Think Microgrid

STATE SCORECARD 2023

ThinkMicrogrid

www.thinkmicrogrid.org

For contact: cameron@thinkmicrogrid.org

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Microgrids have the potential to play a pivotal role at a transformative moment for the electric grid. As communities and consumers seek solutions for the resilience, climate and equity challenges they face, the combination of advanced technology and market interest provide the opportunity for the widespread commercialization of microgrids. The U.S. Department of Energy has advanced a vision that by 2035, microgrids will be the core building block of a transformed grid where 30-50% of electricity generation comes from distributed resources. This vision, however, is not inevitable and there remain potentially existential barriers to microgrid commercialization. Over the past two years, Think Microgrid has led conversations with regulators and industry stakeholders about how to best identify and characterize these opportunities and impediments. From these discussions, a robust and extensible methodology was articulated that considers the policy and market conditions in each state across five critical dimensions – deployment, regulation, resilience, market access and equity. The resulting State Scorecard is at once disappointing and encouraging. On the one hand, only a few states receive even a "B" and far too many receive a "C" or "D". On the other hand, the results suggest how states can proactively and creatively begin to immediately take action to reform outdated policies and collaboratively move toward the coordinated action that this moment deserves.

States can proactively and creatively take action to reform outdated policies and move toward the coordinated action that this moment deserves

INTRODUCTION

Microgrids have a unique role to play at a transformative moment for the electric grid. The nation simultaneously faces increasing threats from extreme weather events and opportunities to electrify entire sectors of the economy and address ongoing inequities in energy access. Microgrids offer the potential to provide real and immediate solutions to a broad range of challenges, including resilience in the face of an increasingly hostile climate, accelerating the integration of clean energy, and correcting for historic and current inequities. The U.S. Department of Energy (DOE) has advanced a vision that by 2035, microgrids will be the core building block of the transformed grid where 30-50% of electricity generation comes from distributed resources.

This is a powerful vision, but it is not inevitable. Achieving this future requires deliberate effort and thoughtful action across states and actors. Regulators, policy makers and a broad range of industry stakeholders must create the appropriate structures to leverage market activity, encourage a broad range of beneficial investments and respond to the changing demands of consumers, companies, and communities. In many contexts, microgrids are helping realize this vision today, but the country has a long way to go. That is why Think Microgrid has developed this scorecard – to highlight the successes, call attention to the barriers that must be addressed and identify immediate and practical steps that state, community and industry leaders can take today.

By 2035, microgrids will be the core building block of transformed grid where 30-50% of electricity generation comes from distributed resources

WHAT IS A "MICROGRID"?

While one may find multiple definitions of a "microgrid" with small variation, there are unifying characteristics that are shared. In this regard, all microgrids are intelligent clusters of physically interconnected resource that can act as a single entity, whether connected to the larger grid or operating independently. The DOE defines a microgrid as, "a group of interconnected loads and distributed energy resources within clearly defined electrical boundaries that acts as a single controllable entity with respect to the grid. A microgrid can connect and disconnect from the grid to enable it to operate in both grid-connected or island-mode" (U.S. Department of Energy Microgrid Initiative).

As a single cluster of energy resources, microgrids can operate independently or in coordination with the larger grid. There are five key aspects that characterize microgrids as unique from other distributed energy resources:

1. INTELLIGENCE:

The individual components of a microgrid are coordinated by a single, intelligent microgrid controller that allows the microgrid to optimize its behavior to align with the needs of the customer and the larger electric grid.

2. INDEPENDENCE:

A microgrid can dynamically connect to and disconnect from the larger electric grid, providing energy independence and resilience in the face of network outages, price volatility, or other grid disruptions.

3. BLACK SKY OPERATIONS:

Because the microgrid can operate independently and because it is physically connected to the load it serves, a microgrid provides resiliency during extended "black sky" conditions lasting for hours or days.

4. BLUE SKY OPERATIONS:

Unlike simple backup power, microgrids are designed to operate effectively during periods of normal grid conditions, allowing local energy production, optimization, and integration of intermittent clean energy resources.

5. INTERACTIVE:

Perhaps most importantly, microgrids are highly flexible and interactive, providing power to the grid when needed, operating independently when needed and able to respond autonomously to the changing conditions of the grid and the needs of the customers they serve.

As a result, microgrids are uniquely positioned to serve as a resiliency solution for communities, critical facilities, and more. In their recent report (***Clean Energy Microgrids: Considerations for State Energy Offices and Public Utility Commissions to Increase Resilience, Reduce Emissions, and Improve Affordability***), the National Association of Regulatory Utility Commissioners (NARUC) and the National Association of State Energy Offices (NASEO) observe that, "microgrids have emerged as a compelling solution for customers and communities looking to improve their ability to prepare for, adapt to, withstand, and recover from disruptions and minimize their impacts on life-saving and critical services" (NARUC & NASEO, 4). If planned to integrate clean energy resources and serve vulnerable, low-income, or rural communities, microgrids further have the potential to deliver broad decarbonization, equity, and economic development benefits.

THE MICROGRID MARKET TODAY AND TOMORROW

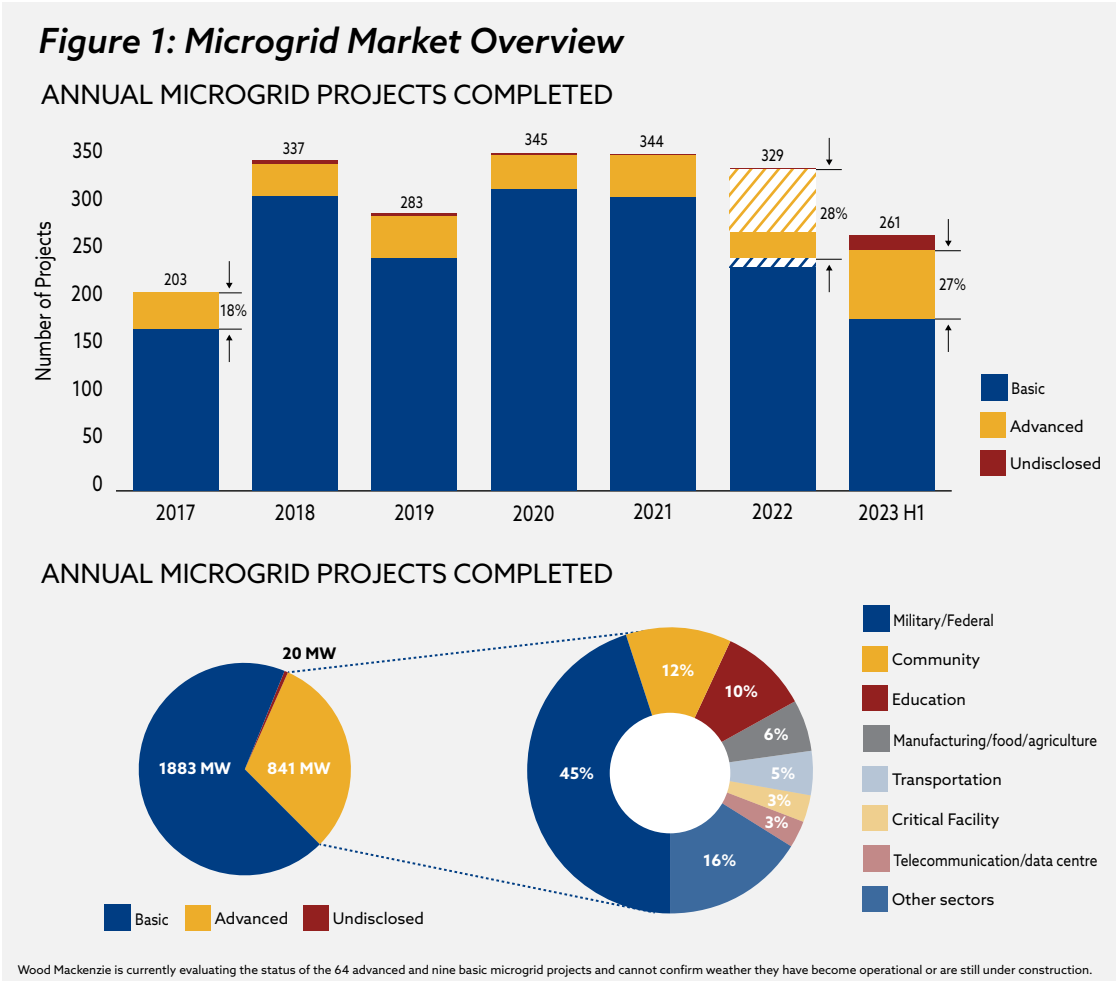
Across the country, the microgrid market is rapidly growing and diversifying. Project configurations, ownership models, customer classes served, and technologies deployed are shifting on an annual basis. Think Microgrid works in close collaboration with the market intelligence firm Wood Mackenzie to develop ongoing visibility into the microgrid industry today and the trends that will shape the market in the years ahead.

In this Scorecard, we benefit from early insights provided in advance of the annual update of Wood Mackenzie's research and analysis. Overall, the data show steady and consistent growth across multiple dimensions of the industry, with annual growth anticipated to be just shy of 20%. The main drivers of this growth include increasing demand for resilience, federal incentives, favorable state policies and expanding corporate commitments to environmental social good (ESG) investment goals.

At the same time, the market continues to face significant project interconnection and development delays. While the Inflation Reduction Act (IRA) established significant tax and financial incentives at the federal level, actual utilization has underperformed expectations set by Wood Mackenzie for 2023. While current microgrid deployments are dominated by single-customer commercial and industrial (C&I) projects providing resilience solutions, public policy incentives and technology advancements are beginning to drive consistent growth in more complex, less carbon-intensive applications.

In addition to overall deployment, Wood Mackenzie data reveal key insights related to emerging business models, variations across customer segments, integration of public funding and technology trends. Figure 1 summarizes microgrid projects completed from 2017-2023, including details about microgrid configurations and customer classes.

Figure 1: Microgrid Market Overview



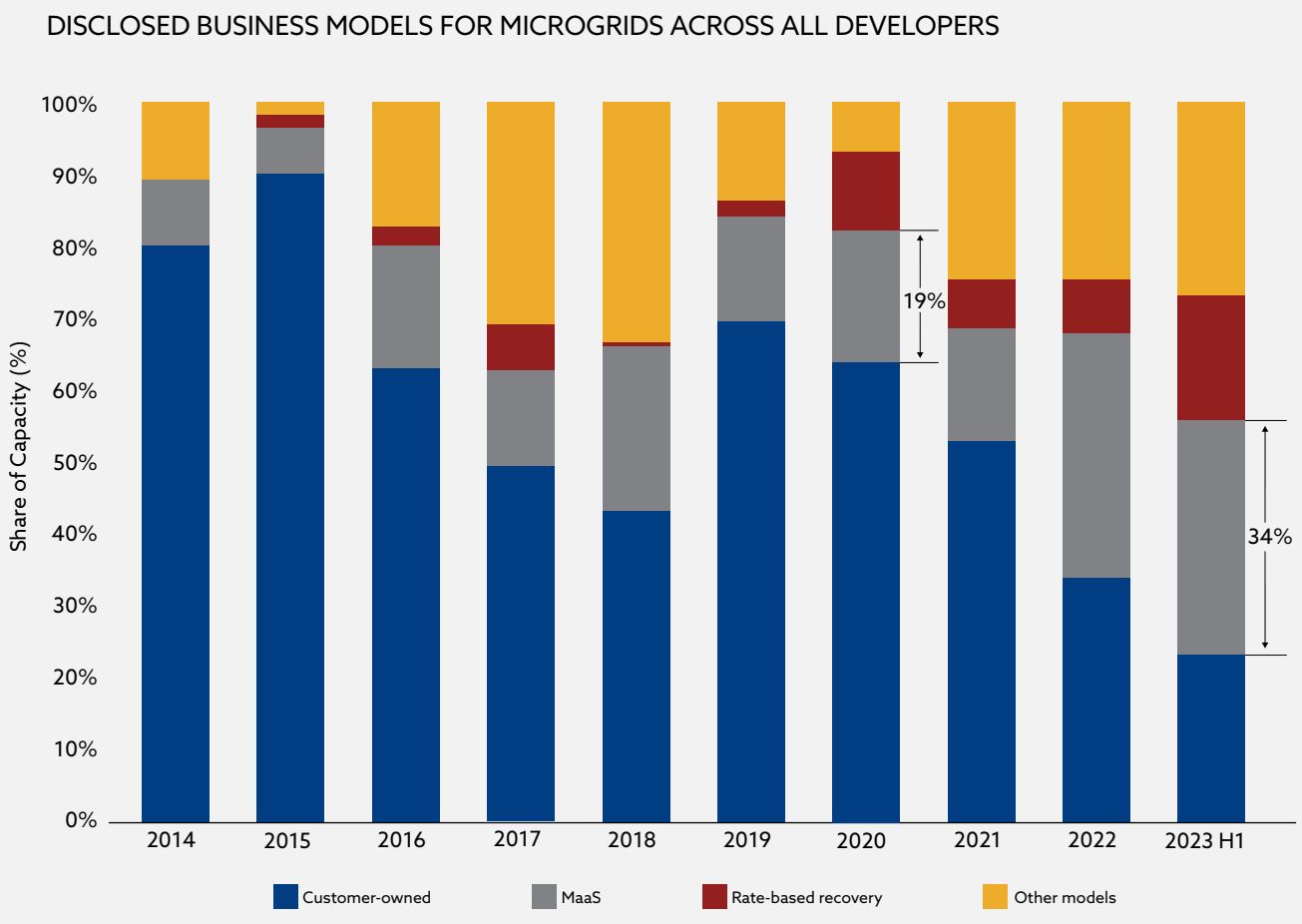
Wood Mackenzie is currently evaluating the status of the 64 advanced and nine basic microgrid projects and cannot confirm weather they have become operational or are still under construction.

Public policy incentives and technology advancements are beginning to drive consistent growth in more complex, less carbon-intensive applications

BUSINESS MODELS:

Utilization of microgrid-as-a-service (MaaS) business models is growing across the market. These new commercial offerings allow end-user customers the option of directly owning a microgrid or emerging into a contract for services. This trend is reflective of the increasing availability of private capital that is eager to invest in microgrid projects, allowing regulated utilities and electricity customers the opportunity to significantly leverage ratepayer capital. Since 2020, MaaS ownership has grown by nearly 80%, with a growing number of private equity firms providing project finance and joint ventures with microgrid developers demonstrating a pool of capital prepared to support these new opportunities. At the same time, utility microgrid projects that are included in rate base have also increased as investor-owned utilities propose microgrid programs, pilot projects, and microgrid-specific tariffs. Figure 2 summarizes the business models of deployed microgrid projects from 2014-2023.

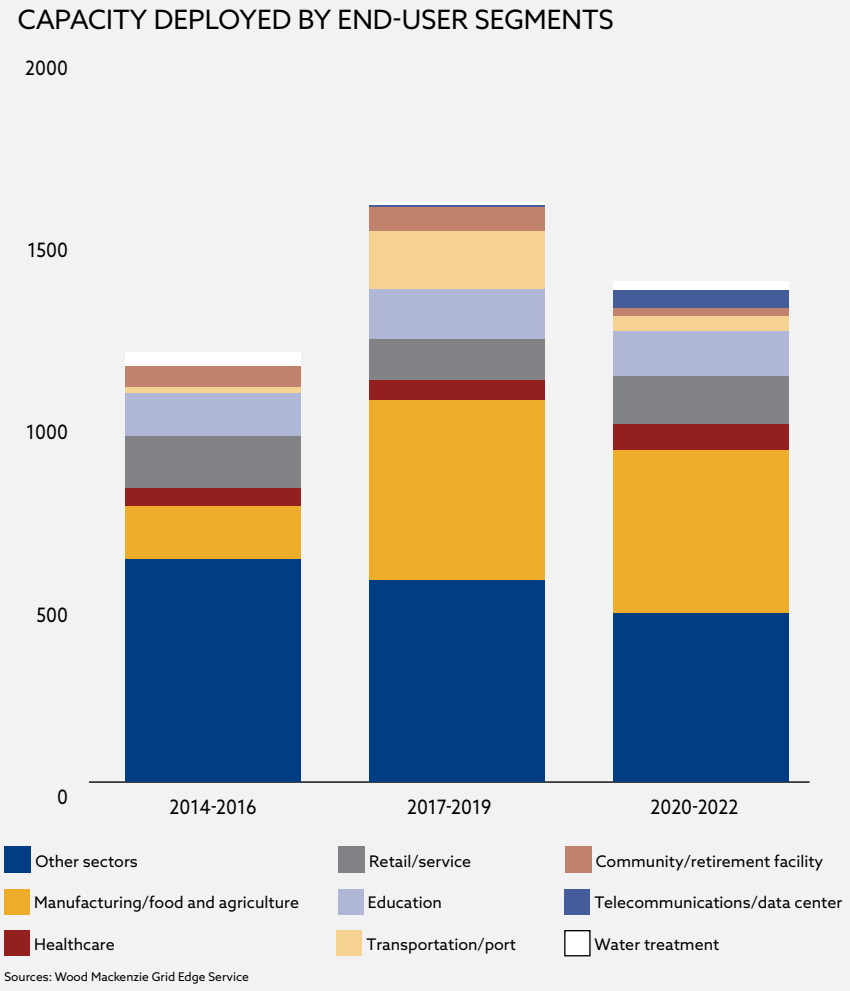
Figure 2: Business Models by Share of Market Capacity



CUSTOMER CLASS SEGMENTS:

The C&I and retail sectors continue to be the primary drivers of microgrid market growth, with large energy consumers investing primarily in resilience solutions. Concurrently, growth in the residential and government segments is accelerating, followed closely by educational institutions. The U.S. military is driving growth in the government sector as it pursues a commitment to develop microgrids on all domestic Army installations by 2035. Microgrid projects promoting e-mobility and serving the community and residential sectors, which have frequently benefitted from public policy incentives, are expected to continue strong growth through 2025 and beyond. Figure 3 summarizes evolving the end-user classes being served by microgrid capacity through 2025.

Figure 3: Market Capacity by End-User Class

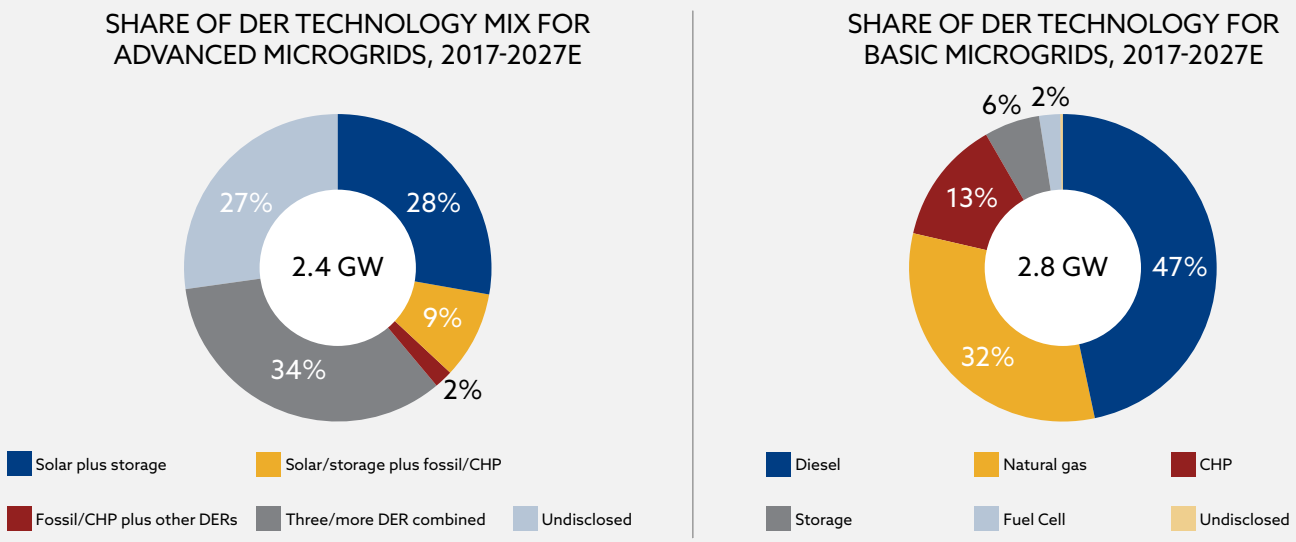


Sources: Wood Mackenzie Grid Edge Service

TECHNOLOGY DEPLOYMENT:

The continued and accelerating demand for long-duration resilience solutions means that fossil fuel-based technologies dominate the current microgrid market. Wood Mackenzie expects fossil-fuel microgrid solutions to persist for at least several years until long-duration energy storage technologies achieve broader commercialization. However, there is evidence that advanced microgrids that incorporate multiple DER technologies will soon reduce the scale and utilization of fuel-based generation, while not displacing it entirely. Figure 4 summarizes the technology deployed at existing and planned microgrids from 2017-2027.

Figure 4: Share of DER Technology Mix



PUBLIC FUNDING:

Public funding from federal and state governments is driving investment in microgrid projects, especially in more complex projects promoting intersecting public policy goals such as resilience, decarbonization, equity and economic development. Wood Mackenzie data indicates a substantial increase in federal public funding for microgrid projects, from $27M in funding for 12 projects in 2018 to over $126M for 38 projects in 2023. This amount is expected to surge to over $400M, driven by a series of port electrification and transportation microgrid projects scheduled to become operational in 2028. Incentives related to the federal Inflation Reduction Act (IRA) including a microgrid controller tax credit were under-utilized in 2023. However, such incentives are expected to have a greater market impact in the future, especially as the industry becomes more familiar with the available incentives and there is more detailed guidance from the Department of the Treasury.

MULTI-CUSTOMER BARRIERS:

Wood Mackenzie analysis suggests that significant, existential hurdles currently hamper the potential market for community and multi-customer microgrids. The most significant barrier to deploying microgrids that connect multiple, independent customers are state laws that prohibit private or community-owned electric infrastructure across property lines. Secondarily, Wood Mackenzie identifies a lack of tariffs or other market pathways designed for multi-customer microgrids. Currently, Wood Mackenzie observes a need for increased public awareness and stakeholder coordination in order to realize growth in this segment of the microgrid market.

CHALLENGES ON THE HORIZON

While microgrid markets are steadily growing, the industry is at an inflection point. There is an increasingly urgent need to accelerate microgrid deployment, especially considering the diverse resilience and reliability threats facing states across the country. However, there are barriers today that prevent many microgrids from serving customers and communities that seek them.

Each year, increasingly frequent and severe extreme weather events expose brittle grid infrastructure and the immense economic and human impacts of failure. According to a 2016 Lexington Institute report, "Local and regional interruptions to electricity service within the United States occurred nearly three times as often in 2016 as in 1984" (Barrett 2016). The frequency of weather and climate-related disasters causing at least $1B in damages has steadily risen – in 2021, 20 such events caused a collective $152.6B in damages and 724 fatalities across the country, compared to an annual average of 3.1 events, $20.2B, and 297 fatalities in the 1980s, adjusted for inflation (NOAA 2022). Prominently, wildfires tore through the Hawaiian island of Maui during the summer of 2023, killing hundreds and leaving thousands without power.

Many states have responded to climate challenges by prioritizing decarbonization, equity, and economic development benefits. However, state legislation and policy has generally prevented the commercialization and enablement of microgrids that can maximize resilience, decarbonization, equity and economic development.

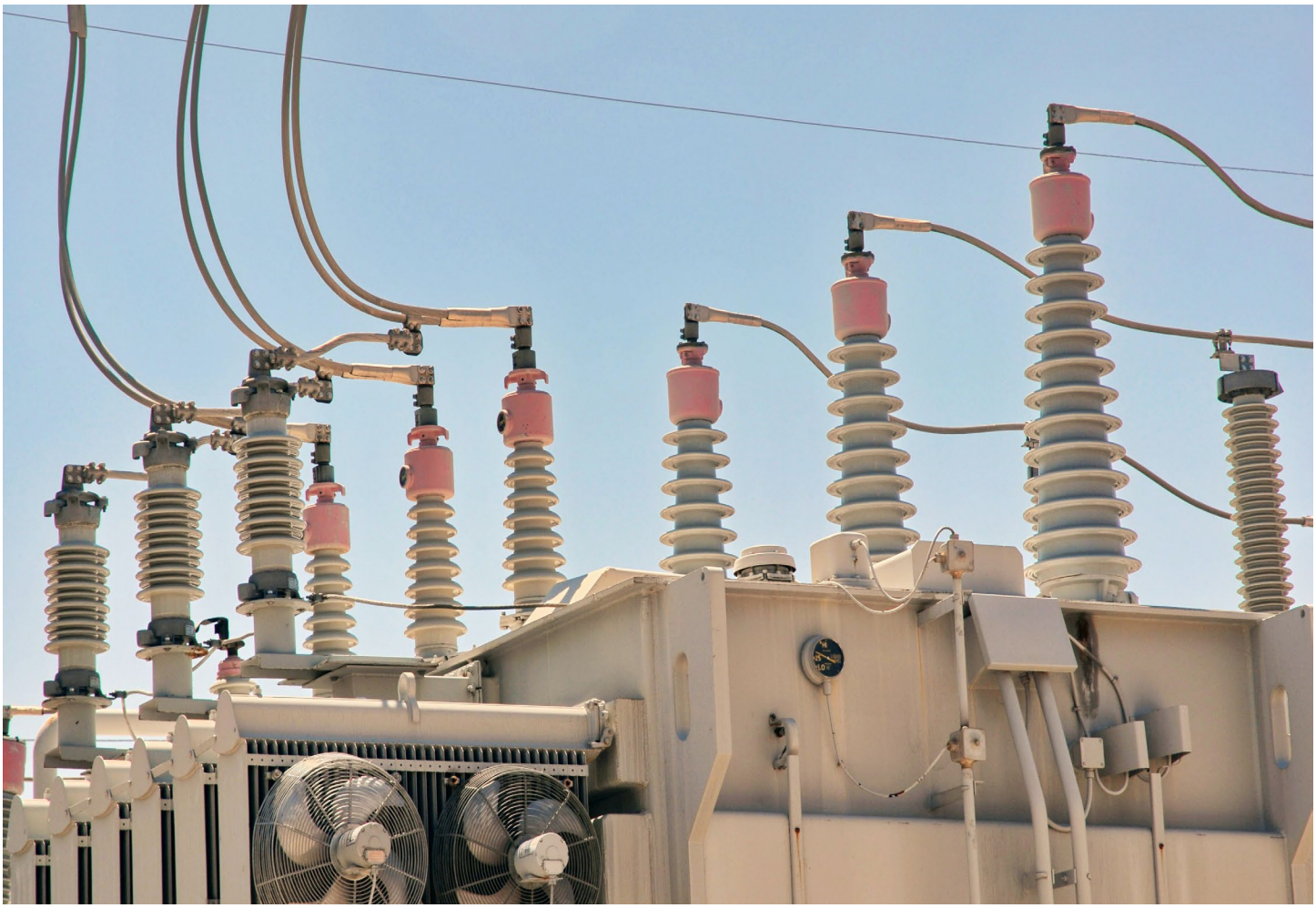
> **Policy — not technology — remains the limiting factor for microgrid commercialization**

Most states have not identified significant and meaningful strategies for incorporating microgrids into the physical grid and creating market designs necessary to support them. Statutory barriers to development of community and multi-customer microgrids remain unexamined in nearly every state, despite presenting an existential barrier to this potent and powerful ownership model. Microgrid policies that do exist – including incentives and programs, retail microgrid tariffs, and resilience planning processes – are often severely limited in scope. For example, most ratepayer and public funding directed at microgrid projects have been for pilot programs. Few states have implemented retail microgrid tariffs and those that have (e.g., Hawaii and California) have often severely restricted the kinds of ownership models that are eligible and the customers that can be served. In summary, policy– not technology– remains the limiting factor for microgrid commercialization.

In this context, the Think Microgrid Scorecard focuses on state activities that advance toward commercialization. Commercialization reflects a landscape where microgrid markets freely flourish, featuring state policies that enable and encourage a balanced mix of ratepayer, private, and public capital while removing procedural or legal barriers to development. A commercialized landscape features projects demonstrating diverse configurations, customer classes, ownership models, and interconnected utilities. In operation, microgrids have access to markets coordinated by the bulk power system, distribution utilities, and including services provided by third parties or individual customers. A landscape that applies open market principles and encourages diverse capital will be successful in advancing microgrid development to achieve resiliency and equity goals.

Microgrids have clearly demonstrated their capabilities as a cost-effective solution to diverse grid needs. Yet, their widespread adoption remains constrained by state policies that at best are limited in scope – and at worst are antagonistic to end-use customer or private investment. Microgrids allow customers and communities to invest in and operate advanced technologies directly. Today's grid challenges demand market transformation, requiring us to re-examine traditional utility business models and regulations that do not consider the opportunity for direct investment, ownership and operation of grid-connected energy technologies such as microgrids.

> **Widespread adoption remains constrained by state policies that at best are limited in scope — and at worst are antagonistic to end-use customer or private investment**



SCORECARD METHODOLOGY

The evaluation framework builds from and extends conversations with regulators, policy makers and industry stakeholders that Think Microgrid has hosted at various convenings and outreach meetings organized in the two years since the formation of the organization. The evaluation framework considers five fundamental dimensions, each of which is critical to understanding the market today and the opportunities in the future:

1. DEPLOYMENT:

Is there a robust market consisting of all forms of microgrids, from simple single-customer applications to more complex community microgrids?

2. POLICY:

Are there proactive and comprehensive efforts to establish clear objectives, modernize rules, and update regulatory frameworks?

3. RESILIENCE:

Is there a dedicated focus on practical opportunities to deploy microgrids that provide resiliency to customers, communities, and critical facilities?

4. GRID SERVICES:

Are there pathways to establish open markets, clear rules, and other incentives so that investments from both utility ratepayers and private capital are properly supported and encouraged?

5. EQUITY:

Are there mechanisms to advance social equity and environmental justice, while driving decarbonization and clean air?

The 2023 Scorecard expands these criteria to evaluate whether state activities represent meaningful progress toward the vision outlined by DOE, Think Microgrid, and others. As a result, the Scorecard is intended to provide both an informed assessment of where the country stands today and a roadmap to achieving a long-term policy vision supporting microgrid commercialization. This inevitably requires identifying existential barriers to development, including statutory limitations, lack of market access, and more. Conversely, it involves identifying pathways for microgrid market commercialization supported by a healthy mix of capital and enabling diverse project development. In both Think Microgrid and the DOE's vision for a commercialized landscape, the benefits of resilience, decarbonization, equity, and economic development are maximized.

For each policy area, specific criteria have been established that guide scoring. In general, the characteristics for each score (or 'grade') are designed to align with the following profiles:

The Scorecard is intended to provide both an informed assessment of where the country stands today and a roadmap to achieving a long-term policy vision supporting microgrid commercialization

GRADE	DESCRIPTION
A	The state is leading proactive, urgent action to pursue long-term reform of existing barriers across regulatory, legislative, and financial dimensions. State actions support robust and diverse microgrid deployment; microgrids are leveraged as a meaningful solution for the operational needs of the state electric grid and the fundamental architecture of the grid supports robust contributions from distributed energy resources and microgrids.
B	The states has established precedent-setting market design components, policy reform and program solutions that include broad stakeholder engagement and clearly articulated goals for coordinated regulatory and agency activity.
C	The state exhibits only limited or passive program and pilot-level activity with little to demonstrate a coherent, coordinated implementation plan.
D	No identifiable or meaningful activity that prioritizes or accommodates microgrid development and deployment
F	Notably regressive or obstructive activities.

METRIC: DEPLOYMENT

Think Microgrid's assessment of deployment is informed by microgrid deployment data provided by Wood Mackenzie. Deployment scores primarily address the overall capacity of each state's deployed microgrid capacity as compared to its overall electricity consumption. Secondarily, Think Microgrid evaluated data to characterize the diversity of each state's microgrid landscape, including what type of distribution utility each state's microgrids are interconnected to, customer classes served, configuration, and ownership model. A state with high overall capacity and diverse projects deployed scores higher because it indicates a broad range of projects serving various customer and grid needs.

To approximate the microgrid capacity in each state, Think Microgrid (informed by the Wood Mackenzie database) developed a ratio that compares the capacity of the microgrid fleet to the state's peak demand. Think Microgrid relied on the best available public information regarding the overall peak electricity demand and compared that figure to the capacity of deployed microgrids (in MW). The resulting ratio , corrected for certain gaps in federaldata[1], is the primary index used for evaluation and scoring in the Deployment category.

To determine the diversity of a state's deployed microgrids, Think Microgrid reviewed state data related to microgrid interconnection type (e.g., investor-owned utility, cooperative); customer classes served (e.g., commercial & and industrial, residential); configuration (e.g., single-customer, campus); and ownership model (e.g., utility-owned, customer-owned). Given the dramatically low ratios of microgrid fleets to overall demand, there was little meaningful diversity that would have an impact on final grades awarded. However, we anticipate future Scorecards will incorporate more robust analysis as deployments increase and market segments expand.

GRADE	DESCRIPTION	MW: PEAK
A	Microgrids serve a significant percentage (>10%) of overall capacity during periods of peak energy usage statewide. Deployed projects include a mix of interconnection types, customer classes served, ownership models, and configurations. Deployment includes privately-owned multi-customer microgrids advancing community resilience, decarbonization, equity, and economic development goals.	>10%
B	Microgrids serve a somewhat significant percentage (1-10%) of overall capacity during periods of peak energy usage statewide. The characteristics of deployed projects include some diversity. Few multi-customer community microgrid projects are deployed or limited to utility ownership.	1-10%
C	Microgrids serve a marginal percentage (<1%) of overall capacity compared to peak energy usage statewide. The state has at least one or several microgrids deployed beyond microgrids serving single commercial & industrial customers.	<1%
D	No significant or coordinated activity identified.	<0.1%
F		

1. Wood Mackenzie peak demand and deployment datasets sample information from the national Energy Information Administration (EIA). EIA data is mostly complete but has certain gaps. For example, certain utilities or retail energy suppliers do not report peak demand information, sometimes skewing a state's capacity factor to a higher percentage. Think Microgrid identified these cases and corrected the information where necessary.

METRIC: POLICY

To determine policy scores, Think Microgrid conducted a comprehensive national review of major policy activities driving microgrid deployment and market access. These include microgrid programs and incentives, tariffs to facilitate interconnection and services compensation between microgrids and distribution utilities, and reforms to regulatory processes or state law to incentivize or remove barriers to microgrid development.

Successful microgrid policies support commercialization, or an ecosystem robustly incorporating private, utility ratepayer, and public sector capital. Today, an influx of private capital is supporting the rapid expansion of microgrid markets, especially in states where markets provide strong pathways to compensation. Effective public policy promotes projects with diverse characteristics while advancing resilience, decarbonization, equity, and economic development outcomes.

Today, state polices have largely prioritized utility-owned infrastructure and mobilized ratepayer and public capital rather than private capital. Most state policies including incentives, programs, and tariffs have been designed to support ratepayer-recovered, utility-owned projects. Very few have addressed structural, procedural, and legal barriers to private microgrid development that impede commercialization.

GRADE	METRIC, FEATURES AND CHARACTERISTICS
A	Policies such as programs, tariffs, and regulatory reforms have driven a robust microgrid market characterized by flourishing private, ratepayer, and public investment. Policy makers have reformed or are exploring reforming wires/right-of-way and interconnection laws that prohibit private multi-customer microgrid development. State authorities have defined microgrids as distinct entities from public utilities and defined microgrid types. Policies incorporate resilience, decarbonization, equity, and economic development outcomes.
B	Policies such as programs and tariffs exist and have impacted microgrid deployment, but primarily advance public and ratepayer capital and utility ownership models. The state may have defined microgrids and/or identified microgrid types.
C	Policies such as programs, tariffs, or future investigations exist but have had limited impact on microgrid deployment, and primarily advance public and ratepayer capital and utility ownership models.
D	No significant or coordinated activity identified.
F	

METRIC: RESILIENCE

Planning for resilience is essential for building a grid that can withstand the pressures of the 21st century. Think Microgrid is informed by an ongoing and comprehensive national review of regulatory activity, legislation, and state planning activities related to electric grid resilience, as well as engaged in collaborative activities with energy regulators and energy offices. While planning for or incentivizing resilience-focused microgrid deployment can be an innovative component of resilience planning, few state resilience plans specifically prioritize microgrid solutions.

To score highly in this category, state policy activities must include microgrids as a targeted resilience solution. This may include planning deployment to serve community institutions, critical facilities, and outage-prone circuits. Effective resilience activities drive decarbonization by promoting the application of renewable energy and energy storage while recognizing the role of low-carbon resources that guarantee long-duration resilience, like small-scale natural gas generation, combined heat and power (CHP), or fuel cells. Effective policy allows communities to tailor microgrid configurations to localized resilience needs and other priorities.

GRADE	DESCRIPTION
A	A state has developed robust, intersectional resilience plans that identify microgrids as a key microgrid solution. State agencies and public utility commissions have each established processes to identify resilience needs and solutions, such as distribution system vulnerability mapping informing resilience investments. Microgrid projects have been studied or implemented based on resilience needs data, and state policy allows for flexibility in microgrid design to meet resilience needs (e.g., resources utilized, ownership model, etc.).
B	A state office and public utility commission have each facilitated activity driving resilience planning of some kind, even if the activities do not explicitly facilitate microgrid planning or deployment as part of a state resilience strategy.
C	Either a state office or its public utility commission has facilitated activity driving resilience planning of some kind. The activities do not explicitly facilitate microgrid planning or deployment as part of a state resilience strategy.
D	No significant or coordinated activity identified.
F	

METRIC: GRID SERVICES

There are three potential market interfaces that any microgrid could engage with to receive compensation for services. The first are wholesale markets, which organize bulk power exchanges across much but not all the country's transmission system. Today, microgrids can directly bid energy into certain markets, but few wholesale markets are designed for microgrid services specifically. The second interface is retail tariffs, in which local distribution utilities compensate microgrids interconnected onto their systems for energy or services. Usually involving regulated utilities, these tariffs are developed as part of regulatory processes and have only been considered in a small number of states. The third interface is distribution-level markets, which currently do not exist. These would facilitate direct exchanges of services for compensation between microgrids and energy users within a distribution circuit, localized region or grid operator.

For this category, Think Microgrid conducted a review of active or developing retail tariffs, and secondarily incorporated data about participation in wholesale markets. Successful retail tariffs provide compensation pathways for a range of microgrid services, including energy exports during periods of excess generation; load-shifting during peak demand periods (e.g., demand response, energy storage); resiliency services (e.g., outage mitigation, restoration time); and utility distribution investment deferral or non-wires alternatives. While compensation for energy exports tends to align with established market mechanisms for distributed energy (e.g., net metering for retail markets, capacity markets for wholesale markets), rate design for grid services tend to be more complex. While microgrids can at a minimum participate in most regional transmission-level energy markets (e.g., RTOs and ISOs) as energy exporters, aspects of certain market designs have led to high levels of microgrid participation.

GRADE	DESCRIPTION
A	State policy and regional authorities have provided pathways for microgrids to be compensated for multiple services through different channels. Microgrids can bid energy services directly into wholesale or bulk power markets. Regulators have developed (and privately-owned microgrids have widely adopted) a retail microgrid tariff for multiple use-cases, including energy exports and grid services. States are considering open access laws that enable distribution-level markets between non-utility entities using private or utility-owned distribution infrastructure.
B	State is developing a retail microgrid tariff for multiple use cases including energy exports, islanding, and non-emergency grid services. Alternatively, microgrid deployment is supported by strong adoption of wholesale compensation mechanisms.
C	State hosts program-specific or single use case retail microgrid compensation mechanism.
D	No significant or coordinated activity identified.
F	

METRIC: EQUITY

This category reviews states' prioritization of in deploying community microgrids, promoting equity outcomes across microgrid policy activities, and supporting communities seeking support with project development and funding. Community microgrids can provide benefits including resilience, clean air, workforce development, and economic development to vulnerable communities. Maximizing these benefits requires identifying and/or mapping vulnerable communities and creating strategies to stimulate investment, empower community members to develop projects, and facilitate sustained benefits.

States have taken varied approaches to supporting equity-focused community microgrid development. In some cases, statewide equity laws have provided mandates, carveouts, or directives for infrastructure that supports low-income, outage-vulnerable, rural, and tribal community resiliency and economic well-being. In other cases, specific state or regulator-approved programs incentivize or fund projects in dedicated communities. State agency programs have supported communities with funding or technical assistance to capture federal funding for microgrids. High scoring states take a coordinated approach, tying all these approaches together.

GRADE	DESCRIPTION
A	State legislation has defined equity metrics such as income or demographic data and applied this information to guide intersecting approaches to microgrid planning. State programs or utility plans support community microgrid deployment based on equity metrics or outcomes. State authorities provide assistance, funding, and implementation support to communities as they develop microgrid plans and implement projects.
B	A state incorporates equity priorities into microgrid planning on a program-specific, project-specific, or ad-hoc basis. Alternatively, a state does not have equity-focused microgrid efforts but has enacted a statewide equity law that contains explicit implications for energy planning and utility regulation.
C	Microgrid deployment does include any organized or explicit focus on microgrids as a tool to support vulnerable, disadvantaged or ignored communities.
D	No significant or coordinated activity identified.
F	

FINDINGS

While some states receive an "A" for activity in specific categories, there is no state that where an overall "A" is warranted. This reflects the current microgrid policy landscape: states have innovated in certain categories, but barriers still inhibit advancement towards commercialization. The level of deployment is nowhere close to establishing microgrids as the building blocks of an electric grid where DERs represent a significant, meaningful resource for grid operations. The following sections summarize some of these existential barriers, present tools states can leverage to overcome them, and offer state activities that either demonstrate successes, partial successes, or failures. See Appendix A for detailed descriptions of what states that received an "A" in each scoring criteria have accomplished.

The level of deployment is nowhere close to establishing microgrids as the building blocks of an electric grid

Figure 5: State Scores

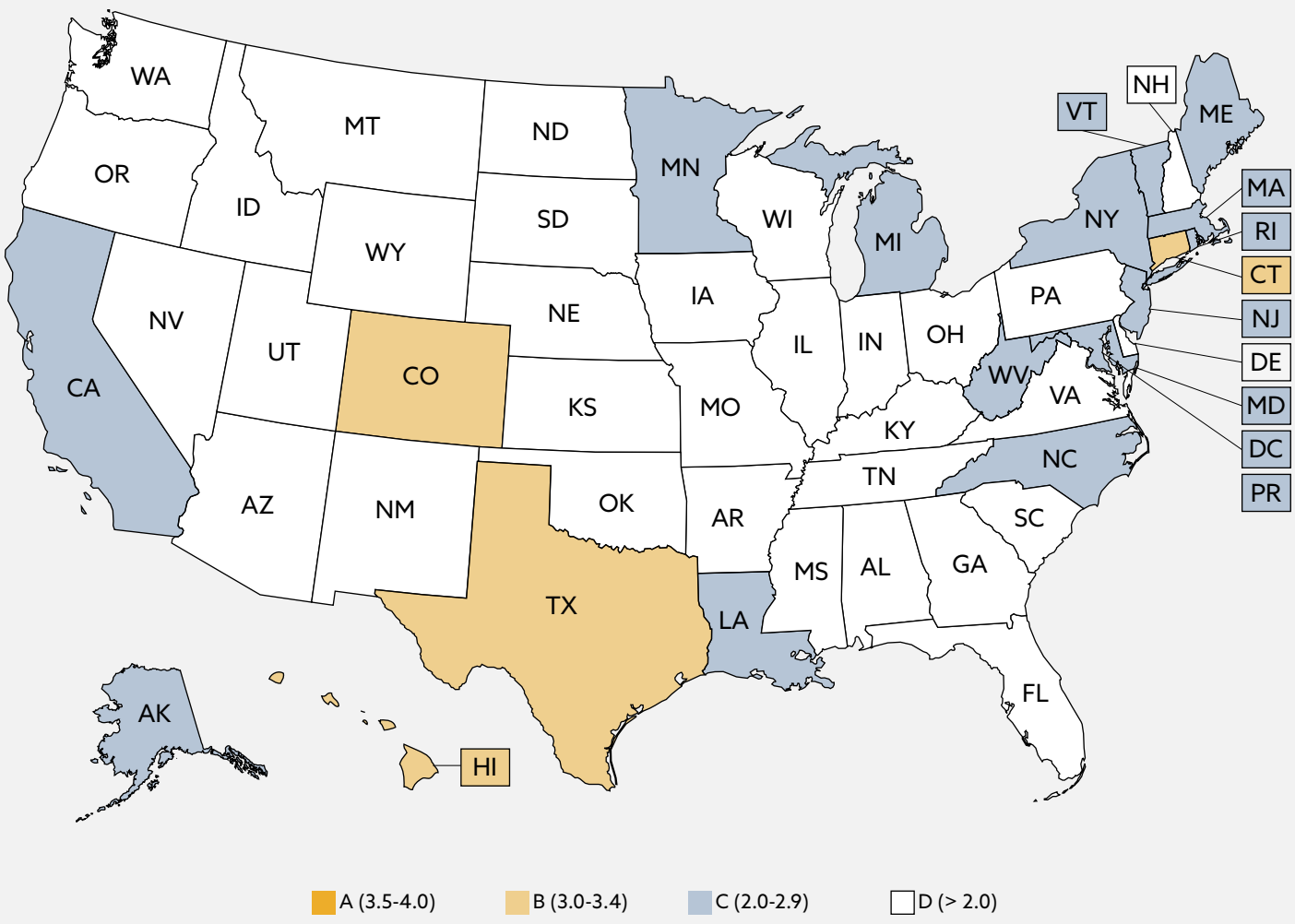


Figure 6: State Scores

STATE	DEPLOYMENT	POLICY	RESILIENCE	GRID SERVICES	EQUITY	TOTAL	GRADE
HI	3	3	3	4	3	3.2	B
TX	3	3	4	3	2	3	B
CO	3	3	3	2	4	3	B
CT	3	3	3	2	4	3	B
CA	3	2	3	3	3	2.8	C
NY	3	2	3	2	4	2.8	C
PR	3	3	3	2	3	2.8	C
NJ	3	3	3	2	2	2.6	C
MD	3	3	3	2	2	2.6	C
ME	2	4	2	3	2	2.6	C
WV	3	3	2	3	2	2.6	C
AK	4	2	3	1	3	2.6	C
MA	3	2	2	2	3	2.4	C
MN	2	2	2	2	3	2.2	C
DC	2	2	2	3	2	2.2	C
VT	2	2	3	1	3	2.2	C
NC	2	2	3	1	2	2	C
MI	2	3	2	1	2	2	C
LA	2	2	3	1	2	2	C
RI	1	2	3	1	3	2	C
FL	3	1	2	1	2	1.8	D
PA	2	1	3	1	2	1.8	D
IL	2	1	3	1	2	1.8	D
AZ	3	1	2	1	2	1.8	D
SC	2	2	2	1	2	1.8	D
WA	2	2	2	1	2	1.8	D
KY	1	2	3	1	2	1.8	D
OR	1	2	3	1	2	1.8	D
OH	2	1	3	1	1	1.6	D
VA	2	2	1	1	2	1.6	D
TN	2	1	2	1	2	1.6	D
WI	1	2	2	1	2	1.6	D
NM	2	1	2	1	2	1.6	D
AR	2	1	2	1	2	1.6	D
GA	2	1	1	1	2	1.4	D
MO	1	1	3	1	1	1.4	D
OK	2	1	1	1	2	1.4	D
IN	1	1	2	1	1	1.2	D
AL	1	1	1	1	2	1.2	D
IA	2	1	1	1	1	1.2	D
MS	1	1	1	1	2	1.2	D
NE	2	1	1	1	1	1.2	D
UT	1	1	1	1	2	1.2	D
MT	1	1	2	1	1	1.2	D
DE	1	1	2	1	1	1.2	D
KS	1	1	1	1	1	1	D
NV	1	1	1	1	1	1	D
ND	1	1	1	1	1	1	D
ID	1	1	1	1	1	1	D
NH	1	1	1	1	1	1	D
WY	1	1	1	1	1	1	D
SD	1	1	1	1	1	1	D

This Scorecard identifies practical next steps and leadership opportunities that are available at all levels of government and community engagement

POLICY ROADMAP

Policy makers and community leaders can take Policy makers and community leaders can take concrete steps to overcome some of the most pressing barriers to microgrid market development, advance microgrid policy in their states, and improve their score in future years.

Over the past two years, Think Microgrid has led interactive discussions and organized unique events in order to identify and highlight opportunities for collaboration and progress. The Scorecard provides a roadmap and many potential actions for community and policy leaders at all levels based on these discussions. For example, Think Microgrid's 2022 Policy Summit outlined a consensus set of actions that state policy leaders can take to advance microgrid policy. These included specific actions for state executives, legislatures, energy offices, and other offices. In our 2023 Policy Summit, Think Microgrid articulated a set of 'vision statements' embodying transformative changes necessary to overcome core barriers in the microgrid landscape. These opportunities align with each of the five dimensions addressed in this scorecard. Similarly, NARUC and NASEO's Clean Energy Microgrids report provides a set of considerations for energy offices and public utility commissions seeking to implement microgrid polices.

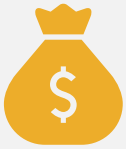
This Scorecard identifies practical next steps and leadership opportunities that are available at all levels of government and community engagement. A microgrid roadmap can be initiated by legislation or utility commission directive and can guide the coordinated efforts between utility commissions, energy offices, and stakeholders. An effective microgrid roadmap identifies opportunities where microgrids can address grid vulnerabilities and address state public policy goals. A state microgrid roadmap can identify and propose solutions to overcome barriers to robust microgrid deployment and market participation, including steps to identify critical facilities, enable multi-customer microgrids, mobilizing private capital, expand market access and prioritize equity for vulnerable, disadvantaged and ignored communities.

1. IDENTIFY CRITICAL FACILITIES:

Identify and inventory priority facilities where microgrids can provide resilience and other public policy priorities like clean air, workforce development, and other economic outcomes. Coordinate with distribution utilities and/or the state energy office to collect and map targeted distribution system data.

2. ENABLE MULTI-CUSTOMER MICROGRIDS:

Lead a process to reform wires laws. Develop legislation that identifies opportunities to create exemptions, special districts, and priority community projects where multi-customer microgrids would provide resilience and advance state public policy goals. Collect data on microgrid operations across rights-of-way to inform a statewide revision of wires laws.



3. MOBILIZE PRIVATE CAPITAL:

Develop recommendations for state programs, tariffs and policies that leverage and encourage the use of private capital. Prioritize programs designed to distribute grants or loans to qualified bidders as over ratepayer-funded programs or those limited to utility-owned projects.

4. OPEN MARKET ACCESS:

Develop recommendations to improve market access in retail and bulk power markets. Offer guidance to ensure that microgrid tariff proceedings are focused on compensation for blue sky energy exports, protocols for islanding situations, and grid services for resilience, emissions reduction, load-shifting, and other grid services. Coordinate with wholesale market operator and neighboring states to identify current practices, challenges and future strategies related to microgrid participation in wholesale markets.

5. PRIORITIZE EQUITY:

Direct the legislature to establish energy equity priorities, including in utility and/or distribution system investments. Include specific guidance addressing how microgrid project prioritization satisfies equity priorities.

WHAT WE'RE WATCHING

While no one state embodies holistic best practice in promoting microgrid commercialization, several states have taken creative or innovative approaches to challenging existential barriers. Conversely, some states have taken actions intended to promote microgrids, but the outcomes have prescriptively limited future progress to certain markets. Think Microgrid is paying special attention to where states are taking steps to accelerate towards or stray from pathways to commercialization.

1. Maine Microgrid Law

Maine's first-in-the-nation law allows multi-customer microgrids to operate across rights-of-way.

Overview: 2021 Maine legislation defined microgrids, classifying them as distinct entities from public utilities. The law required the Maine Public Utilities Commission (PUC) to define services that microgrids can provide while both islanded and grid-connected. It directed the PUC to approve microgrid proposals that are deemed to be in the public interest and meet requirements around size, technical feasibility, resources utilized, and more.

What we're watching: In most state statutes, multi-customer microgrids qualify as public utilities. 'Wires' or 'right-of-way' laws prohibit the sale of electricity across property lines, or beyond immediately adjacent neighbors. Maine's law is the first in the country to address this existential barrier to microgrid commercialization on a statewide scale, providing guidance to the PUC to steward private microgrid development. Think Microgrid is watching how microgrid developers in Maine, where deployment remains low, take advantage of the state's new pathway for complex projects.

2. Texas Energy Fund

Texas law offers promising model to mobilize public and private capital to promote resilience.

Overview: In 2023, a Texas law directed the Public Utilities Commission of Texas (PUCT) to create a $1.8B state-funded grant program for microgrid projects and EV bus-to-grid integration. The "Texas Power Promise" program will be developed by the PUCT to fund resilience-focused, behind-the-meter microgrid projects and dispatchable EV bus-to-grid battery storage projects. Projects will have a capacity of up to 2.5 MW and state funds are expected to cover up to 30-50% of project costs. Qualifying microgrid projects will combine natural gas or propane generation with solar and battery storage resources and must be able to operate in island mode for 48 continuous hours.

What we're watching: The PUCT is in the initial stages of implementing the Power Promise program, which is the highest-funded state microgrid incentive in the country. The program is uniquely tailored for small behind-the-meter projects. Think Microgrid anticipates that the majority of microgrid configurations financed by the Power Promise will be simple single-customer projects hosted by commercial and industrial customers. Think Microgrid will be monitoring grant awards, as well as whether the development of utility resilience plans and distribution system circuit segmentation studies as required by other pieces of 2023 legislation interfaces with the incentives created by the program.

3. Colorado Microgrid Roadmap

Colorado microgrid legislation combine roadmap development with tools and funding to prioritize resilience in low-income, vulnerable, and rural communities.

Overview: Colorado has taken an intersectional approach to integrating equity into resilience planning. The 2021 Environmental Justice Act defined disproportionately impacted communities and established guidelines for supporting community-centered energy resilience and decarbonization. A year later, the legislature passed two microgrid laws, each integrated with the state's equity framework. The first law designed Colorado's Microgrids for Local Resilience grant program for "community anchor institutions" in vulnerable communities and the second directed state agencies to develop an equity-focused Electric Grid Resilience and Reliability Roadmap. In parallel, the state energy office also developed a Climate and Social

Vulnerabilities Mapping Tool to support equity-focused microgrid planning. The legislature further created an Infrastructure Investment and Jobs Act (IIJA) Cash Fund that provides cost matching to entities developing applications for federal funding.

What we're watching: Think Microgrid will be monitoring how Colorado operationalizes its equity priorities in the development of its microgrid roadmap. Will the roadmap design a model for integrating demographic data into vulnerability mapping and microgrid project identification? Recommend incentives or a program to support income-qualified community projects? Integrating equity into resilience planning is not always straightforward, but Colorado is positioned to continue grappling with those parallel policy priorities.

4. Louisiana PSC Resilience Rule

PSC considers new resilience rules while utility proposals offer a concerning redefinition of "microgrid".

Overview: A Louisiana Public Service Commission (PSC) investigation is developing rules around resilience. In 2023, the PSC issued a draft rule that if approved would establish a process for the PSC to solicit, review, prioritize, and implement system redundancy investments including microgrids. Prior to the PSC draft rule filing, Entergy proposed a $9.6B, 10-year Future Ready Resilience plan that includes rate recovery for ten utility-owned microgrid projects. The outcome of the PSC's Assessment may impact whether the Future Ready Resilience plan satisfies the rule's requirements.

What we're watching: The future of resilience investments in Louisiana will be heavily influenced by the outcomes of these parallel proceedings. At this point, it is challenging to prognosticate whether Entergy's undetailed microgrid project proposals would satisfy the requirements of a future PSC resilience rule. Entergy's existing microgrid fleet, developed through its Power Through program, are mostly small, single-customer natural gas projects serving commercial and industrial customers. It is unclear how the PSC's proposed resilience planning process would position microgrids as a utility resiliency solution as compared to traditional distribution investments.

5. Hawaii Microgrid Tariff

Hawaii develops microgrid tariff seeks to value resilience, but sees no new microgrid deployment.

Overview: The Hawaii Public Utilities Commission (PUC) has been developing its statewide microgrid services tariff (MCS) since 2018. Phase 1 of the tariff proceeding established rules for customer-owned microgrids and rules for hybrid arrangements, in which customers utilize utility-owned distribution infrastructure. Phase 2 is developing rules and compensation structures for non-emergency microgrid services to Hawaiian Electric's (HECO) distribution system including demand response, energy storage demand flexibility, infrastructure deferral, and resiliency. Part of developing compensation for resilience (e.g., islanding) involves integrating performance incentive mechanisms that are being developed in a parallel performance-based ratemaking (PBR) proceeding. The Phase 2 scoping document also indicated the PUC's priority of overcoming barriers to microgrids that include aggregated DER as well as privately owned multi-customer microgrids, identify sites for potential microgrid projects, and develop tariffs that might make development more attractive to developers.

What we're watching: Thus far, the microgrid tariff developed in Phase 1 has not been used to develop a single project. The MCS proceeding is addressing cutting edge questions, establishing strong priorities, and has the potential to be transformative in scope. Such an outcome would require an ambitious final order and an effective strategy for implementing and promoting uptake of new tariffs.

6. West Virginia Business Districts

West Virginia law creates a new 'Business Development District'.

Overview: In 2022, West Virginia passed legislation allowing private microgrid ownership and operation in two business districts. These districts can generate, distribute, and consume electricity independent from West Virginia Public Service Commission (PSC) regulation. They are required to have a positive economic impact, to be situated on land previously used for coal mining, and to generate renewable energy either used on-site or delivered to the wholesale market. Microgrid operators in the districts can sell renewable generation to business district customers under independently negotiated rates or to PJM under energy export tariffs. Microgrid stakeholders have the option to interconnect to the local distribution utility's system, in which case they can petition the PSC for a "special rate" for additional regulated utility service and participation in the state's net metering program. One of the two business districts is planned to serve a Berkshire Hathaway-owned titanium production plant and surrounding facilities, using Berkshire Hathaway Renewables generation and distribution infrastructure.

What we're watching: This law represents an interesting exemption to traditional electricity regulation but is limited to two sites with narrow qualifications. One of two use cases appears to explicitly serve the needs of Berkshire Hathaway-owned businesses (both the microgrid operator and customer are Berkshire Hathaway-owned). Despite its limited scope, West Virginia's exemption will be an experiment in private multi-customer microgrid ownership and operation. These districts will act as a testbed for independent rate-setting between stakeholders and new interactions between microgrids and the wholesale market, retail distribution markets, and state regulators.

7. Alaska Remote Deployment

Alaska's long history of microgrid deployment for rural energy needs offers many lessons.

Overview: Microgrids are uniquely positioned to serve Alaska's energy needs. The state's population is largely dispersed across remote communities, many of which are not connected to any utility distribution network. Alaska's investor-owned utilities are small and primarily serve urban customers. State government and federal programs have provided municipalities and rural communities with incentives to partner with microgrid developers, and today microgrids serve a markedly higher percentage of statewide peak demand than any other state in the country.

What we're watching: Think Microgrid will continue monitoring the steady deployment of privately-owned microgrids in Alaska, including how these projects serve as a testbed for diverse microgrid technologies and any actions state regulators or distribution utilities take to support interconnection and/or market participation.

8. Xcel Resiliency As A Service

Utility offers resiliency-as-a-service tariffs for C&I microgrids, but reverses course on other microgrids.

Overview: In Colorado, Minnesota, and Wisconsin, state utility commissions have approved a series of 'resiliency as a service' programs proposed by Xcel Energy companies. The programs and tariffs have provided an option for large customers to install Xcel owned-and-operated resiliency assets on their property for added monthly fees. These assets include basic backup generation, energy storage, and single-customer microgrids. They vary slightly but are each designed to serve either commercial and industrial customers or customers that manage critical infrastructure.

What we're watching: Microgrid and distributed energy advocates have had mixed responses to Xcel's resiliency as a service model. On the one hand, the offerings open a new pathway for basic microgrid deployment among customers with heightened resiliency needs. By contrast, critics argue that Xcel's program in Minnesota, for example, gives the utility an uncompetitive advantage in a crowded distributed energy space and that the program is planned to yield only up to 15 projects. Think Microgrid will monitor the projects developed under Xcel's various tariffs, further controversies, and whether other utilities follow suit.

9. California Microgrid OIR Track 5

In troubling reversal, commission limits public input and scope of multi-customer tariff development.

Overview: In August 2023, the CPUC Administrative Law Judge (ALJ) ordered the state's investor-owned utilities to develop and submit and draft standard microgrid multi-property tariffs. The CPUC directed the utilities to model their submissions based on PG&E's existing Community Microgrid Enablement Tariff. The order offered specific guidelines for the tariffs and required utilities to submit their proposals by October 2023.

What we're watching: In its order, the ALJ did not seek input from stakeholders on the tariff guidelines, a serious concern for advocates of public participation in the regulatory process. Some of the ALJ's specific guidelines are not inherently flawed. For example, tariffs cannot impose restrictions on generation sources utilized and should encourage DER integration and third-party aggregations. That said, by directing California's investor-owned utilities to expand on PG&E's existing Community Microgrid Enablement Tariff, the order extends a limited, failing mechanism. PG&E's tariff has led to the development of very few utility-owned projects. To align with the CPUC's mandate to facilitate microgrid commercialization, its multi-customer microgrid tariff should instead provide pathways for diverse projects and interactions in utility distribution systems, including of privately-owned microgrids.

10. Washington, D.C. Multi-Customer Microgrids

In regressive decision, Washington D.C. increases regulatory barriers for multi-customer microgrids.

Overview: In 2022, the Washington D.C. Public Service Commission (PSC) issued an order concluding its multi-year microgrid tariff proceeding. The order determined that the district would regulate multi-customer microgrids as public utilities, while regulating single-customer and campus microgrids as energy generating facilities/suppliers.

What we're watching: This order was preceded by years of rigorous working group activity. By continuing to regulate multi-customer microgrids as utilities, the PSC's decision opted not to reconsider right-of-way laws that are the most substantial barriers to multi-customer microgrid development. Think Microgrid will monitor ongoing activity related to the decision, including DC utilities' microgrid tariff proposals.

11. California Microutility Proposal

California regulators deny proposal for community microgrid proposal, refusing any hearing.

Overview: In April 2023, the California Public Utilities Commission (CPUC) dismissed distributed energy developer Sunnova's proposal to develop privately-owned community microgrids. Sunnova's petition proposed to build, own, and operate clean CAISO-connected microgrids in new residential communities under California's 'micro-utility' statute. The CPUC's decision argued that Sunnova failed to meet California's statutory qualifications and identified uncertainties around project implementation and rate-setting procedures. The order denied Sunnova the opportunity to advance the request to a hearing.

What we're watching: The CPUC's decision signals unwillingness by the CPUC to consider alternative models to community microgrid deployment. While 2018 state legislation mandated the PUC to facilitate microgrid commercialization, tariffs and programs developed since are limited to utility-owned projects. While some of the CPUC's challenges to Sunnova's position are reasonable, denying a hearing negated the opportunity for a regulatory process including more detailed plans and stakeholder engagement. It also signaled the Commission's reluctance to revisit California Section 218, the state's 'right of way' law, which Think Microgrid suggests is critical to reform in order to mobilize private capital.

12. Project Footprint

Mobile microgrids that exemplify the spirit of community service and resilience.

Overview: Project Footprint provides clean, mobile microgrids that provide power in disaster response situations. Their technology has supported communities across the country during outages following hurricanes, wildfires, tornadoes, and more.

What we're watching: While Project Footprint microgrids are not typically grid-connected in the same way that other microgrids are, Think Microgrid believes that emergency response and interagency coordination are vital components of resilience planning and disaster relief. In many cases, these microgrids complement or support traditional grid resource. As a result, these kinds of mobile microgrids can and should be incorporated into any state's comprehensive resilience and emergency response planning processes.

THINK MICROGRID MISSION

Think Microgrid is a coalition that serves as the unified voice for the microgrid industry, highlighting the role that microgrids can play at this unique moment in history. Think Microgrid collaborates with regulators, political leaders, and communicators, supporting their understanding of how microgrid technologies work, their role in achieving policy goals, and how well-designed policy and regulatory reform can proactively address barriers that exist today. Think Microgrid is dedicated to asking difficult questions about the ever-evolving microgrid landscape. Our role is to steward a future that enables full microgrid commercialization and ensures that communities are positioned to capture the resiliency, climate, and equity benefits of microgrids.

Think Microgrid

Partners include:

ENCHANTED ROCK The Power is On.

EATON Powering Business Worldwide

PowerSecure

A Yokogawa Company PXiSE Energy Solutions

Bloomenergy

sunnova

HOMER Energy by UL

Life Is On Schneider Electric

STATE SCORE COMMENTS

The Scorecard methodology is intended to clearly and transparently describe the criteria by which state scores are determined for each of the five individual criteria that comprise the overall state score. As noted, these combine several dimensions and we have incorporated insights and feedback from a diverse array of leaders in the microgrid and policy communities. At the same time, it is sometimes the case that analysis of a complex market and regulatory ecosystem is as much art as science. As much as possible, these notes and comments provide insight into the observations that informed our scores. Undoubtedly, there are places where our information is incomplete or our interpretation is misguided. Consistent with our overall mission, we hope the Scorecard and these supplemental comments, will stimulate needed conversations and build relationships that support collaboration. We welcome your corrections, additions, questions and suggestions. Thank you for your commitment, dedication and vision.

The table below includes specific comments and notes, where relevant, that are specific to the individual component scores for each category area. The table includes the overall state score, the size of the state market (total electricity sales revenue, as reported by the Energy Information Agency) and category area.

STATE SCORE	STATE	$B	METRIC	SCORE	NOTES
3.2	HI	$2.7	Deployment	3	Hawaii has attracted significant microgrid development, especially in basic single-customer microgrids and behind-the-meter systems. According to Wood Mackenzie data, microgrids serve over 5% of the state's peak electricity demand.
3.2	HI	$2.7	Policy	3	In 2018, the Hawaii PUC intiated its Investigation into Establishing a Microgrid Tariff under 2018 legislation. The proceeding's Phase 1 decision defined a variety of microgrid ownership structures, including customer-owned microgrids. It also established guidelines for billing and compensation during blue sky and islanded conditions; eliminated a potential program cap for PUC-supported microgrid deployment; established rules for microgrid interconnection; and established procedures for microgrid project applications. Phase 2 of the proceeding is investigating compensation mechanisms for grid services to support resiliency; mechanisms to fund microgrid development and avoid cross-subsidization from non-benefitting customers; customer protections in expanded microgrid deployment scenarios; cultivating efficient microgrid interconnection; and coordination across existing initiatives and programs to make Hawaiian microgrid development as universally beneficial and attractive as possible.
3.2	HI	$2.7	Resilience	3	Phase 2 of Hawaii's microgrid tariff proceeding is developing resiliency metrics to facilitate compensation for microgrid islanding services. These metrics will be aligned with performance-based incentive mechanisms designed in the PUC's alternative ratemaking proceeding. The Phase 2 scoping document established a priority of identifying and supporting deployment for projects that support resilience needs: "Can the Commission identify critical facilities, community needs, funding mechanisms for microgrid development, barriers to development, and tariff provisions that might make development more attractive to developers. Hawaii's microgrid tariff proceeding is also aligned with goals developed in IGP and DER proceedings." State resilience planning resources: Hawaii 2050 Sustainability Plan: Charting a Course for the Decade of Action (2020-2030): https://e9radar.link/fvai
3.2	HI	$2.7	Grid Services	4	In 2018, legislation mandated that the Hawaii PUC develop a microgrid services tariff (MCS). While the scope of Hawaii's microgrid tariff is eventually intended to apply to microgrids of all ownership models and configurations, Phase 1 prioritized establishing basic compensation mechanisms for customer-owned projects. Phase 1 also set the parameters for a 'hybrid' model in which customers and/or microgrid operators use aspects of Hawaiian Electric's distribution system and equipment. Phase 2 of the tariff is focused on developing compensation for energy exports and non-emergency grid services, which include demand response, energy storage, islanding capabilities, and distribution infrastructure deferral. It is further focused on harmonizing microgrid services with existing tariffs related to DER exports and resiliency. The Phase 2 order expressed a commitment to open pathways for private multi-customer microgrid development. The order noted that currently, utility participation is a prerequisite for leveraging customer DER aggregations into an islandable resource. It argued that this limitation represented "potentially significant limitation on the future development of microgrids" and wrote that in its tariff development process, it is "supportive of reducing or removing regulatory barriers to private investment in microgrids when primary resiliency benefits accrue to microgrid participant." Phase 2 is also considering revisiting distribution-level wheeling rules, which currently prohibit groups of customers and/or private third parties from developing microgrid projects utilizing existing utility-owned distribution infrastructure.
3.2	HI	$2.7	Equity	3	Hawaii's 2022 Energy Burden, Equity, and Justice law required the PUC to initiate an equity investigation. The proceeding supports equitable access to clean energy through expanding participation in customer programs through community benefits packages; enhanced clean energy financing programs; utility business model reforms with increased reporting and transparency; disconnection moratoriums; developing an equity and justice action plan; improving accessibility of PUC proceedings; and customer education. Hawaii's performance-based ratemaking mechanism has implemented performance incentives and a scorecard to advance equity priorities.
3	TX	$36.9	Policy	3	The Texas Power Promise program was established under the requirements of 2023 legislation SB 2627 and is being implemented in Docket No. 54999. The legislation directs the PUCT to provide grants to privately-owned, resilience-focused microgrid projects. Two pieces of legislation, SB2 and SB3, were passed in 2021 following Texas' blackouts, were reliability rather than resilience-focused. In 2023, the state legislature passed two laws to initiate grid resilience planning in the state.

STATE SCORE	STATE	$B	METRIC	SCORE	NOTES
3	TX	$36.9	Resilience	4	Texas' 2023 legislative session passed several new laws focused on data collection, planning, and investment stipulation related to grid resilience. HB 2555 allowed electric utilities to submit resilience plans to the PUCT. The subsequent proceeding is developing parameters for utility resilience plans, but the legislation does not specifically require plans to include microgrids as resilience solutions. HB 1500, Texas' omnibus energy legislation, included a provision requiring utilities to conduct circuit segmentation studies to support resilience investments by September 2024. These will include examination of "facility-specific backup power systems and segmentation" to "enhance the utility's outage management flexibility." SB 2627 created a $1.8B state-funded grant program to support resilience investments including microgrid projects and EV bus grid integration. The "Texas Power Promise" program will fund microgrid projects and dispatchable EV bus-to-grid battery storage projects with capacity up to 2.5 MW, expected to cover up to 30-50% of projects. Qualifying microgrid projects will combine natural gas or propane generation with solar and battery storage resources and must be able to operate in island mode for 48 continuous hours. The legislation represents a broad investment in resilience-focused microgrids with flexible resource mixes and ownership models. The law is clear to distinguish resiliency from reliability.
3	TX	$36.9	Grid Services	3	ERCOT has supported significant microgrid integration through transparent price signals in various wholesale market tariffs (e.g., bulk power). In ERCOT, customers are exposed to price signals, leading to attractive wholesale market opportunities for microgrid participation.
3	CO	$5.8	Policy	3	In 2023, Colorado legislature passed a law requiring the state energy office to develop a Electric Grid Resilience And Reliability Roadmap. The roadmap will examine microgrids' role in supporting the grid resilience, equity, decarbonization, and other benefits; identify priority sites for microgrid deployment; and explore recommendations for legislative or administrative action to facilitate projects, including rule changes and approaches to technical barriers. Another 2023 law established Colorado's Microgrids For Community Resilience Grant Program, a $3.5M grant program for microgrids in rural, outage-prone communities. The grants will be administered collaboratively by the Colorado Energy Office's Department of Local Affairs and the State Resiliency Office, and "community anchor institutions" in disruption-prone areas will be eligible. In 2020, the Colorado PUC approved a 7-site, $23.4M Xcel-owned and operated microgrid pilot as part of Xcel's Community Resilience Initiative.
3	CO	$5.8	Resilience	3	Colorado's energy programs and planning all focus on facilitating deployment in vulnerable communities, including rural and low-income communities. State resilience planning resources: Colorado Resiliency Framework: https://e9radar.link/tomz Colorado Resiliency Office: https://www.coresiliency.com/
3	CO	$5.8	Equity	4	In 2021, Colorado legislation established a statewide environmental justice framework and implemented a range of planning and funding opportunities. The state's Environmental Justice Act defined "disproportionately impacted communities," established emissions reduction targets, and prioritized a range of specific activities related to community-centered decarbonization. These include requiring utilities to file updated resource and clean energy plans; planning for employment and training support related to coal facility retirement; and establishing and implementing a social cost of carbon mechanism in state planning processes. The state's microgrid roadmap prioritizes "high-risk communities" and identified administrative changes and statutory changes needed to help facilitate projects. The law also defined considerations around microgrid safety, development, maintenance; metrics for evaluating the costs and benefits of microgrids; financial and technical support for microgrid deployment; and education and outreach programs. The state's microgrid grant program provides funding support for "community-anchor" institutions and critical facilities in rural communities served by municipal and cooperative utilities. According to the law, eligible communities must be dealing with risk from extreme weather/climate, infrastructure, or socio-economic or environmental justice concerns. Another 2022 law established the Infrastructure Investment and Jobs Act Cash Fund, which allocated $80M in state funding to match applicant IIJA application spending including applications for grid resilience grants. Colorado programs are directed to utilize state tools like the state Climate and Social Vulnerabilities Mapping Tool to map community demographics to guide the implementation of equity priorities.
3	CT	$5.2	Policy	3	Connecticut was one of the first states nationwide to develop policy to incentivize microgrid development. 2012 legislation created the original Connecticut Microgrid Grant and Loan Program, which has hosted four $15M rounds of funding driving microgrid construction and improvements at critical facilities. 2020 legislation amended and expanded the program, defining resilience as a goal and establishing it as a priority for project awards. In its 2021 Integrated Resource Plan, the Connecticut Department of Energy and Environmental Planning (DEEP) highlighted the statewide objective of further expanding the program. In March 2022, the PURA also created Connecticut's Innovative Energy Solutions (IES) program, which funds and facilitates innovative pilot projects in which microgrids are eligible.
3	CT	$5.2	Resilience	3	The PURA hosts a dedicated resiliency and reliability investigation as part of its Distribution System Planning regulatory umbrella. In 2022, the PURA implemented reliability and resilience frameworks for utility resilience planning and investments. In its first phase, the proceeding investigated the cost-effectiveness of reliability and resilience programs. Connecticut's DEEP also led an interagency working group focused on responding to the state's resiliency and climate needs. State energy resilience resources: DEEP 2022 Comprehensive Energy Strategy: http://e9radar.link/5tv Taking Action on Climate Change and Building a More Resilient Connecticut for All: https://e9radar.link/8a5800
3	CT	$5.2	Equity	4	Connecticut's 2023 environmental justice (EJ) law established a statewide EJ framework and special infrastructure siting parameters for EJ community applications, including for generation facilities. Connecticut's DEEP facilitates a Climate Resilience Grant Program to support communities and other entities in designing applications for federal Infrastructure Investment and Jobs Act (IIJA) resilience grants. DEEP offers funding for community engagement and technical assistance in project development and application-writing support, with 40% of funding allocated to low-income applicants.
2.8	CA	$42.3	Policy	2	California has allocated more state funding than any other state to support utility-owned community multi-customer microgrid development, but its regulators notably denied a private company's petition to develop privately-owned projects. 2018 legislation initiated a range of activities to support the "commercialization" of the microgrid market. These included an ongoing PUC investigation developing microgrid tariffs, a California Energy Commission (CEC) microgrid funding program, and a $200M PUC microgrid incentive program (MIP) expected to stimulate development of about a dozen utility-owned community microgrids. In 2023, California regulators denied a hearing to address private developer Sunnova's petition to develop privately owned and operated, interconnected multi-customer microgrids. The petition would have classified opt-in community microgrid projects as "micro-utilities" under existing statutes. The projects would have set community rates independently and bid energy and grid services into distribution utility or CAISO markets. By denying Sunnova a hearing to examine the proposal, the PUC demonstrated its commitment to a microgrid policy strategy that is limited to utility-owned infrastructure.
2.8	CA	$42.3	Resilience	3	Improving resiliency is a statutory requirement of California's OIR on Microgrids. California's MIP grants were established by that proceeding to prioritize communities with resiliency needs. California's Emergency OIR on Microgrids, Rulemaking on Climate Change Adaptation, CEC Informational DER proceeding all incorporate and advance resiliency goals. State resilience planning resources: Resiliency landing page: https://e9radar.link/klat Planning and Investing for a Resilient California: https://e9radar.link/635b CARB decarbonization plan: https://e9radar.link/975cdc
2.8	CA	$42.3	Grid Services	3	The PUC initiated a microgrid tariff investigation in 2018 and has developed tariffs for single-customer microgrids. The tariffs have not been broadly utilized, only apply to 100% carbon-free microgrids, and are designed to facilitate project development over ~3-year time spans. In 2023, the Track 5 of the investigation is developing multi-customer tariffs. The PUC directed utilities to file tariffs largely modeled off an existing PG&E multi-customer microgrid tariff, or Community Microgrid Enablment Tariff, and conducted minimal stakeholder engagement to establish the tariff parameters.

STATE SCORE	STATE	$B	METRIC	SCORE	NOTES
2.8	CA	$42.3	Equity	3	California's Microgrid Incentive Program (MIP) provides up to $25k and technical assistance to communities developing microgrid applications. California hosts a multi-agency Disadvantaged Communities Advisory Group which advises the Energy Commission (CEC) and Public Utilities Commission on energy equity issues, and the CEC manages an Energy Equity Indicators data initiative to help identify opportunities to improve access to clean energy technologies for low-income customers and disadvantaged communities, increase clean energy investment in those communities, and improve community resilience to grid outages and extreme events.
2.8	NY	$20.9	Policy	2	In 2014, the DPS and NYSERDA initiated New York's NY Prize, a microgrid feasibility assessment program established as an outgrowth of its Reforming Energy Vision (REV) initiative. The program supported microgrid feasibility studies for several years but did not advance to its implementation phase as planned.
2.8	NY	$20.9	Resilience	3	In 2022, the DPS required its utilities to file climate vulnerability plans. The plan parameters require utilities to propose infrastructure changes that reduce outage times and costs; improve reliability; detail how the utility will incorporate climate change into its planning, design, operations, and emergency response; and build resilience and manage climate risk. State resilience planning resources: 2015 State Energy Plan: https://e9radar.link/4fxo NYSERDA Climate Resilience Initiative: https://e9radar.link/t4yy
2.8	NY	$20.9	Equity	4	NYSERDA's Energy & Climate Equity Strategy commits to "advancing energy and climate justice through investments in our economy and workforce that address historic inequities and improve health and resilience for all New Yorkers, especially historically marginalized communities." The program, driven by requirements of the Climate Leadership and Community Protection Act, coordinates interagency planning for climate equity and justice and facilitates community engagement.
2.8	PR		Policy	3	A 2018 rule required the Puerto Rico Electric Power Authority (PREPA) to promote microgrid development in Puerto Rico; enable customer choice and control over their electric service; increase system resiliency; foster energy efficiency; and environmentally sustainable initiatives and spur economic growth by creating a new and emerging market for microgrid services. A 2020 decision in a Puerto Rico Energy Bureau's (PREB) resource planning investigation mandated that PREPA incorporate microgrid planning into its resource planning process. The decision found that "microgrids form a critical part of the resiliency solutions envisioned for the Commonwealth," and ordered PREPA to "directly incorporate the promotion of microgrid resources into all of its transmission, distribution and resource planning exercises and all deployment actions taken in compliance with the modified Action Plan." 2019 legislation and a subsequent PREB proceeding established interconnection rules designed to promote more certainty and streamline microgrid integration.
2.8	PR		Resilience	3	A 2020 decision in Puerto Rico's microgrid interconnection proceeding offers a "Framework for Resilience" as a tool for evaluating potential microgrid projects. This framework includes cost/benefit analysis for resilience investments, flexibility tailored to various classes of customers with varying access to critical infrastructure, and evaluation of value added by integrating DERs and demand response.
2.6	NJ	$9.9	Policy	3	New Jersey's Town Center Distributed Energy Resources (TCDER) microgrid deployment program has financed feasibility studies for over three dozen microgrid sites, some of which have been built. The program is currently amidst its second phase and third round of grants, which were distributed in 2021. The grants have been awarded to towns and municipalities whose proposals would increase resilience for community centers or critical facilities. The BPU has defined and provided specific evaluation parameters for project applications that qualify as single-customer, campus, and multi-customer microgrids. The New Jersey legislature also passed a Property Assessed Clean Energy program in June 2021, and microgrid projects are eligible.
2.6	NJ	$9.9	Resilience	3	New Jersey established the New Jersey Energy Resilience Bank (ERB) in 2014 to minimize the potential impacts of future power outages and increase energy resiliency through grants and loans will be provided to eligible critical facilities. State resilience planning resources: Master Plan: https://e9radar.link/tqv7 New Jersey Climate Change Resilience Strategy: https://e9radar.link/0dqq
2.6	MD	$6.8	Policy	3	In 2020, Maryland established a microgrid grant program to be facilitated by the Maryland Energy Administration (MEA) and funded through the Resilient Maryland program. The program awards feasibility study funding for community and critical facility microgrids across the state, prioritizing projects that address equity and resiliency. The program funded 14 feasibility studies in 2020 and received round two applications in March 2022. While the Maryland PSC has rejected certain utility-owned, ratepayer-funded microgrid proposals, it approved Pepco and Delmarva "grid resiliency charges" to fund resiliency projects including microgrids. The PSC developed performance incentive mechanisms (PIMs) designed for grid resilience, reliability, and energy storage development. A working group established following Maryland's Climate Solutions Now Act of 2022 will explore methods to support DER and storage development that increases grid security, especially for critical facilities during power outages.
2.6	MD	$6.8	Resilience	3	Maryland's alternative rate exploration designed performance metrics for valuing resilience. State resilience planning resources: Energy Plan: https://e9radar.link/1e8005 Climate Adaptation and Resilience Framework Recommendations: https://e9radar.link/awm9
2.6	MD	$6.8	Equity	2	The Resilient Maryland program offers grants for "public purpose" microgrids at community centers, commercial hubs, and emergency service complies.
2.6	WV	$2.8	Policy	3	In 2022, West Virginia passed legislation permitting the state to establish up to two business districts that can generate, distribute, and consume electricity independent of West Virginia PSC regulation. The law requires that the districts have a positive economic impact, are situated on land previously used for coal mining, and generate renewable energy that is either used on-site or delivered to the wholesale market. The law was promoted by Berkshire Hathaway; a Berkshire Hathaway-owned renewable energy company will serve a Berkshire Hathaway-owned titanium manufacturing company at one of the two Business Districts.
2.6	WV	$2.8	Resilience	2	The West Virginia Office of Energy (WVOE) developed a "Regional Microgrids for Resilience" study to identify potential public interest microgrid deployment sites.
2.6	WV	$2.8	Grid Services	3	West Virginia's business district microgrid law establishes diverse pathways for microgrid compensation among its two business districts. These include compensation directly from participating business customers, wholesale markets, and regulated distribution mechanisms like net metering. Microgrid operators have the option to direct renewable generation to business district customers under independently negotiated rates or to the wholesale market under energy export tariffs (in this case, PJM). While microgrid operators and/or business district customers are not required to interconnect to a local utility's distribution system, they may choose to. Under the law, interconnected microgrid customers can choose to negotiate a "special rate" for additional regulated utility service, through a dedicated PSC process. Customers are also eligible to participate in West Virginia net metering service while maintaining exemption from state net metering interconnection requirements.
2.6	ME	$1.6	Policy	4	Maine's microgrid law amended the state definition of public utility to ensure that microgrid developers have access to public rights-of-way, enabling multi-customer privately owned microgrid development. The law also directed the PUC to define the services that microgrids can provide while islanded and grid-connected and gave the PUC parameters to guide approval of microgrid projects. Specifically, the PUC is directed to approve microgrid proposals deemed to be in the public interest and meeting certain requirements around size, technical feasibility, integration of DERs and renewable energy, and more.
2.6	ME	$1.6	Resilience	2	State resilience planning resources: Community Resilience Planning, Public Health, and Emergency Management Working Group: https://e9radar.link/8ef641 Clean Energy Jobs and Climate Council

STATE SCORE	STATE	$B	METRIC	SCORE	NOTES
2.6	ME	$1.6	Grid Services	3	Maine's microgrid law requires a contractual relationship between the microgrid operator and consumers within the area to be served by the proposed microgrid. It also states that any microgrid operator proposing a microgrid must have the financial and technical capacity to build and operate one, and must demonstrate that the microgrid will not impede grid operations.
2.6	AK	$1.2	Deployment	4	Alaska has attracted significant private microgrid development, especially in rural communities. According to Wood Mackenzie data, microgrids serve over 10% of the state's peak electricity demand.
2.6	AK	$1.2	Resilience	3	2022 legislation allowed municipalities to establish 'energy and resilience improvement programs' that include "microgrids for energy storage and backup power generation." The legislation allowed municipalities and partner entities to conditionally apply for financing from the Alaskan state government up to 25% of the project cost. State resilience planning resources: Resilience landing page: https://e9radar.link/1449f8
2.4	MA	$9.4	Policy	2	In 2018, Massachusetts' Clean Energy Center's (CEC) $1.1M Community Microgrid Program sponsored feasibility studies for 14 potential community microgrids across the state. The studies evaluated each project's potential for resilience and community benefits. The Community Microgrid Program's successor, the CLEAR program, is funded by the executive office's $40M Community Clean Energy Resiliency Initiative and continues to grant awards for a broader spectrum of resiliency projects.
2.4	MA	$9.4	Resilience	2	State resilience planning resources: Statewide Resilience Master Plan (SRMP): https://e9radar.link/pona
2.4	MA	$9.4	Equity	3	Massachusetts' climate law mandates environmental justice considerations in all decision-making but has yet to be applied to any microgrid-specific policy processes.
2.2	MN	$6.9	Policy	2	The Minnesota PUC approved an Xcel 'resiliency as a service' tariff that provides rate options for utility-owned, C&I customer-hosted microgrids. The tariff is expected to apply to a limited number of projects. Xcel removed its request to recover ratepayer funds for its Resilient Minneapolis microgrid project in response to the Minnesota PUC's ruling on a proposed rate increase, but the PUC required it to resubmit the proposal. The state's utility Integrated Distribution Planning (IDP) process addresses utility-owned microgrids as a future resilience solution.
2.2	MN	$6.9	Resilience	2	State resilience planning resources: Climate Adaptation and Resilience Planning Survey: https://e9radar.link/4a907d
2.2	MN	$6.9	Equity	3	Minnesota's 100% Clean Energy Bill requires the PUC to consider what impact its decisions will have on historically marginalized communities in environmental justice areas. The law defines these areas and requires utilities to prove that any changes they propose will benefit those communities. Utilities must report every two years to legislative leaders on their progress in creating clean energy jobs; providing workers with the tools, opportunities, and assistance needed to transition to clean energy jobs; increasing the diversity of the utility's workforce and vendors; lowering air emissions; and keeping electricity affordable for low-income Minnesotans.
2.2	DC	$1.4	Policy	2	In 2022, the Washington D.C. PSC issued an order concluding its microgrid tariff proceeding. The order addressed the legal definition of 'public utility' as it relates to microgrids, deciding to regulate single-customer and campus microgrids as energy-generating facilities/suppliers and multi-customer microgrids as public utilities. The order continued existing microgrid definitions: while single-customer and campus microgrids serve the customers that immediately own and manage them, multi-customer microgrids transmit and distribute energy to "multiple end-use retail customers and multiple buildings with individual microgrid-owned meters that may or may not be located on the same site as the microgrid." The classification continues the limitation of privately-owned multi-customer microgrids caused by D.C.'s right-of-way laws.
2.2	DC	$1.4	Resilience	2	State resilience planning resources: Resilient DC A Strategy to Thrive in the Face of Change: https://e9radar.link/nhx4
2.2	DC	$1.4	Grid Services	3	The Washington D.C. PSC issued a Notice of Proposed Rulemaking following the final order of its microgrid tariff proceeding to develop utility microgrid tariffs. According to the Notice, the tariffs should address the value of resiliency, power quality, islanding, grid reliability, and other ancillary services provided by microgrids. It also directs Pepco to modify its Standby Service to accommodate a focus on single-customer and campus microgrids integrating DER. Pepco submitted its proposed Standby Service in 2023.
2.2	VT	$0.8	Resilience	3	Green Mountain Power's October 2020 Resilience Plan identified "resiliency zones" that would facilitate distribution $14M to optimal microgrid investments. The framework is harmonized with GMP's 2020 Climate Plan and is being implemented in its 2021 IRP. State resilience planning resources: Initial Climate Action Plan: https://e9radar.link/71f56b
2.2	VT	$0.8	Equity	3	Green Mountain Power-driven Microgrid planning in Vermont through its Resilience Plan incorporates planning requirements of the state's environmental justice law.
2	NC	$12.9	Resilience	3	Duke Energy's Climate Risk and Resilience Working Group, convened in 2020, published its Climate Risk Assessment and Resilience Report. The report highlighted the resilience, community, and critical infrastructure benefits of microgrids, and established the goal of creating resilience metrics. State resilience planning resources: Energy Plan: https://e9radar.link/slsd Climate Risk Assessment and Resilience Plan: https://e9radar.link/8jx9
2	MI	$11.7	Policy	3	The MI Power Grid is a multi-year stakeholder initiative to maximize the benefits of the transition to clean, distributed energy resources for Michigan residents and businesses. The MI Power Grid's 2023 final report directs staff to investigate microgrids and specifically address the pros and cons of both utility and non-utility ownership and the development of microgrids connected with alternative business models.
2	LA	$7.2	Resilience	3	The Louisiana PSC is developing rules around resilience in its Assessment of Resilience and Storm Hardening. In 2023, the proceeding issued a draft rule that would establish a PSC-facilitated process to review, prioritize, and implement utility and other entities' system redundancy investments including microgrids. In parallel, Entergy proposed a $9.6B, 10-year Future Ready Resilience plan that includes rate recovery for ten unspecified utility-owned microgrid projects. Previously, the PSC approved Entergy's Power Through microgrid fleet, a voluntary offering for customers to develop Entergy-owned natural gas microgrids.
2	RI	$1.4	Policy	2	The Rhode Island Office of Energy Resources utilized funds from the Regional Greenhouse Gas Initiative (RGGI) to establish a microgrid grant program.
2	RI	$1.4	Resilience	3	In March 2021, Rhode Island's Office of Energy Resources (OER) published an assessment detailing potential statewide microgrid deployment, including specific feasibility studies. The OER's Rhode Island Resilient Microgrids for Critical Services report identifies critical infrastructure in the state, describes a methodology for potential facility/project evaluation, and makes policy recommendations – many designed to inform a potential microgrid funding program modeled from other states, and several addressing topics related to resilience and equity.

STATE SCORE	STATE	$B	METRIC	SCORE	NOTES
2	RI	$1.4	Equity	3	The Rhode Island Office of Energy Resources' Road to 100% Renewable Energy Roadmap features specific policy, programmatic, planning, and equity-based actions that will support achieving the 100% renewable electricity goal. The Rhode Island Governor's office established a $500K grant program called CompeteRI to support entities seeking federal funding made available from the Infrastructure Investment and Jobs Act (IIJA).
1.8	PA	$14.3	Resilience	3	State resilience planning resources: DEP Resiliency webinars: https://e9radar.link/h5pt
1.8	IL	$13.2	Resilience	3	Resiliency performance metrics are incorporated into utility alternative ratemaking mechanisms. State resilience planning resources: Climate Resilience ON TO 2050 strategy paper: https://e9radar.link/0md9
1.8	IL	$13.2	Equity	2	In December 2022, the ICC opened an investigation to develop and adopt a Renewable Energy Access Plan (REAP). The plan would designate renewable energy access plan zones suitable for developing renewable energy generation, aligned with state goals including environmental justice.
1.8	AZ	$8.2	Resilience	2	State resilience planning resources: EmPOWER Arizona: https://e9radar.link/dimy
1.8	SC	$8.0	Resilience	2	The South Carolina PSC facilitated a grid reliability investigation whose final report recommended investigating DERs and microgrids for application as grid hardening solutions. The recommendation has not been clearly implemented through any specific new proceeding or program. State resilience planning resources: Office of Resilience resources: https://e9radar.link/kuxw
1.8	WA	$7.3	Policy	2	Washington's Clean Energy Fund includes microgrids as an eligible technology for financing.
1.8	WA	$7.3	Resilience	2	Washington's two major climate laws, the Climate Commitment Act (Cap and Trade) and Climate and Energy Transformation Act, provide statewide priorities around energy resilience. The state does not have a dedicated resilience planning process. State resilience planning resources: "100% Clean Electricity to Meet the Needs of a Decarbonized Economy": e9radar.link/ch99
1.8	KY	$6.5	Resilience	3	Kentucky's Regional Microgrids for Resilience study prepared for its Office of Energy Policy (OEP) highlights 570 potential sites around the state that could receive resilience, reliability, economic, and equity benefits from specific microgrid projects, but no action has been taken to implement the report's recommendations. State resilience planning resources: KYE3: Designs for a Resilient Economy: e9radar.link/ibv3
1.8	OR	$4.4	Policy	2	Oregon's climate law authorized a $50M Community Renewable Energy Grant Program to be administered by the Oregon Department of Energy. Resilience-focused community microgrids are eligible for funding under the program.
1.8	OR	$4.4	Resilience	3	Oregon's climate law established a definition for "community energy resilience" and requires biennial utility reports to describe investments in environmental justice communities and their benefits. State resilience planning resources: Oregon Guidebook to Local Energy Resilience: https://e9radar.link/tri8
1.8	OR	$4.4	Equity	2	Oregon's Community Renewable Energy Grant Program prioritizes applicants from communities of color, low-income communities, Tribes, rural areas, and other underserved groups.
1.6	OH	$14.2	Deployment	2	Cuyahoga County, OH, is establishing a municipal utility that allows direct microgrid ownership and operation of distribution infrastructure.
1.6	TN	$9.7	Resilience	2	State resilience planning resources: Tennessee Resiliency Plan: https://e9radar.link/3juw
1.6	WI	$7.4	Policy	2	In 2020, Wisconsin established an Energy Innovation Grant Program, with microgrid and other resiliency projects qualifying as eligible for funding. The Wisconsin PSC approved Xcel's Resiliency Service Pilot Program, which offers a rate for customers to site and develop Xcel-owned and operated "resiliency assets" including small microgrid projects. In February 2023, the Wisconsin PSC ruled that certain third-party financed distributed energy (DER) systems nor their financiers not be regulated by the PSC as a 'public utility'. The petition focused on a single property- hosted DER project interconnected to the local utility's distribution system. The PSC order approved the specific project but withheld from making a broader determination about third-party financed DER, choosing "to make its determinations on a case-by-case basis, based upon the specific facts and circumstances presented in the record."
1.6	WI	$7.4	Resilience	2	State resilience planning resources: Clean Energy Plan addresses resilience: e9radar.link/dsdcw Governor's task force on climate change report: https://e9radar.link/zwzf
1.6	AR	$4.0	Resilience	2	Entergy's Power Through fleet offers energy resilience services, generally natural gas generation, installed at customer facilities for a monthly added rate.
1.6	NM	$2.2	Resilience	2	State resilience planning resources: 2021 Climate Plan: https://e9radar.link/9gd4 Forthcoming Climate Resilience Gap Assessment
1.4	MO	$7.6	Resilience	3	The Affordable, Abundant, and Reliable Energy Act defined a state reliability goal. It further directed the Missouri PSC to work with RTOs to incorporate cost-benefit analysis, rate impact analysis, and analysis reliability and resilience into planning for generating facilities. State resilience planning resources: Roadmap to Resilience: https://e9radar.link/jyqq
1.2	UT	$2.6	Resilience	1	State resilience planning resources: Office of Energy Development resilience landing page: https://e9radar.link/bi4f
1.2	MT	$1.4	Resilience	2	State resilience planning resources: Montana's Resiliency Framework for Communities: https://e9radar.link/6epm
1.2	DE	$1.2	Resilience	2	State resilience planning resources: Climate Action Plan: https://e9radar.link/2a1a0f Resilience Activities 2013-2020: https://e9radar.link/dviv