
Is Pittsburgh International Airport's New Energy Microgrid Sustainability In Action Or The Opposite?

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Pittsburgh International Airport (PIT) announced this week that it is establishing a microgrid to supply power at the airport, connected to the main electrical power grid in case of emergency but otherwise separate from it.

As microgrids are becoming increasingly popular in the United States due to their efficiencies and the ability to generate power even when the main grid is unavailable, this is not tremendously newsworthy per se. However, what is newsworthy is that most of the power for the microgrid will be supplied by the 14 producing Marcellus Shale natural gas wells at the airport, all of which will provide gas to five natural-gas fired generators. In addition, PIT will build an array of 7,800 solar panels. To construct and operate the grid, PIT entered into a 20-year agreement with utility Peoples Natural Gas, which will connect the gas wells, get the solar panels installed, and make a \$30 million investment. PIT claims it will not pay out of pocket at all for the microgrid.

This microgrid concept is being touted as an example of modern sustainability, and also as an example of how solar power can play a much larger role in providing our energy needs. All of this being true, at its core the microgrid still rests on the back of the Marcellus Shale gas wells located within the airport proper. As with other airports, such as Dallas-Fort Worth International Airport (DFW), PIT generates large revenue streams from the leasing of its land for subterranean shale gas drilling. However, this would be the first time that a large hub airport sets up its own microgrid to power itself, increasing its energy security in case of power problems like brownouts, storm damage, or other occasional problems with the grid. Along with DFW, which also leased its acreage for oil and gas drilling, Los Angeles International Airport (LAX) sits adjacent to the Inglewood Oil Field, the largest urban oil field in the country. Both would seem to be candidates to explore such a self-contained microgrid.

Development of a power microgrid, however, raises the basic question: Is this microgrid concept something to exalt or condemn? It dramatically increases the presence of renewable solar energy for airport operations, but its core remains fossil fuels. The fact that PIT's agreement is for 20 years means that the Allegheny County Airport Authority, which operates PIT, does not believe that it can convert to operate the airport using only renewable energy within the estimated 10 to 12 year time frame in which climate experts tell us we must transition away completely from fossil fuels. Is this then a major positive step on the road to

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a more renewable future or an inappropriate locking in of destructive fossil fuel technology and dependence that does not divest quickly enough from fossil fuels?

At a more esoteric level, is this an example of “sustainability,” a concept that seems to have innumerable definitions? In establishing such a microgrid, PIT is opting to sustain itself using power produced either entirely or overwhelmingly onsite. This is good not only for the airport’s energy security, but indeed for the security of our country. The more we can power major arteries like airports using sources available onsite, with utility backup in case of emergency, the less likely it would be that a terrorist would be able to target our infrastructure and cause mass dislocation and disruption. However, the microgrid still uses fossil fuels, which by their definition are not renewable.

It is this tension between gradual steps forward and the absolutist demands for immediate action to combat climate change that increasingly will play out both in America and around the world. Last week in London the radical climate group “Extinction Rebellion” disrupted London’s underground train service with protests that included people actually climbing on top of train cars. That did not go over well with commuters, who dragged some of the protestors off the train tops and beat them. In the Netherlands, Dutch farmers swarmed The Hague with tractors, upset with Holland’s nitrogen rules that they believe unfairly fall upon them.

Will similar protests happen in America? Certainly, they will from the radical environmental groups like Extinction Rebellion, but the more important ones are the Dutch farmers, resembling the larger protests of the French “Yellow Vesters”, who donned the garb of highway workers to protest climate policies they believe force them to pay the lion’s share of any energy transition. If we in America do move dramatically to try to cut carbon emissions or make other large moves for the purpose of fighting climate change, they will need to be of a type that is felt to be impacting rural and urban residents fairly.

Thus, if reaction to the Pittsburgh microgrid concept is positive, it likely will mean that people feel this is a good way to accomplish numerous societal goals without taking radical steps. If, instead, the reaction is that this is too dependent on fossil fuels, it means the public may be insisting we move farther and faster. We then would have to conceptualize what those moves would be. How society reacts will tell us much about how truly dire we feel the climate situation to be, and how far and quickly we are willing to go in response.

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