



# California's Proposed Compliance Plan for the Federal Clean Power Plan

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# Overview of the Federal Clean Power Plan

- Federal Clean Air Act requirements to limit CO<sub>2</sub> emissions from existing power plants.
- Emission reductions targets, issued under section 111(d) of the Act, are based on the “best system of emission reduction.”
- States may develop compliance plans, or accept a federal plan.
- CPP reductions would yield ~32% reduction in CO<sub>2</sub> emissions from 2005 levels by 2030, and substantial reductions in co-pollutants.

# Overview of the Federal Clean Power Plan

- State plans may rely on existing “state measures” coupled with a “backstop” to ensure federal targets are met.
- Requirements for affected Electricity Generation Units (EGUs) must be federally enforceable, including a “backstop.”
- State plans are submitted to U.S. EPA for review and become effective upon approval.
- California has long-supported the CPP, and advocated for state flexibility in implementation.

# CPP Legal Status and Next Steps

- ▣ Litigation is ongoing; California is defending the CPP.
  - ▣ February 9, 2016 - Supreme Court stayed implementation of the CPP pending judicial review.
  - ▣ Fall 2016-Spring 2017: D.C. Circuit hears the case and considers an opinion.
  - ▣ Spring and summer 2017: Court puts the case on temporary hold.
- ▣ March 23, 2017 an Executive Order directs review of several U.S. EPA rules.
- ▣ April 4, 2017 U.S. EPA announcement of CPP review.

# Summary of California's Proposed Compliance Plan

- Plan developed through extensive public process.
- California programs and ambitious climate mandates far exceed federal targets in 2030.
- State policies achieving electricity sector reductions are reflected in the Cap-and-Trade Program, for extension to 2030 and beyond.
- Staff focused on integrating federal compliance requirements with the Cap-and-Trade Program in a "state measures" plan.

# Affected EGUs and GHG Targets

- Federal definitions cover 249 EGUs in California, located throughout the state. Affected EGUs are essentially all large fossil-fuel-fired power plants in operation or under construction by 2014.
- Substantial numbers in South Coast, San Joaquin, and Bay Area Air Districts.
- Federal targets apply for the 2022-2029 “interim” period and for a “final” period beginning in 2030.
- Staff used U.S. EPA methodology to calculate California mass limits consistent with updated list of affected EGUs.

# Affected EGUs and GHG Targets

- Proposed CPP targets are as follows (2014 emissions are ~ 41.1 MMTCO<sub>2</sub>e):

Year	C&T Compliance Period	Annual CPP Glidepath "Target" (MMTCO <sub>2</sub> e)	Full Federal Compliance Period CPP Glidepath Target (MMTCO <sub>2</sub> e)	CPP Backstop Trigger – 10% Above Target (MMTCO <sub>2</sub> e)
2021	4	N/A	50.0	55
2022		50.0		
2023	5	49.4	98.3	108.2
2024		48.9		
2025	6	48.4	143.4	157.8
2026		47.8		
2027		47.3		
2028	7	46.7	92.9	102.2
2029		46.2		
2030	8	45.6	91.3	100.4
2031		45.6		

# California Complies with CPP Targets

- Modeling used a Reference case where California meets AB 32 2020 targets, and a Stress case that includes low hydro generation, high demand, lower CO<sub>2</sub> prices and retirement of Diablo Canyon.
- Modeling also tested for leakage to out-of-state sources or to new EGUs. Reliability considerations were incorporated.
- Modeling is conservative, and does not incorporate SB 32, SB 350, or AB 398 mandates.
- Both Reference and Stress case show affected EGU emissions below federal target levels in all years.

# CPP Structure

- “State measures” plan based on the Cap-and-Trade Regulation and supported by the Mandatory Reporting Regulation.
- Compliance with state regulation supports CPP compliance, and is federally-enforceable for affected EGUs.
- Backstop trading program for affected EGUs triggers in the very unlikely event of an exceedance.
- Existing linkages are maintained. Connections to other CPP programs are possible.
- Amendments take effect upon plan approval.

# Mandatory Reporting Regulation Amendments

- Requirements for all CPP affected EGUs to report and verify emissions.
- Requirements for reporting consistent with CPP requirements.
- Requirements for recordkeeping consistent with CPP requirements.
- Approved by Board on June 29, 2017.

# Cap-and-Trade Program Amendments

- Requirements for all CPP affected EGUs to participate in the Cap-and-Trade Program.
- Alignment of Program compliance periods with CPP compliance periods, including a bridge period.
- Provisions setting interim and final mass targets.
- Provisions establishing federally-enforceable backstop emission standards.
  - Backstop standards would be an affected EGU-only trading program, operating in parallel with the state program, set to CPP target levels.
- ARB allocates backstop allowances.

# Decarbonizing The Electricity Sector

- ▣ California is committed to decarbonizing the electricity sector.
- ▣ California continues to press for state and federal climate action, working with other governments.
- ▣ States continue to lead:
  - ▣ Western states continue to bring large amounts of renewable power online, and to emphasize energy efficiency.
  - ▣ Aging and non-economic coal power plants are retiring.
  - ▣ Grid management efforts encourage cost-effective decarbonization.

# Decarbonizing The Electricity Sector, cont.

- Per AB 197, prioritize direct reductions at large stationary sources, including power plants.
- Per AB 2868 and AB 33, encourage development of additional energy storage capacity.
- Per SB 350, establish GHG planning targets for California utilities.
- Per SB 350, help support renewables on the western grid.
- Support state and federal policies that spread these efforts.

# Environmental Analysis

- Draft Environmental Analysis (EA) completed
  - Covers both the proposed Cap-and-Trade Regulation 2016 Amendments and the Proposed Compliance Plan
  - Environmental impacts were determined to be consistent with prior analyses conducted for the Cap-and-Trade Program
- Released for public comment August 5, 2016 – September 19, 2016
- ARB prepared the Final EA and written responses to comments received on the Draft EA
  - Released July 17, 2017

# Staff Recommendation

- ▣ Approve the proposed Resolution which includes:
  - ▣ Approving written responses to environmental comments, re-certification of the Final EA, and makes the required CEQA findings
  - ▣ Approving the Proposed Compliance Plan.
  - ▣ Directing staff to work with U.S. EPA and other states to further support policies to reduce greenhouse gas emissions.