

FERC Small Hydro Conference, Dec. 2, 2009

Discussion Points, Jeff Lyng, Governor's Energy Office (GEO), Colorado

Why is permitting of small hydro projects important to Colorado?

The State of Colorado is developing a policy to significantly expand the market for renewable distributed generation technologies, in which small hydro is included. This policy will also include financial incentives to project owners who develop distributed generation projects. Recognizing the existing and anticipated future demand for new small hydro projects in the State, the GEO is proposing a joint effort with FERC with the goal of streamlining the permitting process.

Problem Statement: The complexity and cost of current FERC exemption regulations for small and micro hydro are impediments to making hydro a significant incremental part of Colorado's distributed renewable energy resources. Over the past 27 years, only 22 exemptions for projects under 5 MW have been granted in the State. Many of the applications for exemption have used the services of highly specialized regulatory and legal staffs accustomed to working with FERC, usually as part of large engineering firms.

One Federal survey has estimated the potential of small and micro hydro in Colorado at upwards of 700MW across 200 sites and other federal surveys have found similar potential.¹ More detailed work by Colorado's Small Hydro Working Group indicates these figures are conservative and indeed demand for small and micro hydro projects continues to grow. Examples of potential projects include a 40 kW facility on a municipal waste water pipeline and a 10 kW turbine in the drop between two irrigation ditches. On their own, such potential users are not equipped to file for a conduit or a 5 MW exemption nor do they typically have the time or money it takes to do so.

Proposal: Given a previous expression of interest on the part of FERC, Colorado proposes to collaborate with FERC and other interested states on a pilot project aimed at streamlining the regulatory process. Operating under an MOU or other agreement to be negotiated, the pilot would identify certain categories of hydro which would qualify for such treatment. The GEO is suggesting that the field for consideration be narrowed to those hydro projects that utilize existing infrastructure (water pipelines, irrigation canals, dams, etc.²) and do not require additional diversions from streams. An example of such a category might be hydro projects less than 100 kW proposed on existing raw or waste water pipelines.

Specifically, streamlining regulatory procedures may involve:

- (1) Creating a one step simplified application process,
- (2) Integrating the review process and shortening the comment period by State and Federal agencies,
- (3) Aligning the information requirements to be commensurate with scale of project,
- (4) Utilizing off the shelf software for drawings and maps, and
- (5) Establishing a target review time for FERC upon completion of a pre-screening process by Colorado.

After a trial period, the streamlined procedures would be evaluated according to pre-established criteria. These criteria would include: timeliness and efficacy of the procedures, impact of projects on the environment, and operational integrity. FERC, Colorado and other participating states would then move toward the implementation of those procedures which have proven to be effective. This pilot would likely involve the delegation of process for parts or phases of the regulatory process to the State without compromising FERC's fundamental permitting authority.

Outcome: The result of this pilot would be a set of simplified procedures to be carried out by the State and FERC for certain categories of small and micro hydro projects. These would result in the increased role of hydro as a part of a renewable energy portfolio while maintaining environmental integrity of the State's rivers and streams.

Funding: The timing for this proposal is ideal in that the GEO currently has funds available from the state's ARRA State Energy Program budget for a Renewable Energy Development Team. This team of consultants will be tasked to develop distributed renewable energy projects throughout the state. A portion of this budget will be allocated to the permitting of small hydro projects and could be specifically allocated to implementing this pilot program. The proposed timeline for this pilot would be calendar years 2010 and 2011 or until the State's funding is exhausted, whichever comes first.

Summary: The Colorado's GEO believes that a pilot project is justified and necessary to develop regulatory procedures that would respond to a new class of potential applicants for small and micro hydro power projects. The GEO is prepared develop an agreement to work with FERC and other states on such a pilot project and to implement the results. Finally, we appreciate the consideration of this proposal by FERC as we collectively seek to responsibly develop our nation's small hydro resources.

ⁱ Alison M. Conner, James E. Francfort, Ben N. Rinehart. 1998. Idaho National Engineering and Environmental Laboratory. Idaho Falls, Idaho. U.S. Department of Energy Contract DE-AC07-94ID13223,

ⁱⁱ Because of the connection to dam safety regulations, dams represent a much more complicated type of infrastructure to consider. A few hydro projects involving dams, however, should be considered for inclusion in a pilot project.