Streamlining the Nuclear Power Reactor Licensing Process

Carmen DeLong

Nuclear Safety Applications Incorporated

Carmen.delong@gmail.com

The nation is facing a monumental challenge in meeting the need for dramatic increases in electrical power while reducing the total impact of power production on the environment. The private sector is responding to that challenge, as is the Nuclear Regulatory Commission (NRC), with certified designs. The potential for reducing the time to first kilowatt is great if both industry and the Government are able to establish new ways of doing business.

Meeting the nation's power needs is estimated to require at least 100 plants of 1,000 megawatts each by the year 2030. Neither industry nor the government can hope to succeed at this critical challenge without standardization of design and implementation of a streamlined licensing process.

There is a limited and shrinking pool of technical experts to address private sector design, operation, and licensing needs. The process must be streamlined in order to achieve success over the next 10 years. Currently the NRC requires at best 30 months to complete a license review, however, it can be reduced to 20 months with minor process enhancements and by tracking the journey of each application. Without such marked changes in process, the NRC cannot expect to keep pace with the private sector efforts.

Implementation of an efficient tracking methodology within the NRC is crucial to supply data to form the basis for process improvement. These data, if collected and managed properly, can dramatically reduce the licensing effort on both the NRC and contractors.