

# Shared Energy Economy Model Pilot

Urbanova is defining how to develop and design a living laboratory as well as harnessing data to gain insights, empower people and solve urban challenges in new ways. Avista's Shared Energy Economy Model Pilot will test the integration of energy assets – from rooftop solar and battery storage to building energy management systems – that can be shared and used for multiple purposes. Our goal is to demonstrate how both the customer and the utility can benefit from this shared energy economy model and demonstrate that the electric grid can become more reliable, efficient, resilient and flexible.

## WHAT THE SHARED ENERGY ECONOMY MODEL PILOT WILL TEST

- Can solar, battery storage and a building's energy system called distributed energy resources – be coordinated with each other to more effectively meet a community's energy needs? For example, coordinating solar generation with the power grid to allow for more renewable or more cost-effective generation.
- Can energy storage and available solar generation be coordinated with the energy needs of nearby buildings to maximize the local use of renewable energy? For example, shifting local building energy usage to times when there is a lot of solar generation.
- Can a group of buildings working together with the power grid be more economical and efficient than if the buildings were working independently? For example, coordinating the peak energy need among a group of buildings to minimize the impact to the power grid and to reduce the need for the local energy provider to build more infrastructure to meet growing energy demand.
- Can distributed energy resources, such as solar and battery storage, allow for a better solution for emergency backup power? For example, if a weather event causes a major outage on the grid, can solar and energy storage provide power to meet a building's critical energy needs and possibly provide excess power to a neighboring building?

A shared energy economy can benefit both the customer and the utility. This pilot project will allow us to test and measure all possible outcomes and benefits.

## TIMELINE

### 2018

- Installing two 100KW rooftop solar arrays on two Washington State University buildings located in the University District in Spokane
- Upgrading the existing building management systems in the two buildings.

### 2019

- Installing two battery storage systems near the two solar arrays
- Commissioning the system and beginning to perform demonstrations
- Quantifying the value of shared energy economy concepts when all demonstrations are completed. This will demonstrate the value of the different optimization methods.

### 2020

- Shared Energy Economy Model Pilot completed.

## PARTNERING FOR SUCCESS

Avista, an Urbanova founding partner and Shared Energy Economy Model Pilot lead, was awarded a \$3.5 million matching grant from the Washington Department of Commerce Clean Energy Fund to pilot a shared energy economy. The pilot will take place in Spokane's University District. Other current partners in the model pilot include Washington State University, McKinstry, Schweitzer Engineering Laboratories, Spirae, Itron and Pacific Northwest National Laboratory (PNNL). As an organization dedicated to finding ways to make communities better for people, Urbanova helps Avista and its partners amplify the results of the Shared Energy Economy Model Pilot, tell the story and curate data and insights that will lead to future sharing of economy solutions.

