

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Assess Peak
Electricity Usage Patterns and Consider
Appropriate Time Periods for Future Time-of-Use
Rates and Energy Resource Contract Payments.

Rulemaking 15-12-012
(Filed December 17, 2015)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
ON THE PROPOSED DECISION ADOPTING POLICY GUIDELINES TO ASSESS
TIME PERIODS FOR FUTURE TIME-OF-USE RATES AND ENERGY
RESOURCE CONTRACT PAYMENTS**

Donald C. Liddell
DOUGLASS & LIDDELL
2928 2nd Avenue
San Diego, California 92103
Telephone: (619) 993-9096
Facsimile: (619) 296-4662
Email: liddell@energyattorney.com

Counsel for the
CALIFORNIA ENERGY STORAGE ALLIANCE

November 21, 2016

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Assess Peak
Electricity Usage Patterns and Consider
Appropriate Time Periods for Future Time-of-Use
Rates and Energy Resource Contract Payments.

Rulemaking 15-12-012
(Filed December 17, 2015)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
ON THE PROPOSED DECISION ADOPTING POLICY GUIDELINES TO ASSESS
TIME PERIODS FOR FUTURE TIME-OF-USE RATES AND ENERGY
RESOURCE CONTRACT PAYMENTS**

Pursuant to the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”)¹ hereby submits these comments to the *Proposed Decision Adopting Policy Guidelines to Assess Time Periods for Future Time-of-Use Rates and Energy Resource Contract Payments* (“Proposed Decision”), issued by Administrative Law Judge Jeanne M. McKinney on November 1, 2016.

¹ 8minutenergy Renewables, Adara Power, Advanced Microgrid Solutions, AES Energy Storage, Amber Kinetics, Aquion Energy, Bright Energy Storage Technologies, Brookfield, California Environmental Associates, Consolidated Edison Development, Inc., Cumulus Energy Storage, Customized Energy Solutions, Demand Energy, Doosan GridTech, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, Electric Motor Werks, Inc., ElectrIQ Power, ELSYS Inc., Energy Storage Systems Inc., Enphase Energy, GE Energy Storage, Geli, Gordon & Rees, Green Charge Networks, Greensmith Energy, Gridscape Solutions, Gridtential Energy, Inc., Hitachi Chemical Co., Ice Energy, IE Softworks, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Invenergy LLC, Johnson Controls, K&L Gates, LG Chem Power, Inc., Lockheed Martin Advanced Energy Storage LLC, LS Power Development, LLC, Mercedes-Benz Research & Development North America, Nature & PeopleFirst, NEC Energy Solutions, Inc., NextEra Energy Resources, NEXTracker, NGK Insulators, Ltd., NRG Energy LLC, OutBack Power Technologies, Parker Hannifin Corporation, Powertree Services Inc., Qnovo, Recurrent Energy, RES Americas Inc., Saft America Inc., Samsung SDI, Sharp Electronics Corporation, Skylar Capital Management, SolarCity, Southwest Generation, Sovereign Energy, Stem, SunPower Corporation, Sunrun, Swell Energy, Trina Energy Storage, Tri-Technic, UniEnergy Technologies, Wellhead Electric, Yunicos. The views expressed in these Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. The views expressed in these Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. (<http://storagealliance.org>).

I. INTRODUCTION.

CESA generally supports the set of guiding principles outlined in the Proposed Decision as one that is driven by cost-causation principles, is based on forward-looking costs, provides investor and customer certainty, and is relatively simple and understandable while providing options for added complexity and sophistication in time-of-use (“TOU”) periods. CESA believes that the framework for designing, implementing, and modifying the time intervals reflected in TOU rates is appropriate and will effectively guide the design and modification of rate designs in each of the investor-owned utilities’ (“IOU’s”) rate proceedings.

II. GUIDING PRINCIPLES.

In this section, CESA provides its comments on each of the nine guiding principles.

Guiding Principle 1: Base TOU periods and related rate designs should be established independently for each utility either in a general rate case (“GRC”) or a rate design window (“RDW”). Geographically-differentiated TOU time periods within an IOU’s service territory are not required or encouraged at this time.

CESA agrees with the Commission that each IOU has specific marginal cost profiles that require that each IOU conduct its own marginal cost analysis and independently establish its own TOU periods and related rate designs. CESA also agrees with the Commission that TOU periods should not be differentiated geographically within an IOU’s service territory. By establishing uniform TOU periods within an IOU’s service territory, utility billing administration is simplified and customers are not required to manage a range of TOU schedules. While not time differentiated, the Locational Net Benefits Analysis (“LNBA”) is being developed in the Distributed Resource Plans proceeding to assess locational value of distributed energy resources (“DERs”) such as energy storage. The LNBA will determine, for example, the value of relieving congestion or thermal overloads during peak periods on any given circuit or substation, which serve to compensate existing DERs sited at the stressed part of the grid, or guide future DER

deployment. Therefore, for the sake of simplicity, it may not be necessary to differentiate TOU time periods within an IOU's service territory because the time-differentiated value to the distribution grid may already be accounted for in the LNBA.

Guiding Principle 2: Base TOU periods should be based on utility-specific marginal costs rather than on a statewide load assessment. This marginal cost analysis should use marginal generation cost, consisting of marginal energy costs and marginal generation capacity costs. Going forward, the IOUs should include information on marginal distribution costs that contribute to peak load costs and any time of use information from FERC transmission rate proceedings.

CESA agrees with the Proposed Decision that marginal cost analysis should be utility-specific and be the primary methodology to determine TOU periods. The approach of using marginal energy costs and marginal generation capacity costs for determining TOU periods is appropriate, but CESA believes that marginal distribution costs and marginal transmission costs should also be included in this marginal cost analysis given that these costs can be time differentiated. To provide investor and customer certainty, changing TOU periods in an IOU's next general rate case after only including marginal energy costs and marginal generation capacity costs in the marginal cost analysis in the current rate case should be avoided. Data on marginal distribution costs and marginal transmission costs is currently available and should be used in the marginal cost analysis in the current rate case.

As stated by Southern California Edison Company ("SCE") and San Diego Gas and Electric Company ("SDG&E"),² flexible ramping capacity also needs to be included in assessing marginal generation capacity costs across time. While ramping needs will move in lock step with peak loads and coincide around the same TOU periods, as evidenced by California's net load curve (*i.e.*, the 'duck curve'), the tracking of flexible ramping capacity needs will still be

² Proposed Decision, pp. 19, 21.

important in determining whether peak and super-peak TOU periods are needed. As California moves toward achieving its 50% Renewable Portfolio Standard (“RPS”) goals, the renewable overgeneration and ramping needs are likely to increase substantially and may create the need to establish more advanced set of TOU periods involving not just off-peak and peak, but multiple TOU periods that also involve super-off-peak and super-peak.

Guiding Principle 3: As a secondary check on the marginal cost analysis, the IOUs should provide hourly load and net load data and explain any significant differences between estimated high and low marginal cost hours and the net load shapes. As part of its TOU period analysis, the IOUs should submit the latest data and assumptions, including those vetted in the Long Term Procurement Planning (LTPP) and/or Integrated Resource Planning (IRP) or successor proceeding.

CESA agrees with the Proposed Decision that the California Independent System Operator’s (“CAISO”) hourly load and net load data could be used by the IOUs. While the marginal cost analysis will understandably differ from the load analysis, it is useful for stakeholders to be aware of the reason for these differences. To the extent reasonable, the use of data and assumptions from the Long Term Procurement Planning (“LTPP”) and Integrated Resource Planning (“IRP”) should also be used to ensure that all proceedings in California are operating on the same data and assumptions. Resource production profiles, capacity needs, and transmission and distribution constraints are some examples of the data that will be generated from the IRP proceeding that could be incorporated in the IOUs’ TOU period analysis, as well as forecast data based on reference and candidate portfolios. Most importantly, CESA agrees that the use of data and assumptions from the LTPP and IRP proceedings is necessary because they have already been vetted extensively by stakeholders.

Guiding Principle 4: TOU periods should be developed using forward-looking data, with the forecast year set at least three years after the year the TOU period will go into effect.

CESA agrees with the Proposed Decision that it is important for TOU periods to be forward-looking to create investor and customer certainty. By looking at future data trends for marginal cost of generation and capacity, the IOUs will provide greater regulatory certainty while accounting for forecasted changes in marginal costs. In doing so, the IOUs ensure that TOU periods are not set on current grid conditions but sets TOU periods that balance current and future grid conditions, thereby minimizing the need to change TOU periods frequently and limiting the risk of customer confusion and attrition.

However, CESA cautions against having data look too far forward (*e.g.*, basing TOU periods on ten-year forecasts). There are too many uncertainties related to new and/or improving technologies, customer adoption, and grid infrastructure (*e.g.*, regionalization, grid modernization investments) that may lead to adopting TOU periods in that forecast year that do not align with cost principles when that forecast year arrives. Rather than risking forecast error, CESA believes that it is sufficient to take a mid-term forecast of grid conditions since TOU periods will be assessed every three years in general rate case proceedings.

Therefore, this guiding principle may need to be revised. Setting the forecast year at least three years after the year the TOU period will go into effect could potentially lead to IOUs generating extremely long-term projections in assessing TOU periods. For example, in a 2021 general rate case, if a new TOU period is expected to be implemented in 2025 given that customers will be placed on default TOU rates in 2019 for a minimum period of five years, a marginal cost analysis done from 2020-2021 will be setting new TOU periods based on forecasts of grid conditions in 2028 *at least*. Projections looking eight or more years away may lead to inaccurate TOU periods being established by the time that future year arrives.

Guiding Principle 5: To ensure that the Commission and the public are aware of the likelihood of future TOU period changes, TOU period analysis should be provided in each general rate case, even if the IOU does not propose a change in TOU periods. If such analysis shows a material change in the marginal cost or load analysis than was originally used to set the TOU periods, the IOU should propose revisions to TOU periods.

CESA supports the transparency fostered by this guiding principle. It is important for customers and the industry to be aware of potential TOU period changes.

Guiding Principle 6: TOU periods should continue for a minimum of five years (unless material changes in relevant assumptions indicate the need for more frequent TOU period revisions) and each IOU should propose new TOU periods, if warranted, at least every two general rate case cycles. In support of this principle, each IOU, in its next general rate case or rate design window, should propose a dead band tolerance range for determining when a change would trigger TOU period revisions more frequently than five year intervals.

CESA supports the five-year durability of TOU periods to provide certainty to market participants and customers. Even with grandfathering rules in place, it would be difficult for any market participant or customer to navigate multiple TOU schedules. CESA also agrees with the dead band tolerance range adopted as a principle in the Proposed Decision that triggers TOU period revisions more frequently than the established five-year intervals. It creates some flexibility in the setting of TOU periods, where changes may be necessary due to forecast errors and unexpected market conditions.

Guiding Principle 7: Each IOU should take steps to minimize the impact of TOU peak period changes on customers who have invested in onsite renewable generation or technology to conserve energy during peak periods. Regularly scheduled updates to TOU periods will provide predictability for these customers. Additional steps to increase certainty around TOU periods could include vintaging or grandfathering for five years, as well as other rate structures that provide predetermined limits on TOU period changes. Such steps must also include making information on potential shifts in peak periods available to the public.

Grandfathering is an important principle that provides predictability and financial certainty for customers, who often adopt DER technologies and/or opt-in to TOU rates based on a level of certainty that the TOU schedule will remain in place for some time. This creates

bankability for investors and customers and encourages customer adoption of new technologies such as energy storage. CESA therefore agrees with the Proposed Decision for including grandfathering for five years, which balances the need to ensure alignment with cost-driven consumption and the need for investment certainty.

Guiding Principle 8: A menu of TOU rate options should be developed in utility-specific rate design proceedings and should provide rate choices addressing different customer profiles and needs. IOUs are encouraged to use the Base TOU periods to develop at least one optional TOU rate design with a more complex combination of seasons and time periods and may incorporate more dynamic pricing features and enabling technology as appropriate to address grid needs.

CESA supports a menu of TOU rate options addressing different customer profiles and needs. Undeniably, certain customer classes, such as large commercial and industrial customers, have a more deep and sophisticated understanding of TOU schedules and often have dedicated energy and facility managers. Such customers should have the option to choose a more complex TOU rate option and adopt technologies such as energy storage that can manage their energy use through a more complex combination of seasons and TOU time periods.

Guiding Principle 9: TOU rates should be designed around the Base TOU periods, but may be modified to take into account customer acceptance, preferences, understanding, ability to respond and similar factors. These considerations include:

- **The extent to which customers understand TOU rates generally.**
- **The time and education required for customers to transition to a new TOU rate period.**
- **The ability of customers to respond at a specific time of day or over a given period of time.**
- **Customers' need for predictable TOU periods, including the schedule of possible TOU rate period changes, when they make investment decisions regarding energy efficiency, storage, photovoltaics, electric vehicles and other distributed energy resources.**
- **The appropriate treatment of different customer classes, as necessary, in light of the fact that customer needs and sophistication may vary by customer class**

CESA supports this guiding principle in that it accounts for different levels of customer acceptance, preference, understanding, and capabilities.

III. CONCLUSION.

CESA appreciates the opportunity to submit these comments on the Proposed Decision and looks forward to working with the Commission and parties in active and future rate proceedings based on the important proposed guiding principles discussed herein.

Respectfully submitted,



Donald C. Liddell
DOUGLASS & LIDDELL

Counsel for the
CALIFORNIA ENERGY STORAGE ALLIANCE

Date: November 21, 2016