

Challenges to the Development of Hydropower in the United States

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Who Said it...

As the largest source of renewable electricity generation in the U.S., hydropower provides a wide range of benefits to the country. Hydropower is a minimal emission, low-cost source of energy that can be relied upon for long-term, stable production of domestic energy. Hydropower also provides consistent, reliable generation, which can be quickly adjusted and dispatched to meet the various needs of the electric grid.

Development Challenges

- Three-year limit on preliminary permits relative to ILP schedule
- Status of 1981 MOU between FERC and USACE
- Section 14 of the Rivers and Harbors Act – (33 U.S.C. 408 – Section 408 Permit)
- Coordination of USACE and FERC Authorizations
- Established Rule and Guide Curves
- Limited PTC and ITC Durations (in-service date)

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Hydropower MOU between DOE, DOI, and USACE (3/24/10)

Purpose – To help meet the nation’s needs for reliable, affordable, and environmentally sustainable hydropower by building a long-term working relationship, prioritizing similar goals, and aligning ongoing and future renewable energy efforts between the three agencies

Focus – 1) Increase generation from federal hydropower facilities and 2) evaluate and promote sustainable, low impact, and small hydropower projects

Action Items – Seven initial opportunities

Seven Action Items

- Federal Facility Energy Resource Assessment
- Integrated Basin Scale Opportunity Assessments
- Green Hydropower Certification
- **Federal Inland Hydropower Working Group**
- **Technology Development and Deployment**
- **Renewable Energy Integration and Energy Storage**
- **Regulatory Process Evaluation**

Federal Facility Energy Resource Assessment

- Coordinate ongoing efforts to identify federal facilities or sites to increase hydropower generation
- **Update the Section 1834 Report that resulted from the Energy Policy Act of 2005**
- **Explore opportunities to jointly fund or solicit projects to increase generation through hydropower**
- Includes both federal and non-federal projects
- First meeting to be held in **April 2010** and action items to be completed by October 2010

Integrated Basin Scale Opportunity Assessment

- Through collaboration with environmental NGOs, agencies, tribes, and the hydropower industry – 1) develop methodologies, 2) identify suitable river basins, and 3) select one to three basins for an assessment pilot project
- In **May 2010**, hold first workshop to identify basins
- **Conduct one to three basin-scale assessment pilot projects**
- Produce an initial report 3 months following first workshop

Green Hydropower Certification

- DOE to lead three to four stakeholder meetings, including USACE, Reclamation, USFWS, NPS, and other federal agencies and industry representatives
- Develop a list of criteria to certify sustainable and environmentally friendly hydropower generation facilities – including conventional, hydrokinetic, and pumped storage
- **Recommend talking with the Low Impact Hydropower Institute**

Federal Inland Hydropower Working Group

- Convene a working group composed of DOE, USACE, DOI, and all other federal agencies in the regulation, management, or development of hydropower assets (including in-river and other emerging hydrokinetic technologies) in rivers and streams in the United States
- Hold quarterly, staff-level conference calls to provide status of all initiatives, efforts, and projects related to hydropower
- Hold first quarterly conference call in 2010

Technology Development and Deployment

- Share information and associated results on R&D efforts being conducted by each agency
- In 2010, initiate an annual renewable energy R&D workshop to highlight current initiatives, results of past efforts, and future goals of each agency
- **Identify potential R&D deployment sites at or near USACE or Reclamation facilities for DOE or jointly funded technology development projects (including in-river and other emerging hydrokinetic technologies)**
- **Deploy technologies in 2011**

Renewable Energy Integration and Energy Storage

- Emphasize the critical role that hydropower can play in the integration of other renewable energy technologies into the U.S. electric grid
- **Feasibility analysis of potential pumped storage sites associated with federal facilities**
- Collaborate with other federal agencies and industry stakeholders to assess the amounts and distribution of energy storage needed to effectively integrate other intermittent sources of renewable energy into the U.S. electric grid

Regulatory Process Evaluation

- **Identify ways in which the most time and resource intensive components of each permitting and licensing process could be shortened by reducing unnecessary delay, streamlining, or simplifying for appropriate projects**
- By June 2010, conduct a workshop with all federal agencies involved in the permitting process, including USFWS, NPS, and BLM
- By September 2010, produce a report detailing the results of the workshop

Additional Information

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