



“In the first month of operation alone, the YANMAR CP10WN saved us \$5,000. The system overall has exceeded our expectations, while providing us with consistent access to both heat and electricity.”  
- Tom Harris, CEO of Yak-Tat Kwaan, Inc.



### **Project Overview**

The Kwaan Clinic in Yakutat, Alaska is a 5,000 square foot healthcare facility with an additional 5,000 square feet of office space. YANMAR installed a 10 kW propane blackout start cogeneration unit inside of the building to replace the costly diesel-powered generator that was already in place. For this application, the heat produced by the cogeneration unit is used for hot water and heating of the whole building, while the unit's power supports the electrical demand needs of the clinic.

### **Reason for Choosing YANMAR**

As the remote community's only health clinic, reliable access to heat and power is crucial, and with YANMAR's blackout start option, YANMAR's 10 kW micro CHP unit is able to ensure that both are continuously available independently of the grid.

Also, due to the community's location, access to economical fuel is a challenge. By installing YANMAR's propane-powered cogeneration unit, the building owner is able to achieve financial savings due to propane's more affordable cost over other available fuel types in rural Alaska.

Additional benefits of the system that aided in the decision to install YANMAR's product include the fact that the unit (56 dB(A) from 3 feet) is quieter than the grid's diesel power system, its compact size, improved operating efficiency and lowered environmental impact (carbon footprint reduction of up to 50%).

### **About YANMAR America Energy Systems**

YANMAR America Energy Systems in the North, Central and South American headquarters for the company's Variable Refrigerant Flow and Combined Heat and Power systems. Our team and products are focused on sustainability, reliability, and efficiency.



# QUICK FACTS

**APPLICATION:** Health Clinic **LOCATION:** Yakutat, AK **COMMISSIONING DATE:** September 2014  
**PRODUCT INSTALLED:** CP10WN-SPB **RESULTS:** High electrical utilization (92%) / High energy utilization (89%) / Consistently reliable operation



## RESULTS

- Overall, the CP10WN's energy utilization (heat + electricity) is high (89% 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 CP10WN's electrical utilization (92% average) is high due to the need for and use of the system as the clinic's power source.

## CONCLUSION

- The project successfully demonstrates the application of a YANMAR mCHP in a health clinic. The unit has lived up to its promise of high heat and electrical efficiency during more than a year of operation due to a well-designed project application.
- Customers in remote areas without access to natural gas can choose YANMAR 5 and 10 kW propane-powered CHP products to deliver reliable heat and power to their buildings.

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

