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Submitted by electronic mail and certified U.S. Mail August 17, 2012

Mr. Adrian Garcia, Project Manager
SunZia Southwest Transmission Project
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Dear Adrian:

Attached is an outline of some of the deficiencies and issues that I have identified for the SunZia Draft Environmental Impact Statement and the project itself. Many of these issues are related to the purpose and need for the project, which is a matter of considerable contention. I hope that this outline will help focus the debate about the purpose and need for this project and the feasibility of building a project like this. The outline is self-explanatory.

Thank you for considering these comments.

Sincerely,

Norm "Mick" Meader
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DEIS Deficiencies and Issues
Norm "Mick" Meader, Cascabel Working Group, August 17, 2012

I. Nonrenewable energy generation use of SunZia is not addressed

- **A.** No listing and assessment is given of non-renewable power generation along the project route that may use the project, and no future non-renewable use of the project is projected.
- **B.** No acknowledgment is made of the use of SunZia by SWPG's Bowie power plant, the original reason that the Southwestern Power Group proposed the project.
- **C.** No assessment is made of the non-renewable energy required to stabilize any fluctuating renewable generation that would use the system. No potential locations for such facilities or needed capacity are given.
- **D.** No assessment is made of the mix of renewable and nonrenewable energy required for the project to be economically and physically viable. A system devoted to highly variable renewable energy functions poorly if connected to only that form of generation.
- **E.** How the project will actually be used will likely differ significantly from its stated purpose, and this should be acknowledged and estimated.

II. Assessment of renewable energy generation

- **A.** No assessment is made of whether renewable energy generation facilities can be built quickly enough to make SunZia economic and how much capacity is needed. The project will fail financially if this cannot be achieved. A development timetable needs to be presented for the energy generation facilities required to make SunZia economically feasible, whether these are renewable or nonrenewable.
- **B.** It is not stated how much power SunZia must carry to pay for the project and whether renewable energy alone can provide that amount. It is the sale of power that must pay for the project, and *a given amount of renewable generation capacity produces much less power than an equivalent amount of non-renewable generation capacity* because of differing capacity factors. However, the transmission capacity reserved for both must be the same.
- **C.** Because the capacity factors for renewable energy generation are much less than those for non-renewable generation, this will result in inefficient use of transmission capacity and lower system utilization. No strategies are given for compensating for this.
- **D.** SunZia appears to assume that most of its generation will be promptly subscribed upon completion of the project. This is a highly unlikely and could easily result in project failure and bankruptcy.
- **E.** All renewable generation projected to link to the project is speculative. No renewable generation projects have committed to using SunZia, and all generation must still be built. This greatly increases the project's financial vulnerability, which the DEIS should acknowledge and assess.

III. Cumulative effects not addressed

- **A.** No assessment has been made of the cumulative effects of using the SunZia corridor to accommodate additional transmission lines or other utility projects, something that is highly likely to occur. Such cumulative effects are summarily dismissed by saying that

the impacts of using existing corridors for additional transmission capacity are minimal. This reasoning has been used to justify not estimating and quantifying what these impacts are.

B. Much of cumulative impacts assessment is unrelated to the impacts of this project. While giving an overview of the joint impact of unrelated projects may have value, such impacts are in many respects superfluous.

C. *Non-renewable generation, natural gas in particular, is just as likely to use this transmission system as is renewable energy generation, yet the cumulative effects of this are not addressed*. The use of this system by non-renewable generation is no less speculative or less certain than use of the system by renewable energy. The DEIS has focused solely on the impacts of speculative renewable generation that might use SunZia. If the cumulative effects of renewable generation are included, then the cumulative effects of non-renewable generation must be included also. As noted in the DEIS, no company has yet committed to building a renewable energy project to use SunZia.

IV. Financial difficulties with building the project are not acknowledged

A. No solid coalition of companies has been assembled to build the project, and the project lacks a sufficient ability to secure financing at the moment. The loss of Energy Capital Partners greatly weakened the project. ECP held a 40% interest in the project.

B. An excessive financial burden and risk are placed upon the Salt River Project and its ratepayers because of a lack of additional committed project partners.

C. Several factors combine to make this project very risky financially for a merchant company to build. Because a consortium of utilities with a sufficient stake in the project could not be assembled to build this project, it can likely be built only by the federal government as a public works project. That is, if a merchant company begins construction of the project, it is very likely to fail financially.

V. No feasibility study for the project has been done

A. The DEIS does not list those utilities that could potentially buy SunZia power and an evaluation of how much they might purchase. *SunZia can only be paid for by utilities buying power*. This project cannot be built without first assessing whether these utilities are likely to purchase sufficient power through SunZia's transmission system quickly enough to financially support building the project.

B. *No assessment is made of how these utilities plan to meet their Renewable Energy Portfolio Standards* and whether those plans include importing energy and how much, if so. Arizona Public Service and Tucson Electric Power have focused on meeting their requirements with in-state, locally generated sources.

C. *No compilation of projected load growths for these utilities is included* and, most importantly, the rates at which this load will grow. Assessing this rate is critical to knowing whether power purchases can pay for the project in the required time frame.

D. No assessment is made of current utility plans to meet this growth and whether SunZia is needed to do so. That is, no assessment is made of the probable locations of future generation facilities that utilities plan to use to meet demand.

E. Assessing the rate of load growth and how utilities plan to meet that growth – especially with the use of renewable energy – is a baseline measurement for

determining whether use of SunZia will grow quickly enough for the project to be economically viable and pay for itself. As noted above, this assessment has not been done.

F. No summary is made of Energy Efficiency Standards requirements, how they will reduce load growth, and how this reduction will affect the economics of this project.

VI. No arrangement has been made for the transmission capacity needed beyond the Pinal Central substation to deliver power to California or Nevada

A. The lack of arrangements with California and Nevada users to provide transmission capacity for their own use will greatly reduce Arizona's ability to develop its own solar resources in central and western Arizona. Usurping this capacity for out-of-state use would exhaust critical in-state transmission capacity.

B. The lack of this needed capacity could seriously impair Arizona's ability to deliver power from the Palo Verde hub to the Southeast Valley area and southeastern Arizona, again by having transmission capacity removed from in-state use.

C. *If this project is to deliver power to California, at a bare minimum it must extend a 500-kV line from the Pinal Central substation to the Palo Verde hub west of Phoenix*. Any power delivered to California must pass through this hub, and the SunZia Project makes no provision for this. Using existing Arizona transmission capacity to reach the Palo Verde hub severely impairs Arizona's ability to meet its own in-state power needs.

VII. The lack of a market for New Mexico's renewable energy

A. California will meet its Renewable Energy Portfolio requirements without imported power and has warned against building projects such as SunZia.

B. Arizona is projected to easily meet its Renewable Energy Portfolio requirements without imported power.

C. Nevada utilities have purchased sufficient renewable energy credits to meet their required Renewable Portfolio Standards through 2029.

D. This lack of a market could easily result in the economic failure of the project.

E. In the past, solar projects in southwestern New Mexico such as New Solar Ventures Solar Torque have not been built because they could not find a buyer for the power, not because they lacked transmission capacity. This Solar Torque Project is specifically referenced by the DEIS as support for building SunZia.

F. No renewable energy project will commit to using SunZia without committed power purchase agreements beforehand. While some companies may have expressed interest in using SunZia capacity for renewable projects, the lack of such purchase agreements vastly increases the risk of building this project.

VIII. No consideration is given to competing transmission projects that accomplish similar objectives but with less environmental impact

A. Southline Project (southwestern New Mexico and southeastern Arizona)

B. Centennial West Clean Line Project (northern New Mexico and Arizona)

C. High Plains Express Project (central New Mexico to central Arizona)

D. Lucky Corridor Project (northwestern New Mexico)

E. Power Network New Mexico (central to northwest New Mexico)

IX. The representation of jobs related to the project is inadequate and misleading

A. The actual number of jobs created by the project is not given, nor is the number of workers that SunZia would hire for construction. Only total job-years of work associated with the project are given, making it very difficult to assess actual employment.

B. No actual employment numbers are given for Arizona and New Mexico, only total global job-years of work to complete the project. Half or more of these job-years of work may be outside these states.

C. Wildly unrealistic numbers are used for job projections for photovoltaic plants, resulting in a highly unrealistic number for jobs available in New Mexico to construct these plants.