



# RACT and BACT

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# Alphabet Soup

- RACT – Reasonably Available Control Technology
- BACT – Best Available Control Technology
- LAER – Lowest Achievable Emission Rate (major stationary sources/major modifications in nonattainment areas)

# Alphabet Soup (continued)

- MACT – Maximum Achievable Control Technology (hazardous air pollutant [HAP] major sources)
- GACT – Generally Available Control Technology (HAP area sources)
- BART – Best Available Retrofit Technology (regional haze program)

# RACT

- Technology that will achieve the maximum degree of emission control that a particular source is capable of meeting and that is reasonably available considering technological and economic feasibility.
- Applies to existing (and new/modified) sources in nonattainment areas

# RACT (continued)

- U.S. EPA Control Techniques Guidelines (CTGs) and Alternative Control Techniques (ACTs) for VOCs and NO<sub>x</sub>
- Regulation No. 7 addresses RACT for VOC emissions
- Regulation No. 3 requires RACT for new/modified sources in nonattainment and attainment/maintenance areas

# BACT – Major Source

- An emission limitation based on the maximum degree of reduction for a pollutant, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs
- Required for new major stationary sources and major modifications under the PSD program for attainment areas
- BACT analysis uses a top-down approach

# BACT – Minor Source

- Also applied by states and local agencies for minor sources (i.e., minor source BACT)
- These minor source BACT programs are defined through state/local regulations and use different criteria for the types of sources that are subject, cost-effectiveness thresholds, what level of case-by-case analysis is required, etc.

# RACT and BACT

- Can use presumptive or case-by-case approach
- While RACT may generally be considered less stringent than BACT, RACT and minor source BACT determinations could be identical
- For the most part, Colorado has not specified a bright-line threshold for cost-effectiveness
- Questions?