

Lightning strikes!

Yellowknife – It's that time of year; the time when Mother Nature puts on her annual light shows. In recent years, those shows have become increasingly spectacular.

In 2008 data collected by Environment and Natural Resources recorded 78,315 strikes over a 24-hour period, a new record. It was a summer of discontent as dramatic lightning storms rolled down the Mackenzie Valley from the Arctic Ocean almost weekly.

While the frequency of lightning storms is increasing, so too is the intensity as "positive" strikes continue to rise.

Positive lightning strikes were only confirmed by science in 1973. Prior to that all lightning was thought to be a negative electrical discharge. An average bolt of positive lightning is about 10 times more powerful than a negative strike and they've been known to knock major aircraft out of the sky. Today, positive lightning accounts for 5-6% of all strikes in any electrical storm.

After the storms of the past few years, on Sunday NTPC replaced 18 lightning arrestors on the Snare Transmission Line to protect the system serving Yellowknife. Lightning strikes can travel down the electrical system damaging power infrastructure, causing outages, or destroying home electronics.

"During the summer months, it's not uncommon to have thousands of lightning strikes in a single day around the Snare line," says Brian Willows, NTPC's Chief Operating Officer, "Ensuring that our arrestors are in proper working order is a necessary precaution that greatly reduces the chance of system outages and damage to our infrastructure."

To complete the arrestor work safely and efficiently, the Corporation took the Snare Transmission Line out of service. Backup diesel generators at Jackfish and Frank Channel ensured continuous service to Yellowknife, Dettah, and Behchoko. Line crews began the work at 04:15 Sunday, June 6. Work was completed by 1:00pm.

NTPC monitors all lightning strikes in and around the Snare system from its control centre in Yellowknife. When a lightning surge travels down the power system to the arrestor, the current is diverted to earth by way of a ground wire.

Lightning arrestors mitigate system outages and high voltage system surges. But nothing is failsafe against a bolt of lightning. The Power Corporation encourages all customers to purchase suitable surge protection, such as an Uninterruptable Power Supply (UPS), for sensitive home electronics.

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