

# **Survey of the Difficulty of Obtaining Environmental Permits for the Construction and Operation of New Power Generation Capacity in 28 States**

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## **ABSTRACT**

We conducted a survey of 28 state environmental agencies to evaluate the relative difficulty of obtaining environmental permits for the construction of new power generation capacity. This paper is directed to project managers, project developers and others responsible for selecting locations for new power generation capacity and managing the process of obtaining all environmental permits needed for construction and operation of these facilities.

The survey was conducted by e-mail and phone interview with the persons in charge of air permitting and the persons in charge of other environmental permitting for new power generation facilities in each state. There were eight questions concerning air pollution permitting and nine questions concerning other environmental permitting. All 28 states responded to the survey.

Using an objective scoring system, the 28 states were individually ranked from least to most in terms of difficulty of permitting of new power generation capacity. The ranking was conducted separately for air pollution and for other environmental requirements. These rankings were then combined into a single ranking by state.

States in the South tended to have the least difficulty of permitting while states in the Northeast and Mid-Atlantic regions tended to have more difficult permitting requirements. These results are discussed and conclusions are presented.

## **INTRODUCTION**

The purpose of this survey was to evaluate the relative difficulty of state environmental agencies issuing environmental permits for construction of new power generation capacity in the 28 states east of the Mississippi River. All 28 states responded to the survey. This paper is directed to project managers, project developers and others responsible for selecting locations for new power generation capacity and managing the process of obtaining all environmental permits needed for construction and operation of these facilities. This survey was conducted in 2001.

## **SURVEY PROCEDURES**

The survey was conducted by e-mail and phone interview with the persons in charge of air permitting and the persons in charge of other environmental permitting for new power generation facilities in each state.

The survey questions for the air permitting part of the survey are given in Table 1. The questions for the other environmental permitting portion of the survey are given in Table 2. While the survey dealt generally with the difficulty of environmental permitting of new power generation capacity, three specific questions in the “other environmental permitting” portion of the survey dealt with hypothetical coal fired plants as a way of obtaining additional information about the agency’s views on new power generation.

## **RESULTS**

Survey results are presented in Tables 3, 4 and 5.

Table 3 presents results for the air permitting portion of the survey. These results indicate that the easiest states to obtain an air construction permit in are Mississippi and Kentucky. The hardest states are Massachusetts, South Carolina and New York.

Table 4 presents results for the other environmental permitting portion of the survey. These results indicate that the easiest state to obtain the other environmental permits in is Arkansas with Mississippi being second. The hardest states to obtain the other environmental permits in are New York and Connecticut.

Table 5 presents combined results ranking each state from easiest to hardest in obtaining all environmental permits. This combined ranking is based on weighting the air permitting results and other environmental permitting results equally.

These results indicate that the easiest state to obtain all environmental permits in for construction of new power generation capacity is Mississippi and the hardest state is New York. Tables 6, 7 and 8 provide the detailed survey results for these two states.

Table 5 also indicates that with a few exceptions states in the South tended to have the greatest ease of permitting while states in the Northeast and Mid-Atlantic regions tended to have more difficult permitting requirements for new power generation capacity.

## **CONCLUSIONS**

The questions in this survey focused on the difficulty of permitting in terms of time and complexity of the permitting process. The survey did not address the percentage of power generation permit applications in each state that were eventually issued construction and operating permits.

The difficulty of obtaining the environmental construction permits for new power generation capacity by state is very dynamic. The impending nonattainment designations for the eight-hour ozone standard and the fine particulate (PM2.5) annual standard will change the difficulty of obtaining these permits in many states. The development of State Implementation Plans for the Regional Haze Rule <sup>(1)</sup> and other regulatory and technological developments <sup>(2)</sup> will also change the difficulty of obtaining these permits.

Nevertheless, these survey results provide a starting point for evaluating the time, resources and complexity of obtaining environmental construction permits for new power generation capacity in these 28 states.

## **REFERENCES**

(1) 40 CFR Part 51, Subpart P, §51.308, *Regional Haze Program Requirements*.

(2) Ellis, H.M., Dittenhoefer, A. C., Hirtler, M. F., *New Regulatory and Technological Developments Impacting Air Pollution Construction Permitting for New Combustion Turbines*, EM, Air & Waste Management Association, May, 2002.







## **KEY WORDS**

Survey  
Environmental Permitting  
State Environmental Agencies  
Power Generation

**Table 1.** Questions asked and the scoring of answers for the criterion of difficulty of the state permitting agency issuing air pollution construction permits.

Criterion	Answer	Score
1. Does state have its own separate air quality modeling guidance? (Yes 1, No 0)		
2. Does state have air quality modeling requirements for minor sources? (Yes 1, No 0)		
3. Does state have air toxics modeling requirements? (Yes 1, No 0)		
4. Are air permits written centrally by state? (Yes 0, No 1)		
5. Are air quality modeling protocols and analyses reviewed centrally by state? (Yes 0, No 1)		
6. Does state have its own separate control technology evaluation requirements and guidance? (Yes 1, No 0)		
7. Are air pollution control technology analyses reviewed centrally by state? (Yes 0, No 1)		
8. Does state have its own special control technology requirements for hazardous air pollutants in addition to the MACT requirements? (Yes 1, No 0)		
Total Score		

**Table 2.** Questions asked and the scoring of answers for the criterion of difficulty of the state permitting agency issuing non-air environmental construction permits.

<p> <b>Wetlands</b></p> <p>1 = No state or local laws; Federal law only                  2 = State tidal/Coastal wetland laws only                  3 = State tidal and inland wetland laws                  4 = Undefined                  5 = State tidal, inland, and local laws possible</p>
<p> <b>Threatened and Endangered Species</b></p> <p>1 = No state list or less than 20 total species                  3 = State list of 20 to 70 total species; or simple permitting process                  5 = Greater than 70 total species on state list</p>
<p> <b>Permitting Time</b></p> <p>1 = Less than one year                  3 = One to two years                  5 = More than two years</p>
<p> <b>Cultural Resources</b></p> <p>1 = Section 106 Federal law only                  3 = State requires sign-off by SPHO via letter                  5 = State indicated that many sites exist and/or state has additional requirements</p>
<p> <b>Coal Ash Disposal</b></p> <p>1 = No restrictive caveats; encourages recycling                  3 = Viewed as solid waste but expresses groundwater protection concerns                  5 = Criteria of #3 plus a hazardous waste component</p>
<p> <b>Special EIS or EAS required by state</b></p> <p>1 = None required or issues handled individually                  3 = Required, guidance available and uniform; No extensive pre-application process                  5 = Required; pre-application meetings stipulated to determine scope of document</p>

**Table 2.** Questions asked and the scoring of answers for the criterion of difficulty of the state permitting agency issuing non-air environmental construction permits. (continued)

<p><b>✍ Response to 316 (b) draft language re: dry cooling tower or equivalent technology required</b></p> <p>1 = Response was "wait and see"  3 = Unaware of draft language and/or dry cooling tower technology  5 = Language already adopted by state; state will be adopting it soon; state will adopt it if language becomes part of the guidance .</p>
<p><b>✍ Opposition to new coal plants by organized intervener groups</b></p> <p>1 = May be some local opposition, but not perceived as affecting the permitting process; could be welcomed in some areas of state  3 = Generally to be expected; may have some affect on permitting process  5 = Perceived as being well-organized and includes credible state and/or national groups</p>
<p><b>✍ Other comments gleaned from conversations that may affect permitting process</b></p> <p>1 = Favorable to building new coal plants  3 = Slightly unfavorable to building new coal plants  5 - Strongly unfavorable to building new coal plants</p>

**Table 3.** Ranking of difficulty of state permitting agency issuing air pollution construction permits ranked from least difficult to most difficult.

State	Score
MS	0.00
KY	0.00
DE	1.00
GA	1.00
LA	1.00
FL	1.00
AL	2.00
AR	2.00
IL	2.00
MD	2.00
IN	3.00
ME	3.00
NH	3.00
RI	3.00
TN	3.00
WV	3.00
WI	4.00
CN	4.00
NC	4.00
VT	4.00
MI	4.00
NJ	5.00
OH	5.00
PA	5.00
VA	5.00
MA	6.00
SC	6.00
NY	6.00

**Table 4.** Ranking for difficulty of state permitting agency issuing non-air environmental permits ranked from least difficult to most difficult.

State	Score
AR	1.75
MS	2.40
ME	2.43
AL	2.50
NC	2.50
SC	2.63
VA	2.67
MI	2.71
IL	2.71
GA	2.86
OH	2.88
IN	3.00
LA	3.00
TN	3.11
PA	3.13
KY	3.13
WI	3.25
RI	3.25
FL	3.29
MD	3.29
NH	3.29
DE	3.38
VT	3.75
WV	3.78
NJ	3.89
MA	4.00
NY	4.33
CT	4.33

**Table 5.** Combined ranking results for difficulty of state permitting agency issuing environmental permits ranked from least difficult to most difficult.

State	Score for Air Permitting	Score for Other Environmental Permitting	Combined Score
MS	0.00	2.40	2.40
KY	0.00	3.13	3.13
AR	2.00	1.75	3.75
GA	1.00	2.86	3.86
LA	1.00	3.00	4.00
FL	1.00	3.29	4.29
DE	1.00	3.38	4.38
AL	2.00	2.50	4.50
IL	2.00	2.71	4.71
MD	2.00	3.29	5.29
ME	3.00	2.43	5.43
IN	3.00	3.00	6.00
TN	3.00	3.11	6.11
RI	3.00	3.25	6.25
NH	3.00	3.29	6.29
NC	4.00	2.50	6.50
MI	4.00	2.71	6.71
WV	3.00	3.78	6.78
WI	4.00	3.25	7.25
VA	5.00	2.67	7.67
VT	4.00	3.75	7.75
OH	5.00	2.88	7.88
PA	5.00	3.13	8.13
CT	4.00	4.33	8.33
SC	6.00	2.63	8.63
NJ	5.00	3.89	8.89
MA	6.00	4.00	10.00
NY	6.00	4.33	10.33

**Table 6.** State of Mississippi ranking regarding relative difficulty of obtaining air pollution related construction permits for new power generation capacity.

Criterion	Answer	Score
1. Does state have its own separate air quality modeling guidance? (Yes 1, No 0)	No	0
2. Does state have air quality modeling requirements for minor sources? (Yes 1, No 0)	No	0
3. Does state have air toxics modeling requirements? (Yes 1, No 0)	No	0
4. Are air permits written centrally by state? (Yes 0, No 1)	Yes	0
5. Are air quality modeling protocols and analyses reviewed centrally by state? (Yes 0, No 1)	Yes	0
6. Does state have its own separate control technology evaluation requirements and guidance? (Yes 1, No 0)	No	0
7. Are air pollution control technology analyses reviewed centrally by state? (Yes 0, No 1)	Yes	0
8. Does state have its own special control technology requirements for hazardous air pollutants in addition to the MACT requirements? (Yes 1, No 0)	No	0
<b>Total Score</b>		<b>0</b>

**Table 7.** State of New York ranking regarding relative difficulty of obtaining air pollution related construction permits for new power generation capacity.

Criterion	Answer	Score
1. Does state have its own separate air quality modeling guidance? (Yes 1, No 0)	Yes	1
2. Does state have air quality modeling requirements for minor sources? (Yes 1, No 0)	Yes	1
3. Does state have air toxics modeling requirements? (Yes 1, No 0)	Yes	1
4. Are air permits written centrally by state? (Yes 0, No 1)	No	1
5. Are air quality modeling protocols and analyses reviewed centrally by state? (Yes 0, No 1)	Yes	1
6. Does state have its own separate control technology evaluation requirements and guidance? (Yes 1, No 0)	No	0
7. Are air pollution control technology analyses reviewed centrally by state? (Yes 0, No 1)	Yes	1
8. Does state have its own special control technology requirements for hazardous air pollutants in addition to the MACT requirements? (Yes 1, No 0)	No	0
<b>Total Score</b>		<b>6</b>

**Table 8.** States of Mississippi and New York rankings regarding relative difficulty of obtaining all environmental permits other than air pollution related construction permits for new power generation capacity.

Ranking Categories	MS	NY
1. Wetlands	2	5
2. Threatened and Endangered Species	1	5
3. Cultural Resources		3
4. Permitting Time	3	3
5. Coal Ash Disposal		3
6. State EIS/EAS	3	5
7. Response to Draft 316(b) Guidance	3	5
8. Local Interveners		5
9. Comments		5
<b>TOTAL SCORE</b>	12	39
<b>MEAN SCORE</b>	2.40	4.33