

## PORT CHILKOOT DISTILLERY: MAXIMIZE ENERGY EFFICIENCY

**ABOUT PORT CHILKOOT DISTILLERY LLC.** Port Chilkoot Distillery is a local family-owned and operated manufacturer and wholesaler of craft spirits beverages. The Distillery has a production facility and an on-site tasting room in the Southeast Alaska town of Haines and has six employees on site. Heather Shade and Sean Copeland started Port Chilkoot Distillery in 2012 with the goal of making something local and unique to share with visitors and Alaskans. The company recently expanded their facility and began exporting products to Washington, California, Illinois, and Michigan. It produces a line of five distilled spirits: 50 Fathoms Gin, Icy Strait Vodka, Green Siren Absinthe, Boatwright Bourbon, and Wrack Line Rye.

**THE CHALLENGE.** The spirits manufacturing process requires consistent heating and cooling of cooking and distilling equipment. The production tanks and condensers are designed to utilize a continuous flow of cold water to cool the distillate. The owners wanted to look at engineering a system that would maximize energy efficiency while reducing water usage and utility costs in their processes.

**MEP CENTER'S ROLE.** The Alaska MEP, part of the MEP National Network™, brought in a University of Alaska College of Engineering student team who collected water flow and temperature data, analyzed the equipment design, researched design options and presented key information to help the business owners understand their options for reducing waste and utility costs. The team presented different options, along with cost analyses, to help the owners make the best decisions in optimizing their manufacturing process.

The overall project found that 10-20 ton chillers would decrease the distillery's annual water usage (currently wasting 300,000 gallons of water each year) make their distillery more eco-friendly, and to create a more consistent and sustainable product. Additionally, a 20-ton chiller would save them \$3.46/month, and integrating a buffer tank would reduce upfront costs by \$25,000.

"The MEP, partnered with the College of Engineering student team, was so enthusiastic and a pleasure to work with. They provided very valuable information for our business decision-making and were highly professional and organized. We really enjoyed the process of working with them and the personalized attention we received on the project."

-Sean Copeland, Owner

## RESULTS



\$25,000 in cost savings



Helped them to make the best decisions in optimizing their current manufacturing processes.



Helped the business owners understand their options for reducing waste and utility costs.

## CONTACT US



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