

Comment Letters on Proposed Regulation

EPA Power Plant Cooling System Regulation Implementing Clean Water Act Section 316(b) Governing Cooling Water Intake Structures and Fish Protection Technologies

Published in Federal Register, Vol. 76, No. 76, April 11, 2011, Pages 22174-22288

Request that EPA make the following revisions to ensure effective environmental regulation and value for citizens' electricity dollars:

Entrainment Provision:

- ▶ Define required cost-benefit analysis criterion—cost dollar value must not be “significantly greater” than benefit dollar value, as approved by U.S. Supreme Court decision.
- ▶ Clarify “social costs” to include facility costs (capital expenditures and operation and maintenance costs) for fish-protection technologies installed for compliance.
- ▶ Require no further measures for entrainment or impingement for power plants with cooling towers or cooling ponds.

Impingement Provision:

- ▶ Give states the ability to perform site-specific assessments and determine “best technology available” according to a range of factors, including feasibility and required cost-benefit analysis.
- ▶ Provide compliance flexibility for any national impingement mortality limits or water intake velocity limit, allowing states to take site-specific variability into account.

Send comment letters to:

U.S. Environmental Protection Agency
Water Docket
Mail code: 4203M
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Attn: Docket ID No. EPA-HQ-OW-2008-0667

Comment Letters due: July 19, 2011

Proposed EPA Power Plant Cooling System Regulations



NUCLEAR
ENERGY
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EPA Regulations Implementing Clean Water Act Section 316(b)

- CWA Section 316(b) Phase II and Phase III regulations apply to existing power plants and industrial facilities
- 428 power plants around the country affected
- Law requires “intake structures reflect the best technology available for minimizing adverse environmental impacts”
- EPA considers fish mortality at the intake structure as adverse environmental impact

Preferred Regulatory Approach

- *Site-specific analysis* to determine the “best technology available” (BTA), considering:
 - Feasibility of installing particular protection technologies
 - Costs and benefits of installing particular protection technologies
- *Range of proven fish protection technologies*, in addition to cooling towers, eligible for consideration

EPA Proposed 316(b) Regulation

- *Entrainment* provision—for fish drawn through cooling system—allows for site-specific variability and cost-benefit analysis
- *Impingement* provision—for fish caught on water intake screens—NO site-specific variability or cost-benefit analysis
- Installation of costly, unnecessary, ineffective technologies may be required
- Regulation Costs to Benefits—\$383m to \$18m—according to EPA (annualized)

Entrainment Provision

Generally Acceptable—Site Specific Flexibility

- State environmental agency determines best technology available for each site according to:
 - Number/types of organisms entrained
 - Entrainment impacts on waterbody
 - Comparison of “social cost” to “social benefit”
 - Impacts associated with thermal discharge
 - Impacts on energy reliability
 - Emission of pollutants
 - Land availability
 - Remaining plant life
 - Impacts on water consumption

Entrainment Provision Necessary Revisions

- Define required cost-benefit analysis—cost dollar value must not be “significantly greater” than benefit dollar value
- Clarify “social costs” to include facility costs (CapEx and O&M) for compliance technologies
- Require no further measures for entrainment or impingement for plants with cooling towers or cooling ponds

Impingement Provision

Unacceptable—One Size Fits All, No Site Flexibility

- One technology is BTA for all sites—traveling screens with collection-return system
- All plants must meet single performance standard—12 percent annual mortality per species, 31 percent limit monthly
- Only other compliance alternative is reduced water intake velocity—not widely available
- No consideration of impingement reduction already achieved

Impingement Provision

Necessary Revisions

For Unique Sites, Fish, Waterbodies

- No valid environmental justification to treat impingement differently from entrainment
- Give states ability to perform site-specific assessments and determine BTA according to a range of factors, including feasibility and required cost-benefit analysis
- Provide compliance flexibility for any national impingement mortality limits or water intake velocity limit, allowing states to take site-specific variability into account

Revised 316(b) Regulations Timetable for Comment Letters

- Revised draft Phase II and Phase III regulations formally issued in April 2011
- **Comment letters due to EPA by July 19, 2011** (public comment period is 90 days)
- Final rule expected to be promulgated in July 2012

Comment Letter Issue Summary

- Require cost-benefit analysis for impingement as well as entrainment—define as benefits exceeding costs
- Allow states to determine BTA for impingement according to site-specific assessments
- Provide compliance flexibility for impingement national mortality percentage limit or intake velocity limit

Fish Protection Technologies For Once-Through Cooling Systems

- Physical Barriers
- Collection and Return Systems
- Diversion Systems
- Behavioral Deterrents
- Advanced Technologies:
 - Wedgewire Screens
 - Fine Mesh Screens

State Electricity Generation at Risk from CWA Section 316(b) Regulation

Plant State	Total Capacity (MW)	Estimated Capacity with Once-Through Cooling (MW)	Percent
Alabama	32,303	14,028	43%
Alaska	2,298	-	0%
Arizona	25,798	522	2%
Arkansas	15,751	3,704	24%
California	68,556	23,281	34%
Colorado	13,878	107	1%
Connecticut	8,316	5,210	63%
Delaware	3,094	1,515	49%
District of Columbia	790	-	0%
Florida	58,677	22,147	38%
Georgia	36,677	5,097	14%
Hawaii	2,595	1,139	44%
Idaho	3,871	-	0%
Illinois	44,397	14,761	33%
Indiana	27,550	11,937	43%
Iowa	15,057	3,833	25%
Kansas	12,487	3,265	26%
Kentucky	21,138	5,112	24%
Louisiana	27,613	10,714	39%
Maine	4,481	939	21%
Maryland	12,694	8,179	64%
Massachusetts	13,745	7,731	56%
Michigan	29,896	16,392	55%
Minnesota	15,502	3,548	23%
Mississippi	15,901	3,288	21%
Missouri	22,127	11,134	50%
Montana	5,938	158	3%
Nebraska	7,944	4,005	50%
Nevada	9,821	-	0%
New Hampshire	4,330	2,246	52%
New Jersey	18,522	8,103	44%
New Mexico	8,066	-	0%
New York	39,568	22,458	57%
North Carolina	27,844	12,120	44%
North Dakota	6,383	1,665	26%
Ohio	33,123	19,605	59%
Oklahoma	21,199	1,713	8%
Oregon	14,524	-	0%
Pennsylvania	46,360	12,065	26%
Rhode Island	1,762	-	0%
South Carolina	23,650	6,742	29%
South Dakota	3,828	-	0%
Tennessee	21,259	13,181	62%
Texas	108,037	34,730	32%
Utah	7,610	-	0%
Vermont	1,160	506	44%
Virginia	23,662	9,798	41%
Washington	28,935	-	0%
West Virginia	16,457	4,379	27%
Wisconsin	19,101	7,525	39%
Wyoming	7,999	762	10%
Total	1,042,275	339,344	33%