

Critical Consumption Period

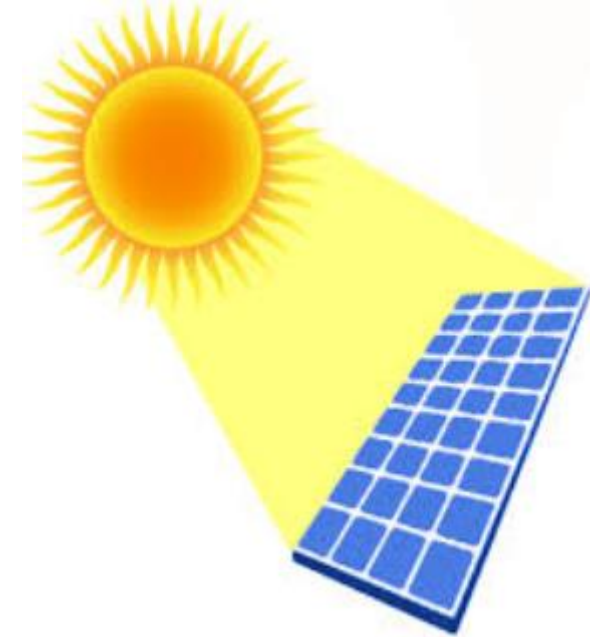
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For California Large Energy Consumers Association

Real Time Pricing Workshop

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Large amounts of Solar PV is being built as a result of CA Energy Policies: Zero Net Energy, Net Energy Metering, and Renewable Requirements



Excess generation occurs during the spring, and often results in curtailment of clean power, or it is exported to other states



The Critical Consumption Period would encourage customers to utilize this excess power which avoids curtailment and keeps low-cost power in CA

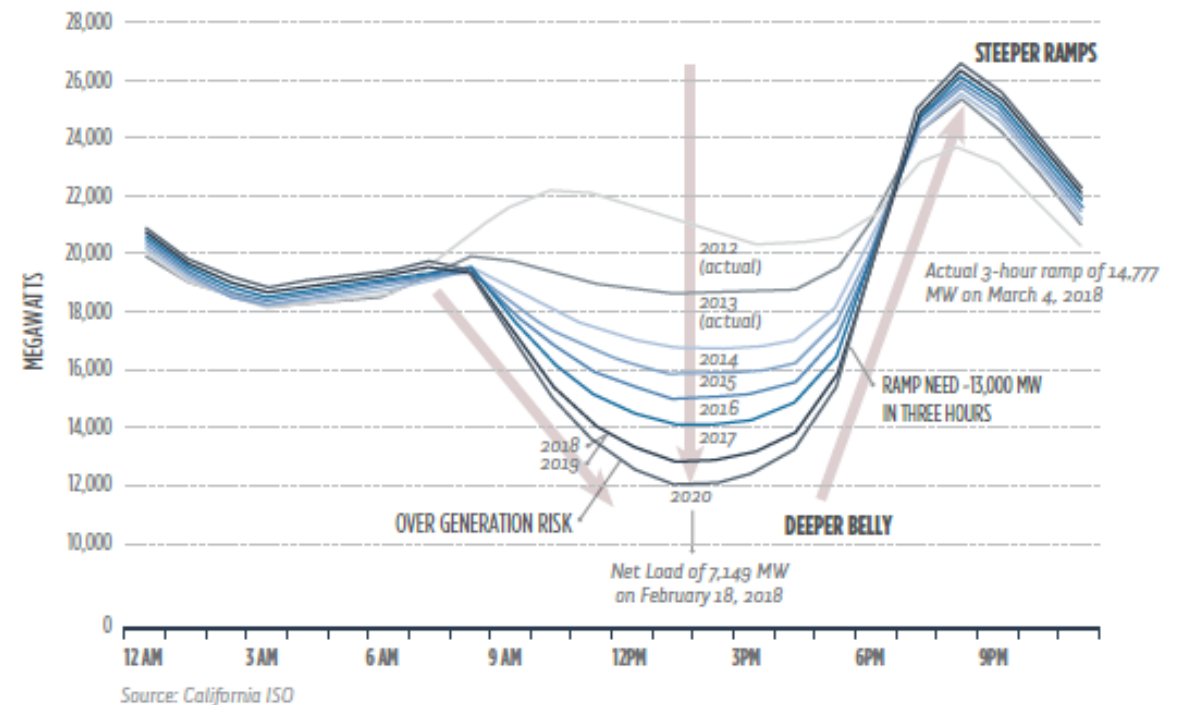
During the belly of the duck, CAISO prices will be very low or negative

- Increased energy use in the mid-day will trim the belly of the duck which reduces over generation and reduces the need for ramping

A trim duck is a healthy duck!
Don't think about extending duck hunting season to spring



TYPICAL SPRING DAY



Critical Consumption Period

- Load serving entity would trigger the Critical Consumption Period based upon negative CAISO day-ahead prices
- Generation price would reflect impact of CAISO real-time prices
 - Non-generation charges remain in place
- Would dispatch at CAISO p-node location based upon its price
 - This would avoid encouraging increasing usage in Transmission constrained areas
- Would use either 15- or 5-minute pricing
- Performance measured using a baseline (i.e. 10/10)
- Low prices are correlated with excess clean energy, so no increase in GHG
 - If load is shifted from other periods, there could be attributable GHG reductions

Transmission and Distribution (T&D) charges are an implementation challenge

- An increase in monthly non-coincident peak transmission (FERC) demand charge could overwhelm the energy benefit from periodic Critical Consumption Periods
- Solution is to neutralize the impact of any increased demand during the event period. Some ideas:
 - Exclude demand measurement during event hours in determining the monthly peak demand charges
 - Perhaps a credit or incentive payment to off-set any impact of the non-coincident peak demand charges based upon the customer's performance
- Complete elimination of demand charges is not proposed as this could encourage usage during the wrong periods which could lead to cost increases
- IOUs should monitor program impacts on T&D system to detect any adverse impacts and adjust future rate design

Benefits of Critical Consumption Period

- Customer responds to real-time price signals
- Avoids curtailment of renewable energy; CA customers are already paying for its renewable attribute
- Provide improved grid reliability and reduces the need for ramping capacity
- Lower energy prices benefits CA consumers
- Keeps production of energy intensive products made in CA which prevents leakage of GHG emissions

