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**RE: Docket No. E999/CI-22-600, Commission Investigation into the Potential Role of
Third-Party Aggregation of Retail Customers**

SwitchDin welcomes the opportunity to provide feedback to the Minnesota Public Utilities Commission on its investigation into the potential role of third-party aggregation of retail customers.

SwitchDin is an energy software company that bridges the gap between energy companies, equipment manufacturers and energy end users to integrate and manage energy resources on the grid. Founded in 2014 in Australia, SwitchDin's technology enables our clients to build and operate vendor-agnostic virtual power plants (VPPs) and microgrids, and to optimize site performance across fleets of diverse assets.

SwitchDin is the key solution provider for Project Symphony, Australia's largest orchestration of distributed energy in a multi-gigawatt-scale grid. This \$35.5 million partnership with the government of Western Australia (WA), utilities and the market operator is more than just a VPP for thousands of households and businesses. It is a market platform for network services, combining central dispatch with local coordination and site-level optimisation. Rooftop solar recently supplied more than 60% of electricity generation in WA, and that proportion continues to grow. By enabling the reliable operation of a multi-gigawatt-scale grid dominated by distributed energy, Project Symphony is blazing the trail for the net zero electricity networks and energy markets of the future.

SwitchDin is expanding to Europe and the USA, to provide leading-edge distributed energy projects, flexibility programs and VPPs. We are currently in the process of establishing partnerships so that we can leverage our experience into the US markets and are a founding member of the RMI Virtual Power Plant Partnership (VP3) to support this mission. VP3 has an educational mission to increase understanding among policy makers of how VPPs can advance priority objectives in the power system.

VPPs can help Minnesota achieve its goals for reliability and sustainability. In the near-term, VPPs are a proven cost-effective solution to enhance system reliability. In the longer term, distributed energy resources (DER) and aggregated DER in the form of VPPs can make an important contribution to Minnesota reaching its goals to decarbonise its electricity system.

SwitchDin's key recommendations are that the Commission should:

- Permit VPP operators and aggregators of retail customers to bid demand response into organized markets,
- Allow VPP operators to include exports from aggregated distributed energy resources (DER) in their bids into organized markets,
- Require rate-regulated utilities to create tariffs that would allow third-party aggregators to participate in programs to incentivize flexible demand and exports from DER,
- Implement a certification scheme for aggregators of retail customers for demand response and DER exports to ensure they can serve customers, deliver services reliably, and have the necessary capabilities to interact as required with utilities and the grid operator, and
- Put in place consumer protections for customers of VPPs to ensure that they are properly

informed, their data is not misused and they have avenues for recourse if required.

Responses to questions raised

1. *Should the Commission permit aggregators of retail customers to bid demand response into organized markets?*

Yes. SwitchDin strongly supports the proposal to allow aggregators of demand response to bid into organized markets. The proposal would benefit customers (by enabling them to extract additional value from their assets) and would improve management of the grid using proven, cost-effective solutions.

SwitchDin has substantial experience in Australian markets, working with distribution networks, electricity retailers and original equipment manufacturers (OEMs) to enable participation of aggregated DER into wholesale markets. We would welcome an opportunity to present the Commission with an overview of our experiences and the lessons that Minnesota can take from Australia's experience of VPPs and wholesale market participation.

2. *Should the Commission require rate-regulated electric utilities to create tariffs allowing third-party aggregators to participate in utility demand response programs?*

Yes. SwitchDin strongly endorses the proposal that the Commission require rate-regulated utilities to create tariffs that would allow third-party aggregators to participate in demand response programs and other programs with similar aims. We also recommend the Commission require utilities to create programs that allow VPP comprising aggregated customers' DER to provide grid services. These kinds of programs improve reliability, reduce costs and enable new revenue opportunities for customer-owned DER.

Preferably, the new tariffs and programs would be open to demand response and to electricity exported by aggregated DER to the grid.

3. *Should the Commission verify or certify aggregators of retail customers for demand response or distributed energy resources before they are permitted to operate and, if so, how?*

Yes. A verification and certification process should be put in place to ensure that aggregators can serve customers and deliver services reliably, and that third-party aggregators have the necessary capabilities to aggregate DER and demand response into VPPs. The certification process could, for example, verify that aggregators have the capability to:

- Receive and respond to signals from the grid operator,
- Communicate with customers and dispatch DERs, and
- Communicate as required for the purposes of verification, payment and dispatch.

4. *Are any additional consumer protections necessary if aggregators of retail customers are permitted to operate?*

Yes. Consumer protections for customers of VPPs should include:

- Provision of information to ensure that customers are fully informed and that they understand the requirements for program participation and anticipated bill impacts,
- Provision of information to explain the roles of utilities and aggregators and their relationship,
- Recourse for misleading communications, and
- Regulations to avoid misuse of customer data.