



## **Distribution Resource Planning**

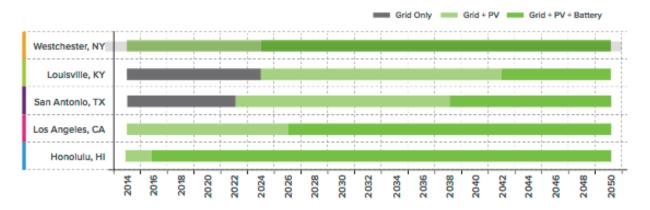
**Enabling Energy Service Valuation for a Shared Energy Economy** 

Curtis Kirkeby, P.E. Fellow Engineer Avista Utilities

## **A Different Utility Future**

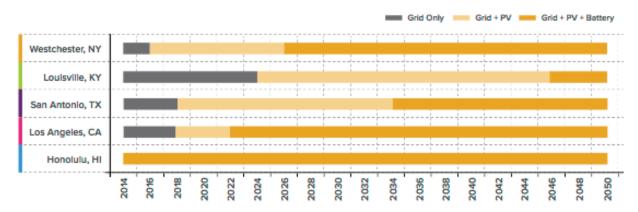
#### FIGURE ES1:

ECONOMICALLY OPTIMAL SYSTEM CONFIGURATION RESIDENTIAL



#### FIGURE ES2:

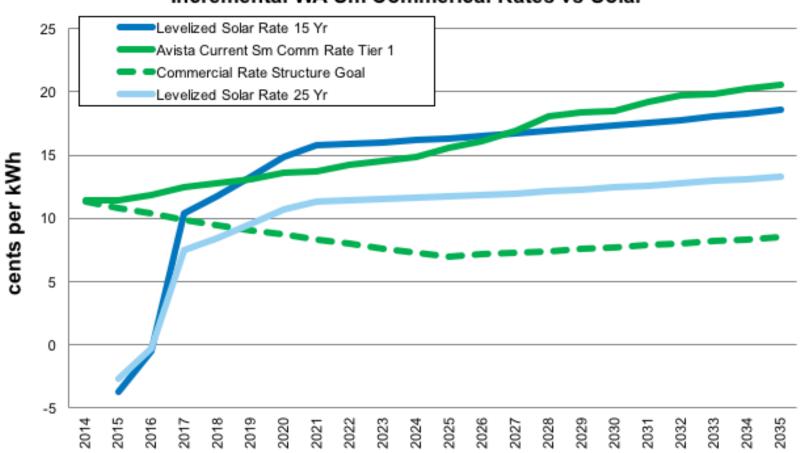
ECONOMICALLY OPTIMAL SYSTEM CONFIGURATION COMMERCIAL





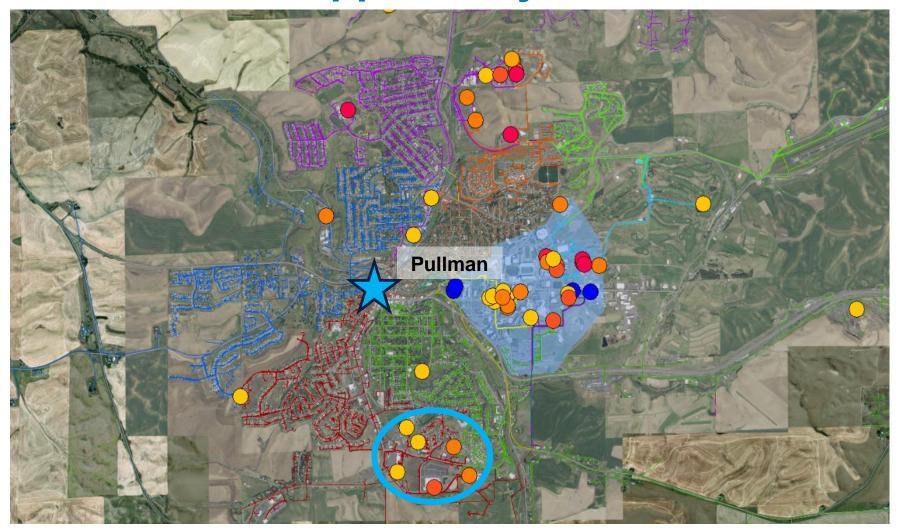
## **Reality Today**

### Incremental WA Sm Commerical Rates vs Solar



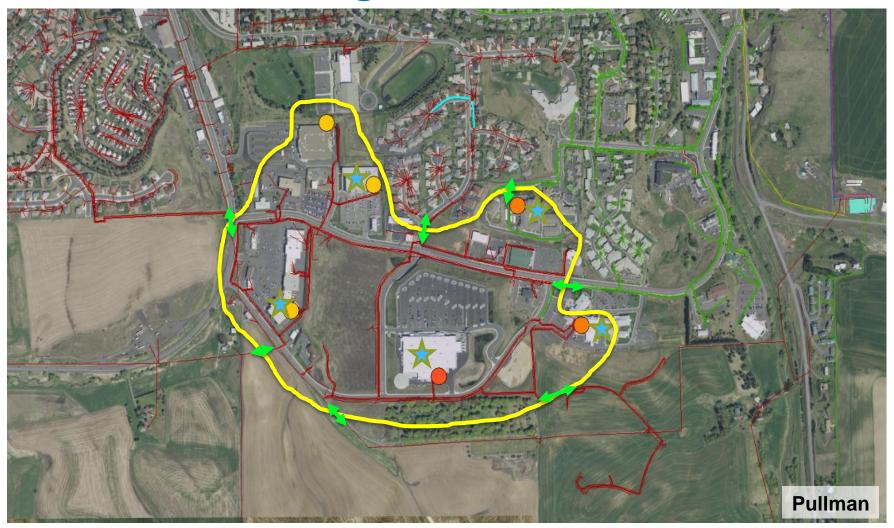


# **Commercial Opportunity**



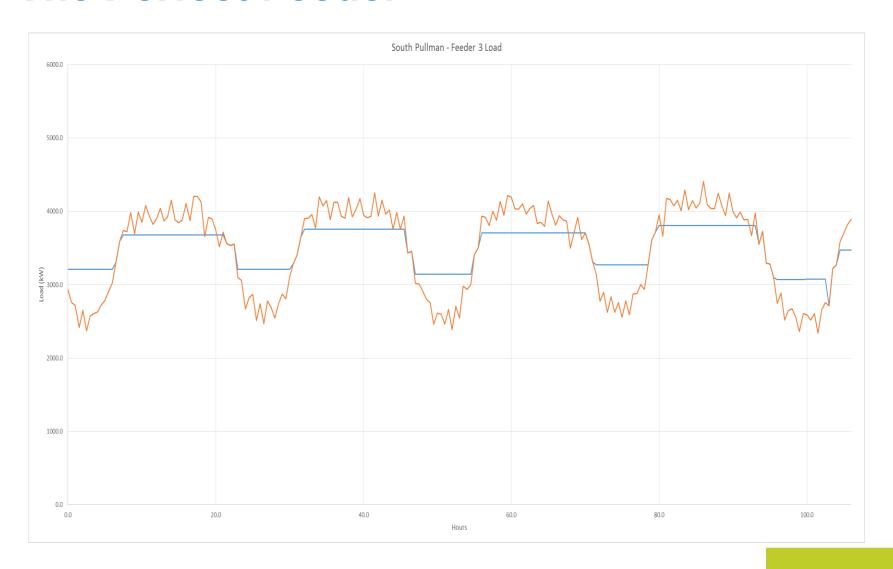


# **A Natural Microgrid**



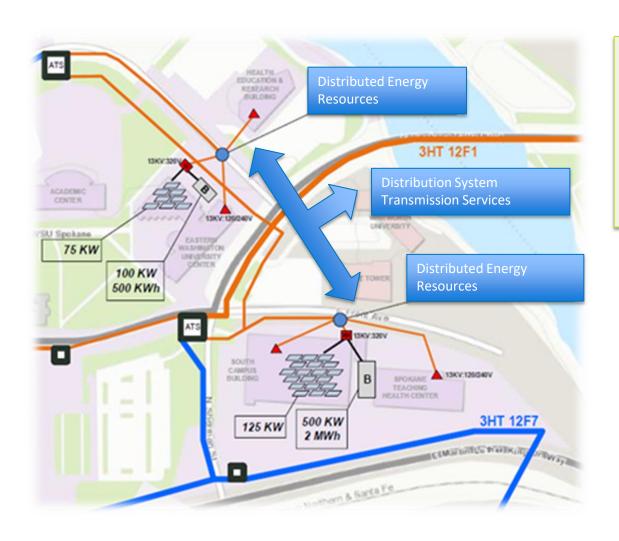


## **The Perfect Feeder**





## A Shared Energy Economy



\$3.5M grant from the Washington Clean Energy Fund to Avista

Demonstrate how a Shared Energy Economy can benefit both consumer and utility

### Goals

Efficiency and optimization of groups of DER assets: storage, solar and buildings (economies of scope)

Resilient operation while islanded during system outages

Simulation of a transactive energy market (PNNL)



## **Questions**

