

Chapter 8: Regulatory Flexibility Analysis

INTRODUCTION

The Regulatory Flexibility Act (RFA) requires EPA to consider the economic impact a 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)).

For the purposes of assessing the impacts of the section 316(b) New Facility Rule on small entities, EPA has

defined small entity as: (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; and (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 electric output (13 CFR §121.20). The small entity determination is made at the level of the parent entity.

To evaluate the potential impact of this rule on small entities, EPA determined which of the projected new in-scope facilities would be owned by a small entity. EPA used a “sales test” to determine the potential severity of economic impact on electric generators and manufacturing facilities owned by small entities. The test calculates annualized compliance cost as a percentage of total sales revenues. This analysis conducts the sales test at the facility-level.¹

EPA’s analysis showed that this regulation will not have a significant economic impact on a substantial number of small entities (SISNOSE). This finding is based on the limited number of small entities expected to incur compliance costs and the insignificant magnitude of compliance costs as a percentage of sales revenues.

The remainder of this chapter is organized as follows:

- ▶ Section 8.1 presents EPA’s analysis of the entity size of the 121 projected new in-scope facilities.
- ▶ Section 8.2 presents the sales tests for all facilities owned by small entities.
- ▶ Section 8.3 summarizes the results of the RFA analysis.

CHAPTER CONTENTS

8.1	Number of New In-Scope Facilities Owned by Small Entities	8-2
8.1.1	Combined-Cycle Facilities	8-2
8.1.2	Coal Facilities	8-5
8.1.3	Manufacturing Facilities	8-9
8.2	Sales Test for Facilities Owned by Small Entities	8-11
8.3	Summary of Results	8-13
	References	8-14

¹ The sales test is equivalent to the cost-to-revenue measure described in *Chapter 7: Economic Impact Analysis*.

8.1 NUMBER OF NEW IN-SCOPE FACILITIES OWNED BY SMALL ENTITIES

EPA's baseline projection of new facilities identified 83 new electric generators and 38 new manufacturing facilities expected to incur costs under the final section 316(b) New Facility Rule (see *Chapter 5: Baseline Projections of New Facilities*). This section discusses the parent size analysis of new combined-cycle facilities, new coal facilities, and new manufacturing facilities separately.

8.1.1. Combined-Cycle Facilities

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

- ▶ Determine the small entity status of the 57 in-scope NEWGen facilities.
- ▶ Extrapolate small entity information from the 57 in-scope NEWGen facilities to the 69 projected new in-scope facilities.

a. Small entity status of the 57 in-scope NEWGen facilities

EPA used the NEWGen database to identify the parent entities of the 57 in-scope NEWGen facilities. Several of these facilities are owned by more than one entity. For these facilities, EPA identified the entity that owns the largest share in the facility (the "majority owner"). Six of the 57 facilities have more than one majority owner. In addition, several entities own more than one of the 57 in-scope NEWGen facilities. In total, 38 entities own a majority share in at least one of the 57 facilities.

Table 8-1 shows that all but two parent entities are private businesses. One entity is a municipal marketing authority and one is a state government. For the purposes of the RFA analysis, states and tribal governments are not small governments (U.S. EPA, 1999). Table 8-1 also shows the SIC codes of each entity, where available, and the SBA standard for each SIC code (in terms of employment, sales revenues, or MWh output). The table then compares the SBA standard with the entity's economic data. The final column lists each entity's size.

EPA used the Dun & Bradstreet (D&B) database to obtain the parent entities' SIC codes, employment, and revenues. For entities in SIC code 4911, EPA used the Energy Information Administration (EIA) Form 861 database to determine electric output. Where the SIC code, the relevant employment or revenue data, or the electric output from Form EIA-861 was not available, EPA determined the entity size based on the projected future electricity generation of new facilities owned by each entity. EPA used the generating capacity of each new facility owned by the entities (adjusted by the entities' share of ownership) and multiplied it by the national capacity utilization forecast for combined-cycle facilities (see *Chapter 7: Economic Impact Analysis*, Section 7.1.1 for a description of the *Projected electricity sales factor* used to forecast generation).²

Table 8-1 shows that of the 38 entities with majority ownership in at least one in-scope NEWGen facility, only seven are estimated to be small. These seven small entities are highlighted in bold font.

² EPA estimated future generation solely based on the planned *future* facilities listed in the NEWGen database. Of the NEWGen facilities, EPA only included the 199 combined-cycle facilities for which cooling water information was available, because these facilities are more likely to be built than facilities about which permitting authorities had no information. EPA did not take into account existing facilities that will continue to operate or new facilities other than the 199 combined-cycle ones. This approach could overstate the number of small entities, to the extent that some entities would in fact be classified as large based on the size of their existing facilities or their future facilities that are not combined-cycle. On the other hand, some entities identified as large could in fact turn out to be small if they have little or no existing capacity and some of their projected capacity is not in fact built. While further research could therefore change the classification of individual facilities, EPA does not expect that the number of small entities is likely to be larger than estimated here. It should also be noted that the entity size of none of the higher cost facilities (i.e., facilities with a once-through baseline system) is based on projected future generation.

Table 8-1: Entities with Majority Ownership in at Least One In-Scope NEWGen Facility

Name of Entity	Type	SIC Code	SBA Small Entity Standard	Entity Value ^a	Entity Size
ABB Energy Ventures, Inc.	Private Business	3612	750 Emp.	20,000 Emp.	Large
American Electric Power Co., Inc. ^b	Private Business	4911	4 Million MWh	154,683,011 MWh	Large
Besicorp Group, Inc.	Private Business	Unknown	Unknown	<i>1,124,479 MWh</i>	Small
Calpine Corp.	Private Business	4911	4 Million MWh	<i>112,462,099 MWh</i>	Large
Cogentrix Energy, Inc.	Private Business	4911	4 Million MWh	<i>32,915,807 MWh</i>	Large
Consolidated Edison, Inc.	Private Business	4911	4 Million MWh	32,630,506 MWh	Large
Constellation Energy Group, Inc. ^b	Private Business	4911	4 Million MWh	34,048,817 MWh	Large
Dominion Resources, Inc.	Private Business	4911	4 Million MWh	75,568,214 MWh	Large
Dow Chemical Co.	Private Business	2821	750 Emp.	50,000 Emp.	Large
Duke Energy Corp.	Private Business	4911	4 Million MWh	80,638,873 MWh	Large
Dynegy, Inc.	Private Business	4924	500 Emp.	5,778 Emp.	Large
El Paso Energy Corp.	Private Business	4922	\$5 Million Rev.	\$21,950,000,000	Large
Empire State Newsprint	Private Business	Unknown	Unknown	<i>1,124,479 MWh</i>	Small
Energetix	Private Business	4911	4 Million MWh	<i>8,790,347 MWh</i>	Large
Entergy Corp. ^b	Private Business	4911	4 Million MWh	128,719,019 MWh	Large
Exelon Corp. ^b	Private Business	Unknown	Unknown	50,165,283 MWh	Large
Genpower	Private Business	4911	4 Million MWh	<i>7,881,630 MWh</i>	Large
GenTex Power Corporation	Private Business	Unknown	Unknown	<i>1,141,603 MWh</i>	Small
Ls Power	Private Business	Unknown	Unknown	<i>5,023,055 MWh</i>	Large
McCorkell & Associates	Private Business	Unknown	Unknown	<i>2,739,848 MWh</i>	Small
MidAmerican Energy Holdings Co.	Private Business	4911	4 Million MWh	<i>4,964,149 MWh</i>	Large
Municipal Electric Authority of Georgia	Municipal Marketing Authority	9631	n/a	10,699,564 MWh	Large
Newport Generation	Private Business	Unknown	Unknown	<i>7,306,262 MWh</i>	Large
PG&E Corp.	Private Business	4911	4 Million MWh	70,297,085 MWh	Large
Power Development Co.	Private Business	Unknown	Unknown	<i>1,242,065 MWh</i>	Small
Power Resource Group	Private Business	8748	\$5 Million Rev.	\$13,000,000	Large
PPG Industries, Inc.	Private Business	2851	500 Emp.	35,600 Emp.	Large
PPL Corp.	Private Business	Unknown	Unknown	<i>8,950,171 MWh</i>	Large
Public Service Enterprise Group, Inc.	Private Business	4911	4 Million MWh	<i>11,070,586 MWh</i>	Large
Smith Cogeneration, Inc.	Private Business	4911	4 Million MWh	<i>2,739,848 MWh</i>	Small
South Carolina Public Service Authority	State Government	n/a		n/a	n/a
Southern Company	Private Business	4911	4 Million MWh	<i>20,822,847 MWh</i>	Large
TECO Energy, Inc.	Private Business	4911	4 Million MWh	17,965,152 MWh	Large
Tenaska, Inc.	Private Business	Unknown	Unknown	<i>20,073,956 MWh</i>	Large
Tractebel Power, Inc.	Private Business	3674	500 Emp.	515 Emp.	Large
Westlake Energy	Private Business	Unknown	Unknown	<i>2,374,535 MWh</i>	Small
Wisconsin Energy Corp. ^b	Private Business	4911	4 Million MWh	29,608,736 MWh	Large
Xcel Energy, Inc.	Private Business	4911	4 Million MWh	<i>8,684,223 MWh</i>	Large

^a The values presented in italics are based on the projected future generation of new facilities owned by the entity.

^b The electric output for these entities is the output of the regulated utility companies each entity owns. The numbers ignore unregulated generating plants and may therefore understate total electric output at the holding company level.

Source: D&B Database, 2001; U.S. DOE, 1999; RDI, 2001.

The seven small entities identified in Table 8-1 own six of the 57 in-scope NEWGen facilities. Table 8-2 below presents the seven entities, the six in-scope facilities they own, and their ownership share in the facilities. The table also presents the facilities' cooling system type, cooling water source, capacity, and the model facility type that represents them (see *Chapter 5: Baseline Projection of New Facilities* for a detailed discussion of how EPA developed model facilities for the economic analysis).

The table shows that all six new in-scope NEWGen combined-cycle facilities owned by a small entity withdraw from a freshwater body. Five of the six facilities have a recirculating system, and one has an unknown system type. Four of the six facilities have relatively small generating capacities (550 MW or less), one has a medium capacity (600 MW), and one has a relatively large capacity (1,200 MW).

Table 8-2: In-Scope NEWGen Facilities Owned by Small Entities

Name of Entity	Share in Facility	Name of Facility	Cooling System Type	Water Body Type	Capacity (in MW)	Model Facility Type
Besicorp Group, Inc.	50%	Empire State Newsprint	Recirculating	Freshwater	493	CC R/FW-1
Empire State Newsprint	50%					
GenTex Power Corporation	50%	Lost Pines I	Recirculating	Freshwater	500	CC R/FW-1
McCorkell & Associates	50%	Kiamichi Energy Facility	Unknown ^a	Freshwater	1,200	CC R/FW-3
Power Development Co.	50%	Meriden Power	Recirculating	Freshwater	544	CC R/FW-1
Smith Cogeneration, Inc.	100%	Smith Pocola Energy Project	Recirculating	Freshwater	600	CC R/FW-2
Westlake Energy	100%	Kentucky [Westlake]	Recirculating	Freshwater	520	CC R/FW-1

^a Based on its generating capacity of 1,200 MW and its reported design intake flow of 15.5 MGD, EPA assumed that this facility will operate a recirculating system.

Source: RDI, 2001; U.S. EPA analysis, 2001.

b. Extrapolation to the 69 projected new facilities

EPA's new facility forecast projected that 69 new in-scope combined-cycle facilities will begin operation between 2001 and 2020. *Chapter 5: Baseline Projection of New Facilities* presented the six model facility types that represent these 69 facilities for the costing and economic impact analyses. Table 8-3 below shows these six model facility types, the number of in-scope NEWGen facilities upon which the model facilities are based (by entity size), and the total projected number of new in-scope combined-cycle facilities (by entity size).

EPA estimated the entity size of the 69 new in-scope combined-cycle facilities based on the assumption that the share of all new facilities owned by a small entity is the same as the share of the 57 in-scope NEWGen facilities owned by a small entity.³ This analysis was conducted at the model facility level. For example, of the 15 NEWGen recirculating/freshwater facilities with relatively small capacities (model facility type CC R/FW-1), 11 are owned by a large entity (73 percent) and four are owned by a small entity (27 percent). Applying these percentages to the 18 projected new facilities of that model type results in 13 facilities owned by a large entity and five facilities owned by a small entity. The same methodology was used for the other model facility types.

³ This assumption is consistent with the model facility approach explained in *Chapter 5: Baseline Projection of New Facilities* and used in the costing and economic impact analyses. The model facility approach assumes that the characteristics of the projected new facilities are the same as those of the "actual" facilities analyzed in support of this regulation.

EPA projects that seven of the 69 projected new in-scope combined-cycle facilities (or 10.1 percent) will be owned by a small entity.⁴

Model Facility Type	Cooling System Type	Source Water Body	Steam Electric Capacity (MW)	Number of In-Scope NEWGen Facilities				Number of Projected New In-Scope Facilities		
				Large		Potentially Small		Total	Large	Small
				#	%	#	%			
CC OT/M-1	Once-Through	Marine	1,031	4	100%	0	0%	5	5	0
CC R/M-1	Recirculating	Marine	489	4	100%	0	0%	5	5	0
CC R/M-2	Recirculating	Marine	1,030	1	100%	0	0%	1	1	0
CC R/FW-1	Recirculating	Freshwater	439	11	73%	4	27%	18	13	5
CC R/FW-2	Recirculating	Freshwater	699	16	94%	1	6%	21	20	1
CC R/FW-3	Recirculating	Freshwater	1,061	15	94%	1	6%	19	18	1
Total Combined-Cycle				51	89%	6	11%	69	62	7

Source: U.S. EPA analysis, 2001.

8.1.2 Coal Facilities

The small entity determination for new in-scope coal facilities was conducted using the same two steps as the analysis for combined-cycle facilities:

- ▶ Determine the small entity status of the 41 existing in-scope coal facilities identified in the section 316(b) Industry Survey.
- ▶ Extrapolate small entity information from the 41 existing in-scope facilities to the 14 projected new in-scope facilities.

a. Small entity status of the 41 existing in-scope coal facilities

EPA used publicly available information as well as the section 316(b) Industry Survey to identify the parent entities of the 41 existing in-scope coal facilities. EPA analyzed facilities owned by utilities and nonutilities separately, because different data are publicly available for the two types of electric generators.

❖ Utilities

Twenty-nine of the 41 facilities are owned by utilities. These 29 facilities are owned by 26 entities. For facilities owned by investor-owned utilities, cooperatives, or municipal marketing authorities, EPA applied the SBA size standard for SIC code 4911 (4 million MWh of electric output). EPA obtained this information from the 1999 Form EIA-861. For facilities owned by a municipality, EPA used the size standard for government entities (population of 50,000). In addition, EPA determined that one of the 29 utility plants has recently been sold to a nonutility. The small entity determination for this firm was also based on the 4 million MWh threshold. As stated previously, states and tribal governments are not considered small governments for the purposes of the RFA analysis.

Table 8-4 presents the 26 entities that own one or more of the 29 existing in-scope coal facilities. The table also shows the type of each entity and the applicable SBA standard (in terms of MWh output or population), and compares the SBA standard

⁴ This estimate is consistent with the percentage of NEWGen facilities owned by a small entity (six out of 57, or 10.5 percent).

with the entity's economic data. The final column lists each entity's size. The results in Table 8-4 show that of the 26 entities that own at least one of the 29 coal facilities, only one is estimated to be small. This entity is highlighted in bold font.

Name of Entity	Type	SBA Small Entity Standard	Entity Value	Entity Size
AES Corporation	Private Utility Company	4 mill. MWh	140,000,000 MWh	large
American Mun Power-Ohio, Inc.	Municipal Marketing Authority	4 mill. MWh	6,238,601 MWh	large
Appalachian Power Co.	Investor-owned Utility	4 mill. MWh	37,737,554 MWh	large
Carolina Power & Light Co.	Investor-owned Utility	4 mill. MWh	53,489,444 MWh	large
Central Power & Light Co.	Investor-owned Utility	4 mill. MWh	23,116,191 MWh	large
Cleco Corporation	Investor-owned Utility	4 mill. MWh	8,177,513 MWh	large
Entergy Arkansas Inc.	Investor-owned Utility	4 mill. MWh	31,123,876 MWh	large
Georgia Power Co.	Investor-owned Utility	4 mill. MWh	77,509,777 MWh	large
Grand River Dam Authority	State Government	n/a	5,200,178 MWh	large
Hoosier Energy R E C Inc.	Cooperative	4 mill. MWh	10,057,941 MWh	large
Indiana Michigan Power Co.	Investor-owned Utility	4 mill. MWh	25,920,410 MWh	large
Jacksonville Electric Authority	Municipality	50,000 People	695,877 People	large
City of Kansas City	Municipality	50,000 People	139,971 People	large
Kansas City Power & Light Co.	Investor-owned Utility	4 mill. MWh	15,477,138 MWh	large
LG&E Energy ^a	Holding Company	4 mill. MWh	40,391,415 MWh	large
MidAmerican Energy Co.	Investor-owned Utility	4 mill. MWh	21,852,303 MWh	large
Otter Tail Power Co.	Investor-owned Utility	4 mill. MWh	4,616,370 MWh	large
Reliant Energy HL&P	Investor-owned Utility	4 mill. MWh	72,106,898 MWh	large
San Antonio Public Service Bd	Municipality	50,000 People	1,147,213 People	large
Seminole Electric Coop Inc.	Cooperative	4 mill. MWh	11,959,412 MWh	large
South Carolina Electric&Gas Co.	Investor-owned Utility	4 mill. MWh	20,974,917 MWh	large
South Carolina Pub Serv Auth	State Government	n/a	20,285,462 MWh	large
Southwestern Electric Power Co.	Investor-owned Utility	4 mill. MWh	23,550,221 MWh	large
Texas Municipal Power Agency^b	Municipal Marketing Authority	4 mill. MWh	3,042,555 MWh	small
Virginia Electric & Power Co.	Investor-owned Utility	4 mill. MWh	75,568,214 MWh	large
West Texas Utilities Co.	Investor-owned Utility	4 mill. MWh	7,621,638 MWh	large

^a The electric output for this firm is the output of the regulated utility companies the firm owns. The numbers ignore unregulated generating plants and may therefore understate total electric output at the holding company level.

^b This entity might not be classified as small if evaluated on a population served basis.

Source: U.S. EPA, 2000; U.S. DOE, 1999; U.S. Census Bureau, 2001.

The small entity identified in Table 8-4 above owns one of the 29 existing in-scope coal utility plants. This facility operates a recirculating system with a lake, withdraws water from a freshwater body, and has a generating capacity of 444 MW. Table 8-5 presents the characteristics of this facility and the model facility type that represents the facility.

Name of Entity	Name of Facility	Cooling System Type	Water Body Type	Capacity (in MW)	Model Facility Type
Texas Municipal Power Agency	Gibbons Creek	Recirculating with Lake	Freshwater	444	Coal RL/FW-1

Source: U.S. EPA, 2000; U.S. DOE, 1999; U.S. EPA analysis, 2001.

❖ Nonutilities

The remaining 12 existing in-scope coal facilities are owned by a nonutility. EPA used data from the section 316(b) Industry Survey and from the D&B database to determine the size of the entities owning these 12 facilities. Since the survey data are confidential, this chapter only presents a summary of the entity size determination conducted for this analysis.

For each of the entities that own one of the 12 nonutilities, EPA determined the SIC code, the SBA small entity standard, and the economic information with which the SBA standard is compared. Table 8-5 below shows the distribution of the 12 facilities by their entity's SIC code and size. The table shows that two of the 12 nonutilities are owned by a small entity.

Entity SIC Code	SBA Small Entity Standard	Existing In-Scope Facilities		
		Total	Small	Large
1542	\$17,000,000	1	0	1
4911	4,000,000 MWh	7	1	6
4931	\$5,000,000	2	0	2
4939	\$5,000,000	1	1	0
4961	\$9,000,000	1	0	1
Total		12	2	10

Source: U.S. SBA, 2000; U.S. EPA analysis, 2001.

The two small entities identified in Table 8-6 above each own one of the 12 existing in-scope coal nonutility plants. Both operate a recirculating system, withdraw water from a freshwater body, and have a generating capacity of less than 450 MW. Table 8-7 presents the characteristics of these two facilities and the model facility type that represents them.

Cooling System Type	Water Body Type	Capacity (in MW)	Model Facility Type
Recirculating	Freshwater	< 450	Coal R/FW-1
Recirculating	Freshwater	< 450	Coal R/FW-1

Source: U.S. EPA, 2000; U.S. EPA analysis, 2001.

b. Extrapolation to the 14 projected new facilities

EPA's new facility forecast projected that 14 new in-scope coal facilities will begin operation between 2001 and 2020. Chapter 5: *Baseline Projection of New Facilities* presented the eight model facility types that represent these 14 facilities for the costing and economic impact analyses. Table 8-8 below shows these eight model facility types, the number of existing in-

scope coal facilities upon which the model facilities are based (by entity size), and the total projected number of new in-scope coal facilities (by entity size).

EPA estimated the entity size of the 14 new in-scope coal facilities based on the assumption that the share of all new facilities owned by a small entity is the same as the share of the 41 existing coal facilities owned by a small entity.⁵ This analysis was conducted at the model facility level. For example, of the 10 existing recirculating/freshwater facilities with relatively small capacities (model facility type Coal R/FW-1), eight are owned by a large entity (80 percent) and two are owned by a small entity (20 percent). Applying these percentages to the three projected new facilities of that model type results in two facilities owned by a large entity and one facility owned by a small entity. The same methodology was used for the other model facility types.

EPA projects that one of the 14 projected new in-scope coal facilities (or 7.1 percent) will be owned by a small entity.⁶

Model Facility Type	Cooling System Type	Source Water Body	Steam Electric Capacity (MW)	Number of Existing In-Scope Coal Facilities				Number of Projected New In-Scope Facilities		
				Large		Potentially Small		Total	Large	Small
				#	%	#	%			
Coal OT/FW-1	Once-Through	Freshwater	63	3	100%	0	0%	1	1	0
Coal OT/FW-2	Once-Through	Freshwater	515	5	100%	0	0%	1	1	0
Coal OT/FW-3	Once-Through	Freshwater	3,564	1	100%	0	0%	1	1	0
Coal R/M-1	Recirculating	Marine	812	3	100%	0	0%	1	1	0
Coal R/FW-1	Recirculating	Freshwater	173	8	80%	2	20%	3	2	1
Coal R/FW-2	Recirculating	Freshwater	625	7	100%	0	0%	3	3	0
Coal R/FW-3	Recirculating	Freshwater	1,564	8	100%	0	0%	3	3	0
Coal RL/FW-1	Recirculating with Lake	Freshwater	660	3	75%	1	25%	1	1	0
Total Coal				38	93%	3	7%	14	13	1

Source: U.S. EPA analysis, 2001.

⁵ This assumption is consistent with the model facility approach explained in *Chapter 5: Baseline Projection of New Facilities* and used in the costing and economic impact analyses. The model facility approach assumes that the characteristics of the projected new facilities are the same as those of the “actual” facilities analyzed in support of this regulation.

⁶ This estimate is consistent with the percentage of existing in-scope coal facilities owned by a small entity (three out of 41, or 7.3 percent).

8.1.3 Manufacturing Facilities

The small entity determination for new in-scope manufacturing facilities was conducted using the same two steps as the analyses for combined-cycle and coal facilities:

- ▶ Determine the small entity status of the existing in-scope manufacturing facilities identified in the section 316(b) Industry Survey.
- ▶ Extrapolate small entity information from the existing in-scope facilities to the 38 projected new in-scope facilities.

a. Small entity status of the existing in-scope manufacturing facilities

EPA used data from the section 316(b) Industry Survey and from the D&B database to determine the size of the entities owning the existing in-scope manufacturing facilities. Since the survey data are confidential, this chapter only presents a summary of the entity size determination conducted for this analysis.

Table 8-9 shows each of the 4-digit SIC codes in which EPA projected a new in-scope manufacturing facility, the SIC description, and the SBA standard for each SIC code. The SBA standards for manufacturers are based on firm employment. To determine if a facility is owned by a small entity, EPA compared each facility's parent firm employment to its corresponding SBA threshold presented in table 8-9.

SIC Code	SIC Code Description	SBA Small Entity Size Standard (Employees)
2621	Paper Mills	750
2812	Alkalies and Chlorine	1,000
2819	Industrial Inorganic Chemicals, N.E.C.	1,000
2821	Plastics Materials, Synthetic Resins, and Nonvulcanizable Elastomers	750
2834	Pharmaceutical Preparations	750
2869	Industrial Organic Chemicals, N.E.C.	1,000
2873	Nitrogenous Fertilizers	1,000
2911	Petroleum Refining	1,500
3312	Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills	1,000
3316	Cold-Rolled Steel Sheet, Strip, and Bars	1,000
3317	Steel Pipe and Tubes	1,000
3353	Aluminum Sheet, Plate, and Foil	750

Source: U.S. SBA, 2000.

b. Extrapolation to the 38 projected new facilities

EPA's new facility forecast projected that 38 new in-scope manufacturing facilities will begin operation between 2001 and 2020. *Chapter 5: Baseline Projection of New Facilities* presented the 21 model facility types that represent these 38 facilities for the costing and economic impact analyses. Table 8-10 below shows these 21 model facility types, the number of existing in-scope facilities upon which the model facilities are based (by firm size), and the total projected number of new in-scope manufacturing facilities (by firm size).

EPA estimated the firm size of the new in-scope manufacturing facilities based on the assumption that the share of all new facilities owned by a small firm is the same as the share of the existing facilities owned by a small firm.⁷ This analysis was conducted at the model facility level. For example, of the 34 once-through/freshwater facilities in SIC 2869, 30 are owned by a large firm (88 percent) and four are owned by a small firm (12 percent). Applying these percentages to the seven projected new facilities of that model type results in six facilities owned by a large firm and one facility owned by a small firm. The same methodology was used for the other model facility types.

EPA projects that three of the 38 projected new in-scope manufacturing facilities (or 7.9 percent) will be owned by a small entity.⁸ The three facilities owned by a small entity are expected to operate in the following industries: Industrial Organic Chemicals, N.E.C. (SIC code 2869); Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills (SIC code 3312); and Cold-Rolled Steel Sheet, Strip, and Bars (SIC code 3316).

⁷ This assumption is consistent with the model facility approach explained in *Chapter 5: Baseline Projection of New Facilities* and used in the costing and economic impact analyses. The model facility approach assumes that the characteristics of the projected new facilities are the same as those of the “actual” facilities analyzed in support of this regulation.

⁸ This estimate is consistent with the percentage of existing in-scope manufacturing facilities owned by a small entity (19 out of 230, or 8.3 percent).

Model Facility Type	SIC Code	Cooling System Type / Source Water Body	Number of Actual In-Scope Facilities				Number of Projected New Facilities		
			Large		Potentially Small		Total	Large	Small
			#	%	#	%			
MAN OT/F-2621	2621	Once-Through / Freshwater	44	94%	3	6%	2	2	0
MAN OT/M-2812	2812	Once-Through / Marine	5	100%	0	0%	1	1	0
MAN OT/F-2812	2812	Once-Through / Freshwater	5	100%	0	0%	1	1	0
MAN OT/M-2819	2819	Once-Through / Marine	13	100%	0	0%	2	2	0
MAN OT/F-2819	2819	Once-Through / Freshwater	16	100%	0	0%	2	2	0
MAN OT/F-2821	2821	Once-Through / Freshwater	10	100%	0	0%	4	4	0
MAN OT/F-2834	2834	Once-Through / Freshwater	4	100%	0	0%	2	2	0
MAN OT/F-2869	2869	Once-Through / Freshwater	30	88%	4	12%	7	6	1
MAN RE/F-2869	2869	Recirculating / Freshwater	4	100%	0	0%	1	1	0
MAN OT/F-2873	2873	Once-Through / Freshwater	4	100%	0	0%	1	1	0
MAN RE/F-2873	2873	Recirculating / Freshwater	4	100%	0	0%	1	1	0
MAN OT/F-2911	2911	Once-Through / Freshwater	7	76%	2	24%	1	1	0
MAN RE/F-2911	2911	Recirculating / Freshwater	15	100%	0	0%	1	1	0
MAN OT/F-3312	3312	Once-Through / Freshwater	25	80%	6	20%	5	4	1
MAN RE/F-3312	3312	Recirculating / Freshwater	3	100%	0	0%	1	1	0
MAN OT/F-3316	3316	Once-Through / Freshwater	6	100%	0	0%	1	1	0
MAN RE/F-3316	3316	Recirculating / Freshwater	0	0%	3	100%	1	0	1
MAN OT/F-3317	3317	Once-Through / Freshwater	3	100%	0	0%	1	1	0
MAN RE/F-3317	3317	Recirculating / Freshwater	3	100%	0	0%	1	1	0
MAN OT/F-3353	3353	Once-Through / Freshwater	3	100%	0	0%	1	1	0
MAN RE/F-3353	3353	Recirculating / Freshwater	3	100%	0	0%	1	1	0
Total Manufacturers			211	92%	19	8%	38	35	3

Source: U.S. EPA, 2000; U.S. EPA analysis, 2001.

8.2 SALES TEST FOR FACILITIES OWNED BY SMALL ENTITIES

Each of the eleven projected new in-scope facilities owned by a small parent entity was further analyzed to evaluate the economic impact of this regulation. The analysis is based on the ratio of estimated annualized compliance costs to estimated annual revenues. Sales revenues required for the sales test were not available for all parent entities, so EPA could not evaluate the economic impact of the rule directly on the parent small entities. Instead, EPA assessed economic impact at the

facility level.⁹ EPA concluded that, in all cases, facility revenues are equal to or smaller than the parent entity revenues. Therefore, this approach will overstate the economic impact of this rule on the parent small entity.¹⁰

Table 8-11 lists each model facility type with at least one projected new facility owned by a small entity, the number of projected new facilities, estimated annual revenues, estimated annual compliance costs, and the ratio of estimated annual compliance costs to estimated annual revenues. The table shows that there are seven model types with projected facilities owned by a small entity. These seven model types represent 11 new facilities.

Model Facility	Number of Actual In-Scope Facilities	Number of Projected New Facilities Owned by Small Entities	Facility Information		
			Estimated Annual Revenues (\$2000; mill.)	Estimated Annual Compliance Cost (\$2000; mill.)	Ann. Compl. Cost/ Ann. Revenues
CC R/FW-1	4	5	\$65	\$0.17	0.26%
CC R/FW-2	1	1	\$104	\$0.17	0.17%
CC R/FW-3	1	1	\$158	\$0.18	0.11%
Coal R/FW-1	2	1	\$38	\$0.17	0.44%
MAN OT/F-2869	4	1	1,045	\$0.46	0.04%
MAN OT/F-3312	6	1	\$1,076	\$0.82	0.08%
MAN RE/F-3316	3	1	\$362	\$0.19	0.05%
Total	21	11			

Source: U.S. EPA analysis, 2001.

Table 8-11 shows that the ratio of estimated annual compliance costs to estimated annual revenues for the 11 in-scope facilities owned by a small entity ranges from 0.04 percent to 0.44 percent. None of these facilities is expected to incur compliance costs in excess of one percent of revenues. Based on this analysis EPA determined that the parent small entities in the analyzed industries will not experience significant impacts as a result of complying with this rule.

In developing model facilities, EPA estimated compliance costs and revenues based on an average facility size. These averages may not reflect the true effects of the final rule on facilities owned by small entities. To test the sensitivity of the model facility approach used in this analysis, EPA also analyzed data for the actual facilities owned by small entities (NEWGen facilities or existing survey facilities). EPA compared the revenues and annualized compliance costs specific to each facility. This analysis was conducted for all 21 facilities owned by a small entity in each of the seven model facility types listed in Table 8-11.

The results of this analysis showed that impacts for the actual facilities were almost identical to impacts under the model facility approach. For combined-cycle facilities, impacts of the actual facilities ranged between 0.10 and 0.24 percent compared to between 0.11 and 0.25 for the model facilities. For coal facilities, impacts of the actual facilities ranged between 0.32 and 0.54 percent compared to 0.44 for the one model coal facility. Only for manufacturing facilities did the sensitivity analysis show slightly higher impacts: three of the actual facilities owned by a small entity had an impact of over one percent.

⁹ Facility-level revenues for electric generators were estimated using expected annual electricity generation and expected future prices of electricity. Compliance costs include the annualized equivalent of all costs incurred during the first 30 years of each facility's life. *Chapter 7: Economic Impact Analysis* provides details on the estimation of expected annual compliance costs and expected annual revenues for this analysis.

¹⁰ In addition, the number of facilities owned by small entities may be overstated because it is based on the entity's *current* employment. Once the employment of the new facility is added to the entity's employment, the entity may no longer be considered small.

The other ten facilities had impact ratios of between 0.05 and 0.48 percent. EPA therefore concludes that the model facility approach provides a reasonable approximation of potential small entity impacts.

Table 8-12 presents the results of this sensitivity analysis.

Facility Type	Number of Actual Facilities Owned by Small Entities	Annualized Compliance Costs / Annual Revenues
Combined-Cycle	6	0.10% to 0.24%
Coal	2	0.32% to 0.54%
Manufacturers	13	0.05% to 1.62%

Source: U.S. EPA analysis, 2001.

8.3 SUMMARY OF RESULTS

The RFA analysis for this final regulation shows that only 11 projected new facilities owned by small entities would be affected by the final section 316(b) New Facility Rule. Because none of these facilities will experience significant economic impact as a result of this regulation, EPA concluded that the small entity parents of these facilities will similarly not experience significant economic impact. Therefore, EPA certifies that the final section 316(b) New Facility Rule will not have a significant economic impact on a substantial number of small entities.

Table 8-13 summarizes the results of the RFA analysis.

SIC Code	Facilities Owned by Small Entities	Compliance Cost as a Percent of Revenue	Number of Facilities Owned by a Small Entity with Significant Impact
Electric Generators			
<i>n/a</i>	<i>8</i>	<i>0.11% to 0.44%</i>	<i>0</i>
Manufacturing Facilities			
26 – Pulp & Paper	0	n/a	0
28 – Chemicals	1	0.04%	0
29 – Petroleum	0	n/a	0
33 – Metals	2	0.05% to 0.08%	0
Total Manufacturing	3	0.04% to 0.08%	0
Total	11	0.04% to 0.44%	0

Source: U.S. EPA analysis, 2001.

REFERENCES

Dun and Bradstreet (D&B) Database. 2001. Data as of August 2001.

Regulatory Flexibility Act. Pub. L. 96-354, Sept. 19, 1980, 94 Stat. 1164 (Title 5, Sec. 601 et seq.).

Resource Data International (RDI). 2001. NEWGen Database. February 2001.

U.S. Census Bureau. 2001. *Place and County Subdivision Estimates*. Data as of April 2001.

U.S. Department of Energy (U.S. DOE). 1999. Form EIA-861. *Annual Electric Utility Report for the Reporting Period 1999*.

U.S. Environmental Protection Agency (U.S. EPA). 1999. *Revised Interim Guidance for EPA Rulewriters: Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Fairness Act*. March 29, 1999.

U.S. Environmental Protection Agency (U.S. EPA). 2000. Section 316(b) Industry Survey. *Detailed Industry Questionnaire: Phase II Cooling Water Intake Structures* and *Industry Short Technical Questionnaire: Phase II Cooling Water Intake Structures*, January, 2000 (OMB Control Number 2040-0213). *Industry Screener Questionnaire: Phase I Cooling Water Intake Structures*, January, 1999 (OMB Control Number 2040-0203).

U.S. Small Business Administration (U.S. SBA). 2000. *Small Business Size Standards*. 13 CFR §121.201.