



# 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 designed to limit CO<sub>2</sub> emissions from existing power plants, which are the largest stationary source of these emissions nationally.
- Emission reductions targets, issued under section 111(d) of the Act, are based on the “best system of emission reduction,” accounting for plant efficiency improvements, favoring cleaner fuels, and use of renewable energy.
- States may develop compliance plans, or accept a federal plan. Plans must be federally enforceable.
- CPP reductions would yield ~32% reduction in CO<sub>2</sub> emissions from 2005 levels by 2030, and substantial reductions in co-pollutants nationwide.

# 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 specifically for affected EGUs must be federally enforceable, including a “backstop”.
- State plans are submitted to U.S. EPA for review and become effective upon approval.
- U.S. EPA will begin reviewing state plans after CPP stay order is resolved.

# Summary of California's Proposed Compliance Plan

- California policies and climate goals will result in emission reductions far exceeding federal targets in 2030.
- Cap-and-Trade Program can meet federal targets, while supporting economy-wide GHG reductions.
- The proposed “state measures” plan for California relies on the Cap-and-Trade Program, with appropriate amendments to support compliance.
- Mandatory Reporting Regulation supports greenhouse gas reporting for CPP compliance.

# Affected EGUs and GHG Targets

- Staff developed affected EGU list by updating U.S. EPA's initial list, coordinating with districts as appropriate.
- Federal definitions cover 249 EGUs in California. Affected EGUs are large fossil-fuel-fired power plants in operation or under construction by 2014.
- 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.
- California is on track to comply years early. EGU emissions in 2014 were ~41.1 MMTCO<sub>2</sub>e, well below the ~45.6 MMTCO<sub>2</sub> federal 2030 target.

# California Complies with CPP Targets

- An interagency team (ARB/CEC/CPUC) used CEC's Integrated Energy Policy Report and PLEXOS model to demonstrate compliance.
- Modeling used a Reference case where California continues to meet AB 32 2020 target levels, and a Stress case that leads to higher EGU emissions because of low hydro generation, high demand, lower CO2 prices and retirement of the Diablo Canyon nuclear facility.
- 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 or SB 350 mandates.

# California Complies with CPP Targets

- Both Reference and Stress case show affected EGU emissions below federal target levels in all years.

| Year | Reference Case (MMTCO <sub>2</sub> e) | Stress Case (MMTCO <sub>2</sub> e) | Illustrative Annual Federal Glidepath (MMTCO <sub>2</sub> e) | Federal Compliance Period Targets (MMTCO <sub>2</sub> e) |
|------|---------------------------------------|------------------------------------|--|--|
| 2021 | N/A                                   | N/A                                | N/A  | 50.0   |
| 2022 | 33.5                                  | 41.3                               | 50.0   |  |
| 2023 | 32.3                                  | 40.0                               | 49.4   | 98.3   |
| 2024 | 31.1                                  | 39.3                               | 48.9   |  |
| 2025 | 32.1                                  | 44.1                               | 48.4   | 143.4  |
| 2026 | 31.6                                  | 43.8                               | 47.8   |  |
| 2027 | 31.3                                  | 43.8                               | 47.3   |  |
| 2028 | 31.0                                  | 43.8                               | 46.7   | 92.9   |
| 2029 | 30.7                                  | 43.7                               | 46.2   |  |
| 2030 | 30.4                                  | 43.7                               | 45.6   | 91.3   |
| 2031 | 30.1                                  | 43.6                               | 45.6   |  |



# Proposed Plan 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 linkage with Quebec is maintained.

# Proposed MRR Amendments

- All CPP affected EGUs must report and verify emissions.
- Reporting consistent with CPP requirements.
- Recordkeeping consistent with CPP requirements.

# Proposed Cap-and-Trade Program Amendments

- All CPP affected EGUs must participate in the Cap-and-Trade Program.
- Alignment of Program compliance periods with CPP compliance periods.
- Include interim and final mass targets for affected EGUs consistent with the CPP.
- Establish federally-enforceable backstop emission standards.
  - Affected EGU-only trading program to restore CPP target levels, operating in parallel with the state program.

# Next Steps

- Continue stakeholder outreach and review comments.
- Continue coordination with air districts on permitting and implementation.
- Coordinate further changes with 15-day change processes for the MRR and Cap-and-Trade Regulation amendments.
- Present final Plan, Final EA, and response to environmental comments, to Board for proposed approval in 2017 with U.S. EPA submission thereafter.