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# International Business Case Studies: California



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7<sup>th</sup> Australia-New Zealand Climate Change and  
Business Conference



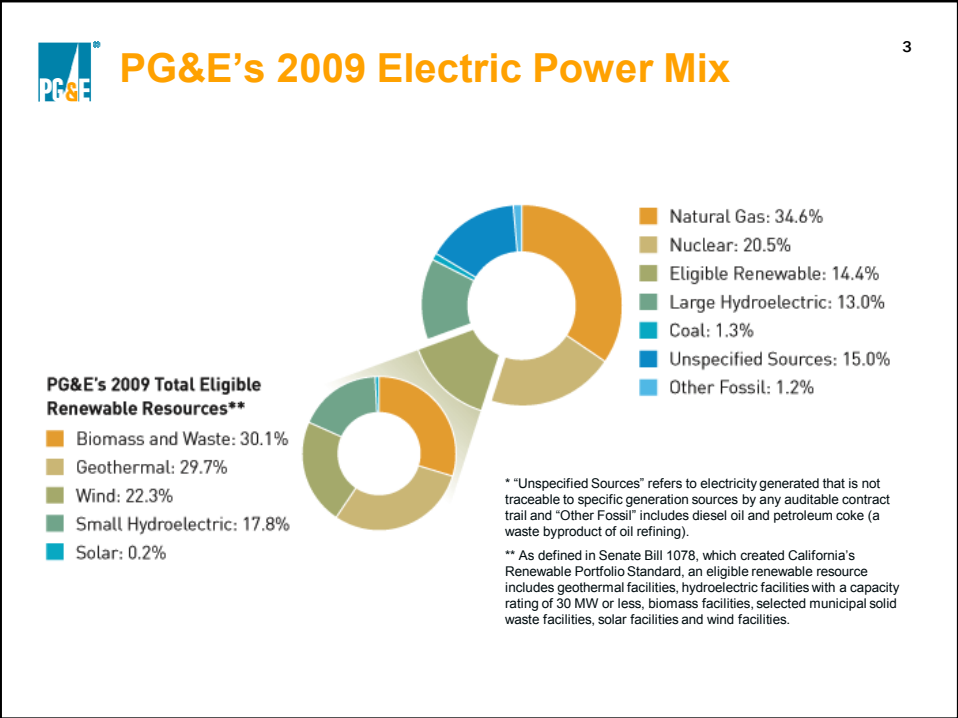
## Pacific Gas and Electric Company (PG&E)<sup>2</sup>



A regulated investor-owned utility  
Energy services to 15 million people:

- 5.2 million Electric accounts
- 4.3 million Natural Gas accounts

70,000 square miles with diverse topography  
160,000 circuit miles of electric transmission and distribution lines  
49,000 miles of natural gas transmission and distribution pipelines  
Peak demand: 20,000 MW  
Approximately 20,000 employees



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- PG&E's Actions Associated with Climate Change Policy**
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- One of first utilities in the United States to call for mandatory national legislation
  - Founding member of U.S. Climate Action Partnership
  - First investor-owned utility to support enactment of California's Global Warming Solution Act, Assembly Bill (AB) 32
    - Requires California to return economy wide GHG emissions to 1990 levels by 2020
  - Joined coalition in opposition to California Proposition 23, initiative to suspend AB 32



## Key Government Policies

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- 30+ Years of Energy Efficiency Programs Facilitated by Decoupling
- Preferred Loading Order for Electricity Resources:
  - Demand reductions: energy efficiency, demand response
  - New renewable and distributed generation
  - Clean gas-fired power plants
- Renewable Portfolio Standards
  - 20% by 2010
  - 33% by 2020
- Assembly Bill 32 (AB32), Global Warming Solutions Act of 2006

Since 1976, PG&E's energy efficiency programs have:

- Helped California avoid building 24 large power plants
- Saved customers over \$24 billion
- California per capita electricity use has remained relatively flat, compared to the 50% increase in U.S. per capita electricity use since 1974



## Overview of Assembly Bill 32

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### Requires CA to return economy-wide GHG emissions to 1990 level by 2020

The first mandatory greenhouse gas (GHG) reduction law in the US

Required California Air Resources Board (ARB) to prepare a Scoping Plan to achieve GHG reductions

### Scoping Plan Recommendations

Direct emission-reduction measures (such as 33% Renewable Electricity Standard, Energy Efficiency and Combined Heat and Power)

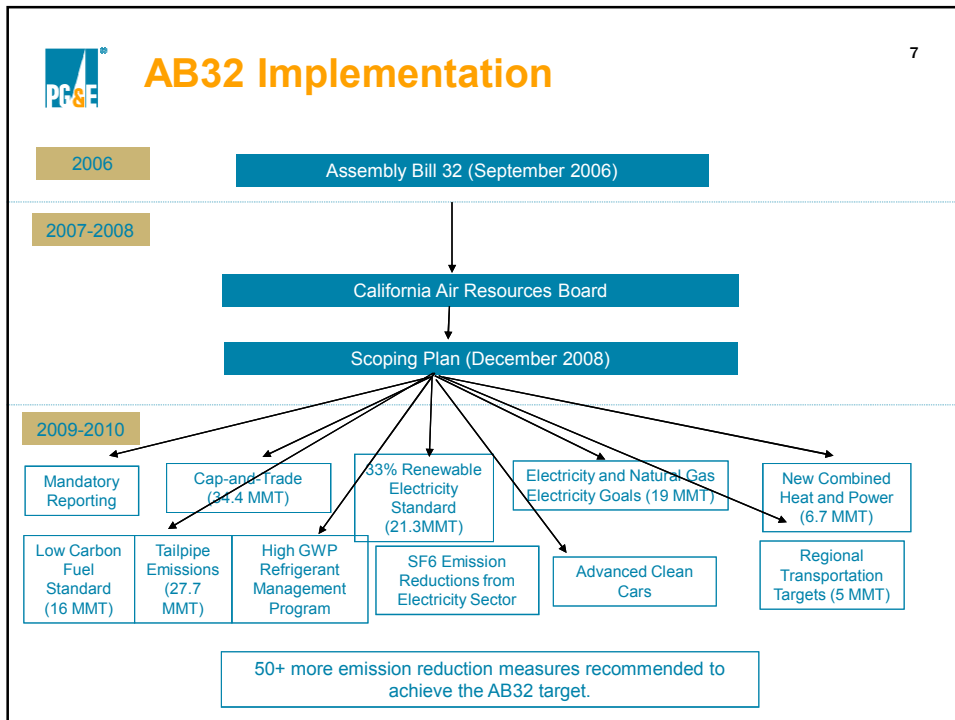
Market-based compliance measures (i.e., cap-and-trade program)

### PG&E's Objectives

Ensure environmental integrity through mandatory, real, and verifiable reductions

Manage costs to California consumers and business by pursuing cost-effective reduction strategies and a consumer oriented allowance allocation approach

Maintain California's leadership role by creating a model program that can be integrated effectively with future regional, national and international programs

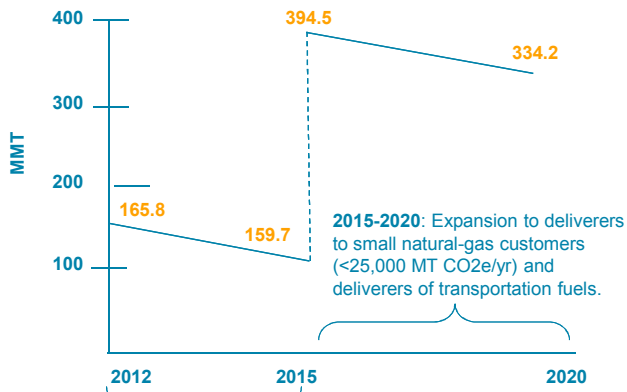


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- California's Emerging Cap-and-Trade Program**
- December 16, 2010: Staff authorized to move forward to finalize the Cap-and-Trade Regulation.
  - June 29, 2011: Chairman Nichols announced a one year delay of the compliance obligation.
    - First half of 2012: Test market, run simulations
    - Second half of 2012: Allocations, auctions, trading and other activities to begin
  - July 25, 2011: ARB released first package of proposed revisions to the Cap-and-Trade Regulation.
  - August 24, 2010: Staff scheduled to update the Board on the cap-and-trade program.
  - Late October: Regulations expected to be finalized by ARB



## Cap-and-Trade: Scope and Cap

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### Compliance:

- 3 year compliance periods
- Retire 30% of annual obligation in years 1 and 2
- Retire 100% of remaining obligation in year 3 by November 1 of following year

2012-2014: Large stationary sources (> 25,000 MT CO<sub>2</sub>e/yr), such as electricity generators, electricity importers, and industry.

2015-2020: Expansion to deliverers to small natural-gas customers (<25,000 MT CO<sub>2</sub>e/yr) and deliverers of transportation fuels.