

**VGI WORKING GROUP  
WORKING GROUP CALL 4/2  
CONSOLIDATION EXAMPLES**

**Dynamic TOU Rates (“Topic level consolidation”)**

Establish EV TOU rates that (a) don’t require separate metering or submetering; (b) pass through time- and location-specific price signals that reflect, at a minimum, energy, delivery, and GHG; and (c) are not too complex for customers to understand and use. All EV charging should be subject to TOU rates and rates should be consistent to the extent practical and appropriate across IOUs (i.e., time windows for off-peak rates) and should reflect “realistic” costs of energy and grid conditions. Allow commercial and industrial customers to opt to switch to a commercial EV fleet TOU rate that eliminates monthly demand charges in favor of some modified form of more-dynamic demand charges.

1.5 Establish EV TOU rates that don't require separate/submetering (significant customer cost). Allow vehicle data to be used as input to utilities for settlement to customer. Also- having a standardized TOU rate format across IOUs would be helpful.

1.6 Establish optional dynamic rate schedules for EV charging that pass-through time- and location-specific price signals that reflect, at a minimum, energy, delivery, and GHG.

1.7 To ensure effective capturing and realization of value from EV flexible load: the retail price signal received by the EV customers (drivers and/or site hosts) should be reflective of realistic, time-variant cost of energy. Unless proved necessary in select circumstances, all EV charging rates should be time-variant, and current TOU rate design (by IOUs, CCAs, and private entities) should continue to evolve and improve to be more reflective of realistic costs of energy and grid conditions. Importantly, time-variability of EV rates should never be too complex for customers to comprehend and use.

1.8 To ensure effective capturing and realization of value from EV flexible load: At any particular time of day, the pricing signal received by the EV customers (drivers and/or site hosts) should be relatively consistent (not necessarily identical) across different sectors and price-setting entities. For example, charging at 2pm within the same geographical region should not be deemed "off-peak" on one IOU rate but "partial-peak" on another IOU rate or CCA rate. Harmonizing different EV rates by different entities, so they are consistent in any given time window, is important for customers to adjust their charging behavior and develop healthy, predictable, and robust charging habits. At the very least, different price-setting entities should agree on the time window where "off-peak" rates apply.

1.10 Create an "EV fleet" commercial rate. Allows C&I customers to switch from a monthly demand charge to a more dynamic rate structure (e.g. average daily demand, dynamic TOU).

## CAISO Market Participation Rules (“Outcome level consolidation”)

“Help CAISO to modify its market participation rules.”

1.4 Apply Station Power concept to V2G. (EVs with WDAT interconnection charged retail for end-use driving energy, allowing WDAT and wholesale purchase of energy discharged to the grid.)

2.14 Create an EV Demand Response (System RA) Portfolio of Programs: 1. "Rush hour rewards"-style peak time rebate incentive program for EV owners/fleets/EVSPs who respond to utility signal to limit charging during critical peak periods; 2. DRAM-style procurement for capacity; 3. Critical Peak Pricing (reduced rate except during critical peak periods); 4. Public Charging incentive/payment - customers provided a payment (or future free charging session) for agreeing not to charge during critical peak periods.

3.1 Authorize new tariffs in CAISO ESDER Phase 4 that allow utilities to pay V1G aggregators to use managed charging to reduce the local distribution grid impacts of EV charging.

3.4 Solve critical issues to enable aggregated BTM V2G to provide RA: storage exports receive no RA value, limiting value proposition; aggregated BTM V2G (+ all storage) lacks an NQC value.

**3.3** Solve critical issues with DERP-NGR to enable MUAs and the economic integration of aggregated BTM V2G in CAISO markets: 24x7 market integration for DERPs; lack of coordination between DERPs and LSE, resulting in double payment for charging energy; clarify applicability of and standardize / streamline WDAT interconnection process.

**3.9** CPUC develops accounting/operational standards governing retail versus wholesale charging for V2G applications. Utilities may need to develop subtractive billing to net out wholesale charging. Specifically, pilot for electric school buses, which will have high idle time and may be full market participants for part of the year. This pilot can also inform how V2G should qualify for Resource Adequacy going forward.

**3.10** CAISO allows for BTM resources to participate in Frequency Regulation without 24/7 wholesale settlement.

**3.12** Resolve NGR issues for BTM aggregation [for] market access

9.5 Establish a voluntary task-force to convene on regular basis to discuss barriers related to wholesale market design; submit semi-annual update reports to relevant CA state agencies (CPUC, CEC, CARB, and CAISO) every 6 months, including potential recommendations on consensus items.