

PURPA NOPR 2019

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NRRI Webinar

PURPA Perspectives: Do the Comments Provide
Opportunities for Common Ground?

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THE **Brattle** GROUP



Agenda

- NOPR Summary
- Lack of Volumetric Cap
- PURPA Relevance Varies with Geography
- Suggested Refinements
 - Focus on non-RTO states with weak or saturated RPS regimes
 - Focus on renewable QF *oversubscription* in those states
 - Add showing that variable energy pricing comports with QF viability*
 - Convert some utility options into requirements

(*): Refers to “reasonable opportunities to attract capital from potential investors” in FERC’s Windham Order in 2016 (157 FERC ¶ 61,134)

NOPR Summary

- The FERC NOPR is the latest in a long series of attempts to reshape implementation of PURPA.
- It calls out the perennial problem of fixed avoided cost pricing in a declining cost environment:

“[T]here is evidence suggesting that the Commission’s rationale for allowing a QF to fix its avoided cost rate for the term of its contract, i.e., that any overestimations and underestimations in avoided cost rates during the term of the contract would “balance out” over time, may no longer be valid.”
[NOPR in Docket No. RM19-15-000; page 22]

- The NOPR also notes the development of wholesale markets in many parts of the U.S. and that “significant renewable resources have been developed outside of PURPA”.
- Proposed remedies include:
 - A state option for variable, as-delivered avoided-cost energy pricing in PPAs with QFs;
 - A state option for implementing RFPs to set the avoided cost rates;
 - Select curtailing of utility must-purchase obligations; and
 - Select limits on QF eligibility

Lack of Volumetric Cap Continues...

NOPR does not fully address utility/state concerns with lack of volumetric cap in PURPA must-buy requirements for utilities

- Current design and implementation attempts to ration the QF entry by price, not by quantity/volume
- But the prices (avoided cost rates) have not been sufficiently flexible/dynamic in many states to effectively perform its rationing role

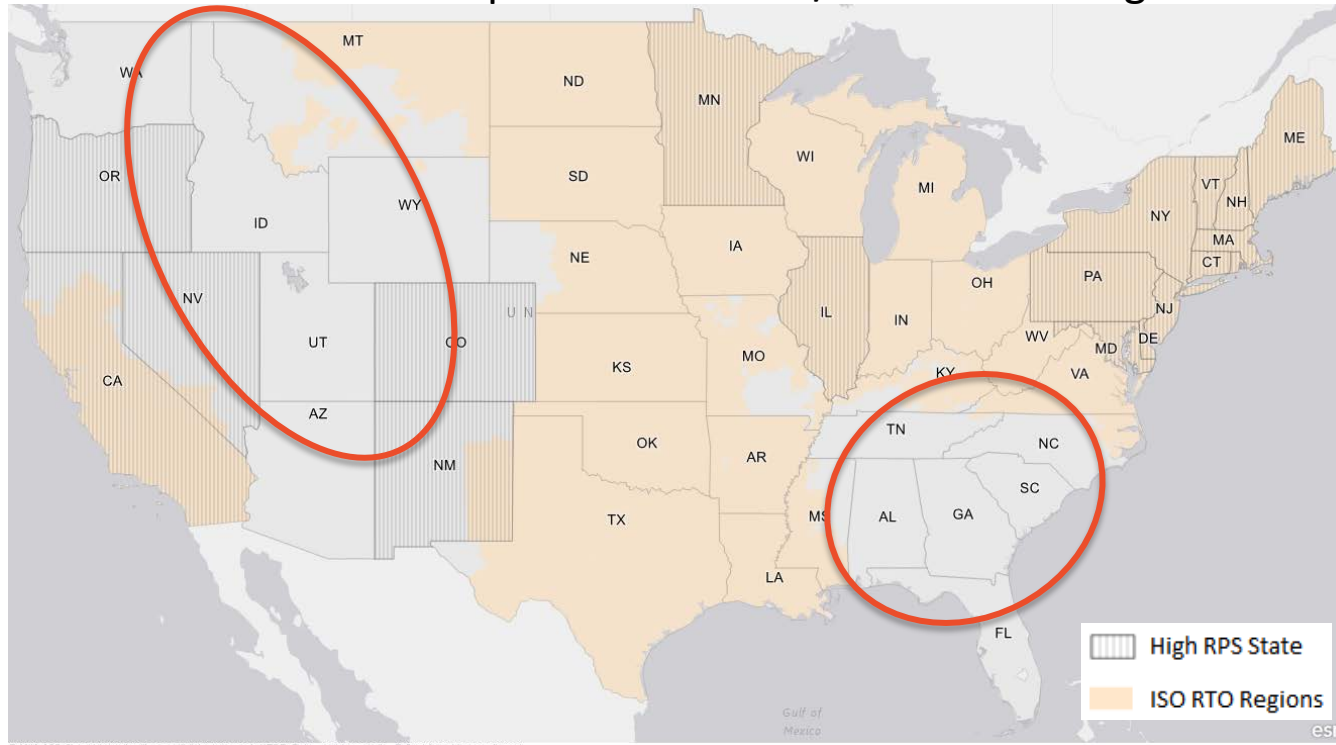
However, the NOPR partially mitigates utilities' concerns with lack of volumetric cap through:

- Reinforcing the price discipline on entry of too much QF capacity
 - the avoided energy prices to float over time (not fixed for the duration of the contract term) would adjust over time depending on cumulative QF entry
 - The competitive solicitations (RFPs) to set the avoided cost rates instead of administrative determination, hence automatically results in lower prices if there is too much QF capacity proposed
 - Clarifies that avoided costs may not always include a capacity component in the event that the utility's demand for capacity is determined to be zero by the state. Missing capacity payments may constitute a soft cap on QF development
- Reducing utility's purchase obligation from QFs if the utility's supply obligation is reduced through retail access

PURPA Relevance Varies with Geography

PURPA's relevance for renewables development is most pronounced in non-RTO states with low RPS requirements.

- These states represent almost 1/3rd of the total generation capacity in U.S.



Top 10 States for QF Entry (MW) Since 2009

Plant State	Total
North Carolina	4,498
California	3,270
Texas	1,219
Idaho	1,025
Utah	994
Nebraska	971
Georgia	816
Massachusetts	779
New Jersey	664
Minnesota	614
US Total	23,950

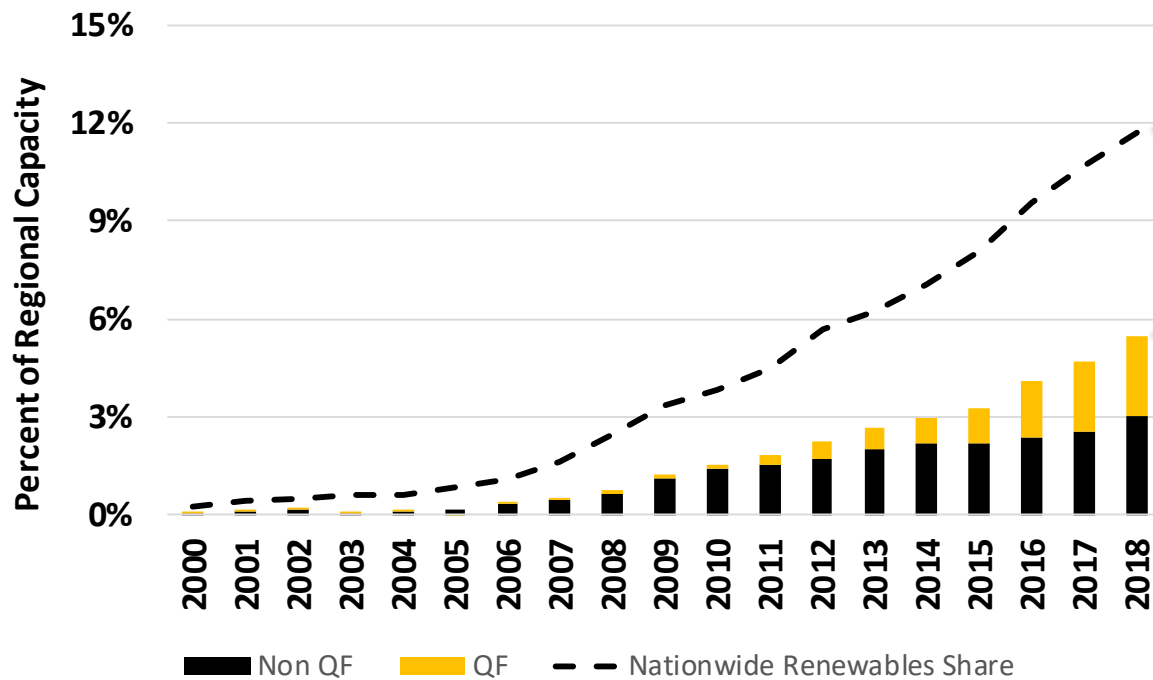
Source: Energy Velocity, 2019

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Notes: States with RPS targets greater than 15% and not yet expired (as according to DSIRE) were considered “high RPS states.” Renewable portfolio goals, clean energy standards, and clean energy goals were not considered.

PURPA's Geographical Relevance

Renewables As A Percent of Capacity In Non-RTO / Weak-RPS Regions



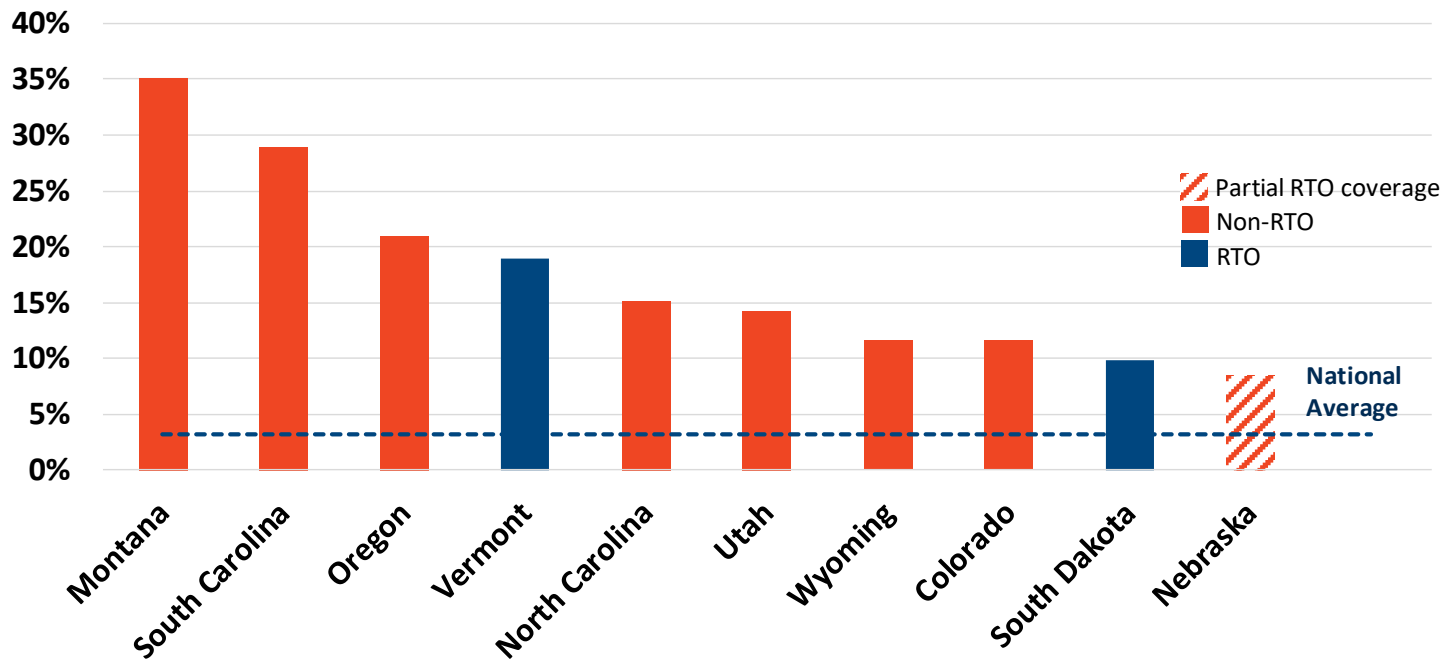
Renewable penetration is lower in non-RTO and weak RPS states compared to national average.

Renewable QFs represents 45% of all renewables in those states.

QF Oversubscription Problem

Currently, about 28 GW (or 80%) of the 35 GW total QF capacity under development around the country is concentrated in 10 states. Most of these states are located in non-RTO regions.

QFs in Development as a Percent of Total Capacity
Top 10 Jurisdictions



Industry Comments on the NOPR

Interests across the spectrum acknowledge it is time to modernize PURPA rules, but differ on how to balance statutory directive against just & reasonable rates

- General support for competitive solicitations (RFPs) as means to procure capacity; RFPs amount to **implicit volumetric caps** on QF development
- But the variable energy rate option has opponents and supporters
- Various utilities argue that PURPA QF rates are in significant excess of avoided cost rates, creating burdens for ratepayers
- Many parties note the continuing importance of PURPA for developers in non-RTO regions
- Parties debate implementation; e.g., whether the locational marginal price is the appropriate measure of avoided cost in centrally-dispatched but vertically-integrated service territories (e.g., MISO)

	Variable Energy Rates	Competitive Solicitations
Utilities / PUCs	✓	✓
Developers	✗	✓
Academia/ Environmental Advocates	✗	✓

Summary Observations on NOPR

- **PURPA has a potential role to continue supporting development of non-utility owned renewable generation in non-RTO states with weak RPS goals**
- **Under the existing FERC guidelines and regulations, sustained decreases in natural gas prices, renewables costs, and load growth resulted in:**
 - Oversubscription of QFs and shift of long-run cost risk to utility ratepayers in some states due to requirement to set rates fixed over the term of the contract,
 - Reaction by some states to adopt much shorter QF contracts and lowering the QF size thresholds to qualify for standard offer QF rates, and
 - Resulting adverse impact on QF developers' ability to finance new QF projects.
- **FERC's NOPR would mitigate the oversubscription problem by giving states the options to implement:**
 - Avoided energy prices to float over time (not fixed for the duration of the contract term), hence would adjust over time depending on cumulative QF entry
 - RFPs for setting the avoided cost rates instead of administrative determination, hence automatically resulting in lower prices for QFs that did not win in the RFP if there is QF oversubscription
- **However, further improvements and refinements to FERC's NOPR would mitigate QF financeability concerns while achieving cost-effective implementation of PURPA.**

Refinements to NOPR

The NOPR will likely face resistance from QFs as “zero-sum”. It could be strengthened by:

1. More focus on non-RTO states with weak or saturated RPS regimes

- Non-QF renewables have relied on robust wholesale markets and RPS regimes
- PURPA remains important where these don't exist
- As a result, most QFs today are renewables

2. More focus on problem of renewable QF *oversubscription* in those states

- Utilities face greater threats of system disruption than inordinate cost from QFs
- RFP and variable energy rate options partially mitigates oversubscription through price mechanism

3. Showing that variable, as-delivered energy pricing comports with QF viability

- “Virtual” access to wholesale energy markets would require contractual undertakings, at minimum:
 - Future prices indexed to liquid hubs via transparent formula,
 - Minimum durations for contracts,
 - “Evergreen” mandatory purchase obligations that would survive changes in PURPA law.

4. Absent the above showing, convert utility options into *requirements*:

- Fixed energy pricing based on forecasts, or
- Independently-monitored RFPs to procure capacity and energy in regular intervals

Refinements to NOPR – RFP Focus

Clarify that if a state chooses to implement RFPs to determine avoided cost rates, several additional provisions should be present to assure transparent and non-discriminatory process and outcome:

- RFP should be conducted on regular intervals (e.g., every year);
- Total procurement target in the RFP should be based on the needs identified in an IRP study that was approved by the state regulatory commission;
- Types of products to be procured through the RFP and the offer evaluation criteria should be reviewed and approved by an independent monitor;
- Large QFs (e.g., > 1 MW) that did not win in the RFP should be offered to enter into long-term energy-only QF contracts at floating future energy rates, assuming RFP total procurement targets are met;
- Small QFs that did not win (or participate) in the RFP should be offered to enter into long-term QF contracts at avoided cost rates based on the highest winning offer price in the RFP.

Presenter Information



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Dr. Celebi provides expertise in electricity markets and analysis of environmental and climate policy. He has consulted primarily in the areas of electricity spot pricing and market design, and has experience in developing and analyzing climate policies, resource planning, power plant valuation, cost/benefit analyses for joining RTOs, LMP modeling, and merger analysis.

Dr. Celebi received his Ph.D. degree in Economics at Boston College, M.A. degree in Economics at Bilkent University, Turkey, and B.Sc. Degree in Industrial Engineering at METU, Turkey.

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