Proposed Expedited BARCT Schedule for Industrial Facilities Subject to Cap and Trade

Feather River Air Quality Management District

An expedited schedule for implementation of best available retrofit technology (BARCT) in response to the amendment of California Health and Safety Code section 40920.6 by Assembly Bill 617.

541 Washington Ave.
Yuba City, CA 959991
Phone: (530) 634-6299
Fax: (530) 634-7660
fraqmd@fraqmd.org

I. Executive Summary

Assembly Bill 617 (AB 617), which was approved July 26, 2017, amends California Health and Safety Code section 40920.6., and requires each air district that is a nonattainment area for one or more air pollutants to adopt, by January 1, 2019, an expedited schedule for implementation of best available retrofit control technology (BARCT) by the earliest feasible date, but no later than December 31, 2023.

This requirement applies to each industrial source subject to California Greenhouse Gas (GHG) Cap-and-Trade requirements. The Feather River Air Quality Management District (FRAQMD) is designated nonattainment for multiple pollutants and is therefore required to adopt an expedited BARCT schedule.

FRAQMD reviewed the permitted emission sources at these facilities and developed a list of potential rule development activities to implement BARCT by the deadline of December 31, 2023.

II. Discussion of Proposed Expedited BARCT Schedule

A. BARCT Evaluation and Identification of Potential Rule Development Projects

Best available retrofit controlled technology (BARCT) is an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source (Health and Safety Code Section 40406). AB 617 requires each district to adopt by January 1, 2019 an expedited BARCT schedule to implement BARCT, which applies to each industrial source subject to the Cap-and-Trade Regulation as of January 1, 2017. This document serves as a high level assessment of the planned rule development activities to implement BARCT through 2023. A more thorough review of emission standards, control technologies, environmental impacts, and cost-effectiveness will be conducted as each rule is developed.

AB 617 requires that the BARCT schedule identify rules to develop to require BARCT for specific sources by the earliest date feasible, but no later than December 31, 2023. It also states that the schedule must give priority to any sources that have not had emissions limits modified for the greatest period of time. The schedule does not apply to an emissions unit that has implemented BARCT due to a permit revision or new permit issuance since 2007.

FRAQMD staff conducted a preliminary BARCT review of affected sources to determine which equipment would be suitable for rule development. The review process for potential rule development projects involved:

- Identifying pollutants of concern and applicable facilities and sources;
- Screening out sources with limited potential emission reductions and sources not subject to the expedited schedule;
- Identifying and prioritizing potential BARCT rule projects based on existing rules in other Air Districts.

B. Pollutants

The FRAQMD is designated attainment for both the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for carbon monoxide (CO), sulfur dioxide (SO2), nitrogen dioxide (NO2), and lead. The FRAQMD is designated nonattainment for ozone (O3) and particulate matter (PM10) CAAQS, and nonattainment for the O3 NAAQS.. The BARCT review was conducted focusing on:

- Nitrogen oxides (NOx)and volatile organic compounds (VOC), as they are precursors for ozone, and
- Particulate Matter less than 10 microns (PM10).

Sulfur dioxide (SO2) has not been shown to be a substantial contributor to condensable PM and is therefore not included in the control strategy review.

C. Affected Facilities and Type of Permitted Equipment

The BARCT requirement applies to industrial sources subject to Cap and Trade. The ARB identifies one multiple-location a natural gas producer, is subject to BARCT schedule implementation. Natural Gas (Spark ignited) Internal combustion engines (ICE) used as a prime power source are subject to the expedited BARCT requirements of AB 617.In addition to the prime ICE, facilities within the FRAQMD include natural gas production equipment such as natural gas dehydrators, condensate tanks, injection wells, and associated equipment. This equipment is subject to the requirements of the state regulation for Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities, which became effective October 1, 2017 and is considered BARCT for LDAR requirements. Therefore, this equipment is not subject to the expedited BARCT requirements of AB 617.

D. Permitted and Actual Emissions

The District calculates emissions from permitted sources based on annual usage. The following table summarizes the permitted and actual combined annual emissions of NOx, VOC, and PM10/2.5 from the facilities subject to the expedited BARCT schedule. Implementing the expedited BARCT schedule is intended to achieve reductions in these values. The criteria pollutants and the degree of which the emissions will be reduced is ultimately dependent on which control technologies are proposed and how the proposed rules are amended.

Table1. Permitted and Actual Emissions (2017) from facilities subject to Expedited BARCT Schedule

	Permitted Emissions (tons/year)	Actual Emissions (tons/year)
NO_x	48.0	43.1
VOC	28.3	27.4
PM10	1.6	1.6
PM2.5	1.6	1.6

E. BARCT Identification Process

Health and Safety Code Section 40920.6(c)(3) directs air districts to give the highest priority in the BARCT schedule to those permitted units that have not modified emissions-related permit conditions for the greatest period of time. Because all subject prime engines will be subject to the same rule amendment, there will be no feasible priority implemented; all applicable equipment will be subject to the BARCT schedule at the same time.

F. Proposed BARCT Schedule

FRAQMD is proposing to amend District Rule 3.22 – Stationary Internal Combustion Engines during calendar year 2020. The rule amendment process will be focused on acceptable emission limit concentration (In parts per million volume) of oxides of nitrogen in spark ignited prime engine emission point exhaust.