

3745-107-02**EGU-specific operational characteristics, heat rate study and standard of performance.**

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see paragraph (C) of rule 3745-107-01 of the Administrative Code.]

Any owner or operator of an EGU subject to this chapter shall submit the following to the director in accordance with the schedules specified in rule 3745-107-03 of the Administrative Code:

(A) EGU-specific current and anticipated future operational characteristics including, at a minimum, the following:

- (1) Current electric generation capacity and capacity factors.
- (2) Hourly and annual carbon dioxide emissions for the most recent five-year period if such data were not reported to U.S. EPA's clean air markets division.
- (3) A description of the operating conditions of the EGU for the most recent five-year period, including load, heat input and any current or projected changes in operation that were considered when establishing the standard of performance.
- (4) A summary of anticipated future operational characteristics through the year 2035 or through the end of the remaining useful life, where applicable, including, at a minimum, the following:
 - (a) Future annual generation, capacity, and capacity factors.
 - (b) Annual carbon dioxide emissions.
 - (c) Fuel use, fuel prices, and fuel carbon content.
 - (d) Fixed and variable operations and maintenance costs.
 - (e) Heat rates.
 - (f) Electric generation capacity and capacity factors.

(B) Current and projected wholesale electricity prices through year 2035.

(C) For EGUs with complex or shared stacks, a detailed description of the methodologies, including formulas and measurement techniques that will be utilized to disaggregate the emissions, generation, and heat rates of the individual EGUs.

- (D) An EGU specific evaluation of the applicability of each individual HRI measure identified in Table 1 of 40 CFR 60.5740a, including, at a minimum, the following:
- (1) The recommended baseline date or period from which the HRI will be measured including a sufficient explanation for why the proposed baseline date or period is appropriate for the EGU. Identify if startup, shutdown and malfunction events are included or excluded from the HRI analysis and standard of performance. When applicable, include sufficient explanation as to how the baseline heat rate will be corrected for these events.
 - (2) Evaluation of the technical feasibility of the installation or implementation of each HRI measure.
 - (3) Evaluation of the estimated per cent HRI achievable by the installation or implementation of each HRI measure. Provide sufficient explanation in cases where site-specific factors may lead to the per cent HRI achievable falling outside of the ranges identified in Table 1 of 40 CFR 60.5740a.
 - (4) Evaluation of the estimated cost of each HRI measure including the following:
 - (a) The anticipated initial capital cost of installation or implementation.
 - (b) The anticipated operational and maintenance costs.
 - (c) Provide sufficient explanation in cases where site specific factors may lead to the anticipated cost of the HRI measure being outside the ranges identified in Table 2 of 84 FR 32520.
 - (5) Include an evaluation of the repeatability of HRI measures previously implemented. Where a measure is determined to not be repeatable, provide sufficient explanation.
- (E) An evaluation of the estimated HRI achievable for each individual EGU when all feasible HRI measures are applied, including the expected cumulative HRI achievable. Where applicable, provide sufficient explanation where individual expected HRIs were determined to not be additive.
- (F) The recommended standard or standards of performance including, at a minimum, the following:
- (1) Expression of the form of the standard of performance as an emission performance rate relating mass of carbon dioxide emitted per unit of electricity generated (e.g. pounds of carbon dioxide emitted per MWh).

- (2) Identification as to whether the emission rate is expressed as a net output-based standard or as a gross output-based standard. If expressed as a gross output-based standard, include a demonstration on how emission reductions achieved through HRI measures that only affect the net energy output are accounted for.
- (3) Sufficient explanation where more than one emissions performance rate is recommended.
- (4) Consideration of the applicability of each of HRI measure and associated degree of emission limitation individually and cumulatively expected at the individual EGU. Include a demonstration on how each HRI measure was considered and each associated degree of emission limitation when calculating each standard of performance.
- (5) With sufficient explanation, other factors, including remaining useful life, may be considered in applying a standard of performance to an EGU provided that the owner or operator demonstrates any of the following:
- (a) Unreasonable cost of control due to unit age, location, or basic process design.
 - (b) Physical impossibility of installing necessary control equipment.
 - (c) Other factors specific to the EGU that make application of a less stringent standard more reasonable. For example, unreasonable cost of control due to the likelihood of initiating a prevention of significant deterioration review, or when an HRI measure was recently installed and therefore reapplication of the same technology is not reasonable.

If remaining useful life is considered as a factor, provide the retirement date of the affected unit which will become an enforceable requirement.

- (G) Proposed method for monitoring, record keeping and reporting in accordance with rule 3745-107-04 of the Administrative Code.
- (H) Proposed compliance schedule in accordance with rule 3745-107-03 of the Administrative Code. Include a detailed timeline for the installation or implementation of the HRI measures, including an evaluation of the feasibility of installing or implementing the HRI measures simultaneously with other HRI measures.
- (I) Include materials supporting calculations for each standard of performance and any other materials necessary to support evaluation of the owner or operator's submittal of the requirements contained within this chapter by the director.

Effective:

Five Year Review (FYR) Dates:

Certification

Date

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