

Thank you for your comment, Pat Richards.

The comment tracking number that has been assigned to your comment is SolarS50051.

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Solar Energy Development PEIS
Comment ID: SolarS50051

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Comment Submitted:

Thank you for requesting my input in the scoping process for this PEIS. For scoping purposes I provide the following input.

The following should be included in the PEIS:

-A requirement for the environmental review of each proposed solar energy system to include a full life cycle cost-benefit energy study to determine whether or not the proposed system would result in a net energy increase or decrease. This analysis should cover the full life cycle of the system, from mining of raw materials to shipping, manufacture, assembly, installation, operation, maintenance, and disposal. The analysis should provide a full and realistic accounting of energy inputs required (consumed) by the system and energy outputs (produced) by the system. Without such a full life cycle energy cost-benefit study for each system it may not be possible to determine whether a proposed energy system would result in a net energy loss or gain. Without such an assessment there may be no way to determine whether or not a proposed system would consume more energy than it would produce over its full life cycle. Such an assessment would determine whether or not a proposed solar energy system would really be a net energy producer.

-A requirement for the environmental review of each proposed solar energy system to include a full life cycle greenhouse gas emissions assessment to determine the total amount of greenhouse gas emissions that would result from each proposed energy system. The emissions assessment should be conducted on the full life cycle of the proposed energy system, from mining materials to transport, manufacture, assembly, installation, maintenance, and disposal. Total emissions should be standardized to a common unit of measure, such as CO2 emission equivalents. The greenhouse gas emissions assessment should be compared to the energy cost-benefit study to determine whether or not, and by how much, each system would result in more or less greenhouse gases than fossil fuels for the same amount of net energy provided by the system if the system does result in a net production of energy.

-A requirement for the environmental review of each proposed solar energy system to include an analysis of impacts to the following resources: 1. Public Safety, including fire risks from systems and how systems will be secured from tampering; 2. Public Services, including who will be responsible for responding to potential fires at or resulting from systems and transmission lines and who will be responsible for security from theft or arson; 3. Environmental Justice, including the working conditions of laborers in the U.S. or other countries who would be making the solar energy systems; 4. Utilities, Infrastructure, and Roads, including the construction of new roads to access the systems for construction and long-term maintenance; 5. Hazardous Materials, including disposal or recycling of toxic substances in the system and prevention and cleanup of potential releases into the environment; 6. Transportation, including how panels will be shipped to and removed from their locations of use; 7. Climate Change, include heat island effects of solar energy systems covering potentially large surface areas and greenhouse gas emissions resulting from the full life cycle of each system (see above); 8. Irreversible Commitments of Resources, including the types of minerals used in the systems and the amount of energy consumed by each system (see above); 9. Air Quality, including air quality impacts at the places where materials for the solar energy systems would be mined; 10. Earthquakes, including whether or not systems would fail or have to be re-aligned in the event of tremors and earthquakes.

-A requirement to establish rules indicating how each solar energy system would mitigate its own greenhouse gas emissions. It is recommended that each solar energy system would be required to operate until it would offset its own greenhouse gas emissions

before any remaining benefits of its operation could be calculated toward offsetting or mitigating greenhouse gas emissions from other projects or releasers of greenhouse gases.

-Inclusion of space solar power as an alternative in the types of solar energy technologies addressed. Space solar power should be addressed in the PEIS because it may represent a solar energy alternative that is environmentally superior to the other solar energy systems so far identified in the PEIS scoping literature. For example, space solar power may be able to provide much greater quantities of energy more reliably and with fewer greenhouse gas emissions and few impacts to wildlife and archaeological resources than other solar energy systems. At a minimum, the environmental review of each proposed solar energy project should include a comparison, by each resource area, to the potential environmental impacts of generating the same amount of energy from the implementation of space solar power.