2016 Demand Response End of Year Review

February 22, 2017

2016 Summary

	Events Dispatched	Customers	MWs (August)	Changes
BIP	1 test	~248	303 ⬆	Capped at maximum (330 MW for PG&E)
CBP – DA	16	~29	4 ⬌	
CBP – DO	19	~426	15 ⬌	
AMP	14	~1,297	87 ⬇	Closed 12/2016
DBP	14	~455	17 ⬇	Closed 12/2016
SmartAC	14 tests	~151,000	70 ⬌	
PDP	12	~210,000	39	
SmartRate	12	~146,000	45	
DRAM	N/A	~5,000	17.2*	DRAM2 for 2017
ADR incentives		~600	69 ⬆	AB 793 opens ADR to SMB/residential

* MW contracted for across 6 DRPs

PG&E 2016 DR Successes

- Increased interest and participation in BIP – reached RDRR cap.
- Successful 2016 and 2017 DRAM RFO solicitation process.
- ADR pipeline of projects increased (35.5 MW).
- PDP system enhancements improved customer experience.
- Door to door marketing test of SmartAC had 5x the install rate.
- Testing complete on SmartAC 2-way switches, which will be installed going forward.

PG&E 2016 DR Challenges

- Declining enrollments in CBP related to frequency of dispatch
- 60-40 split in ADR incentive payments are a barrier
- Current Rule 24 CISR process makes customer enrollment difficult for DRPs participating in DRAM.
- SmartAC paging system problems in SubLap tests.

2016 Feedback

Customers:

- Over half of residential customers are familiar with and willing to participate in a DR program.

Primary participation drivers:

- Reducing energy costs/bills
- Taking advantage of incentives
- Meeting environmental goals*

  *Large C&I cite "doing the right thing" as the primary driver

Aggregators:

- Customer dissatisfaction due to consecutive days of dispatch
- Customers fatigued due to amount of events being called

2016 Feedback – cont.

Why do customers de-enroll?

- DR does not fit their operational requirements
- Low return for the incentive/high risk
- Duration & frequency of dispatch
- Unhappy with the baseline calculation
- Higher incentives via a DRP program

What changes do they want?

- Flexibility
- Changes to baseline calcs
- Better understanding of incentives
- Better tools (view into real time or next day performance)
- Residential customers want a Smart Phone app
- Program stability
- Higher incentives
- Rationale for event days

Changes/trends for 2017

- Back Up Generators for DR prohibited
- Integrating BIP starting May 1, 2017
- Increasing choice in CBP for 2018, educating aggregators
- DRAM increasing in size (MW and budget targets)
- CISR-DRP form revision/Click-Through improvements
- Possible mid-stream/up-stream ADR incentives
- ADR expands to SMB/res with deemed incentives
- Implementation of auto-enrollment for SmartAC residential customers who move