USC Schwarzenegger Institute & Stanford Energy Modeling Forum Transportation Symposium

Senator Fran Pavley
Environmental Policy Director, USC Schwarzenegger Institute
1970 Clean Air Act

President Nixon signing 1970 Clean Air Act

Climate Changes
- Temperature Increase
- Precipitation Patterns and Extremes
- Sea Level Rise

Health
- Air Quality - Respiratory Illness
- Weather-related Mortality
- Infectious and Tropical Diseases

Agriculture
- Crop Yields
- Irrigation Demands

Forests
- Forest Composition
- Geographic Range of Forests
- Forest Health and Productivity

Water Resources
- Water Supply
- Water Quality
- Competition for Water

Coastal Areas
- Erosion of Beaches
- Inundation of Coastal Wetlands
- Additional Costs to Protect Coastal Communities

Species and Natural Areas
- Loss of Habitat and Species
Global Warming Solutions Act (2006)

California’s Landmark Policy

- Climate pollution reduction targets by 2020
- Multi-sector approach:
  - Vehicles
  - Fuels
  - Renewable energy standards
  - Appliances
  - Buildings
  - Land use planning
  - Cap-and-trade

Putting a cap on emissions and rolling back to 1990 levels by 2020 created a market for investment and innovation.
California has a 40% GHG Reduction Target by 2030

**Executive Order B-30-15:** Brown Administration’s 2030 greenhouse gas reduction goals.

**SB 32** codifies this 2030 economy-wide greenhouse gas reduction target.

**AB 197** institutionalizes a policy of equity, transparency, and accountability in future programs.

Businesses and Markets Need Certainty
**AB 32 Emission Reduction Strategies**

(Measure, Percent of Total)

- **Forestry**: 4%
- **Clean Cars Standards**: 27%
- **Cap-and-Trade**: 16%
- **Renewable Energy**: 19%
- **Energy Efficiency**: 12%
- **Smart Growth**: 3%
- **High GWP Measures**: 7%


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**SB 32 Scoping Plan**
Governor Newsom’s Executive Order on 100% Zero Emission Vehicles (September 2020)

• 2035: All new passenger vehicle sales
• 2035: Drayage & off-road vehicles
• 2045: All medium and heavy duty vehicles
• Accelerate charging/fueling infrastructure & focus on disadvantaged communities
Challenges and Opportunities of the Gov.’s ZEV EO

1. Opportunity for CA to reestablish itself as a world leader on electrification.
   • Must focus on equitable pathways to electrification.
   • Prioritize investments in regions with poor air quality.

2. Opportunity to transition completely off fossil fuels.

3. Will require an unseen degree of collaboration amongst all sectors: public, private, government.
   • Coordinate with local, state and federal governments on ZEV infrastructure for drayage vehicles, medium and heavy duty trucks.
   • Tie state or federal subsidies to workforce related policies and standards.
   • Implement with CEC, CCA’s and local governments to implement ZEV targets in all communities.
   • Partner with workforce training programs to build and maintain ZEV infrastructure.
Adaptation and Mitigation Strategies

Example of a home with solar and storage

LADOT purchases electric buses

Water Reuse

Hydrogen charging stations