



Wanda Cordero <wcordero@energia.pr.gov>

---

**RE: NEPR-MI-2019-0015 NRDC comments on standalone Demand Response draft rule**

1 message

---

**Martinez, Luis** <lmartinez@nrdc.org>  
To: "comentarios@energia.pr.gov" <comentarios@energia.pr.gov>

Tue, Aug 4, 2020 at 2:43 PM

We mistakenly sent the wrong document. Here are the comments from NRDC on the proposed demand response rule.

Thank you,

Luis G. Martinez

---

**From:** Martinez, Luis  
**Sent:** Friday, July 31, 2020 4:51 PM  
**To:** [comentarios@energia.pr.gov](mailto:comentarios@energia.pr.gov)  
**Cc:** DeCostanzo, Donna <ddecostanzo@nrdc.org>  
**Subject:** NEPR-MI-2019-0015 NRDC comments on standalone Demand Response draft rule

Please find attached comments from the Natural Resources Defense Council on the standalone Demand Response draft rule.

Best regards,

**LUIS G MARTINEZ**

*Senior Attorney &  
Director of Southeast Energy*

NATURAL RESOURCES DEFENSE COUNCIL

M 828.278.9077

34 WALL ST., SUITE 805, ASHEVILLE, NC 28801

[LMARTINEZ@NRDC.ORG](mailto:LMARTINEZ@NRDC.ORG)

[NRDC.ORG](http://NRDC.ORG)

*Admitted in North Carolina and New York*

---

 **NEPR-MI-2019-0015 NRDC feedback on Standalone draft for Demand Response Rule.pdf**  
283K



Via E-Mail: [comentarios@energia.pr.gov](mailto:comentarios@energia.pr.gov)  
Puerto Rico Energy Bureau  
Public Service Regulatory Board  
Government of Puerto Rico  
268 Ave. Munoz Rivera, Nivel Plaza Suite 202  
Hato Rey, PR 00918

July 31, 2020

**RE: NEPR-MI-2019-0015, Regulation for Energy Efficiency and Demand Response request for feedback from Stakeholders on standalone draft for Demand Response (“Preliminary Draft”)**

We appreciate the opportunity to present these comments and hope they will help create a strong Regulation for Demand Response. Below we provide some overall recommendations for the regulation, and we offer detailed suggestions for several items. We stand ready to help tailor these policies to achieve the stated goals when work shifts towards enacting solutions. Additionally, we remain committed to helping the Puerto Rico transition quickly to clean energy and hope we can help the island achieve its climate and clean energy goals.

Luis G Martinez  
[lmartinez@nrdc.org](mailto:lmartinez@nrdc.org)  
Director of Southeast Energy  
Climate and Clean Energy Program  
Natural Resources Defense Council

## INTRODUCTION

NRDC appreciates the opportunity to comment on the preliminary draft of the Regulation for Demand Response for Puerto Rico. We are supportive of the draft and believe it to be an important step towards ensuring reliable, affordable electricity for Puerto Ricans. Since the price of power is higher during periods of high loads, and reliability can be impacted, all ratepayers will benefit from cost-effective demand response (DR) through lower total costs and improved reliability and system operations. Further, the high cost power used during peak periods also tends to be dirtier than the power used during off peak periods. By reducing usage instead of buying the marginal power, DR will thus help reduce pollution and greenhouse gas (GHG) emissions in Puerto Rico. As an increased amount of distributed energy resources such as solar + battery gain acceptance, DR will only become more important to help deal with issues such as intermittency, and to help take full advantage of the additional storage capacity on the Grid.

For these reasons, we particularly appreciate the requirement to pursue all cost-effective demand response. Starting this process now will help Puerto Rico gain practical experience with administering demand response programs and iron out any issues in advance of a likely high rate of increase of new renewable energy and distributed energy resources. We further appreciate the prohibition on using backup generators, and the requirement to integrate cost-effective demand response into the Integrated Resources Plan (IRP) process. However, we believe that several details of the proposed rules could be modified in order to ensure that the laudable goals driving the proposed rulemaking are preserved when the programs are being implemented. Our comments will focus on several recommendations that we believe will increase the chances of success for DR in Puerto Rico.

### PREPA and DR Aggregators

#### *Size Requirements*

The preliminary draft states that large commercial and industrial customers who can offer DR capacity of greater than 50 kW can participate directly in the Puerto Rico Energy Power Authority's (PREPA) programs, but that others have to participate through DR Aggregators. This effectively bans PREPA from offering DR Programs directly to residential and small commercial customers. In most US jurisdictions, residential customers enroll in DR directly through the utility/Transmission & Distribution (T&D) operator, and often DR Aggregators can offer larger DR resources through aggregation of any size customers. This is because:

1. The utility has a pre-existing relationship with the customer, knows their data, and can thus more easily gain widespread participation.
2. DR Aggregators may add cost to the DR programs, although this is unclear.
3. In some cases, direct implementation may let the utility more directly and flexibly control the timing and duration of demand events. For example, some utilities in California are using wi-fi thermostats to control demand on a minute to minute basis to balance loads. This level of control is likely not possible if utilities are working through an aggregator.

By contrast, it is quite common to use aggregators for demand response in large customers. However, the situation may be different in Puerto Rico, as neither PREPA nor its customers has any experience with existing DR or Energy Efficiency (EE) programs. It thus may be more effective or efficient for a new private entity to aggregate and run the programs. However, it is important to avoid a situation where multiple DR aggregators are competing for the same customers in the same space, potentially outbidding each other and sending conflicting marketing messages.

One potential solution, as discussed more below, would be that PREPA or the Puerto Rico Energy Board (PREB) run a competitive bid process. This would allow for articulating the scale and types of DR that are consistent with achieving all cost-effective DR and provide assurance they are capturing it at least cost. PREPA or PREB could potentially model different offerings through an IRP-type approach to assess the value and optimal mix of offerings, as adding additional DR on top of existing DR can change the benefits that accrue per kW. For example, if it is expected that 1 MW of DR will be needed in a typical weather year, but that in extreme weather or emergency situations 2 MW would be needed, the second MW of DR will likely be less valuable since it is not expected to be called as frequently. Evaluating these nuances will support a comprehensive approach to ensure all eligible and cost-effective markets can be targeted and avoid inefficient systems where numerous aggregators are competing for the same thing and confusing the market.

#### *Organizational and Regulatory Requirements*

In addition, the relationship between PREPA and the DR Aggregators is somewhat unclear from the proposed draft. For example, PREPA would use DR Aggregators to implement DR programs, but both PREPA and the aggregators are required to submit three-year and annual plans to the Energy Bureau – it's not clear how these plans would differ or how PREPA's plans would interact with the plans from the Aggregators. The process for finding aggregators, choosing aggregators, approving aggregator plans, and administering contracts with aggregators and the respective roles of PREPA and the Energy Bureau in this process is also unclear and should be clarified. Below we go over our suggestion on how this might work.

#### *Recommendations*

One potential structure for administering demand response programs would be to rely heavily on a competitive bidding process. Under this structure someone (likely either PREPA or the PREB) would periodically issue requests for proposals (RFPs) soliciting aggregators to come forward with proposals to deliver specific demand response resources, including a full explanation of the details of the resource in response to the RFP, an amount that they can achieve, and a cost per kW.

The RFP would likely call for different types of demand response resource. For example, some respondents may bring resources that are meant to be called on the 4 or 5 peakiest days of the year (such as that enabled by water heater controls or wi-fi thermostats) and others may bring solutions to shift daily load from on-peak to off-peak (such as that enabled by batteries). PREPA or the PREB could then select the least cost solutions, up to the kW limit deemed needed in the upcoming three years, making sure not to select too many competing firms promoting similar strategies to similar market

sectors in a way that would detract from effectiveness. Since it is important that DR resources actually materialize when called, there should be a penalty built in the contracts if the actual verified DR does not reach a certain threshold of the contracted DR resource from the aggregators.

Contracts with DR aggregators would have a specified term limit (likely three years) but could always re-bid for a continuation of the same or similar program. Large commercial and industrial customers could potentially put in bids of their own when they have greater than >50 kW available for DR in their own facilities or sign up with an aggregator. If it is determined that it makes sense for PREPA to run its own programs in addition to the aggregator and direct larger customers, that is not precluded, so long as they can they would provide a more cost-effective or improved DR, or be supplemental to aggregator programs.

## STAKEHOLDER PROCESS

We recognize that demand-side management (DSM) to capture EE and DR resources are new concepts in Puerto Rico, and thus any related activities and funding will need to be well communicated and accepted by various parties. To this end, we encourage the final rules to clearly define a more formal stakeholder process. This process would include representatives from various interested parties and allow set times for public comments. This process will help to build broad public and special interest support for cost-effective DSM, provide greater transparency, and could be used not only for reviewing PREPA's three-year plans, but also for activities like:

1. Review and comment on RFPs for DR aggregators prior to release.
2. Review and comment on PREPA's plans, and help assess which programs, if any, PREPA may run and which would be left up to the bidding process.
3. Determine how DR savings would be evaluated, measured, and verified, and potentially review Evaluation, Measurement & Verification (EM&V) plans from DR Aggregators, PREB, and/or PREPA.
4. Follow the proposal selection process to help encourage a broad consensus on, and support for, the optimal portfolio of DR programs.
5. Review and comment on 3-year plans, annual updates, and quarterly reports to the PREB.
6. Review and suggest improvements to the methodology and assumptions used to assess DR program cost-effectiveness, the process used to determine how much DR is cost-effective, and help guide the process to scope out and secure studies to aid these goals (i.e. DR potential studies, or studies measuring DR's value to the grid).
7. Help determine the funding mechanism for the DR programs.

The rules would also ideally outline a mechanism to resolve any disputes that may arise from this stakeholder process – likely an order from the PREB<sup>1</sup>

---

<sup>1</sup> Potential disputes could involve the methodologies for evaluating savings or cost-effectiveness, as well as disputes over the saving and spending targets put forward in the three-year plan.

## COST EFFECTIVENESS

We commend the Energy Bureau on the requirement to pursue all cost-effective demand response. We note that the proposal calls for using a utility cost test (UCT) as an interim until inputs are developed for the Puerto Rico Cost Test (PRCT). We recommend that the PRCT be used from the beginning, even if there needs to be interim values for certain inputs. In the meantime, a stakeholder process should convene to develop the final methodologies and inputs for the PRCT. As part of the process, we support the following principles to develop fair cost-effectiveness tests for all distributed energy resources (DER) that utilities should apply (including DR). They are:

- The test should be comprehensive by accounting for all relevant benefits and policy goals that utilities are required to meet through energy programs.
- The test should be balanced, all costs of attaining the energy system benefits and meeting policy objectives should be accounted for. So, if the test considers a benefit then it should account for the cost incurred to attain that benefit. No costs should be included that does not also include a measure of its benefit.
- The test should be applied to all energy resources fairly, so that resource planners can use it to select the best mix of demand and supply side resources.

Following these principles, the costs accounted for by a demand side program that acquires an energy resource should be the costs a utility incurs when offering the program (PA Costs). The benefits accounted for should be the economic value of all the energy system needs met and related policy objectives, such as reducing carbon emissions, attained through the program.

We also note that the cost effectiveness for demand response can be somewhat more complicated than for energy efficiency. For example, the benefits of demand response may vary based on the time frame of the resource, the predictability, how often it can be called, how long it can be called, the specific location in the grid, and when PREPA actually chooses to call for the resource. Further, marginal benefits of DR likely decline as more and more is added to the grid. We therefore recommend that part of the EM&V process includes ensuring that these issues are fully assessed to quantify the DR impacts and valuation for cost-effectiveness screening.

We also have several more detailed suggestions to the wording of the section to help ensure that the full range of benefits are included:

1. In section 4.01.C.2, we propose adding that the costs included should be “Program costs including incentive payments to participants.” As written, it seems like these are two separate things.
2. In section 4.02.D.2, we recommend specifying that the avoided generation capacity costs should account for reserve margins.
3. In section 4.02.D.4, we recommend specifying that the avoided line losses should reflect the marginal line losses at the system peak, which are what is actually saved at the generator, and are much higher than average system losses.

## REGULATORY REQUIREMENTS

We have some concern that somewhat onerous reporting and regulatory requirements will detract from PREPA's and the DR Aggregator's flexibility to respond to changing market conditions. We have several suggestions to streamline this process:

1. The preliminary draft requires both PREPA and the DR Aggregators to submit plans to the PREB. To the extent PREPA is purchasing DR resources from DR Aggregators, and overseeing the contracts and performance, we recommend only requiring PREPA to file formal plans. These plans should explicitly describe the PREPA programs, and its overall DR saving, costs and cost-effectiveness. They should also explicitly describe the process and criteria it will use to solicit third party aggregators to participate and specific expected aggregator savings and a cost carve out for the bidding process. As part of their bids for contracts, the aggregators would submit plans to PREPA based on PREPA's approved plans. PREPA would be required to confidentially share the received bids and other information about the selection process with PREB, to ensure transparency.
2. The interaction between the 3-year plan and the annual plans is not entirely clear. We recommend that the "Annual Plans" really be called "Annual Updates," which focus on any proposed changes to the 3-year plan.

## EVALUATION, MEASUREMENT AND VERIFICATION

The EM&V process is extremely important, as it is critical that committed DR resources translate to real, measurable demand reduction. We have several comments aimed at improving the robustness of the outline EM&V process:

1. EM&V plans and procedures are almost as important as the DR Plans themselves. There should thus be a similar stakeholder process and opportunity for input during the EM&V plan development and approval as to what is outlined for the DR Plans.
2. Consider adding language describing what may happen if EM&V shows that the actual demonstrated peak demand reduction does not match the committed demand reduction. For example, if the resources come from a DR Aggregator with a contract that pays out at based on delivered kW, presumably they would be paid out based on the delivered savings as opposed to the committed. However, some performance requirement or assurance should also be considered, such as, for example, a penalty if delivered savings do not reach a minimum percentage of what has been contracted for. Further, PREPA, itself, should have some sort of performance incentives and/or penalties for meeting its plan goals.
3. As discussed above, benefit cost analysis for DR has many nuances that may differ from energy efficiency. Consider also using the EM&V process to conduct studies evaluating the financial benefits specifically of DR Resources.



## IRP PLANNING

We commend that the preliminary draft requires that DR resources be included in the IRP planning process. To help ensure that DR is effectively and fully evaluated on an equal basis to supply-side and EE resources:

1. Section 8.01.A.1.b directs PREPA to “consider the achievable demand response potential identified in any relevant studies conducted by PREPA.” The language in this section is a bit vague. For example, it is not clear whether PREPA is required to conduct a DR potential study. Ideally, PREPA would conduct a study that develops different tranches of potential at different costs. The IRP would then progressively apply the tranches to determine what level of DR (along with other resources) is optimal. Alternatively, if the IRP is developed as part of the bidding process, the IRP could model the actual amount and cost of available DR from the various bids. The IRP process than could be used to determine how many bids are cost-effective, and thus should be selected for the next three-year period.

## OTHER

1. Consider requiring that PREPA implement TOU rates and/or critical peak pricing, unless shown to be non-cost effective. These rates typically significantly reduce peak demand at minimal price and can increase the effectiveness of other DR programs and technologies.
2. Stakeholders should be given an opportunity to formally intervene and challenge the three-year plan, if the stakeholder process outlined in section 3.03.F.2 does not result in satisfactory consensus.
3. Section 2.04.B states that PREPA cannot discriminate among resources on any basis other than the cost to ratepayers for performance. Consider adding to include the reliability and/or performance history of the DR Aggregator.
4. Section 3.01.B.1 states that compensation for DR should be based on the value to the grid. Consider modifying this section – while payments should not exceed the value they bring to the grid, they should be based on the minimum value necessary to achieve the needed DR resources.
5. Section 3.02 on DR in emergency situations implies that plans for DR in emergency situations are only developed and approved after an emergency occurs. The opposite is what should be required – the standard three-year plans should include plans and contingencies for emergency situations. These resources need to be signed up and ready for deployment before the emergency occurs.