PG&E's Perspective
Demand Response
Competitive Neutrality Cost Causation

Prepared for April 2, 2018 workshop in R.13-09-011

Together, Building
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Agenda

Standard For Determining Bill Credit

- DR costs are generally recovered in distribution rates
- All DR costs would continue to be recovered in distribution rates; however, customers of DA/CCAs with “similar” programs would receive ongoing bill credits.
- Only costs directly tied to a “similar” program would be included in the bill credit.
- Bill credit to be based on CPUC authorized program revenue requirement covering the cost elements:
  - Program incentives
  - Marketing (if applicable)
  - Administration

Allocation and Rate Calculation

- Credit will be based on the same allocation method as used for DR costs.
- DR credits are allocated in the same manner as DR costs within distribution costs utilizing the Distribution Revenue Allocation Factors.
- To simplify the process this credit would be based on a volumetric rate credit for ALL customer classes *(note: certain non-residential customers pay distribution costs through demand and customer charges).*

Steps to Determine Credit

#1 [Slide 6]

Identify cost of "similar" DR program (Admin + Incentive + Marketing) over the CPUC approved funding horizon

For example:
CBP
Avg. Cost: $4.5M

#2 [Slide 7]

Allocate cost of "similar" DR program to all customers (CCA/DA and bundled) based on the GRC approved distribution allocation factor utilizing current sales forecasts

For example:
CBP
For residential
*($4.5M) * (50.59%)*
= $2.3M

#3 [Slide 7]

Divide the allocated cost of the "similar" DR program by the total sales forecast, which results in a unit rate per kWh by customer class.

For example:
CBP
For residential
($2.3M) / (27.7B KWh)
= $0.00008

Step 1: Determine Full Program Cost

SMART AC						
	2018	2019	2020	2021	2022	
Smart AC Admin	$ 5,759,000	$ 5,759,000	$ 5,759,000	$ 5,759,000	$ 5,759,000	
Smart AC Incentives	$ 637,000	$ 637,000	$ 637,000	$ 637,000	$ 637,000	
Smart AC Marketing	$ 1,616,000	$ 1,644,490	$ 1,673,543	$ 1,703,173	$ 1,733,392	**5-Year Average**
TOTAL COSTS SUBJECT TO CREDIT	**$ 8,012,000**	**$ 8,040,490**	**$ 8,069,543**	**$ 8,099,173**	**$ 8,129,392**	**$ 8,070,119.57**

Base Interruptible Program (BIP)						
	2018	2019	2020	2021	2022	
BIP Admin	$ 566,000	$ 566,000	$ 566,000	$ 566,000	$ 566,000	
BIP Incentives	$ 31,788,000	$ 31,788,000	$ 31,788,000	$ 31,788,000	$ 31,788,000	
BIP Marketing	$ -	$ -	$ -	$ -	$ -	**5-Year Average**
TOTAL COSTS SUBJECT TO CREDIT	**$ 32,354,000**	**$ 32,354,000**	**$ 32,354,000**	**$ 32,354,000**	**$ 32,354,000**	**$ 32,354,000.00**

Capacity Bidding Program (CBP)						
	2018	2019	2020	2021	2022	
CBP Admin	$ 664,000	$ 664,000	$ 664,000	$ 664,000	$ 664,000	
CBP Incentives	$ 3,439,000	$ 3,439,000	$ 3,439,000	$ 3,439,000	$ 3,439,000	
CBP Marketing	$ 386,615	$ 398,221	$ 410,188	$ 422,526	$ 435,247	**5-Year Average**
TOTAL COSTS SUBJECT TO CREDIT	**$ 4,489,615**	**$ 4,501,221**	**$ 4,513,188**	**$ 4,525,526**	**$ 4,538,247**	**$ 4,513,559.36**

Steps 2 and 3

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Demand Response Programs - Competitive Neutrality Cost Causation - Rate Analysis

		Average Annual Program Costs					Average Program Rate embedded in Distribution ($/kWh)			
Customer Class	**DR Program Allocation[1]**	**SMART AC**	**EBIP**	**CBP**	**Total**	**2018 Total Bundled & DA/CCA Sales**	**SMART AC**	**EBIP**	**CBP**	**Total**
Res	50.59%	$ 4,082,421	$ 16,366,876	$ 2,283,268	**$ 22,732,565**	27,664,032,970	$ 0.00015	$ 0.00059	$ 0.00008	**$ 0.00082**
SLP	13.83%	$ 1,116,242	$ 4,475,138	$ 624,306	**$ 6,215,686**	7,946,121,858	$ 0.00014	$ 0.00056	$ 0.00008	**$ 0.00078**
A10 T	0.00%	$ 63	$ 253	$ 35	**$ 351**	2,496,297	$ 0.00003	$ 0.00010	$ 0.00001	**$ 0.00014**
A10 P	0.06%	$ 5,144	$ 20,625	$ 2,877	**$ 28,646**	65,222,401	$ 0.00008	$ 0.00032	$ 0.00004	**$ 0.00044**
A10 S	10.49%	$ 846,185	$ 3,392,451	$ 473,265	**$ 4,711,901**	9,976,544,170	$ 0.00008	$ 0.00034	$ 0.00005	**$ 0.00047**
E-19 T	0.01%	$ 886	$ 3,553	$ 496	**$ 4,935**	55,138,054	$ 0.00002	$ 0.00006	$ 0.00001	**$ 0.00009**
E-19 P	0.63%	$ 51,233	$ 205,399	$ 28,654	**$ 285,286**	967,426,911	$ 0.00005	$ 0.00021	$ 0.00003	**$ 0.00029**
E-19 S	9.46%	$ 763,472	$ 3,060,842	$ 427,004	**$ 4,251,318**	11,695,282,760	$ 0.00007	$ 0.00026	$ 0.00004	**$ 0.00036**
Streetlight	0.26%	$ 20,796	$ 83,375	$ 11,631	**$ 115,802**	275,719,662	$ 0.00008	$ 0.00030	$ 0.00004	**$ 0.00042**
AG	8.39%	$ 677,281	$ 2,715,296	$ 378,799	**$ 3,771,376**	6,189,888,334	$ 0.00011	$ 0.00044	$ 0.00006	**$ 0.00061**
E20T[2]	0.20%	$ 15,950	$ 63,947	$ 8,921	**$ 88,818**	5,606,477,033	$ 0.00000	$ 0.00001	$ 0.00000	**$ 0.00002**
E20P	4.19%	$ 337,836	$ 1,354,421	$ 188,949	**$ 1,881,206**	7,989,023,836	$ 0.00004	$ 0.00017	$ 0.00002	**$ 0.00024**
E20S	1.67%	$ 135,045	$ 541,411	$ 75,530	**$ 751,986**	2,380,354,864	$ 0.00006	$ 0.00023	$ 0.00003	**$ 0.00032**
Standby T	0.14%	$ 11,210	$ 44,943	$ 6,270	**$ 62,423**	303,297,960	$ 0.00004	$ 0.00015	$ 0.00002	**$ 0.00021**
Standby P	0.07%	$ 5,405	$ 21,670	$ 3,023	**$ 30,099**	12,462,266	$ 0.00043	$ 0.00174	$ 0.00024	**$ 0.00242**
Standby S	0.01%	$ 948	$ 3,801	$ 530	**$ 5,279**	4,657,081	$ 0.00020	$ 0.00082	$ 0.00011	**$ 0.00113**
Total	100.00%	$ 8,070,120	$ 32,354,000	$ 4,513,559	**$ 44,937,679**	81,134,146,457	$ 0.00010	$ 0.00040	$ 0.00006	**$ 0.00055**

Footnotes:

[1] DR Program Allocation factors determined from 3/1/18 Distribution Rate Revenue Allocations prior to non-allocated, CPUC Fee and CARE Shortfall revenues by Customer Class.

[2] Due to the minimal amount of DR Program cost recovery allocated to E-20 Transmission voltage level customers, the average DR Program rate rounds to zero in the 5th decimal. Unrounded rate values are as follows:

E-20T	SMART AC	CBP
Average Rate	$ 0.000003	$ 0.000002

Applying the Rate Credit and Determining the Overall Bill Credit

- The bill credit amount is calculated by multiplying the program credit rate ($ per Kwh) by the customer's <u>monthly</u> electric usage (kWh).
- Illustrative example (monthly usage assumed):
  - Applying the CBP example for the residential class
  - ($0.00008) * (300KWh) = $0.02476 = **2.5 cents**
- Credit rate is the same for CARE/FERA as for other residential customers.

Tariff for the Credit

- PG&E envisions creating a tariff that identifies the rate credit for each program (see slide 7).

- The existing Revenue Cycle Service Credit (Schedule E-CREDIT) could serve as a model.

Timing of the Credit

- IOUs must begin processing the bill credit within one billing cycle from the end of the one year implementation period.
- PG&E's understanding is that this represents approximately **395** days (365 + 30), where 365 days is the one year period from the date of the Resolution plus up to ~ 30 days to reflect various monthly meter read/bill cycles.
- PG&E generally utilizes a monthly bill cycle

Administration of the Bill Credit

- PG&E's understanding is the bill credit may appear as a line item on the utility portion of the consolidated bill.
- The bill credits would be ongoing, if applicable, once the implementation period (395 days) begins.
- The bill credit could be too small for it to be displayed on the bill since PG&E's billing system only goes out to the 5th decimal level.

Customer Notification Letters

- The January 2018 Joint IOU proposal provided sample letters for direct and Aggregator enrolled participants.
- PG&E interprets the 60 day notification letter requirement as applying to direct enrolled customers and to Aggregators (but not their customers).
- Aggregators would be responsible for communicating with their customers directly since they are responsible for the relationship with the participant.
- PG&E notes that with Aggregators there may need to be additional avenues of communication.

Cost Tracking and Recovery

- D. 17-10-017 provides for a mechanism to track and recover costs.
- PG&E proposes to track and recover costs using existing DR mechanisms. This includes:
  - Track implementation costs in the Demand Response Expense Balancing Account (DREBA);
  - Transfer these costs to the Distribution Revenue Adjustment Mechanism for recovery through PG&E's Annual Electric True-up (AET).

PG&E

Timeline of Activities

T=0:

CPUC issues Resolution for "Similar" Program

T+30 days:

Incumbent Utility (and presumably Aggregator) cannot enroll or continue to market "similar" program to impacted customers

T+60 days:

Notification Letters sent up to 60 days after

T+365 + 30 days:

Bill credit to be initiated and dead line for impacted customer to be removed from the IOU's DR program.

References and Miscellaneous

- Demand response funds are allocated in the same manner as other distribution revenue requirements and do not receive a unique allocation. Allocation of distribution revenue requirement is determined in GRC Phase II proceedings and was last decided in D.15-08-005, which adopted a Marginal Cost and Revenue Allocation Settlement Agreement addressing allocation of costs.

- The Distribution Revenue Allocation Factors are determined from the apportionment of annual Distribution-related revenues calculated using Present Rates effective 3/1/18 by the Commission-approved 2018 Sales Forecast by Customer Class.

- PG&E also has a demand response auction mechanism pilot (DRAM), which may become a permanent program. However, Commission D.17-10-017 has indicated that DRAM is not subject to CNCC, “This Decision confirms that the Demand Response Auction Mechanism, if adopted as a permanent mechanism, is not eligible for the Competitive Neutrality Cost Causation Principle implementation because the auction mechanism is a procurement mechanism designed to allow third party direct participation into the CAISO market; it is not a demand response program.” Therefore, PG&E understands that DRAM would not be subject to the CNCC principle.

Questions