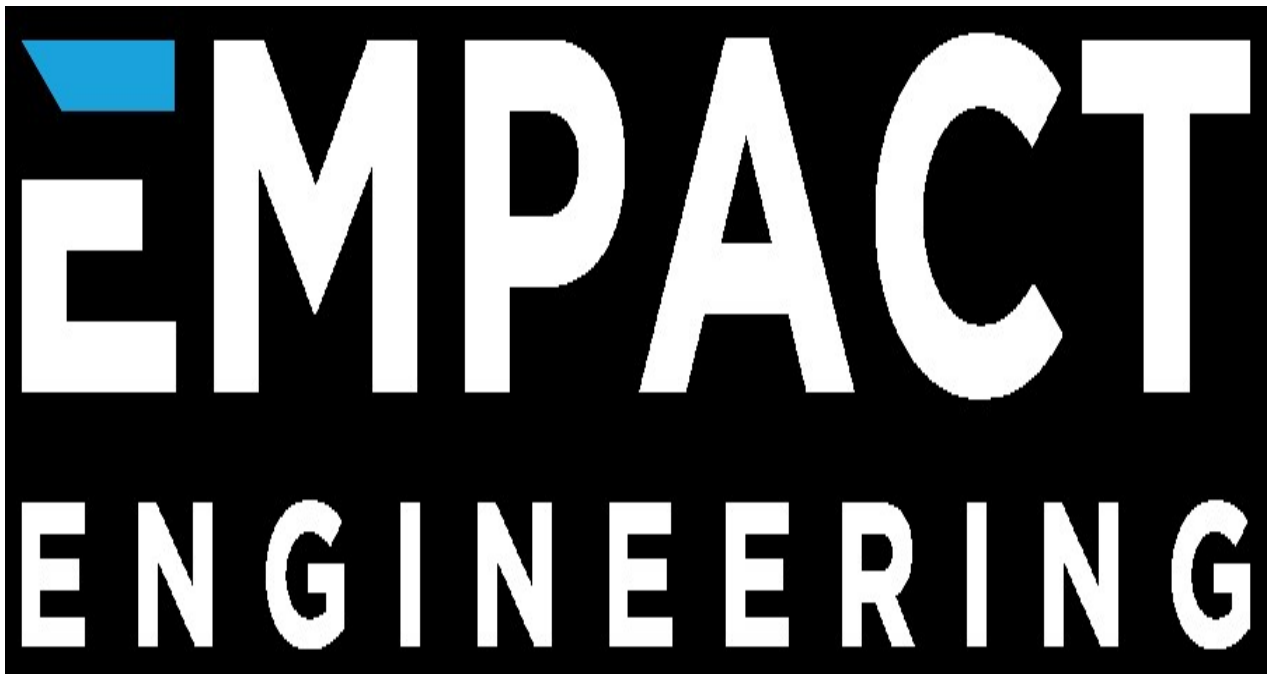




Grid Modernization Expands Access to Utility Engineering Services

September 21, 2026

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Accelerating grid modernization initiatives and federal reliability mandates across North America have prompted electric utilities to systematically overhaul aging overhead and underground distribution networks. Addressing these technical requirements, Navasota-based EMPACT Engineering recently completed survey-grade distribution design and digital route analysis across more than 15,000 circuit miles of electric line, marking a major operational milestone for its national infrastructure programs. Operating out of Texas, the firm provides electric cooperatives, municipal systems, and investor-owned utilities with specialized utility engineering services structured to support grid capacity expansion, voltage conversions from 12.47 kV to 34.5 kV, and complex line relocations. Detailed structural modeling and clearance evaluations help utility operators identify physical vulnerabilities prior to construction, supporting long-term grid stability across rural and suburban operating environments.

Modernizing distribution networks requires high-precision field data to ensure compliance with National Electrical Safety Code (NESC) standards, particularly under extreme wind and ice loading conditions defined by NESC Rule 250. During complex reconductoring or highway expansion projects, imprecise field measurements can lead to clearance violations and unexpected material expenses. To address these

technical challenges, EMPACT Engineering utilizes three-dimensional pole loading analysis integrated directly with survey-grade field staking platforms. "Accurate structural calculations at the individual pole and span level are essential for maintaining physical grid safety," stated Chief Executive Officer Tom Jackson of EMPACT Engineering. "Integrating real-time field survey data with 3D structural modeling allows engineering teams to verify clearance tolerances, guy wire tensions, and mechanical stresses before construction crews deploy hardware on site."

Administrative bottlenecks associated with regulatory permitting frequently delay utility capital improvement schedules and inflate project budgets. Securing project approvals involves rigorous coordination with state departments of transportation under specific utility accommodation rules, municipal authorities, Class I railroad operators, the Federal Aviation Administration, and the United States Army Corps of Engineers under Section 10 and 404 permits. EMPACT Engineering manages these administrative requirements by preparing, submitting, and tracking permit documentation directly with regulatory agencies. In addition, the firm conducts joint-use system audits that evaluate third-party pole attachments, track bad order poles, manage double-wood remediation, and execute make-ready engineering staking. Consolidating permit workflows alongside field staking helps power providers reduce administrative friction, eliminate project backlogs, and maintain predictable construction timelines.

Severe weather recovery and wildfire mitigation represent additional operational areas where specialized utility engineering services directly impact grid resilience. When tropical storms, severe ice, or high winds damage overhead distribution lines, power providers require rapid system visibility to organize restoration efforts. EMPACT Engineering deploys post-storm field assessment teams equipped with geographic information system mapping, digital dashboards, and real-time damage tracking tools. Field personnel collect structural data on damaged poles, broken conductors, and compromised transformers, transmitting verified findings straight to utility control centers. "Having validated field data during emergency restoration allows utility managers to allocate crew resources with confidence," noted Vice President of Operations Duane Price of EMPACT Engineering. Furthermore, EMPACT Engineering develops formal wildfire mitigation plans, evaluating vegetation clearances and asset exposure to protect regional power infrastructure.

Headquartered in Navasota, Texas, EMPACT Engineering is an electric utility technical services firm serving utility providers across North America. Founded in 2020, the company delivers distribution line design, geospatial asset mapping, joint-use program management, regulatory permitting support, wildfire mitigation planning, and storm damage assessment. EMPACT Engineering combines field experience with modern analytical tools to support power delivery infrastructure. For more information, visit <https://empactengineering.com/engineering/>.

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