

North Kingfisher Substation

Kleinfelder was contracted with Western Farmers Electrical Cooperative (WFEC) to provide full design services for a 138–4.16 kV, 10.5 MVA substation near Kingfisher, Oklahoma. The substation was one of several projects designed for WFEC to support the growing electrical demand from large Oil and Gas Customers. WFEC is a large generation and transmission cooperative primarily serving Oklahoma and New Mexico.

PROJECT RESULTS

Kleinfelder's multi-disciplinary teams working across several regions completed the substation project with only minor delays—providing WFEC with thorough design, construction, and reporting that met all stakeholder requirements. Consistent and thorough collaboration efforts led to Kleinfelder's retention by WFEC on this project and others.



COMPLEX COORDINATION

WFEC's transmission system upgrade from 69 kV to 138 kV involves multiple new and upgraded distribution substations, transmission lines, and switching stations. Each project requires diligent coordination between Kleinfelder's project team and WFEC's internal groups (environmental, engineering, land acquisition, right of way, procurement, and operations) to ensure that all stakeholder expectations are met. The ongoing system upgrades require a consultant that can maintain a high level of support and coordination without compromising efficiency or schedule. Furthermore, the funding for the projects typically require following strict Rural Utilities Service project design and reporting requirements.

MULTI-FACETED AND MULTI-DISCIPLINE

To meet the complex needs of this multi-faceted project, Kleinfelder brought together experts from six different U.S. offices and four different engineering disciplines—geotechnical, civil, structural, and electrical—with concentrations in substation and transmission line design. The teams performed engineering design, project management, materials specification, and construction support for the high-voltage substation and the transmission line intercept to connect to an existing WFEC 138 kV transmission line.

Location:

Anadarko, Oklahoma

Owner:

Western Farmers Electric Cooperative (WFEC)

