

*In July 2011 Johnson Controls acquired a Silicon Valley based company called EnergyConnect
... now operating as Johnson Controls, Integrated Demand Resources*

Integrating Demand Resources

California Energy Commission

DOCKETED

13-IEP-1F

TN 71319

JUN 17 2013



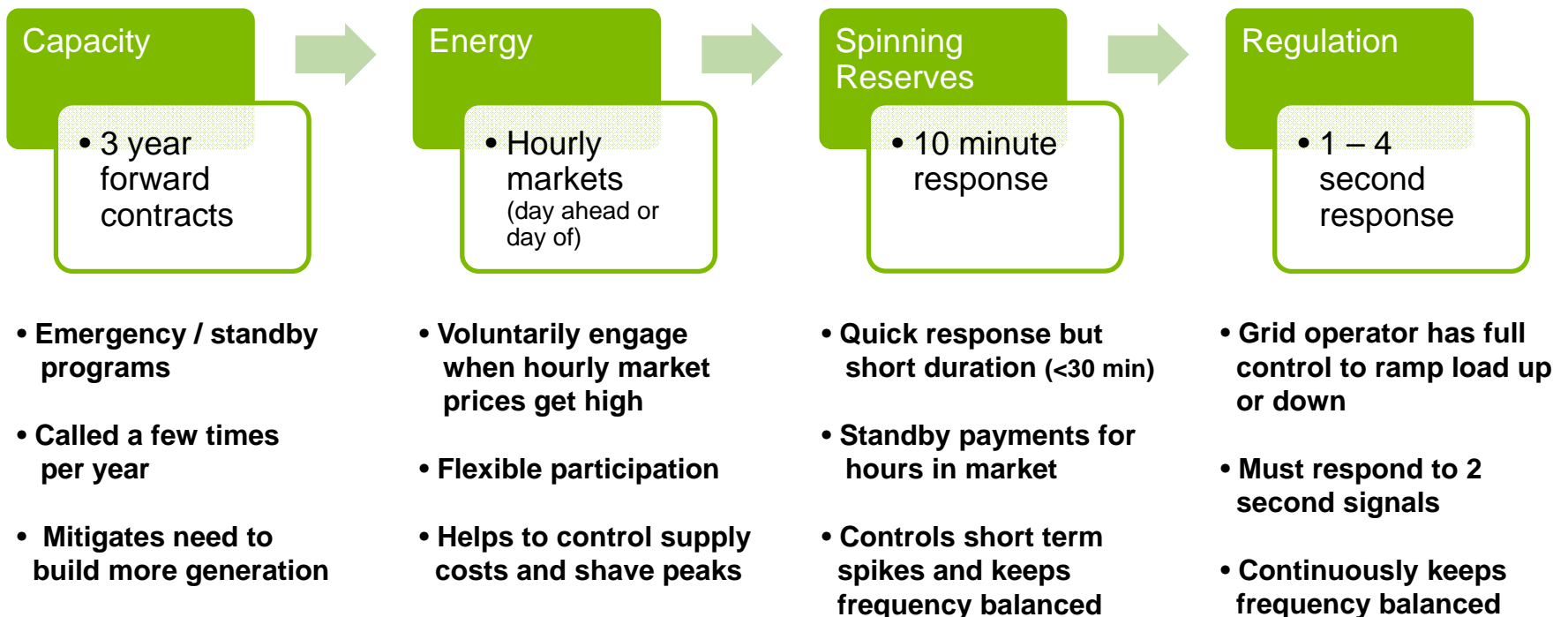
17, June 2013



Evolution of Demand Response to Meet Grid Needs

- Need for DR is evolving to be far more than peak shaving
- DR resources will be used in more advanced and creative ways

Different needs as we get closer to the actual time of consumption



DR Forces – RTO vs. Consumers



RTO needs and energy user desires often at odds with each other



Needs

- Reliability
- Predictability
- Availability
- Quantifiable load impact

Desires

- Flexibility
- Min operational burden
- Easy engagement
- ROI for performance

We Help Bring These Forces Together



Needs

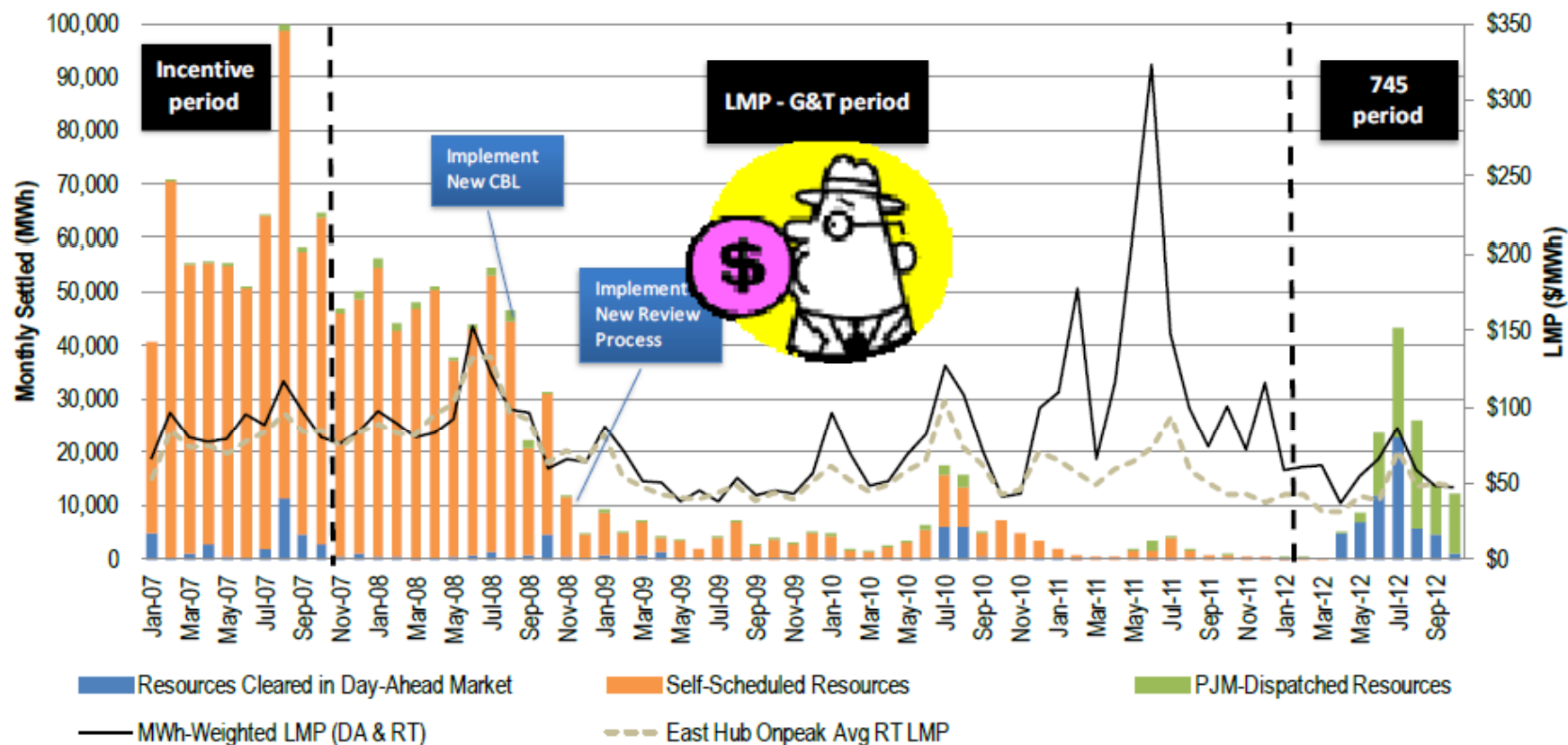
- Reliability
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Price Responsive DR – “You Get What You Pay For or Not”

Figure 1: Economic DR settled energy by month (Jan. 2007 - Oct. 2012) ¹¹



Source: PJM

Since 745 was implemented, Economic DR MWh delivered are up and large portion were committed in day-ahead market.

FlexConnect Scheduling

Facility:

Date: 6/21/2012

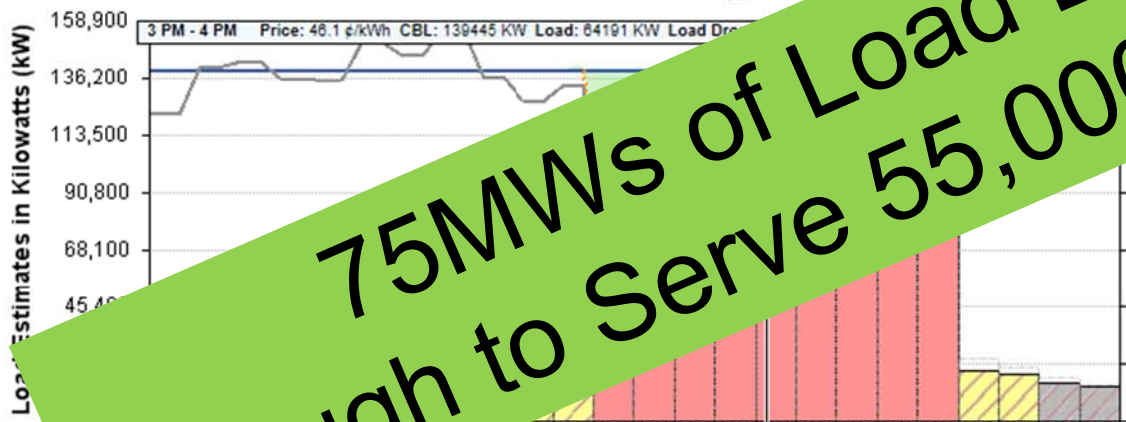
View

ACT 129 ALERT - EVENT CONFIRMED:
extended the dispatch hours to include 11am to 12 pm.

is confirming the ACT 129 Event for the hours below. Please

Note:

Thursday, June 21



Graph Elements

Loads:

☒ Baseline (CBL)

☐ My Scenario

☐ Hourly Load

☐ Curtailment

☐ Sub-Hourly Load

Prices:

☒ Actual (hr, 5min)

☒ Forecast

ACT 129 Hours

Earnings

My Selected Scenario

\$284,040

☒ Melt Shop Shutdown

\$18,936 ☐ Shut Down Cold Mill

\$302,976 ☐ MS & CM Shut Down

\$118,350 ☐ Run #2 EAF (25 Mw)

[Disclaimer](#)

Re-Calc / Graph

Submit Schedule

Submitted Scenario Forecast

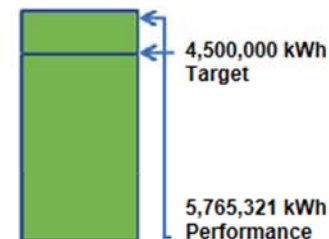
Melt Shop Shutdown

PJM Earnings	ACT 129 Earnings
\$68,040	\$216,000

**Total Opportunity
\$284,040**

[Disclaimer](#)

Act 129 Season to Date Performance



[Calculation Details](#)

Barriers to DR Participation

Design “Inform & Motivate” vs. “Command & Control”

Day

Get Started NOW!

Res

Once you get the “Rules Right”

“Can

It takes 18-36 Months to

Pay

Develop Reliable Demand Resources