Spectrum Energy, Inc.

Charlotte, North Carolina
Irvine, California

April 30, 2001

Mr. Rick Wolfinger
Constellation Power
111 Market Place, Suite 200
Baltimore, MD 21202

RE: Steam Turbine Output

Dear Rick:

There are a number of ways to limit steam turbine output ranging from an operator adjustable setpoint in the plant controls system to a hard-wired/hard-programmed limit in the steam turbine governor/controller. We recommend the hard-wired/hard-programmed limit, which has been used in California for ten years to hold generator output below the California Energy Commission's 50 megawatt jurisdictional threshold. On the projects we were involved in General Electric installed a custom programmable read only memory ("PROM") chip in the turbine governor/controller to limit output to 49.99 megawatts, which was acceptable to the California Energy Commission since it can not be easily modified/overridden (unlike typical plant control system setpoints, which can be changed with a few mouse clicks).

Steam turbine governor/controllers already limits operation based on steam parameters and metal temperatures, etc. General Electric and Siemens-Westinghouse (or any other steam turbine vendor) can implement a hard-wired/hard-programmed output limit although both deferred committing to the implementation specifics until an order is placed and detailed engineering is under way.

Summarizing, implementing a hard-wired/hard-programmed limit is technically feasible and has been approved in other states under nearly identical circumstances.

If you have any questions, please contact me.

Best regards,

Mark Gilliss, PE

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