

Load Impact Evaluation: *PeakChoice Program*

**Steve Braithwait and Dan Hansen
Christensen Associates Energy Consulting**

DRMEC Spring Workshop

April 26, 2011

PG&E's PeakChoice Program

- ❑ Enrollment
- ❑ Ex-post load impacts (2010)
- ❑ Ex-ante load impacts (2011 – 2021)

PG&E's PeakChoice Program

- ❑ PeakChoice offers customers a wide range of options (amount of notice, event duration, allowed number of consecutive event days, maximum number of events, and event windows)
- ❑ For analysis purposes, options were combined into four groups:
 - Committed load, day-of notice
 - Committed load, day-ahead notice
 - Best efforts, day-of notice
 - Best efforts, day-ahead notice

Enrollment by Program Type

Program	# of Accounts	Non-Coincident Max MW	Share of Max MW
Committed Load, Day-Of Notice	14	123	40%
Committed Load, Day-Ahead Notice	122	84	28%
Best Efforts, Day-Of Notice	40	24	8%
Best Efforts, Day Ahead Notice	99	74	24%
Total	275	305	

PeakChoice Event Information

August 24, 2010

Commitment	Notice	Event Hours	Count	Sum of Max kW	% of Max kW
Best efforts	2 day ahead	3:00 to 5:00 pm	15	14,606	4.8%
Best efforts	Day ahead	2:00 to 5:00 pm	8	2,458	0.8%
Best efforts	Day ahead	2:00 to 6:00 pm	76	56,869	18.7%
Best efforts	Day of	2:00 to 5:00 pm	16	13,292	4.4%
Best efforts	Day of	2:00 to 6:00 pm	24	10,872	3.6%
Committed load	2 day ahead	3:00 to 5:00 pm	1	520	0.2%
Committed load	Day ahead	2:00 to 5:00 pm	85	58,344	19.1%
Committed load	Day ahead	2:00 to 6:00 pm	36	25,069	8.2%
Committed load	Day of	2:00 to 5:00 pm	5	114,237	37.5%
Committed load	Day of	2:00 to 6:00 pm	9	8,449	2.8%
TOTAL			275	304,716	100.0%

“Sum of Max kW” is the sum of SA_ID non-coincident demands, which are calculated as the average of the service account’s monthly maximum demands during the summer.

Ex-Post Load Impact Summary

Program Type	Customer Accounts	Estimated Reference Load (MW)	Observed Load (MW)	Estimated Load Impact (MW)	% Load Impact
Committed Load, DO	14	120	103	18	14.8%
Committed Load, DA	121	83	81	3	3.1%
Best Efforts, DO	40	21	20	1	5.8%
Best Efforts, DA	84	57	57	0	-0.5%
Two-day ahead (all)	16	15	14	2	10.4%
Total	275	297	274	23	7.7%

Concentration of PeakChoice Load Impacts

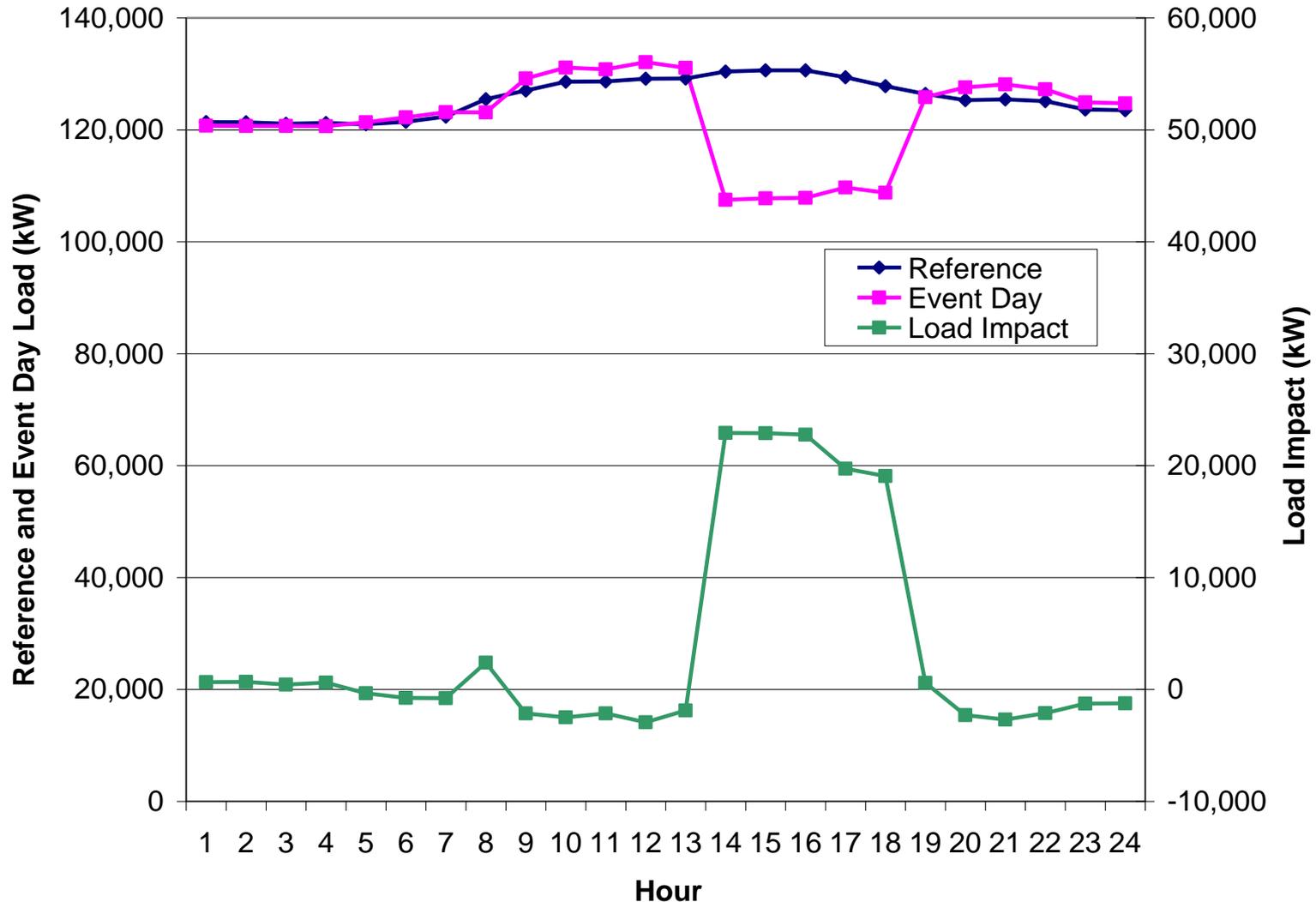
- ❑ The top 5 percent of customers (by load impact) accounted for 92 percent of the total load impact
- ❑ One customer accounted for 14 MW of the 21 MW total impact
 - Committed Load, Day-Of Notice
 - NAICS 211111: Crude petroleum and natural gas extraction
 - Large (over 100 MW), very demand responsive customer

PeakChoice Program: *Basis for Ex-Ante Load Impacts*

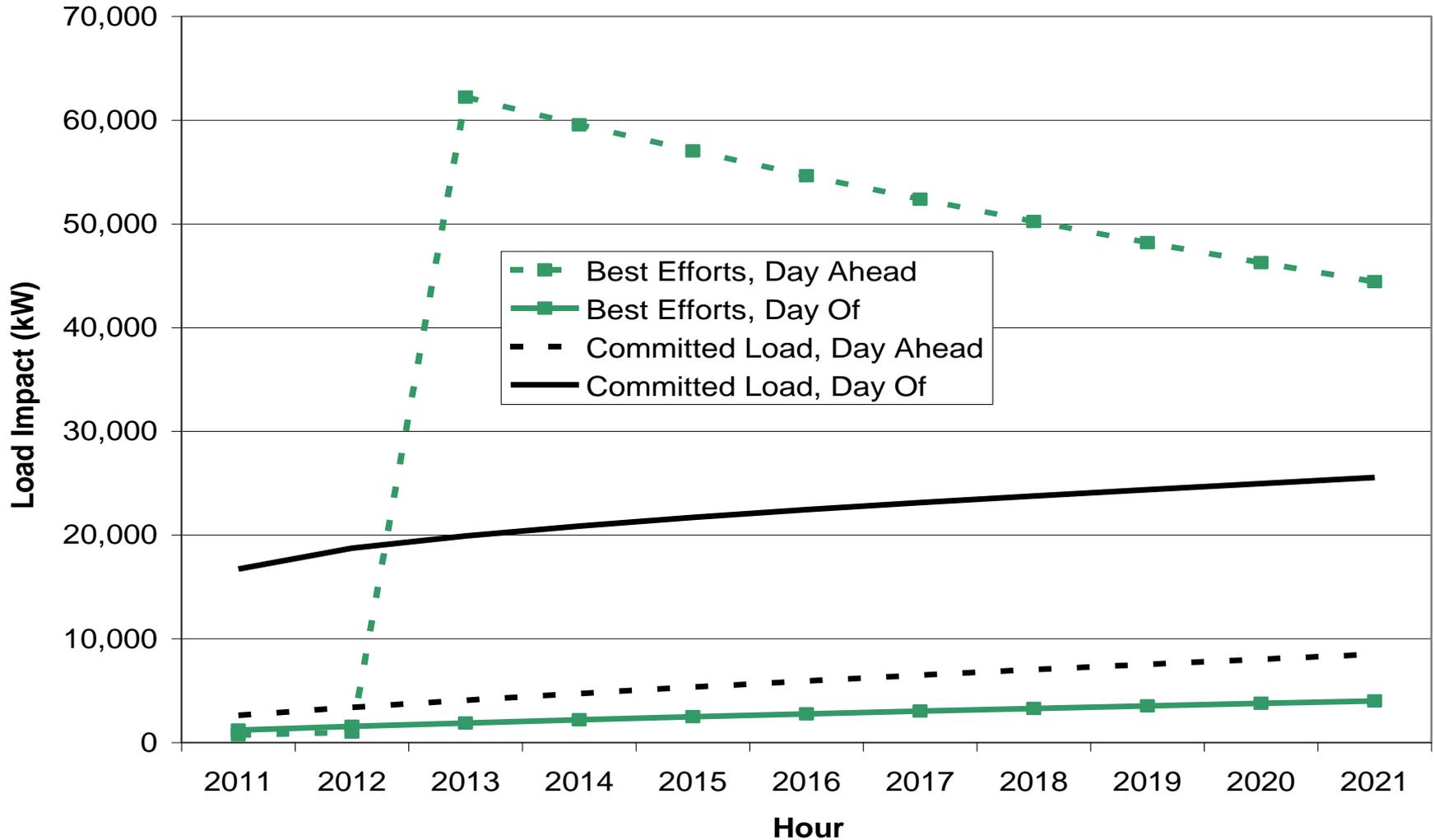
- Committed Load:
 - 2010 ex post load impacts
 - Very large customer handled separately, accounted for in the enrollment forecast
- Best Efforts:
 - 2010 ex post load impacts
 - Distinct customer groups:
 - Current PeakChoice customers
 - DBP customers migrated into PeakChoice after 2012
 - DBP only
 - DBP/BIP dual enrollment

PeakChoice Ex Ante Results:

Aug. 2013 TED, 1-in-2 Weather, Committed Load, Day-Of



PeakChoice Ex Ante Load Impacts: 1-in-2 Typical Event Day, by Year



Questions?

- Contact – Steve Braithwait or Dan Hansen, Christensen Associates Energy Consulting Madison, Wisconsin
 - Steve@CAEnergy.com
 - Danh@CAEnergy.com
 - 608-231-2266