

## Energy Efficiency Potential and Goals Study for 2018 and Beyond

Errata to the Final Public Report

Prepared for:

California Public Utilities Commission



**Submitted by:**

Navigant Consulting, Inc.  
1 Market Street  
Spear Tower, Suite 1200  
San Francisco, CA 94105

415-356-7100  
navigant.com

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## ERRATA

This document serves as an erratum to the Energy Efficiency Potential and Goals Study for 2018 and Beyond (2018 PG Study).<sup>1</sup>

Since the publication of the 2018 PG Study, Navigant discovered an issue with how the model was reporting cumulative savings from rebated equipment. This specifically impacted the reported savings for measures with dual baseline treatment (i.e. retrofit measures and measures for which below-code savings are being reported). This correction does not impact savings from replace on burnout equipment, codes and standards, low income programs, behavior programs, or industrial/agriculture emerging technologies. This update does not impact annual savings values used to inform the CPUC's goals setting process.

The issue was that reported cumulative savings was not counting the savings from the second baseline period of the dual baseline. Correcting this means cumulative savings is higher than what is reported in the 2018 PG Study. The table below compares the results of this update to the September final release of the 2018 PG Study. Cumulative savings in 2030 from rebate program increased approximately 15-30% depending on the savings type and scenario.

**Table 1: Impact of Update on 2030 Cumulative Net Savings**

Savings Type	Result Vintage	TRC   Reference	mTRC (GHG adder 1)   Reference	mTRC (GHG adder 2)   Reference	PAC   Reference	PAC   Aggressive
<b>Rebate Programs (Equipment + Low Income + BROs)</b>						
GWH	Updated Value	14,690	15,143	15,824	16,708	18,579
	Previous Value	11,662	11,938	12,395	12,905	14,548
	% Difference	26%	27%	28%	29%	28%
Mmtherms	Updated Value	441	505	601	578	640
	Previous Value	397	434	507	482	537
	% Difference	11%	16%	19%	20%	19%
<b>Equipment Savings Only</b>						
GWH	Updated Value	13,411	13,864	14,546	15,429	16,298
	Previous Value	10,383	10,659	11,116	11,626	12,267
	% Difference	29%	30%	31%	33%	33%
Mmtherms	Updated Value	354	418	514	491	525
	Previous Value	310	347	420	395	422
	% Difference	14%	20%	22%	24%	24%

<sup>1</sup> Navigant. *Energy Efficiency Potential and Goals Study for 2018 and Beyond- Final Public Report*. September 2017

All portions of the 2018 PG Study written report remain unchanged except for Appendix B (which reports cumulative savings results). This document contains an updated Appendix B with updated graphs.

A new results viewer and model file were also provided to the CPUC along with this document.

## APPENDIX B. TECHNICAL, ECONOMIC AND CUMULATIVE MARKET POTENTIAL FOR EQUIPMENT REBATE PROGRAMS

Figure B-1 through Figure B-10 below illustrate the statewide technical, economic and cumulative market potential from IOU equipment rebates for electric (GWh) and gas (MMTherms) respectively for each scenario. These graphs do not show IOU claimable savings from behavior, low income or C&S advocacy programs as the technical and economic potential for these sources are undefined. Only Scenario 5 (PAC Aggressive) includes the effects of energy efficiency financing. The cumulative market potential line is based on an accumulation start year of 2015 to match the needs of tracking towards SB350.

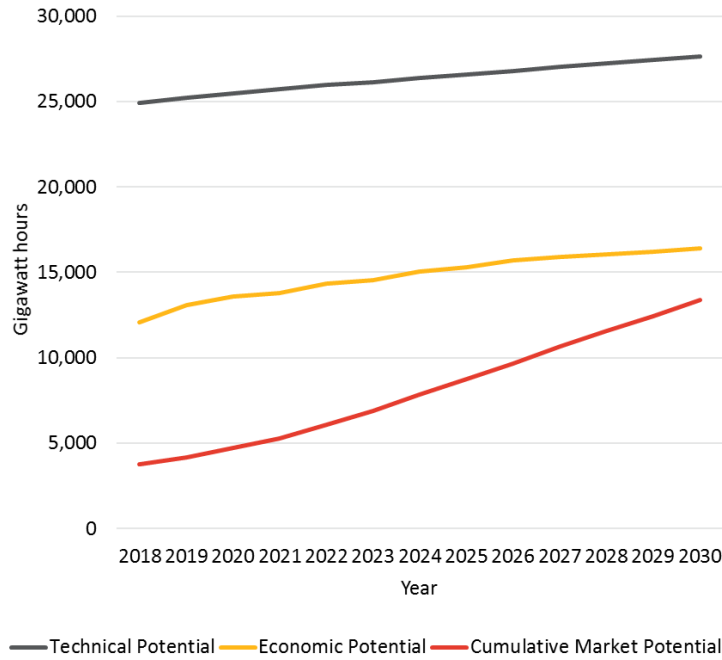
The technical potential is based on instantaneous potential, which is defined as the amount of energy savings that would be possible if the highest level of efficiency for all technically applicable opportunities to improve energy efficiency were taken. It does not account for equipment stock turnover. The economic potential shown in the graph is a subset of technical potential that is cost-effective under the relevant screening test in each scenario. Both the technical and economic potential lines grow steadily over time to reflect stock growth across all scenarios.

The large gap between the economic and technical potential on the graphs for Scenario 1 (TRC Reference) reflects that a significant number of measures are not cost-effective. A key driver for this is the 2016 avoided cost update, which produced avoided costs that are lower than in previous studies. This gap becomes smaller as the cost test used to screen measures becomes less stringent for electric savings. This gap is smallest in Scenario 2 (mTRC w/ GHG Adder 2) for gas savings as the adder is applied uniformly to all gas measures. On the other hand, the impact of the adder on electric measures is loadshape-dependent, which means the benefits of the GHG adder vary by time of day and season.

The electric cumulative market potential generally grows at a steady pace between 2018 and 2021, after which it ramps up out to 2030 across all scenarios. Savings from LEDs are expected to grow significantly during this time. Since overall potential is generally dominated by lighting measures, the growth in the LED market drives the cumulative market potential.

Additional versions of these figures including demand savings and savings as a percent of consumption are available for each utility and all scenarios in the results viewer under the tab "Tech, Econ and Market Potential"

**Figure B-1. Statewide Technical, Economic and Cumulative Electric Market Potential for Equipment Rebate Programs in Scenario 1 (TRC Reference)**



**Figure B-2. Statewide Technical, Economic and Cumulative Electric Market Potential for Equipment Rebate Programs in Scenario 2 (mTRC w/ GHG Adder 1)**

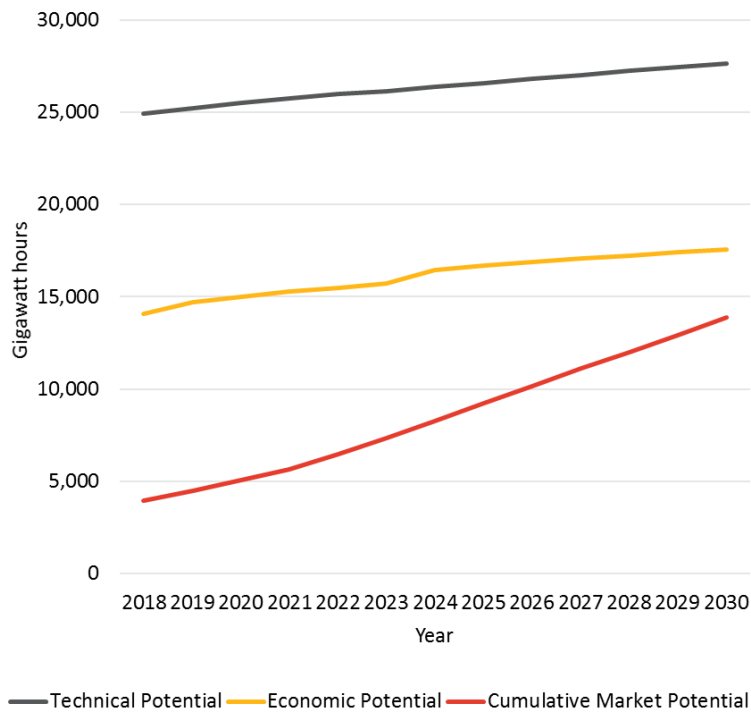


Figure B-3. Statewide Technical, Economic and Cumulative Electric Market Potential for Equipment Rebate Programs in Scenario 3 (mTRC w/ GHG Adder 2)

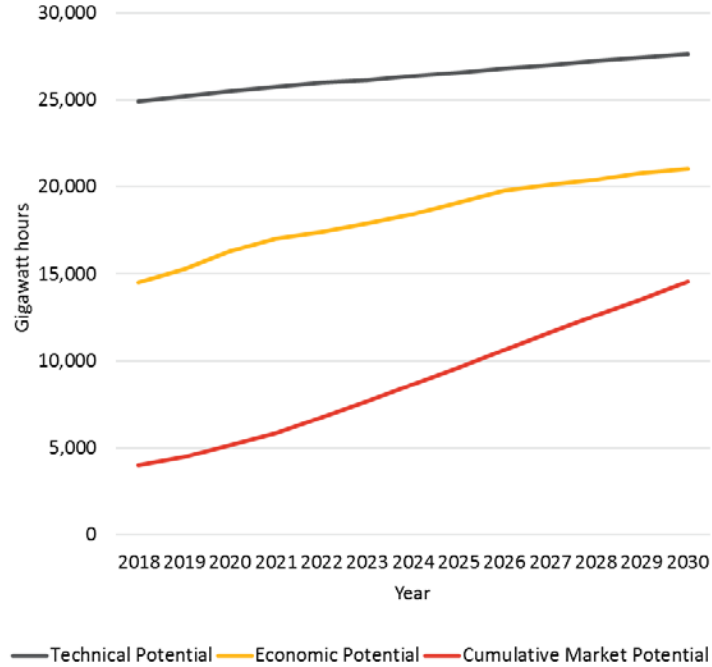


Figure B-4. Statewide Technical, Economic and Cumulative Electric Market Potential for Equipment Rebate Programs in Scenario 4 (PAC Reference)

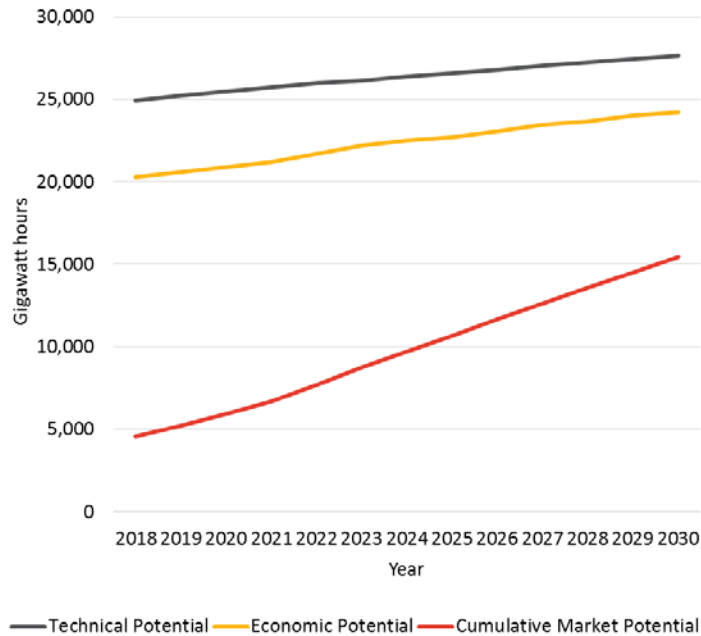


Figure B-5. Statewide Technical, Economic and Cumulative Electric Market Potential for Equipment Rebate Programs in Scenario 5 (PAC aggressive)

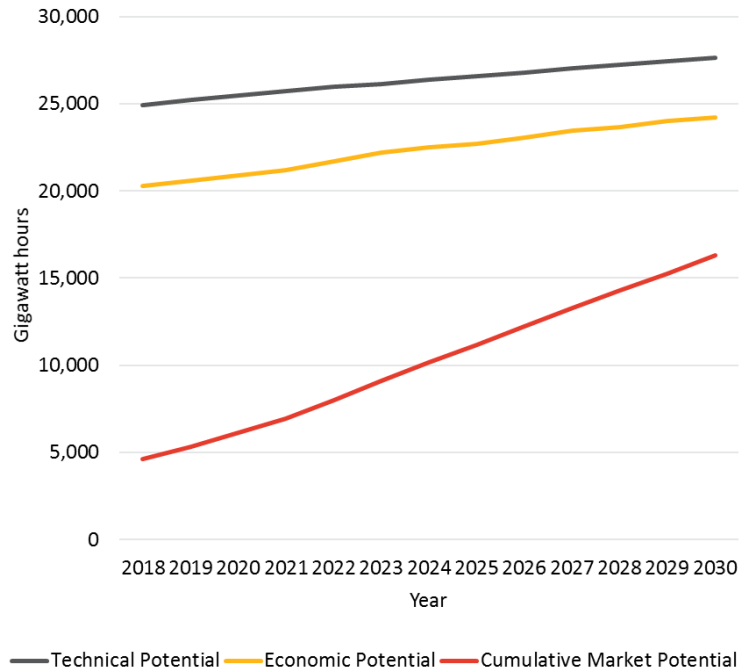


Figure B-6. Statewide Technical, Economic and Cumulative Gas Market Potential for Equipment Rebate Programs in Scenario 1 (TRC Reference)

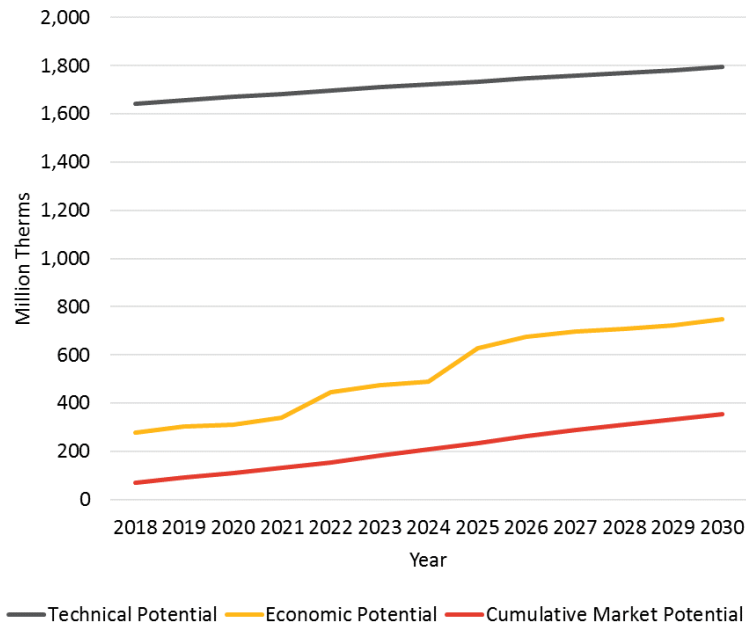


Figure B-7. Statewide Technical, Economic and Cumulative Gas Market Potential for Equipment Rebate Programs in Scenario 2 (mTRC w/ GHG Adder 1)

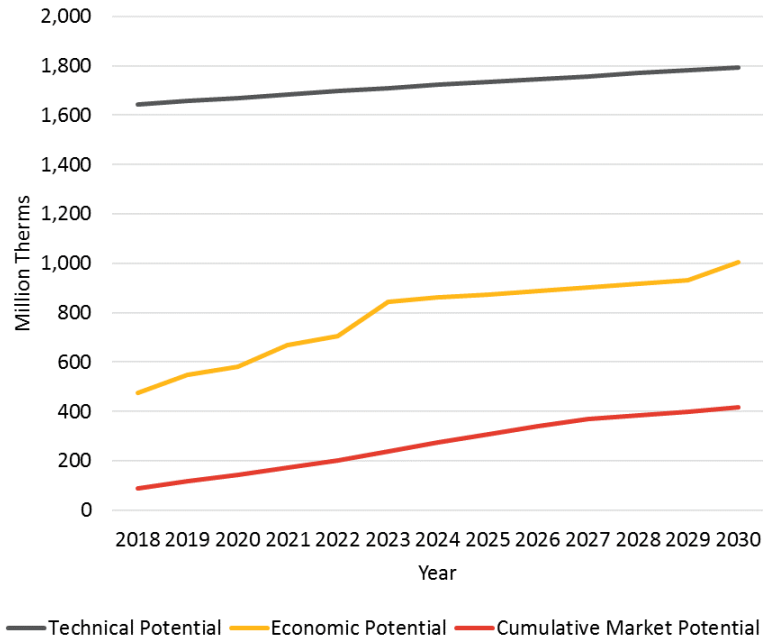
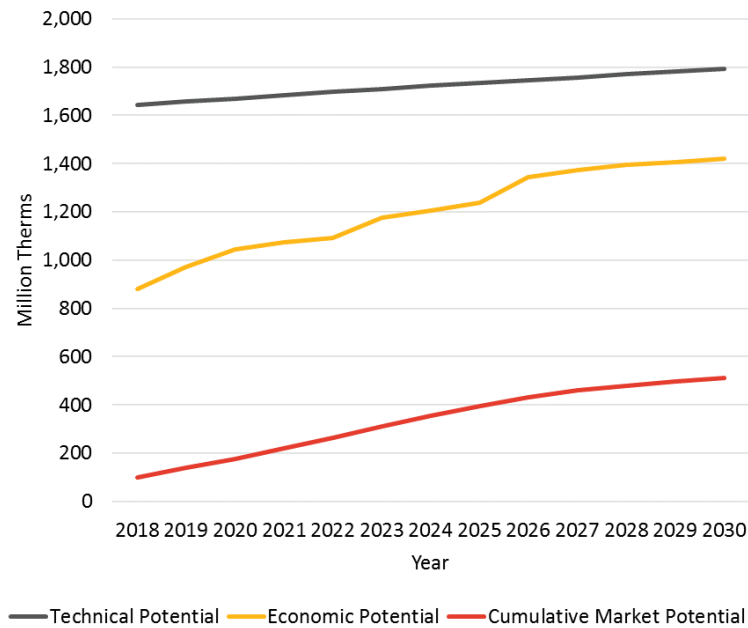
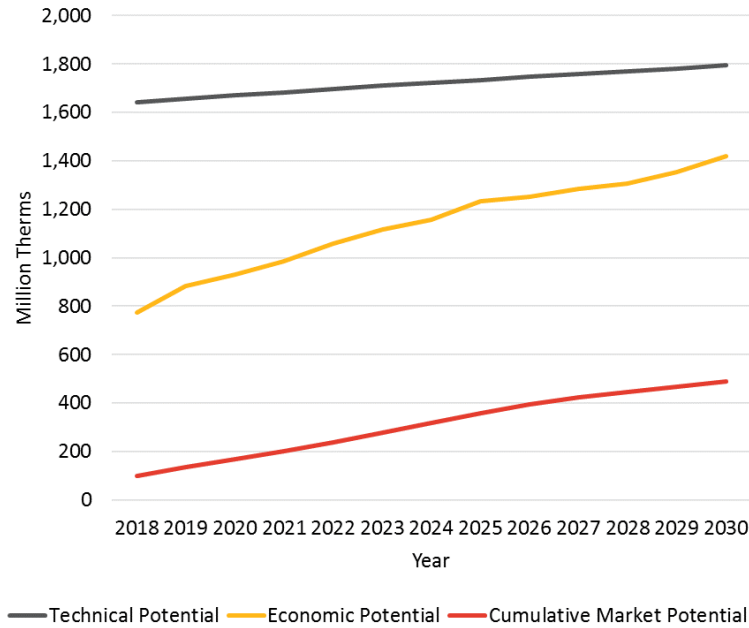


Figure B-8. Statewide Technical, Economic and Cumulative Gas Market Potential for Equipment Rebate Programs in Scenario 3 (mTRC w/ GHG Adder 2)





**Figure B-9. Statewide Technical, Economic and Cumulative Gas Market Potential for Equipment Rebate Programs in Scenario 4 (PAC Reference)**



**Figure B-10. Statewide Technical, Economic and Cumulative Gas Market Potential for Equipment Rebate Programs in Scenario 5 (PAC Aggressive)**

