



Energy storage project: a game changer



Leading-edge research

Avista's Energy Storage Project in Pullman, Washington, is the latest example of Avista's history of innovation and commitment to forge our energy future.

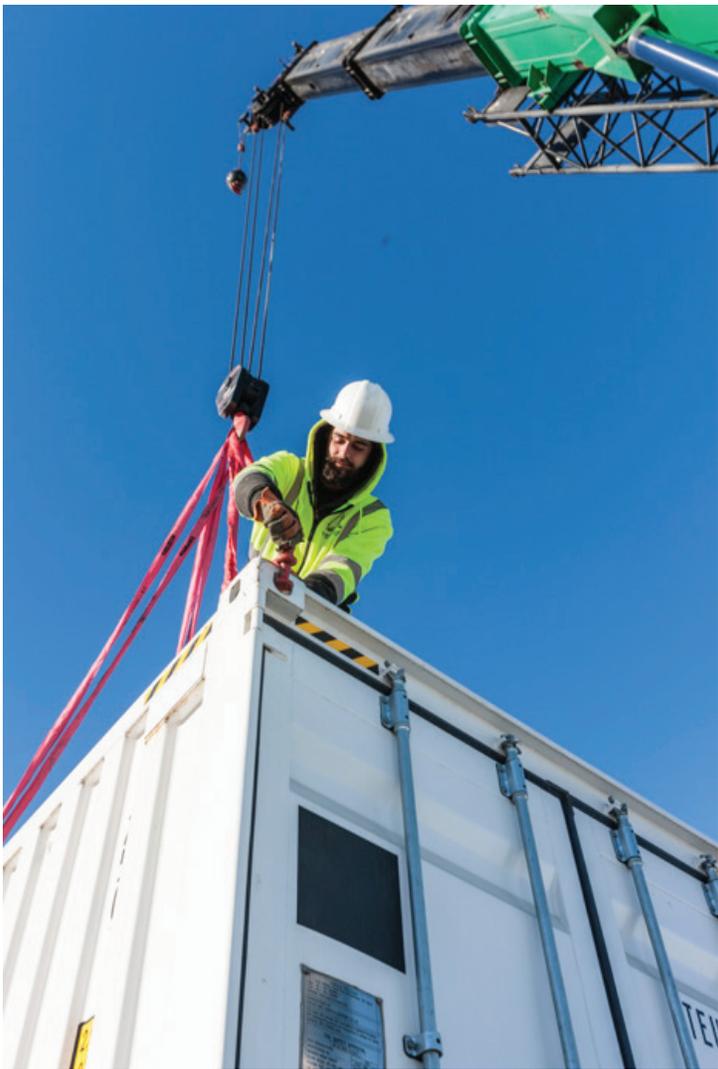
Avista's leading-edge energy storage research will help address one of the biggest challenges facing today's energy industry: How to integrate power generated from intermittent, renewable resources such as wind and solar into the electrical grid. We'll also examine better ways to improve power system reliability.

The missing piece

We all expect reliable energy when we need it. But electric energy—including power from renewable resources—must be used as soon as it is generated. So if the wind isn't blowing or the sun isn't shining during times when people need the most energy, it is not always possible to meet demand.

Avista's Energy Storage project is testing new batteries that can store power when it's abundant and distribute energy when it's needed, providing reliable energy to our customers regardless of weather patterns.

Energy storage could be the missing piece to solve the puzzle of integrating renewable resources into the electric grid.



Creating a more reliable, resilient and flexible grid

Over an 18 month period, Avista has been this large-scale energy storage system in seven different scenarios. Thanks to our partners at Schweitzer Engineering Laboratories, we have been conducting these tests in a real-world setting, which provides an added benefit to our research.



While examining the potential of battery storage as a back-up energy source during a power outage in manufacturing facilities where reliability is critical to operations, we have experienced the challenges that came with implementing any new technology. Since battery power is available almost instantaneously, it can provide flexibility for sudden fluctuations in power supply or demand.

Investing in forging our energy future

When Avista's Energy Storage Project went online in April 2015, it was the largest-capacity, vanadium-flow battery system in North America and Europe.

The one-megawatt, 3.2 MWh large-scale battery storage system has the capacity to power 750 homes for 3.2 hours.

The \$7 million project is funded by a \$3.2 million grant from Governor Inslee and the Washington State Department of Commerce's Clean Energy Fund and another \$3.8 million in Avista matching funds.

In recent years, Avista has invested \$80 million in combined Avista and federal matching funds from the Department of Energy to modernize our grid. As a result, our customers are experiencing fewer and shorter power outages. And we've improved the energy efficiency of Avista's entire electric distribution system.

"Avista is an invaluable partner in our efforts to design, demonstrate and deploy new clean-energy technologies here in Washington state that hold so much promise for revolutionizing our nation's power grid."

Governor Jay Inslee
State of Washington

Avista's goal is to explore how energy storage can help our electrical grid become more flexible, more reliable, and more resilient. The lessons we learn will benefit ALL of our customers, the industry as a whole and could transform the nation's power grid.

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