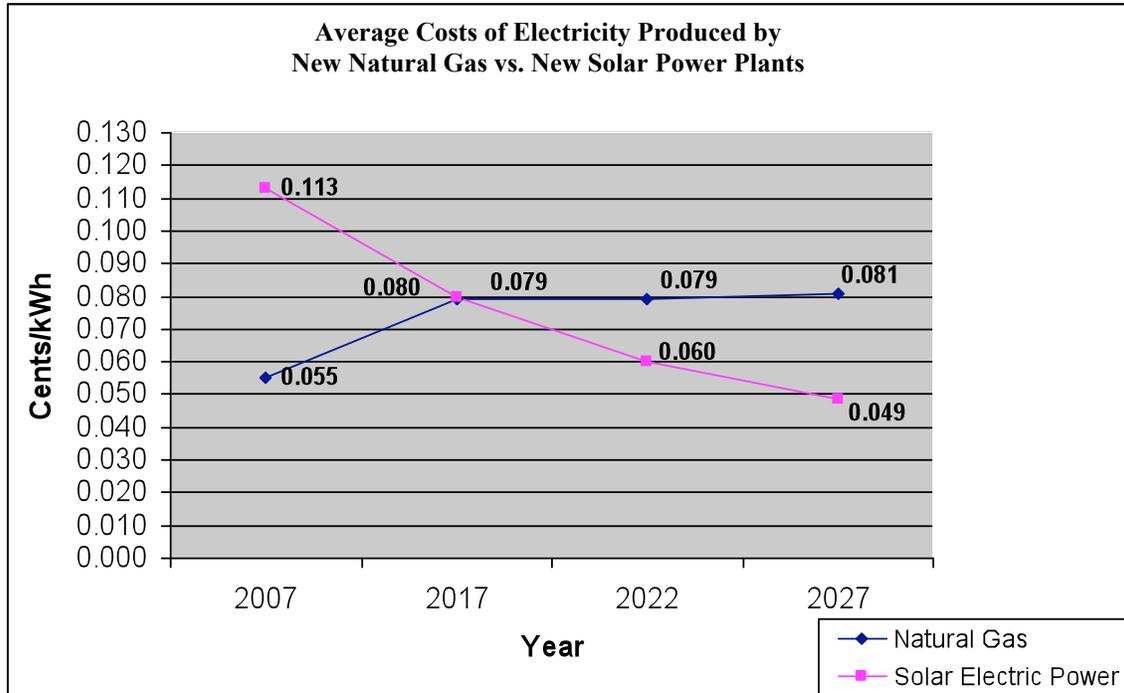


Natural Gas vs. Solar Energy Cost Analysis

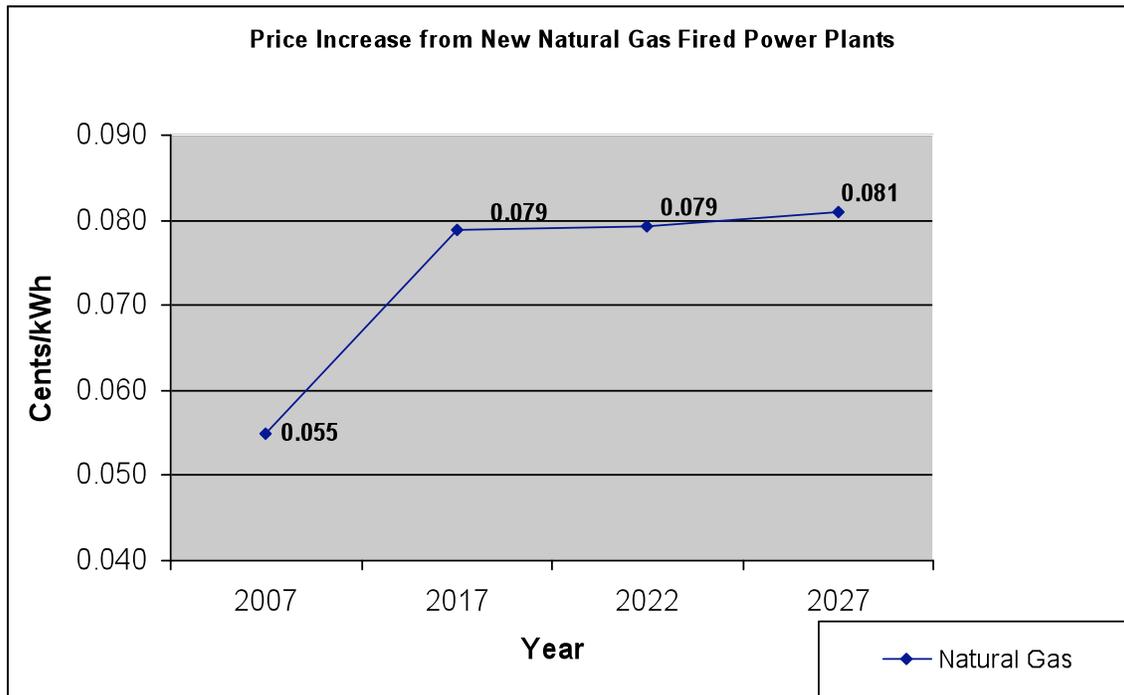
The Proposed California Clean and Renewable Act of 2008 Would Lower Residential Electricity Bill by Over 4%

A study commissioned by the United States Department of Energy and The National Renewable Energy Laboratory analyzed the cost and performance projections of various solar thermal electricity generation technologies.ⁱ The study concluded that a high deployment schedule of solar thermal electric power plants by 2020 would result in cost reductions for solar energy ranging from initial electricity costs of 10 to 12.6 cents per kilowatt hour falling to 3.5 to 6.2 cents per kilowatt hour.

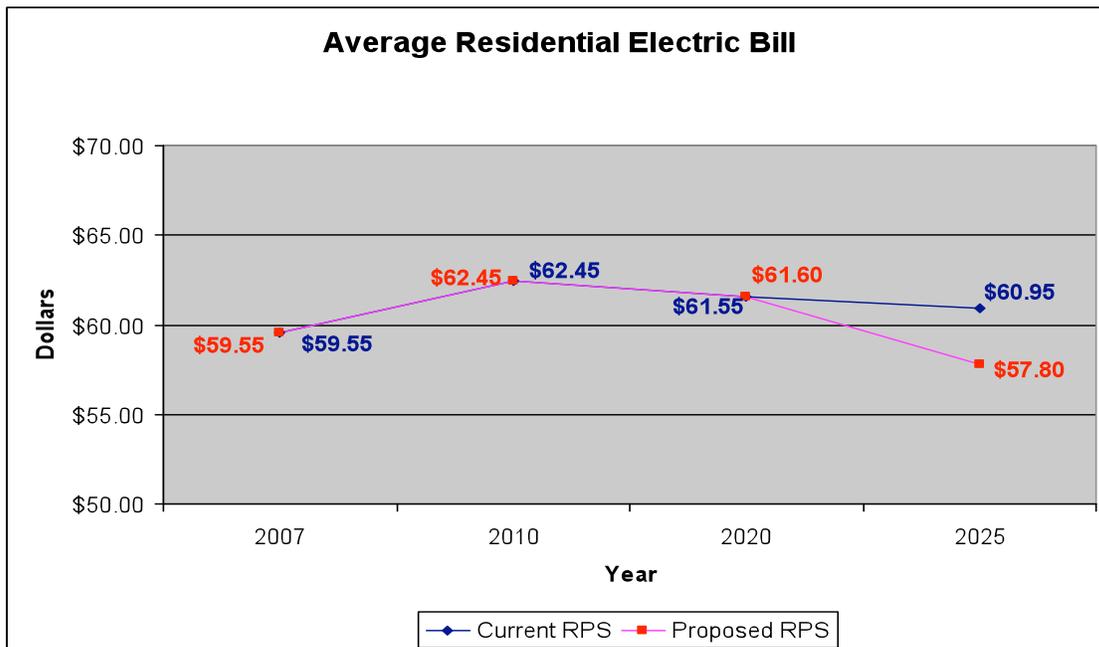


In 2003, the California Energy Commission found that the cost of electric generation for new natural gas fired plants varied between 5.5 cents per kilowatt hour for combined cycle gas turbine (CCGT) plants and 15.9 cents per kilowatt hour for cycle combustion plants.ⁱⁱ

The 20 year Market Price Referent for natural gas, adopted by the California Energy Commission in 2005, projected that the cost of new combined cycle gas turbine (CCGT) and cycle combustion (CC) gas turbine and natural gas generated electricity, including expenses such as cost of capital and fixed and variable operation and maintenance costs, would rise from 7.894 cents per kilowatt hour to 8.098 cents per kilowatt hour for 20 years contracts beginning in 2007.ⁱⁱⁱ

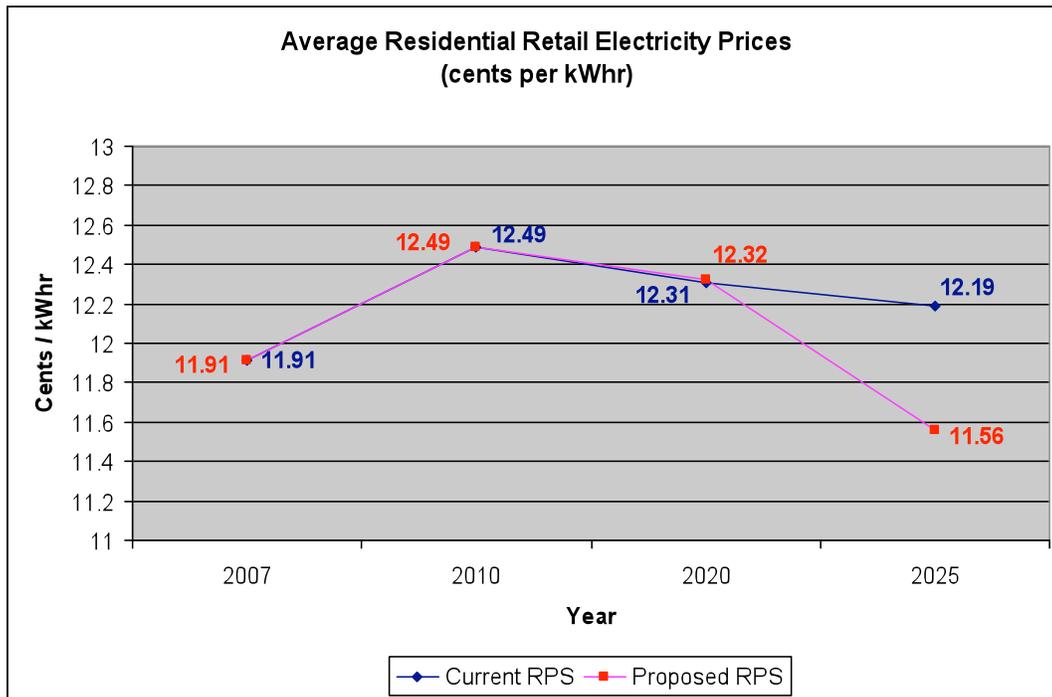


Applying these projected costs^{iv} for electricity to average consumer bills paid by customers of the largest California utilities (PG&E, Southern California Edison, SDG&E, and LADWP), it can be projected that a production strategy relying on natural gas fired plants would result to higher costs to the average consumer than a production strategy relying on solar electricity power plants. **However, under the proposed California Clean and Renewable Act of 2008, average residential electricity bills would decline by over 4%.**



- With a 50% Renewable Portfolio Standard (RPS) fully in effect by 2025, residential electricity bills would decline from the 2007 price of \$59.55 to \$57.80 in 2025 (see figure above).

- If the current 20% RPS remained unchanged between 2010 and 2025, residential electricity bills would increase from \$59.55 in 2007 to \$60.95 in 2025.



- With a 50% RPS, average costs of electricity per kilowatt hour would decline from the 2007 price of 11.91 cents to 11.56 cents per kilowatt hour by 2025.
- If the current 20% RPS remained unchanged between 2010 and 2025, average costs of electricity per kilowatt hour would increase from 11.91 cents in 2007 to 12.19 cents in 2025.

These figures reflect utility bills for the major California investor owned and municipal owned utilities, (based upon a 500 KWh average monthly usage).^v

This conclusion is based upon a price sensitivity analysis reflecting a Renewable Portfolio Standard of 20% by 2010; rising to 40% by 2020; and, peaking at 50% by 2025.

Under this analysis, the average statewide percentage of electricity generated by natural gas would decline from 41.5% in 2007 and be replaced by an equivalent percentage of solar thermal generated electricity based upon the following replacement scenario:

| | Natural Gas Generated Electricity | Solar Thermal Generated Electricity | Renewable Portfolio Standard (RPS) |
|--------|--------------------------------------|--|---------------------------------------|
| * 2007 | 41.5% | 0.2% | NA |
| * 2010 | 32.4% | 9.3% | 20% |
| * 2020 | 12.4% | 29.3% | 40% |
| * 2025 | 2.4% | 39.3% | 50% |

This basic sensitivity analysis scenario does not consider the impact other factors such as changes in the mix of electricity generation resources (renewable and non-renewable), or the impact of consumer demand or inflation.

ⁱ See *Assessment of Parabolic Trough and Power Tower Solar Technology Cost and Performance Forecasts*, May 2003, prepared for the Department of Energy and National Renewable Energy Laboratory by Sargent & Lundy Consulting Group.

ⁱⁱ See California Energy Commission. http://www.energy.ca.gov/electricity/comparative_costs.html

ⁱⁱⁱ See Resolution of the California Public Utilities Commission, E-3980, adopted April 13, 2006. http://www.cpuc.ca.gov/PUBLISHED/FINAL_RESOLUTION/55465.htm

^{iv} These projections do not reflect unforeseen impacts of market factors relating to other sources of electricity; nor do they attempt to reflect inflation.

^v The average price per kilowatt hour used in these estimates can be found at The California Energy Commission http://www.energy.ca.gov/electricity/rates_iou_vs_muni_nominal/residential.html