

NCC Case Study

Brilliant Results - Northwest Communications Cooperative

Background:

“From a one-room office in the Ray Co-op Credit Union building, to providing ... members with a modern communications network, Northwest Communications Cooperative (NCC) has prospered ... since it was incorporated in 1951. “

NCC’s mission is to be the premier provider of communications to northwest North Dakota. NCC provides Internet, voice, television and security services to the businesses and residents of rural northwest North Dakota. NCC is the 87th largest provider of broadband in the U.S. by coverage area, covering 25 cities.

NCC is known for delivering the highest quality services to its customers. It is also extremely important for NCC to be community friendly. Not only does NCC want to be a good citizen, but they want to be as unobtrusive and environmentally friendly as possible.



Northwest Communications Cooperative
111 Railroad Avenue.
Ray, ND 58849

The Problem:

In order to provide its customers with the great services it provides, NCC has invested in its infrastructure. Scattered across 540 square miles of rural North Dakota, NCC owns and operates 28 communication towers. This tower infrastructure has been built over the last 30 years. Of this tower base, 23 of the towers were required to be lit by the FCC. In the past, the lighting on each of these towers was accomplished using traditional incandescent bulb lighting technology.

The problem for NCC was that the cost of maintaining the lighting was exorbitant. A simple bulb change would cost over \$2,000. On average, bulbs needed to be replaced about every 18 months. Not only did the bulbs need to be replaced, but also per FCC rules each tower lighting system must be inspected every quarter. Also, there was the day-to-day monitoring, maintenance and reporting that are required by law. When all the costs were added up, NCC was spending thousands of dollars per tower each year on the lighting systems. Also, NCC personnel utilized their valuable time by frequently having to handle obstruction lighting issues.

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The Solution:

NCC selected LumenServe to provide an end-to-end solution for all 23 sites. During the initial implementation, LumenServe decommissioned the old tower lighting and installed a brand new state of the art Dialight LED lighting system. As part of the total solution, a LumenServe designed communication network was implemented to provide connectivity to LumenServe's Network Operations Centers.

Once this solution was implemented, LumenServe began to provide the full range of necessary operations for the lighting systems.

This included the following services:

- Daily monitoring and reporting
- FAA notification for outages
- All repairs and maintenance
- All quarterly inspections
- Monthly uptime analysis

NODE STATUS (UP/DOWN)			
for Node			
Ordered by:Node - Ascending			
NODE	IP ADDRESS	STATUS	AVERAGE RESPONSE TIME
NCC Epping ASA	69.57.93.210	● Up	90 ms
NCC Epping Dialight	69.57.93.210	● Up	90 ms
NCC Epping Watchdog	69.57.93.210	● Up	91 ms
NCC Ray West ASA	69.57.93.213	● Up	90 ms
NCC Ray West Dialight	69.57.93.213	● Up	90 ms
NCC Ray West Watchdog	69.57.93.213	● Up	90 ms
NCC Tioga ASA	69.57.93.211	● Up	90 ms
NCC Tioga Dialight	69.57.93.211	● Up	90 ms
NCC Tioga Watchdog	69.57.93.211	● Up	91 ms
NCC Zahl ASA	69.57.93.209	● Up	92 ms
NCC Zahl Dialight	69.57.93.209	● Up	95 ms
NCC Zahl Watchdog	69.57.93.209	● Up	91 ms

View From LumenServe
Network Operation Centers

Brilliant Results:

NCC no longer has to worry about tower lighting. LumenServe handles all of that for them. An example occurred when the Zahl tower site experienced a power outage. Once the outage occurred, the LumenServe team went into action, running diagnostics on the situation, notifying the FAA of the lighting outage so that a NOTAM could be issued and finally notifying the FAA once the power was restored. This whole process was seamless to NCC, as they were informed of the outage, but had to do nothing else as it related to the lighting system and required reporting.

In comparison, NCC would have had to handle the entire process prior including the notification, as well as having to send someone out to the site to determine the issues and ensure that the lighting restoration.

Additionally, the implementation of the lighting system provided an improved environmental and community impact. After implementation, NCC recognized an estimated 95% decrease in electric usage associated with the tower lighting. Also, the lighting was less noticeable in the communities due to the patented optics of the lighting system.

NCC has also experienced savings based upon the solution. No longer was NCC spending several thousand dollars a year to maintain tower lighting. NCC now just pays the LumenServe monthly fee for the full end-to-end services.



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Dean Rustad, Operations Manager for NCC said “cost savings” was “the primary reason we decided to make the move to LumenServe. We also highly value that LumenServe provides a full service. They take care of calling the FAA when issues arise and schedule crews for repairs. LumenServe has given NCC the peace of mind that comes with knowing the quality of our tower lighting is second to none and the maintenance of the service is promptly taken care of, at every level, by professionals.”

A summary of the benefits of the LumenServe service:

- New, highly reliable LED technology
- No upfront capital
- Fixed monthly cost with no budget surprises
- No maintenance, repair, bulb replacement or other unplanned expenditures
- Lower power consumption costs ~ 90%
- LumenServe takes care of compliance tracking and reporting
- LumenServe takes the risk associated with fines for non-compliance away
- Improved site safety and community friendly lighting system utilizing patented optics
- Use upfront capital you would have spent on another product set for your customers
- Design may be able to eliminate need and associated cost of painting your structure. Eliminate cost of Quarterly review of system
- Have the comfort of dual NOC monitoring for higher reliability
- Performance reports provided regularly to each customer
- Partnering with a “Go To” Obstruction lighting company for all future needs

For More Information:

www.lumenserve.com