

**Comments of TeMix Inc. on
Advanced DER & Demand Flexibility Management Workshop
Hosted by Energy Division on
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TeMix Inc. is pleased to submit the following comments on the staff proposal put forth at the Advanced DER & Demand Flexibility Management workshop hosted by Energy Division on May 25, 2021. TeMix is a California transactive energy services company that as led in the creation of standards and tariffs and in development and demonstration of secure, scalable, platforms for dynamic pricing and transactive energy for DER and Demand Flexibility management.

The Staff Proposal

At the May 25th workshop, the CPUC Energy Division (ED) Demand Response and Retail Rates Staff presented their joint proposal for a comprehensive roadmap to facilitate widespread flexible demand management while minimizing the cost of service. The proposal will integrate advanced rates with load modifying demand response to promote flexible load management. The roadmap has the following six steps:

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

The No Brainer Case for the Staff Proposal

TeMix strongly supports a rulemaking and further workshops to implement the staff proposal. Without this proposal and its implementation, the cost of achieving California's clean electricity and electrification goals will be much higher because more customer-owned DER investments and supplier solar, wind, storage and distribution and transmission network capacity will be required than without the proposal. And, as the staff proposal makes clear, the existing baskets of rates, supply-side programs, and distribution level DR programs are complex, inefficient, expensive, confusing, difficult to scale, have limited adoption, and high cost for controls and automation. The proposal reduces complexity and is highly scalable for widespread adoption with reduced cost of controls and automation.

The staff proposal is not a policy shift as it simply continues and accelerates the CPUC, CEC, and CASIO policy over many years to bifurcate DR programs into supply-side CAISO dispatch and demand-side price response and to implement time differentiated and dynamic tariff rates. TeMix believes that the CPUC has the authority to develop the advanced tariff rates for this demand-side approach. The technology to implement the advanced tariffs, including all six steps in the roadmap, is commercially available and has

been demonstrated¹. Automation for customers and their devices also exists and can be deployed by customers and vendors. Billing is more straightforward and more understandable for customers with the proposed advanced tariffs. And, with the advanced tariffs in place, current and new smart device vendors, DR aggregators, installers, IOUs, CCAs, and many others may realign their business models to create new ways to support customers.

Implementation Issues

TeMix does not support more pilots, but strongly supports the incremental deployment of the staff proposal. All parties need the confidence that the optional advanced tariffs will be in place long enough to recover their investments and operational costs and benefits. Short-term pilots cannot do this.

The advanced tariffs can be offered to any customer, but those customers with flexible devices and loads such as EVs, storage, smart thermostats, electric heating, and cooling and pumps, or with plans to install these devices will be most interested, initially. The subscription portion of the proposed tariff can be adjusted for polices to support low-income customers, for example, without affecting the dynamic price portion of the tariff.

All six steps in the proposal roadmap must be made available to all interested customers from the start of implementation. The real-time, bi-directional prices with forward subscriptions and advance transactive lock-in of prices for bill volatility protection and for automated device management must be provided to the automated EMS systems for customers; otherwise, they are unlikely to get the full benefit of this proposal and have less interest.

The proposal is simpler for customers, LSEs, DOs, the CAISO, vendors, service providers and others than the current baskets of tariffs and programs. The staff proposal is simpler because the composite prices are based both on capacity utilization and CAISO LMPs, so demand charges, counterfactual baselines, market integration and dispatch by the CAISO are all not needed, and other obstacles impeding DER providers are avoided as stated in the proposal. Vendors of smart devices need the proposed tariff in place as soon as possible to further develop their devices with the assurance of a market for their device. Therefore, there is no reason not to deploy all six steps right at the start with all participating customers.

Implementation Must Avoid Over-Reliance on Real-Time Prices

It would be a huge mistake to only implement dynamic pricing in steps 2 and 3 without steps 4, 5, and 6, and expose customers to potentially crippling bill volatility and suppliers to potential bankruptcy. It is tempting to only send real-time prices to customers and their devices, as it may seem to be simpler. But it is not simpler because large, fixed charges and demand charges will be needed for resource adequacy that will cause complexity and reduce bill volatility at the expense of incentives for load flexibility. And, without the ability to use transactions to lock-in composite forward prices that recover fixed and variable costs, automation of storage, EV charging, and HVAC load shifting will be less effective and more difficult.

Overreliance on real-time (day-ahead or hour-ahead) pricing, insufficient forward truly binding transactions for physical supply, and poor load management greatly exacerbated the recent Texas

¹ [Complete and Low-Cost Retail Automated Transactive Energy System \(RATES\) \(dret-ca.com\)](https://dret-ca.com)

market problems and the California 2001 market failure. Extreme weather and other events will and should cause price volatility. In Texas, customers on real-time prices suffered very high bills. Some retailers who provided fixed prices to customers suffered bankruptcy because of increased usage beyond their forward contract supply that they purchased at very high real-time prices. Let us not repeat mistakes of overreliance on spot prices and instead implement the full proposed roadmap.

Summary

TeMix applauds the Energy Division for its initiative in proposing this roadmap and its plan for opening a rulemaking. This demand-side approach is consistent with current policy and will greatly reduce the complexity of tariffs and programs, especially with increasing renewables, storage and electrification of transportation and buildings. The cost of implementation of the proposed advanced tariffs will be lower than for the baskets of current tariffs and programs, and with customer education and marketing of automated devices by vendors and LSEs, customers will control the adoption of this approach and innovation by vendors will accelerate.

Finally, it is essential that the advanced tariffs and all six steps be rapidly implemented on an opt-in basis to protect both customers and suppliers from risks and provide support for 100 per cent clean energy and electrification.