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April 7, 2012

Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, N.E., Room 1A Washington, DC 20426

Re: FERC Project No. 14354-000 and Docket # P-14354. Comments on the application for a preliminary permit known as Long Canyon Pumped Storage Project by Utah Independent Power.

Dear Ms. Bose,

Thank you for this opportunity to provide public comments concerning the proposed Long Canyon Pumped Storage Project by Utah Independent Power (UIP), which would provide peaking power by using pumped Colorado River water stored in perched, off-river reservoirs in Grand County, Utah, near Canyonlands National Park and Dead Horse Point State Park. We understand the power to pump the water from the Colorado River to the twin reservoirs will be provided by existing steam generating plants that heat water using fossil fuels, and so the project is not truly renewable as claimed by UIP.

This project will also stress ever-diminishing water supplies for people and critical habitat, and spoil superlative scenery that is enjoyed by millions of visitors. The allocations for Colorado River water are presently over-subscribed by a factor of 10%<sup>1</sup> and increased evaporation as a result of climate change will compound the shortage in future decades.

Living Rivers is a non-governmental organization whose mission is to restore the biological integrity of the Colorado River. Our organization has been working on Colorado River issues since its founding in 2000 at Moab, Utah, which is located about 6 air miles from the proposed pumping plant.

The application under review, to determine the feasibility of this hydropower

<sup>&</sup>lt;sup>1</sup> Interim Report No.1: Colorado River Basin Water Supply and Demand Study. 2011. Bureau of Reclamation. <a href="http://www.riversimulator.org/Resources/USBR/BasinStudy/">http://www.riversimulator.org/Resources/USBR/BasinStudy/</a> <a href="https://www.riversimulator.org/Resources/USBR/BasinStudy/">https://www.riversimulator.org/Resources/USBR/BasinStudy/</a> <a href="https://www.riversimulator.org/Resources/USBR/BasinStudy/">https://www.riversimulator.org/Resources/USBR/BasinStudy/</a> <a href="https://www.riversimulator.org/Resources/USBR/BasinStudy/">https://www.riversimulator.org/Resources/USBR/BasinStudy/</a> <a href="https://www.riversimulator.org/">https://www.riversimulator.org/Resources/USBR/BasinStudy/</a> <a href="https://www.riversimulator.org/">https://www.riversimulator.org/Resources/USBR/BasinStudy/</a> <a href="https://www.riversimulator.org/">https://www.riversimulator.org/Resources/USBR/BasinStudy/</a> <a href="https://www.riversimulator.org/">https://www.riversimulator.org/</a> <a href="https://w

project, must be denied.

We strongly suggest that UPI propose projects in the future that are adjacent to the markets they are intended for to increase transmission efficiency. New projects for energy should not be dependent on fossil or nuclear fuels, nor damage sensitive lands near critical habitat and protected federal and state reserve lands.

In addition, it is not necessary for project investors to needlessly spend large amounts of money on a feasibility study that will damage the landscape, when free and credible hydrologic and geologic studies about the Colorado Plateau and Colorado River already exist. A simple document search will provide a significant amount of prior research that will show why this proposed project is not feasible and should be abandoned.

### **Water Scarcity**

Both federal and university scientists have determined that the Colorado River has no longer has surplus water to allocate because the system is overappropriated and increasing evaporation from atmospheric warming will keep this situation unchanged beyond the duration of a 50-year operating permit for this project.

This water scarcity problem for the Colorado River basin includes forecasts that hydropower production at Glen Canyon and Hoover dams will be curtailed and periodically cease altogether in the near future.

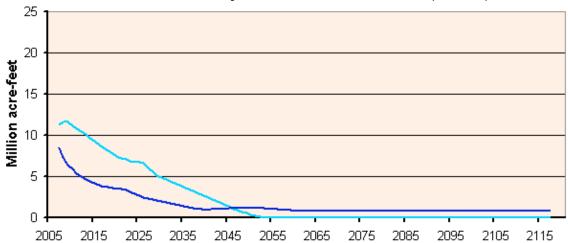
For example, the Scripps Institute produced a paper<sup>2</sup> which concluded statiscally that storage in Lakes Mead and Powell will by exhausted in 2050 under the current 10% reduction of the annual flow. Since the annual yield is decreasing with each passing decade, the likelihood of dual reservoir exhaustion is more likely to occur around 2025.

This inevitability can be demonstrated by using using Index Sequential Modeling (ISM) as provided by the open source simulator called CROSS found at <a href="https://www.onthecolorado.org/Cross.cfm">www.onthecolorado.org/Cross.cfm</a>. The results displayed here start with 10% reduction of annual water supply as of 2008 and conclude with a 30% reduction by 2060.

<sup>&</sup>lt;sup>2</sup> Barnett, Tim P., David W. Pierce. 2009. Sustainable water deliveries from the Colorado River in a changing climate. Proceedings of the National Academy of Sciences. http://www.riversimulator.org/Resources/ClimateDocs/PierceBarnett2009.pdf

# Projected Lake Powell and Lake Mead AvailableStorage by Year Average of 111 traces using ISM simulation

Lake Powell storage realative to dead pool (-1.89 maf)
Lake Mead storage relative to SNWA's lowest intake (-6.37 maf)

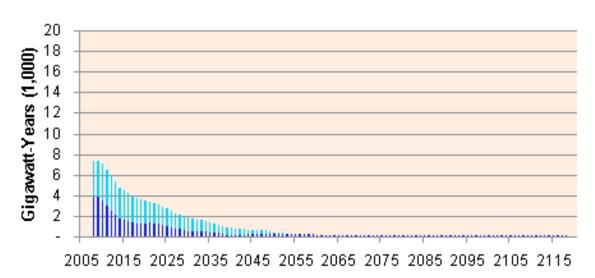


## Legend

Light blue is Lake Powell (Glen Canyon Dam)

Dark Blue is Lake Mead (Hoover Dam)

The ISM results for projected average hydropower production at Glen Canyon and Hoover dams, is displayed below.



It is not internally consistent to grant a federal license to a hydroelectric facility that needs Colorado River water to operate, when existing Colorado River hydropower facilities are currently stressed from low reservoir levels and predicted to fail entirely within the next 50 years.

#### **Transmission Lines**

The Bureau of Reclamation conducted feasibility studies in the past for hydroelectric dams on the Colorado River in Grand County. One of the reasons why hydropower dams were not built in Grand County included the long distances for transmission lines to deliver that power to faraway urban markets, which is still the case today. Power projects must be built closer to the markets they are intended for to minimize losses through long transmission lines. Furthermore, the additional transmission lines for this project in the scenic Colorado Plateau will harm the fundamental reason why visitors from around the world visit our county to enjoy our unspoiled canyons and vistas.

### Seepage and Evaporation

This proposal includes two new reservoirs that are surrounded by a geologic formation known as the Glen Canyon Group. These Jurassic sandstones are comprised of massive and homogenous formations that are highly porous and permeable. For example, the Glen Canyon Group surrounds Lake Powell downstream. The Bureau of Reclamation estimates that as much as 19 million acre-feet of Colorado River water have saturated these sandstones.

The climate of the area is arid with excessive evaporation rates. The local annual evaporation rate exceeds the amount of annual rainfall on the magnitude of six. Consequently, thousands of acre-feet of water will unnecessarily be lost to support these two reservoirs and constitutes another inappropriate inefficiency for this project, especially when considering the impending scarcity of water for downstream consumers and the critical habitats of this region.

## **Dam Safety**

The geology of the proposed dam site in Day Canyon has Triassic Chinle Shale. The Bureau of Reclamation has done feasibility studies on Chinle Shale with the conclusion that it is not an adequate bedrock material for dam construction. For example, of the many potential sites investigated for the building of Glen Canyon Dam in Arizona, the sites where Chinle Shale is exposed were rejected.

### Conclusion

It is unfortunate that UIP is wasting the time, resources, and goodwill of federal and state agencies, and the citizens of Grand County, to process this ill-conceived plan to build an expensive and inefficient power plant with many controversial tradeoffs. We ask that FERC deny this permit so that the investment money can be used instead for power development that is truly innovative, efficient and renewable, and without causing any harm to natural resources that are already under stress or sensitive to development.

Please do not hesitate to contact us should you have any questions or require additional information.

Sincerely yours,

John Weisheit Conservation Director