



Best Available Control Technology

For use with Instructions for Notice of Construction Application, ECY 070-410a-g.

Why should I care about BACT?

Ecology must find that Best Available Control Technology (BACT) is being employed before issuing a final air permit approving your project.

What is BACT?

BACT is an emission limitation based on the maximum degree of reduction that can be achieved for each regulated air pollutant emitted. To determine BACT, a facility must have an understanding of air pollutants emitted from each emission unit. BACT requires you to consider what production processes, methods, systems and techniques are available to control each air pollutant.

How do I know what BACT is for my project?

- BACT is determined on a case-by-case basis, consisting of the following five steps: Step 1 – Identify each emission unit and all available control options.
- Step 2 – Evaluate the technical feasibility of each control option. Eliminate control options that are not technically feasible based on physical, chemical, and engineering principals.
- Step 3 – Rank remaining control options on the basis of control efficiency, the top ranked control alternative is the first selection of BACT.
- Step 4 – Eliminate control options based on evaluation of economic, environmental and energy impacts.
- Step 5 – Select the most effective option as BACT.

If Ecology is familiar with your source category and you propose the top-ranked control option, no further analysis is usually performed.

To assist you with your BACT determination, a BACT Analysis Worksheet is included on the reverse side of this form. You are not required to use this table.

What do I do with my BACT proposal?

You are responsible for proposing BACT level emissions control for your project. If you are proposing the highest efficiency control option, your proposal will be relatively simple. If you are proposing other than the highest level of control, you are responsible for defending its use.

Are there routinely accepted BACT proposals?

Several examples of recently accepted BACT proposals are listed below. Your approved BACT emission limits may be different, as BACT is a case-by-case determination.

- Natural Gas Boilers – ultra lo-NO_x burners; 9ppm NO_x; 30ppm CO
- Baghouse/dust collector – 0.005 gr/dscf
- Reciprocating Internal Combustion Engines (RICE) – see EPA [RICE New Source Performance Standards](http://www.epa.gov/ttn/atw/rice/ricepg.html)¹ (NSPS). BACT may be not less stringent than NSPS.

¹ <http://www.epa.gov/ttn/atw/rice/ricepg.html>



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Where can I get more information on BACT?

- EPA's [Draft New Source Review Workshop Manual](http://www.epa.gov/ttn/nsr/gen/wkshpman.pdf)²
- EPA's Office of Air Quality Planning and Standards (OAQPS) – [Air Pollution Control Cost Manual](http://www.epa.gov/ttn/catc1/products.html#aptecfacts)³
- EPA's [RACT/BACT/LAER Clearinghouse website](http://www.epa.gov/rblc/)⁴
- Washington State Department of Ecology Permitting Office Contact identified on page 1 of the application

BACT Analysis Worksheet

Facility Name: _____

Emission Unit: _____

Pollutant: _____

Control Alternative	Emissions After Control Equipment [lbs./hr.] & [tons/yr.]	Emission Reductions ¹ [tons/yr.]	Cost per ton of pollutant removed (\$)
1)			
2)			
3)			
4)			
5) Uncontrolled Baseline (worst case - no controls)			

¹ Emissions reduction over baseline control level

² <http://www.epa.gov/ttn/nsr/gen/wkshpman.pdf>

³ <http://www.epa.gov/ttn/catc1/products.html#aptecfacts>

⁴ <http://cfpub.epa.gov/RBLC/>