



RIDGE ROAD BUILDING YAKUTAT, ALASKA

PROJECT OVERVIEW

The Ridge Road Community Center in Yakutat, Alaska is a 7,000 square foot mixed used building with offices and apartments. YANMAR installed a 5 kW propane blackout start cogeneration unit outside of the building in a covered power shed to replace the costly diesel-powered generator that was already in place. This particular building benefits from stable power, as well as generated heat, which is used for heating and hot water needs.



REASON FOR CHOOSING YANMAR

Since Yakutat is a rural community in Alaska, the need for a cost effective, reliable heat and power source for the building was great. YANMAR's 5 kW cogeneration unit was able to meet this need using its blackout start option, which provides the building with continuous power and heat independently of the grid. In addition, the more affordable cost of propane versus other fuel types available for heat and power in this remote location generates significant financial savings for the building's owners.

Supplementary benefits of the system that aided in the decision to install YANMAR's product include the fact that the unit (54 dB(A) from 3 feet) is quieter than the electric power utility's grid diesel power system, its compact size, improved operating efficiency and lowered environmental impact (carbon footprint reduction of up to 50%).

ABOUT CP5WN

Using propane, the CP5WN's high-efficiency generator provides 5 kW of electrical power. The engine heat is captured, and heats water at a rated temperature of 149°F for immediate use or storage in your facility.

QUICK FACTS

Application: Community Center

Location: Yakutat, Alaska

Commissioning Date:
August 2014

Product Installed: CP5WN-SPB

Results:

- High electrical utilization (91%)
- High heat utilization year-round (100%)
- Quiet operation: 54 dB(A) at 3 ft.
- Consistently reliable operation



RIDGE ROAD BUILDING CP5WN-SPB

“The YANMAR unit has kept every promise made to us. The cost savings have been phenomenal, and the support from YANMAR America in our challenging market has been excellent.” - Tom Harris, CEO of KI Energy



RESULTS

- Overall, the CP5WN’s operating utilization (heat + electricity) is high (96% average) because the mCHP system’s primary purpose in this application is to provide heat recovery to the facility with generating electricity as the secondary purpose.
- The CP5WN’s heat utilization (100% average) is high throughout the year, even during the summer, due to high and consistent thermal demand from the community building.
- The unit provides 100% of the building’s electricity and heat requirements year-round.

CONCLUSION

- The project successfully demonstrates the application of a YANMAR CHP in a community center. The unit has lived up to its promise of high heat and electrical efficiency during over a year of operation due to a well-designed project application.

**YANMAR CHP Energy Utilization Ratio - April 2015 through March 2016
(Actual Output/Maximum Potential Output)**

