



December 27, 2018

Federal Energy Regulatory Commission  
Office of Energy Projects  
888 1<sup>st</sup> Street NE  
Washington, Dc 20426

Attn: Kimberly D. Bose, Secretary

Re: Project No. 14889-000-West Virginia, Big Run Pump Storage Hydroelectric Project,  
FreedomWorks, LLC

Secretary Bose:

West Virginia Rivers Coalition, on behalf of our members, respectfully submits the following comments on Project No. 14889-000-West Virginia, Big Run Pump Storage Hydroelectric Project by FreedomWorks, LLC.

The proposed location for this project raises clear concerns for our members as it impacts the Big Run Bog National Natural Landmark, Mill Run a Tier 3, native-reproducing brook trout stream and Tub Run, an impaired stream that has a \$4-million-dollar reclamation investment. Due to the outstanding resources and sensitive nature of the proposed location for the project, intense scrutiny of the project impacts is warranted. A site suitability analysis must be performed to avoid and minimize impacts.

We endorse the comments submitted by US Forest Service, Forest Supervisor for the Monongahela National Forest, Clyde Thompson, and Department of Interior, Regional Environmental Officer, Lindy Nelson. We offer these additional comments and recommendations:

**Section 1.1 General Project Description:**

**Mine Site Reclamation:** The application states that both reservoirs could be constructed using earth and rock excavated from nearby mine site reclamation. More data is needed to determine the impacts of using mine spoils for the dam. Unearthing mine site overburden can have unwanted negative impacts due to the acidic properties of the

geology. Acid Mine Drainage could result from the exposure of any pyritic material. Detailed information must be provided on how additional acid mine drainage will be avoided during the construction of the dam if mine waste is used.

**Upper Reservoir:** The project description for the Upper Reservoir depicts plans to construct a circular dam or dike to create a 1,213-acre lake. However, when reviewing project maps, the circular dam does not account for terrain and topography. More details are necessary to explain how a perfectly circular dam will be constructed in mountainous terrain crossing watershed boundaries. The proposed Upper Reservoir boundary must be drawn to show the actual extent of the flooded area.

### **Section 1.3 Existing or Proposed Transmission Lines:**

(3) If other possibilities exist for transmission interconnections, they need to be drawn on the map. All possible transmission lines must be included in the feasibility study and analyzed for impacts to the viewshed, endangered species habitat, and recreation.

### **Section 1.6 Public Interest:**

As the country transitions toward wind and solar electricity generation, energy storage is becoming a larger issue. Sufficient and affordable storage will ensure that intermittent renewable electricity sources such as wind and solar can supply power when it is needed.

Pump-storage hydropower in and of itself isn't a renewable electricity generating technology, because the electricity used to power the pumps can come from coal, natural gas, renewables, or other fuels. Only if the electricity used to power the pumps is generated from renewable electricity sources such as wind and solar will the pump-storage hydropower be truly renewable.

In the first bullet point, clarify that the pump-storage facility will only fulfill the public interest as an environmentally sound source of renewable energy if it is powered by wind and/or solar.

The second bullet point states that the project will utilize the public water resources without damage to the environment. However, this claim is misleading and unfounded

and must be corrected. Further analysis is needed before this statement can be made. Clarify that the pump-storage facility will only reduce the acid rain and greenhouse effects associated with coal- and oil-fueled power plants if it is powered by wind and/or solar. If the pump-storage facility is powered by the coal-fired Mount Storm Power Plant, or any other coal- or oil-fueled power plant, the second bullet point is incorrect as written.

In the seventh bullet point, provide greater assurances that the pump-storage facility must be powered by wind and/or solar. As currently written, this bullet point states that the facility will "...store excess energy especially from intermittent renewable sources such as the Locust Wind Farm...". The sources of electricity used to power the pump-storage facility must be definitively stated. If it is not possible to do so at this early stage of development, then the application must at least include language stating that the pump-storage facility must be powered with renewable electricity and that the preliminary permit granted by FERC, along with any future permits or certificates granted by FERC, must be conditioned on appropriate legal arrangements that guarantee that the facility is powered 100% by renewable energy including wind and/or solar.

### **Section 2.1 Studies Process:**

We recommend hosting community meetings as a component of the studies process. Obtaining comments and feedback from the impacted community is vital for a project of this magnitude that is proposed in an area renowned for its scenic beauty and recreational value.

### **Section 2.2 Studies to be Completed:**

**Cultural Attachment:** Because this project is proposed for such a deeply valued area by residents and visitors, an evaluation of Cultural Attachment must be included in the feasibility study. Cultural attachment is the cumulative effect over time of a collection of traditions, attitudes, practices, and stories that tie a person to the land, to physical place, and to kinship patterns. By definition, this phenomenon is linked to specific land, physical place and kinship patterns; therefore, it cannot be transferred to another location with a similar view, rural lifestyle, or property value. In cultural attachment, land is not seen as a commodity but as a part of the family system that has a sacred

quality.

### **Section 2.2.3 Water Quality Studies:**

**Mill Run:** The proposed project includes impounding a Tier 3 stream, Mill Run to create the lower reservoir. Tier 3 is the classification for waters designated as an outstanding national resource. Sediment transfer, temperature variability, species richness, and overall habitat functionality are some of the effects dams have on river systems. An anti-degradation review of Mill Run is necessary to comply with the Clean Water Act and must include an analysis of alternatives. The analysis must evaluate a range of practicable alternatives that would prevent or lessen the degradation associated with the proposed project.

**Tub Run:** The proposed project appears to impound Tub Run, listed as impaired for iron, aluminum and pH. Excess turbidity in the stream as a result of construction may increase iron and aluminum concentrations. The water quality studies must include any additional pollution loads that will contribute to the stream's impairment.

Approximately \$4 million dollars has already been invested in mine reclamation within the Tub Run watershed. The Water Quality studies must determine if construction within the watershed will undo the progress made on the Tub Run highwall mine reclamation projects. Phase III of the reclamation work is in the design phase. An analysis must be conducted to determine how the proposed project will impact mine reclamation work.

### **Section 2.2.6 Fisheries Studies:**

Plans for the lower reservoir include damming a naturally reproducing native brook trout stream, Mill Run. Regardless of whether the project is a closed loop system, review of the following impacts is necessary:

1. **Impact on Fish:** Fish may be pulled into the intake or transported through the penstocks. The study must include measures put in place to prevent fish kills.
2. **Effects of Impoundment:** Water in the reservoirs may become thermally stratified depending on water retention and depth of the reservoir. An analysis of the discharge water must include water temperature and depth. Lacustrine conditions of the reservoir will differ from the original stream conditions. The change in conditions will have an impact on the original aquatic fauna. The

effects of impoundment on water quality and habitat must be analyzed.

3. **Effects of dam on fish migration:** Dams alter aquatic ecology and hydrology both upstream and downstream. A dam will also fragment and isolate resident fish. The fisheries study must include an analysis of whether the dam will impede fish and aquatic organism passage and how that will impact the native brook trout population.
4. **Socioeconomic impact:** The communities impacted by the proposed project depend on the healthy trout populations for tourism dollars. Studies need to detail the impact of the project on the adjacent communities if fish populations decline and there is a loss of tourism income.

### **Section 2.2.8 Economic Impacts**

Economic analysis of the proposed project also needs to include loss of income of tourism dollars during and following construction, undoing decades of mine reclamation work in the Upper Blackwater River Watershed, and interference with planned reclamation work.

### **Section 3.3 Proposed Market:**

The proposed market analysis must also include the following:

1. Detail exactly which wind and/or solar electricity generating facilities will be used to power the pump-storage facility.
2. Show calculations that demonstrate that the generation at these wind and/or solar facilities will be sufficient to power the pump-storage facility.
3. Provide legal arrangements currently in place, or will be put in place in the future, to guarantee that the facility will be powered 100% by renewable energy including wind and/or solar. These legal arrangements must address the possibility that the pump-storage facility changes ownership in the future.

We appreciate your thorough consideration of these comments and look forward to your response.

Signed,

Angie Rosser, Executive Director  
West Virginia Rivers Coalition