



CLOSED-LOOP PUMPED STORAGE PROJECTS AT ABANDONED MINE SITES WORKSHOP

Docket No. AD19-8-000

April 4, 2019, Washington, DC

Purpose: To explore potential opportunities for development of closed-loop pumped storage projects at abandoned mine sites.

Workshop Agenda

- 1. Introduction** **1:00 p.m. to 1:30 p.m.¹**
 - 1.1 Opening remarks
 - 1.2 Introduction of FERC Commissioners and staff, and panel members

- 2. Background (FERC staff presentation)** **1:30 p.m. to 1:45 p.m.**
 - 2.1 Review of Section 3004 of the America's Water Infrastructure Act of 2018 (AWIA 2018) requirements
 - 2.2 Licenses or preliminary permits for closed-loop pumped storage projects at abandoned mine sites

Panelists:

James A. Besha, Sr., P.E., Albany Engineering Corporation

Carl E. Borgquist, Absaroka Energy LLC

Ginger Gillin, GEI Consultants

Jay W. Hawkins, P.G., Office of Surface Mining, Reclamation and Enforcement

Ken Homolka, Oregon Fish & Wildlife

Michael Manwaring, McMillen Jacobs Associates

Erinn Shirley, MSc, Bureau of Land Management

¹ All times are eastern daylight savings time.

3. Developing Closed-Loop Pumped Storage Projects at Abandoned Mine Sites – Site Identification

(Input solicited from panel and participants)

1:45 p.m. to 4:25 p.m.

- 3.1 How many abandoned mine sites are there in the United States? What are the types of sites and in which states or regions are they typically located?
- 3.2 How does a developer identify abandoned mines that could be used for pumped storage hydropower? Are there tools available to identify potential closed-loop pumped storage project sites at abandoned mines?
- 3.3 What types of abandoned mines are most conducive for closed-loop hydropower development? What are those characteristics?
- 3.4 Once a site has been selected, where would a developer look for existing environmental information on the site?

Developing Closed-Loop Pumped Storage Projects at Abandoned Mine Sites – Benefits

- 3.5 Are there advantages of abandoned mine sites compared to other more conventional pumped storage sites?

Break

(15 minutes)

Developing Closed-Loop Pumped Storage Projects at Abandoned Mine Sites – Challenges

- 3.6 What are the challenges of siting closed-loop pumped storage projects at abandoned mine sites? Are there specific challenges depending on the type of abandoned mines, e.g., coal mine vs. hard rock mine?
- 3.7 What are the likely environmental issues a developer could expect at abandoned mine sites?
- 3.8 What are the likely safety and design issues a developer could expect at abandoned mine sites?

4. Licensing or Permitting Closed-Loop Pumped Storage Projects at Abandoned Mine Sites – Guidance Content

(Input solicited from panel and participants)

4:25 p.m. to 4:40 p.m.

4.1 AWIA 2018 requires FERC to issue guidance to assist applicants for licenses or preliminary permits for closed-loop pumped storage projects at abandoned mine sites. What types of information would most help in terms of providing such guidance?

5. Closing Comments and Next Steps

4:40 p.m. to 4:45 p.m.