

A.17-01-014
SDG&E 2018-2025 EE Rolling Portfolio Business Plan
TURN Data Request TURN-SDG&E-01 Dated February 24, 2017
Question 10
Submitted: March 20, 2017

Portfolio Measure Composition and Intervention Strategies

10. In Appendix F to SDG&E’s Business Plan, wherein SDG&E responds to external stakeholder observations, SDG&E indicates that it “does not plan to target second refrigerators” in residential dwelling units for early retirement or replace-on-burnout as part of promoting appliance EE, and appears to suggest that such targeting would not be cost-effective or that SDG&E has inadequate budget. (See Appendix F, ID # 0940). Regarding this response:
- a. Is SDG&E’s response specific to appliance recycling, or does it also reflect SDG&E’s analysis of the potential for energy savings from downstream and midstream programs that expressly encourage retirement/removal of second refrigerators?
 - b. Does SDG&E believe that second refrigerators offer lower savings relative to primary refrigerators, cost more to capture, or both? Please explain and provide the basis for your conclusions.

SDG&E Response:

a: The following table provides the latest statewide load impact results for refrigerator cycling from program years 2010-2012 for the statewide Residential Appliance Recycling program (ARP)¹:

¹ “Appliance Recycling Program Impact Evaluation Volume 1: Report Work Order 35,” Prepared by KEMA, Inc. for the California Public Utility Commission, Energy Division, October 24, 2014.

A.17-01-014
SDG&E 2018-2025 EE Rolling Portfolio Business Plan
TURN Data Request TURN-SDG&E-01 Dated February 24, 2017
Question 10
Submitted: March 20, 2017

Table 3: Refrigerator Gross and Net Annual Electric Impacts - GWh

IOU	Evaluation Result	ex ante	ex post	Realization rate	Precision at 90% confidence
PG&E	Gross Savings, GWh	41.1	27.9	0.68	±26%
	NTGR	0.61	0.67		
	Net Savings, GWh	25.1	18.8	0.75	±28%
SCE	Gross Savings, GWh	153.1	93.6	0.61	±25%
	NTGR	0.62	0.68		
	Net Savings, GWh	94.1	63.6	0.68	±26%
SDG&E	Gross Savings, GWh	39.1	14.5	0.37	±26%
	NTGR	0.61	0.69		
	Net Savings, GWh	24.0	10.0	0.41	±28%
Totals	Gross Savings, GWh	233.3	136.0	0.58	±25%
	NTGR	0.61	0.68		
	Net Savings, GWh	143.3	92.4	0.64	±27%

The study found:

“For refrigerators, ex post savings were estimated at about 70% of ex ante claims. Most of the difference is driven by lower evaluated gross savings estimates, mostly attributable to the trend of decreasing age of recycled units, with NTGRs from the evaluation being similar or somewhat higher than IOU estimates. The evaluation savings reduction for SDG&E is much larger than for PG&E and SCE, which a combined result of SDG&E’s higher unit savings claim and the fact that recycled units in the SDG&E area tend to be much newer units than those recycled by PG&E and SCE.”²

The base efficiency of refrigerators has continually been increasing since the program was introduced in the 1990s. As the proportion of refrigerators manufactured since the appliance standards were enacted increases, the program savings decline. More retailers are now offering recycling with the purchase of new units, which also potentially increases program free ridership should it be continued. Since then the measure’s cost effectiveness has been declining. SDG&E closed down its ARP as of Q2 2016 and is not planning to offer the program in 2017.

b. Secondary refrigerators tend to be older relative to the primary refrigerator. As such, the second refrigerator would most likely be less efficient or at best have the same efficiency as the primary unit.

² Id., p. 101.

A.17-01-014
SDG&E 2018-2025 EE Rolling Portfolio Business Plan
TURN Data Request TURN-SDG&E-01 Dated February 24, 2017
Question 10
Submitted: March 20, 2017

With the base efficiency of refrigerators continually increasing since standards were enacted, savings from the second unit continue to decline.