

GWSP Scorecard: 2010 Clean Energy & Climate Plan Forecast Compared With 2014 Global Warming Solutions Project Estimate

**Figure 2: Economy-wide 2020 Greenhouse Gas Emissions Reduction
Below 1990 Levels**

Clean Energy & Climate Plan 2020 forecast (middle case) – December 2010	27%
2020 reduction required by Global Warming Solutions Act	25%
Global Warming Solutions Project Scorecard estimate – March 2014	20%
<i>Difference Between GWSA Mandate & GWSP Scorecard estimate (March 2014)</i>	<i>-5%</i>

Figure 3: GWSP Forecast of Greenhouse Gas Emission Reductions
(as % of reductions in the Dec. 2010 Clean Energy & Climate Plan)

Sector	% of the reduction mandate we expect to be reached by 2020 [†] (without intensified effort) “How much of the way there?”
Buildings & Energy Efficiency	87%
Electricity Supply	88%
Transportation & Land Use	63%
Non-Energy Emissions	74%
All Sectors Weighted & Combined	81%

[†]The *Clean Energy and Climate Plan for 2020* included emissions reduction programs totaling to a 27% reduction from 1990 emissions, 2% more than is legally required. These numbers are adjusted so that they are relative to the 25% requirement.

Figure 4: Measures and Policies in 2010 Clean Energy & Climate Plan Forecast vs. 2014 GWSP Estimates

Measures and Policies	Estimated % reduction of 1990 emissions by 2020		Difference between 12/10 Plan and 2/14 estimate of % emissions reduced	% of 25% reduction mandate forecast to be reached by 2020* <i>(w/out intensified effort)</i>
	2020 Plan (December 2010)	GWSP estimate (March 2014)		
Buildings and Energy Efficiency	9.8%	7.9%	-1.9%	87%
Electric energy efficiency	5.0%	3.9%	-1.1%	
Natural gas, heating oil energy efficiency	2.1%	1.3%	-0.8%	
Advanced building energy codes	1.6%	1.2%	-0.4%	
Federal appliance and product standards	0.6%	0.4%	-0.2%	
MEPA GHG policy and protocol	0.0%	0.0%	0.0%	
“Deep” energy efficiency improvements for buildings	0.2%	0.0%	-0.2%	
Expanding energy efficiency programs to commercial/industrial use of heating oil	0.1%	0.0%	-0.1%	
Tree retention and planting to reduce heating and cooling loads	0.1%	0.1%	0.0%	
Develop a mature market for renewable thermal heating**	0.1%	0.7%	0.6%	
Electricity Supply	7.8%	6.4%	-1.4%	88%
Expanded Renewable Portfolio Standard (RPS)	1.2%	1.2%	0.0%	
More stringent EPA power plant rules cause shutdown of inefficient coal-fired plants	1.2%	1.2%	0.0%	
Clean energy imports	5.4%	0.3%	-5.1%	

Measures and Policies	Estimated % reduction of 1990 emissions by 2020		Difference between 12/10 Plan and 2/14 estimate of % emissions reduced	% of 25% reduction mandate forecast to be reached by 2020* (w/out intensified effort)
	2020 Plan (December 2010)	GWSP estimate (March 2014)		
Brayton Point Power Plant shuts down	0.0%	3.7%	3.7%	
Transportation and Land Use	7.8%	4.6%	-3.2	63%
Federal and California vehicle efficiency and GHG standards	2.6%	2.6%	0.0%	
Federal emissions and fuel efficiency standards for medium and heavy duty vehicles	0.3%	0.3%	0.0%	
Federal renewable fuel standard and regional clean fuel standard (formerly called low carbon fuel standard)	1.6%	0.5%	-1.0% ¹	
Mileage Reduction Pilot program (Pay-As-You-Drive auto insurance)	1.1%	0.3%	-0.8%	
Clean car consumer incentives (auto sales tax varying by GHG emissions/mile)	0.5%	0.0%	-0.5%	
Electric vehicles	0.0%	0.1%	0.1%	
GreenDOT (all measures except transportation planning)	1.2%	0.5%	-0.7%	
bike, pedestrian, transit investments	0.2%	0.2%	0.0%	
operations efficiency, development project mitigation, consumer choice	0.5%	0.3%	-0.2%	
smart-driving education for light duty vehicles (speed, acceleration, maintenance)	0.4%	0.0%	-0.4%	
smart-driving education for heavy-duty vehicles	0.1%	0.0%	-0.1%	

¹ Difference does not match subtraction of column 2 from column 1 in this row due to rounding.

Measures and Policies	Estimated % reduction of 1990 emissions by 2020		Difference between 12/10 Plan and 2/14 estimate of % emissions reduced	% of 25% reduction mandate forecast to be reached by 2020* <i>(w/out intensified effort)</i>
	2020 Plan (December 2010)	GWSP estimate (March 2014)		
Smart Growth Policy Package (including transportation planning and Sustainable Development Principles)	0.5%	0.3%	-0.2%	
Non-Energy Emissions	2.0%	1.4%	-0.6%	74%
Reducing GHG emissions from motor vehicle air conditioning	0.3%	0.3%	0.0%	
Stationary equipment refrigeration management	1.2%	0.6%	-0.6%	
Reducing SF6 emissions from gas-insulated switchgear (in electricity distribution systems)	0.2%	0.2%	0.0%	
Reduce GHG emissions from plastics (through greater recycling)	0.3%	0.3%	0.0%	

All Sectors Combined	27%	20%	-7%	81%
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* The *Clean Energy and Climate Plan for 2020* has emission reductions totaling 27% of 1990 emissions, 2% more than is legally required. To account for this, we have adjusted the numbers in this column by taking (GWSP estimate/CECP forecast) and multiplying by $27\%/25\% = 1.08$, so that the numbers are now relative to the 25% requirement.

** In the 2020 Plan, the policy was termed “solar thermal.” Due to expanded policies by the Patrick administration, we have renamed it here to be “renewable thermal,” which includes other forms besides solar, such as biomass and high efficiency heat pumps.