

Decision on FERC Order 764 market changes – participating intermittent resource program protective measures

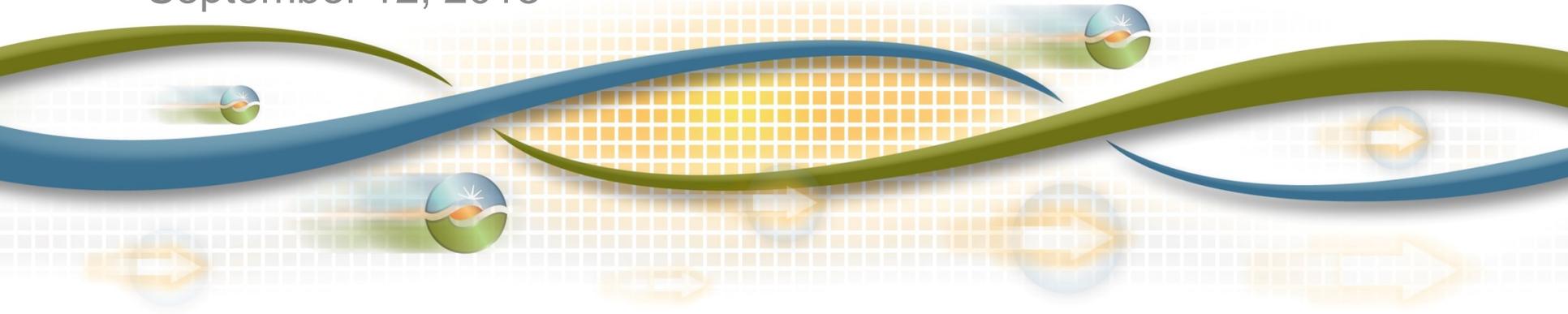
Greg Cook

Director, Market and Infrastructure Policy

Board of Governors Meeting

General Session

September 12, 2013



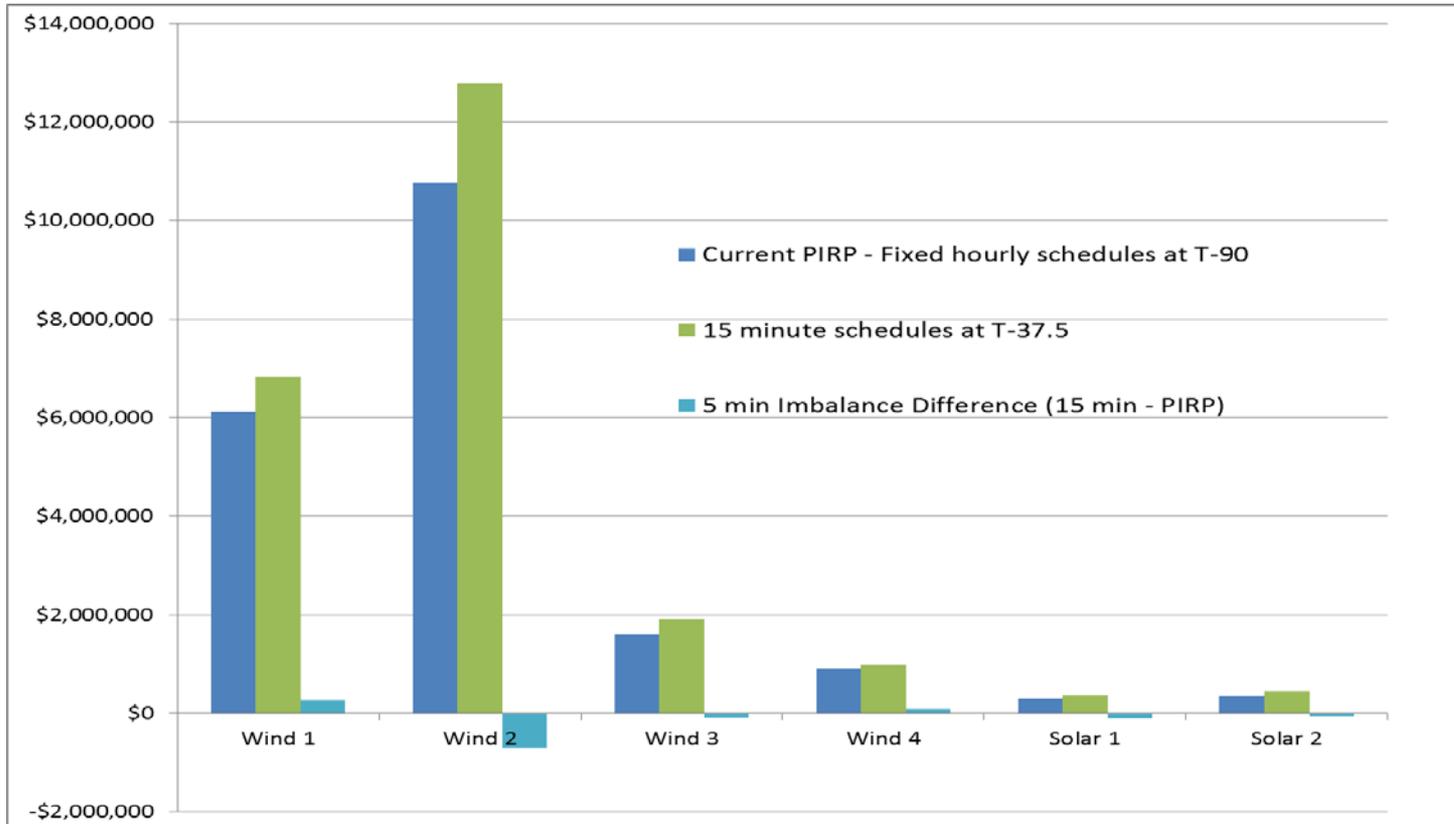
Since 2010 the ISO and stakeholders have worked to orient market design around variable energy resources

Issue	BOG Approved Order No. 764 Design	
Use forecasts closer to financially binding interval	T-37.5 min forecast used in 15-min market T-7.5 min forecast used in RTD	✓
More granular forecast	Multi-hour forecast with 5-min granularity	✓
Allow economic bids	Bids can determine if forecast will be scheduled or dispatched	✓
Minimize deviations settled at more volatile 5 minute prices	Introduced 15-minute schedule and eligible for bid cost recovery	✓

FERC Order No. 764 accelerated necessary design changes
Implementation Spring 2014

Proposed design provides variable energy resources with more granular and accurate 15 minute scheduling opportunities - reducing exposure to the 5 minute market.

Real-time Market Revenue Comparison (July 2011 – June 2012)



Used persistence as a proxy for 15-minute forecast

At the May Board meeting, Management committed to consider protective measures for older technology resources.

- Provided 30 day window for initial resource request for protective measures
- July Board meeting update
 - Received 19 requests for protective measures
 - 7 LSE Scheduling Coordinator (~1000 MW)
 - PG&E 1, SCE 1, SDG&E 3, Muni 2
 - 7 Resource Scheduling Coordinator (436 MW)
 - PG&E 4, SDG&E 2, Muni 1
 - 5 Qualifying Facilities (36 projects, 577 MW)
- July-August completed stakeholder process to develop protective measures proposal

Propose protective measure for old technology resources that meet specific qualifying criteria.

1. More than half the resource is old technology that is unable to curtail output without significant investment.
 - ✓ Dispatch, control, and telemetry or metering needs would not qualify
 - ✓ Turbine replacement would qualify
2. Resource is responsible for real-time energy settlement under their current contract and has no contractual options available to mitigate imbalance energy risk.
 - ✓ PPA specifies resource is directly or indirectly responsible for imbalance costs
 - ✓ QFs \leq 20 MW not eligible
3. During the term of the transition period, the resource owner agrees to seek a long-term PPA and/or take steps to upgrade the resource so that it can respond to ISO dispatch instructions.

Protective measure would be provided for limited transition period.

- Transition period – Three years from effective date or until new PPA is signed, whichever comes first.
- Settlement – Based on current PIRP provisions
 - Hourly schedule based on 90 minute forecast priced at simple average 5-minute price
 - 5 minute imbalances netted over month at output weighted average 5-minute price
- Allocation – Difference between protective measure and Order 764 settlement allocated to net negative deviations. Includes costs and revenues.

Resources must request protective measures within 30 days of the effective date

- The resource will be settled under the protective measure for three years, no opt out provision.
- If a resource will become eligible within the transition period, it must make request within the 30 day window
- ISO will post on website requests received and disposition

Stakeholders remain divided on the proposed protective measure.

- CalWEA argues the proposal is too restrictive:
 - Does not apply to resources that are contractually prohibited from curtailing
 - Should apply to QF resources < 20 MW
 - Duration should be for full term of the contract
- Load serving entities question the appropriateness of any protective measure, but support limited scope and duration
- Load serving entities oppose proposed cost allocation

Management recommends the Board approve the proposal.

- Provides a limited transition period for resources unable to respond to ISO dispatch
- Incentivizes participation in the market under FERC Order No. 764 design changes
- Minimizes implementation cost by leveraging existing PIRP settlement and allocation