



Part 4: Private Procurement, Public Benefit: Integrating Corporate Renewable Energy Purchases with Utility Resource Planning

December 2016

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About This Paper Series

Since the late 1990s, state Renewable Portfolio Standards (RPS) and Energy Efficiency Resource Standards (EERS) have been the largest drivers of the renewable energy and energy efficiency sectors. State target dates are quickly approaching, however. By 2026, 29 RPS and 11 EERS policies will need to be extended, or replaced, in order to maintain market certainty. In this paper series, the Center for the New Energy Economy analyzes energy efficiency policies (Parts 1 and 2) and renewable energy policies (Parts 3 and 4). Parts 1 and 3 discuss the prospects for extending and enhancing EERS and RPS policies and Parts 2 and 4 propose innovative options that could work with or without an EERS or RPS.

Introduction

With a growing list of major companies committed to meeting their electricity needs with renewable sources, corporate demand for clean energy goes above and beyond what is offered in any state. For these large corporations, investing in a long-term resource that gives them stable rather than fluctuating energy costs can be an attractive financial risk mitigation strategy as well as a corporate responsibility commitment. These companies are some of the largest consumers of electricity in the country, and their energy choices have a direct impact on utility resource needs. This paper examines opportunities to make it easier for states, utilities, and renewable energy developers to accommodate corporate renewable energy procurement.

In 2015, renewable energy made up 13% of electricity generated in the United States, with leading states Iowa, South Dakota, and Kansas getting at least one-fifth of their electricity from wind and solar.¹ Contrast that with the 100% renewable energy goals that 33 U.S.-based, mostly Fortune 500 companies have committed to (see Table 1) and it becomes clear that corporate ambitions cannot be met through currently available resources. In total, 83 international companies have committed to 100% renewable energy as part of the RE100 initiative.²

Corporations are moving ahead on their own. In the past four years, renewable energy contracts for nearly six gigawatts (GW) of capacity have been announced.³ Microsoft recently committed to purchasing 237 megawatts (MW) of wind power in Kansas and Wyoming, as one example.⁴ By 2020, it is estimated that the top 50 corporate buyers of solar and wind power in the United States will add more than 17 GW of renewable energy.⁵

As large corporate buyers invest in fulfilling their corporate renewable energy goals, state policy and utility planning must also evolve to take advantage of this trend, rather than be challenged by it. This paper charts three pathways to capitalize on the leadership of these corporate citizens by considering corporate renewable energy goals in state energy

¹ See U.S. Energy Information Administration, *How much U.S. energy consumption and electricity generation comes from renewable energy sources?* last updated Apr. 2016, <http://www.eia.gov/tools/faqs/faq.cfm?id=92&t=4>; in 2014, Iowa, South Dakota, and Kansas got 28%, 21%, and 20% of their electricity from wind and solar energy, respectively; U.S. Energy Information Administration, *Table C9. Electric Power Sector Consumption Estimates, 2014*, http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_sum/html/sum_btu_eu.html&sid=US.

² RE100, "The World's Most Influential Companies, Committed to 100% Renewable Power," *RE100*, 2016, <http://there100.org/re100>.

³ The Business Renewables Center (BRC), "BRC Deal Tracker," *The Business Renewables Center*, 2016, <http://www.businessrenewables.org/corporate-transactions/>.

⁴ Microsoft News Center, "Microsoft Announces Largest Wind Energy Purchase to Date," *Microsoft*, last modified November 14, 2016, <https://news.microsoft.com/2016/11/14/microsoft-announces-largest-wind-energy-purchase-to-date/#sm.00000lt3r2okg5f6wszfryxi093f2>.

⁵ Chris Martin, "Microsoft Signs Biggest Wind-power Deal for Wyoming Data Center," *Bloomberg New Energy Finance*, November 14, 2016, <http://www.bloomberg.com/news/articles/2016-11-14/microsoft-signs-biggest-wind-power-deal-for-wyoming-data-center>.

resource planning. By planning for the future with corporate renewable energy targets in mind, utilities and regulators can meet the needs of their entire customer base while opening options for companies to pursue these goals in a way that best fits their individual needs.

Company with 100% Renewable Energy Target	Target Date	Interim Target	Progress Toward 100% Goal
Biogen	2014	-	100%
Microsoft	2014	-	100%
Steelcase	2014	-	100%
Voya Financial	2015	-	100%
Interface	2020	-	84%
Autodesk	2020	-	40%
Coca-Cola	2020	-	10%
Goldman Sachs	2020	-	14%
Wells Fargo	2020	100% via RECs by 2017	-
Vmware	2020	-	-
Bank of America	2020	-	-
Bloomberg	2025	35% by 2020	21%
VF	2025	-	-
Nike	2025	-	-
Rackspace	2026	-	-
AbbVie	2035	50% by 2025	-
Adobe	2035	-	30%
Mars	2040	-	6%
Johnson and Johnson	2050	35% by 2020	3%
General Motors	2050	-	-
Amazon Web Services	TBA	50% by 2017	40%
Apple	TBA	-	93%
Avon Products	TBA	-	-
Equinix	TBA	50% by 2017	-
Facebook	TBA	50% by 2018	35%
hp	TBA	40% by 2020	-
IFF	TBA	-	-
Google	TBA	Triple RE by 2025	-
Procter and Gamble			
Salesforce	TBA	-	43%
Starbucks	TBA	-	59%
Walmart	TBA	7,000 GWh RE/yr by 2020	26%
Workday	TBA	-	100% offset by RECs

Table 1. Large U.S. Companies with a 100% Renewable Energy Goal

How Is Corporate Purchasing Done Today?

There currently is no clear and consistent pathway for companies to purchase renewable energy, particularly in states with traditionally regulated electricity markets. In a few cases, states have found ways to accommodate some level of investment, though there have been many challenges and none really provides a replicable model. In extreme cases, utilities may experience customer grid defection if the corporate desire to procure renewable energy is not addressed. The following examples demonstrate the range of outcomes across different states.

Nevada: On October 1, 2016, two casino owners — MGM Resorts and Wynn Resorts — chose to leave the NV Energy utility system citing, in part, the desire to increase renewable purchases.⁶ MGM and Wynn comprise nearly 6% of NV Energy’s total sales.⁷ The casinos will be charged exit fees totaling \$102 million, in addition to six years of recurring fees, for the flexibility to buy power on the open market.⁸

It is also worth noting that several Nevada casinos and technology companies like Switch and Tesla supported Question 3 on the state ballot this November to deregulate the Nevada market. Voters passed the measure with a wide margin, although it must pass on the 2018 ballot and will also require legislative action to become law.⁹ While it is too early to tell if this election result is a barometer of long-term public will, the overwhelming vote of support in Nevada may indicate that other states could face a similar challenge.

Utah: States such as Utah have attempted to meet corporate demand for renewable energy without disrupting the relationship between regulated utilities and corporate customers. A 2012 bill, SB 12, allowed customers purchasing at least 2 MW of grid capacity to buy power from a renewable energy facility.¹⁰ In the regulatory docket opened by Utah’s Public Service Commission (PSC) to develop the tariff, there was disagreement over how to structure the demand charge. Rocky Mountain Power (RMP) and the Utah Association of Energy Users submitted competing proposals, and the PSC ultimately selected RMP’s approach.¹¹ However, this tariff does not have any participants to date, despite early

⁶ Daniel Rothberg, “MGM Resorts, Wynn to Stop Purchasing NV Energy Power Saturday,” *Las Vegas Sun*, September 30, 2016, <https://lasvegassun.com/news/2016/sep/30/mgm-resorts-wynn-stop-purchasing-nv-energy-power/>.

⁷ Mark Chediak and Noah Buhayar, “Warren Buffett’s Dacey Power Play,” *Bloomberg Business*, June 10, 2016, <http://www.bloomberg.com/news/articles/2016-06-10/buffett-s-power-play-pits-las-vegas-casinos-against-energy-unit>.

⁸ Daniel Rothberg, “MGM Resorts, Wynn to Stop Purchasing NV Energy Power Saturday,” *Las Vegas Sun*, September 30, 2016, <https://lasvegassun.com/news/2016/sep/30/mgm-resorts-wynn-stop-purchasing-nv-energy-power/>.

⁹ Nevada Secretary of State, “Silver State Election Night Results 2016,” *silverstateelection.com*, last modified November 15, 2016, <http://silverstateelection.com/ballot-questions/>.

¹⁰ “Energy Amendments,” Senate Bill 12, State of Utah General Session, 2012, <http://le.utah.gov/~2012/bills/sbillint/sb0012s01.pdf>.

¹¹ See Utah PSC *Docket Number 14-035-T02, Report and Order*, issued March 20, 2015, <http://psc.utah.gov/utilities/electric/elecindx/2014/documents/26466414035T02rao.pdf>, at 14.

corporate support for SB 12, most notably from eBay. The structure of the demand charge may have discouraged corporate participation by providing little or no credit for capacity provided from certain renewable energy resources, an outcome that could have been avoided with greater corporate engagement in program design.¹²

North Carolina: Another example of the impact of policy design is North Carolina's Green Source Rider. Google agreed to be the first company to enroll in Duke Energy's program to supply its expanded data center in the city of Lenoir. Under the program, Duke Energy and Google agreed to cover the full costs of the project such that no additional costs would be incurred by non-participating ratepayers.¹³ While the program is capped at 1,000,000 MWh annually, Google plans to use only a small fraction of that. The program is only available for new load, and participation has been relatively low due in part to the design of the rider and the limitation that all projects must be negotiated through the utility.¹⁴

New Mexico: States have a significant opportunity to attract investment if they are responsive to corporate goals, as the competition for a new Facebook datacenter shows. In July 2016, the New Mexico Public Regulation Commission opened a docket to approve a power purchase agreement (PPA) to enable the Public Service Company of New Mexico to sell renewable energy to supply the prospective datacenter.¹⁵ The commission's Accounting Bureau Chief noted that the PPA would promote "economic development and renewable energy resource development."¹⁶

¹² See World Resources Institute and World Wildlife Fund, *Corporate Renewable Strategy Map*, <http://buyersprinciples.org/corporate-re-strategy-map/>; see also, World Resources Institute, *Emerging Green Tariffs in U.S. Regulated Electricity Markets: Rocky Mountain Power — Utah*, http://buyersprinciples.org/wp-content/uploads/15_IB_GreenTarrif_Rocky_Mountain_Power-1.pdf.

¹³ The program has a number of eligibility criteria: The project must be new load at a billing meter, customers must be served under a designated rate schedule, enrollment is capped at 1,000,000 MWh/year, and Duke retires RECs on behalf of the customer. The fees are a \$2,000 application fee, a \$500/month administration fee, and a \$.20/MWh REC retirement fee. For more information, see World Resources Institute, *Emerging Green Tariffs in U.S. Regulated Electricity Markets: North Carolina — Duke Energy*, <http://buyersprinciples.org/wp-content/uploads/Emerging-Green-Tariffs-September-16-North-Carolina-Duke.pdf>.

¹⁴ Gary Demasi, "Creating New Pathways for Buying Renewable Energy," *Google Green Blog*, November 24, 2015, <https://googlegreenblog.blogspot.in/2015/11/buying-renewable-energy.html>.

¹⁵ See New Mexico Public Regulation Commission, *Docket 16-00191-UT*, (final order Aug. 17, 2016), http://powersuite.aee.net/dockets/nm-16-00191-ut?docket_search_id=164369.

¹⁶ Joe Cardillo, "Race to Lure Facebook Data Center Heating Up," *Albuquerque Business First*, on The Business Journals, August 4, 2016, <http://www.bizjournals.com/albuquerque/news/2016/08/04/race-to-lure-facebook-data-center-heating-up.html>.

Is there a Better Way?

As the list of companies seeking renewable energy grows, there is an opportunity to improve upon the mixed results experienced to date. Specifically, considering corporate renewable energy commitments during the resource planning process would give utilities and public utility commissioners the information needed to meet the needs of all customers while also ensuring that corporate customers with renewable energy targets can follow through on these commitments. This approach would complement the mandate of regulated utilities to provide low-cost electricity to all ratepayers, and would also reduce uncertainty for companies. Importantly, there would be no need to limit companies to any particular program or mechanism to purchase renewable energy, so companies would be allowed to meet their goals in a way that fits their individual needs. While no states have yet taken a forward-looking approach to planning around corporate renewable energy targets, the experience under utility demand-side management programs provides a close analogue and a useful model.

Lessons from utility Demand-Side Management programs

Utility demand-side management (DSM) programs may provide some perspective for how corporate renewable energy goals could be factored into utility planning processes. Most larger utility DSM programs have program managers who are responsible for delivering a certain amount of annual savings from a specific program (e.g., 10 GWh/year from industrial efficiency). These managers are in frequent communication with large industrial and commercial customers regarding what level of savings they may be able to recover in a given year. Many of these large customers may also have a separate “key account representative” at the utility — a person responsible for fielding any concerns ranging from questions about billing to discussions about which DSM programs would provide the greatest benefit. The key account representatives and DSM program managers arguably know large customers in their service territory better than anyone. The same key account representatives and program managers could arguably perform a similar function in documenting the ambitions of large corporate customers to install or buy renewable energy, and systematically report that information to the utility resource planners.

In an analysis of industrial energy efficiency programs in the southwestern United States, the Southwest Energy Efficiency Project notes that some utilities have conducted both “technical” and “economic” energy efficiency market potential studies in the industrial sector, which help identify available savings opportunities.¹⁷ Building on this example, a PUC could instruct utilities to conduct similar studies among corporations with renewable energy targets.

Self-directed energy efficiency programs also provide a model for giving individual industrial customers flexibility to achieve their own goals. Industrial customers retain significant control of program implementation, while the savings they obtain by their self-

¹⁷ Neil Kolwey, “Southwest Utility Industrial Energy Efficiency Programs: Highlights and Best Practices,” *The Southwest Energy Efficiency Project*, June 2012, http://www.swenergy.org/data/sites/1/media/documents/publications/documents/Southwest_Industrial_EE_%20Programs.pdf.

directed program are aggregated into a wider portfolio of savings by the utility. A similar process could be applied to renewable energy procurement by industrial customers.¹⁸ It is worth noting that DSM programs are typically overseen through a regulatory proceeding separate from, and typically just prior to, a utility IRP. In keeping with this example, a PUC could request a Corporate Renewable Energy Goal docket ahead of an IRP to inform the level of new resources, either customer-sited or utility-sited, that are needed. Similar to self-directed energy efficiency programs, companies interested in purchasing renewable energy could still be given full flexibility to meet their goals according to their individual needs.

Why Consider Corporate Renewable Energy Goals During the Utility Planning Process?

The burden of proof to change a process, especially a utility regulatory process, can be significant. But factoring corporate renewable energy targets in state resource and infrastructure planning will benefit a wide range of stakeholders, including corporate buyers, electric utilities, renewable energy developers, utilities commissioners, consumer advocates, legislators, Governor's offices, and economic development agencies. Each stakeholder has unique responsibilities, and the process improvements in this paper will benefit them all.

We note the following reasons why state decision makers should take action on this issue:

1. Minimize risk to corporate purchasers and other ratepayers

Thoughtful state planning for corporate renewable energy procurement can minimize risks for corporations, utilities, and ratepayers, better matching a utility's load with the generation mix desired by the ratepayers. In addition, a more integrated planning process would inform the development of utility corporate purchasing programs, which often impose high rates and fees. In an effort to avoid any undue impact on non-participating ratepayers, these costs are often set conservatively such that corporate purchasers are, some would argue, unfairly *over*-charged for their participation, thereby dampening demand.

2. Spur economic development

A transparent and forward-looking planning process for corporate renewable energy procurement will spur economic development by giving both renewable energy developers and companies seeking to purchase renewable energy a clear picture of the opportunities in the state. Renewable development also generates new sales tax revenue, jobs, local property tax revenue, and diversifies the state's economy.

3. Defer ratepayer investments

Utilities will benefit also. Private capital deployed to develop renewable energy assets can defer the need for utilities to build or buy new generation themselves. By reducing the need

¹⁸ American Council for an Energy-Efficient Economy, "Overview of Large-Customer Self-Direct Options for Energy Efficiency Programs," *American Council for an Energy-Efficient Economy*, August 2015, <http://aceee.org/sites/default/files/self-direct.pdf>.

for utilities to rely on existing or new emitting resources, these projects would also indirectly help utilities and states to comply with state and federal environmental regulations, even when the environmental attributes are retired by the corporate purchaser.

4. Align private sector ambitions with public policy objectives

Governors’ offices, their staff, and state legislatures are increasingly tasked with balancing their environmental resources, public health, and economic competitiveness. By encouraging state agencies and utilities to work with corporate buyers, decision makers can promote economic growth while ensuring affordable rates. Like other public/private partnerships, streamlining renewable procurement can make states more competitive in attracting new businesses, especially as the list of companies demanding renewable energy continues to grow.

Three Pathways to Plan for Corporate Renewable Purchases

The most direct approach to implement this type of process change is very likely through a Public Utilities Commission, but it could also begin with executive or legislative action. In the pages that follow, we discuss all three pathways: a regulatory, a legislative and an executive agency approach (see Figure 1). The ultimate goal should be to institutionalize a process by which major corporate renewable energy investments and goals are taken into account in future assessments of public necessity for new generation resources.

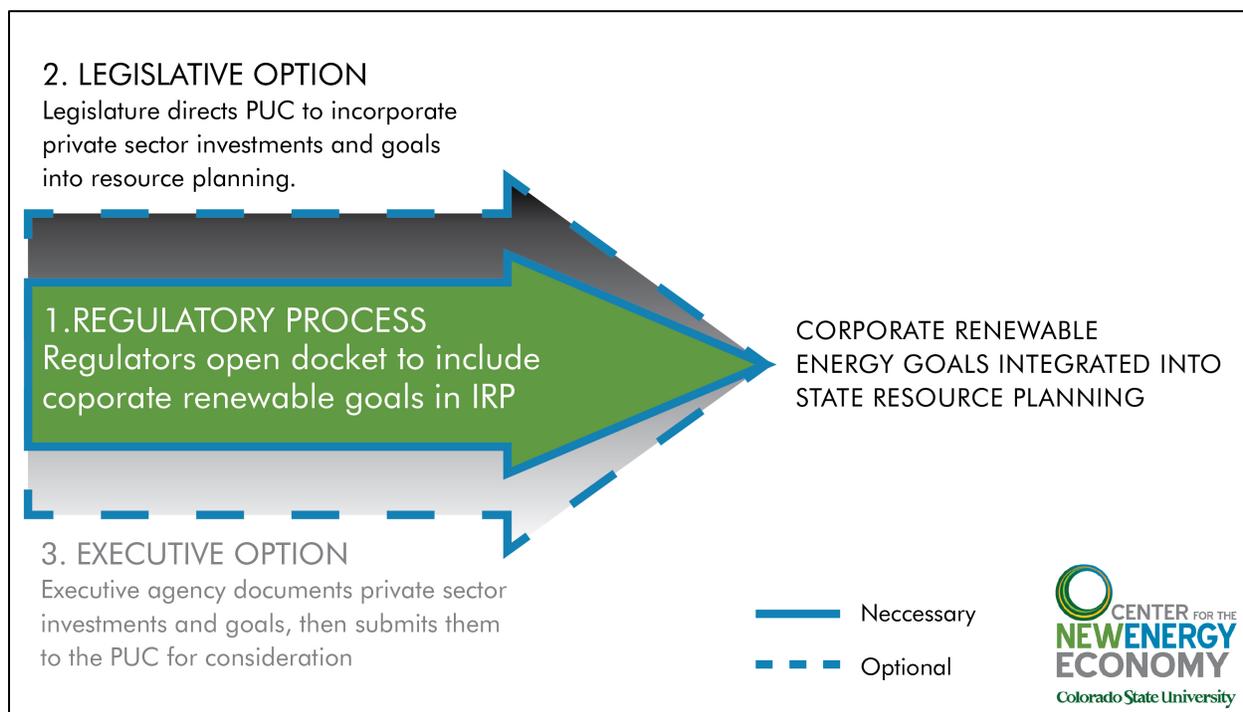


Figure 1. Pathways to Integrating Corporate Goals With Utility Resource Planning

It is worth noting that policymakers along any of these three pathways can pursue other actions to facilitate corporate renewable energy purchasing, such as establishing a

renewable energy tariff or passing laws or regulations to enable onsite renewable energy generation.¹⁹ While specific purchasing mechanisms are beyond the scope of this paper, they can go hand-in-hand with a process to better integrate corporate commitments into the utility resource planning process. In fact, the process described here may help identify opportunities to develop new tariffs or programs to facilitate the actual transactions that companies will pursue to meet their goals.

Pathway 1: Regulatory Approach

State Public Utilities Commissions (PUCs), or their equivalent, generally have the organic authority to consider corporate renewable energy goals during the resource planning process. Furthermore, most PUCs undergo some form of periodic resource planning such as an Integrated Resource Plan (IRP). In other words, new authority and new planning processes are generally not required in order to bring corporate renewable energy targets into the planning fold.

Integrated Resource Plans

Integrated Resource Planning is a process by which utilities create long-term plans, typically looking out 20 years, which are updated regularly every two to four years (see Figure 2). To meet forecasted demand with some established reserve margin, utilities need to plan for a combination of supply- and demand-side resources that minimize future costs and risks.²⁰ IRPs provide the means by which utilities, regulators, and the public analyze an increasingly complex future that requires the consideration of short-term costs, long-term regulatory objectives, possible fuel and supply interruptions, and changes in load forecasts and peak-load requirements.²¹

The implementation and enforcement of IRPs varies by state. There are differences in planning horizons, frequency of updates, resources and future regulatory changes to be considered, and stakeholder involvement in the development and review of an IRP. While PUC authority in some states is limited to reviewing and acknowledging the plan, commissions in other states have discretion to accept or reject the plan.²²

¹⁹ Advanced Energy Economy Institute (AEE Institute) commissioned Meister Consultants Group to identify and assess policy options to expand corporate access to advanced energy, including utility renewable energy tariffs, utility “sleeved” PPAs, direct access tariffs, onsite third-party ownership, and shared renewable energy projects. See Meister Consultants Group, “Opportunities to Increase Corporate Access to Advanced Energy: A National Brief,” August 2016, <https://www.aee.net/articles/report-top-11-states-for-corp-access-to-renewables-policies-to-meet-sustainability-goals>.

²⁰ Rachel Wilson and Bruce Biewald, “Best Practices in Electric Utility Integrated Resource Planning: Examples of State Regulations and Recent Utility Plans,” *Synapse Energy Economics for the Regulatory Assistance Project*, June 2013, <http://www.synapse-energy.com/Downloads/SynapseReport.2013-06.RAP.Best-Practices-in-IRP.13-038.pdf>.

²¹ Inara Scott, “Teaching an Old Dog New Tricks: Adapting Public Utility Commissions to Meet Twenty-First Century Climate Challenges,” *Harvard Environmental Law Review* 38, no. 2 (2014): 371.

²² Rachel Wilson and Bruce Biewald, “Best Practices in Electric Utility Integrated Resource Planning: Examples of State Regulations and Recent Utility Plans,” *Synapse Energy Economics for the Regulatory*

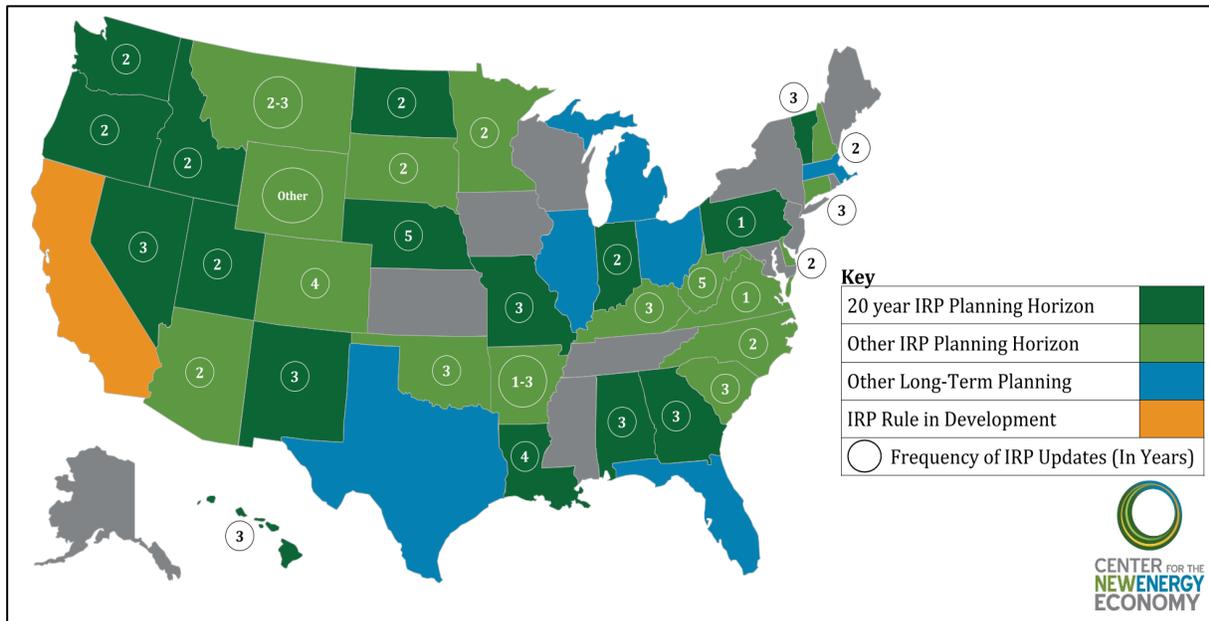


Figure 2. Integrated Resource and Long-Term Planning, by State

Some state IRP requirements are in legislation, others codified in state administrative code or rules, and some through a combination. As of 2016, 32 states require utilities to submit an IRP.²³ Many of these requirements, which were developed during the late 1980s and early 1990s, were repealed or set aside in the 1990s and 2000s during the period of electric utility restructuring. Today, some states have updated their IRP requirements and others either use an alternative long-term planning process or do not actually require long-term plans from utilities (Figure 2).²⁴ Of the states that have updated their requirements, some states such as Colorado and Oregon require utility plans to consider resources that have not been traditionally considered.²⁵

Certainly, there are number of issues that must be addressed by PUCs to satisfy the financial concerns that utilities may have with regard to corporate procurement of renewable energy. By integrating the mechanism for addressing these concerns into the established system of resource planning, the PUC can craft an IRP that will work for customers, renewable energy developers, and utilities and their investors.

Assistance Project, June 2013, <http://www.synapse-energy.com/Downloads/SynapseReport.2013-06.RAP.Best-Practices-in-IRP.13-038.pdf>.

Inara Scott, "Teaching an Old Dog New Tricks: Adapting Public Utility Commissions to Meet Twenty-First Century Climate Challenges," *Harvard Environmental Law Review* 38, no. 2 (2014): 371.

²³ As directed by Senate Bill 350, enacted in 2015, California's Public Utilities Commission is developing an IRP rule. See: <http://www.cpuc.ca.gov/ltp/>.

²⁴ Rachel Wilson and Bruce Biewald, "Best Practices in Electric Utility Integrated Resource Planning: Examples of State Regulations and Recent Utility Plans," *Synapse Energy Economics for the Regulatory Assistance Project*, June 2013, <http://www.synapse-energy.com/Downloads/SynapseReport.2013-06.RAP.Best-Practices-in-IRP.13-038.pdf>.

²⁵ Ibid.

Some of the challenges that can be resolved through an integrated planning process include:

- *How does the PUC prevent spreading costs to the remaining rate base when large corporate customers pursue new renewable energy projects and no longer rely on existing utility resources?* By taking into account corporate renewable energy commitments, states can better plan for changes in customer needs over time to reduce the risk of stranded assets (assets that have been purchased by the rate base but are no longer needed prior to being fully paid for). At the same time, PUCs can also calculate reasonable fees for customers that are no longer relying on utility assets to avoid impacts on the remaining rate base.
- *How does the utility earn money while allowing customers to pursue their own renewable energy goals?* PUCs may want to consider a tariff on corporate renewable energy purchases to account for the utility's earnings on revenue based on their management of resources and grid infrastructure investments. A long-term planning process can be used to set a reasonable rate that *accurately* charges corporate customers for the services provided by the utility.
- *If corporate purchasers choose to access renewable energy through a PPA signed by their regulated utility, what would happen in the event the company leaves the state, is sold or fails?* While these principles can be included in the PPA contracts approved by the PUC, addressing this risk through a long-term planning process would help identify means to mitigate the potential impact on non-participating ratepayers.
- *How does the utility manage the costs associated with a large customer departing from the utility system?* This is one of the critical roles of the PUC and is one of the most important reasons this process should be integrated within the resource planning process. These conditions will be different in each state depending upon their rates of population and load growth, their resource mix, the state of transmission capacity, as well as the existence of an energy imbalance market.
- *How does the PUC respect the confidentiality needs of companies during their negotiation process?* Companies building new load often keep plans confidential in an effort to negotiate superior rates. PUCs must be able to provide a confidential venue and compromise on what is disclosed.

By addressing these challenges, the integrated planning process would minimize many of the risks and address upfront the primary challenges that have made corporate renewable energy procurement so difficult in traditionally regulated states.

In most states, this process will already fall within PUC authority, even under the rather narrow interpretation of that authority as an economic mandate to ensure the provision of low-cost and reliable electricity. While meeting customer demand for cleaner energy does not require the PUC to have a mandate to consider environmental concerns, it may be

helpful to note that PUC authority can also be interpreted more broadly to include environmental concerns. This is true for states where statute makes the link between economic and environmental issues clear, and this broader authority is implicit in PUC authority to address facility siting, emissions regulations, resource planning, and the general charge to serve the public good.²⁶ In states where authority to consider environmental issues is provided, and in states where authority exists but where utilities commissions have not traditionally considered environmental concerns, resource planning processes may provide the best avenue for integrating environmental and economic concerns.²⁷

Pathway 2: Legislative Approach

While incorporating company renewable energy procurement goals into an IRP planning process will ultimately fall to the utilities commission to implement, state legislatures and executive branch offices can play a crucial role in initiating this process. In particular, while state utility regulators play both quasi-judicial and quasi-policy roles, some PUCs lean more heavily on the judicial side and defer to state legislatures to provide clear policy guidance to the commission. In fact, most regulators derive their authority from state statutes and many look to legislators to provide them with explicit authority when it comes to implementing new policy initiatives.

As a result, state legislatures can play a critical role in giving direction to the regulatory process. As representatives of the public, legislators are able to consider a wide variety of factors that may be perceived as beyond the PUC's authority in determining whether such a program is in the public interest. These factors may include economic vitality, job creation, climate mitigation, and environmental priorities, among others. The legislature, using this authority, can set clear program parameters for the commission that will strengthen the objectives of the program and promote renewable energy development.

For example, the legislature could require utilities to approach companies to determine firm renewable energy procurement commitments on an annual basis. The legislature could also direct the commission to open a docket to investigate how the list of firm commitments can be leveraged to benefit overall resource planning. State legislatures could also require utilities to include firm corporate renewable energy goals whenever they evaluate the need for new generation to ensure that utilities are minimizing the future risk of stranded assets. The legislature also has the authority to provide participating companies with incentives to participate in the program (tax credits or other financial incentives) and to follow through with their commitments.

²⁶ Michael Dworkin, David Farnsworth, and Jason Rich, "The Environmental Duties of Public Utilities Commissions," *Pace Environmental Law Review* 18, no. 2 (2001): 325. And: Michael Dworkin, David Farnsworth, Jason Rich, and Jason Salmi Klotz, "Revisiting The Environmental Duties of Public Utility Commissions," *Vermont Journal of Environmental Law* 7, no. 1 (2006): 1.

²⁷ Inara Scott, "Teaching an Old Dog New Tricks: Adapting Public Utility Commissions to Meet Twenty-First Century Climate Challenges," *Harvard Environmental Law Review* 38, no. 2 (2014): 371.

Additionally, the legislature could pass a bill directing the commission to set up a taskforce that includes large corporate renewable energy buyers. The taskforce could be instructed to develop a proposed program based on its research and deliberations and report back to the legislature with recommendations.

Finally, state legislatures have an expanded authority beyond those entities typically governed by the public utilities commissions, including municipal utilities and rural electric cooperatives. As a result, state legislatures may choose to establish the integration of corporate renewable energy procurement goals as a matter of statewide importance,²⁸ not limited to those utilities governed by the state utility commission.

It will be important for the legislature to provide a clear and explicit directive to ensure that costs are distributed fairly, while also making corporate participation appealing. Such a legislative directive can provide an initial push to integrate corporate goals into resource planning, supporting the efforts with statutory authority.

Pathway 3: Executive Agency Approach

The executive branch can catalyze, motivate, and direct efforts to maximize the value of meeting corporate renewable energy goals for a range of public purposes by coordinating action within various executive offices. Any Governor's office could direct state agencies, such as a State Energy Office, Office of Economic Development, or their equivalent, to undertake a documentation exercise to determine the scope of renewable energy commitment among private sector companies in their state.

State Energy Office

Barring action by a PUC or a state legislature, State Energy Offices could also initiate this process by issuing a Request for Information (RFI) directed at large private sector companies. The purpose of this exercise would be to collect information on their current investments, their goals, and their timelines for procurement. A formal state process gives these goals more validity because it puts the responsibility on the private sector to consider their firm commitments on a state-by-state basis, which is how our energy system is built and financed. From here, the office could then submit this information to a PUC for consideration in the next IRP.

Furthermore, by pooling individual corporate renewable goals, a state energy office may be able to lower costs for all participants through the request for proposal (RFP) process, resulting in the development of fewer large systems rather than numerous small systems.²⁹ This may be particularly relevant for smaller companies that would prefer to subscribe to a renewable energy purchasing program rather than negotiate large individual contracts. In its state climate or energy plan, the energy office could identify ways to explore the

²⁸ The term "issue of statewide importance" may be required in some "home rule" states to exercise state legislative supremacy over entities given constitutional independence from state statute.

²⁹ For more information see: John Sterling and Ted Davidovitch, "Utility Scale Solar: The Path to High Value, Cost-Competitive Projects," *The Smart Electric Power Association*, 2016, <http://www.sepapower.org/media/453731/highvalue-costcompetitive-projects.pdf>.

development of new renewable opportunities, including distributed energy resources and community solar aggregation. The establishment of a shared renewable project through this process may also open an opportunity for energy offices to combine the shares in renewable resources with the state's low-income weatherization program—lowering energy costs through efficiency upgrades while also lowering risk by minimizing the costs associated with fluctuating fuel costs.

Most State Energy Offices currently are required to formally petition for participation in a regulatory proceeding. While PUCs generally grant petitions from their State Energy Offices, the petition process limits the ability of energy offices to comment on and take part in proceedings that have already begun. In states where the energy office has intervenor authority, or does not have to go through a petition process, the agencies are allowed to comment on ongoing proceedings, thereby increasing their ability to be a part of any stage of a proceeding. This is important because the timing of an RFI and party status would need to happen ahead of an IRP for State Energy Offices that do not have automatic intervenor status.

State Economic Development Authority

If the above pathways are not possible, a state economic development authority or its equivalent could engage in a very similar process to the one described above for the State Energy Office. An economic development office would necessarily put a much greater emphasis on metrics germane to its mission: job creation, business attraction and retention, etc. The motivation for an economic development office would likely be to use innovative renewable energy policy as a means of attracting new businesses, i.e., *“Come to our state because we have the process and policies in place to help your company achieve its clean energy or sustainability commitments.”* Many states have seen first-hand how an RPS or an EERS increases their chances of attracting a clean energy manufacturer, installer or laboratory. When incentive dollars are scarce, any opportunity to attract new companies to a state deserves consideration. Armed with data on which companies are motivated to purchase more renewable energy, an economic development authority would make a strong case to a regulatory body or a legislature for why corporate targets need to be formally considered in the state energy planning process. This may also spark discussion and action on specific purchasing options, such as a renewable energy tariff, to facilitate these purchases.

Conclusion

Corporate procurement of renewable energy has the potential to substantially contribute to a state's economy and electric power system if it is fully integrated with utility resource planning. Large corporate customers bring significant capital to the table as they seek to meet their renewable goals, and while that capital will by definition be used to serve the company's private interests, it can do so in a way that serves the public interest as well. By working with companies to consider corporate procurement plans during the resource planning process, utilities and utility commissions can reduce concerns and remove barriers associated with corporate procurement while ensuring that new corporate

renewable energy projects complement the needs of the grid overall. The legislature can support this process through clear directives to the utilities commission, and the executive branch can work to ensure that the state on the whole benefits from the fulfillment of corporate renewable goals.

If developed and implemented carefully and deliberately, programs that enable corporate procurement of renewable energy can benefit a wide range of stakeholders. If a state positions itself to work with corporations pursuing renewable energy goals, it can make itself more competitive and help retain and attract corporate investment. At the same time, ratepayers benefit as corporate capital goes to building generating capacity that diversifies the grid mix, thereby supplementing a utility's traditional planning process. Utilities benefit as they unlock new choices for their biggest customers while still meeting the needs of their smallest customers. Finally, corporate purchasers benefit from reduced barriers and access to new options to purchase renewable energy according to their individual needs. With wide stakeholder participation in program design and development, states can harness and fully capitalize on the expanding market driven by corporate renewable energy goals.