Chapter B4: Regulatory Flexibility Analysis

INTRODUCTION

The Regulatory Flexibility Act (RFA) requires EPA to consider the economic impact a new rule will have on small entities. The RFA requires an agency to prepare a regulatory flexibility analysis for any notice-and-comment rule it promulgates, unless the Agency certifies that the rule "will not, if promulgated, have a significant economic impact on a substantial number of small entities" (The Regulatory Flexibility Act, 5 U.S.C. § 605(b)).

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For the purposes of assessing the impacts of the Final Section 316(b) Phase II Existing Facilities Rule on small entities, a small entity is: (1) a small business according to the Small Business Administration (SBA) size standards; (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; or (3) a small organization that is a not-for-profit enterprise that is independently owned and operated and is not dominant in its field. The SBA defines small businesses based on Standard Industrial Classification (SIC) codes and size standards expressed by the number of employees, annual receipts, or total electric output (13 CFR §121.20). The thresholds used in this analysis are four-digit SIC codes at the domestic parent entity-level.[1]

To evaluate the potential impact of this rule on small entities, EPA identified the domestic parent entity of each in-scope Phase II facility and determined its size. EPA used a "sales test" to evaluate the potential severity of economic impact on electric generators owned by small entities. The test calculates annualized post-tax compliance cost as a percentage of total sales revenues and uses a threshold of three percent to identify facilities that would be significantly impacted as a result of the final Phase II rule.

EPA's analysis showed that the final Phase II rule would not have a significant economic impact on a substantial number of small entities (SISNOSE). This finding is based on: (1) the limited absolute number of small entities expected to incur compliance costs; (2) the low percentage of all small entities in the entire electric generating industry expected to incur compliance costs; and (3) the insignificant magnitude of compliance costs as a percentage of sales revenues.

B4-1 NUMBER OF IN-SCOPE FACILITIES OWNED BY SMALL ENTITIES

EPA's 2000 Section 316(b) Industry Survey identified 543 generating facilities expected to meet the in-scope requirements of the Final Section 316(b) Phase II Existing Facilities Rule. As described in previous chapters of this document, these 543 facilities represent 554 facilities in the industry.[2] It is impossible, however, to determine the parent entity of extrapolated

[1] The North American Industry Classification System (NAICS) replaced the Standard Industrial Classification (SIC) System as of October 1, 2000. The data sources EPA used to identify the parent entities of the facilities subject to this rule did not provide NAICS codes at the time of this analysis.

[2] EPA applied sample weights to the 543 facilities to account for non-sampled facilities and facilities that did not respond to the survey. For more information on EPA's 2000 Section 316(b) Industry Survey, please refer to the Information Collection Request (U.S. EPA 1999a; U.S. EPA 2000).

facilities. The remainder of this parent size analysis therefore discusses research done for the 543 surveyed facilities only. Later steps of this RFA analysis extrapolate the small entity findings to the industry level.

The small entity determination for in-scope facilities was conducted in two steps:

- determine the domestic parent entity of the 543 in-scope facilities, and
- determine the size of the entities owning the 543 facilities.

B4-1.1 Identification of Domestic Parent Entities

Each of the 543 Phase II facilities belongs to one of the following seven types of domestic parent entities: investor-owned, nonutility, federal, state, municipality, political subdivision, or rural electric cooperative. Investor-owned firms and nonutilities are private entities, federal, state, municipal, and political subdivision entities are public entities, and rural electric cooperatives are not-for-profit enterprises. EPA first identified the utility owner of each Phase II facility using the 2001 Form EIA-860 (U.S. DOE, 2001a). In most cases, utilities that are classified as federal, state, municipal, and political subdivision utilities are the domestic parents of the facilities that they own.

For facilities owned by a private entity, including utility (i.e., investor-owned) and nonutility plants, the immediate utility owner is not necessarily the domestic parent firm. Many privately-owned utilities and nonutilities are owned by holding companies. A holding company is defined by the U.S. Census Bureau as being "primarily engaged in holding the securities of (or equity interests in) companies and enterprises for the purpose of owning a controlling interest or influencing the management decisions of these firms" (U.S. DOC, 2002). To determine the domestic parent entity for all facilities owned by a private entity, EPA used several publicly available data sources, including data from the Department of Energy's (DOE) Energy Information Administration, 2001 Form EIA-860; 10-K filings available through the Securities and Exchange Commission's (SEC) *FreeEdgar* database; corporate websites; and Dun and Bradstreet data (U.S. DOE, 2001a; Edgar Online Inc., 2003; D&B, 2003).

EPA determined that 126 unique entities own the 543 in-scope facilities.

B4-1.2 Size Determination of Domestic Parent Entities

The thresholds used by EPA to determine if a domestic parent entity is small depend on the entity type. Therefore, EPA used multiple data sources to determine the entity sizes. The entity size thresholds and data sources EPA used are:

- For ***private*** entities (including investor-owned entities and nonutilities), the small entity size is defined based on the parent entity's SIC code and the related size standard set by the Small Business Administration (SBA). The SBA standards are based on employment, sales revenue, or total electric output (in megawatt hours (MWh)), by four-digit SIC code. EPA used Dun and Bradstreet data, as well as the following publicly available data sources, to obtain the information necessary to determine the entity size: 10-K filings available through the Security and Exchange Commission's (SEC) *FreeEdgar* database, 2001 EIA Form-860, U.S. Census Data, and company websites (D&B, 2003; EDGAR Online Inc., 2003; U.S. Census Bureau, 2003; U.S. DOE, 2001a). Table B4-1 presents the unique Phase II firm-level SIC codes and the corresponding SBA size standards that were used to determine the size of privately-owned entities.

- All ***federal and state*** governments are considered large for the purpose of the RFA analysis (U.S. EPA, 1999b).

- ***Municipalities and political subdivisions*** are considered public sector entities. Public sector entities are defined as small if they serve a population of less than 50,000. Population data for these entities was obtained from the U.S. Census Bureau (U.S. Census Bureau, 2003).

- The SBA threshold for SIC 4911 (4 million MWh of total electric output) was used for the size determination of ***rural electric cooperatives***. The size determination was based on data from the 2001 Form EIA-861 (U.S. DOE, 2001b).

Table B4-1: Unique Phase II Non-Government Entity SIC Codes and SBA Size Standards

SIC Code	SIC Description	SBA Size Standard
1311	Crude Petroleum and Natural Gas	500 Employees
3312	Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills	1,000 Employees
4911	Electric Services	4 million MWh
4924	Natural Gas Distribution	500 Employees
4931	Electric and Other Services Combined	$5.0 Million
4932	Gas and Other Services Combined	$5.0 Million
4939	Combination Utilities, NEC	$5.0 Million
4953	Refuse Systems	$10.0 Million
5012	Automobiles and Other Motor Vehicles	100 Employees
6512	Operators of Nonresidential Buildings	$5.0 Million
8221	Colleges, Universities, and Professional Schools	$5.0 Million

Source: U.S. SBA, 2000.

Based on these size thresholds, EPA determined that 25 out of the 126 parent entities owning the 543 in-scope facilities are small entities.[3] Sixteen of the 25 small entities are municipalities, six are rural electric cooperatives, one is a nonutility, one is an investor-owned entity, and one is a political subdivision. Table B4-2 presents the distribution of the unique entities by entity type and size. Table B4-2 also presents the distribution of the weighted in-scope facilities by their owner's type and size. No small entity owns more than one in-scope facility; therefore, the 25 small entities own 25 in-scope facilities.

[3] EPA conducted a sensitivity analysis of domestic parent size determinations where entity size for political subdivisions and municipalities is based on utility-level electric output rather than the population threshold of 50,000. The results of this analysis are presented in section B4-A.1 of the appendix to this chapter.

Table B4-2: Phase II Unique Entities and Facilities (by Entity Type and Size)

Entity Type	Small Entity Size Standard	Number of Entities			Number of Facilities		
		Large	Small	Total	Large	Small	Total
Investor-Owned	SIC Specific	40	1	41	273	1	274
Nonutility	SIC Specific	25	1	26	178	1	179
Federal	Large	1	-	1	14	-	14
State	Large	4	-	4	7	-	7
Municipality	Population of 50,000	20	16	36	32	16	48
Political Subdivision	Population of 50,000	2	1	3	6	1	7
Rural Electric Cooperative	4 million MWh	9	6	15	19	6	25
Total[a]		**101**	**25**	**126**	**529**	**25**	**554**

[a] Individual numbers may not add up to total due to independent rounding.

Source: U.S. EPA analysis, 2004.

B4-2 Percent of Small Entities Regulated

In order to assess the small entity impact of the final Phase II rule on the electric generating industry, EPA compared the number of in-scope small entities to the number of small entities in the entire electric generating industry. As discussed above, EPA identified 25 small entities subject to the final Phase II rule. Since only facilities with design intake flows of 50 MGD or more are subject to the final rule, the low number of small entities owning in-scope facilities is not unexpected. EPA identified 1,992 small entities within the entire electric power industry from the methods discussed below. Overall, only a small percentage of all small entities in the entire electric power industry, 1.3 percent, is subject to the final Phase II rule.

Based on Form EIA-861, 3,272 unique utilities operated in the United States in 2001.[4] It was not feasible to conduct the same research for all 3,272 utilities that was done for the 126 entities owning in-scope facilities (i.e., determining the holding companies and their SIC code and size standard information for private entities, and the population size for public sector entities). EPA therefore determined the industry-wide number of small entities based on the electric output threshold of 4 million MWh, using the 2001 Form EIA-861 data. However, EPA's analysis of the 126 entities that own in-scope facilities showed that the small entity determination based on the 4 million MWh threshold is not always the same as that based on the SIC code or population thresholds. EPA therefore made the following adjustments to the industry-wide numbers of small private entities, municipalities, and political subdivisions:

- ***Private entities:*** EPA identified five privately-owned in-scope utilities that would qualify as small entities based on the 4 million MWh total electric output threshold. However, EPA's holding company research showed that only one of these five small utilities would also be considered small at the holding company level. EPA therefore estimates that industry-wide only 20 percent of private entities that are small at the utility level would also be small at the holding company level. Accordingly, EPA reduced the industry-wide number of privately-owned small utilities (based on Form EIA-861) by a factor of 80 percent.

- ***Municipalities:*** EPA's research of municipalities owning in-scope facilities showed that 30 municipalities would be small based on the 4 million MWh size standard. Of these 30 entities, 16, or 53 percent, would also be considered

[4] It should be noted that the total number of small entities in the industry used in this analysis is based on regulated entities (utilities) only. Information on the size of unregulated entities (nonutilities) is not readily available. The total number of small entities in the industry may therefore be understated, and, as a result, the percentage of small entities subject to the final Phase II rule may be overstated.

small when using the population threshold. EPA therefore estimates that industry-wide only 53 percent of municipalities that are small based on electric output would also be small based on population size. Accordingly, EPA reduced the industry-wide number of small municipalities (based on Form EIA-861) by a factor of 47 percent.

- ***Political Subdivisions:*** EPA's research of political subdivisions owning in-scope facilities showed that only one political subdivision owning an in-scope utility is small based on electric output, and that this entity is also small based on population. EPA therefore assumes that all political subdivisions within Form EIA-861 that are small based on electric output are also small based on population. Accordingly, EPA did not make an adjustment to the industry-wide number of small political subdivisions (based on Form EIA-861).

These adjustments are based on the assumption that Phase II utilities (i.e., utilities that own steam electric generators with flow greater than 50 MGD) are representative of the EIA universe of electric utilities (for private entities in terms of their respective sizes at the utility level and the holding company level; for municipalities and political subdivisions in terms of their respective sizes based on electric output and population). If this is not the case, the industry-wide numbers of small entities may be over- or underestimated.

Table B4-3 presents the adjusted industry-wide number of small entities, the number of small entities that own in-scope facilities, and the percent of all small entities that are subject to the final Phase II rule.

Table B4-3: Number of Small Entities (Industry Total and Entities with In-Scope Facilities)

Type of Entity	Total Number of Small Entities	Number of Small Entities with In-Scope Facilities	Percent of Small Entities Subject to the Final Phase II Rule
Private[a, b]	35	2	5.7%
Municipality[b]	983	16	1.6%
Political Subdivision[b]	111	1	0.9%
Rural Electric Cooperatives	862	6	0.7%
All Firm Types	**1,992**	**25**	**1.3%**

a The total number of small private entities includes only investor-owned utilities because information for determining the total number of small nonutilities was unavailable. The total number of small entities in the industry may therefore be understated, and, as a result, the percentage of small entities subject to the final Phase II rule may be overstated.

b EPA estimated the total number of small entities for this entity type using the methodology described above.

Source: U.S. DOE, 2001b; D&B, 2003.

B4-3 SALES TEST FOR SMALL ENTITIES

The final step in the RFA analysis consists of analyzing the cost-to-revenue ratio of each small entity subject to this final rule (also referred to as the "sales test"). The analysis is based on the ratio of estimated annualized post-tax compliance costs to annual revenues of the entity. EPA used a threshold of three percent to determine entities that would experience a significant economic impact as a result of the final Phase II regulation.

None of the 25 facilities EPA determined to be owned by a small entity has more than one owner. Also, none of the 25 small entities owns more than one in-scope facility. Therefore, no small entity is expected to incur compliance costs for more than one facility under the final rule.

The estimated annualized post-tax compliance costs include all technology costs, operation and maintenance costs, and permitting costs associated with the final Phase II rule. A detailed summary of how these costs were developed is presented in *Chapter B1: Summary of Compliance Costs*. EPA collected revenue data for the 25 small entities from one of several sources, depending on the availability of information. EPA used revenue data for each entity from one of the following sources, listed in order of preference: (1) Dun and Bradstreet, (2) average utility revenue (1999-2001) from 2001 Form EIA-861, (3) 10-K filings available through the Securities and Exchange Commission's (SEC) *FreeEdgar* database, or (4) other sources such as company websites (D&B, 2003; U.S. DOE, 2001b; Edgar Online Inc., 2003).

The overall annualized compliance costs that facilities owned by small entities are estimated to incur represent between 0.005 and 6.7 percent of the entities' annual sales revenues. Table B4-4 presents the distribution of the entities' cost-to-revenue ratios by small entity type. Of the 25 small entities, only one is estimated to incur compliance costs of greater than three percent of revenues. Eight entities incur compliance costs of between one and three percent of revenues, while the remaining 16 entities incur compliance costs of less than one percent of revenues. Eleven small entities are estimated to incur no costs other than permitting and monitoring costs.

Table B4-4: Impact Ratio Ranges by Small Entity Type					
Type of Entity	**Impact Ratio Ranges**	**0-1%**	**1-3%**	**>3%**	**Total**
Investor-Owned	0.005%	1	0	0	1
Nonutility	0.01%	1	0	0	1
Municipality	0.28 to 6.72%	8	7	1	16
Political Subdivision	1.01%	0	1	0	1
Rural Electric Cooperative	0.14 to 0.40%	6	0	0	6
Total	**0.005 to 6.72%**	**16**	**8**	**1**	**25**

Source: U.S. EPA analysis, 2004.

EPA has determined that, overall, the impacts faced by small entities as a result of the final Phase II rule are very low. Of the 25 entities owning in-scope facilities, only one entity is expected incur compliance costs of greater than three percent of revenues. Moreover, this entity represents less than one percent of the 126 entities owning in-scope facilities.

B4-4 SUMMARY

EPA estimates that only 25 of 554 in-scope facilities subject to the Final Section 316(b) Phase II Existing Facilities Rule are owned by a small entity. The absolute number of small entities potentially subject to this regulation, 25, is low. Additionally, only a small percentage, 1.3 percent, of all small entities in the electric power industry is subject to this rule. Finally, the costs incurred by the 25 small entities are low, representing between 0.005 and 6.7 percent of the entities' annual sales revenue. Only one entity is expected to incur compliance costs of greater than three percent of revenues. EPA therefore finds that this final rule would not have a significant economic impact on a substantial number of small entities (no SISNOSE).

The RFA analysis in support of this final Phase II rule is summarized in Table B4-5.

Table B4-5: Summary of RFA Analysis				
Type of Entity	**Total Number of Small Entities**	**Number of Small Entities with In-scope facilities**	**Percent of Small Entities In-Scope of Rule**	**Annual Compliance Costs/ Annual Sales Revenue**
Investor-Owned[a]	35	1	5.7%	0.005%
Nonutility[a]		1		0.01%
Municipality	983	16	1.6%	0.28 to 6.72%
Political Subdivision	111	1	0.9%	1.01%
Rural Electric Cooperative	862	6	0.7%	0.14 to 0.40%
Total	**1,992**	**25**	**1.3%**	**0.005 to 6.72%**

[a] The total number of small private entities (i.e., investor-owned utilities and nonutilities) includes only investor-owned utilities because information for determining the total number of small nonutilities was unavailable. The total number of small entities in the industry may therefore be understated, and, as a result, the percentage of small entities subject to the final Phase II rule may be overstated.

Source: U.S. EPA analysis, 2004.

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Appendix to Chapter B4

Introduction

Chapter Contents

This appendix presents a sensitivity analysis of the domestic parent size determinations for municipalities and political subdivisions, and of the small entity impact assessment that is based on these size determinations. The analysis presented in the body of this chapter used the population-based size threshold (population of less than 50,000) for municipalities and political subdivisions; this appendix compares those results with an analysis that uses the electric output size threshold (total electric output of less than 4 million MWh).

B4-A.1 Regulatory Flexibility Analysis (RFA) Results Using Alternative Domestic Parent Size Criteria

Table B4-A-1 below presents the comparison of the estimated number of large and small entities and of the cost-to-revenue ranges, by entity type, for the two methods of determining municipality and political subdivision entity size.

The top part of the table presents the results, where the small entity determinations are based on EPA guidelines (i.e., municipalities and political subdivisions are evaluation based on population; State and Federal entities are assumed to be large; cooperative entities are evaluated based on electric output; and investor-owned and nonutility entities are evaluated based on SIC-specific criteria). Based on this method, 101 of the 126 unique final parents of Phase II facilities are large and 25 are small. Sixteen of these 25 small entities are municipalities and one is a political subdivision.

The bottom part of the table presents the alternative set of results, where the size determinations for municipalities and political subdivisions are based on electric output at the utility level, using data from 2001 Form EIA-861 (U.S. DOE, 2001). Based on this method, 87 of the 126 unique final parents are large, and 39 are small. Compared to the first method, 14 additional municipalities would be classified as small using the electric output threshold. Ten of these 14 entities have cost-to-revenue ratios of less than 0.5 percent, two have ratios between 0.5 and 1.0 percent, two have ratios between 1.0 and 3.0 percent, and none have ratios of 3.0 percent or greater.

Table B4-A-1: Unique Entities by Type, Size, and Cost-Revenue Range

Entity Type	Large					Small					
	<0.5%	0.5-1%	1-3%	>=3%	Total Large	<0.5%	0.5-1%	1-3%	>=3%	Total Small	Grand Total
Municipality and Political Subdivision Size Based on Population											
Investor-owned	38	2	0	0	40	1	0	0	0	1	41
Nonutility	24	1	0	0	25	1	0	0	0	1	26
Federal	1	0	0	0	1	0	0	0	0	0	1
State	4	0	0	0	4	0	0	0	0	0	4
Municipality	16	2	2	0	20	4	4	7	1	16	36
Political Subdivision	2	0	0	0	2	0	0	1	0	1	3
Cooperative	8	1	0	0	9	6	0	0	0	6	15
Total	**93**	**6**	**2**	**0**	**101**	**12**	**4**	**8**	**1**	**25**	**126**

Table B4-A-1: Unique Entities by Type, Size, and Cost-Revenue Range											
Entity Type	**Large**					**Small**					
	<0.5%	**0.5-1%**	**1-3%**	**>=3%**	**Total Large**	**<0.5%**	**0.5-1%**	**1-3%**	**>=3%**	**Total Small**	**Grand Total**
Municipality and Political Subdivision Size Based on Electric Output											
Investor-owned	38	2	0	0	40	1	0	0	0	1	41
Nonutility	24	1	0	0	25	1	0	0	0	1	26
Federal	1	0	0	0	1	0	0	0	0	0	1
State	4	0	0	0	4	0	0	0	0	0	4
Municipality	6	0	0	0	6	14	6	9	1	30	36
Political Subdivision	2	0	0	0	2	0	0	1	0	1	3
Cooperative	8	1	0	0	9	6	0	0	0	6	15
Total	**83**	**4**	**0**	**0**	**87**	**22**	**6**	**10**	**1**	**39**	**126**

Source: U.S. EPA analysis, 2004.

B4-A-2 below presents a comparison of the minimum and maximum cost-to-revenue ratios, by entity type and size, for the two methods of determining municipality and political subdivision entity size. The overall minimum and maximum cost-to-revenue ratio of unique entities does not vary across the two methods of size determination. However, there are slight differences in both the maximum ratio for large municipalities and the minimum ratio for small municipalities.

Table B4-A-2: Minimum and Maximum Cost-to-Revenue Ratios of Unique Entities by Type and Size				
Utility Type	**Large**		**Small**	
	Minimum	**Maximum**	**Minimum**	**Maximum**
Municipality and Political Subdivision Size Based on Population				
Investor-owned	0.001%	0.640%	0.005%	0.005%
Nonutility	0.006%	0.782%	0.007%	0.007%
Municipality	0.030%	2.442%	0.279%	6.723%
Political Subdivision	0.088%	0.096%	1.009%	1.009%
Cooperative	0.122%	0.579%	0.143%	0.400%
Total	**0.001%**	**2.442%**	**0.005%**	**6.723%**
Municipality and Political Subdivision Size Based on Electric Output				
Investor-owned	0.001%	0.640%	0.005%	0.005%
Nonutility	0.006%	0.782%	0.007%	0.007%
Municipality	0.030%	0.369%	0.046%	6.723%
Political Subdivision	0.088%	0.096%	1.009%	1.009%
Cooperative	0.122%	0.579%	0.143%	0.400%
Total	**0.001%**	**0.782%**	**0.005%**	**6.723%**

Source: U.S. EPA analysis, 2004.