

# **Joint DER Parties Comments on CPUC Energy Division’s May 25, 2021 Workshop on Advanced DERs and Demand Flexibility Management**

June 11, 2021

## **I. Introduction**

Enel X North America, Inc., California Energy Storage Alliance, the California Solar & Storage Association, Sunrun, Inc., Vote Solar, Tesla, Inc., EDF Renewables, Nuvve Holding Corp, and Stem, Inc. (collectively, the “Joint DER Parties”) respectfully submit the following comments on the California Public Utilities Commission (Commission) Energy Division’s May 25, 2021 exploratory workshop on Advanced DERs [Distributed Energy Resources] and Demand Flexibility Management (Workshop).

## **II. UNIDE Proposal Background**

In the Workshop, Energy Division staff presented its vision for a “unified, universal, dynamic, economic,” or “UNIDE,” approach to rates and load management. The UNIDE proposal would address inefficiencies and complexities associated with currently available time-differentiated rates, which are intended to modify load, and market-integrated demand response (DR) programs, which provide compensation for load curtailment or shifting, by promoting a more unified strategy for demand management tied to optimizing grid operations. The objective of this strategy is to increasingly realize the load-shifting potential of customer loads and automation devices to empower consumers to flex their demand for electricity and thereby reduce renewable curtailments, mitigate the impact of the evening ramp, and ultimately reduce system costs.

UNIDE would encourage comprehensive pricing reforms by eliminating outdated rate design elements (e.g. non-coincident demand charges), promoting more dynamic time-differentiated pricing, and capturing locational values that facilitate a transition to an increasingly bidirectional, transactive grid. The UNIDE proposal would work together with, and be enabled by, the California Energy Commission’s (CEC’s) proposed amendments to its Load Management Standards (LMS) that would establish a “Market Informed Demand Automation System” (MIDAS) rates clearinghouse and require each of the state’s five largest distribution utilities to propose an optional dynamic pricing tariff for each customer class by March 31, 2023.

The UNIDE vision would be developed through a six-step roadmap, as follows:

- Step 1: Develop standardized, universal access to current electricity prices
- Step 2: Introduce dynamic prices based on real-time, wholesale energy cost (opt-in)
- Step 3: Modify prices per real-time, localized grid conditions (opt-in)
- Step 4: Transition to bi-directional prices (buy and sell)
- Step 5: Offer subscription option (average load shape and energy quantity)
- Step 6: Introduce transactive features (ability to lock in price in advance)

### III. Support for UNIDE

The Joint DER Parties commend the Energy Division for its forward-looking proposal. Certain members of the Joint DER Parties co-sponsored a Petition for Rulemaking<sup>1</sup> in late 2018 to holistically examine wholesale market-based real-time pricing (RTP), alternatives to non-coincident demand charges, and the development of optional RTP tariffs across customer classes. The Commission denied the Petition on procedural grounds and instead recommended that these issues be taken up in each investor-owned utility's (IOU's) subsequent General Rate Case (GRC) Phase II proceeding.<sup>2</sup> We are glad to see many of these same concepts form the basis of Energy Division's UNIDE and CEC's LMS proposals and fully support the recommendation that the Commission open a Rulemaking to consider their coordinated development and implementation.

Dynamic pricing tariffs and alternatives to non-coincident demand charges<sup>3</sup> would greatly improve the alignment of customer-facing price signals with actual grid conditions and requirements, the occurrence of GHG emissions, and system cost causation. A bi-directional RTP tariff, inclusive of time- and location-based recovery of embedded capacity costs, should greatly increase the market for DERs, promote optimal battery storage sizing, and improve the value proposition of DERs for adopting customers, ratepayers, and the grid. In addition, dynamic pricing would allow customers to make better decisions about their energy use and operate smart devices in greater alignment with local and system grid conditions and marginal GHG emissions rates, compared with static pricing structures.

We would, however, question the Energy Division's assumption that enabling bi-directional compensation for exports at the all-in RTP would necessarily result in "easily discoverable, rational, fair, transparent, and predictable economic value" for DERs.<sup>4</sup> While this assumed result may be true in theory, in practice customers typically make purchasing and contracting decisions about DER technologies based on their understanding of the long-term value of bill savings or revenues from providing grid services. Moving to a rate structure based on the real-time cost of energy and capacity, with increasing temporal and spatial variability, could make it more difficult to forecast longer-term costs and revenues, which for the purposes of structuring project financing is particularly important since it involves large capital investments in technologies such as customer-sited energy storage systems. The ability to forecast costs and

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<sup>1</sup> Petition 18-11-004

<sup>2</sup> Decision 19-03-002. RTP has subsequently been considered within SDG&E and PG&E GRC Phase IIs (A.19-03-002 and A.19-11-019, respectively; a Proposed Decision adopting an RTP Pilot in the SDG&E case mailed June 9, 2021), and a PG&E application for a Day-Ahead Hourly RTP (DAHRTP) pilot for commercial EV charging customers (A.20-10-011). SCE's GRC Phase II (A.20-10-012) has in scope the issue of "Whether SCE's proposed rate designs, including its demand charges, customer charges, dynamic rate options, and proposed time-of-use periods and seasons, are reasonable and should be approved."

<sup>3</sup> Such as UNIDE's proposal to scale recovery of embedded distribution and generation costs based on a time-dependent system utilization factor.

<sup>4</sup> Aloke Gupta presentation, slide 47.

revenues is further complicated if pricing becomes more locationally granular – e.g., customers located at different pricing nodes or on different circuits would realize different values from an all-in RTP for the same level of investment, simply due to their location.

#### **IV. Continued Need for Resource Adequacy Pathways**

While the Joint DER Parties support examining the UNIDE proposal with an eye to unlocking the above RTP benefits, we also stress that the Commission must continue work on developing and improving pathways for exporting DERs to participate in the state’s Resource Adequacy (RA) framework. Even if the UNIDE rules are practical and implementation goes smoothly, it will take years for full rollout and customer adoption of dynamic pricing will likely be gradual as aggregators gain experience and customers gain confidence in RTP operations and realizing a return on their investments. Tariffs allowing wholesale market participation of DERs exist *today*, but are underutilized due to RA rules that severely discount the value of those resources, fail to recognize exported energy or, in the case of behind the meter storage and hybrids participating in a CAISO DER Aggregation (DERA), do not exist at all.

Even if the Commission moves forward with the UNIDE concept, there is still a need to create, improve and refine RA counting rules for BTM resources. For example, FERC Order 2222 requires ISOs and RTOs to accommodate DER participation in wholesale markets. Due to California’s regulatory structure, the Commission will need to work with CAISO to realize the full capacity value associated with BTM resource participation in wholesale markets. In addition, depending on the bill treatment for export compensation, some BTM resources may be ill-suited to take advantage of the UNIDE framework and may be better suited to wholesale market participation. Schools, for example, may have large BTM batteries installed for resiliency, but very little load in the summer months through which to access bill credits for exported energy. These types of facilities might be better suited to wholesale market participation than a dynamic retail rate.

The barriers to operationalizing exporting DERs as supply resources are well-documented and primarily require policy determinations at the Commission, followed by minor adjustments to existing DER participation models at the CAISO.<sup>5</sup> We estimate that these barriers could be resolved within a year of concerted and coordinated procedural work between the Commission, CAISO, IOUs, CEC, and DER providers. If the Commission were to launch such work in the pending RA Proposed Decision (PD), we posit that exporting DERs could be selling RA to LSEs as early as the 2023 delivery year. Then, any future availability of an RTP rate option would be a *complement* to a supply-side pathway for exporting DERs, not a replacement.

#### **V. Proposed Rulemaking Scope and Timing**

Ideally, the Joint DER Parties would suggest a sequential roadmap within the proceeding to develop and implement each of the six steps in order of increasing complexity, as to expedite the rollout of, and enable bi-directional access to, RTP offerings. For instance, in Step 2, it may

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<sup>5</sup> The UNIDE proposal would entail its own inherent barriers and complexities, some of which are in common with, or different flavors of, the barriers and complexities associated with a supply-side pathway.

make sense to start with day-ahead hourly LMPs and then consider adding day-of-prices later. It would also be possible to “develop subscription and transactive options” (Steps 5 and 6) prior to, or in parallel with, “modify[ing] prices per real-time, localized grid conditions” (Step 3).

However, it may be likely that the March 2023 RTP applications (per the CEC LMS) would serve as a gating function to the development and implementation of the proposal as a whole. In that case, to ensure as timely a development as possible, the Joint DER Parties would suggest that any Rulemaking is scoped to dispose of all key elements of the UNIDE proposal as to provide timely guidance for the opt-in RTP tariff applications that the CEC would require by March 31, 2023.

The Rulemaking should be scoped to include the following elements, at a minimum:

- Day-ahead versus real-time energy market pricing
- Hourly versus sub-hourly pricing intervals
- Methodology for utilization-based collection of embedded capacity costs
- Locational granularity of pricing components
- Methodology for monthly subscription charge, or other considerations for minimizing customer bill volatility within an RTP framework
- Method for crediting exported energy at retail price and interaction with reforms to net energy metering being contemplated in R.20-08-020
- Guidance and recommendations for improving CCA access to IOU interval metering data to enable CCA RTP rate offerings
- Guidance for schedule and budgeting of near-term offerings to study customer acceptance and response
- Guidance for proposed investments in pricing engine, billing system upgrades, DERMS systems, day-ahead distribution system forecasting tools, line sensors, enhanced communications, and other enabling grid modernization investments
- Operational coordination, communications, and visibility requirements between IOUs, LSEs, DER providers, and the CAISO
- Metering requirements
- Updates to the Rule 21 interconnection tariff
- Program measurement and verification
- Accounting for UNIDE response in Resource Adequacy, CEC IEPR, and long-term planning
- Incorporation of learnings from RTP offerings that result from live proceedings (see footnote 2)

Finally, the Commission should not feel pressure to design the perfect tariff from the start. It is unlikely that market uptake will happen rapidly, so there will be time to learn and adapt. The proceeding should begin as soon as practicable and set an aggressive timeline for the initial version of the tariff.

## V. Conclusion

The Joint DER Parties appreciate the consideration of these comments. We urge the Commission to expeditiously open a Rulemaking and look forward to working with Energy Division staff and other stakeholders to further develop the UNIDE proposal.

Sincerely,

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