

# DECA

Full CREDIT for Flexible Capacity  
An Alternative Proposal

March 20, 2013

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# **The CPUC needs to seriously consider that the ED and JP proposals may undermine most Commission programs**

Energy Efficiency, Demand Response, SGIP, and RPS

**...and prevent emerging technologies from developing**

Storage, and ADR

## **While creating a negative carbon feedback loop**

Decrease the ability of non-generation resources to provide flexibility

Increase penetration of “carbon backstop”-requiring resources

**...resulting in even more GHG emissions over time**

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# The structure of this presentation

Overview of the market forces at play

Problems with the ED and JP proposals

The role of the CPUC

The Full CREDIT Proposal

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# Market forces

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# A bad outcome caused by two simultaneous events...

## 1) The collapse of traditional peak-oriented, “generic” capacity

- Quite probably inevitable, but will be instantaneous under the ED and JP proposals

## 2) The exclusion of non-combustion resources from flexibility markets, which denies them the value of their actual flexible capacity - the only capacity value left in the market

- Direct result of an administrative decision in this proceeding

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## **...which will massively distort CPUC programs and processes**

Procurement evaluation for *any* resources will be governed by near zero peak/generic capacity values

- Massively disruptive to RFOs
- Will freeze investment in most non-fossil generation for years

Program design and evaluation will no longer be able to rely on any capacity values for their justification

- EE and DR particularly hard hit
- Also affects cost effectiveness calcs for procurement directives

## **...denying a vehicle for potential transformative solutions**

- Curtailment
- Storage
- Smart EV charging
- ADR
- Upward demand response

## **...and cementing high GHG resources in CA, permanently**

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# Problems with the ED and JP Proposals

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# **The ED and JP proposals have real and unquantified flaws...**

**Both proposals are incompatible over the long term with the state's environmental goals**

- designed with the flawed assumption that only combustion resources can provide “real” flexibility

- fail to quantify or even consider the carbon impact of their design

**Both proposals assume the CAISO's flexible ramping products should be the sole product to address ramp needs**

**Both proposals result in pricing signals to imports that are fundamentally backwards with regard to isolating California from WECC**

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## ...and contain fundamentally flawed assumptions

Both proposals wrongly exclude imports and exports from being considered as potential ramp mitigating resources.

- “the methodology described in Section 2.1, above, is one example of how the interties are taken into account in the needs determination.”\* (October 29, JP proposal)
- The scale of this omission is potentially 28,000 MW
- The CAISO goes further by proposing to penalize imports in the FPR despite their ability to help meet ramp

Both proposals wrongly assume a resource must be dispatchable to help meet a ramp need.

- “Flexible resources [...] must also be contractually bound to operate subject to economic dispatch.” (March 11 ED proposal)
- CAISO assumptions decrement the fleet's flexible capability because of self scheduling.

\* Please note Section 2.1 contains no accounting of interties and in fact the section itself does not exist in the document.

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# The exclusion of non-combustion resources

ED and JP proposals rely unduly on the CAISO's discriminatory construct that flexible resources must offer energy beyond when they are needed for ramp

- Wrongly forces end to self scheduling and requires Must Offer Obligation for most resource in CAISO
- Unduly relies on NQC, which is peak, not ramp oriented
- Mostly penalizes non-combustion resources
- Assign extra ramping capability to CCs
- Absurd handling of hydro
- Discriminatory handling of imports/exports

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# CPUC must take a broader view of resource procurement

The preferred loading order requires it

Opportunity to prevent the release of millions of tons of carbon

Simple solutions exist

e.g. allowing bundling of resource by LSE

- The pumped storage/import hypothetical

And can be implemented without sending market disrupting information about uncertainty of capacity value for DG, etc.

- Probably not by June
- Will require review of impact on wide range of programs
- But can certainly be addressed before next June 2014

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# The Full CREDIT Proposal

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# How does the Full CREDIT proposal help?

**Recognizes that the CPUC is the best entity to ensure the state's environmental goals are met.**

- **Control of IOU procurement**
- **Ability to set complimentary retail rates**
- **Broad range of iterative programs under management**
- **Better cost sensitivity than FERC**

**Recognizes that the CAISO's tools for addressing ramp need are inadequate.**

- **Difficulty in treating load as a resource**
- **Resource retirement averse**
- **Unwilling to aggregate load and small generation**
- **Biased against any resource it cannot control**

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**There is a simple solution to the flexibility problem:**

- do almost nothing.**

**The Full CREDIT proposal only slightly modifies the existing RA program**

- Embraces the current MCC bucket design**
- Provides flexibility for LSEs to optimize their fleet to load**
- Compatible with CAM, but not CAM dependent**

**The Full CREDIT proposal can be used to look forward at flexibility needs for an interim period, but can rely on historical behavior on a forward going basis**

- Consistent with historical RA practices regarding resource limitations**
- Avoids creating a permanent forward market for a short term transitional need**

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# What is the Full CREDIT proposal?

Requirement within the existing RA program for the LSEs to meet a monthly/annual flexible capacity/ramp mitigation obligation (based on a historical forecast) based on the LSE's proportional load share.

The ability of resources to meet the flexibility requirement is based on their ability to match, via MCC buckets, a portion of the Flexibility Duration Curve (FDC).

The program acknowledges full value for a resources' contributions to meeting FDC curve, including those contributions outside direct ISO control, so long as they are obligated to assist in meeting ramp needs in a deliberate, quantifiable way.

- Utilizes NQC-like process for qualifying capacity that is CPUC stakeholder vetted with input from the CAISO

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# Flexible capacity showing vs. peak capacity showing

LSEs meet their RAR within the existing RA program structure via a showing of flexible capacity, which may or may not have peak-oriented RA value.

- If flexible capacity has an RA value, it may be counted, if it does not, a separate RA procurement must be shown.

The program acknowledges full flexibility value for resources' contributions to meeting that FDC curve, including those contributions outside direct ISO control, so long as they are obligated to assist in meeting ramp needs in a deliberate, quantifiable way.

- Embraces the current MCC bucket design
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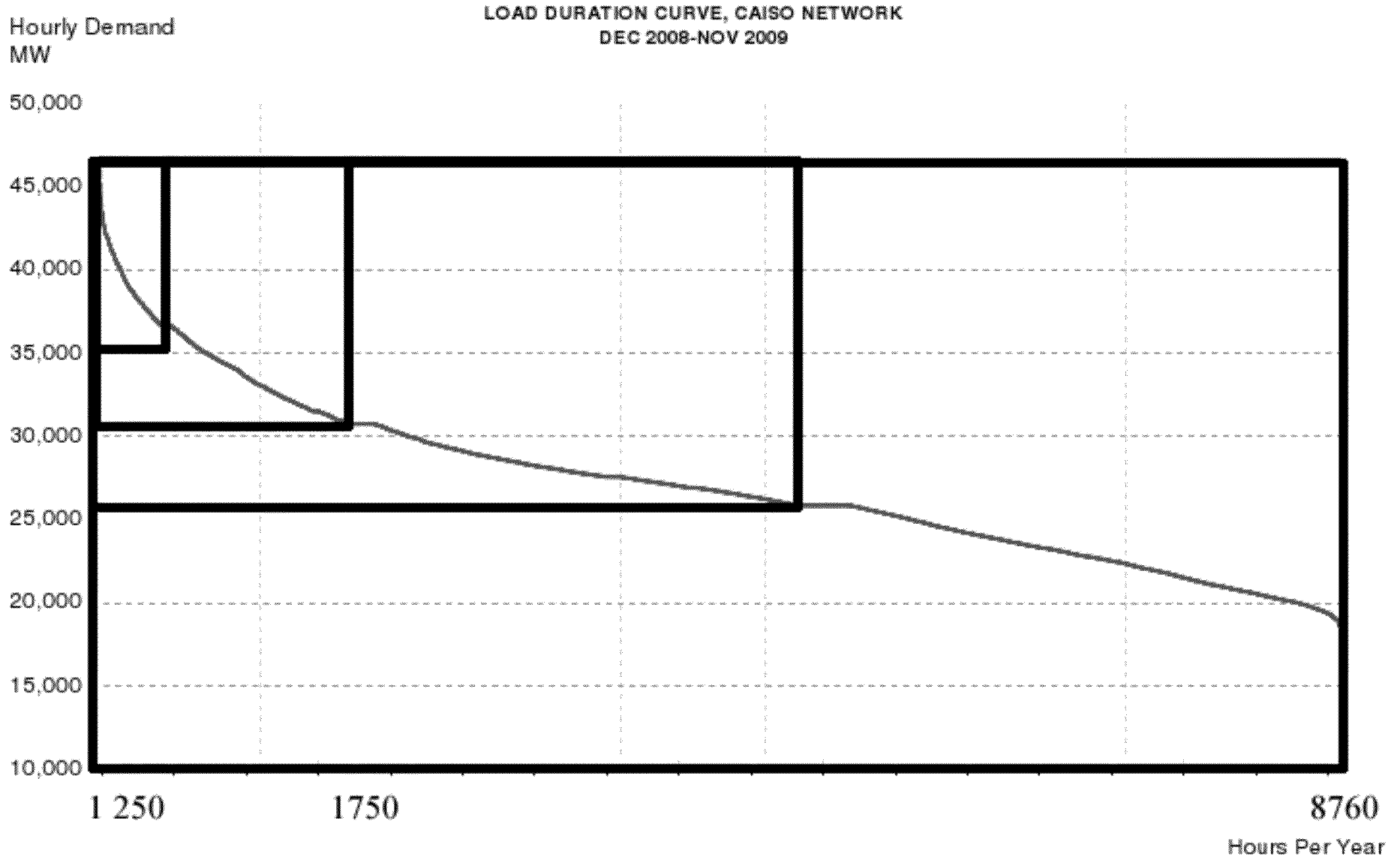


# The Load Duration Curve

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# Load Duration Curve with MCC Buckets



Source: California Independent System Operator (CAISO), OASIS database.

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# Benefits the Full CREDIT proposal

Ensures that scarcity rents only apply to actual, not administrative, scarcity.

Provides a mechanism for valuing contribution to flexibility needs outside of a FERC defined administrative tool for addressing it.

Provides a special seat at the table for the CPUC to advocate on behalf of the state's environmental goals when interacting with ISO/FERC.

Recognizes that the CPUC needs an integrated mechanism for valuing the capacity of a range of programs and resources in light of emerging needs rather than past needs.

Requires CPUC/ISO quantification of forecasted flexibility need in a collaborative fashion ahead of a coordinated procurement mechanism.

Introduces a potential interim, RA compatible mid-term procurement tool based on changing system needs and does not force a capacity market into existence ahead of a Commission decision.

Does not create market uncertainty for capacity value of non-gas resources.

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# What constitutes flexibility?

The CAISO's Flexible Ramping Products are not sufficiently inclusive of preferred ramp-affecting resources/mechanisms either available now or likely to be developed.

- Results in an increasing carbon per renewable MW over a relatively low threshold
- Penalizes imports exactly when they are most beneficial
- Ignores the role of inertias in meeting load
- Incompatible with non-generation resources

The Full CREDIT proposal is designed to quantify the ability of a range of resources, including preferred resources, to affect ramp rates.

- Accepts that a reduction in load is the same as a decrease in generation
- Accepts that an increase in load is the same as a decrease in generation
- Can recognize the doubling of ramp from storage resources
- Compatible with a spectrum of curtailment scenarios

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# How is flexibility measured?

The CAISO's Flexible Ramping Products and related proposals favor some technologies while penalizing others.

- Overvalues the flexibility of many gas resources
  - Combined cycles' forbidden zones are ignored
- Penalizes imports and exports despite their obvious value
  - A 15min intertie schedule is penalized the same amount on a 5 minute basis as a 1H intertie schedule despite being able to bring 4 times the ramp assistance into the CAISO market.

The Full CREDIT proposal is designed to quantify the ability of a range of resources to affect ramp rates.

- Accepts callable changes in energy commitment as MW for MW capacity
  - Well suited for valuing cost of contract changes for RPS
- Values the portion of load that is responsive to ramp needs based on the reduction in ramp rate
- Recognizes the doubling of ramp from storage resources
- Encourages optimization by utilities of imports as ramp tools

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## Next Steps

DECA is interested in working with LSEs and generation resources to begin developing a spectrum of potential ramp affecting resources for consideration in this proceeding, especially those whose current offerings may be harmed by a collapse in generic capacity.

Larger, supporting document detailing the proposal is in draft form.

DECA expects to file this document in a timely manner based on ALJ feedback from today's PHC

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# Thank You

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