

MEETING NOTES

Vermont Department of Public Service (PSD)
Innovative Rate Design Study
Rate Design Initiative – Workshop No. 5
July 16, 2020 (Online via Zoom)

General Notes

This was the last workshop for the Innovated Rate Design Study. Similar to previous efforts, this was conducted virtually, using Energy Action Network's (EAN) Zoom account. Riley provided an introduction, which was followed by a summary of the report findings, two panel discussions, comments from the Commissioner and closing remarks. The Study draft report was provided in the invitation for the workshop along with the agenda (originally sent on July 10). The following is a summary of the presentations/discussions for this workshop.

Report Summary (NewGen)

- Electricity usage is evolving as a function of technology adoption; focus of Study is on adoption rates, inherent load flexibility, and policy support.
- Increasing load will increase costs which can be impacted by strategic load control programs (indirect with rates, and direct through utility or 3rd party management).
- Recommendations, which may or may not be sequential, include 1) developing embedded cost base rates, 2) identifying forward price signals, 3) adopting device-centric rate design, 4) bundling services for load management, and 5) developing strategies for adoption of dynamic rates / rate programs.
- Implementation challenges are real and may be mitigated with enrollment structure, program design and pricing, increased marketing, and continued innovation of technology / business models.

Panel #1 (Plans and Perspectives from Vermont Distribution Utilities)

James Gibbons (Burlington Electric Department - BED)

James indicated that BED supports dynamic rates and working with new technologies, although legacy billing systems are an issue to changing rates / rate programs. He suggested that there is likely a two year window to resolve billing issues and that BED is in the midst of significant IT investments. He indicated a concern over mandatory and “opt-out” rate programs and thought that the lack of discussion on the challenges of infrastructure was a major oversight in the Study. James opposes a mandatory or an “opt-out” rate program. Further, he suggested that trying to identify “critical” times for rates (such as Critical Peak Pricing) would become more difficult to predict as load becomes more flexible and dynamic. He stated that some of BED's best ideas came from customer focus groups, as they are able to “buy into” a program to make it successful. James felt that BED was already along the process of the Study recommendations but did not feel they were as “linear” as stated in the report.

Ken Nolan (Vermont Public Power Supply Authority - VPPSA)

Ken agreed with the general findings and direction of the Study and feels that utilities are seeking to be more innovative in their approaches. He disagrees with the characterization that smaller utilities have fewer resources. He instead offered that municipally owned utilities are not like traditional utilities, as they are more like government entities, being risk adverse, tied closely to residential customer demands, and do not have appetite / technology for innovation. He stated that marketing is important to success of load control programs. VPPSA does have a strategic plan in place and is looking at significant technology investments in the future to support potential rate programs. Ken was appreciative of the stakeholder process, but that the report was written at a state level and would be difficult to deploy at utility level (for VPPSA members). He would like to see more around the costs for programs versus the savings, and more detail connecting front-line implementation to establishment of policy and strategy.

Josh Castonguay (Green Mountain Power - GMP)

Josh stated that GMP was in alignment with most of the findings of the Study but was concerned about mandating or forcing customers into a program. Their primary questions about future rate programs are 1) does it make sense for the customer to participate?, 2) does it drive down costs (or reduce carbon output)? or 3) does it improve resiliency? They see EV customers as being flexible and have found that few customers “opt-out” of peak time load reductions in the EV pilot program they have running (approximately 400 cars). He cautioned about going after every device just because they are electric. For example, he did not see much benefit from the already efficient heat pump water heaters. He suggested utilities should try to utilize more social media, rather than paid media, and that the next big issue would be around battery storage. He feels GMP is pretty solidly along the recommendation continuum presented in the report and they are investigating “bundling” load management. Josh felt that GMP benefitted from the feedback from the stakeholder groups as part of this process.

Rebecca Towne (Vermont Electric Coop - VEC)

Rebecca concurred with the previous comments and was thankful for conversation around the implementation challenges around rate design / rate programs. She indicated that new programs need to be adaptable to respond to future loads which will continue to change and that strategies will depend on location, technology (such as broadband) and many might not be applicable in the short-run. She also indicated appreciation for the perspective that load control programs should be designed both from the perspective of cost recovery and from the perspective of increasing customer enrollment. At VEC, the words they use are important – the utility thinks in “control;” the customers want “management.” They have a diverse customer group with wide-ranging interests across their service territory. She feels they have an effective marketing approach and are careful about coming across as overly “sales” focused to their customers. She felt that VEC was solidly at Step 3, and outlining future steps was helpful. She does not expect VEC to be on the “bleeding edge” but will look to other best practices in the state. She indicated she thought the process was valuable to get different groups within the state together to discuss.

Patty Richards (Washington Electric Coop - WEC)

Patty indicated that conceptually, she likes the recommendations in the report. Her concerns were regarding the requirement for AMI metering systems to implement rates / rate programs and technology limitations on their system. They have done some pilots on peak controls but are limited by billing / meter communication systems. They see this as two groups; rates and peak controls, rolling out rates with

effective price signals is a challenge. Half of their membership would qualify for low-income programs, so it's difficult to get too sophisticated with rate programs. She feels that a fundamental infrastructure is necessary before you can get to load control.

Panel #2 (Where Do We Go from Here?)

Paul Hines (Packetized Energy)

Paul indicated that electrification is the key driver to achieving carbon goals. He advocated for keeping fixed costs off the volumetric elements of electrification and thought that device-based rates may help facilitate this process. He thinks the utilities in Vermont are already fairly innovative and may not need 3rd parties for load management, but third-parties may be able to bring outside capital to the equation that may otherwise be constrained by utility capital budgets and spending caps.

Steve Rymsha (Sunrun)

Steve commented that current rates are not typically “forward-looking” but based on today’s costs. He felt that getting to “opt-out / TOU rates” from “opt-in” rates is a very big challenge. He thought that rate riders for EV (and other applicable technologies) were better than unique rates for specific load (e.g. EV-only rates). He urged participants to think about future flexibility, including EV to grid; however, electrification and the hosting capacity will be expensive in the future (and distribution system planning is critical). He highlighted the need to develop advanced distribution planning processes to develop forward looking locational pricing and programs to ensure avoidance of future traditional investments. He supports more efforts to understand avoided costs and that load shaping by integrating scale of technologies will happen and will pay-off in the future. Additionally, programs for low and moderate income customers should be investigated for development to ensure this demographic is not left out of the energy transition.

Morgan Casella (Dynamic Organics)

Morgan contends that very little of the value that NewGen has modeled as a byproduct of new rate designs can actually be realized through behavioral response to pricing alone. Customer equipment will have to be automated to be responsive to external control signals on a mass scale. And the methods for coordinating these assets has to be developed through ongoing trial and error. Time-varying retail rates are not necessarily the ideal control signal and in any case are not a substitute for a system of load scheduling and dispatch that has to be explicitly designed. Much work still needs to be done to define the grid services that flexible loads can provide to distribution system operators, down even to the device level. There are large foundational ITC infrastructure investments that need to be contemplated now as part of the least-cost planning process to avoid duplicative expenditures and diseconomies of scale. Ultimately, realizing the value prop of flexible load is first and foremost an operations and planning problem, not a question of rate design.

Annie Gilileo (Greenlots)

Annie did not feel that the strategic rollout described in NewGen’s report needed to be sequential and wants to make sure all are being realistic about the size of the Vermont market for “new business models.” She does see an opportunity for interesting and innovative pilot offerings, but market size in Vermont may be difficult for large-scale private sector transformation. Annie suggested leveraging the report for regional coordination. She is concerned that additional emphasis would need to be placed on complementary program design to achieve about getting to the numbers in the “high adoption” technology scenario in the report.

Jared Duval (Energy Action Network - Vermont)

Jared thanked the Department for their proactivity and foresight in convening these important conversations, as they have been helpful. He was concerned about participants missing the “big picture” that while utilities capacity costs may increase, there is opportunity to reduce overall state energy expenses by reducing fossil fuel consumption (and associated carbon emissions) as we electrify transportation and heating. He felt that for rapid greenhouse gas reductions (GHG) there needs to be an equitable energy burden reduction, which could come from “beneficial” electrification. Also, there is a benefit to the state economy that is not identified in the report, from having local dollars invested and recirculating locally (rather than sending them out of state, as happens with a large share of fossil fuel expenditures). The big question is around total energy costs, not just electric system costs in isolation. Additionally, in the long-term, there will likely be opportunities for EV-Grid type charging.

Rick Weston (RAP)

Rick asked questions about “why not” (with regard to innovative rate design). and He stated that an energy system build from scratch today would be different from the one currently in place and that we would pay for it—that is design rates for it—in very different ways than we do today. This exercise is about the transition from today’s electric system to that new and much more dynamic one. Rate design reform is part of what will get us there. He felt the comments in opposition to mandatory rates takes a too narrow view of the options and is something of a diversion, as rates under most current tariffs are already “mandatory,” because customers do not have a choice in their rate class rate design. The question is really about how best to move to more economically efficient pricing (in the broadest sense). Further, he offered that smart rate design and products should mean that the decisions that customers make to minimize their own bills will be consistent with those they (or system operators) would make to minimize system costs—that is, smart rate design will felt that programs that benefit the overall system, the maximize customer welfare, and encourage drive achievement of public policy goals (e.g., reducing carbon) should be viewed similarly. He closed by saying that utilities and regulators should not be afraid to make mistakes, but they should have more time and a more supportive environment in which to do so.

Tom Dunn (Vermont Electric Power Company – VELCO)

Tom indicated that historically, load increases resulted in more transmission assets in the state, a process that was expensive and particularly difficult to achieve. Now they have more tools to adjust load, and successfully avoided transmission system upgrades with Energy Efficiency (EE) and Distributed Energy Resources (DER). He stated that VELCO only wants to build new transmission as a last choice; however, plausible high-case forecast adds significant demand to the system. He also mentioned that in the past, VELCO’s general perception of the ISO-NE load forecast was that the ISO was likely high, whereas in the future it may be that the ISO’s load forecasting will be too low. Additionally, the design and development

of new transmission is a very long-term effort which should put the rate program recommendations / implementation schedules in context.

Perspectives from the Public Service Department (Commissioner Tierney)

The Commissioner expressed her thanks to all involved in this Study. She commented on the evolution of public policy and the roles that stakeholder engagement groups have in supporting those changes. She stated that she recognized the efforts and resources that participants have dedicated to this Study and was appreciative. She stated the Department's vision includes incorporating the concepts of this Study as a component of the Integrated Resource Planning (IRP) review, as well as in their Section 248 Needs Determination review process, and the Vermont System Planning procedures (long range transmission system).

She indicated they anticipate pushing the Study concepts in future rate proceedings, as well as in their Comprehensive Energy Plan and Annual Energy reports, and in direct conversations with utilities. She indicated the Study concepts will be also included in reviewing the compensation for Net Energy Metering and future demand rates. Further progress is needed on these two topics. She made it clear that the Department is only one voice in the state's electric industry; there are a lot of smart people participating in this Study and in the state, and she is depending on them to be as vocal in the future as they have been for this process.

Closing Remarks (NewGen / Department)

The Department and NewGen greatly appreciate the effort that the stakeholders have put into attending, participating, responding, and commenting on the subjects and topics discussed in the workshops over the period of this Study. Comments on the draft report were requested to be provided to the Department by July 24, 2020, which will be reviewed by NewGen. A final report is anticipated to be published in early August.