



Aurora and Lindahl

ADLS

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Informal Hearing Presentation

Lindahl Wind Project, LLC

201 PU-18-352 Filed 08/11/2025 Pages: 12
Informal Hearing Presentation

Aurora Wind Project, LLC

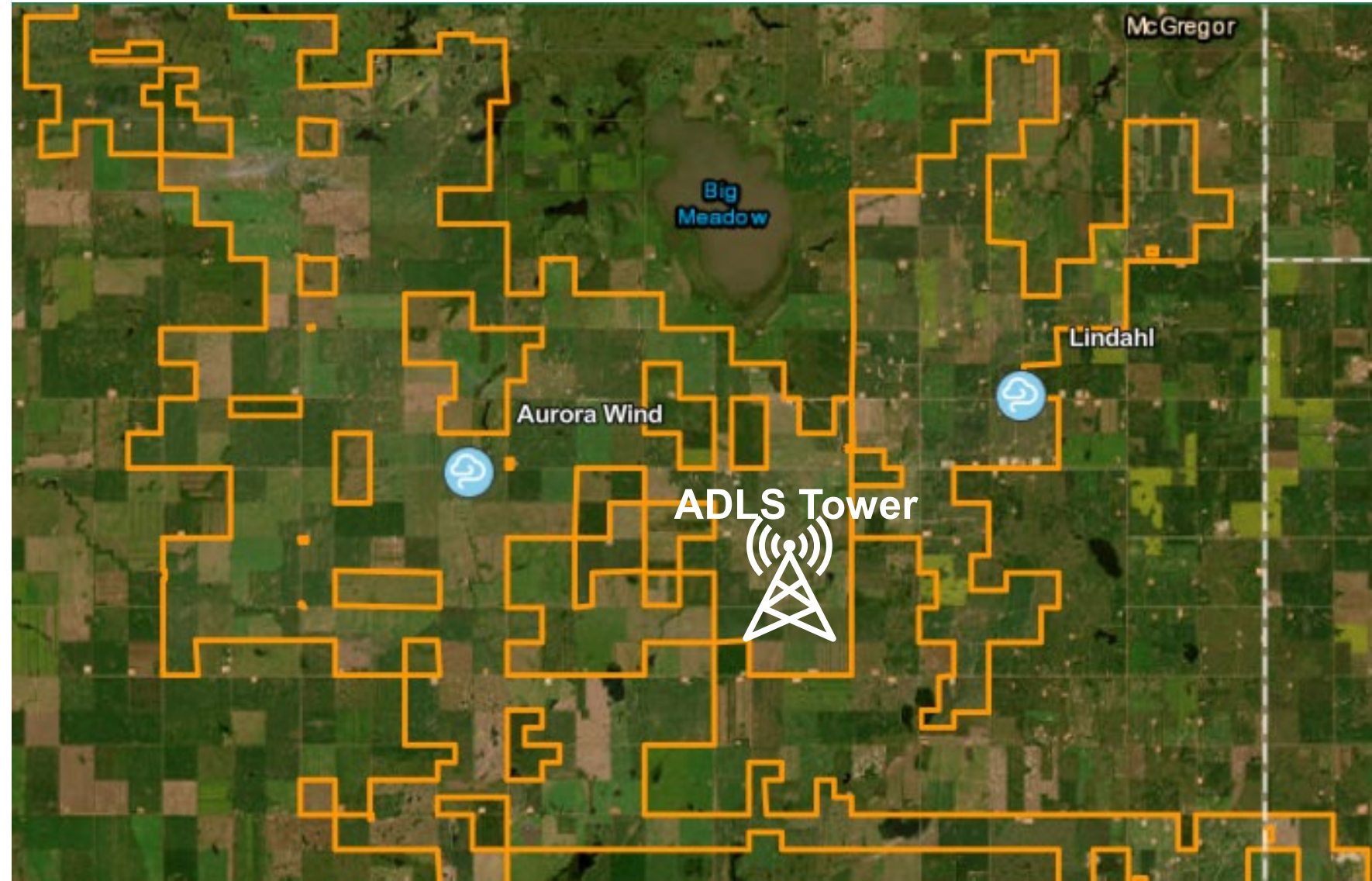
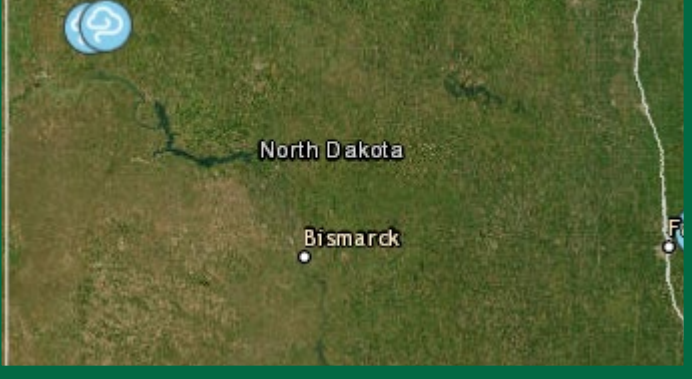


ADLS

Overview of Project – Williams County, ND



Site Location



Lindahi – 75 WTGs
- All Vestas

Aurora – 71 WTGs
- 56 Nordex
- 15 Vestas

ADLS

Task Force and Status of Project

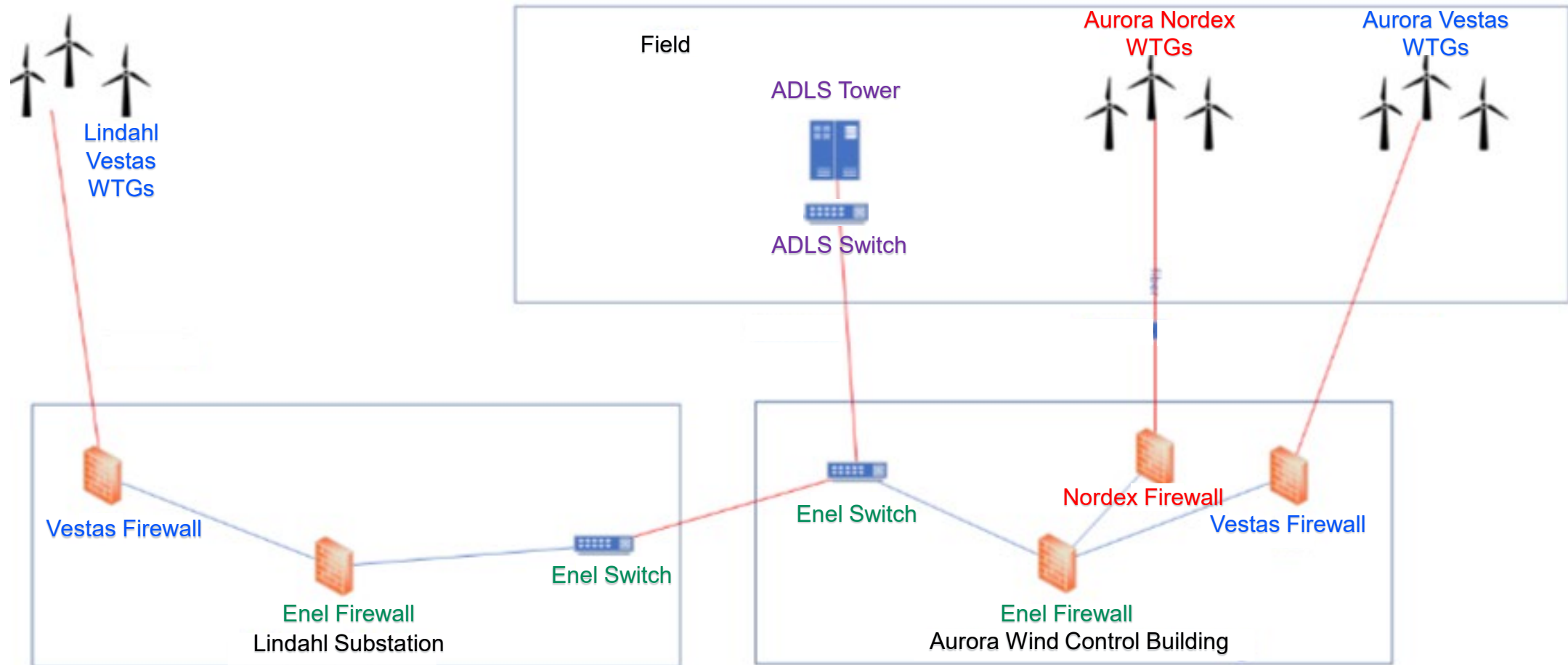


Personel	Occupation
Shaun Strickland - Enel	Director O&M
Curtis Hutson - Enel	Head of Technical Services
Paul Landers - Enel	Senior Electrical Control Specialist
Sam Scigliano - Enel	Site Manager
Greg Howard - Enel	Manager IT/OT Plant Systems
Paul Smull - Enel	Regional Manager
Matt Shaw - Enel	Network and Delivery Lead
Todd White - Enel	Wind Specialist
Joshua Hodge - Enel	Assistant Site Manager
Terma	OEM of ADLS
Vestas	OEM of Lindahl and Aurora
Nordex	OEM of Aurora
TWR	Lighting Provider
Vikor	Met/ADLS Tower Maintenance
Run Energy	Renewable Wind Technicians

	Aurora	Lindahl
Units w/ ADLS	71	47
% Online	81.69%	100%
Combined	88.98%	

ADLS

Overview of System



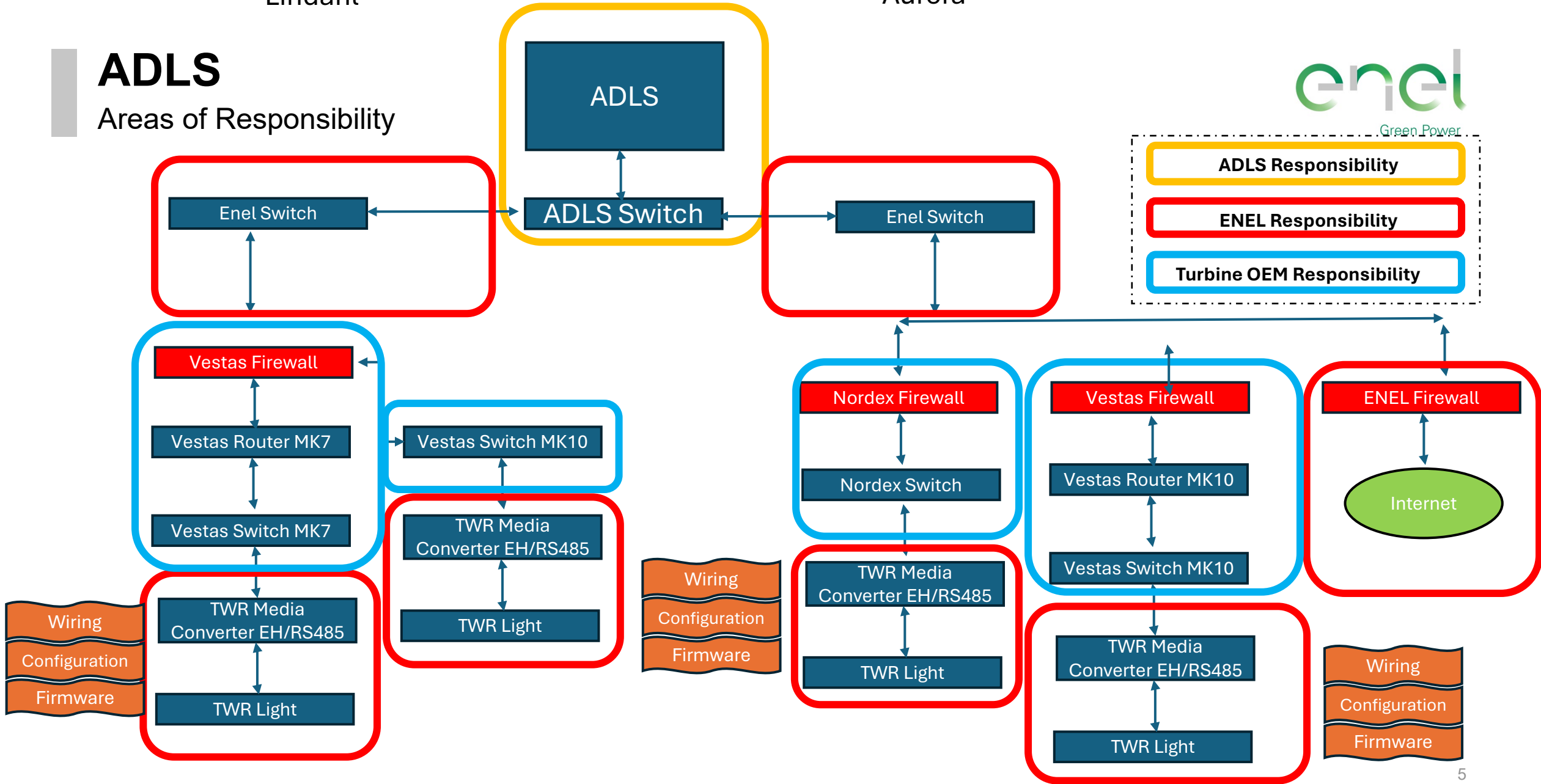
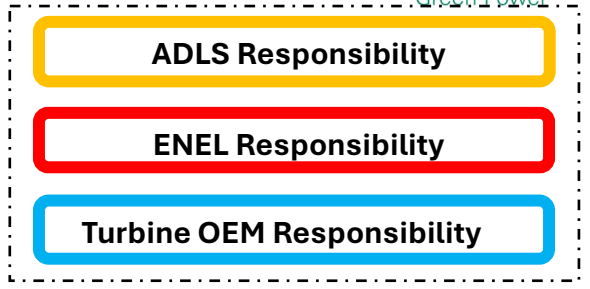
Lindhahl

Aurora



ADLS

Areas of Responsibility



ADLS Troubleshooting Sequence



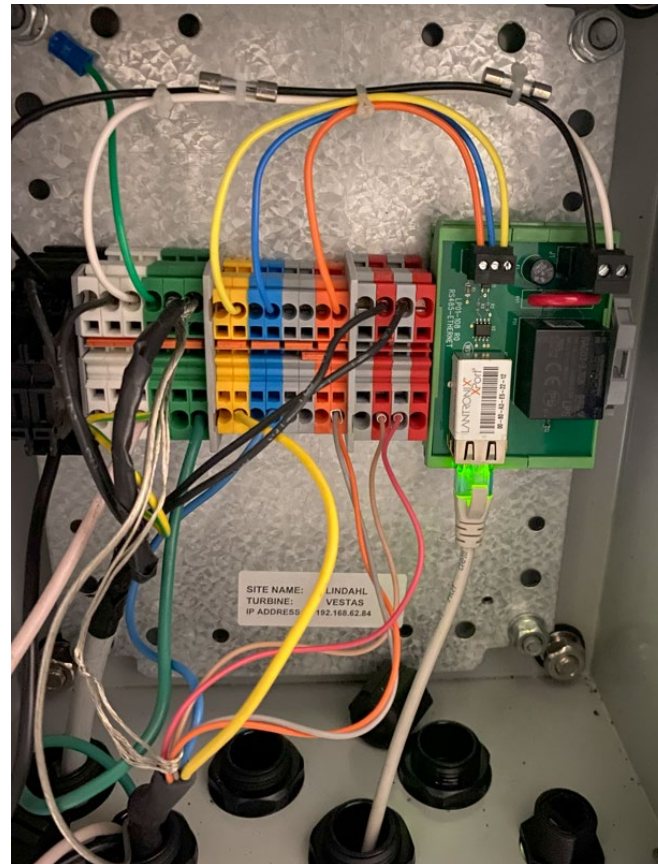
- **Initial ADLS Functionality Remediation Efforts (2024)**
 - Initial diagnoses of ADLS functionality in 2024 focused on network firewall and connectivity issues between Projects and OEM networks
 - Upon further troubleshooting and analysis, Enel determined that a myriad of other issues contributed to the ADLS functioning issues
- **Setup Task Force (Early 2025)**
 - Task assigned Internally to Cross Technical Services restore ADLS
 - Required installation and configuration of ADLS web client
 - Met with ADLS vendor to assess system
- **ADLS System Review**
 - Reviewed radar and server components
 - ADLS provider confirmed radar functionality and server stability
 - ADLS provider only responsible for data intake, not data quality from lights
 - Realized need to involve light vendor, network team, and turbine suppliers
 - To date there are no know issue with the ADLS outside of normal service and repairs

ADLS Troubleshooting sequence



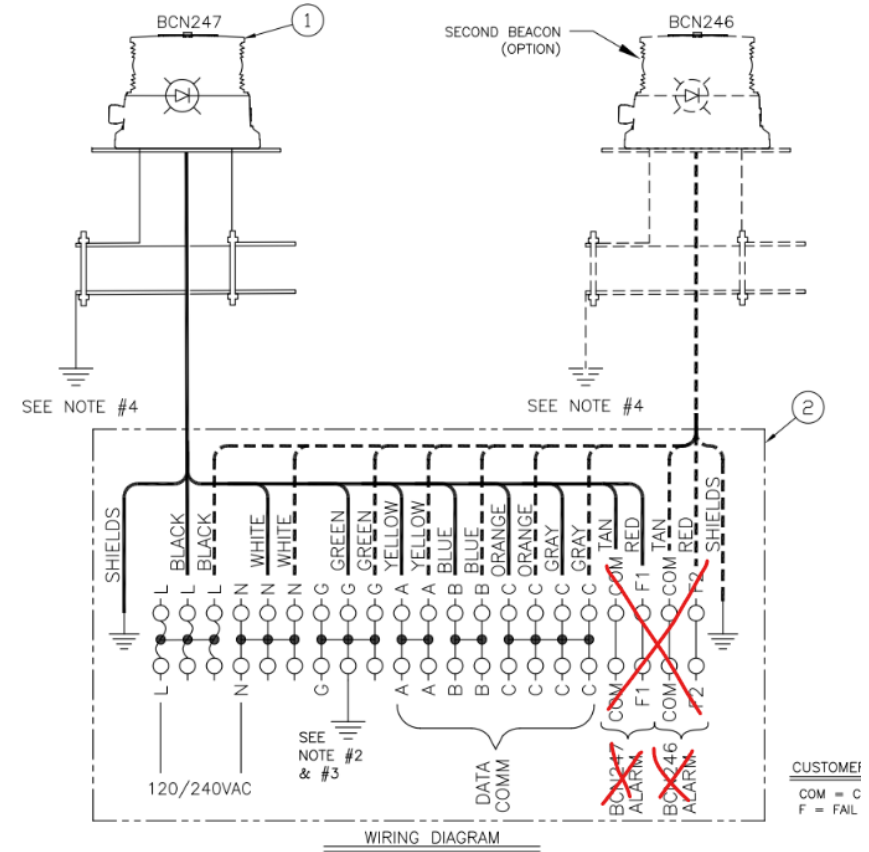
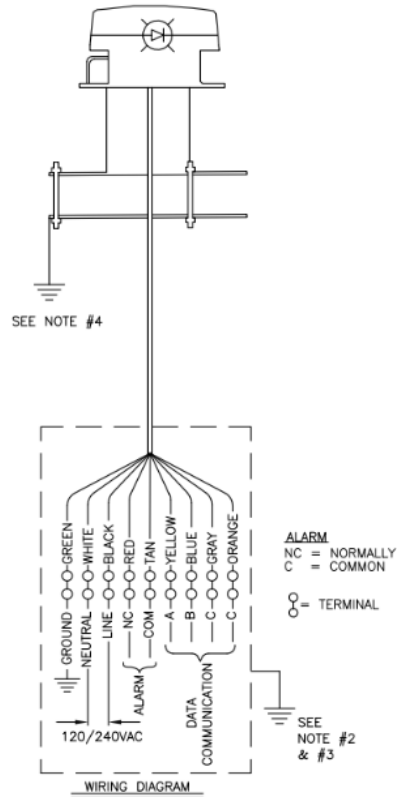
- **Network Review**
 - Cyber and Networking teams confirmed ADLS traffic was not blocked
 - To date there are no known issues with the fiber optic outside of normal service and repairs
 - To date there are no known issues with the Firewalls outside of normal service and repairs
- **Lindahli Lighting Device Troubleshooting (Vestas)**
 - Identified issues with wiring, light box communication devices, and firmware
 - Extensive troubleshooting performed between ADLS and lighting provider
 - Developed tools for diagnosing communication issues at light control cards and lights
 - Discovered firmware updates affecting status communication
- **Aurora Lighting Device Troubleshooting (Nordex with some Vestas)**
 - In addition to the above issues
 - Encountered problems restoring communication on 17 devices
 - Found incorrect primary wiring has damaged some electronics (light Control card and light)

Typical Lighting Configuration



Typical Lighting Configuration

Left Vestas, Right Nordex



ADLS Troubleshooting Issues



- Troubleshooting is difficult with need to review wiring communication firmware and settings
 - This troubleshooting requires workers to climb to the top of the turbines (~300')
- Finding Competent Troubleshooters has been difficult
 - This troubleshooting also requires skills and electrical knowledge that is difficult to find
- There is commonly the need to climb the same turbine multiple times as one item may be found and corrected but still does not operate as needed (Still flashes at night or does not report properly in the ADLS platform)
- Weather has caused delays. We cannot be in the towers during high wind, lightning, heavy rain, and snow. We also had several stand down days due to smoke from the Canadian fires

Current and Future Plans

Mitigation of reoccurrence



- Process to add administrator rights to plant personnel computers for configuration activities **(Completed)**
- Created a test bench to test light cards and update firmware and test and configure communication cards **(Completed)**
- ADLS Server and Scada access for plant personnel **(Completed)**
- Implemented tools in the ADLS Server to troubleshoot lights and verify operational status **(Completed)**
- Create a troubleshooting guide for Vestas configuration **(To be Completed)**
- Create a troubleshooting guide for Nordex configuration **(To be Completed)**



Thank You

