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January 12, 2010

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Mr. John Foreman, Chairman
Arizona Power Plant and Transmission Line Siting Committee
1200 W. Washington Street
Phoenix, AZ 85007

Arizona Corporation Commission
DOCKETED

JAN 18 2010

Re: Docket Number L-00000NN-09-0541-00151 Hualapai Valley Solar LLC

DOCKETED BY
[Signature]

Dear Chairman Foreman and Members of the Committee:

I am submitting written public comments on the Hualapai Valley Solar LLC facility on behalf of the Sierra Club's Grand Canyon (Arizona) Chapter.

The Sierra Club's mission is "to explore, enjoy and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments." The Grand Canyon Chapter is one of more than 60 Sierra Club chapters throughout the country. Our chapter was formed in 1966 and we have approximately 12,000 members in Arizona. The Sierra Club has a significant interest in this proposed project. One of the Sierra Club's key conservation priorities is *promoting smart energy solutions to global warming*. We strongly support investing in renewable energy resources such as solar and believe that is a key component of a balanced energy plan that will help us to reduce greenhouse gas emissions in order to address global warming. We also have protecting water resources as one of our key priorities and this project also significantly affects those.

It is our understanding that the proposed project would involve constructing either a 340 megawatt (MW) concentrating solar power generating station or a 500 MW photo-voltaic (PV) project on approximately 4,233 acres of semi-desert grassland habitat within sections 19-21 and 28-31 of Township 26 North, Range 16 West. Either of the options for the plant will utilize the same transmission connections.

We support granting this Certificate of Environmental Compatibility for the project with the adequate conditions to limit groundwater pumping and water use by the facility; with the utilization of the Interconnection #1, an approximately 3-mile long electric transmission line that will interconnect either the existing Mead- Phoenix 500kV electric transmission line, or the existing Mead-Liberty 345kV transmission line at a switchyard to be built by Western Area Power Administration, which

would involve the least public land and the shortest distance with new transmission; and with adequate protections for wildlife and cultural resources.

We are very concerned about the amount of groundwater that would be used by this facility if constructed as a Concentrating Solar Power (CSP) plant. Should it be approved as a CSP and for using wet cooling, the facility would use between 2,400 and 3,000 acre feet of water each year. While the application includes discussion of utilizing effluent from the City of Kingman's Hilltop wastewater treatment plant, there is nothing solid in place to assure it, and as it involves constructing a pipeline that is 25 to 35 miles long, we are somewhat skeptical that it will be built. It also will not meet the needs of the entire plant. The water use is not something we should take lightly and overall we should continue to seek ways to reduce water use including via dry cooling or hybrid cooling systems. As California and Nevada step up to protect their water resources by requiring dry cooling, so should Arizona.

Already, the Mohave County General Plan indicates that "estimated annual water use in Hualapai Valley will be over 14,000 acre-feet per year and exceed natural recharge placing the aquifer under stress from depletion." This makes it clear that operating the facility with wet cooling is not sustainable without having a further negative impact on water resources.

By drawing down the water table, any seeps and springs in the area will be negatively affected. As these areas tend to be areas of significant biological diversity, it is imperative that we make sure that they are protected, especially in light of ongoing drought and the implications of future climate change.

We agree with the Arizona Game and Fish Department's recommendations relative to the settling ponds for the wastewater from the cooling. These ponds would have to be screened from wildlife, including birds and bats, to limit wildlife mortality associated with this highly saline water.

There are several Bureau of Land Management Sensitive Species located in the project area including several species of bats as well as burrowing owls. Clearly a project such as this has potential to significantly impact burrowing owls. The applicants should work closely with a group such as Wild at Heart to ascertain opportunities for relocating burrowing owls and minimizing impact. Mitigation for the loss of wildlife habitat should also be included in the project including the purchasing of land to compensate for the habitat loss with the assurance that the purchased land is protected from development.

The project includes cultural sites important to Native Americans in the Southwest. The applicant should be required to consult closely with the Hualapai Tribe to ensure that impacts are minimized and that respect is afforded to these sites.

It is our understanding that a supplementary fossil fuel or biodiesel will be used in the Generating Facility for supplementary firing, up to 2% of the annual solar energy input. What are the emissions

impacts of this? The plant will need to obtain an air quality permit as well as an aquifer protection permit to ensure that neither the air nor the water are degraded due to the use of a polluting fuel.

The Sierra Club strongly supports generation of electricity from renewable energy sources and its role in helping reduce greenhouse gas emissions that contribute to global climate change, which is one of the greatest environmental threats we face. The threats posed by global climate change are unprecedented. Never before have we faced such an enormous planet-wide problem. It is clear that to protect our communities, our wildlands and wildlife, we must quickly transition away from fossil fuels to clean renewable energy and energy efficiency programs. We must eliminate energy waste; moderate demand through energy efficiency, conservation, and demand-side management practices; and rapidly develop and deploy clean, renewable energy technologies, including at the utility-scale.

Arizona's greenhouse gas emissions are forecast to increase 148% between 1990 and 2020, according to the Climate Change Action Plan, dated August 2006. The best scientists tell us we must reduce global warming pollutants 80 percent by 2050 to avoid the worst impacts of global climate change. In Arizona, the electricity sector accounts for about 38% of these greenhouse gas emissions. It is imperative that we seek ways to both stop the growth in emissions from electricity generation and actually reduce those emissions. We cannot do that effectively without significant use of renewable energy resources including solar energy.

Arizona is an ideal place for solar generated electricity due to the abundant sunshine in our state and high solar insolation. We strongly support distributed solar electric generation, including rooftop programs, but we think concentrating solar power at a utility scale also must be a component of a clean energy future for Arizona. These facilities have no significant greenhouse gas emissions which is a key factor and limited emissions of criteria pollutants and hazardous air pollutants.

We appreciate that this site is on private land rather than public land and on land that would otherwise be used for developing more houses – all of which would also have a significant environmental impact and no net benefit relative to providing a cleaner renewable energy source. The site is also not near any wilderness areas, any wilderness study areas, citizen proposed wilderness areas, wildlife refuges, Areas of Critical Environmental Concern, or other specially designated areas. The closest wilderness area is the Mount Tipton Wilderness Area, which is seven miles to the west. This area also has a high solar insolation and because of the current use, is relatively flat, so it is ideal for this type of solar facility.

Other areas that should be evaluated relative to potential environmental impacts from this project include the impacts from the new transmission proposals including:

- What is the damage or loss of habitat for plants and wildlife, including sensitive, threatened and endangered species from construction and maintenance of towers and roads?
- What are the impacts related to the practice of removing extensive areas of habitat to keep vegetative clearance under powerlines?

- What are the air quality impacts during construction through use of heavy equipment and their emissions as well as fugitive dust emissions?
- How will soils be affected, eroded or compacted through construction?
- Will drainage patterns be altered significantly by construction of towers and roads?
- Are their indirect impacts from increased access to lands near powerlines, such as increased illegal off-road vehicle use?
- How will cultural, historic, and paleontological resources be impacted by transmission construction and operation?
- Will the roads and other intrusions increase the spread of noxious weeds?

Thank you for the opportunity to address the Committee. With the proper conditions to protect water and wildlife resources as well as cultural sites, this facility can help contribute to helping Arizona meet the renewable energy standard and tariff requirements, avoid significant greenhouse gas emissions, and limit emissions of criteria pollutants.

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in cursive script, appearing to read "Sandy Bahr".

Sandy Bahr
Chapter Director
Sierra Club - Grand Canyon Chapter
202 E. McDowell Rd, Suite 277
Phoenix, AZ 85004