

the measures presented below would not be meaningful for these facilities. In addition, the change in variable production cost per MWh of generation

could not be developed for 62 facilities with zero generation in either the base case or post-compliance scenario. For these facilities, the change in variable

production cost per MWh is indicated as “n/a.”

**EXHIBIT 6.—NUMBER OF PHASE II FACILITIES WITH OPERATIONAL CHANGES AT PHASE II FACILITIES WATERBODY/CAPACITY-BASED OPTION (2013)<sup>a</sup>**

Economic measures	Reduction			Increase			No change	N/A
	≤1%	1–3%	>3%	≤1%	1–3%	>3%		
Change in Capacity Utilization <sup>b</sup> .....	4	11	21	6	14	15	430	0
Change in Generation .....	7	24	37	5	7	23	398	0
Change in Revenue .....	56	13	41	108	247	28	8	0
Change in Variable Production Costs/MWh .....	18	5	8	154	115	21	118	62
Change in Pre-Tax Income .....	51	62	164	45	141	36	2	0

<sup>a</sup>For all measures percentages used to assign facilities to impact categories have been rounded to the nearest 10th of a percent.

<sup>b</sup>The change in capacity utilization is the difference between the capacity utilization percentages in the base case and post-compliance case. For all other measures, the change is expressed as the percentage change between the base case and post-compliance values.

Exhibit 6 indicates that the majority of Phase II facilities would not experience changes in capacity utilization or generation due to compliance with the waterbody/capacity-based option. Of facilities with post-compliance changes in capacity utilization and/or generation, the majority would experience a decrease in these measures. Exhibit 6 also indicates that the majority of Phase II facilities would experience increases in both revenues and variable production costs of between 0.0 and 3.0 percent. Similarly, almost all Phase II facilities would experience a change in pre-tax income, with a slight majority seeing a reduction in this measure.

## VI. Other Economic Analyses

EPA updated several of its other economic analyses conducted at proposal to determine the effect of changes made to the assumptions for this NODA on steam electric generating facilities. For more detailed information on these analyses, refer to the memo entitled “Supporting Documentation of Changes to Economic Impacts in Support of the Section 316(b) Phase II NODA” (DCN 5–3004). This section and the supporting memo discuss changes made to EPA’s methodology and assumptions as well as the updated results. For a discussion of the original methodology used by EPA for the proposal analysis, refer to the chapters in Part B of the Economic and Benefits Analysis (EBA) document in support of the proposed rule at <http://www.epa.gov/waterscience/316b/econbenefits/>.

It should be noted that the measures presented in this section are provided in addition to the impact measures based on the Integrated Planning Model (IPM®) analyses (see Section V of this Notice). The following measures are

used to assess the magnitude of compliance costs; they are not used to predict closures or other types of economic impacts on facilities subject to Phase II regulation.

It should also be noted that the results of the preferred option and the waterbody/capacity-based option cannot be directly compared to each other. EPA used two different demand growth assumptions for the IPM base cases of the preferred option (EPA electricity demand assumption) and the waterbody/capacity-based option (AEO electricity demand assumption, upon request by the Department of Energy). Since EPA is using IPM base case data in its estimate of the cost of installation downtime, the cost of the energy penalty, and revenues, the results presented in this section could vary between the two options, even for facilities or NERC regions with identical compliance requirements under the two options.<sup>12</sup> EPA intends to place additional IPM runs in the record during the NODA comment period to allow direct comparisons of both policy alternatives under both base cases.

### A. National Costs

Based on the NODA analysis, EPA estimates that facilities subject to the preferred option would incur annualized post-tax compliance costs of approximately \$265 million (at proposal, this estimate was \$178 million). These costs include one-time technology costs of complying with the rule, a one-time cost of installation

<sup>12</sup> For example, compliance requirements in NERC regions without estuarine/tidal river or ocean facilities (i.e., ECAR, MAIN, MAPP, and SPP) are identical under the two options. For this NODA analysis, all facilities in these regions would have had identical compliance costs under the two options, were it not for the difference in base case assumptions.

downtime,<sup>13</sup> annual operating and maintenance costs, and permitting costs (including initial permit costs, annual monitoring costs, and permit reissuance costs). This cost estimate does not include the costs of administering the rule by permitting authorities and the federal government. Also excluded are compliance costs for eight facilities that are projected to be baseline closures. Including compliance costs for projected baseline closure facilities would result in a total annualized compliance cost of approximately \$269 million (at proposal, this estimate was \$182 million). The cost differences between proposal and the NODA are accounted for primarily by the expanded range of technology options considered for the NODA and the “best performing technology” selection criteria used to assign cost modules to model facilities (see Section IV of this Notice).

EPA also updated the estimated total national annualized post-tax cost of compliance for the alternative waterbody/capacity-based option. Costs for this option include the same components as the estimate for the preferred option (one-time technology costs, cost of downtime, annual operating and maintenance costs, and permitting costs) but also include the cost of the energy penalty incurred by facilities estimated to upgrade to a recirculating cooling tower system. For the NODA analysis, the estimated total annualized post-tax cost of compliance for the waterbody/capacity-based option is approximately \$793 million (at proposal, this estimate was \$585 million). This increase reflects a number

<sup>13</sup> At proposal, EPA assumed that the technologies required to comply with the preferred option would not require installation downtimes (see Section III.4 of this Notice).