



QUANTA

SEPTEMBER 2024

ERCOT

EHV

WORKSHOP

QUANTASERVICES.COM



A Great Collaboration

WORLD-CLASS PEOPLE. UNMATCHED EXECUTION ACROSS NORTH AMERICA.

Quanta Services is your single source solutions provider across the electric power, underground utility and communications industries.

We have the largest, most skilled and highly trained workforce, which self-performs 85% of our work. We collaborate with our customers on projects of any size, delivering cost certainty and safe execution.

We want to thank you for our partnership over the years – we have built over 2,000-miles of 765 kV working closely with our partners to design for safety and constructability, whereby allowing us to meet aggressive schedules. We know together we can develop solutions for ERCOT to meet the tremendous regional growth.





SAFETY. ALWAYS.

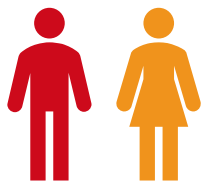
THE QUANTA STANDARD

We know that how we work is what sets us apart. We hold ourselves to industry-leading standards to protect what matters most: our people, our communities, and our environment. We are investing and innovating ever-better ways to protect and empower our most valuable resources.



54,000+

Highly trained, craft skilled workforce of more than 54,000



17,990+

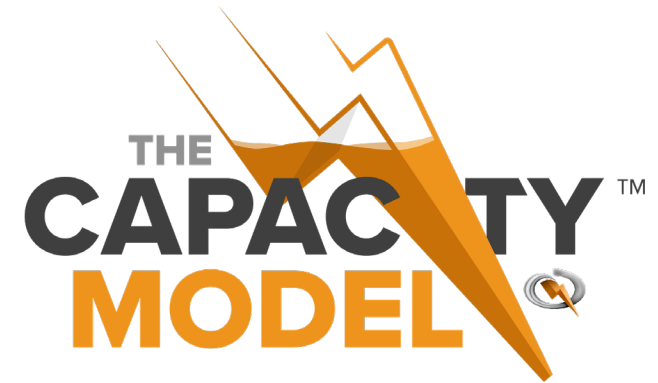
Quanta has deployed 17,990+ AED units in the field

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45

45 lives have been saved by AED units, including several civilians



Good intentions don't save lives. We know that even with the best preventions in place, things can still go wrong: people make mistakes, and the world is unpredictable. We plan and execute our work assuming that failure will happen today. The Capacity Model is a system that helps us build the capacity to absorb failure without suffering harm. We learn from every job, every mistake, and every success to continually improve. Safety is not merely the absence of injuries; it is the presence of capacity. Click [Here](#) to learn more.

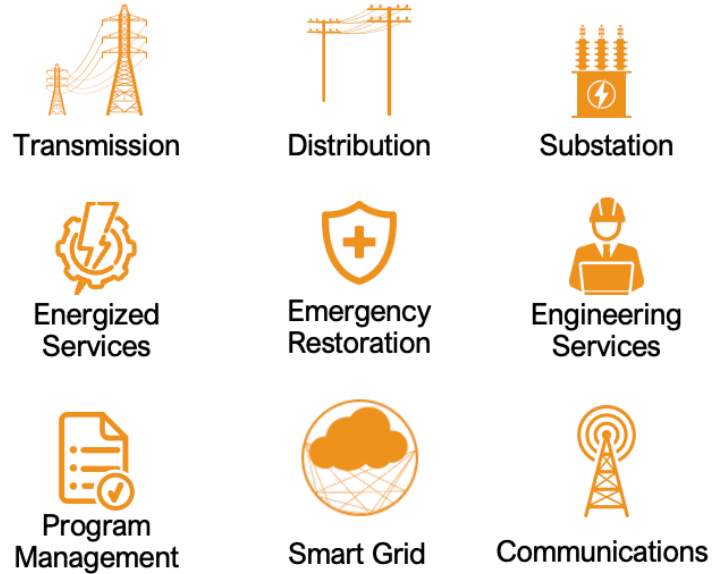


Construction Led Infrastructure Solutions

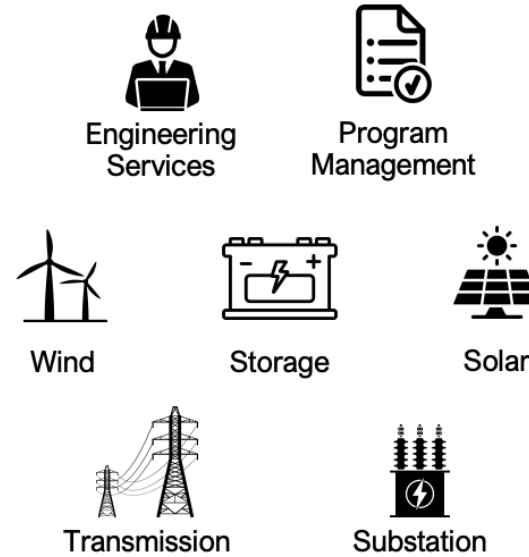
1 2023 ENR #1
Specialty Contractor

1 2023 ENR #1
Utility Contractor

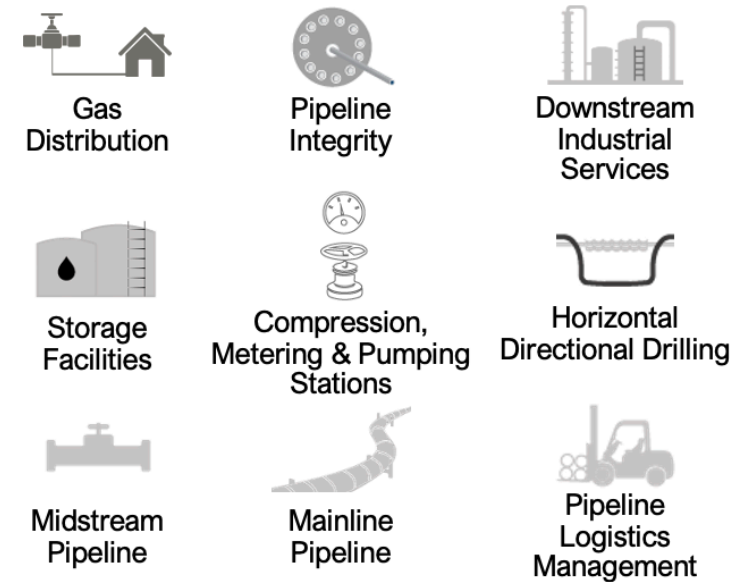
ELECTRIC POWER INFRASTRUCTURE SOLUTIONS



RENEWABLE ENERGY INFRASTRUCTURE SOLUTIONS



UNDERGROUND UTILITY & INFRASTRUCTURE SOLUTIONS



DESIGN

ENGINEERING

PROJECT
MANAGEMENT

INSTALLATION

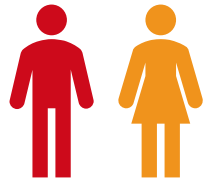
MAINTENANCE

REPLACEMENT



QUANTA BY THE NUMBERS

Projects are getting larger and more complex – and customers are increasingly seeking cost certainty and performance. Quanta is positioned as the largest energy infrastructure specialty contractor in North America, meeting your demands as an end-to-end solutions provider. We can **self-perform 85%** of our work to ensure the lowest risk and highest quality across our industries.



1

Largest employer of union and non-union line workers in North America



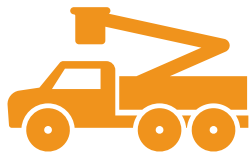
\$ 3 0 B

Record backlog of \$30B reflects collaboration with customers & advancement of long-term strategies

PWR
LISTED
NYSE

192

2024 Fortune 500 List Ranking



1

Largest procurer of line trucks in North America – and 3rd largest private fleet in North America



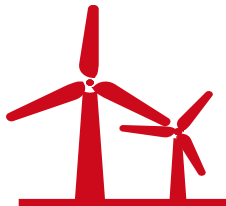
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More than 300 strategic operating centers across U.S., Canada and Australia

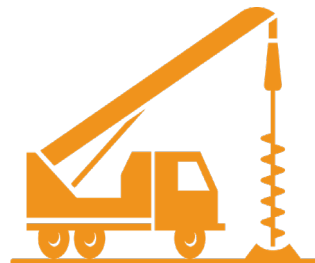
2024 Fortune 500 Companies

| | |
|------------|-------------------------------|
| 1 | Walmart |
| 29 | Comcast |
| 187 | NextEra Energy |
| 192 | <i>Quanta Services</i> |
| 302 | Entergy |

2 5 %



25% of utility – scale wind and solar – generation capacity in the U.S. were constructed by Blattner



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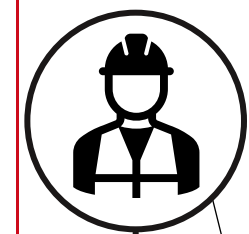
Unmatched specialized equipment resources: approximately 74,000 pieces of equipment



End-to-End Infrastructure Solutions

WORLD-CLASS PEOPLE AND EXECUTION, LOCAL DELIVERY.

We use in-house talent, expertise and resources to plan, design, engineer, manage, conduct maintenance on and construct your project. This turnkey project execution ensures your team has one point of contact to handle projects of any size from beginning to end.



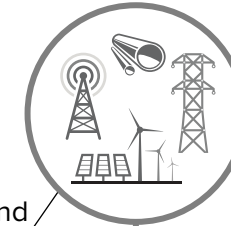
INTEGRATED SERVICES

- Complete engineering services for turnkey projects
- Substation and switchyard design
- Overhead & underground electric distribution and transmission design
- Specialty foundation designs
- Professional Land Survey, geospatial & GIS services
- Full-service pipeline and facility design for Oil, Gas, and LDC market
- Service lines
- *And more*



PROCUREMENT

- Procurement Management
- Buying
- Expediting
- Shipping/freight forwarding
- Coordination of factory inspections and tests
- Warehousing
- Logistics
- *And more*



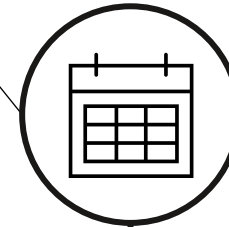
CONSTRUCTION

- Largest infrastructure provider across the electric power, pipeline and industrial and communications sectors in North America
- Largest, most highly trained and skilled workforce in the industries served
- On time, on budget world-class execution – delivered at a local level
- *And more*



ENVIRONMENTAL PLANNING & MANAGEMENT

- Project-specific environmental planning
- Environmental Site Assessments
- AHJ Permitting
- Monitoring & Compliance
- In-depth knowledge of federal, state and local environmental regulations
- *And more*



PROJECT MANAGEMENT

- Single-source responsibility and accountability with one-team approach
- Seamless, integrated transitions through project phases
- Optimized budgets and schedules
- *And more*





EHV POWER EXPERTISE





SUNZIA: 525kV

SunZia Wind and Transmission is a 3,000 MW wind generation facility and a 550-mile bi-directional ±525kV high-voltage direct current (HVDC) transmission line spanning central New Mexico and south-central Arizona, which includes two converter stations, one on each end of the transmission line.

Quanta Companies Provide Significant Scope, Scale and Financial Resources, Along with a Track Record of Safely Executing Large, Complex EHV Projects

GATEWAY SOUTH: 500kV

The Gateway South Project - 416 miles of single-circuit 500kV overhead, alternating current transmission line - officially began construction in June 2022. Spanning across significant portions of Wyoming, Colorado, and Utah.

COLORADO POWER PATHWAY: 345kV

Colorado's Power Pathway is approximately 610 miles of new double-circuit 345kV transmission line with four new and four expanded substations. The transmission line route will span more than a dozen counties, primarily in eastern Colorado. The first segments are planned to be in-service by 2025, with other segments complete in 2026 and 2027.

>500kV TRANSMISSION PROJECTS

| Project Name | State | Voltage | Tower Type | Line Length | Completion Date |
|---|-------|---------|----------------------|-------------|-----------------|
| AESO Alberta Power Line Fort McMurray West 500kV Transmission Project | AB | 500 | Guyed, Steel Lattice | 312.5 | 2019 |
| ATCO Electric Eastern Alberta 500kV HVDC Transmission Project | AB | 500 | Steel Lattice | 303.1 | 2016 |
| Florida Power & Light Peen Cross Brace Bolts on 901 500kV Structures | FL | 500 | Steel H-Frame | 204.1 | 2010 |
| SRP Coolidge Substation Expansion | AZ | 500 | Steel Tower | 85 | In Progress |
| Exelon Brandon Shores/Dominion Programs | MD | 500 | Monopole | 56 | In Progress |

500kV • 150+ PROJECTS • OVER 5,000 MILES

EHV Electric Power Infrastructure Solutions Capabilities



Quanta has built more high-voltage electric transmission infrastructure in North America than any other specialty contractor.

- Industry-leading experience constructing 765kV power lines, Including AEP's 6-Bundle Design



>700kV TRANSMISSION PROJECTS

| Project Name | State | Voltage | Tower Type | Line Length | Completion Date |
|--|--------|---------|---------------|-------------|-----------------|
| AEP Rockport - Jefferson 765kV Transposition Project | IN | 765 | Steel Tower | 24.0 | 2013 |
| AEP Rockport - Sullivan Transmission Project | IN | 765 | Steel Tower | 0 | 2012 |
| AEP Wyoming - Jackson Ferry 765kV Transmission Line | WV, VA | 765 | Steel Lattice | 90.0 | 2006 |
| AEP/Ohio Power Company Rolling Hills Facility 765kV Line Relocation | PA | 765 | Steel Tower | 1.0 | 2002 |
| Bonneville Power Administration Celilo-Sylmar Transmission 750kV Upgrade Project | OR | 750 | Guyed | 99.0 | 2016 |

750-765kV • 25+ PROJECTS • OVER 2,000 MILES



Quanta's Constructability Expertise Positively Influences Project Outcomes

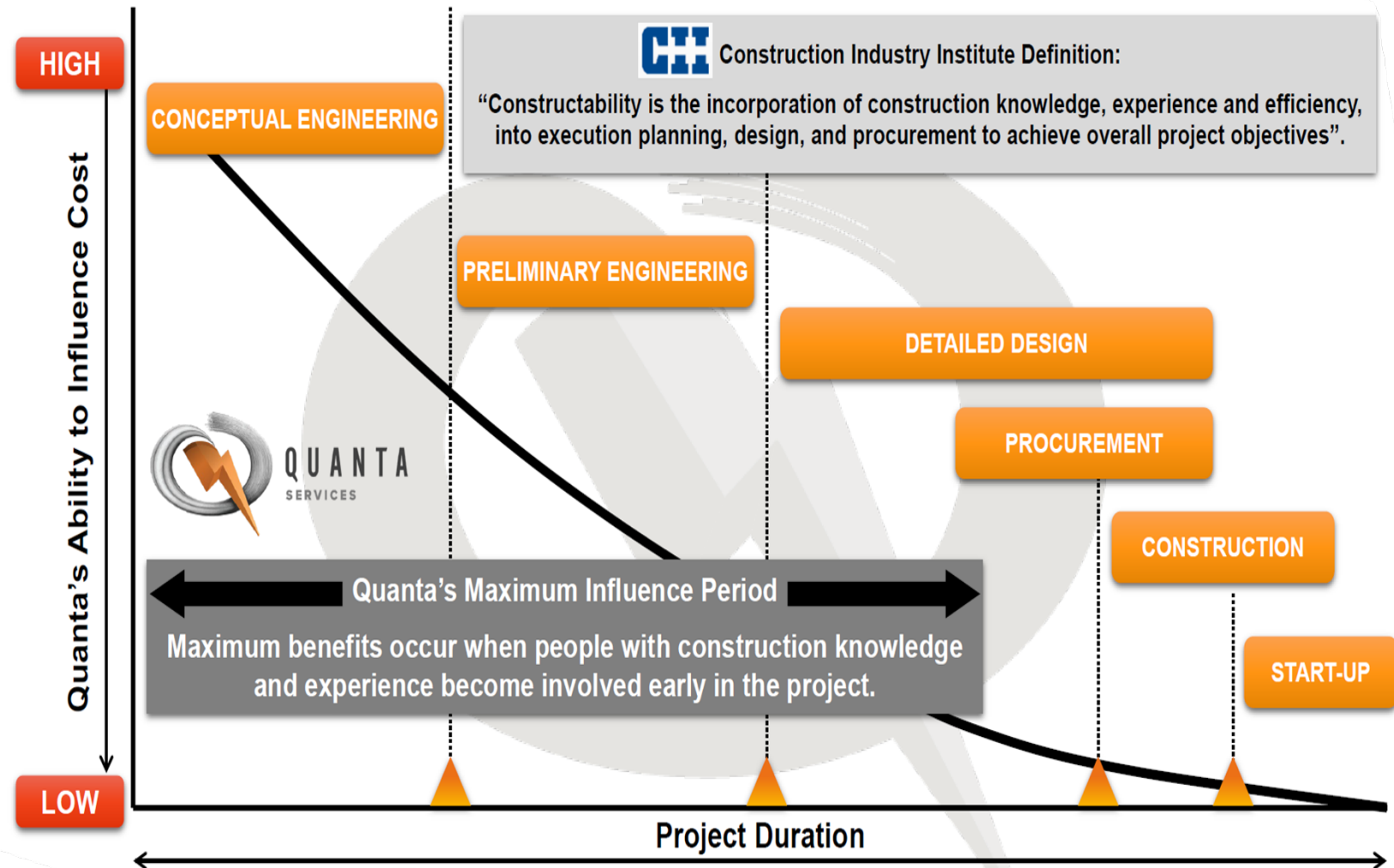


Wind Catcher Energy Connection 360-Mile, 765 kV Powerline Project

In 2017, Quanta was selected as the turnkey EPC contractor for the 1st major 765kV program in over a decade

Quanta Companies Performed:

- Routing and Siting Support
- Public Outreach
- Environmental Services
- Transmission and Substation Design (Reached 60%)
- Constructability reviews with field leadership with engineering teams, optimizing project design for safety, cost and schedule





Gateway South Transmission Line

PROJECT OVERVIEW

The Energy Gateway South transmission line is a new 416-mile high-voltage 500kV line, connecting Medicine Bow, WY to just outside of Provo, UT.

SCOPE OF WORK

The heavy lift work encompassed the construction of structures through remote canyons. Accessing several tower sites was possible only via helicopter. Work crews were transported to these locations using light aircraft, and structures were flown in sections and then assembled on-site. Utilizing various guides and rigging techniques, the structures were positioned without requiring crews to be inside the towers.

IMPACT

This innovative heavy lift construction method in the CH-47D was pioneered by PJ Helicopters. It not only facilitated the assembly of large structures in challenging locations but also significantly reduced the exposure of steel crews to potential hazards.



765kV Construction Experience





765kV Construction Experience





CONSTRUCTIBILITY OF 765 kV
VS 345 kV



Constructability of 345kV vs 765kV

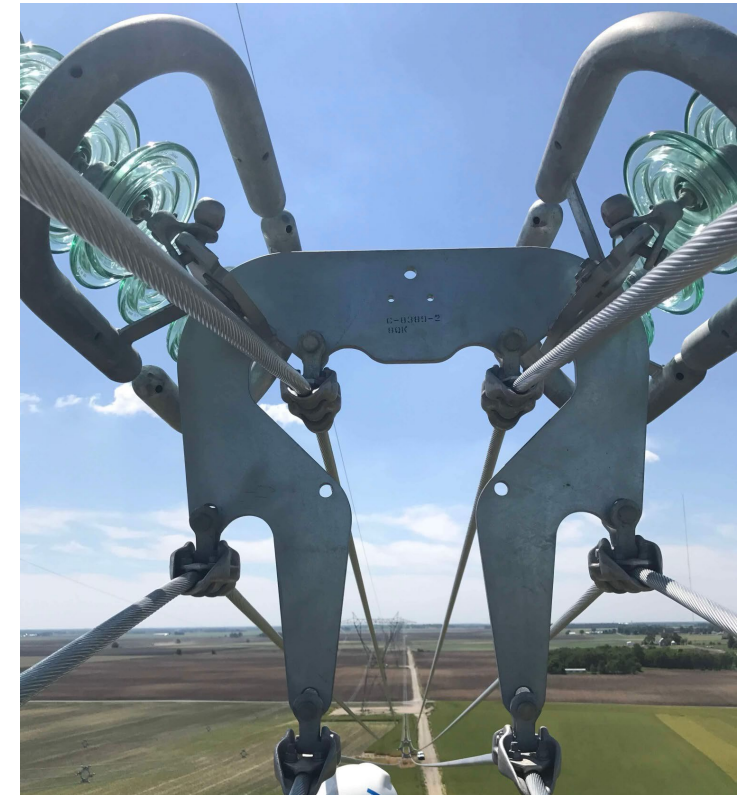


Conductor Comparison Estimates

| Circuit | Double Circuit (mi) | Single Circuit (mi) | Circuit Miles (mi) |
|-------------------|---------------------|---------------------|--------------------|
| 345kV Import Path | 1676 | | 3352 |
| 765kV Import Path | | 1255 | 1255 |

- 345kV conductor 2-Bundle 1926.9 kcmil ACSS/TW "Cumberland"
- 765kV conductor 6-Bundle 795 kcmil ACSR "Tern"
- Significant reduction in mileage of conductor to be installed providing opportunities to improve schedule
- 765kV reduces electrical line losses significantly as well

| | Material Savings | Labor Savings |
|-------------------|------------------|---------------|
| 765kV Import Path | -25% | -6% |



Constructability of 345kV vs 765kV



Structure Comparison Estimates

- 765 kV provides several benefits during construction
- Typical 765kV span lengths can increase 10% reducing the overall structures
- Single circuit 765kV allows for use of guyed towers which can reduce tangent weight by 20%

| Circuit | Total Towers | Reduction |
|-------------------|--------------|-----------|
| 345kV Import Path | 8,050 | |
| 765kV Import Path | 5,530 | -31% |

- Reduction of ~30% of towers required will reduce foundations, access roads, installation man hours
- Tower erection efficiencies can balance out increased weight
- Use of guyed tower option will further reduce the overall tower weight and installation cost



| | Tower Weight | |
|-------------------|-------------------------|------------------------|
| | Self-Support Comparison | Guyed Tower Comparison |
| 765kV Import Path | 5% | -16% |

| Overall Advantage | Self-Supporting | Guyed |
|-------------------------|-----------------|-------|
| Weight Savings | | X |
| Reduced Labor | | X |
| Concrete Reduction | | X |
| Overall Tower Footprint | X | |



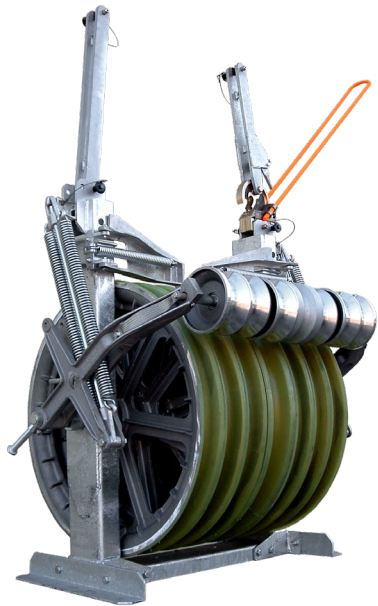
Procurement

Capacity & Experience

- Steel Structure Procurement
 - >100M pounds of steel procured per year
- Conductor Procurement
 - >60M feet of conductor procured per year
- Global Procurement
 - Experience sourcing material from global suppliers to provide greater capacity and decreased lead times
 - Suppliers are thoroughly qualified through factory audits
 - Robust quality inspection programs to ensure a quality product in accordance with standards and specifications is delivered



AEP: 765kV Wyoming - Jacksons Ferry Project



- S+R's ongoing investment in inventory and product development supports current and future transmission infrastructure including 765 kV projects.
- S+R can determine puller and tensioner requirements with sag detail.
- S+R previously designed and manufactured North America's first 765 kV 6-bundle block in support of AEP's Wyoming – Jacksons Ferry Project.

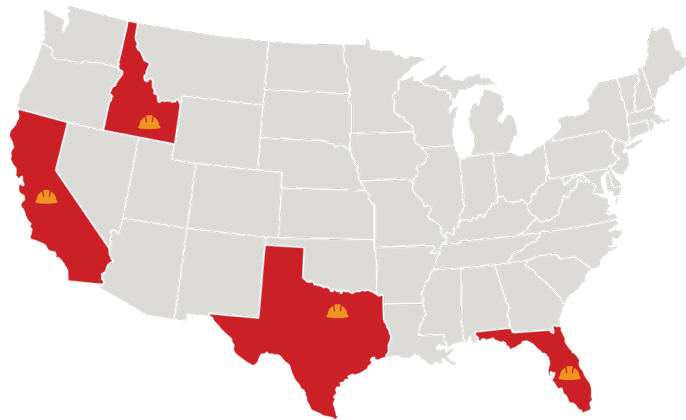
AEP: 765kV Wyoming - Jacksons Ferry Project



Investing in Safety, Training and Recruitment



DEDICATED TRAINING FACILITIES



4

NLC has campuses across the US – California, Idaho, Texas, and Florida.

- High and increasing demand for craft skilled labor as infrastructure investment grows
- Quanta has taken ownership of our employee recruitment, training and retention strategies to help ensure we meet customer needs
- Quanta has incrementally invested +\$150 million in strategic training initiatives



Northwest Lineman College (NLC) – Postsecondary education institution that has provided world-class electric training curriculum for +25 years. Added communications and gas distribution curriculum



Quanta Advanced Training Center – World-class 2,300 acre training facility. Up-training employees to advanced capabilities in all industries



Military Veteran Recruiting



Urban Workforce Development Program



Sam Houston State Univ. Partnership – Workforce Development Program for middle management resources



Ongoing Union & Trade Relationships



(representative)



Workforce and Diversity Development

SHSU Workforce Development Program

Quanta’s partnership with Sam Houston State University (SHSU) started in 2016, establishing a business relationship and workforce development program. SHSU professors, in conjunction with Quanta managers, created a proprietary curriculum. In addition to classroom course work, the program provides SHSU students hands-on experiences at the Quanta Training Center and summer internship opportunities. Quanta and the industry as a whole benefit from an education and trained workforce.



Quanta H.E.R.O.E.S Program



Quanta H.E.R.O.E.S. (*Hiring, Educating and Retaining Our Exceptional Service Men and Women*) is a comprehensive initiative to expand our long-standing support for the men and women of the U.S. Armed Forces.

In addition to hiring veterans, we’re also committed to ensuring they have the tools they need to effectively transition into a successful civilian career. By joining the energy infrastructure industry, they are continuing to serve their country in a different way – by keeping the lights on, heat generated, and communications connected. **We are a veteran-ready company!**

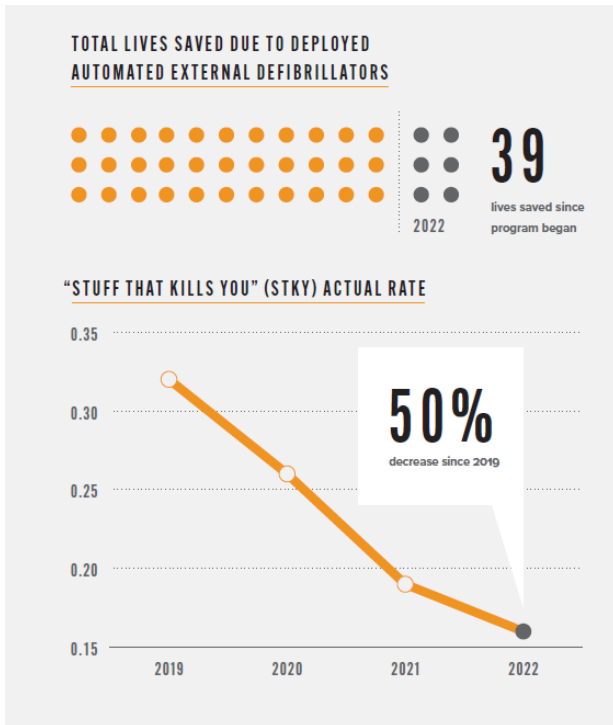


2022 Social Highlights



SAFETY

Our goal is to complete every project without incident or injury. Quanta's management team creates a culture in which all employees have the opportunity and responsibility to take ownership of their safety and the safety of their coworkers. At the end of the day, there's nothing more important than our employees coming home safely.



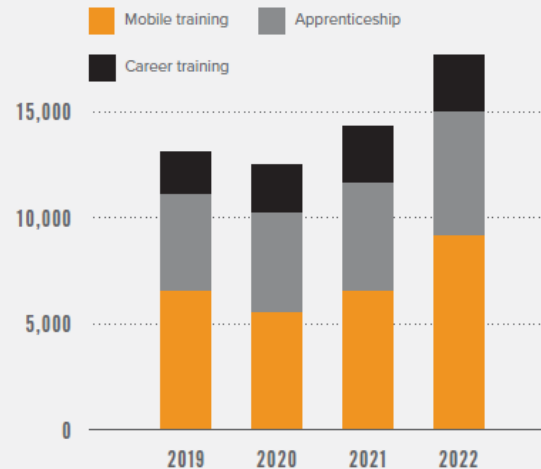
TRAINING

NLC'S INDUSTRY IMPACT

Northwest Lineman College (NLC), continues to grow its reach, enabling thousands of people to have safe and rewarding careers in electric power, telecommunications, and natural gas.

STUDENTS TRAINED

In 2022, NLC increased its positive impact on society by training 17,642 students, a 17% increase over 2021 and a 35% increase since 2019.



Our positive impact on society extends to our world-class training, empowering thousands to have safe and rewarding careers in the electric power, renewables, telecommunications, and natural gas industries.

DIVERSITY

A portfolio of operating companies, Quanta has been built on a foundation of diversity, and we are stronger when we recognize each person's unique strengths and talents. Quanta is committed to providing a work environment where every employee has a voice and sense of belonging, regardless of race, ethnicity, national origin, age, religion, gender, sexual orientation, gender identity, disability status, or veteran and military status.

BY THE NUMBERS

\$ 1.12 B

Total Diverse Vendor Spend in 2022

Increased Board Diversity

To 18% minority

Increased Minority Representation

In management and non-management roles



QUANTA

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