Proposed Updates to BACT Guidelines

Board Meeting

February 2, 2024

Background

- Best Available Control Technology (BACT) guidelines are periodically updated to
  - Reflect advancements in technology and
  - Ensures affected equipment use the cleanest technologies
- BACT Guidelines are published for commonly permitted equipment:
  - Based on category or class of source
  - Source is defined as an individual permit unit
    - Engine, boiler, spray booth, etc.
  - Technical feasibility considered for the class and category of source

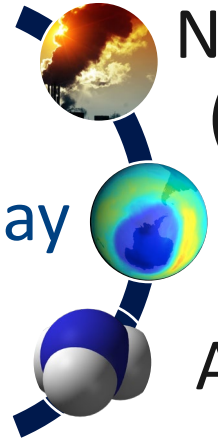
BACT is the most stringent emission limitation or control technique for a class and category of equipment that is:

- Achieved In Practice, or
- Contained In a State Implementation Plan (SIP), or
- Technologically Feasible

Background (Cont'd)

- BACT is a major element of Regulation XIII - New Source Review (NSR)
- During permitting, NSR analysis is performed for
  - New sources
  - Relocated sources
  - Modifications to existing sources
- BACT is required if NSR analysis shows:

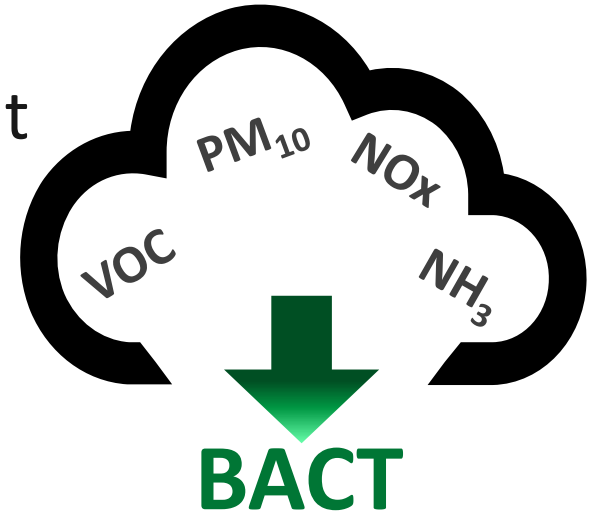
An emissions increase ≥ 1.0 lb/day



Nonattainment air contaminant (NOx, VOC, SOx, PM10)

Ozone depleting compound

Ammonia



BACT Guidelines Structure

BACT Guidelines Structure

- Overview
- Major Source BACT (LAER*)
- Non-Major (Minor) Source BACT
- Prevention of Significant Deterioration (PSD) for GHG

* Lowest Achievable Emission Rate

Facility Types

Major Source

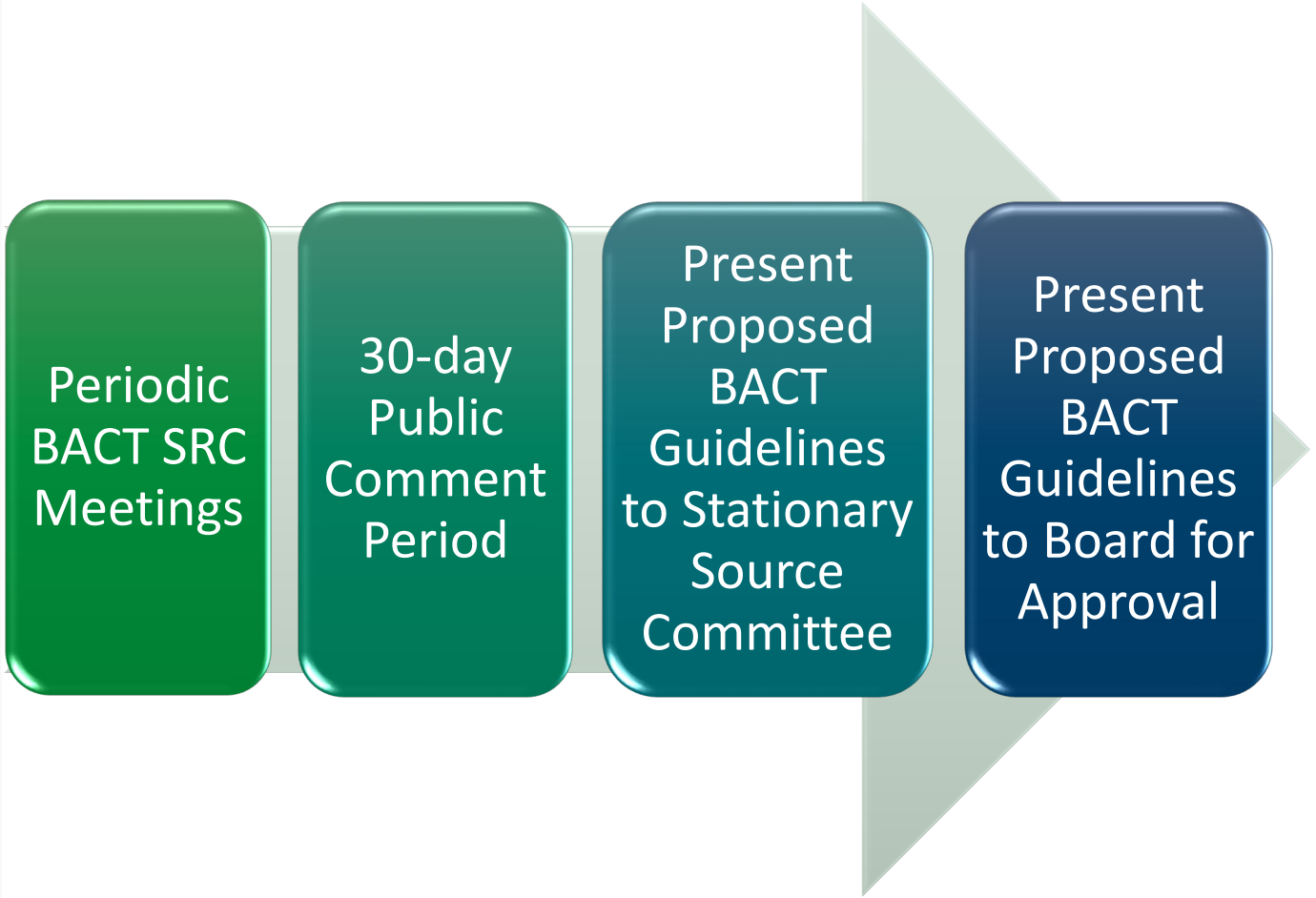
- Federal Title V facilities – LAER*
- Additional stringencies due to federal regulations
  - Does not allow for routine consideration of cost
  - Applicable at time of permitting

Non-Major (Minor) Source

- Smaller emitting facilities
- CA H&SC 40440.11
- Cost-effectiveness analysis required
- Requires Board approval
- Applicable at the time an application is deemed complete

Process to Update BACT Guidelines

- Updates to BACT Guidelines are subject to a public process which includes:
  - Review the most stringent emission limitation or control technique
  - Review the revised cost-effectiveness values
  - Technical review and comments by BACT Scientific Review Committee (SRC) which includes members from industry, other agencies, trade organizations, academia, and consultants



BACT Guidelines Proposed Updates

- Revise VOC and NOx thresholds for major polluting facilities to be consistent with Rule 1302
- Routine update of maximum incremental cost- effectiveness values
- New LAER/BACT listings and updates to existing listings:

Equipment Category	Current LAER/BACT	Proposed LAER/BACT Limit
Part B, Major Polluting Facilities (Section I)		
Fugitive Emission Sources at Petroleum Refineries	Leak Standard: 500 ppmv	Leak Standard: 200 ppmv
Heater, Natural Draft, Multiple burners	New listing	NOx: 7 ppmv @ 3% O_2 dry CO: 100 ppmv @ 3% O_2 dry
Linear Generator, Non-Emergency Electrical Generator, Natural Gas Fired	New listing	NOx: 2.5 ppmv @ 15% O_2 dry CO: 12 ppmv @ 15% O_2 dry VOC: 25 ppmv @ 15% O_2 dry
Sulfur Recovery Unit	New listing	NOx: 0.05 lb/MMBTU natural gas CO: 0.03 lb/MMBTU natural gas SOx: 12 ppmv @ 0% O_2 dry
Tank Truck Loading Racks	New listing	VOC: 0.02 lb/1000 gals

BACT Guidelines Proposed Updates (Cont'd)

Equipment Category	Current LAER/BACT	Proposed LAER/BACT Limit
Part B, Major Polluting Facilities (Section II)		
Boiler, Natural Gas Fired > 20 MMBTU/HR	New listing	NOx: 2.5 ppmv @ 3% O_2 dry CO: 50 ppmv @ 3% O_2 dry
Heater, Natural Draft, Single burner	New listing	NOx: 6 ppmv @ 3% O_2 dry CO: 50 ppmv @ 3% O_2 dry
Gas Turbine - Simple Cycle, Natural Gas	CO: 4 ppmv @ 15% O_2 dry	CO: 2 ppmv @ 15% O_2 dry
Part D, Non-Major Polluting Facilities		
Crumb Rubber/Asphalt Oil Blending System	New listing	VOC Control Efficiency: 90%*

* Determined to be cost-effective




Summary

- ✓ Part B: 8 Major Source LAER listings (Federal Title V facilities)
- ✓ Part D: 1 Non-Major Source BACT listing
- ✓ Update maximum incremental cost- effectiveness values
- ✓ Administrative updates to make the BACT Guidelines consistent with rules and regulations

Recommended Actions

Determine that the proposed amendments to the BACT Guidelines are exempt from the requirements of the CEQA

Approve Proposed Amendments to the BACT Guidelines