# The Urgency of PURPA Reform to Assure Ratepayer Protection

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## 2 | Understanding PURPA's Original Goals

In 1978, Congress passed the National Energy Act ("NEA") as a legislative response to the 1973 energy crisis. The purpose of the NEA was to ensure sustained economic growth during a period in which the availability and price of future energy resources was becoming increasingly uncertain. The NEA was composed of five different statutes.[2] While many aspects of the NEA affected the electric power industry, PURPA was its most significant component. PURPA's intent was to encourage: (1) the conservation of energy supplied by electric utilities; (2) optimal efficiencies in electric utilities facilities and resource use; and (3) that equitable rates were established for electric consumers (ratepayers).[3,4] Nowhere in the PURPA's electric provisions is there a requirement or specification to explicitly "promote" renewable energy, an often misrepresented and misstated claim made by renewable energy advocates in the PURPA reform debate.

To accomplish its goals, PURPA established a new class of generating facilities that would receive special rate and regulatory treatment.[5] These facilities are known as "non-utility generators" or more commonly "qualifying facilities" ("QFs"). PURPA requires utilities to purchase electricity generated by QFs at the utility's avoided cost, not the QF generator's cost of service. A utility's avoided cost is the cost a utility would incur if it chose to generate the electricity itself or purchase it from another source.[6] PURPA charged the Federal Energy Regulatory Commission ("FERC") with administering its provisions and developing a set of regulations under which QFs operate. Equally important are the provisions in PURPA that left implementation of these regulations up to the individual states, and states have done so in a number of ways including setting specific terms for utility purchases of QF generation, such as the avoided cost calculation, contract terms, and capacity thresholds.

## 3 | Why PURPA's Buy-back Provisions Are Unnecessary

PURPA effectively changed the regulated utility monopoly model by mandating QF purchases from all types of generation, including renewable and that associated with combined heat and power ("CHP") or cogeneration applications. Wholesale markets have been in a frequent state of reform ever since that time period rendering many PURPA

[2] The Public Utilities Regulatory Policy Act (PURPA); the Energy Tax Act; the National Energy Conservation Policy Act; the Power Plant and

provisions unnecessary. In fact, in a 2017 letter to FERC recommending comprehensive

power, without renewable energy certificates.[10] Originally, the assumption underlying this choice between prices was the idea that renewable resources would be more expensive than traditional resources. However, updated avoided cost filings show that renewable prices are actually lower than non-renewable prices, giving renewable QFs the opportunity to select prices that are not reflective of actual avoided costs.[11]

While PURPA was not specifically intended to promote renewable energy, state policies, nonetheless, have filled in this gap so there is no need to use PURPA to duplicate what state policies have already accomplished.

**Figure 1: State RPS Adoption and Annual Natural Gas Prices.**

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Finally, the current electric power industry is made up of a large number of competitive suppliers; something not imaginable back in the early 1980s when PURPA was originally being implemented. Today, a regulated utility of any kind, as well as any large wholesale purchaser, can access a variety of spot markets, forward markets, financial derivatives and other tools to secure and hedge electricity purchases. States can now conduct competitive solicitations for large amounts of renewable capacity and can expect numerous responses

[10] Sanger Thompson PC. 2018. Oregon Commission requires PacifiCorp to purchase renewable power from large independently owned generators. Available at: http://www.sanger-law.com/oregon-commission-requires-pacificorp-to-purchase-renewable-power-from-large-independently-owned-generators/.

[11] In the matter of PacifiCorp, dba Pacific Power, updates standard avoided cost purchases from eligible qualifying facilities. Public Utility Commission of Oregon, Docket UM1729. Order. August 9, 2018, p. 3; and In the matter of PacifiCorp, dba Pacific Power, application to update Schedule 37 qualifying facility information. Public Utility Commission of Oregon, Docket UM1729. Motion for emergency interim relief. April 26, 2018.

and bids from creditworthy market participants. Again, something that was a challenge back in the early days of PURPA implementation is, today, simply commonplace.

## 4 | Ratepayer implications

Renewable energy advocates often dismiss arguments for PURPA reform as being motivated by utilities wanting to maintain their monopoly privileges by shunning competition and customer empowerment that is purportedly facilitated by renewable QFs. This kind of argument makes for good press, and potentially good politics, but fails to recognize that utilities are more-or-less indi□erent to long-term QF contracts because the costs of these over-priced contracts are simply passed on to ratepayers through fuel adjustment clauses ("FACs") and/or a utility's overall cost of service.

A reimbursement rate that is equivalent to the utility's "avoided cost" sounds reasonable since prices in competitive markets are often set by cost, and in particular, the marginal costs that these rates are intended to represent. However, the similarity between what is envisioned by PURPA and what happens in real markets is conceptual only. Avoided costs are rarely reflective of the actual cost-based prices that characterize wholesale electricity markets, and the pseudonym "administratively-determined," when used in conjunction with avoided costs, is simply political-speak for "set by regulators, not markets." Regulators attempting to "promote" renewable energy through the manner in whi39gTt is elies w5 0mis 12p7C

A number of renewable energy organizations opposed the utility petitions citing the need to "do what's right," "foster solar," and "promote renewable development."[25] Renewable developers asserted that they would not be able to secure financing without the long-term QF contracts.[26] Similarly, one renewable developer cited the lack of attractive state incentives as a need for the long contract length a□orded under the state's QF contracting provisions.[27] Developers also stated that investment recovery for utility-owned resources can be up to 50 years and that PURPA resources should be placed on an "equal footing" with these regulated assets.[28] These arguments simply underscore the uneconomic nature of some of these renewable QF contracts. In fact, the Sierra Club explicitly argued that reducing contract lengths, and declining avoided cost rates, were "likely to make uneconomic QFs that could be developed at avoided cost prices with a long-term agreement."[29]

The Idaho Commission ruled in favor of the utilities' request to reduce the QF contract term from twenty years to two years. It concluded that it was "self-evident" that long-term avoided cost rates set at the beginning of a contract term would overestimate future avoided costs collected from ratepayers and that 20-year contracts "exacerbate overestimations to a point that avoided cost rates over the long-term period are unreasonable and inconsistent with the public interest."[30]

A similar QF contracting controversy arose in Montana, a western state that, like Idaho, is not part of an RTO or ISO. In May 2016, NorthWestern Energy requested approval for new avoided cost rates for QF facilities of three MW or less. NorthWestern noted in its application that its existing QF rates were out of date, notably higher than current avoided costs, and providing "inappropriate incentives" to QF developers.[31]

NorthWestern's proposed new rate structure was about $34 per MWh for solar facilities and $30 per MWh for wind facilities. The avoided cost rates in place were almost double at $66 per MWh for solar and $54 per MWh for wind.[32] These old prices were set in 2013, and since then, the development of regional excess capacity and low natural gas prices resulted in fundamental changes in the Northwestern's avoided costs.[33]

More importantly, NorthWestern claimed these dated avoided cost rates were unnecessarily

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stimulating a considerable degree of uneconomic QF generation. In fact, NorthWestern stated that since the beginning of the year it has had "two out-of-state developers propose 43 three-MW QF solar projects, projects which our electric system does not need."[34] NorthWestern made an additional emergency filing soon after its original request, asking to suspend its QF tari for new solar QFs greater than 100 kW.[35]

The Montana Commission ultimately ruled in favor of NorthWestern's emergency request recognizing that "avoided cost rates that reflect outdated market price expectations can convey improper price signals."[36] To avoid this problem and still allow QFs contracts at fixed prices based on avoided costs, the Commission ordered NorthWestern to update its QF tari every six months.[37]

Unhappy with this decision, solar developers filed a petition with FERC arguing that the Montana Commission and NorthWestern "failed to implement PURPA in a manner consistent with the statute and the Commission's [FERC] regulations."[38] Renewable QF developers also took the unusual step of petitioning FERC to actually exercise its enforcement powers against both NorthWestern and the Montana Public Service Commission.

The FERC ruled in favor of the QF developers, at least in terms of a finding that the Montana Commission had acted in a manner inconsistent with PURPA. The FERC also found that the Montana Commission's attempt to grandfather the terms and conditions of certain projects that were in the process of signing QF contracts was inconsistent with PURPA since those terms and conditions could, in theory, be manipulated by the utility and are, therefore, inconsistent with PURPA.[39] However, despite the admonition, the FERC stopped short of launching an enforcement action, telling developers that they could pursue such matters in the courts.[40]

The solar developers and advocates also filed reconsideration requests with the Montana Commission arguing that the 10-year contract length is inconsistent with the law; negatively a ects a QF's financing abilities; and that PURPA requires contract lengths that allow for "reasonable opportunities to attract capital."[41] Upon further review the Commission recognized that "long-term" is defined by Montana law as "a time period at least as long as a utility's electricity supply resource planning horizon."[42] And it recognized that Montana has

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[34] NorthWestern Energy files to update avoided cost rate for qualifying facilities; change could save customers millions. NorthWestern Energy News. May 4, 2016. Available at: http://www.northwesternenergy.com/news/2016/08/10/NorthWestern-Energy-files-to-update-avoided-cost-rate-for-qualifying-facilities-change-could-save-customers-millions.

[35] *Id.*, ¶7.

[36] In the matter of NorthWestern Energy's application for interim and final approval of revised Tari No. QF-1, Qualifying Facility Power Purchase. Montana Public Service Department. Docket No. D2016.5.39. Order No. 7500c. June 22, 2017. ¶38.

[37] *Id.*

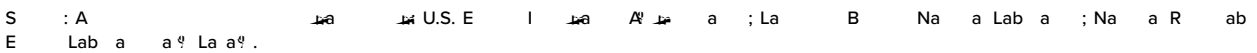
[38]

Renewable QF capacity growth is becoming problematic in many parts of the country and development continues to increase. Figure 3 highlights the fact that not only is the total amount of capacity increasing, but the average size of the typical renewable generators taking advantage of the PURPA provisions is increasing as well. In 2007, the average size of a solar QF facility was under 8 MW. A decade later, average capacity has increased by almost 85 percent to over 14 MW for a typical solar QF project.

Not surprisingly, the location of renewable energy QF capacity development is concentrated in states that have some of the more generous QF pricing and contracting policies (e.g., Oregon, Montana, Idaho). Figure 4 shows that a large amount of both wind and solar installations are located in the WECC (western) region of the country.[51] Wind QF capacity development dominates NERC regions, with the exception of the SERC which is heavily dominated by solar QF capacity development.

Figure 5 shows the required reserve margins for each NERC region. Most NERC regions

**Figure 6: Estimated Annual QF Renewable Installation Capital Investments.**




Excess renewable QF capacity development is not costless since utilities are forced to purchase this electricity under current law, regardless of whether or not the generation is needed. Further, it is often the case that the QF generation secured under these PURPA contracts is above prevailing market prices. Consider, for instance, the earlier-cited case of Montana that originally had a $66 per MWh rate that was dated and well in excess of going market prices around $34 per MWh: in other words, the costs paid to QF renewable generation in Montana, at one time, were double going market rates. On a more general basis, for the U.S. overall, the excess cost of this QF renewable generation can be estimated using a number of assumptions.

Figure 6 for instance, estimates the annual installed capital costs for each QF renewable generator installed over the past decade (2007-2017). Estimates by generator type and year were calculated and summed to represent the overall capital requirement that will be needed to be recovered by the renewable QF generator that came on line in each of these years. These capital investment costs, over the decade, sum to around $108 billion in 2017 dollars. The installed costs just over the past five years sum to over $45 billion. These are all costs that will ultimately be recovered directly from ratepayers for capacity that is likely not needed to meet reliability requirements.

Figure 7 provides an estimate of the potential payments that have been made to renewable QF generators over the past several years. These estimates are made at the individual generator level and are “rolled-up” to get an annual total. The annual QF payment estimates

**Figure 7: Estimated Annual "Avoided Cost" Payments to QF Renewable Installations.**

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provided in Figure 7 are based upon a number of conservative assumptions. The first assumption is that these generators perform at levels comparable to the averages for that resource type. That is, solar or wind generators will produce electricity at capacity factors comparable to the industry average for the size and year in which the particular renewable QF facility came on line. Second, the estimates assume that renewable QF generators receive annual "avoided cost" payments that are comparable to the levelized cost of energy ("LCOE") for a combined cycle natural gas facility. The LCOE estimate is developed using capital, operating, and fuel cost drivers from the EIA's Annual Energy Outlook, 2018.

Figure 7 shows that the estimates of the payments likely needed to support new renewable QF generation are considerable, on average about $468 million per year for the last five years, for a cumulative total of about $2.3 billion over a five-year period. These renewable QF payments are likely underestimates (of the total payments) since the valuation is done at a natural gas-based estimate of avoided cost that does not include any mark ups, premiums, or "adders" that can often be tacked on top of an avoided cost reimbursement rate. For instance, the estimated avoided cost utilized in developing the estimates in Figure 7 is around $48 per MWh, an amount much lower than the prior Montana payments of $66 per MWh.

Estimating how much of these payments are "excessive" admittedly requires knowledge about of the specific avoided cost for each renewable QF contract and the current market conditions at the time in which each renewable QF contract was executed. However, it

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## About the Center for Energy Studies

The Center for Energy Studies at Louisiana State University is an applied research, policy analysis, and public education organization concerned with energy and environmental problems and issues that are important for the state of Louisiana and the Gulf Coast region. Established in 1982, the Center's capabilities and experience are related to the offshore oil and gas industry and its infrastructure, Louisiana's petrochemical industries, regional power markets, and the impacts of the energy industry on the state's overall fiscal health.