

COMMONWEALTH OF MASSACHUSETTS
Energy Facilities Siting Board

Peabody Power, LLC
Advisory Ruling

)
)
)

July 30, 2004

ACTION BY CONSENT

This “Action by Consent” is made pursuant to 980 CMR § 2.06, which provides the Energy Facilities Siting Board (“Siting Board”) with the authority to render a decision via Action by Consent when the Board “determines that expeditious action is necessary.” 980 CMR § 2.06(1).

On January 12, 2004, Peabody Power LLC (“Peabody Power” or “Company”),¹ filed with the Siting Board a request for an advisory opinion (“Request”) as to whether a simple cycle combustion turbine peaking generator that would be limited to a 99 megawatt (“MW”) gross output through use of an active control system is a generating facility subject to the Siting Board’s jurisdiction under G.L. c. 164, § 69H. The request for an advisory ruling was made pursuant to 980 CMR § 2.07. On March 2, 2004, the Siting Board notified Peabody Power of its intent to issue an advisory ruling on this issue.

I. DESCRIPTION OF PROPOSED POWER PLANT

Peabody Power proposes to construct a simple cycle combustion turbine generator (“generator”) on an approximately four-acre parcel of land adjacent to the existing Peabody Municipal Light Plant (“PMLP”), in Peabody, Massachusetts (Request at 1).² The generator would be fueled primarily by natural gas, but would use low-sulfur oil as a back-up fuel. Emissions of nitrogen oxides (“NO_x”) would be controlled using a selective catalytic reduction system; carbon monoxide and volatile organic compounds would be controlled with efficient combustion control; and sulfur emissions would be limited through the use of low sulfur fuels (*id.*). The generator would interconnect with the regional transmission system by connecting to one of the two 115 kV New England Power circuits that cross the site (*id.*).

¹ Peabody Power informed the Siting Board that effective April 29th, Peabody Power had assigned its rights to the proposed project to Fortistar Peabody, LLC, which is owned by Fortistar, a New York independent power producer (May 6, 2004 Letter at 1).

² Peabody Power states that there is no physical, operational or corporate relationship between PMLP and Peabody Power (IR-1; IR-2). Peabody Power has discussed with PMLP the use of PMLP’s natural gas lateral to supply the Peabody Power project; however, no agreement is in place (IR-1).

The generator would be based on the ALSTOM GT-11N2 combustion turbine, which has an unencumbered gross output of between 100.3 and 124.5 MW, depending on the ambient temperature (May 6, 2004 Letter).³ However, Peabody Power proposes to use an active control system to control the fuel supply to the generator so that gross output of the Alstom turbine would not exceed 99 MW (January 12, 2004 Letter at 2). Specifically, a certified and sealed load measurement system would continuously measure the turbine's output; if output exceeded 99 MW, the active control system would automatically reduce the flow of fuel to limit output to 99 MW (IR-5). Peabody Power proposes that the active control system be located in a separate building from the main turbine control system and sealed from entry by plant operators, to prevent operator bypass of the control system (IR-8).

Peabody Power states that the manufacturer will warrant the performance of the active control system (IR-7). The Company notes that the active control system has been successfully used on projects constructed in New York State.⁴ In addition, in a March 5, 2004 meeting with staff, the Company represented that it would be willing to provide the Siting Board with computer-generated reports documenting the actual output of the generator. Peabody Power states that it would seek Siting Board approval if it were to operate the generator above 99 MW on either a temporary or a permanent basis (IR-11; IR-12).

II. ANALYSIS

Pursuant to G.L. c. 164, § 69G, a “generating facility” subject to the Siting Board’s jurisdiction is “any generating unit designed or capable of operating at a gross capacity of 100 Megawatts or more, including associated buildings, ancillary structures, transmission and pipeline interconnections that are not otherwise facilities, and fuel storage facilities.” Therefore, in order to determine whether the generator is a generating facility subject to the Siting Board’s jurisdiction, the Siting Board must determine whether the generator is “designed for or capable of” operating at 100 MW or more.

As an initial matter, the Siting Board notes that the term “generating unit” encompasses not just a turbine or turbines, but the integrated system of equipment required for the production of electricity, including, but not limited to, turbines, boilers, and emissions control equipment. Each part of this integrated system may affect the output of the generating unit. Thus, the gross capacity of a generating unit may differ from that of the turbine on which it is based.

³ The unencumbered gross output of the generator would be 124.5 MW at an ambient temperature of -10 °F, 114.4 MW at 51 °F, and 100.3 MW at 90 °F (May 6, 2004 Letter).

⁴ Siting Board staff spoke with personnel at the New York State Department of Public Service (“DPS”), who stated that the control limiters used on facilities in that state have worked as expected to limit output to below the jurisdictional threshold of the DPS.

Here, Peabody Power argues that, while the ALSTOM GT-11N2 turbine has an unencumbered gross output of between 100.3 and 124.5 MW, the capacity of the generator would be limited to 99 MW by an active control system that limits flow of fuel to power the turbines. Therefore, in order to determine whether the generator is a generating facility subject to the Siting Board's jurisdiction, the Siting Board must determine whether the active control system provides sufficient assurance that the gross capacity of the generator would be under 100 MW. Peabody Power has adequately described the proposed functioning of the active control system, and has undertaken to secure the active control system from tampering by operators. In addition, Peabody Power states that the manufacturer will warrant the performance of the active control system. Finally, similar active control systems have been used successfully in New York state. The Siting Board concludes that, if the active control system is installed and operated as described, the generator would not be "designed or capable of" operating at more than 99 MW, and therefore would not be subject to Siting Board jurisdiction.⁵

However, the Siting Board notes that it is theoretically possible that an operator could gain access to the active control system and seek to override it. It is not clear whether the active control system could be placed offline with the flick of a switch, or whether significant rewiring and reconfiguration would be required to bypass it. In addition, we note that the active control system could be subject to mechanical failure; it is not clear whether, following such a failure, the Peabody Power generator would shut down, or remain up and operate at 100 MW or more. In order to address these and other concerns, Peabody Power has offered to provide to the Siting Board computer-generated load reports that document the output of the Peabody Power generator. The Siting Board is of the opinion that such reports are necessary to provide assurance that the active control system is performing as designed. The Siting Board therefore requires Peabody Power, if it builds the Peabody Power generator without first obtaining Siting Board approval, to file with the Siting Board computer-generated reports documenting the output of the Peabody Power generator at least once every three months for the first two years of commercial operation.

III. ADVISORY RULING

Accordingly, after due consideration of the averments of fact and argument presented by Peabody Power, the Siting Board hereby advises that Peabody Power's proposed simple cycle combustion turbine peaking generator that would be limited to a 99 MW gross output through use of an active control system would not be jurisdictional to the Siting Board under G.L. c. 164, § 69J¼. However, if Peabody Power constructs this generator without first obtaining Siting

⁵ In addition, the Siting Board notes that peaking units such as the Peabody Power generator are dispatched most frequently during periods of high electric demand, which typically occur on hot summer days. At such times, the unencumbered gross output of the ALSTOM GT-11N2 turbine is approximately 100.3 MW; the encumbered output therefore is unlikely to exceed 99 MW in any case.

Board approval, it must file with the Siting Board computer-generated reports documenting the output of the Peabody Power generator at least once every three months for the first two years of commercial operation. Additionally, if Peabody Power seeks in the future to modify or disable the active control system or other elements of the generator in order to increase its capacity to 100 MW or more, it must first seek Siting Board approval of the entire project pursuant to G.L. c. 164, § 69J^{1/4}.

Finally, the Siting Board notes that, since filing its request for an advisory ruling, Peabody Power has assigned its rights in the proposed project to another entity. This assignment, as well as any other that may occur, does not obviate the fact that this ruling is based on the information and representations provided to the Siting Board by Peabody Power project. Therefore, to ensure that the Peabody Power generator is operated as currently contemplated for the life of the power plant, the Siting Board requires Peabody Power to provide written notification to the Siting Board of any change in the ownership of the Peabody Power project and provide the name and telephone number of a contact person for the new owner(s). At the time of transfer, Peabody Power must also provide written certification to the Siting Board that Peabody Power has notified the new owner(s) of the restrictions and requirements in this advisory ruling.

This Action by Consent may be executed in any number of counterparts, each of which shall be an original, but all of which constitute one agreement, and shall be dated and become effective when the copies bearing all of the signatures of the Siting Board members are received by the Chairman. 980 CMR § 2.06(2).

Signed:

Paul G. Afonso
Chairman
Energy Facilities Siting Board/
Department of Telecommunications and Energy

Stephen Pritchard
For Ellen Roy Herzfelder
Secretary of Environmental Affairs

W. Robert Keating
Commissioner
Department of Telecommunications and Energy

Deirdre K. Manning
Commissioner
Department of Telecommunications and Energy

Joseph Donovan
For Barbara B. Berke, Director
Department of Business and
Technology

Robert Sydney
For David L. O'Connor
Commissioner
Division of Energy Resources

Louis A. Mandarini, Jr.
Public Member