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Participating in Power: How to Read and Respond to Integrated Resource Plans

A Guide for Local Governments and Other Advocates

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Introduction

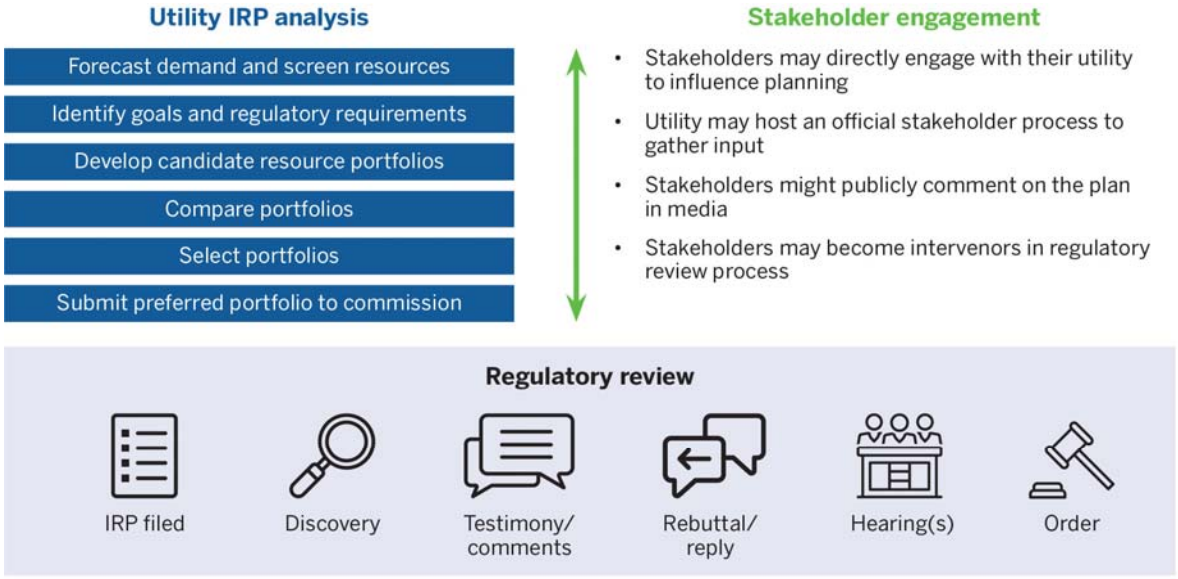
To meet 21st-century decarbonization and social equity priorities, utilities will have to transform the way they plan power sector investments. Most utilities have been focused on two metrics for success: reliability and affordability. While these objectives remain important, this framework does not effectively account for the climate, environmental and human impacts of fossil fuels, which disproportionately affect marginalized communities. To change the way utilities operate, it is critical to understand their governing structures and the strategic moments that offer the most opportunity to shift the industry's priorities. State-level public utility commissions (PUCs) are regulatory bodies with the power to change utility planning, procurement and rate-setting practices. PUC decision-making processes require public input, but historically, participation has been limited due to the technical and legal expertise required. This guide serves as a resource for local governments and other advocates who wish to engage PUCs in aligning their priorities with climate and social equity goals.

One of the most important opportunities to advocate for decarbonization and social equity in the power sector is through utility integrated resource plans (IRPs). An IRP is a tool that regulated electric utilities use to develop a publicly available plan for the best way to meet consumer needs over time, usually 10 to 20 years.[1] IRPs should consider a full range of feasible options on the supply side (utility-scale generation), demand side (customer-sited solutions) and distribution side (customer and community resources) and assess them against a common set of planning objectives and criteria.[2] The goal is to identify the portfolio of resources that performs best against those objectives and criteria over the long term, such as meeting policy requirements and maintaining reasonable rates.

IRPs are important because they shape the thinking of utility executives, regulators and intervening parties about the future of the utility, the reliability of the grid, the costs that customers will bear and the resulting impacts on the environment. Typically, a regulatory commission or PUC reviews the plan, orders modifications if necessary, and accepts or acknowledges it as the guidance document for future utility investment and operations decisions —especially the action plan, which identifies near-term actions the utility plans to take to achieve the identified resource portfolio. "Acceptance" means the plan meets guidelines set forth by law or by the regulator.[3]

Input from stakeholders such as consumer advocates, local governments[4] and environmental and justice advocates is crucial to the development of an IRP. Third parties that are granted formal legal status in a regulatory proceeding are called intervenors. Regulatory commissions will base their acceptance or rejection of a utility IRP on the evidence and testimony that intervenors submit to the official record. Without broad participation of stakeholders offering informative perspectives, a utility might not equitably consider all resource options, particularly those that may not support its management goals. Utilities control the data assumptions they present, the resources they do and do not evaluate, and the scenarios they do and do not analyze. Figure 1 provides an overview of the elements of an IRP development process and how stakeholders may engage in that process.[5]

Figure 1. Elements of an IRP development process



Note: This graphic shows a generalized example of the IRP development process. It does not capture all the variations of analysis, review, or stakeholder engagement, nor the iterations between steps. In this graphic, the regulatory review processes illustrated reflect states in which the regulator has a high level of regulatory oversight.

Source: Bonugli, C., & Ratz, H. (n.d.). *Integrated Resource Plan (IRP) Support Package*

To alter the outcome of an IRP, which is fundamentally based on modeling, stakeholders need access to the models used so they can comment on the utility's inputs, assumptions and methods. With this input, the utility and regulator can adjust the models accordingly before decisions are made. In other words, what might seem an obscure modeling process is actually a critical factor in shaping a utility's future investments and all of our future well-being. Those seeking to change the power sector must learn the technical terms and find ways to counter traditional assumptions and fossil fuel-based models with alternatives that make a compelling case for a new path forward.

This guide is written primarily for local governments and is informed by their experience engaging in IRPs. The resource is, however, likely to be useful for other advocates with similar climate and social priorities. The rest of this guide discusses common elements of IRPs, how local governments and other advocates can critique IRPs in ways that advance clean energy and social justice outcomes, ways to structure comments within IRP proceedings, and strategies to ensure that IRPs accomplish many of the aspirational outcomes described above.

Common Elements of IRPs

There is no universal framework or terminology that guides the development of IRPs. The requirements and terminology vary from state to state and, in some cases, even from utility to utility within a state. But regardless of the terminology used, several common elements form the core of almost every plan.[6] These common elements may be combined in some IRPs or presented in a different order than outlined below but will usually appear somewhere in the planning documents.

Description of the planning environment and requirements

The IRP will normally begin by identifying some status quo facts about the utility, the planning process, and any legal mandates or regulatory requirements that are germane to resource planning (for example, requirements to satisfy a portion of customer demand with renewable or clean resources, commonly known as a renewable portfolio standard or energy portfolio standard).

Load forecast

Because the IRP is a plan for meeting the long-range needs of utility customers, it will always include a forecast of future customer demand for energy. IRPs should include multiple load forecasts based on different assumptions about key variables such as local adoption rates for electric vehicles (EVs), building electrification growth, anticipated economic development or regional growth, and the effectiveness of energy efficiency programs.[7]

Resource options

The IRP should explore the full range of resource options. It will start by providing details about the electric resources that are already installed or have been adopted in the utility system, along with any known or already planned future changes to those resources (e.g., the planned retirement date for a coal-fired power plant). In addition, the IRP will describe the types of new resources that the utility could acquire to serve customer needs. For example, these could include storage, microgrids and active demand response programs that bid into wholesale markets. Furthermore, the IRP should include details about these resources' assumed capabilities and costs.

Resource portfolios

Based on the load forecast(s), the IRP identifies portfolios of existing and new resources that are capable of satisfying customer needs through the entirety of the planning period. Capacity expansion models are typically used to identify feasible portfolios. These models use a relatively simple approach to determine if a portfolio of resources can satisfy peak demand on the system, measured in megawatts (MW), and meet annual energy needs (megawatt-hours), while meeting any policy or regulatory requirements. Each portfolio represents one feasible way to serve the forecast load. By assembling multiple portfolios, the utility can assess (in the steps that follow) the costs and environmental impacts of different ways of serving load; see the text box.

Scenario selection

Many IRPs take the extra step of developing a baseline scenario and one or more alternative scenarios for evaluation. Scenarios can be used to test what happens if baseline planning assumptions are altered. For example, an IRP may evaluate a scenario in which the future commodity price of fossil gas is significantly higher (or lower) than what is considered to be the most likely price. Or the IRP might evaluate a scenario in which new environmental regulations are adopted in the future, such as a federal carbon tax. By evaluating scenarios, the utility can develop a robust IRP that avoids costly mistakes if events unfold in ways that the planners knew were possible but did not consider likely.

Two analytical models

Capacity expansion models simulate generation and transmission capacity investment and rely on assumptions about future electricity demand, fuel prices, technology cost and performance, and policy and regulation.

Dispatch models ensure the operation of generation facilities to produce energy at the lowest cost to reliably serve consumers, recognizing any operational limits of generation and transmission facilities.

Analysis

At its core, the IRP is an analytical undertaking. The planners use dispatch models (which are more complex than capacity expansion models) to simulate how the system would operate every hour of the year over the entire planning horizon and what that would cost for each combination of a resource portfolio and a scenario. In most cases, these models can also calculate the associated greenhouse gas emissions and in some cases other environmental impacts. The results for each portfolio can then be compared based on cost and environmental impacts.

Preferred portfolio

The ultimate goal of the IRP process is to choose a preferred portfolio of resources that will form the basis of the utility's future procurements and program offerings. In most cases, the portfolio that costs the least under the baseline scenario will be selected as the preferred portfolio, provided that the portfolio meets legal and regulatory mandates and the modeling did not reveal any reliability concerns. In these cases, evaluations of other scenarios are provided primarily for informational purposes. In some IRPs, however, a more complicated or risk-weighted assessment of all the scenarios is considered, such that

a portfolio that performs well under many different scenarios might be selected as the preferred option even if it is not the least-cost portfolio in the baseline scenario. Risk assessment can show what happens if load, resource costs or resource performance varies significantly from a baseline assumption.[8]

Near-term action plan

Many IRPs include a section in which the utility describes the actions it intends to take in the near term (e.g., the next one to five years). These actions include procuring new resources or developing new programs that are included in the preferred portfolio and necessary to meet near-term customer needs. This action plan normally does not address all the resources in the preferred portfolio. Because an IRP is a long-range planning exercise, the preferred portfolio may identify new resources to procure that will not be needed until many years into the future. For these resources, action can wait. In the next IRP, the load forecast may look different, the costs of various resource types may change, and the preferred portfolio may no longer include a resource that was included in the preferred portfolio in the prior IRP.

How to Read and Analyze an IRP

Integrated resource plans are often large and complicated documents. They are a product of years of work, various models and assumptions, and input from numerous stakeholders. No one individual produces them; not surprisingly, no individual has the capacity to effectively understand and critique every aspect of an IRP. Given this challenge of scale, in this section we discuss some strategies for effectively analyzing an IRP.

The IRP support package produced for the American Cities Climate Challenge highlights the advantages of partnering with other parties participating in the IRP process.[9] Engaging with other advocates and friendly industry players can produce common insights and help coordinate a unified voice of participating advocates. Local governments have a unique opportunity to collaborate with other jurisdictions that have similar climate and equity goals in order to introduce a shared, collective voice while elevating those goals with the utility and regulators.

As advocates share expertise, it is critical to focus one's analysis and comments to regulators on specific aspects of the IRP. Comments that, for example, simply ask for more clean energy provide a utility commission no evidence as to why this change would be good for the ratepayers or what the utility should do to revise its IRP analysis. Pointing out a specific flaw, such as a lack of new solar resources after 2030 without a justification, and giving relevant data that supports their inclusion provides useful insights that the commission will have to address. Similarly, identifying specific disconnects between a draft IRP and prevailing state climate or equity goals is another way to elevate important priorities and ensure the planning process reflects broader policy ambitions. One example of a disconnect would be an IRP that proposes development of new carbon-based electricity generation resources that are counter to achieving deep decarbonization targets over the goal time horizon.

The following discussion provides additional advocacy tips to manage the scale of an IRP and to focus on issues of greatest concern.

General Tips for Reading an IRP

> Develop a map

Read the executive summary in full. This step will provide an overall map of the IRP's structure and help you find your way around.

Another way to get the big picture is to review testimony of the utility's lead witness. It will provide a succinct narrative of the main points of the IRP, the corporate vision for the IRP and a list of utility witnesses for each subtopic. This testimony can also help advocates decide what sections to focus on.

> Use your search function

It is useful to make a list of keywords relevant to your priorities and use the search function to scan the document.

> Pictures help

Review graphs and tables relevant to your priorities. The table of contents usually lists all tables and figures. Do any of the images look drastically different than you expected? If so, it may warrant a deeper dive into that specific topic.

> A little history is useful

Look at the company's prior IRP and compare the two to see what has changed. Are trends moving in the direction you hope to see? Or is the new IRP simply a regurgitation of the old one?

> Compare your goals with the utility's

Do an informal gap analysis by looking at the resource mix in the preferred plan and compare that to your goals and expectations.

> What does the company emphasize?

If a review keeps surfacing specific topics (like the retirement of a specific plant), that likely means it is a subject of interest to the utility. If it is also relevant to your priorities, this may warrant a deeper dive into the related assumptions and methodology.

> Understand the perspective of the utility

One of the most important skills in the regulatory space is to think like the utility, including gaining familiarity with what executives of investor-owned utilities care about most (e.g., capital investment in utility-owned infrastructure) and why[10] (e.g., because under current regulatory practices utilities earn profit only on capital investments in utility-owned infrastructure). This approach will help you understand what informs their choices in the IRP and how you might align your interests with theirs.

> Divide and conquer

Remember the advice from the IRP support package: Coordinate with others and divide up the work. If you know the interests of other parties in the proceeding, you can help to amplify one another's priorities without duplicating analysis. A support network is also useful for answering questions about draft IRP documents and language, plus understanding the historical context of key issues.

Information requests

In most cases, parties granted intervenor status in a formal contested case can participate in one or more PUC-led rounds of "discovery" and submit information requests to the utility for information related to the docket. In the case of an IRP, intervenors can use information requests to gather additional data to formulate their response. This can include data on methodologies or assumptions, justification for trends referenced in the IRP, and data the intervenor thinks are relevant but missing in the IRP.

For example, the city of Minneapolis submitted several information requests to expand upon Xcel Energy's diversity, equity and inclusion appendix to the 2020-2034 Upper Midwest IRP. The data received through the requests ultimately informed the city's equity-centered comments on workforce and economic development.[11]

When requesting information, be as specific as possible and where the IRP references the topic. In some cases, the utility may respond that the requested data is not publicly available, which may require the signing of a nondisclosure agreement. Be prepared to challenge the assertion of confidentiality if the information does not constitute a trade secret or other disclosure not covered in the PUC rules.

Strategies to Advance Equity and Social Justice Priorities

Electricity generation has historically been a major source of harmful air pollution, and low-income communities and communities of color have been disproportionately exposed to those pollutants. Energy burden —or the percent of income spent on energy —tends to fall disproportionately on marginalized communities, particularly in areas that have been subjected to other systemic racial and environmental injustices. Likewise, marginalized communities often do not have the financial resources or property ownership status to take advantage of traditional utility incentive programs that could begin to address cost burdens. Furthermore, within the energy industry itself, Black, Indigenous and people of color and women are generally underrepresented as both workers and decision-makers. This helps perpetuate the cycle of exclusion, underinvestment and inequitable clean energy policies and program outcomes. The resource planning process provides an opportunity to correct some of these disparities. By formally integrating the priorities of the communities it serves, a utility resource plan can be an avenue to address historic inequities in communities and mitigate energy burden.

Advocates should consider IRP discussions as a venue for raising their concerns about how public utilities affect communities of color and how to improve upon this history.

Many of the topics discussed below have not historically been considered in IRPs. This omission is due to a lack of stakeholder advocacy and a narrow interpretation of the role of resource planning. Still, advocates should consider IRP discussions as a venue for raising their concerns about how public utilities affect communities of color and how to improve upon this history. These are precisely the important points of view that local governments and other advocates can bring to IRP proceedings and use to influence the process to achieve more equitable outcomes.

The following subsections provide conceptual justifications, key questions for the commission, possible sections of the IRP to review and evidence to cite for the following topics:

- Make the case for integrating equity into the IRP.
- Request the utility use a just transition framework.
- Advocate for utility programs that address community priorities and energy burden.
- Advocate for a utility workforce that represents the communities it serves.

Make the Case for Integrating Equity Into the IRP

Increasingly, energy thought leaders are encouraging regulators to better reflect the needs of all communities being served by public utilities in regulatory decision-making. It is important for advocates to provide a basis for regulators to take these steps. Advocates need to demonstrate why equity considerations are relevant to utility planning and why addressing solutions for vulnerable communities is within the authority of regulators reviewing utility plans.

When making the case for equity, consider that a PUC is a legislatively created court system. Frame your arguments within the scope of the authority that the state legislature or constitution has granted the PUC. PUCs are generally mandated to regulate utilities in the public interest, which is not always clearly defined and therefore up for interpretation by individual commissioners.[12]

Advocates should encourage a dialogue that explores what the public interest means today and offer guidance and encouragement to utility regulators on how they can use their authority to reflect decarbonization and social equity priorities. For instance, the COVID-19 pandemic has laid bare health and economic disparities among communities, underscoring that the "public" is not a monolith but composed of many diverse communities, each of which needs representation in long-term planning.[13] Advocates may wish to highlight numerous points. For example, advocates can encourage regulators to:

- Look at existing regulatory authority with renewed urgency and a willingness to consider relevant demographic data.
- Recognize and direct utilities to recognize that the public is composed of different communities with specific needs that utility programs should endeavor to meet.

Furthermore, there is precedent for incorporating equity, environmental justice and consideration of energy burden more broadly into regulatory decision-making and specifically into resource planning. At a high level, several states have used administrative, legislative and executive powers to do so. For example:

- The governor of Michigan introduced Executive Directive No. 2020-10, requiring the state Public Service Commission to expand its review of IRPs to incorporate considerations of environmental justice.[14]
- The governor of Oregon, in Executive Order No. 20.04, directed all state agencies to consider climate change and the PUC to specifically prioritize decarbonization, mitigating energy burden and addressing other inequities of affordability and environmental justice.[15]
- Washington state's Clean Energy Transformation Act requires IRPs to include an assessment informed by the cumulative impact of: energy and non-energy benefits and reductions of burdens to vulnerable populations and highly impacted communities; long-term and short-term public health and environmental benefits, costs and risks; and energy security and risk.[16]
- A 2018 decision by the California PUC requires IRPs to include an analysis of the disadvantaged communities served, air quality impacts of potential portfolios, and resources planned for procurement in disadvantaged communities. The rule also requires IRPs to include a summary of outreach and evaluation criteria that will be used in procurement of generation and storage located in disadvantaged communities.[17]

 Key questions to ask	 Relevant IRP sections	 Possible suggestions to the commission	 Sources
Does the commission have a stated position on its role in advancing equity?	Planning environment PUC website (external)	Request the commission open an investigation to establish its role in advancing equity and to establish a modern definition of the public interest	Initiative for Energy Justice[18] *The Intersection of COVID, the Recession, and Race and Their Impact on Utility Regulation*[19] from the National Association of Regulatory Utility Commissioners
Has the commission defined the public interest, and is this definition relevant?	Statutes guiding PUC review of IRP (external, but likely cited in the filing)	Require the utility to propose equity criteria for its evaluation of resource portfolios	*Revisiting the Public Good,* Part 1 and Part 2[20]

Request the Utility Use a Just Transition Framework

Maximizing the benefits from a clean energy future requires gathering input on resource planning from the people who will be most affected. Principles of both distributive and procedural justice must be applied to ensure that the clean energy transition addresses social and economic inequality.

Distributive justice is the fair allocation of the costs and benefits of the transition, such as directing support to an entire community (e.g., not just the workers) and including environmental remediation, in addition to social and economic assistance. Procedural justice incorporates a comprehensive range of interests and issues in transition planning. To reflect historically underrepresented voices, it promotes inclusiveness and encourages power sharing in decision-making forums.[21]

Just transition plans should create a vision for transitioning away from all types of fossil fuels and endeavor to address existing gender and racial inequalities in the energy sector. Advocates could recommend that their utility embark on a comprehensive and inclusive planning process that will promote a transition of its resource mix away from fossil fuels and start to remediate historic energy sector inequalities. Worker training programs should address structural barriers to participation in the energy workforce and greater access to decision-making forums.

Highlight the Local Effects of Power Plant Pollution

Fossil fuel combustion is directly linked to a number of negative health outcomes, including heart disease, asthma, premature birth, neurological problems, cancer and susceptibility to COVID-19.[22] Many combustion plants —and often dirtier and more expensive peaker plants —are in or near underserved communities and disproportionately affect communities of color.[23] Although these direct impacts may not be recognized in IRPs due to the lack of stakeholder engagement or explicit requirement that they be analyzed, they are critical topics for advocates to bring into the discussion and analysis.

IRPs generally do not discuss siting of planned power plants. IRPs forecast generic additions of generation (size, type and timing) instead of identifying specific assets in specific locations. Those details are instead covered in the rate case the plant falls under or in a preconstruction approval case. However, as the venue for utility planning and public engagement, IRPs will be foundational to the eventual justification for utility investments like new power plants. Therefore, including this topic in an IRP proceeding can establish an important criterion for determining the suitability of new generation investments.




Key questions to ask	Relevant IRP sections	Possible suggestions to the commission	Sources
Where are polluting plants located?	Information request Utility documentation outside the IRP	Map out the locations of fossil fuel combustion plants in relation to underserved communities	*Power Plants in the United States* interactive map[24] by Synapse Energy Economics
How is the utility planning to replace existing plants? What are the nonpolluting alternatives and are they adequately evaluated in the IRP?	Preferred portfolio Near-term action plan	Replace retiring plants near underserved communities with clean energy portfolios	*The Fossil Fuel End Game: A Frontline Vision to Retire New York City's Peaker Plants by 2030*[25] from the PEAK Coalition *The Growing Market for Clean Energy Portfolios*[26] from RMI

Advocate for Utility Programs That Address Community Priorities and Energy Burden

While IRPs usually analyze demand-side resources as part of larger energy resource portfolios, actual demand-side management (DSM) program designs and budgets are usually reviewed separately. This practice can result in a failure to recognize that the benefits of DSM programs are not distributed evenly among ratepayers, given that residents of energy-burdened communities may face higher barriers to participation in such programs. The next section looks briefly at how demand-side programs can be evaluated and why advocates should endeavor to raise the distributional issues in an IRP.

Cost-effectiveness tests are used to evaluate energy efficiency programs by comparing the benefits of an investment with the costs. Advocates should determine whether the jurisdiction in question considers low-income customer benefits and environmental benefits when evaluating DSM programs. If they are not included, advocates should argue for their inclusion.

Local governments may have extensive experience working with energy-burdened communities and should bring that experience and those insights into the IRP process. Advocates can request an energy burden analysis and an analysis of the distributional impacts of programs. To support this request, advocates can point to existing resources or request that the commission undertake or require the utility to do such analysis.

 Key questions to ask	 Relevant IRP sections	 Possible suggestions to the commission	 Sources
What is the energy burden in my community?	Planning environment Analysis Information request DSM plan (external)	Request the utility analyze the energy burden among its customers and publish a map Set a goal for energy efficiency delivered to energy-burdened customers	*Quantitative Energy Equity*[27] by Empower Dataworks Energy Equity Project[28] of the Urban Energy Justice Lab *How High Are Household Energy Burdens?*[29] from ACEEE Energy burden mapping[30] by The Greenlink Group *Low-Income Energy Affordability Data Tool*[31] from the U.S. Department of Energy
What is the distribution of the impacts of DSM programs? Do they benefit certain communities or demographics more than others? How successful have existing programs been at addressing energy burden?	Analysis Information request DSM plan (external)	Develop inclusive cost-effectiveness tests or approve DSM programs if they demonstrate ability to lower energy burden Convene stakeholder groups to ensure community-centered design	*Supporting Low-Income Energy Efficiency: A Guide for Utility Regulators*[32] by ACEEE *Equitable Clean Energy Planning*[33] by World Resources Institute *Bridging the Solar Income Gap*[34] from the GW Solar Institute

Case study: Charlotte, North Carolina

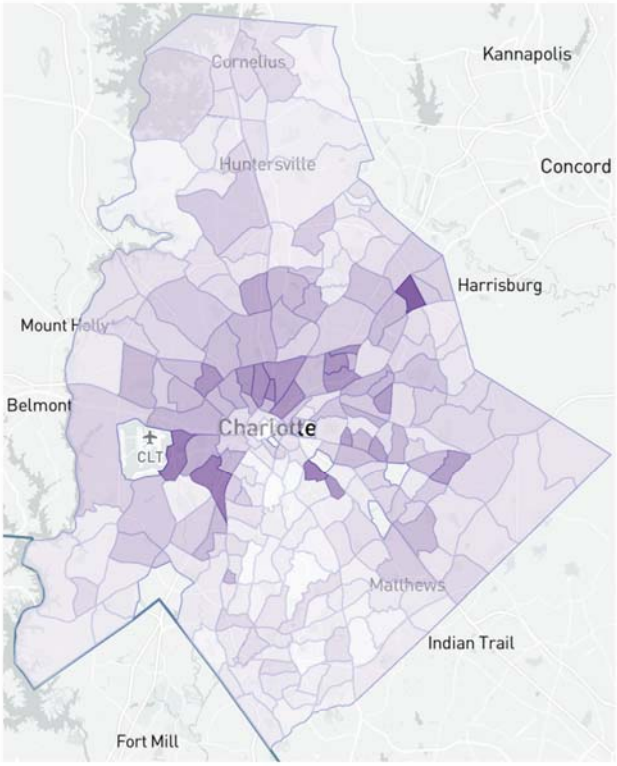
The comments of the city of Charlotte, North Carolina, on Duke Energy's 2020 IRP provide a useful example of an advocate's emphasis on the need to incorporate recognition of distributional effects.[35] City officials are motivated to alleviate the energy burden on residents (see Figure 2[36]) in a sustained way without exacerbating other health and environmental inequities. The city's comments explain the concept of energy burden and what officials are doing to address both disparate income levels and disparate spending on energy. These points are buttressed with relevant local statistics, including the fact that more than a quarter of low-income households in Charlotte have an energy burden over 14%.[37]

The city's comments emphasized that Duke Energy should:

- Maximize energy efficiency and update the cost-effectiveness screening to include the full range of customer benefits.
- Accelerate coal retirement, model clean energy portfolios against new gas and use all-source procurement.
- Analyze the impact of EV growth.

Throughout the comments on energy efficiency, decarbonization and renewables expansion, Charlotte grounded each request to the commission in both the importance to the city and the importance of ensuring greater equity.

Figure 2. Energy burden for households in Charlotte, North Carolina, census tract



Source: City of Charlotte. (2021, February 25). *City of Charlotte Initial Comments on Duke Energy Carolinas, LLC and Duke Energy Progress, LLC's Integrated Resource Plan*

Advocate for a Utility Workforce That Represents the Communities It Serves

Because not all communities have equal access to economic opportunity, the composition of the utility's workforce is a relevant issue to raise in a utility planning docket. Absent an explicit strategy to address equity in the energy workforce, not all demographics will have access to one of the key economic opportunities associated with the transition to a low-carbon economy: clean energy jobs. If the issue is not raised, then clean energy policies and programs envisioned in the context of utility plans could not just overlook certain members of the public, but could also reinforce existing inequalities, such as the underrepresentation of women and marginalized groups in the energy sector.

Even if women and people of color participate in the sector, they still may hold indirect and supportive roles (such as lower-paid service work or contract positions) that would not be covered by proposed worker compensation or other training policies. Utility proceedings do not generally address this issue directly, but there is an opportunity to advocate for a more reflective workforce in the IRP and to highlight how important demographics are to utility resource —in this case, labor —decisions.

Utility workforce and leadership demographic data aren't likely to be in the plan but can be sought through information requests (described in the text box on Page 10). This information is directly relevant to an IRP because participation in the planning process and utility program implementation are, to some degree, built on trust from participants. If the individuals communicating the utility plans or implementing a program do not reflect the community they are in, this trust may be threatened. The same potential disconnect occurs within leadership decision-making. Advocates may wish to include utility leadership and workforce diversity as part of their strategy.

 Key questions to ask	 Relevant IRP sections	 Possible suggestions to the commission	 Sources
What are the demographics of the utility workforce and leadership?	Information request	Require the utility to submit a plan to bring its workforce and leadership demographics in line with the communities it serves	Diversity Toolkit[38] from the National Utilities Diversity Council and partners
Who will these investments benefit, and is there a way to include provisions that encourage the use of minority and women contractors, for example? What are effective strategies for the utility to diversity its workforce? Is the utility required or encouraged to make investments in workforce development?	Rate case or certificate of need (external) All-source procurement (external, see Page 25)	Apply high-road job requirements for contractors leveraging utility incentives and programs Encourage the use of women and minority contractors for construction and other projects Advocate for enhanced energy workforce investment funded by ratepayer dollars	Utility Supplier Diversity Program[39] of the California Public Utilities Commission *Inclusive Procurement and Contracting: Building a Field of Policy and Practice*[40] from PolicyLink and Emerald Cities Collaborative

Case Study: Minneapolis and Xcel's IRP

Through an information request in the Minnesota utility commission's investigation into Xcel Energy's 2020 IRP, the city of Minneapolis obtained data on the company's workforce and management demographics, which Xcel compared with statewide demographic data from the U.S. Census Bureau (see Table 1).[41] Highlighting the differences, Minneapolis contends that diversity within the workforce influences the culture of the organization and that diversity at the leadership level is critical to integrating diverse perspectives in decision-making.

Table 1. Comparison of Minnesota demographics and Xcel Energy Minnesota workforce

	Population	Total available workforce*	Xcel Energy Minnesota workforce	Xcel Energy Minnesota management workforce
White	78.10%	91.00%	92.82%	93.87%
Female	50.20%	29.40%	23.01%	19.73%
Minority	21.90%	9.00%	7.20%	6.13%
Black	7.00%	2.20%	2.09%	1.20%
Hispanic	5.60%	2.10%	1.95%	2.27%
Asian, Pacific Islander	5.10%	3.10%	1.93%	1.33%
American Indian	1.40%	0.70%	0.32%	0.27%
Two or more	2.60%	1.00%	0.90%	1.07%

* Based on the 2010 Census codes for jobs specific to the Xcel Energy workforce located in the state of Minnesota

Source: City of Minneapolis. (2021, February 11). *Comments of the City of Minneapolis*

Because the Xcel IRP investigation is still underway as of the writing of this guide, Minneapolis' request that Xcel bring its workforce's racial and gender diversity in line with the population the utility serves is still an unresolved issue.

Strategies to Advance Clean Energy

Local governments and other advocates bring unique perspectives on DSM and distributed energy resources (DERs) to IRP proceedings due to their proximity to the individual utility customer. As individual customers become more connected with the energy system through opportunities arising from ownership of DERs and flexibility-enabling smart technologies, their representation becomes increasingly important. In addition, local governments and advocates often have their own climate and clean energy goals that are realistically achievable only through coordination with utility goals and plans. These perspectives are important for the commission to hear during planning processes.

Yet, because IRPs are heavily reliant on modeling, advocates will need to equip themselves with the technical expertise to be able to effectively participate in these conversations. To question and suggest improvements to particular technical issues, specific cost and forecasting assumptions, for example, most advocates will need to collaborate with others, such as well-resourced nongovernmental organizations and local industry. Commissioning relevant analyses when funds are available is another possible step. Assembling a team of retirees from utilities, academia, consulting firms and government can also provide a strong review group. The following sections discuss strategies to assess various clean energy options.

The following subsections provide a conceptual justification, key questions for the commission, possible sections of the IRP to review and evidence to cite for the following topics:

- Make the case for modeling demand-side resources on equal footing with supply-side resources.
- Promote the capabilities of clean energy generation to meet grid needs.
- Ensure beneficial electrification by equitably distributing benefits and costs.
- Lay the groundwork for demand flexibility.

Make the Case for Modeling Demand-Side Resources on Equal Footing With Supply-Side Resources

The "integrated" in integrated resource plan refers to the consistent and fair treatment of both demand- and supply-side resources by the planning utility.[42] As noted above, demand-side management refers to interventions that modulate customer demand, instead of energy supply. Definitions vary by jurisdiction, but DSM can include energy efficiency, demand response, demand flexibility (e.g., EV smart charging), behind-the-meter storage and potentially rooftop solar. Discussion of specific DSM programs generally occurs in separate filings. Because the utility should be weighing the suitability of all resources at its disposal during the planning phase, the IRP is the chance to discuss and quantify how DSM fits into the utility's broader resource strategy.

Despite the importance of looking at all resources in an integrated manner, DSM is often at a disadvantage in the modeling process despite its potential to address environmental and energy justice issues. The following are two examples of ways in which IRP modeling

can place an artificial limit on DSM that might otherwise be selected for inclusion in a preferred portfolio.

1. Cost-effectiveness screening often determines the baseline amount of demand-side resources eligible for consideration.

As discussed in a prior section, DSM approaches must generally pass an initial cost-effectiveness screening test to be included in the resource modeling. The screening process can take many forms and fundamentally rely on subjectively selected tests that determine what benefits and costs are included and how they are weighted. Many screening tests do not include societal benefits, such as reductions to energy burden, decreased disconnections from utility service, health improvements and carbon reductions.[43] Advocates will need to understand the assumptions about DSM that are built into the modeling. This can be established by searching the document for terms like "cost-effectiveness screen." The national *Database of Screening Practices* that may be useful.[44] Screening may also be investigated in more depth in an independent but related DSM plan docket.

The initial screening threshold should be about two times the current retail rate. This threshold may seem high, but even measures that seem expensive at the screening level may be cost-effective when analyzed in the modeling process. For example, energy efficiency measures that primarily save power during on-peak periods (air conditioning measures in summer-peaking systems, for example) may be very valuable in reducing peaking capacity in generation, transmission and distribution.

2. Some IRP models use an assumed fixed amount of demand-side management.

IRP models optimize potential resources according to their individual costs and system benefits to meet forecast demand. This practice means that the model might include more or less fossil gas generation, based on cost assumptions. However, many IRP models treat energy efficiency and demand response, and sometimes distributed solar, as a fixed input to the model. Furthermore, they may treat these resources as a load reduction instead of a selectable resource. This approach limits the potential for DSM to be valued and maximized for its energy and non-energy benefits in the model. Although there are some valid critiques to modeling DSM as a selectable asset, such as the fact that program participation is not guaranteed, IRP modeling is ultimately an informative exercise — none of the modeled outputs will be adhered to precisely. Modeling demand- and supply-side resources on equal footing can be illuminating.

 Key questions to ask	 Relevant IRP sections	 Possible suggestions to the commission	 Sources
Are the costs and benefits relevant to my community reflected in current cost-effectiveness screening?	Resource options Resource portfolios (External) Demand-side management plan	Request that the commission develop a new cost-effectiveness screening test with stakeholder and community input using the *National Standard Practice Manual for DERS*	*National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources*[45] by NESP *State Cost-Effectiveness Fact Sheets*[46] by NESP *States Using the SCC*[47] by the Institute for Policy Integrity
Does the discount rate used to evaluate demand-side resources reflect the value to society or to utility capital?	Resource options (External) Demand-side management plan	Request that the utility use a societal discount rate when evaluating demand-side resources	*National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources*, Appendix G
Are energy efficiency and demand response included as a reduction to the load forecast or included as a selectable asset within the planning models?	Load forecast Resource options	Request that the utility model demand-side resources as a selectable asset, with the capacity and energy savings benefits separately recognized	*Does Integrated Resource Planning Effectively Integrate Demand-Side Resources?*[48] from Resources for the Future

Case study: Duke Energy Carolinas and North Carolina local governments

In an ongoing investigation, a coalition of 11 North Carolina local governments,[49] supported by the American Cities Climate Challenge, responded to Duke Energy's proposed 2020 IRP.[50] Based on its review of Duke's analysis of DSM and voltage optimization, the coalition argued that Duke's cost-effectiveness screening includes participant costs but not all participant benefits. This approach, the coalition members contended, skews analysis results and makes what could be lower-cost resources look less valuable.

The coalition proposed a solution: Use a different cost-effectiveness test that would recognize more benefits to program participants. The coalition also encouraged Duke to pursue deeper engagement with disadvantaged communities that stand to benefit the most from such programs, connecting DSM to local equity concerns.[51]

Promote the Capabilities of Clean Energy Generation To Meet Grid Needs

IRPs analyze the wisdom of retiring existing plants and replacing that capacity with new resources to meet load growth or new customer needs. This process provides an opportunity to prompt the utility to retire fossil-fueled plants earlier and to replace them with clean energy solutions. The following are examples of ways in which advocates can articulate justifications for expanding clean energy resources in utilities' preferred portfolios.

Analyze the potential for accelerated retirement of existing fossil-fueled plants.

IRPs can be a platform to analyze the economic value of retiring fossil-fueled power plants early. Fossil-fueled power plants are durable facilities, and in the past they typically operated for 40 years or longer. Utilities adopt depreciation schedules and design rates on the assumption that they will recover the capital investment costs for building those power plants, and the associated returns on equity for shareholders, from ratepayers over decades. In their IRPs, utilities usually assume that existing generating facilities will continue to operate for at least their expected useful lifetime.

As the costs of renewable energy and energy storage have declined, it's time to reconsider this common practice. Utilities factored power plant retirements into IRPs only after deciding, external to the IRP process, that a unit was due for retirement during the planning period. This approach meant that the IRP did not evaluate the least-cost means of meeting all consumer demand but rather was a least-cost plan for replacing retired capacity and satisfying any increased capacity needs. The practice made sense in an era when fossil-fueled power plants were the least-cost option, because operating an existing plant was always less expensive than building and operating a similar new plant. In recent years, however, several utilities have discovered through their IRP processes that they could retire fully functional coal-fired power plants earlier than planned and replace them with new renewable facilities, or combinations of renewables and energy storage, at a lower total cost and without jeopardizing the reliability of the electric power system.[52]

Utilities have at least two ways to assess the potential for cost-effective early retirement of fossil-fueled plants. First, they can evaluate specific retirement scenarios as a variation on

their baseline assumptions. This has now happened in quite a few IRPs but usually only at the instigation of clean energy advocates. Second, and even more powerful, would be to adopt a "zero base" approach to resource planning as standard practice. This change would mean the utility no longer assumes that existing resources belong in the preferred portfolio and instead forces all resources, existing and new, to compete on cost in every IRP. Either way, advocates should understand that continued operation of some fossil-fueled plants might be necessary to maintain system reliability. Advocates should avoid taking positions or making statements that could be misconstrued or mischaracterized as advocating for retirements that could jeopardize reliability.

Advocates may find that utilities resist requests to assess the potential for early retirements. Utilities will commonly cite the impacts that early retirements have on their workforce and the communities that host power plants. These impacts are very real and important. Investor-owned utilities, however, normally have an additional concern that they do not always state publicly: stranded assets. When an asset like a power plant retires early, the utility has not yet recovered all of its capital costs, and it loses the opportunity to earn a return for its shareholders on the equity they invested in that plant.

The economic and environmental benefits of early fossil plant retirements can be enormous, but that alone may not be enough to counter resistance to analyzing the potential. To overcome resistance, advocates may want to engage the utility and other parties in ways to mitigate concerns about workforce and community impacts and stranded asset costs. For example, accelerated depreciation and securitization of stranded asset costs are two tools that can be assessed in conjunction with early retirements in an IRP.[53]

Suggest all-source procurement as a strategy to keep costs low.

The modeling that lies at the foundation of an IRP is based on assumptions about the *expected* costs of different types of generic new resources. The *actual* costs of *actual* new resources may vary from those assumptions. Fortunately, there is a powerful tool for avoiding mistakes that might otherwise arise from erroneous assumptions: all-source procurement.

All-source procurement is a method in which the utility issues a technology-agnostic request for proposals; service providers can submit individual or combined proposals consisting of centralized and distributed renewables, energy efficiency, demand response, storage and distributed energy resources that are viewed on equal footing with traditional combustion plants.[54] The utility can solicit proposals as part of the IRP process, but more commonly that happens during a procurement phase after regulators accept the IRP.

All-source procurement can lead to the procurement of cleaner and cheaper resources for customers than those the utility initially proposes in its preferred portfolio.[55] Advocating for fair competition among all types of resources may be more effective than directly advocating for procurement of specific types of clean energy resources, since almost all parties to an IRP case are cost conscious, and clean energy resources are increasingly cost competitive with fossil resources.

Support efforts to address transmission and distribution constraints.

In some areas, electric transmission infrastructure is reaching its capacity to transport electricity, causing delays and constraints for new renewable generation. Electrification will amplify this challenge and could drive the need to build more transmission.[56] When developers propose new projects, they must account for the timeline and cost of connecting to the grid. When interconnection queues become congested, this cost can skyrocket and cause developers to abandon projects. In the long run, this trend threatens to slow the pace of renewable growth.

Distributed energy resources, energy efficiency and demand flexibility can mitigate some of the need to build additional grid infrastructure by creating additional capacity on existing equipment through load reduction or shifting. The planning processes for the distribution and transmission system usually occur outside the IRP, but the resource decisions and individual measure-level cost-benefit analysis for DERs that occur within the IRP may feed into nonwires solutions analysis. It is important that the value of DERs and DSM accounts for their ability to defer transmission and distribution investments.

Another element in evaluating DERs and DSM is avoided line losses. Due to heating, transmission and distribution lines lose a portion of the energy moving across them: about 5% of power during off-peak periods but (at the margin) up to 30% during critical peak hours. Ensuring the modeling recognizes marginal line losses, not just average losses, can make a big difference in the value of DSM and DERs that provide on-peak benefits (e.g., efficient cooling equipment and customer battery storage).

Consider supporting your utility's transmission plans and, where applicable, offering to support its requests to the independent system operator and to work with it on centering equity in the siting process.

 Key questions to ask	 Relevant IRP sections	 suggestions to the commission	 Sources
How is the utility planning to meet future load?	Preferred portfolio Near-term action plan	Request the utility take an all-source procurement approach to meet new capacity needs	*Making the Most of the Power Plant Market: Best Practices for All-Source Electric Generation Procurement*[57] from Energy Innovation and the Southern Alliance for Clean Energy *How to Build Clean Energy Portfolios*[58] from RMI and RAP *All-Source Competitive Solicitations: State and Electric Utility Practices*[59] from Lawrence Berkeley National Laboratory
How are the costs of retiring coal plants early being distributed across ratepayers and shareholders?	Resource portfolios Analysis Preferred portfolio Near-term action plan	Request the PUC to make use of accelerated depreciation or securitization laws when retiring plants, if available	*Comparing 2019 Securitization Legislation in Colorado, Montana, and New Mexico*[60] and *The Coal Cost Crossover 2.0*[61] from Energy Innovation

Are transmission and distribution capacity benefits of DSM and DERs adequately measured?	Resource portfolios Analysis Preferred portfolio Near-term action plan Distribution system plan (external)	Ensure that the transmission and distribution benefits are modeled in avoiding transmission and distribution investment and line losses	*Recognizing the Full Value of Energy Efficiency*[62] and *Valuing the Contribution of Energy Efficiency to Avoided Marginal Line Losses and Reserve Requirements*[63] from RAP *An Overview of Distributed Energy Resource (DER) Interconnection: Current Practices and Emerging Solutions*[64] from the National Renewable Energy Laboratory
Are transmission constraints limiting the possibility of new renewable energy?	Planning environment Analysis	Offer to support transmission projects that enable renewable generation and offer to work with the utility, PUC and others on considering local impacts	*Transmission Expansion Planning*[65] by Greening the Grid

Case study: Indianapolis Power and Light and the city of Indianapolis

In its 2019 IRP, Indianapolis Power and Light planned to retire two coal-fired plants and included several scenarios to replace them.[66] The city of Indianapolis submitted comments that offered specific feedback in several areas.[67] First, Indianapolis stated its preference for a specific scenario that meets capacity needs with a mixture of clean energy generation, DSM and storage. The city pointed to relevant information on the wind production tax credit and guidance on how to value energy storage. The city then strongly supported Indianapolis Power and Light's concurrent efforts to issue an all-source procurement request for proposals and cited research supporting the point that a clean energy portfolio could save $4 billion over 30 years. Finally, the city suggested including carbon emissions reductions as part of the evaluation criteria for the proposals received.

Ensure Beneficial Electrification by Equitably Distributing Benefits and Costs

Electrifying buildings and vehicles is a key strategy to eliminate carbon emissions in these sectors. If not carefully managed, electrifying large sections of the economy that have historically relied on onsite fuel combustion could, however, drive an unnecessary expansion of the electric system. Additional studies suggest the level of infrastructure required can be mitigated with targeted efficiency and demand flexibility.[68] Unmanaged building and transportation electrification can also affect daily and seasonal demand, requiring strategies to manage load.

Ensuring that utilities adopt robust electrification scenarios in resources plans is of critical importance. Utilities will be inclined to either develop their own electrification forecasts using econometric modeling or to use the output of an external study. This forecast would then be incorporated into the base load forecast.

Since few local governments will have the resources to dispute the econometric modeling of the baseline electrification forecast, their efforts are best focused on examining alternative scenarios regarding the pace and impact of electrification. For example, advocates can request that the utility analyze scenarios with faster uptake of electrification than the baseline forecast. Scenarios can examine the different impacts and costs if building or transportation electrification is actively managed to optimize existing grid resources.

This kind of analysis will reveal the benefits of managed electrification. It will also illustrate affordability implications if electrification is not carefully managed. Advocates can use this information to ensure that increased reliance on electricity for essential services is accomplished reliably and resiliently. Stakeholders, such as businesses, local governments and citizens, have an important contribution to make in this area, especially emphasizing the need to manage all new electrified load to accommodate clean distributed resources. Ensuring that electrification proceeds in an orderly manner that optimizes rather than taxes existing grid infrastructure first will be one key to ensuring that this important carbon reduction opportunity benefits all consumers.

Utility programs, incentives, tariffs and financing options that are designed to achieve electrification should also consider whether technologies are accessible to underinvested communities and renters. Local governments and advocates can elevate equity approaches in electrification initiatives and provide novel insight about these customers at the PUC.

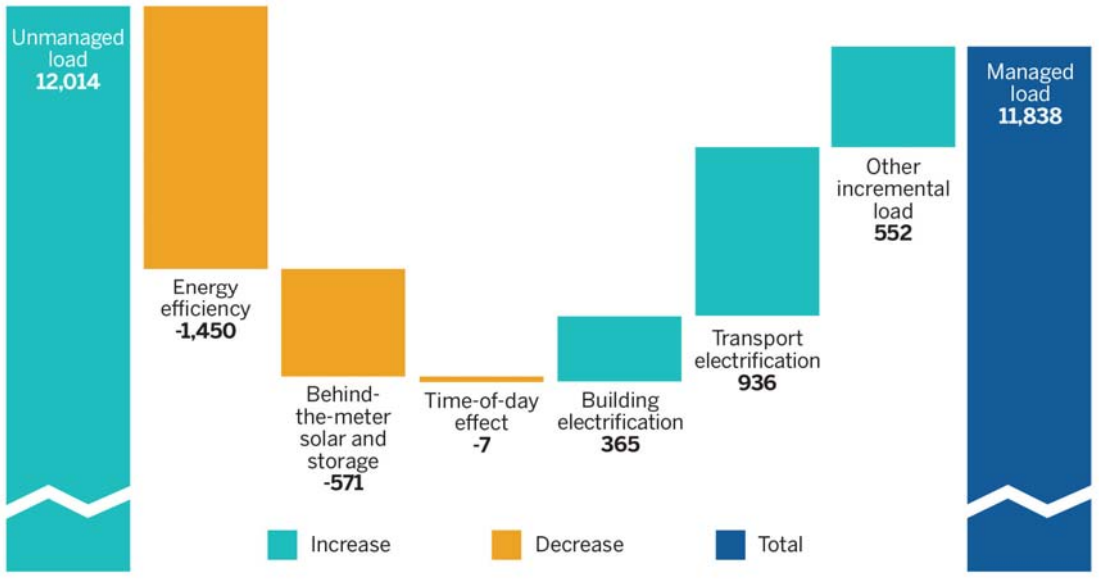
 Key questions to ask	 Relevant IRP sections	 Possible suggestions to the commission	 Sources
Does the plan account for building and vehicle electrification?	Planning environment Load forecast Scenario selection Appendices on DER forecasts	Request the utility establish electrification forecasts or revise its existing scenarios to better reflect on-the-ground expectations, and analyze at least one "high electrification" scenario	Local or regional electrification studies *Renovating Regulation to Electrify Buildings: A Guide for the Handy Regulator*[69] from RAP and Synapse Energy Economics
Could electrification disproportionately impact or benefit underserved communities? Does the plan acknowledge the potential role of the utility in enhancing access to electrification for underserved communities?	Scenario analysis Planning environment Demand side management plan (external)	Request the utility to engage stakeholders to ensure electrification will benefit underserved communities	*The Building Electrification Equity Project*[70] by Emerald Cities Collaborative *Equitable Building Electrification: A Framework for Powering Resilient Communities*[71] by The Greenlining Institute and Energy Efficiency for All *Siting Electric Vehicle Supply Equipment (EVSE) With Equity in Mind*[72] from ACEEE
Does the plan take into account resilience needs generated by electrification?	Scenario analysis Planning environment	Request the utility analyze potential resilience needs generated from electrifying new end uses in light of extreme weather events	*Keep Warm and Carry On: Electrification and Efficiency Meet the "Polar Vortex"*[73] from Synapse Energy Economics

Does the plan look to energy efficiency and demand flexibility as a core method to offset the increased demand of electrification?	Resource portfolios Scenario analysis Planning environment Preferred portfolio	Request the utility meet all increased demand from electrification with energy efficiency, demand flexibility or clean generation	*Beneficial Electrification: Ensuring Electrification in the Public Interest*[74] from RAP

Case study: Sacramento Municipal Utility District

Sacramento Municipal Utility District (SMUD) has shifted its planning and programming to minimize greenhouse gas emissions, creating a conducive environment for electrification. In its 2019 IRP, SMUD models both building and vehicle electrification and finds that, while critical to meeting greenhouse gas targets, electrification could lead to an estimated 1,301 gigawatt-hours of new demand by 2030 (Figure 3).[75] It also has determined, however, that energy efficiency and distributed solar and storage can more than offset the load growth, leading to a net load reduction by 2030.

Figure 3. Annual energy demand components in 2030 (gigawatt-hours)



Source: Sacramento Municipal Utility District. (2019). *Resource Planning Report*

Lay the Groundwork for Demand Flexibility

To integrate high levels of variable renewable energy, the ability to actively shift demand — such as through building and transportation electrification discussed above —throughout the day to match renewable output will be increasingly important. Demand flexibility can yield significant energy, dollar and carbon savings by mitigating the need for generation and grid infrastructure investments.[76] For these reasons, advocates should emphasize the value of demand flexibility as an important grid resource and the importance of accurately modeling it in resource plans. This action will be critical for ensuring that utilities compare their capabilities with other resources and that customer-sited smart solutions help meet climate and justice goals.

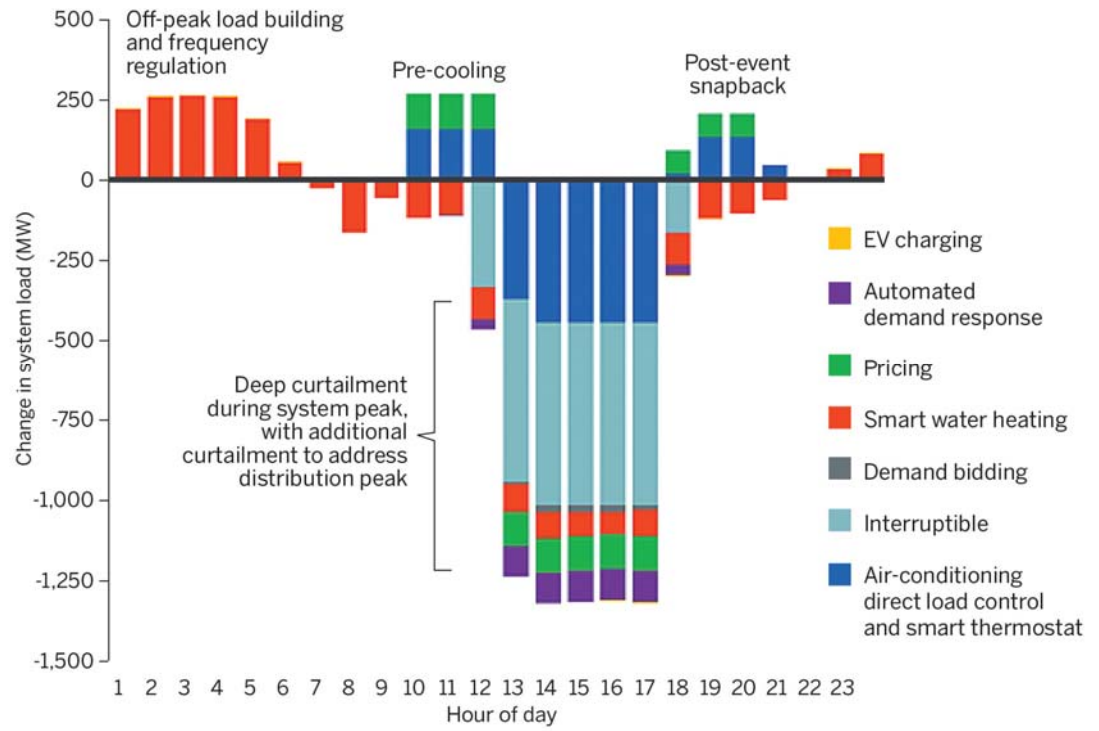
 Key questions to ask	 Possible suggestions to the commission	 Sources
Does the utility consider the role of active demand management in integrating renewables?	Request that the utility undertake a load flexibility study or submit a load flexibility plan Suggest that the commission set a target for demand flexibility for the utility to achieve in the short term to demonstrate its capabilities	*The Potential for Load Flexibility in Xcel Energy's Northern States Power Service Territory*[77] from The Brattle Group Portland General Electric's Flexible Load Plan[78]
Does the IRP treat buildings and vehicles as grid resources?	Encourage the utility to propose diverse types of demand flexibility pilots that will provide experiential data on costs and benefits to its system	*A National Roadmap for Grid-Integrated Efficient Buildings*[79] from the U.S. Department of Energy *Determining Utility System Value of Demand Flexibility from Grid-Interactive Efficient Buildings*[80] from the U.S. Department of Energy *A Regulatory Roadmap for Vehicle-Grid Integration*[81] from the Smart Electric Power Alliance

Case study: Xcel Energy and the city of Minneapolis on demand flexibility

The Minnesota PUC required Xcel Energy to procure at least 400 MW of demand response by 2023, prompting the company to dive deeper into the potential of demand response and demand flexibility. Xcel Energy (operating in Minnesota as Northern States Power) commissioned The Brattle Group to publish a demand flexibility potential study.[82] It analyzed how Xcel could increase existing demand response, tap into emerging demand flexibility (like managed EV charging and smart water heating) and include new benefit streams. The study identified a number of barriers to flexibility specific to Xcel's territory and found that, under favorable conditions, cost-effective demand response and demand flexibility could exceed the 400 MW the Minnesota commission required.[83] Figure 4 shows the average impact of the modeled programs smoothing the daily load curve, lowering peak demand and reducing costs for all customers.[84]

In its comments, the city of Minneapolis[85] supported Xcel's use of these findings in the company's modeling, emphasizing the importance of demand flexibility for the city and Xcel in meeting their respective decarbonization goals.

Figure 4. Average load impacts of 2030 cost-effective demand response portfolio on top 10 load days (high sensitivity case)



Source: Hledik, R., Faruqui, A., Donohoo-Vallett, P., & Lee, T. (2019). *The Potential for Load Flexibility in Xcel Energy's Northern States Power Service Territory*

How to Develop Comments

Up to this point, this guide has considered substantive IRP-related issues. This section looks at how to be most effective in presenting those issues to decision-makers.

Given that PUCs are quasi-judicial regulatory bodies, commissioners must base their decisions on evidence and opinion submitted to the evidentiary record. Commissioners cannot make decisions based on stakeholder priorities that are not included within the docket's record. Therefore, it is important that stakeholders submit comments that reflect evidence that the commission has agreed will go into the record. Including your organization's priorities and perspectives in the record through comments can go a long way toward influencing the ultimate decision regarding the IRP at hand.

Including your organization's priorities and perspectives in the record through comments can go a long way toward influencing the ultimate decision regarding the IRP.

Comments can take two distinct forms: public comments or formal comments. Public comments are typically submitted by interested members of the public. The commission usually establishes a date by which public comments should be filed. Comments filed in formal proceedings are subject to other requirements the commission sets out. For example, they often must be filed with all participants in an investigation —that is, members of a service list. To submit formal comments, you must request and receive intervenor status in the proceeding, which may require legal representation.

When drafting comments, it is important to consider that your audience is utility commission staff and commissioners —not the utility or other stakeholders. To be even more precise, your audience will be commission staff who have to read many sets of comments. So whether drafting public comments or a formal submission, be as clear and to the point as possible.

Some PUC websites have specific guidance on how to submit public comments. Several local government comments are cited in this guide; see the end notes to view these specific examples. The following section provides tips and examples for structuring comments.

Introduction

- It is common practice to open comments by thanking the commission for the opportunity to provide input.
- Next, provide some context for your organization: who you are, why your opinion is relevant to the proceeding and what your priorities are. Possible data to include:
  - Size, geographic location, diversity of population represented.
  - Absolute and/or relative load and share of the utility revenues represented.

  - Ongoing clean energy/environmental programs, policies or public goals.
  - Ongoing avenues of collaboration with the utility or PUC.
- If a local government is commenting, it may be pertinent to note that you are simultaneously a representative of the public interest, a policymaker whose actions are relevant to the power sector and a large utility customer.
- It is also useful to acknowledge the utility's historic and/or ongoing effort in responding to stakeholder priorities.

Body

- Start by summarizing your points and clearly state your requests for commission action.
- Try to put yourself in the commission's shoes. How do your points promote the public interest? How is the utility plan not reasonable, and why should this be acknowledged? If relevant, provide background information as to why the organization is commenting or how the IRP plays into broader trends or events.
- Discuss the areas of the IRP that your organization wishes to change or new analyses you wish to see performed. This information can be formatted in different ways, including:
  - A simple bulleted list.
  - Bold headers stating the problems, with discussion underneath.
  - Narrative paragraph form.
- While writing, consider the broader political situation. How does your local government or organization's leadership manage their relationship with the utility? Use this context as a basis for your framing and language. Also, remember the commission staff who have to read comments: Help them by being succinct.
- Identify other parties and participants who have similar or overlapping perspectives. For example, cities and counties may share desired outcomes with environmental advocates, clean energy advocates and low-income advocates.

Conclusion

- If your comments are high level, the conclusion can be a concise reiteration of why your voice is important to the process and your organization's appreciation for the opportunity to participate.
- If your comments are extensive, use the conclusion as a summary of your key points and your request of the commission.
- Do not include new information in the conclusion.

Key Considerations for Success

Intervenor and Stakeholder Compensation

Local governments and smaller advocacy organizations often lack the staff, funding and necessary technical or legal expertise to effectively participate in utility regulatory proceedings. Providing intervenor funding expands the ability of these groups to participate in IRP processes before utility commissions. Federal law requires some provision for compensation to representatives of the public in certain utility proceedings.[86] State law may make additional provisions for intervenor funding. Providing intervenor funding expands the ability of these groups to participate in IRP processes before utility commissions. A limited number of states[87] provide public advocates with some form of reimbursement for costs associated with intervening before state utility regulators.[88]

In many cases, however, compensation is not guaranteed upfront and is determined based on whether the intervenor contributed significant and new material to the docket. This practice generates uncertainty for potential intervenors and may not eliminate the need for initial funding. Alternative models that provide more upfront certainty do exist, such as Michigan's Utility Consumer Representation Fund,[89] which provides upfront grants to local governments and nonprofits to advocate for residential consumers.

Suggested action item:

> Introduce legislation to create or expand intervenor and stakeholder compensation, with a focus on upfront certainty for intervenors who face resource constraints.

Coalition Building and Joint Response Tactics

Across the country, advocates in several jurisdictions have formed coalitions to overcome the capacity and technical expertise barriers of regulatory engagement. In some cases, the coalition is a formal organization representing several local governments, such as the King County-Cities Climate Collaboration[90] and the Michigan Municipal Association for Utility Issues.[91] Other informal collaborations have produced one-off joint comments, such as the Minnesota and North Carolina local governments joint comments. The PJM Cities and Communities Coalition formed a group to engage at the independent system operator level to support renewables and other related measures.[92] When considering forming a coalition, key considerations include determining who has the expertise or capacity to lead the engagement and how aligned the organizations' goals are. The Cities Climate Challenge Renewables Accelerator's IRP support package discusses this topic in detail and provides useful insights.[93]

Suggested action items:

> Create formal or informal partnerships with local advocates that share the same priorities.

- Consider requesting support from national experts or philanthropy to support technical assistance in developing analysis and positions.
- Consider engaging underrepresented participants and voices to join your coalition and advocate for positive climate and equity outcomes.

Creating a More Inclusive Stakeholder Process

Stakeholders and PUCs across the country are working to create a more inclusive stakeholder process to better match the public's needs. A recent report by the National Association of Utility Regulatory Commissioners provides a framework for PUCs to adopt new, inclusive engagement practices throughout their work.[94] Advocates can build on this momentum and request that a PUC improve its engagement practices. As an example, community organizations in Oregon successfully petitioned their PUC to develop an inclusive distribution system planning process after a utility made an investment decision in an underserved neighborhood without community input.[95] The Oregon commission also created and filled a full-time staff position for a director of diversity, equity and inclusion to promote greater inclusiveness in PUC processes.

Suggested action items:

- Request that the commission host meetings and workshops that are accessible to communities across the state through virtual and physical meetings.
- Request that the commission review and take public comment regarding its own stakeholder engagement processes.

Commission Authority and Commissioner Interpretation of Its Authority

PUCs have traditionally operated within a legislatively defined scope that generally directs them to evaluate utility investment decisions on the grounds of customer affordability, service reliability and safety. State commissions are also typically required to ensure that their decisions promote the public interest, often an elusive and vague standard. The PUC's mandate, or its interpretation of its mandate, may restrict its ability to address climate and social equity, regardless of the evidence it hears. However, if state law requires commissions to determine that utility plans are in the public interest and the public interest is clearly defined, then advocates have the opportunity to make sure the evidence supports such a conclusion.[96]

In some states, utility commissions are given more explicit authorization to direct regulated utilities to meet climate and social goals. For example, Washington, D.C.'s 2018 Clean Energy Omnibus Act included a provision that directs the District of Columbia Public Service Commission to consider "the public safety, the economy of the District of Columbia, the conservation of natural resources, and the preservation of environmental quality, including effects on global climate change and the District's public climate

commitments."[97] Explicit legislative authorization makes it easier for advocates to ensure that commission decisions lead to beneficial climate- or equity-related outcomes.

Suggested action items:

- Request at the outset of a case that the commission define its role in addressing climate, social and racial justice issues.
- Provide the commission examples of actions it can take, consistent with its existing authority, to address environmental justice and equity.
- Introduce legislation that directs utility commissions to consider climate, social and racial justice.

Conclusion

Participating in utility resource planning offers an opportunity for local governments and advocates to integrate their priorities, perspectives and experience into the clean energy transition. For public utility commissions, participation by these stakeholders provides a more complete view of the public interest. In addition, the information these stakeholders provide can lead to greater scrutiny of utility proposals and, ultimately, better resource plans. Although participating in the IRP development and review process can be a challenging task for local governments and advocates facing resource constraints, many are finding that the effort is worth it. The guidance, tactics and illustrative examples provided here are intended to help local governments and other advocates effectively read and respond to utility IRPs and so reflect important climate and equity priorities.

Endnotes

[1] Integrated resource planning is sometimes referred to as least-cost planning, which is described as "a process of examining all electricity-saving and electricity producing options to select a mixture of options that minimizes total consumer cost, often including consideration of environmental concerns and other responsibilities." Moskovitz, D. (1989). *Profits & progress through least-cost planning.* National Association of Regulatory Utility Commissioners. https://www.raponline.org/knowledge-center/profits-progress-through-least-cost-planning/

[2] Tellus Institute. (2000). *Best practices guide: Integrated resource planning for electricity*, p. 3. U.S. Agency for International Development. https://www.tellus.org/tellus/publication/best-practices-guide-integrated-resource-planning-for-electricity

[3] Actual approval of utility investments typically comes in a separate proceeding, either a rate case or a construction preapproval case.

[4] Crandall, K., & Duncan, J. (2019). *Local government engagement with public utility commissions.* National Council on Electricity Policy. https://pubs.naruc.org/pub/41BBF1F5-ED6E-79C8-CC25-14E9721A6E8B

[5] Bonugli, C., & Ratz, H. (n.d.). Integrated *resource plan (IRP) support package.* American Cities Climate Challenge Renewables Accelerator. https://cityrenewables.org/resources/integrated-resource-plan-irp-support-package/

[6] For further background on the development of an IRP, see: City of Seattle. (1976). *Energy 1990 study: Final report.* http://nuclearfreenw.org/energy1990.htm; Tsongas, G. (1976). *Bonneville Power Administration Electric Energy Conservation Study.* Skidmore, Owings & Merrill. https://www.osti.gov/biblio/6814955; Lovins, A. (1976, October). Energy strategy: The road not taken? *Foreign Affairs.* https://www.foreignaffairs.com/articles/united-states/1976-10-01/energy-strategy-road-not-taken; and Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. 839 et seq. http://uscode.house.gov/view.xhtml?path=/prelim@title16/chapter12H&edition=prelim

[7] In the load forecast and resource options, the utility also makes important assumptions about commodity prices, the costs and capacity factors of resources, and the costs of complying with regulations that affect resource optimization modeling.

[8] In its initial regional energy plan, the Northwest Power Planning Council found that resources with short lead times — including energy efficiency and small generating units — had dramatically lower risk due to the avoidance of construction of expensive coal and nuclear capacity that proved unnecessary after a long construction period. Northwest Power Planning Council. (1983). *Northwest Conservation and Electric Power Plan.* https://www.nwcouncil.org/reports/1983-northwest-conservation-and-electric-power-plan

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