PUC does not have exclusive jurisdiction over Panda Power’s claims.\(^{81}\) ERCOT again petitioned the Texas Supreme Court for review.\(^{82}\) The Court granted ERCOT’s petition and set oral argument for January 9, 2023.\(^{83}\)

\textbf{G. Virginia}\n
Appalachian Voices appealed an order of the Virginia State Corporation Commission (VA SCC) that approved a petition by Virginia Electric and Power Company (VEPCO) for a rate adjustment to recover projected costs of purchasing Regional Greenhouse Gas Initiative (RGGI) allowances.\(^{84}\) Appalachian Voices

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\(^{70}\) \textit{Id.} at 903.

\(^{71}\) \textit{Id.} at 902.

\(^{72}\) \textit{Id.}

\(^{73}\) \textit{Panda Power Generation Infrastructure Fund, LLC,} 641 S.W.3d at 902.

\(^{74}\) \textit{Id.}

\(^{75}\) \textit{Id.}

\(^{76}\) \textit{Id.}

\(^{77}\) \textit{Panda Power Generation Infrastructure Fund, LLC,} 641 S.W.3d at 894.


\(^{79}\) \textit{Id.} at 646.

\(^{80}\) \textit{Id.} at 637.

\(^{81}\) \textit{Panda Power Generation Infrastructure Fund, LLC,} 641 S.W.3d at 899.


claimed that applicable law \(^{85}\) required the VA SCC to find that VEPCO’s costs were necessary, but the SCC failed to do so. \(^{86}\) Specifically, Appalachian Voices asserted that, because the VA SCC did not require VEPCO to study and actually plan to reduce its carbon dioxide (CO\(_2\)) emissions, the VA SCC did not apply the correct standard of necessity. \(^{87}\) The Virginia Supreme Court disagreed holding that, under the statute at issue, “[i]t is . . . the necessity to comply with applicable laws or regulations that matters.” \(^{88}\) Based on this, the Virginia Supreme Court concluded that, because Virginia Department of Environmental Quality regulations \(^{89}\) required VEPCO to incur the costs of purchasing CO\(_2\) allowances, the costs of those CO\(_2\) allowances were necessary. \(^{90}\)

II. LEGISLATIVE REPORT

A. Federal

1. Inflation Reduction Act of 2022

On August 16, 2022, President Biden signed into law the “Inflation Reduction Act of 2022” (IRA), addressing a wide array of issues of interest to energy lawyers. \(^{91}\) The IRA includes a variety of clean energy provisions to accelerate development of clean energy technologies, and support continuing transition of the United States’ energy economy toward zero or low emission electricity supply. Some of the most significant attributes of the IRA include restoring the renewal energy projects production tax credit and investment tax credit (ITC) to their original levels, adopting a two-tiered approach to the existing renewable energy credit scheme, linking certain incremental tax credits for renewable projects made in North America requirements, extending the beginning of construction deadline for certain carbon capture facilities to qualify for enhanced credits, and giving tax payers alternative methods to monetize their credits, to permit cash in lieu of credit and allowing the sale of tax credits to third parties (i.e., Direct Pay and Transferability). \(^{92}\) The IRA also provides a new two-tier, inflation-adjusted ten-year Production Tax Credit (PTC) for clean hydrogen produced after 2022 at a qualifying facility that must begin construction before 2033. \(^{93}\) It also provides new tax credits for manufacturers of solar and wind components made in the United States, stand-

\(^{85}\) VA. CODE ANN. § 56-585.1 (West 2021) (requiring the SCC to determine whether the utility’s costs are “necessary to comply with such environmental laws or regulations”).

\(^{86}\) Appalachian Voices, 879 S.E.2d at 37.

\(^{87}\) Id.

\(^{88}\) Id. at 38.


\(^{90}\) Appalachian Voices, 879 S.E.2d at 38.


\(^{92}\) Id.

alone storage facilities, and other emerging clean fuel technologies, such as hydrogen and sustainable aviation fuel.94

This summary focuses on some of the more notable tax credit, clean energy, and environmental provisions included in the IRA.

**Energy Security**

- Extends the PTC for certain projects, such as wind, hydropower, geothermal and biomass) and revives the credit for solar facilities.95
  The credit available for projects that began construction before January 1, 2022, is restored to pre-phase-out levels and would be extended to certain projects that commence construction before January 1, 2025.96
- Extends the ITC for the cost of energy property to include energy storage technology, biogas property, micro grid controllers, dynamic glass, and linear generators.97
- Amends the ITC by providing additional credits for certain solar and wind generation facilities located in low-income communities or Indian lands, or are part of certain low-income residential building projects or low-income economic benefit projects.98
- Extends the beginning of construction date for carbon capture facilities to qualify for PTC through the end of 2032 and including significantly increased credits.99
- Extends a new zero-emission nuclear power PTC to facilities already in service starting in 2024 and ending after 2032.100

**Clean Fuels**

- Creates/extends various renewable fuel tax credits, including for biodiesel, renewable diesel, alternative fuels and fuel mixtures, second generation biofuel, sustainable aviation fuel, and low emissions transmission fuel.101
- Establishes new tax credits for clean hydrogen production.102

**Clean Energy Efficiency Incentives for Individuals**

- It extends through 2032, and expands the scope of, direct to consumer energy property tax credits for making certain home improvements or installing appliances designed to boost energy efficiency.103 Among other things, the IRA includes the following interesting items: (a) individuals receive a credit for thirty percent

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94. **Id.**
95. Inflation Reduction Act of 2022, § 13101.
96. **Id.** § 13102.
97. **Id.** § 13102.
98. **Id.** § 13103.
100. **Id.** § 13105.
101. **Id.** §§ 13201-03.
102. **Id.** § 13204.
103. **Id.** § 13301.
of all costs associated with qualified energy efficiency improvements installed, or residential energy property expenditures incurred, during a tax year (subject to delineated annual caps); (b) expansion of qualified energy property eligible for the tax credit to include: (i) electric or natural gas heat pump water heaters, electric or natural gas heat pumps, central air conditioners, natural gas, propane or water heaters, or natural gas, propane, or oil furnace or hot water boilers, all of which must meet or exceed the highest efficiency tier set by the Consortium for Energy Efficiency; (ii) biomass stoves or boilers with thermal efficiency ratings or at least seventy-five percent; (iii) oil furnaces or hot water boilers that meet specified criteria based on when they are placed into service; (iv) improvements to, or replacements of, panelboards, sub-panelboards, branch circuits, or feeders that meet specified criteria and are installed in conjunction with qualified energy efficiency improvements or specific qualified energy property; and (v) costs incurred by a taxpayer for home energy audits also are eligible for the credit, subject to a $150 annual limit. The Residential Clean Energy Credit is also extended for solar, small wind, fuel cell, geothermal, and biomass, as well as a noteworthy expansion of eligibility to include standalone battery storage. Further, the IRA extends and revises tax deductions for installation of qualifying energy efficient systems in commercial buildings. It also extends, increases and modifies tax credits for eligible contractors that construct qualified new energy efficient homes.

Clean Vehicles

- Modifies the Clean Vehicle Credit, which provides a consumer tax credit for new Electric Vehicles (EVs), including plug-in hybrids, in use before 2033, subject to various income thresholds. To earn a credit, an EV must be assembled in North America, and the minerals and other key battery components must be sourced primarily in North America.

- Creates the Previously Owned Clean Vehicles Credit, which provides a tax credit of up to $4,000 for used EVs that are at least two years old and are sold before December 31, 2032. There is a maximum sale price of $25,000 with income eligibility limits of $75,000 or $150,000 for joint filers.
• Creates the Qualified Commercial Clean Vehicles Credit, providing a tax credit up to $7,500 for qualified commercial clean vehicles sold before December 31, 2032.112

• Modifies and extends the Alternative Fuel Refueling Property Credit, which is a tax credit for alternative fuel refueling property (such as EV chargers) to property placed in service before December 31, 2032.113 The tax credit is increased to 30% of the cost of alternative fuel refueling property up to $100,000.114

Clean Energy Manufacturing and Energy Security

• Modifies and extends the Advanced Energy Project Credit, which involves a tax credit for projects that expand or equip manufacturing facilities that make specified renewable energy equipment, including wind, solar and geothermal property, fuel cells, microgrids, and carbon capture and sequestration property.115 The credit would be expanded to include industrial facilities and those that manufacture energy storage systems and components, electric grid modernization equipment or components, electric and hybrid vehicles, property used to produce energy conservation technologies, and equipment that re-equips a manufacturing facility with equipment designed to reduce greenhouse emissions by at least twenty percent.116

• Creates the Advanced Manufacturing Production Credit, which provides a tax credit for production of certain eligible components produced by the taxpayer and sold to an unrelated person after December 31, 2022.117 Eligible components include photovoltaic cells and wafers, solar grade polysilicon, polymeric backsheets, solar modules, wind energy components, torque tubes, structural fasteners, electrode active materials, battery cells, battery modules, and certain critical minerals.118

Incentives for Clean Electricity and Clean Transportation

• Clean Electricity Production Credit created to establish a tax credit for producing zero carbon emission electricity sold to an unrelated person or sold, consumed or stored by the taxpayer so long as the facility is equipped with a metering device owned and operated by an unrelated person.119

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112. Id. § 13403.
114. Id. § 13404.
115. Id. § 13501; 26 U.S.C. § 48(C).
118. Inflation Reduction Act § 13502.
119. Id. § 13701.
PTC replaces the Renewable Electricity Production Tax Credit once it phases out at the end of 2024.\textsuperscript{120} The new credits will phase out the latest of 2032 or when emissions targets are achieved and the credits can be Direct Pay and have Transferability.\textsuperscript{121}

- Clean Electricity Investment Credit created to establish a tax credit for qualified investments in zero-carbon emission electric generating facility or energy storage property placed into service after December 31, 2024.\textsuperscript{122} This is considered a technology neutral ITC that replaces the existing investment tax credit regime. It may be noted also that clean electricity projects smaller than 5 MWs can include the costs of interconnection in the ITC.\textsuperscript{123}

- Creates a new, technology neutral 2-year tax credit for low-carbon transportation fuels other than hydrogen, called the Clean Fuel Production Credit.\textsuperscript{124} There is a maximum credit of $1.25 per gallon or $1.75 per gallon for sustainable aviation fuel, multiplied by an emissions factor, which is calculated based on the maximum emission rate standard and using the U.S. Department of Energy Greenhouse gases, Regulated Emissions, and Energy use in Technology (GREET) model for emission rate calculations.\textsuperscript{125} This provision provides a tax credit for the production of low-emission transmission fuel other than hydrogen produced at a qualified facility after December 31, 2024 and sold before December 31, 2027.\textsuperscript{126}

Credit Monetization and Appropriations

- Establishes guidelines for claiming, processing, and transferring available tax credits, including for alternative fuel vehicle refueling, carbon oxide sequestration, and zero-emission nuclear power.\textsuperscript{127}

Rural Electrification

- Provides $1 billion in funding under the Rural Electrification Act of 1936 to underwrite loans for electricity storage projects.\textsuperscript{128}

- Provides over $1 billion in grant funding for projects under section 9007 of the Farm Security and Rural Invest Act of 2002, related to underutilized renewable energy technologies.\textsuperscript{129}

\begin{thebibliography}{99}
\bibitem{183} Inflation Reduction Act of 2022 §§ 13701, 13703.
\bibitem{184} Id. § 13702.
\bibitem{185} Id. §§ 13702-03.
\bibitem{186} Id. § 13704.
\bibitem{187} Id. §§ 13801-02.
\bibitem{188} Id. § 22001.
\bibitem{189} Id. § 22002.
\end{thebibliography}
• Provides nearly $10 billion in funding for rural electric cooperatives to purchase renewable energy and renewable energy systems, zero-emission systems, carbon capture and storage systems, and to deploy those systems and make energy efficiency improvements to electric generation and transmission systems.130

Efficiency & Emissions
• Provides funding for projects that improve energy or water efficiency, indoor air quality or sustainability, implement use of low-emission technologies, materials or processes, including zero-emission power generation, storage or building electrification, or otherwise address climate resilience for certain eligible low-income housing.131

Residential Efficiency and Electrification Rebates
• Provides over $4 billion to fund grants to state energy offices to develop and implement a home energy rebate program to incent home energy efficiency retrofits.132 The rebates are available to contractors, home owners, aggregations of home owners, multifamily building owners and aggregators, including provisions specific to low or moderate income households or multifamily buildings.133
• Provides funding to states and Native American tribes for the development and implementation of a high-efficiency electric home rebate program, to include rebates for efficiency upgrades.134 The program incorporates income-based thresholds and requirements.135
• Provides $200 million to states for training programs to educate contractors involved in home energy efficiency and electrification improvement installations.136

Building Efficiency and Resilience
• Provides $1 billion in funding for grants to states and local governments to adopt building energy codes, including allocations for programs that target residential and commercial buildings that meet or exceed zero energy provisions in the 2021 International Energy Conservation Code.137

130. Inflation Reduction Act of 2022 § 22004.
131. Id. § 30002.
132. Id. § 50121.
133. Id.
135. Id.
136. Id. § 50123.
137. Id. § 50131.
DOE Loan and Grant Programs

- Provides funding for DOE Loan Programs Office earmarked for projects under the Energy Policy Act of 2005 and for the Tribe Energy Loan Guarantee Program.\textsuperscript{138}
- Provides funding for energy infrastructure reinvestment financing under the Energy Policy Act of 2005, and amends section 1706 thereof to include refinancing for projects that “(1) retool, repower, repurpose, or replace energy infrastructure that has ceased operations; or (2) enable operating energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emission of greenhouse gases.”\textsuperscript{139}

Electric Transmission

- Provides funding for direct loans to non-federal borrowers for constructing or modifying electric transmission facilities under section 216(a) of the Federal Power Act.\textsuperscript{140}
- Provides over $750 million for grants to siting authorities for covered transmission projects, as well as grants to siting authorities, state, local, or Tribal governments for economic development activities for communities affected by construction and operation of covered transmission projects.\textsuperscript{141}
- Provides $100 million for expenses relating to interregional transmission planning, modeling, and analysis for electricity generated by offshore wind.\textsuperscript{142}

Greenhouse Gas & Clean Air Act

- Provides funding for eligible recipients and eligible contractors to replace heavy-duty vehicles with zero-emission vehicles and associated costs.\textsuperscript{143}
- Adds a new section to the Clean Air Act and providing $27 billion in funding to establish a Greenhouse Gas Reduction Fund.\textsuperscript{144} The money would be used to provide grants to states, municipalities, Tribal governments and other not-for-profit entities to enable low-income and disadvantaged communities to deploy or benefit from zero-emission technology.\textsuperscript{145} The funds would also support qualified projects, which reduce greenhouse gas emissions and other

\textsuperscript{138} Inflation Reduction Act of 2022 §§ 50141, 50145.
\textsuperscript{139} Id. § 50144.
\textsuperscript{140} Id. § 50151.
\textsuperscript{141} Id. § 50152.
\textsuperscript{142} Inflation Reduction Act of 2022 § 50153.
\textsuperscript{143} Id. § 60101.
\textsuperscript{144} Id. § 60113.
\textsuperscript{145} Id.
forms of air pollution in partnership with or by leveraging investment from the private sector to assist communities to reduce greenhouse gas and other emissions.\textsuperscript{146}  
- Provides state funding for adoption and implementation of new greenhouse gas and zero-emission standards for mobile sources under section 177 of the Clean Air Act which allows states to adopt new motor vehicle emissions standards that are identical to those adopted in California.\textsuperscript{147}  
- Provides funding to support standardization and transparency of climate commitments and plans to reduce greenhouse gas emissions and transparency around progress toward meeting those commitments.\textsuperscript{148}  
- Adds a new provision to the Clean Air Act to provide $850 million in funding to EPA for grants, rebates, contractors, and loans for financial and technical assistance to owners and operators of facilities to prepare and submit greenhouse gas reports and for methane emission monitoring.\textsuperscript{149}  
- Adds a new section to the Clean Air Act providing $5 billion for developing greenhouse gas air pollution plans and associated grants.\textsuperscript{150} Also provides $250 million for development and $4.75 billion for implementing the plans.\textsuperscript{151} EPA is directed to make a grant to at least one eligible entity in each state to cover the costs of developing a greenhouse gas reduction plan that features programs, policies, measures, and projects that will achieve greenhouse gas reductions.\textsuperscript{152}  

\section*{B. States}

\subsection*{1. Alabama}

Alabama law already prohibits and prescribes penalties for unauthorized entry into critical infrastructure facilities, including electric power generation facilities and surrounding areas, electricity transmission and distribution system facilities and control centers, communications equipment, switching stations, water intake and treatment facilities and structures, LNG terminal and storage facilities, natural gas transmission compressor stations.\textsuperscript{153} Enacted in 2022, Alabama Senate Bill 17 adds pipelines and mines to those facilities that are already protected.\textsuperscript{154}

\begin{thebibliography}{99}
\bibitem{146}Inflation Reduction Act of 2022 § 60103.
\bibitem{147}Id. § 60107.
\bibitem{148}Id. § 60111.
\bibitem{149}Id. § 60113.
\bibitem{150}Inflation Reduction Act of 2022 § 60114.
\bibitem{151}Id.
\bibitem{152}Id. § 60114.
\bibitem{153}ALA. CODE § 13A-7-4.3 (2022).
\bibitem{154}Id.
\end{thebibliography}
The law also adds an enhanced penalty for when a critical infrastructure facility is entered with an unmanned aircraft (drone) and enhances the penalties for certain violations (including but not limited to drones).\footnote{Alabama’s prohibitions and penalties relating to critical infrastructure are set forth in section 13A-7-4.3 of the Code of Alabama.}

2. Alaska

On June 15, 2022, the Governor of Alaska signed into law House Bill 3, amending the Alaska Disaster Act to include cyberattacks or imminent threats of cyberattacks to critical infrastructure or state information systems in the definition of disaster.\footnote{ALASKA STAT. \textsection 26.23.900(2)(F) (2022).} Significantly, the amendment’s definition of critical infrastructure is not limited to state owned assets, but includes both physical and virtual assets “so vital to the state that the incapacity or destruction of the systems and assets would have a debilitating effect on security, state economic security, state public health or safety, or any combination of those matters.”\footnote{Id. at (2)(F)(i).} Under a declared emergency, funding and emergency response options are available to address such attacks.\footnote{ALASKA STAT. \textsection 26.23.020 (2022).}

3. California

The California Legislature passed several energy-related bills on the last day of the 2021-2022 session, including two bills adopting new climate goals, a bill creating the framework for development of carbon capture and carbon removal projects, and another extending the life of Pacific Gas and Electric Company’s Diablo Canyon nuclear power plant for an additional five years.\footnote{The California Climate Crisis Act, A.B. 1279, 2021-2022 Gen. Assemb., Reg. Sess. (Cal. 2022); see also S.B. 905, 2021-2022 Gen. Assemb., Reg. Sess. (Cal. 2022).}

Assembly Bill 1279\footnote{Cal. A.B. 1279.} requires California to achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative greenhouse gas (GHG) emissions thereafter. It also requires that statewide anthropogenic GHG emissions be reduced to at least eighty-five percent below 1990 levels.\footnote{Id.} Existing law sought to reduce statewide greenhouse gas emissions to forty percent below the 1990 level by 2030.\footnote{Id.}

The operation of AB 1279 was contingent upon the adoption of Senate Bill 905,\footnote{Id.} which requires the California Air Resources Board (CARB) to create a carbon capture, removal, utilization, and storage program to evaluate the efficacy, safety, and viability of carbon capture and carbon dioxide removal technologies,
and to “facilitate the capture and sequestration of carbon dioxide from those technologies, where appropriate.”165 The bill authorizes CARB to require changes in operations of the projects “to ensure public and environmental health and safety if the monitoring and reporting detects increased seismicity or carbon dioxide leakage outside the geologic storage reservoir”166 and requires that all such activities be carried out in a way that seeks to, among other things, reduce greenhouse gas emissions and reduce fossil fuel in the state.166

Consistent with the AB 1279 goal of net zero GHG emissions by 2044, Senate Bill 1020167 adds interim targets to require renewable energy and zero-carbon resources to supply ninety percent of all retail electricity sales by 2035 and ninety-five percent of all retail electricity sales by 2040. These interim targets are intended to ensure that the state makes steady and accountable progress towards the full decarbonization of California’s electricity grid.168

The Legislature also passed Senate Bill 846169 to extend the life of the Diablo Canyon nuclear power plant, which supplies nearly ten percent of the state’s electricity. Diablo Canyon’s two nuclear reactors were scheduled to close in 2024 and 2025.170 SB 846 delays this timeline by five years, to 2029 and 2030, by enabling the United States Nuclear Regulatory Commission and any other state and federal authorities to renew the operator’s license for an additional five years.171

4. Idaho

On March 25, 2022, the Governor of Idaho signed into law Senate Bill 1321, which provides specific penalties for any person who commits a battery or other certain specified crimes against public or emergency personnel in the state.172 Such covered personal include employees of a jurisdictional public utility, including employees of a consumer-owned utility, where the perpetrator knows or has reason to know of the victim’s status.173 The law includes specific penalties, which, in some cases, are double what is otherwise provided under the law for such crimes.174

5. Massachusetts

Massachusetts lawmakers enacted House Bill 5060 (H. 5060) in August 2022, which requires utilities to develop electric sector modernization plans.175

166. Id.
168. Id.
170. Id.
171. Id.
173. Id.
174. Id.
Electric companies are required to use a five-year forecast, a ten-year forecast, and a demand assessment through 2050. The modernization plans are intended to proactively upgrade the distribution and transmission systems to: (i) improve grid reliability, communications and resiliency; (ii) enable increased, timely adoption of renewable energy and distributed energy resources; (iii) promote energy storage and electrification technologies necessary to decarbonize the environment and economy; (iv) prepare for future climate-driven impacts on the transmission and distribution systems; (v) accommodate increased transportation electrification, increased building electrification and other potential future demands on distribution and, where applicable, transmission systems; and (vi) minimize or mitigate impacts on the rate-payers, thereby helping Massachusetts realize its statewide greenhouse gas emissions limits and sublimits.

The plans should include “improvements to the electric distribution system to increase reliability and [to] strengthen . . . resiliency [for] potential weather” and/or disaster-related events, the availability of new technologies, distributed energy resource adoption forecasts, enable customers have access to renewable energy resources, and improvements that will facilitate transportation or building electrification. Plans should also include “improvements to the transmission or distribution system” to facilitate statewide greenhouse gas emissions, “opportunities to deploy energy storage technologies . . . alternatives to proposed investments,” and alternatives to financing the proposed investments.

Electric companies are required to solicit input from the Grid Modernization Advisory Council (also created by H. 5060), as well as work with the Council to inform the public of the plans. First plans are due to the Grid Modernization Advisory Council by April 1, 2023, and thereafter once every five years.

The Grid Modernization Advisory Council will “consist of the commissioner of energy resources or a designee; . . . the attorney general or a designee; the commissioner of environmental protection or a designee; [and] thirteen members to be appointed by the governor.” Members shall serve for terms of five years and may be reappointed. The council will “review and provide recommendations on the electric-sector modernization plans . . . that maximize net customer benefits and demonstrate cost-effective investments in the . . . grid.”

6. New Jersey

In 2022, the New Jersey state legislature pursued a bill that focuses on nuclear facility protection and would make it a third-degree crime to trespass at the site of

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176. Id.
177. Id.
178. Id.
180. Id.
181. Id.
182. Id.
184. Id.
a nuclear plant, which carries higher penalties than trespassing on other critical infrastructure or utility-owned properties.\footnote{185}

N.J.S.2C:18-3 concerns unlicensed entry.\footnote{186} Pending legislation Assembly Bill 717 would amend this statute to enhance protections for physical infrastructure and increase associated penalties for trespassing.\footnote{187} This bill increases the penalty for trespassing offenses that are committed in a nuclear electric generating plant.\footnote{188} Under current law, trespassing in a nuclear electric generating plant is a crime of the fourth degree, which is punishable by a fine of up to $10,000, imprisonment for up to eighteen months, or both.\footnote{189} Under this bill, trespassing in a nuclear electric generating facility would be a crime of the third degree, punishable by a fine of up to $15,000, imprisonment for three to five years, or both.\footnote{190}

The affirmative defenses to prosecution are that the structure was abandoned, it was open to the public and the actor conformed to all the laws pertaining to the structure, or the person reasonably believed they were empowered to enter the facility by someone with the power to authorize entry.\footnote{191}

7. New York

In December 2022, Governor Hochul signed legislation which is designed to protect against cyber security threats to New York state’s electric grid.\footnote{192} The law provides safeguards for local distribution systems and empowers the Division of Homeland Security and Emergency Services to work with private entities as well as local, state, and federal agencies to assess cybersecurity vulnerabilities of critical infrastructure.\footnote{193} The law also provides enhanced auditing authority for the state public utility commission relating to cyber security policies, protocols, procedures and protections and industrial control systems.\footnote{194} The commission can elect to have such audits performed by its staff or by an independent third party.\footnote{195} All electric corporations will be required to submit an annual report for review and approval discussing the plan for an emergency event, including cyber-attacks, that cause widespread power outages.\footnote{196} These plans must include: (1) the staff responsible for company operations, (2) plans on how communication with customers will take place, (3) outreach plans for clients who need electricity for medical needs, (4) identification and outreach plans for clients with essential transportation or telecommunication needs, (5) the staff who will communicate with officials (6)
how the company will ensure the safety of staff, (7) procedure for deploying crews
(8) additional supplies needed (9) means of obtaining additional supplies (10) pro-
cedures to practice the emergency plan (11) appropriate safety precautions regard-
ing electrical hazards, and (12) additional information the commission requires. The commissioner will be required to “provide a report to the governor, the tem-
porary president of the senate, the speaker of the assembly, the chairperson of the
assembly standing committee on energy,” and the chairperson of the senate on
energy once every five years beginning in 2023 discussing the measures required
to ensure effective protection of the electric or gas corporation infrastructure.

8. North Dakota

Senate Bill 2313 (enacted in 2022) requires the North Dakota Transmission
Authority (authority) to participate in studies of transmission options to identify
opportunities to “private transmission investment or private public investment op-
tions in transmission which will increase [the] opportunity for export from the
state, consistent with maintaining a stable grid for the load serving entities in North
Dakota.” The authority is required to deliver a written report on the status of
the resilience of the electric grid to the North Dakota Legislative Council and the
North Dakota Industrial Commission on an annual basis. The report may in-
clude short-term and long-term projections of the adequacy of the state’s electric
grid, the resilience of the state’s electric grid, and the plans of generation owners,
developers, or operators to add or remove generation “assets connected to an in-
dependent system or regional transmission operator in excess of an aggregate of
twenty-five megawatts.” SB 2313 also includes requirements for “resource
planning, planning reserve margin [penalties], and reliable service obliga-
tion[s].”

Within the requirements for resource planning, electric utilities are required
to file annual reports on cyber security preparedness, including an assessment of
emerging threats and efforts taken by the electric public utility to implement cy-
bersecurity measures.

9. Tennessee

On June 1, 2022, the Governor of Tennessee signed into law Senate Bill 2282,
which requires certain utilities to prepare and implement cyber security plans to
provide for protection of utility facilities from unauthorized use, alternation, ran-
som, or destruction of electronic data. Initial cyber security plans must be pre-
pared and implemented by July 1, 2023 or within one year after the utility is

197. N.Y. A.B. 3094.
198. Id.
200. Id.
201. Id.
202. Id.
203. N.D. S.B. 2313.
Utilities are to assess and update their cyber security plans every two years to address new threats.\footnote{Id.} Cyber security plan implementation is verified annually.\footnote{Id.} Non-compliance with these provisions may result in sanctions.\footnote{\textsc{Tenn. Code Ann.} \S\S 7-51-2203(b), 65-4-127(d).} Plans are verified by either the comptroller of the treasury or the Tennessee Public Utilities Commission, which compile an annual report regarding compliance with these provisions.\footnote{Id.} The annual report is to be provided to the chair of the House of Representatives Commerce Committee, the chair of state Senate Commerce and Labor Committee, the Tennessee Department of Safety and Homeland Security, and the legislative librarian.\footnote{Id.} These provisions apply to entities subject to the jurisdiction of the water and wastewater financing board, entities subject to the jurisdiction of the utility management review board, rural electric membership cooperatives, county-owned or municipal-owned utilities that provide electric, natural gas, or propane services, and public utilities that provide electric, water, wastewater, or natural gas services.\footnote{Id.}

10. \textit{Utah}

On March 22, 2022, Utah Governor Spencer Cox signed HB 0280 (Act), which creates a state Cybersecurity Commission.\footnote{Bills, \textsc{Utah Gov. Spencer J. Cox}, https://governor.utah.gov/featured-feed/bills/}. The Act directs the Cybersecurity Commission to gather various information regarding cybersecurity vulnerability and best practices.\footnote{Id.} The Cybersecurity Commission must provide cybersecurity information to the governor, including an analysis of current cyber incident response capabilities, potential cyber threats, and areas of significant concern.\footnote{Id.} In addition, the Cybersecurity Commission is directed to establish cybersecurity guidelines and best practices, to analyze cybersecurity practices across the public and private sectors, and to provide an annual report to the Public Utilities, Energy, and Technology Interim Committee.\footnote{Id.}

\footnote{Id.}\footnote{Id. \S\S 7-51-2202(b), 65-4-127(c).}\footnote{Id. \S\S 7-51-2203, 65-4-127(b)(1).}\footnote{\textsc{Tenn. Code Ann.} \S\S 7-51-2203(b)(1-3), 65-4-127(d).}\footnote{Id. \S\S 7-51-2205, 65-4-127(f).}\footnote{Id.}\footnote{Id. \S\S 7-51-2201, 65-4-127(a).}\footnote{H.B. 280, 2022 Leg., Gen. Sess. (Utah 2022).}\footnote{Id.}\footnote{Id.}