Whisky & Ramen Restaurant

Full-Service Restaurant & Bar

The Challenge

The Whisky & Ramen restaurant in Anchorage, Alaska, established in 2021, faced energy efficiency roadblocks as they retrofitted the historic three-story, 2,250-square-foot building into a high-end restaurant.

The building, constructed in the 1940s, had outdated mechanical systems including a vintage 1970's era boiler that provided heat at about 50 percent efficiency. This was far below what would be needed for the appliances used to prepare the scratch-made entrees, and support the heated floors scheduled for installation.

Capstone Green Energy's distribution partner Arctic Energy collaborated with the owners to explore an energy solution that also reduced its carbon footprint while saving money.

The Solution

The owners of Whisky & Ramen selected Capstone's C65 microturbine for its ability to provide reliable, efficient power in a compact package. The C65 was particularly suited to this retrofit project because of its high efficiency and combined heat and power (CHP) capabilities, allowing it to meet the restaurant's significant energy and heating needs. Additionally, its small footprint and light weight made it an ideal choice for installation on the rooftop, minimizing impact on the building's structure.

"Here at Arctic Energy, we were excited to support Whisky & Ramen with Capstone's C65 microturbine. It efficiently meets their energy needs while reducing their carbon footprint and operating quietly in downtown Anchorage. The Cay's high efficiency and low maintenance make it an ideal solution for their retrofit, delivering significant cost savings."

— Greg Porter,
President/CEO at Arctic Energy Alaska

Power Profile

Customer
Whisky & Ramen Restaurant

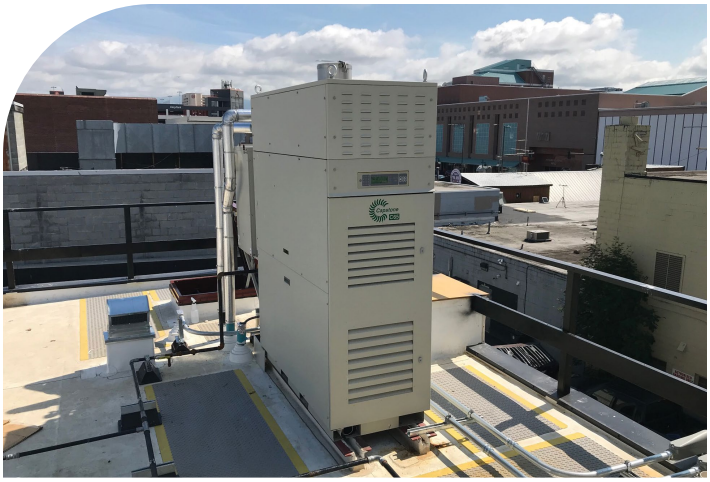
Location
Anchorage, Alaska

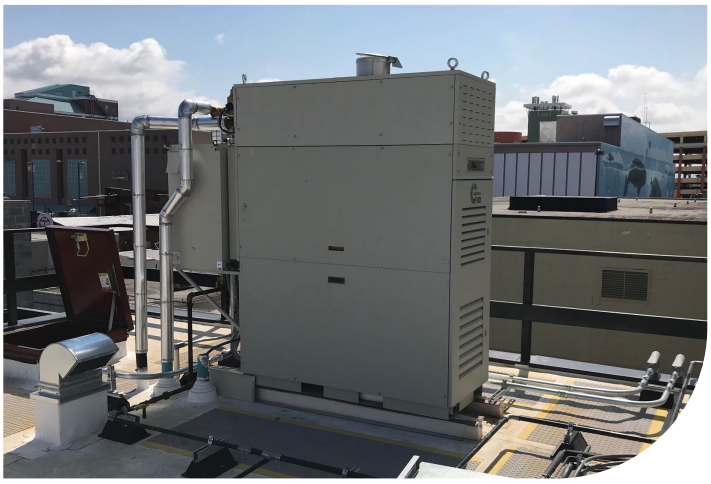
Commissioned
2020

Fuel
Pipeline Natural Gas

Technologies
- (1) C65 ICHP Microturbine

Capstone Green Energy Distributor
Arctic Energy Alaska





A Capstone C65 microturbine, situated on the rooftop of Whisky & Ramen in Anchorage, Alaska, delivers efficient power and heating with natural gas, achieving over 80% overall efficiency.

Another key factor in choosing the C65 was its suitability for urban settings, as it operates quietly with minimal vibrations. Equipped with an acoustic enclosure, the microturbine holds sound pressure levels below 65 dB, ensuring it does not disturb the bustling downtown Anchorage environment, which includes nearby hotels and businesses. During the restaurant's construction phase, the C65 operated independently in island mode, supplying all the necessary heating, electricity, and hot water.

Today, the C65 operates in parallel with the utility grid, but its ability to switch back to island mode provides ongoing resilience in case of future energy needs. The C65's integrated heat recovery system further enhances its efficiency by converting exhaust into hot water, which is used for heating and other operational requirements within the restaurant.

In addition to its performance benefits, the C65 microturbine is designed for low maintenance, providing further operational ease for Whisky & Ramen. With minimal moving parts and no need for lubricants or coolants, the microturbine's design inherently reduces the wear and tear associated with traditional power systems. Arctic Energy, the local distributor, remotely monitors the system, allowing for real-time diagnostics and troubleshooting without the need for frequent site visits. Routine maintenance is limited to an annual inspection of air and fuel filters, a bi-annual check on injectors and igniters, and an overhaul only every five years—significantly reducing operational interruptions and maintenance costs for the restaurant.

The Results

Whiskey & Ramen operates and promotes itself as a sustainability-focused business. This is evident in their use of biodegradable straws and utensils, as well as displaying on LED screens the number of cars taken off the road due to the efficient electricity and heating generated by the Capstone CHP System.

Here's a rundown on the microturbine's impact:

- **Equivalent to 50 cars taken off the road since operation began.**
- **$237,000** total project cost which paid for itself over **3.9 years**.
- **80%** is the total efficiency Cogeneration (CHP) delivers
- **$100,000 utility fee savings (electricity & gas)** - In 2023, the microturbines saved almost 5000,000 kWh of energy a month.
- **Over 45,000 hours** - Approximate amount of the continuous run time logged.
- **65kW** - The energy produced by the microturbines, reducing the site's total energy consumption 50 percent.
- **Added Value:** The Capstone cogeneration system's exceptional efficiency enables the restaurant to both heat and power the business. This is at a cost equivalent to what was previously spent solely on heating the building.

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