



Water To Wire Heating Homes with Hydro

SEAPA



Southeast Alaska Power Agency

Fun Facts

About SEAPA

2nd Largest Electric Transmission System in Alaska

Tyee: 3rd highest-yield hydro in Alaska

Petersburg

Wrangell

Tyee Lake

Ketchikan

Swan Lake

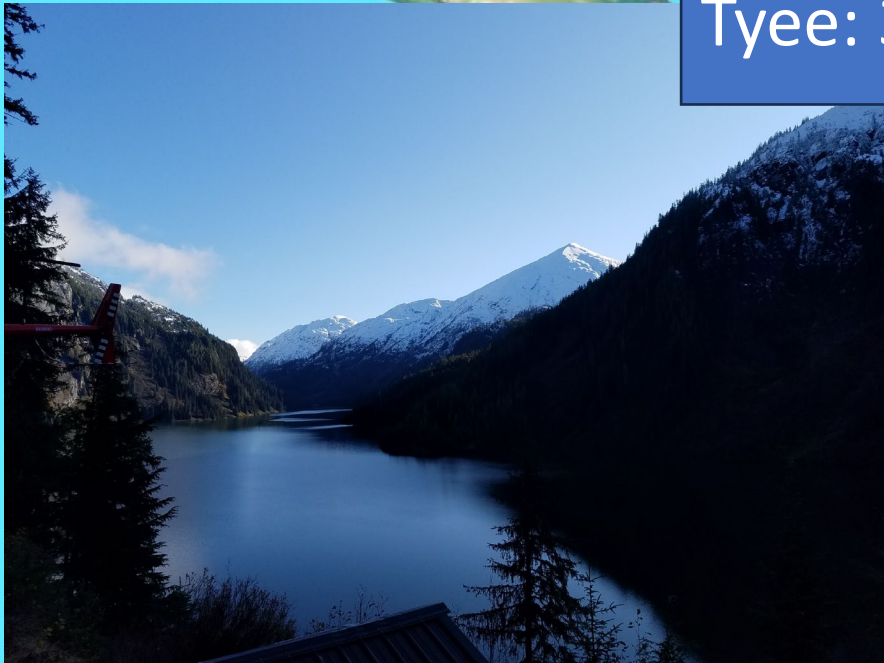
Services 3
Communities

2 hydro plants

175 miles of
transmission

12 miles of
submarine cables

175+ Giga-Watt
hours/year



Your Low-Cost Wholesale Provider



About SEAPA

Swan Lake



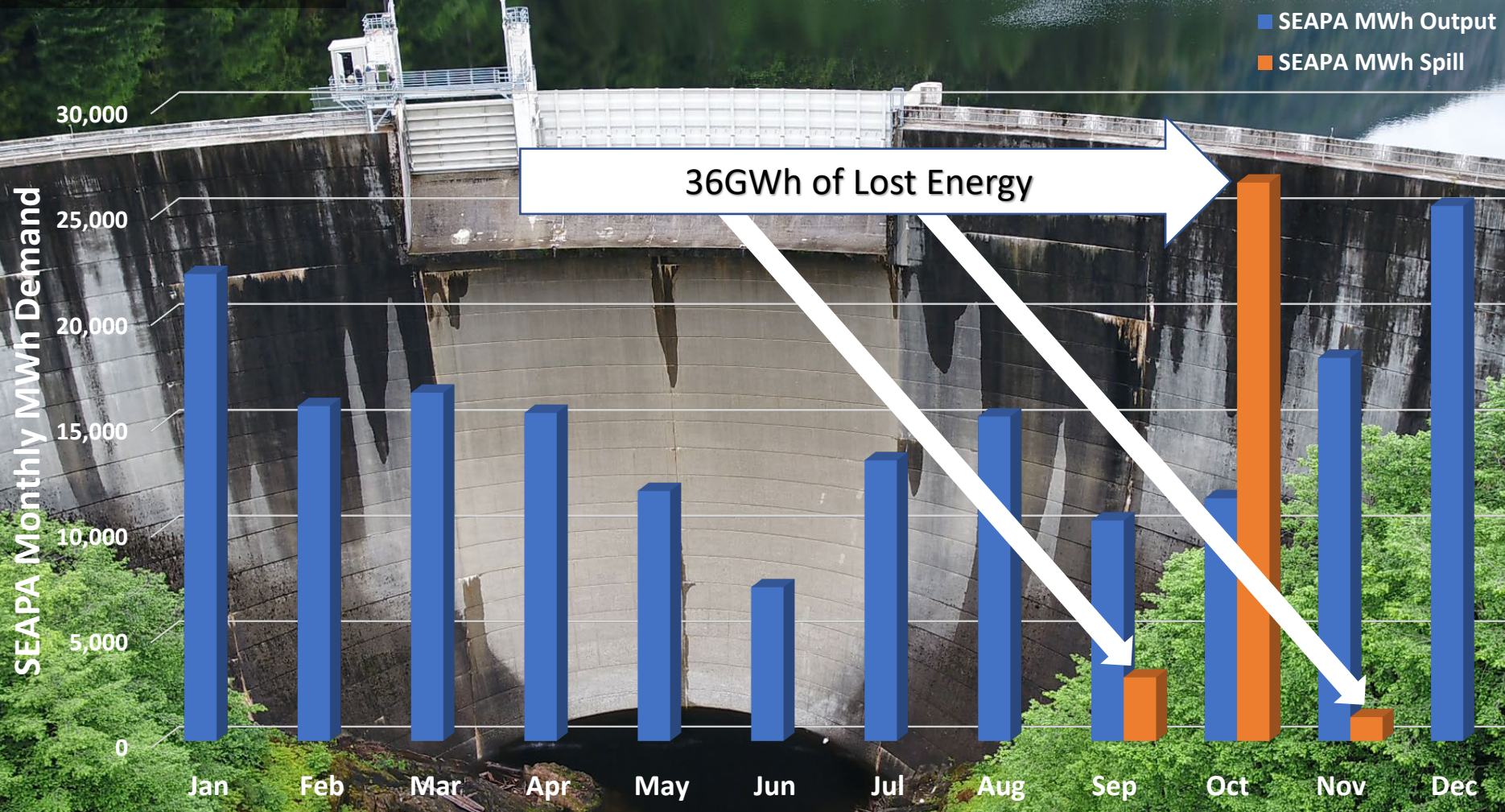
100% Renewable
99% of the time

Your Low-Cost Wholesale Provider



Trend Analysis - Capacity

Capacity & Spill - A Year in the Life of SEAPA: 2022 Megawatt-Hour Outputs



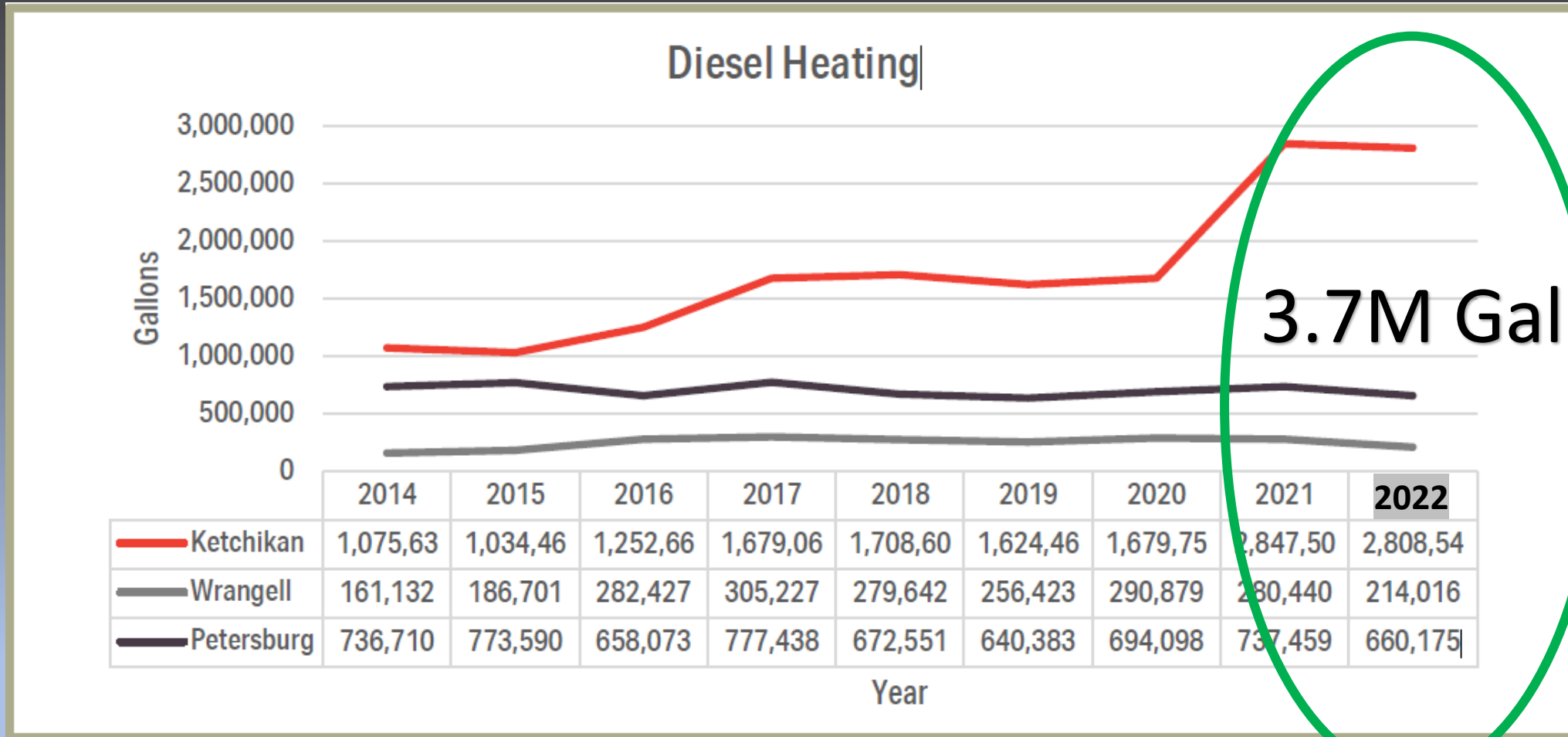
GWh Capacity is
200+GWh

~180GWh
Dispatched in
2022

Average Spill
between
20GWh –
30GWh

Your Low-Cost Wholesale Provider

Trend Analysis – Diesel Heating



3.7M Gal



Your Low-Cost Wholesale Provider



Diesel Heating Calculations

Overview

36GWh of Energy required to convert Fuel Oil Heating to Heat Pumps

=

36GWh spilled Energy in 2022

Existing Fuel Oil Boilers

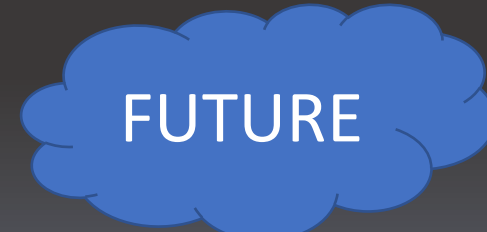
\$4 - \$5 per gallon of Diesel Fuel Oil

Heat Pump Systems

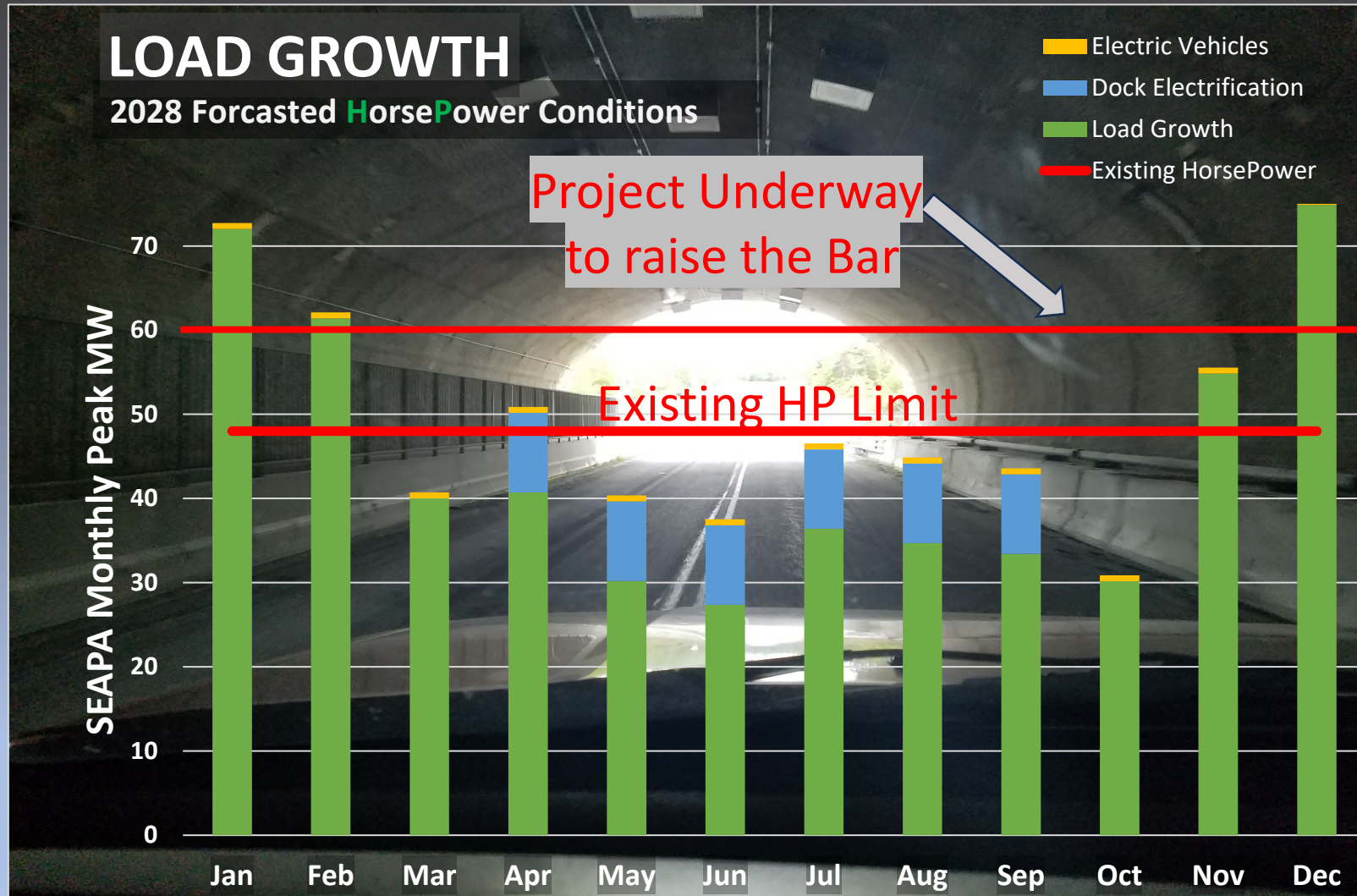
\$1.62 per equivalent gallon of Diesel Fuel Oil

Your Low-Cost Wholesale Provider

Load Growth – Horsepower



FUTURE



Forecasted HP Growth is 2.52%

Heat Pump conversions dock electrification and electric vehicles included

Increase MW from 48MW to 60MW (16,000HP)



Your Low-Cost Wholesale Provider



New Generator at Tyee

FUTURE



Tyee 3rd Turbine

Tyee was built with provisions for another generator

Increase Tyee HP by 50%

Increase SEAPA HP by 25%

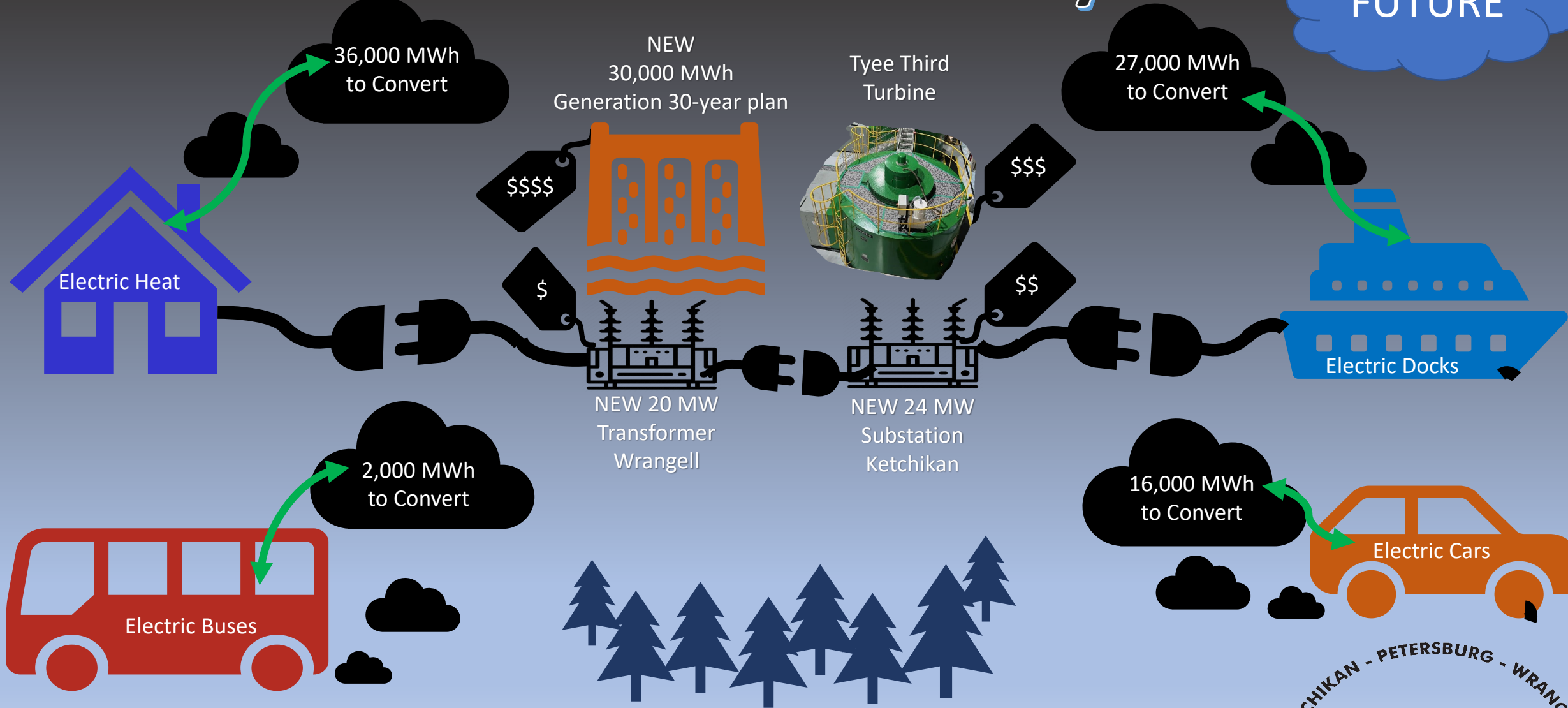
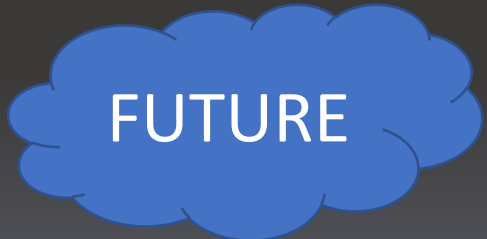
Increase Contingency

Increase Resiliency

Low Hanging Fruit

Your Low-Cost Wholesale Provider

Growth & Reliability



Your Low-Cost Wholesale Provider



Southeast Alaska Power Agency

Questions/Discussion



Your Low-Cost Wholesale Provider

