

# A Powerful Delivery

*Twin tugs help Alaska villages see the light*



Above, the M/V Naniq, left, and the M/V Cavek will deliver fuel and supplies to villages in Alaska.

Story and photos  
by Mike Teegarden



Above, Father Victor Nick blesses the vessels during a ceremony May 31 in Dillingham, Alaska. Right, Alaska Village Electric Cooperative President and CEO Meera Kohler prepares to christen the bow of the 183-foot barge with sparkling cider.



As the sun fights through a light haze, the M/V Cavek fires up its three Caterpillar diesel engines and points the bow of its barge toward the Pacific Ocean. It is headed to meet the Russian tanker T/V Orestina three miles off the coast of Bristol Bay, where it will take on more than 300,000 gallons of diesel fuel. The fuel will be delivered to remote Alaska villages and used to heat homes and generate electricity.

After carefully navigating out of Bristol Bay during low tide, Captain Ken Dassel opens up the throttles and cruises toward the open sea.



Clockwise from top, Isaac Hodgson adjusts a valve during a meter test while docked in Dillingham; Captain Ken Dassel keeps an eye on river traffic as he maneuvers the *M/V Cavek*; power poles destined for remote Alaska villages wait to be loaded onto the *M/V Naniq* in Dillingham.

This is a dance that will be repeated several times during the next six months as the *Cavek* and its sister ship the *M/V Naniq* make their deliveries.

The *Cavek* reaches the rendezvous point a few minutes early, but 6-foot swells and darkness make the transfer too dangerous, so the crew drops anchor and waits until morning. The *Naniq* arrives shortly after and does the same.

Waiting is normal in Alaska.

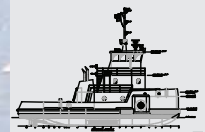
Also normal is the high cost of electricity, but Alaska Village Electric Cooperative (AVEC) has a plan to resolve that.

Built last year for AVEC, the *Cavek's* mission, along with the *Naniq*, is to deliver diesel to villages scattered throughout an area so remote no roads connect them.

The window of opportunity is short, as the waterways are free of ice for only 6 months a year.

The tug-and-barge sets—operated by Vitus Marine and contracted to deliver 5 million gallons of fuel a year—are a lifeline to the people who live in the villages and depend on generators for their electricity. With fuel oil running at about \$4.27 a gallon, AVEC looks for every possible way to reduce the cost. That is why the AVEC board of directors and President and CEO Meera Kohler made the move to build its own fleet, allowing the co-op to better control delivery costs.

“More than half of AVEC’s gross revenue is spent on diesel fuel for generation,” says Meera. “That was



## By The Numbers

### Tugs

The *M/V Cavek* and *M/V Naniq* are identical.

**76'**

Length

**5'2"**

Loaded draft

**12**

Speed in knots

### Barges

The two barges are nearly identical except for length and capacity.

**183'/**

**208'**

Length

**7'9"**

Loaded draft

**8,000/**

**10,000**

Fuel capacity  
in barrels



**Isaac Sargent guides a 6-inch hose to the header on the *Cavek*, where fuel from the tanker *Orestina* will flow.**

more than \$19 million in 2011. Coupled with the cost of heating fuel, our members pay a staggering portion of their budgets on home energy.”

By owning its own fleet, Meera says AVEC will reduce delivery costs by 10 to 12 cents a gallon.

“While it does nothing for the cost of a wholesale gallon of fuel, 12 cents a gallon represents about a penny a kWh to our consumers,” she says.

AVEC members pay about 21 cents a kWh on the first 500 kWh. After that, it is 63 cents a kWh. Average monthly use ranges from 250 kWh to 530 kWh depending on the time of year.

The villages AVEC serves represent a unique way of life.

“Their residents and their ancestors have prevailed for thousands of years in some of the harshest conditions on earth, yet today their very survival is threatened by the growing scarcity and expense of energy,” Meera says.

### **High-Tech Tugs**

According to Vitus Marine, the *Cavek* and *Naniq* use an articulating tug and barge design (ATB) that combines the economics of a tug and barge with the speed and weather reliability of a ship. The back end of the barge forms a U where the front of the tug nestles in and is held in place with stainless hydraulic pins and rubber pressure feet.

Acting like a single vehicle, this positioning allows the tug to push the barge, making the unit easier to maneuver and increasing fuel economy. The ATB design also is quicker and easier to connect and disconnect than a traditional tug-and-barge set.

The barges can each carry multiple types of fuel



**Isaac Hodgson keeps photos of his family close by in his stateroom to help relieve the loneliness from being away from them for six months at a time.**

products in their tanks and have deck space configured for shipping containers.

In a nod of respect to the villages they serve, the tugs carry Native Alaskan names. *Naniq* is an Inupiaq word for source of light and *Cavek* is a Yupik word for harpoon or metal.

### **Six Months at Sea**

One hundred and eighty days, 12 hours a day comprises a full season on the *Cavek*.

Five men, one tug.

You had better like your crewmates or it is going to be a long trip.

“The most important part of boat life is crew morale and attitudes,” says Chief Mate Isaac Sargent.

Each crew member on the *Cavek* plays an important role in the operation of the boat, but nothing is more important than getting along. Teamwork is critical for boat safety and morale. From who is cooking dinner and washing the dishes to loading and off loading fuel, each crew member must play his part.

“Shipmates are like family,” says Chief Engineer Rick Ferroni.

Tankerman Isaac Hodgson agrees.

“I consider these guys my family,” he says. “I spend half my life with them.”

The other half of their lives are spent away from Alaska. Some of the crew take on other jobs, some just enjoy the time off. A native Californian, Ken heads to his winter home in Panama, where he has a fishing boat.

But when the the seasons change, Ken is ready to go back to work.

“There’s no place I’d rather be in the summer than



Ken, left, and First Mate Isaac Sargent make plans to come alongside the Russian tanker *Orestina* to take on diesel to deliver to the villages.

Alaska,” he says.

Isaac Sargent says one thing setting the *Cavek* apart from other boats he has worked on is that each crew member has his own stateroom. With so much togetherness, being able to get away for a bit of privacy is a priceless perk.

But waiting at home for Isaac Hodgson are a wife and two kids, whom he misses while he is away.

Isaac and the rest of the crew stay in touch with family as much as they can through cell phones and the Internet, but reception in Alaska is hit or miss. Isaac tries to call home in time to say good night to

his son and talks to his wife a few times a day.

“She’s very understanding,” he says. “She knows there are places where I can’t call.”

Off shift, Isaac often thumbs through a well-worn album with photos of his wife and children. Many of the pages are coming loose.

“I look at them a lot,” he says. “I do good during the summer, but it builds up.”

He says the tears start flowing when he gets to the airport and sees his waiting family.

“I can’t wait to get my boys in my arms,” he says, “get my wife in my arms.” ■

## Five Days on the M/V Cavek

I’m not a sailor. I’m not even a boat person, so I approached spending five days on a working tug boat and barge with a mix of trepidation and excitement.

Will my normally steady stomach succumb to the rolling waves? Will I have the right gear to stay warm and dry? And the real big one, will the crew accept my presence?

The good news is all of my worries were for naught. The rough seas we experienced had no affect on me. The weather was somewhat moderate, so the gear I brought kept me warm.

And I can’t say enough about the crew. The best compliment I can give them is that I felt completely safe onboard. These are

intelligent, hardworking men who do a dangerous job in less-than-ideal circumstances. Weather, tides, mechanical glitches and long hours all work against them, yet they continue to succeed. I was most taken with how quickly each man transitioned from downtime to work. The eyes of every crew member reflected the change in demeanor as they shifted modes.

Mutual respect was another common thread. Captain Ken Dassel leads by example, listens to his crew and shares his knowledge. His crew had nothing but good things to say about him. I would gladly sail with this crew again, if they will have me.

—Mike Teegarden