

Chapter D1: Background

INTRODUCTION

This chapter presents an overview of the Phase II facilities in the Mid-Atlantic study region and summarizes their key operating, economic, technical, and compliance characteristics. For further discussion of operating and economic characteristics of Phase II facilities, refer to Chapter A3 of the *Economic and Benefits Analysis for the Final Section 316(b) Phase II Existing Facilities Rule*; for further discussion of the technical and compliance characteristics of Phase II facilities, refer to the *Technical Development Document for the Final Section 316(b) Phase II Existing Facilities Rule* (U.S. EPA, 2004a,b).

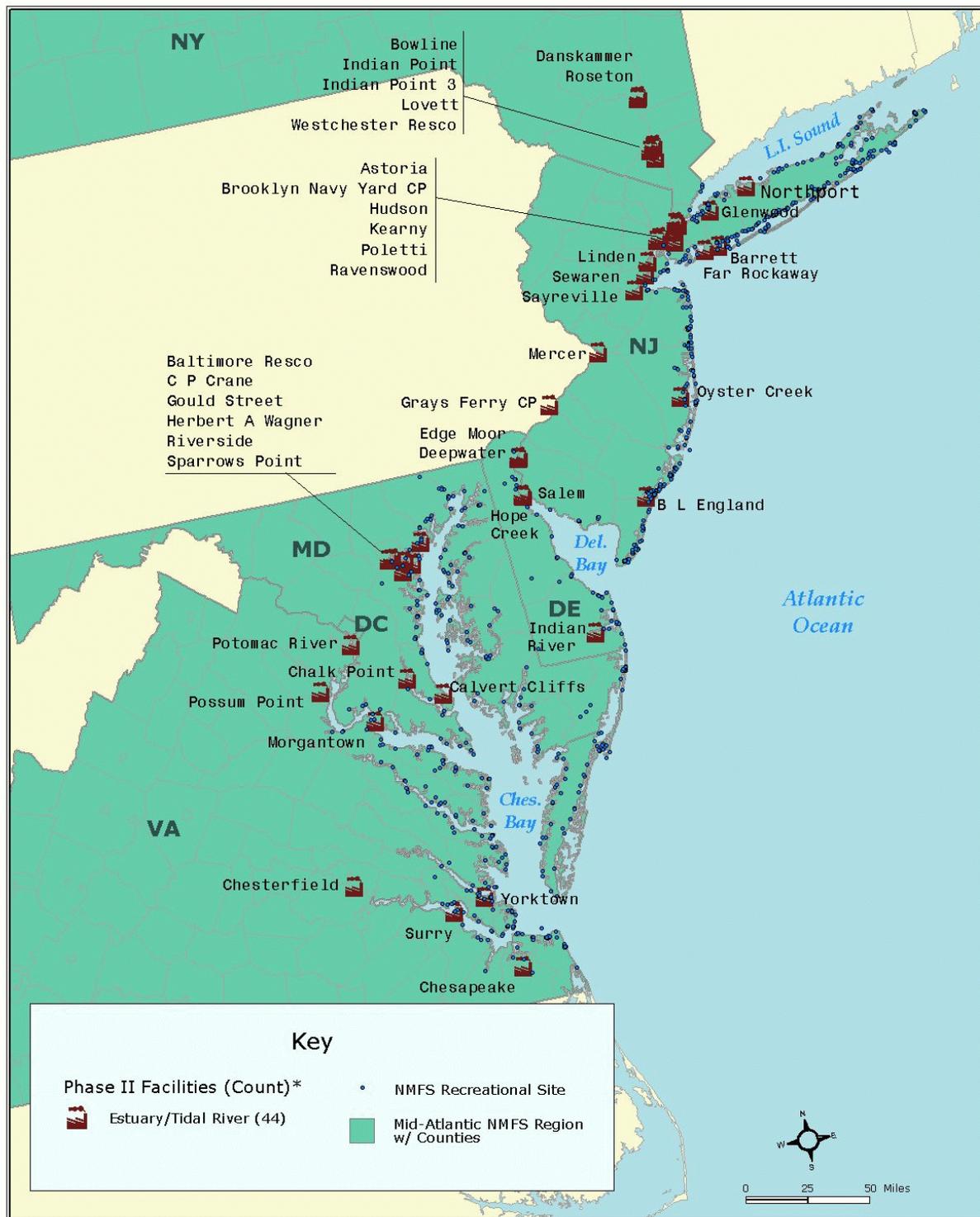
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D1-1 OVERVIEW

The Mid-Atlantic Study includes 44 facilities that are in scope for the final Phase II regulation. All 44 facilities withdraw cooling water from an estuary or tidal river. Figure D1-1 presents a map of the 44 in-scope Phase II facilities located in the Mid-Atlantic study region.

Figure D1-1: In-Scope Phase II Facilities in the Mid-Atlantic Regional Study



Source: U.S. EPA analysis for this report.

D1-2 OPERATING AND ECONOMIC CHARACTERISTICS

Nearly half of the 44 Mid-Atlantic Study facilities (21) are oil/gas facilities; eleven are coal steam facilities; seven are nuclear facilities; three facilities use another type of steam electric prime mover; and two are combined-cycle facilities. In 2001, these 44 facilities accounted for 40.4 gigawatts of generating capacity, nearly 158,000 gigawatt hours of generation, and \$8.6 billion in revenues.

The operating and economic characteristics of the Mid-Atlantic Study facilities are summarized in Table D1-1. Section D1-4 provides further information on each facility [including facility state, North American Electric Reliability Council (NERC) region, plant type, capacity, 2001 generation, and whether impingement and entrainment estimates were developed for the facility].

Waterbody Type	Number of Facilities by Plant Type ^a						Total Capacity (MW) ^b	Total Generation (MWh) ^b	Electric Revenue (millions)
	Coal Steam	Combined Cycle	Nuclear	Oil/Gas Steam	Other Steam	Total			
Estuary/Tidal									
DE	1	-	-	1	-	2	1,510	4,286,451	\$356
MD	2	-	1	4	2	9	8,030	30,708,580	\$2,414
NJ	3	-	3	5	-	11	9,732	38,549,683	\$2,700
NY	2	1	2	9	1	15	13,384	45,979,169	\$1,307
PA	-	1	-	-	-	1	193	677,311	\$78
VA	3	-	1	2	-	6	7,547	37,382,028	\$1,743
TOTAL	11	2	7	21	3	44	40,394	157,583,222	\$8,598

^a Based on largest steam-electric capacity at facilities.

^b MW is an abbreviation for megawatt; MWh is an abbreviation for megawatt hour.

Sources: Plant type (IPM Analysis, U.S. EPA, 2002; Form EIA-860, U.S. DOE, 2001a); capacity (Form EIA-860, U.S. DOE, 2001a); generation (Form EIA-906, U.S. DOE, 2001c); revenue (Form EIA-861, U.S. DOE, 2001b; Form EIA-906, U.S. DOE, 2001c).

D1-3 TECHNICAL AND COMPLIANCE CHARACTERISTICS

Thirty-nine of the 44 Mid-Atlantic Study facilities employ a once-through cooling system in the baseline; four employ a combination cooling system; and one facility utilizes a recirculating cooling system. These 39 facilities with once-through systems incur a combined pre-tax compliance cost of \$60.1 million, and the four facilities with combination cooling systems incur a combined pre-tax compliance cost of \$2.4 million. Table D1-2 summarizes the flow, compliance responses, and compliance costs for these 44 facilities.

Table D1-2: Technical and Compliance Characteristics of Phase II Facilities				
	Cooling Water System (CWS) Type^a			
	Once-Through	Recirculating	Combination	All
Design Flow (MGD)	45,452	115	2,272	47,839
Number of Facilities by Compliance Response				
Fish H&R	3	-	-	3
Fine Mesh Traveling Screens w/Fish H&R	6	-	2	8
New Larger Intake Structure with Fine Mesh and Fish H&R	2	-	-	2
Passive Fine Mesh Screens	12	-	-	12
Fish Barrier Net/Gunderboom	4	-	-	4
Double-Entry, Single-Exit with Fine Mesh and Fish H&R	5	-	1	6
Multiple	3	-	-	3
None	4	1	1	6
Total	39	1	4	44
Compliance Cost (2002\$; millions)^b	\$60.1	w^b	\$2.4	w^b

^a Combination CWSs are costed as if they were once-through CWSs.

^b Data withheld because of confidentiality reasons.

Source: U.S. EPA analysis for this report.

D1-4 PHASE II FACILITIES IN THE MID-ATLANTIC REGIONAL STUDY

Table D1-3 presents economic and operating characteristics of the Mid-Atlantic Study facilities.

Table D1-3: Phase II Facilities in the Mid-Atlantic Study							
EIA Code	Plant Name	Plant State	NERC Region	Steam Plant Type	2001 Capacity (MW)	2001 Net Generation (MWh)	I&E Data?
Estuary/Tidal River							
593	Edge Moor	DE	MAAC	O/G Steam	710	2,608,911	N
594	Indian River	DE	MAAC	Coal Steam	799	1,677,540	Y
1552	C P Crane	MD	MAAC	Coal Steam	416	2,236,071	N
1553	Gould Street	MD	MAAC	O/G Steam	104	188,570	N
1554	Herbert A Wagner	MD	MAAC	O/G Steam	1,059	3,413,594	N
1559	Riverside	MD	MAAC	O/G Steam	244	61,764	N
1571	Chalk Point	MD	MAAC	O/G Steam	2,647	4,670,004	Y
1573	Morgantown	MD	MAAC	Coal Steam	1,548	6,582,466	Y
6011	Calvert Cliffs	MD	MAAC	Nuclear	1,829	12,379,806	Y
10485	Sparrows Point	MD	MAAC	Other Steam	120	916,057	N
10629	Baltimore Refuse Energy Systems Co LP	MD	MAAC	Other Steam	65	260,248	N
2378	B L England	NJ	MAAC	Coal Steam	484	1,158,457	N
2384	Deepwater	NJ	MAAC	O/G Steam	227	512,222	N
2388	Oyster Creek	NJ	MAAC	Nuclear	641	5,215,005	N
2390	Sayreville	NJ	MAAC	O/G Steam	462	50,051	N
2403	Hudson	NJ	MAAC	Coal Steam	1,230	2,764,485	N
2404	Kearny	NJ	MAAC	O/G Steam	867	142,470	N
2406	Linden	NJ	MAAC	O/G Steam	922	327,796	N
2408	Mercer	NJ	MAAC	Coal Steam	768	2,802,612	N
2410	Salem	NJ	MAAC	Nuclear	2,386	17,205,046	Y
2411	Sewaren	NJ	MAAC	O/G Steam	577	319,518	N
6118	Hope Creek	NJ	MAAC	Nuclear	1,170	8,052,021	N
2480	Danskammer	NY	NPCC	Coal Steam	537	2,104,233	N
2491	Poletti	NY	NPCC	O/G Steam	883	2,562,092	N
2497	Indian Point	NY	NPCC	Nuclear	1,299	7,752,031	Y
2500	Ravenswood	NY	NPCC	O/G Steam	2,375	4,912,761	N
2511	Barrett	NY	NPCC	O/G Steam	687	1,711,962	N
2513	Far Rockaway	NY	NPCC	O/G Steam	100	295,490	N
2514	Glenwood	NY	NPCC	O/G Steam	338	816,686	N

EIA Code	Plant Name	Plant State	NERC Region	Steam Plant Type	2001 Capacity (MW)	2001 Net Generation (MWh)	I&E Data?
2516	Northport	NY	NPCC	O/G Steam	1,564	7,269,527	N
2625	Bowline	NY	NPCC	O/G Steam	1,155	1,715,931	N
2629	Lovett	NY	NPCC	Coal Steam	449	1,249,288	N
8006	Roseton	NY	NPCC	O/G Steam	1,242	1,960,925	N
8906	Astoria	NY	NPCC	O/G Steam	1,345	3,369,193	N
8907	Indian Point 3	NY	NPCC	Nuclear	1,012	8,006,454	N
50882	Westchester Resco	NY	NPCC	Other steam	75	37,777	N
54914	Brooklyn Navy Yard Cogeneration Partners L P	NY	NPCC	Combined Cycle	322	1,874,826	N
54785	Grays Ferry Cogeneration Partnership	PA	MAAC	Combined Cycle	193	677,311	N
3788	Potomac River	VA	MAAC	Coal Steam	514	2,006,566	N
3797	Chesterfield	VA	SERC	Coal Steam	1,800	9,908,478	N
3803	Chesapeake	VA	SERC	Coal Steam	812	4,229,965	N
3804	Possum Point	VA	SERC	O/G Steam	1,469	3,560,634	N
3806	Surry	VA	SERC	Nuclear	1,695	12,662,376	N
3809	Yorktown	VA	SERC	O/G Steam	1,257	5,014,009	N

Source: U.S. EPA analysis for this report.