

In addition to determining the replacement value of a process unit, in our final rule we allow for the use of several other accepted methods in different industries for estimating such values. Replacement values are the estimated value of replacing a unit and can be based on a current appraisal. In lieu of replacement cost, you can also use inflation-adjusted original investment, insurance limits if insured for full replacement of the unit, or other cost estimation techniques currently employed by the company, as long as the company follows GAAP and if approved by the reviewing authority.

A dollar-per-kilowatt rate for calculating costs may be appropriate for utilities. This model is specific to source and fuel type and is updated periodically. We allow sources to use insurance valuation methods such as the Handy-Whitman Index to determine replacement costs for electric utilities. Other sources to compute costs include the Nelson Refinery Construction Index Factors, Solomon Refinery Study, and licensors of the respective process unit (e.g., Kellogg, UOP).

In order for a cost-based approach to be equitable, all owners or operators must include the same categories of expenses in both the process unit replacement value and the replacement activities sought to be excluded. Therefore, although the final rule does not mandate any particular approach, we believe it is generally appropriate to calculate costs using an approach similar to the elements of Total Capital Investment as defined in the APCCM. While the manual contains basic concepts that could be used to estimate total capital investment at a process unit, it is geared toward cost calculations for add-on control equipment. On the other hand, the underlying concepts are taken from work done by the American Association of Cost Engineers to define the components of cost calculations for all types of processes, not just emission control equipment. In certain cases, other manuals might make more sense depending on their circumstances.

Under the APCCM, total capital investment includes the costs required to purchase equipment, the costs of labor and materials for installing the equipment (direct installation costs), costs for site preparation and buildings, and certain other indirect installation costs. However, any costs that are part of the installation and maintenance of pollution control equipment should be excluded from the cost calculation, per our discussion in the previous section of this preamble. We believe equipment that serves a dual purpose of process

equipment and control equipment (combustion equipment used to produce steam and to control hazardous air pollutant emissions, exhaust conditioning in the semiconductor industry, *etc.*) should be considered process equipment.

Direct installation costs include costs for foundations and supports, erecting and handling the equipment, electrical work, piping, insulation, and painting. Indirect installation costs include such costs as: engineering costs; construction and field expenses (costs for construction supervisory personnel, office personnel, rental of temporary offices, *etc.*); contractor fees (for construction and engineering firms involved in the activity); startup and performance test costs; and contingencies.

We believe there may be merit to the comments we received advocating a categorical exclusion for unanticipated shutdowns and failures of some kind. When such an outage occurs, there may be a real urgency to restore the plant to operation without forcing it to await the results of a permitting action or applicability determination. In the past, we have handled these situations with case-by-case consent orders; however, even that approach may lead to unnecessary delays. It may specifically be sensible to relaxing the 20 percent cost threshold limitation for such events because it is unlikely that sources would incur an outage to avoid controls. We did not propose such a stand-alone exclusion and hence we believe we should not act upon it at this time.

I. Enforcement

1. Compliance Assurance

We believe that the records developed and maintained in the ordinary course of business will provide the primary means of assuring compliance with today's rule. We know that, as a general rule, companies necessarily generate and keep records related to the types of projects covered by today's rule. For example, companies generally have comprehensive procedures by which funds are allocated to both capital and maintenance expense projects. Many of the records generated by these procedures are needed for tax accounting purposes and, by law, must be maintained for at least 6 years. Moreover, additional records must be maintained in industries regulated for other purposes, such as the energy sector (over 90 percent of which, by capacity, is subject to FERC regulation). Public utilities, licensees and natural gas companies that are subject to FERC jurisdiction must, unless they receive a

waiver from the Commission, comply with extensive accounting and record retention requirements. They must keep financial information according to uniform systems of accounts that are set out in 18 CFR part 101 for public utilities and licensees, and 18 CFR part 201 for natural gas companies. These uniform systems of accounts include hundreds of specific accounts, including individual accounts for boiler plant equipment, engines and engine-driven generators, turbogenerator units, and hundreds of other asset, liability, cost and property items.

These companies also must retain records according to the schedules set forth in 18 CFR part 125 (for public utilities and licensees) and 18 CFR part 225 (for natural gas companies). The types of records that companies must keep include, for public utilities and licensees, for example, generation and output logs (records must be kept for 3 years), load records (3 years), gauge-reading reports (2 years), maintenance work orders and job orders showing entries for labor, materials and other charges in connection with maintenance and other work pertaining to utility operations (5 years), work order sheets for construction work in progress (5 years), appraisals and valuations made of utility property or investments (3 years), engineering records, drawings, and other supporting data for proposed or as-constructed utility facilities, including detail drawings and records of engineering studies (must be kept until facilities are retired), contracts or other agreements relating to services performed in connection with construction of utility plant (6 years after the plant is retired or sold), general and subsidiary ledgers (10 years), paid and canceled vouchers, and original bills and invoices for materials, services, *etc.* (5 years).

Altogether, these various sources of information provide more than reasonable assurance of compliance with today's rule. This is particularly true given EPA's broad authority to inspect affected facilities and require submission of compliance related data. Accordingly, we are not imposing any recordkeeping requirements in today's rule.

2. General Issues

Today's rule provides revisions to the major NSR program to specify categories of equipment replacement activities that we will consider RMRR in the future. As recognized by the U.S. Supreme Court, an agency may not promulgate retroactive rules absent express congressional authority. *See Bowen v. Georgetown Univ. Hosp.*, 488 U.S. 204,