The Drawbacks of Large Solar Farms

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Photo by Priamo Mendez on Unsplash

Earlier this week, I attended a hearing about the proposed 2,000-acre solar farm in Pontotoc County, Mississippi. Over 50 local residents were present at the hearing, which was led by Public Service Commissioner Chris Brown.

The community's concerns were valid, focusing on how such a massive project would affect their property, way of life, and the future of their area. What struck me the most was the misinformation being spread by the very people entrusted with representing Pontotoc County citizens. Many residents had contacted their county supervisors, only to be told that these officials had no involvement in the project. However, it became

clear during the hearing that this wasn't true. In fact, the project cannot move forward without the unanimous approval of the county supervisors, which directly contradicts what they had been telling the public.

Solar energy has long been heralded as a key solution to the global challenge of reducing carbon emissions and transitioning to cleaner, renewable energy sources. While some believe solar energy is a critical component of the future energy mix, large solar farms also bring with them a number of potential drawbacks, both environmentally and economically, that must be carefully considered. Here are some of the primary negatives associated with large solar farms:

1. Land Use and Habitat Destruction

One of the most significant issues with large-scale solar farms is the amount of land they require. Solar farms are land-intensive projects. In areas where land is a scarce or valuable resource, such as agricultural regions, the installation of large solar farms can displace farming activities, potentially leading to reduced local food production and harm to rural economies.

Beyond the economic concerns, the environmental impact can be equally damaging. The large tracts of land needed for solar farms often involve clearing habitats that support wildlife, potentially disrupting ecosystems. Deserts, where many large solar farms are located, may seem barren, but they are home to a range of species adapted to the harsh environment. Building solar farms in these areas can destroy habitats for plants and animals, potentially threatening endangered species.

2. Energy Efficiency and Intermittency

While solar energy is clean, it is also intermittent. Solar farms only produce electricity during daylight hours, and their efficiency is impacted by weather conditions, cloud cover, and the angle of sunlight. At night or during overcast days, solar farms cannot generate energy, necessitating the use of battery storage or backup power sources like natural gas plants. This intermittency can be particularly problematic on a large scale, where consistent, reliable energy supply is crucial for maintaining grid stability.

Moreover, large solar farms tend to be less efficient compared to small, localized solar installations. The further the energy travels from the solar farm to its point of use, the

more energy is lost in transmission. This inefficiency can offset some of the environmental benefits, especially when the infrastructure to store and transport the energy is insufficient.

3. Environmental Impact of Manufacturing and Disposal

The production of solar panels is not without environmental cost. The process of manufacturing solar panels involves mining and processing minerals such as silicon, silver, and rare earth elements. These materials are often extracted in countries with less stringent environmental regulations, leading to environmental degradation, water contamination, and significant carbon emissions from mining operations.

In addition, solar panels have a finite lifespan, typically lasting around 25 to 30 years. At the end of their life cycle, they need to be disposed of or recycled. Currently, the recycling infrastructure for solar panels is still underdeveloped, and a large proportion of old panels could end up in landfills, contributing to environmental pollution.

4. Impact on Local Communities

Large solar farms can have mixed effects on the communities they are built in. While they may bring temporary jobs during construction, these are often not long-term. Once operational, solar farms require minimal staff to maintain. In some cases, communities may feel that the aesthetic impact of large solar farms, which can cover hundreds or even thousands of acres, detracts from the natural beauty of the landscape. This can lead to reduced property values and decreased tourism in areas that depend on natural vistas.

Conclusion

The challenges of land use, energy intermittency, environmental impacts of manufacturing, and the effects on local communities highlight the need for a balanced approach. In order to fully benefit from solar energy, it is crucial to weigh these negatives against the positives and to continue developing more efficient, less disruptive ways of harnessing solar power. Decentralized solar installations, improvements in battery storage, and advances in recycling technology are just some of the ways that solar energy must evolve to minimize these drawbacks.

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Angie Brummett Sep 25

Just say no to solar farms. The best use of solar energy is to grow plant materials of all types. Not considered in anyvreports is the loss of OXYGEN PRODUCTION by covering up the land and preventing the growth of plants which convert CARBON DIOXIDE TO OXYGEN. That is still very important to our planetary health and ours.

Also new research has shown that solar farms CHANGE WEATHER ABOVE AND AROUND THEM; creating more potential for severe weather events, ie. Tornados.

For these reasons and the above stated impacts, vote NO TO SOLAR FARMS.

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Robert Callegari Sep 26

All forms of energy generation impact the environment in a negative way. Have you been to a refinery? They continue to negatively impact the communities as they have since they were constructed. Cancer belt in south Texas and Louisiana are prime examples.

Solar while a severe drain at start-up begin to recover without the continuous pollution of the petrochemical industry.

Short sighted to keep calling solar a negative drain on communities. Mississippi just “invested” in battery production and huge energy draining Amazon plant while demonizing

“green” alternatives. Can’t have growth without some changes.

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