




Chugach Electric Association's

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Outlet

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Susitna River topples two transmission towers



A 70-foot aluminum tower holding a 230,000-volt transmission line leans over the Susitna River after being undercut by flood waters.

Twice in one week a flooding Susitna River dropped transmission line towers after undercutting their foundations at Dynamite Slough.

The towers were on separate 230,000-volt transmission lines that – along with a third line energized at 138,000 volts – carry power from Chugach's Beluga Power Plant to the Point MacKenzie substation. The lines cross several rivers and miles of wetlands as they cover the 40 miles between the plant and substation. Heavy, persistent rains in August caused the river to rise, filled channels with fast moving water and spread water across miles and miles of lowlands at the point where Chugach's three transmission lines cross the Susitna River.

The towers that fell were both 70-foot-tall aluminum lattice towers on foundations driven more than 30-feet deep. They stood side-by-side on an island between the main channel of the Susitna and a normally quiet

stretch of water called Dynamite Slough. Steady rain upstream in the Susitna drainage filled the slough and a strong current ate away the riverbank.

Chugach has monitored conditions at Dynamite Slough and other locations for some time, and had already made plans to move the towers further from the channel later this year. However, Mother Nature had her own timetable. During the first week of August the towers sat more than 20 feet back from the edge of the bank; two weeks later they were in the swollen river.

The first tower went down the evening of Tuesday, Aug. 15. On the morning of Monday, Aug. 21, a Chugach crew on its daily aerial reconnaissance of the situation found the second tower had fallen. Neither case caused an outage for customers. Chugach did subsequently restrict the amount of power generated at Beluga in the interest of maintaining the reliability of the grid.

Chugach is working on plans to relocate and rebuild towers to support the line. That work will probably not be done until

fall or winter. The widespread flooding in the area prompted the governor to issue a disaster declaration. Chugach is working with emergency management personnel to track costs and qualify the project for repair and restoration funding.

When the towers went down they pulled the electrical conductors close to the water.

According to the National Weather Service 4-to-9 inches of rain fell in locations that drain into the Susitna drainage over a 4-day period, just prior to the second of two Chugach transmission towers falling into the river.

Chugach notified the Alaska State Troopers and the U. S. Coast Guard of the hazard and used the media to help get the word out for river travelers to be alert as they neared the point where the power lines cross the river.



Under difficult and often miserable working conditions, Chugach crews worked to free wires from the downed towers and allow more generation from the plant at Beluga.

Board picks Stewart as CEO



At a special board meeting Aug. 2, the Chugach Board appointed Bill Stewart as Chugach's Chief Executive Officer. Stewart is a 37-year

employee of Chugach. He was named Interim CEO by the board in September 2005. Prior to that he served as general manager of Chugach's Corporate Services Division.

Chugach overhauls Beluga Unit No. 6

Chugach is overhauling one of its largest natural gas-fired generating units. Beluga Unit No. 6 is Chugach's second largest generating unit and has a rated capacity of 79.2 megawatts. The unit has operated a total of 215,419 fired-hours since it was commissioned in 1975. The unit is located at the Beluga Power Plant, about 40 air miles west of Anchorage across Cook Inlet.



The crews pulled the Unit No. 6 turbine rotor for inspection during the overhaul. They inspected and cleaned the unit's blades.

Chugach crews are performing the \$11.2 million overhaul at the plant.

The work entails disassembling and inspecting the unit and, if necessary, replacing major components like turbine blades.

A technical field advisor from Alstom Power, the manufacturer of the unit, is providing on-site assistance.

Beluga Unit No. 6 is a sister unit to No. 7, which has a rated capacity of 80.1 megawatts. Both units are gas turbine-generators and are connected to a 53-megawatt steam unit. The 950-degree hot exhaust from Unit Nos. 6 and 7 is the fuel for the steam unit, at no additional fuel cost. The combined trio of units is more than 55 percent of the Beluga Plant output and provides Chugach's most efficient and economical gas-fired generation.

Maintenance on major units is scheduled for the summer when there is less load on the electric system.

Renewable energy committee members sought

The Chugach board is looking for volunteers for its Renewable Energy Committee. Seven Chugach members will be appointed to work with staff to identify ways to reduce electric demand, develop recommendations on increasing renewable energy in Chugach's generation mix and to develop information on the viability of wind, geothermal, hydroelectric, tidal and wave generation.

Interested Chugach members with knowledge of renewable energy resources should submit a resume and a committee qualification form to Chugach by close of business, Friday, Oct. 6. More information and the committee form is available on Chugach's web site at www.chugachelectric.com, or by calling 762-4736.

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