

Northwest Power and Conservation Council's Issue Paper *Demand Response Advisory Committee Scope*

6/14/2016

1. ***PNNL applauds the Northwest Power and Conservation Council's proposed creation of the Demand Response Advisory Committee (DRAC)*** as an important step in helping the Council address technical, cost, and institutional barriers facing demand response (DR) in the region. Further, in general we endorse the Council's proposal for an initial focus on items A-D and a subsequent expansion of focus to items E-G. We offer a number of observations and suggestions, as follows:
 - a. The term "demand response" means different things to different people. Some constrain it to the traditional notion of managing peak demand and/or peak production costs or prices. We note that in its 7th Power Plan the Council acknowledges that DR can also form an important flexibility resource for (among other purposes) helping integrate renewables. ***By implication, we presume the Council intends the DRAC to focus on peak and flexibility applications for DR, but this should be made clear in its charter. We strongly support the latter view,*** particularly in light of the need to obtain as much value as possible to offset the cost of the DR resource.
 - b. We feel that ***Item E.1 in the Council's white paper*** (current performance, cost, and availability) ***is probably required to support implementation of the recommendations in the 7th Power Plan and therefore should probably begin as part of the initial activities A-D.***
 - c. PNNL feels that ***Item B in the Council's white paper (policies and actions to remove barriers) is a critical activity. Key elements the Council should consider including as part of the DRAC*** activities in this regard are issues surrounding
 - i. cost recovery, and (for investor-owned utilities) impacts on revenues and profits
 - ii. firmness and dispatchability of the DR resource
 - iii. structural issues inside utilities where energy efficiency and demand management organization and staff are not well integrated with supply-side organization and staff
 - iv. customer acceptance.In the process of addressing these issues, the region would benefit if the DRAC were to
 - v. survey or interview regional utilities, and examine activities in other regions, to assemble an inventory of how these issues can be addressed and identify and best practices

- vi. develop structure(s) that could be the basis for consistent valuation of the DR resource across utilities, including whether and how local transmission and distribution bottlenecks should be included
 - vii. propose development of tools, check lists, standard reporting formats, etc. that would help regulators (and the Council) assess whether and how DR is being considered in utility resource plans
 - viii. propose a regional branding activity and public information campaign directed toward customer acceptance
 - ix. propose a regional approach toward interoperability and cybersecurity.
 - d. ***With respect to improving the effectiveness of DR programs*** (Item C) and implementing action plans (items D and G), ***we would urge that the DRAC's charter consider:***
 - i. applying market transformation techniques that have been a hallmark of regional energy efficiency activities (DR for water heaters, and smart thermostats are prime candidates, for example)
 - ii. opportunities for early deployment presented by large institutional and commercial campuses.
 - e. ***With respect to assisting with the development of the 8th Power Plan's assessment of DR potential (Item G), the DRAC should address the need expressed in the 7th Plan to identify a means of assessing the potential of flexible DR to assist with the integration of renewables.***
2. ***PNNL also endorses the Council's proposed creation of the System Integration Forum*** to address issues that cut across various types of resources, and hence, Council advisory committees.
- a. ***We believe that it is critically important to offer a level playing field and unified operational approach for all types of distributed resources that can similarly contribute – batteries and other forms of electrical storage, thermal energy storage, combined heating-power and cooling-heating power, electric vehicles, and eventually other resources such fuel cells – in the name of both fairness and economic efficiency.***
 - b. ***We are encouraged by the Council's intent that transactive energy approaches be considered as part of the charter of the Forum,*** as a means to defining this playing field and as a mechanism to link the value obtained to incentives for customers to participate.
 - c. ***The Forum should address the lack of a regional business model and/or an exchange for such services, including in the context of the CAISO energy imbalance market.*** In the absence of this, utilization of DR and other resources may be limited to the self-interests of the individual utilities rather than regional development and sharing of resources.
 - d. ***With respect to planning tools and techniques, the Council may want to have the Forum review work on coordinated T&D planning in California (<http://morethansmart.org>),***

and new U.S. Department of Energy Grid Modernization projects on planning tools as follows:

- i. Development of Integrated Transmission, Distribution and Communication Models
- ii. Distribution System Decision Support Development & Applications
- iii. Development and Deployment of Multi-scale Production Cost Models

PNNL leads the first of these and is a team member in the others and can serve as a point of contact.