NTPC

Revitalizing Hydro Power: Zyxel's Cutting-Edge Wireless Infrastructure Upgrade

Customer at a glance

Customer Name
Tapovan Vishnugad Hydropower Plant, NTPC

Industry
Energy

Location
Uttarakhand, India

Customer Background

The Tapovan Vishnugad Hydropower Plant is the 520 MW hydropower project undertaken by NTPC built on the Dhauliganga River in Uttarakhand's Chamoli District. The facility is estimated to produce more than 2.5 TWh of power per year.

Summary

NTPC, an Indian power utility company, faced the common challenges of outdated networks in one of its hydropower plants, including compatibility issues, frequent disruptions, and poor signals at one of its hydropower plants. To address these issues, the company turned to SI, Creative Communication, who proposed Zyxel's wireless solutions for a comprehensive network infrastructure upgrade. Creative Communication deployed 110 WAC6103D-I 802.11ac Dual Radio Dual-optimized Antenna 3x3 Access Points indoors, providing switchable signal patterns to reduce interference in high-density environments. Additionally, 10 units of WAC6553D-E 802.11ac Dual Radio External Antenna 3x3 Outdoor Access Point were installed outside, ensuring robust and long-lasting service with their industry-grade weather and dust-proofing capabilities. To centralize and manage the entire network, NXC5500 Wireless LAN Controllers were installed in the main server rooms. These controllers offered convenient AP planning, deployment, monitoring, and maintenance, along with centralized management and authentication, all in one device. The network makeover has yielded numerous positive changes. The hydropower plant now operates more smoothly with minimized downtime, while work efficiency has reached new heights. Employees benefit from a hassle-free network management system and seamless connectivity, providing them with the confidence to work efficiently. Moreover, the scalability of the solution ensures adaptability to future demands, promising long-term support for the company's evolving needs.

Challenges

- Revamp networks to prevent disruptions and amplify wireless signals at the plant
- Require cost-effective installation without performance compromise
- Reduce messy cables from previous expansions

Benefits

- WLAN optimization and RF management result in high-quality wireless LANs
- WiFi that is resilient and manageable without complicated deployments of cables
- A scalable solution allows for future network expansion

Products Used

- WAC6553D-E 802.11ac Dual Radio External Antenna 3x3 Outdoor Access Point
- WAC6103D-I 802.11ac Dual-Optimized Antenna 3x3 Access Point
- NXC5500 Wireless LAN Controller