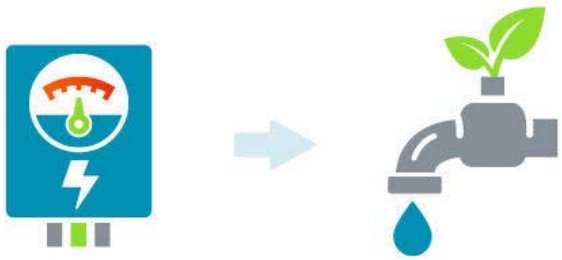
Morgantown Apartment Complex participates in a Virtual Power Plant

By STACEY DABALDO • 4 HOURS AGO



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CREDIT MOSAIC POWER

Traditionally, electricity is turned on and off on a demand-only basis, with physical power plants only generating electricity when it's needed for use. However, a Maryland-based power brokerage company, Mosaic Power, has come up with a way to make our energy consumption more efficient without changing our lifestyle.

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Mosaic CEO Laurie Vaudreuil says, "And you can think about that like a car driving in traffic, where if you stop and start all the time, it's very, very poor fuel efficiency. But if you drive at a steady 55 miles an hour all the time, it's very good fuel efficiency. So that's what we're offering the power grid, is a way to let generators drive 55."

Mosaic's solution is a virtual power plant, and it all starts by connecting our water heaters to a cellular network. The system monitors the patterns of supply and demand on the power grid and recognizes when electricity is being over-generated.

Electricity levels fluctuate all day and even every minute. When there's an excess of power, the network responds by firing up more water heaters to do their job now rather than later. Then it communicates to the generators to lower their output.

By steadying the supply of electricity at a lower level, less carbon is emitted without changing the electricity demand. Joey James of Downstream Strategies adds, "This smart grid technology will bring West Virginia into the 21st century of virtual power plants."

Vaudreuil compares Mosaic to a stock market of electricity. Mosaic's job is to stabilize the demand by trading excess electricity with other power companies who need it. Just like buying and selling stock, Mosaic gets paid by how well they respond to momentary changes in the market.

This summer, Downstream Strategies and the Morgantown Municipal Green Team have paired up with Mosaic as part of the third phase in their project to limit the city's greenhouse gas emissions. So far, one multi-unit apartment complex has signed up to participate in the virtual power plant, Mosaic is withholding the landlord's name to protect its client's privacy.

Vaudreuil says that every standard water heater produces one and a half tons of carbon per year. By participating in Mosaic's demand-response technology, most of the energy typically used per water heater is saved, significantly reducing its carbon emissions.

Mosaic doesn't charge for its services and pays its clients $100 per water heater every year. That adds up to $28,000 every year for this Morgantown apartment complex. Vaudreuil says the added income can even help improve low-income housing statewide.

"Sometimes when we go into low income apartment complexes, it's offsetting money they used to get from government grants that's no longer available," Vaudreuil says.

Both Downstream and Mosaic say the extra income is a great way for property owners to install solar and other cost-saving measures without raising rent. In an effort to cut carbon emissions in West Virginia and in the region, the team is looking for more apartment complexes and single-family homes to participate in the program.

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