

November 1, 2021

TO: Amy Hafkemeyer, Energy Facility Site Evaluation Council  
FROM: Malcolm Rooper, resident of East Wenatchee  
SUBJECT: Proposed Badger Mountain Solar Energy Project, Docket #EF-210747

I have a number of questions about this proposed solar energy project that I hope your office is able to answer:

1. Why is Douglas County selected as the proposed location? Certainly, Douglas County has large amounts of sunshine every year. However, Douglas County has perhaps the least expensive electrical energy of any county in the country at 2.3 cents per kWh. So, assuming this project intends to deliver power to the grid, how can it compete with inexpensive power from Wells Dam? Why not install such a large solar farm in a place where power is much more expensive such as California where sunshine is also abundant?
2. Please inform who are the intended buyers and consumers of this extra power from the solar farm and if they are taking the full output from this solar farm. If they are not taking the full power, then how much power are they taking?
3. Please confirm if the project intends to deliver power from this solar farm to the grid (as opposed to using all of its generated power on site for some unspecified use such as a hydrogen production plant).
4. Please confirm the companies sponsoring this 200 MW solar farm project are covering the full cost of transmission lines to connect this power source to the grid.
5. During a period of heavy snow melt in the spring months in some years there has been more hydroelectric power available from Wells Dam than the power grid is able to transmit and the Wells Dam has had to spill (i.e., waste) excess water. This situation has been made worse from new wind farms added to the power grid. In about 2012 a court ruled in favor of wind farms that wanted to avoid losing revenue as well as their production tax credit money during periods of having more power generation available than the capacity of the transmission system. So, when the power grid itself is the bottleneck preventing it from accepting more power generation, the dams had to cut back on power generation, and sometimes spilling water. Please confirm that during times when the grid itself cannot accept additional power that the companies sponsoring this 200 MW solar farm project will either (a) curtail their power production as opposed to asking the dams on the Columbia River to curtail their power production or (b) pay the cost to upgrade the transmission lines to accept all of the available power generation.

6. It seems somewhat nonsensical from an environmental viewpoint for one clean energy source such as wind or solar to be displacing another clean energy source such as hydroelectric. Does it not make more sense to locate a solar farm in an area where it displaces electrical energy from a coal fired power plant? If Congress were to pass a carbon tax, would this completely change the economics of where to locate such a large solar energy farm? If so, does it make sense to wait and see which direction Congress will go regarding a carbon tax?
7. The rated capacity of the Wells dam on the Columbia River is about 840 MW, but the average power generation for dams on the Columbia River is roughly half of their full capacity. This puts the average power generation at about 400 MW. So, the addition of 200 MW of power can have a significant impact on the electrical system. Are there any costs associated with the ability of Douglas County PUD to be able to accept such a large and variable load, and are all of these costs to be covered by the companies sponsoring this large solar farm? That is, if Douglas County PUD must make modifications to its system due to such a large and variable load, are the companies sponsoring this 200 MW solar farm going to pay Douglas County PUD for the full cost of the required modifications?
8. The solar farm project describes the addition of 200 MW of battery energy storage to be “optional.” Why would this be optional? If a passing cloud should fall over the solar farm at noon on a sunny day, the output from the solar farm can drop very quickly from 200 MW to near zero, and conversely the output could jump very quickly from near zero to 200 MW. Such a sudden change of 200 MW in the power generation to the Douglas County transmission system with a load of about 400 MW can surely create enormous problems. It would seem that a battery energy storage system would help to stabilize the electrical system—so, again, why would it be optional?
9. The project simply describes the battery energy storage as having a capacity of 200 MW. But for how long can it provide 200 MW of backup power? Is it for 15 minutes? Two hours? Four hours? What scenario dictates the required period of battery backup power, and what is this required period of time?
10. What fraction of the total installed cost of the solar energy farm is to be paid for with tax credits? The intention of Congress in authorizing solar energy tax credits was to offset carbon emissions. However, in Douglas County where all power is hydroelectric, the addition of a large solar energy farm does not offset carbon emissions. Is the use of tax credits for a solar energy farm not an abuse of the system?
11. Is the project economically viable without tax credits?
12. Is the project economically viable if the 200 MW of battery energy storage is a requirement?