

COMPANY **PROFILE**

Our services

- AMPJACK® lattice tower raising
- AMPJACK® tubular structure raising
- exogrid™ grid upgrades
- Foundation repairs & upgrades
- Corrosion inspection & repairs
- Cathodic protection
- Customized construction methods
- Emergency tower repairs

CONTACT



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We help utilities do the impossible:

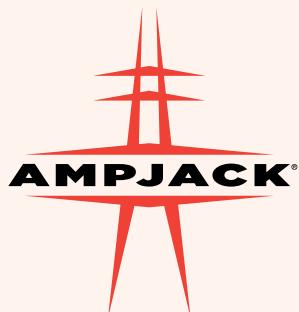
Raise and re-rate transmission towers without shutting down the lines.

Our proprietary methods extend the life and capacity of existing assets, **saving millions in avoided outages and rebuilds**. Behind every project is a cross-disciplinary team of engineers, line technicians, trainers, and analysts.

Together, we deliver practical, proven solutions that keep crews safe, budgets intact, and energy flowing. With in-house design, fabrication, and project management, Ampjack is a true end-to-end partner for transmission challenges.



What drives us:



Innovation

Redefining what's possible in tower construction with safer lifts, faster methods, and proven solutions that keep the power flowing.



Safety

Built for people first. Our methods eliminate unnecessary risks and put worker safety at the heart of every project.



Sustainability

Strengthening the grid without rebuilding it. Smarter solutions that minimize environmental impact and extend asset life.

Our services

AMPJACK® tower raising

Innovative methods for safe and efficient tower raising for all kinds of lattice and tubular steel towers.

Forensic root cause failure analysis

Investigating failures to prevent future issues effectively.

Above & below grade tower inspections

Thorough assessments for comprehensive tower maintenance.

Structural repair for steel & wood

Restoring integrity and reliability for prolonged structure lifespan while enhancing reliability.

Emergency tower solutions

Rapid tower solutions for urgent infrastructure challenges.

Construction & safety methodologies

Implementing best practices for secure and efficient construction.

Supply of repair material

Providing quality materials for effective structural rehabilitation.

exogrid™ grid upgrades

Increase grid capacity and resilience without needing new right-of-ways or expensive reconstruction.

Transmission line design & upgrades services

Enhancing transmission efficiency with expert engineering solutions.

Tower modeling & analysis

Precision analysis for structural integrity and performance optimization.

Layout, assembly & fabrication drawings

Detailed blueprints ensuring accurate construction execution.

As-built capacity assessment

Evaluating structural capacity to ensure reliability.

Footing & foundation design

Solid foundation solutions for stable tower support. We also perform geotechnical investigation & design.

Tower extension design & fabrication

Customized solutions for tower height and capacity augmentation.

We take a unique approach to our engineered solutions.

Our teams of engineers, power line technicians, operational trainers and asset management analysts combine to tackle transmission line upgrade and maintenance projects. This ensures the most economical, reliable and practical solution option is provided to our clients.

Raising your bottom line



BY AMPJACK



Uses existing right-of-way

exogrid™ builds new towers over existing ones, maximizing efficiency and minimizing land use and environmental impact.



Potential for reduced timelines

exogrid™ can shorten project timelines by reusing existing structures, reducing the need for new towers and foundations.



Lower cost for you & the environment

exogrid™ is a cost-effective, eco-friendly solution that uses existing infrastructure.



Significantly reduced permitting

exogrid™ reduces the number of new structures needed by using current tower sites.



Less downtime, more power

exogrid™ upgrades minimize disruption, allowing improvements while systems remain energized.



Enhanced grid hardening

exogrid™ strengthens towers for future demands, including converting tangents to dead ends and supporting larger conductors.



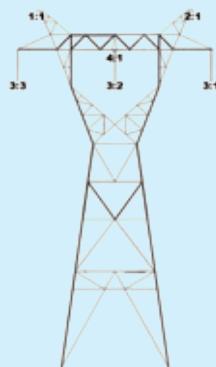
Upgrade existing towers for enhanced capacity and grid hardening

EXAMPLE APPLICATION:

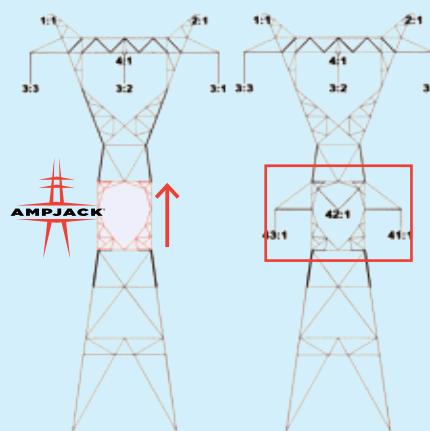
ADD CIRCUITS BELOW EXISTING CIRCUITS

Raise towers, add **under-build** circuits.

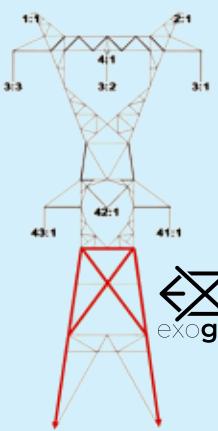
By combining Ampjack® Tower Raising with exogrid™ technology, we offer a unique, innovative approach to upgrading transmission lines, adding circuits, and hardening the grid—all without the need for new towers or costly right-of-way acquisitions.



Existing 345kV or 500kV single circuit tower.



Tower raised using the **Ampjack® tower raise system**. Modified mid-body extension for clearance window for lower 115kV or 230kV circuit.



Modified to 230kV double circuit transmission tower with **exogrid™** exoskeleton for stability.

Solving real challenges.

CASE STUDY 1: UPGRADE RATHER THAN REBUILD

Primary objectives

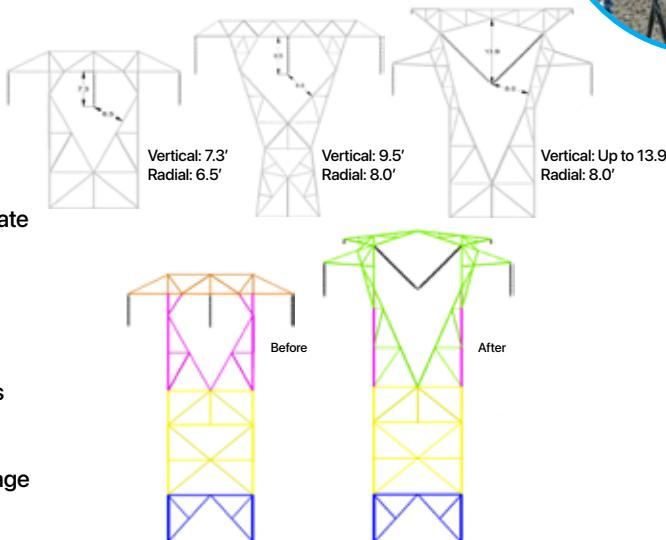
- Retrofit existing transmission lines to accommodate 2x bundled HTLS (ACCC) circuit configuration
- Increase window and phase wire clearances to modern standards
- Resolve bird fouling issues

Secondary objectives

- Increase ground line clearance and remove floating dead-end configurations
- Minimize scheduled outage time
- Implement climbing and fall-arresting standards
- Develop a consistent design for structures of the same type
- Develop a constructible sequencing plan



- Bridge & K-Frame modified to accommodate V-String center phase
- Outside phase height increased by 5'
- Able to eliminate standard configuration once re-conductoring is completed
- Vertical clearance to bridge increase to average of 10', up to 13.9'



As per California ISO Generator Interconnection Procedures (ISO Tariff DD Appendix 5)

Tear-down **\$1.19M/mile**
Rebuild **\$4.7M/mile**
Distance **30 miles**
Total cost~ \$177M
Towers: *single circuit* ASCR conductor

exogrid™ \$2.1M/mile
Distance **30 miles**
Total cost~ \$63M
Towers: *twin bundle* ACCC conductor

CASE STUDY 2: NO NEW RIGHT-OF-WAYS REQUIRED

TRADITIONAL OPTION 1:

Full tear-down and rebuild for higher capacity

- Full tear-down of an existing 345kV line and rebuild with a 500kV triple bundle t-line.

- **Cost estimate:** ~ \$1.1B
- **Time estimate:** ~ 10 years



Use exogrid™ to upgrade all existing towers to 500kV and bundled conductors

Using **exogrid™**'s exoskeleton system, upgrade your towers where they stand, no need for tear-downs or purchasing of new right-of-ways, and expedite any permitting or construction delays.

TRADITIONAL OPTION 2:

Keep existing line, purchase new right-of-ways

- Purchase additional right-of-ways to build a second line to raise the network capacity.

- **Cost estimate:** ~ \$990M
- **Time estimate:** ~ 9-10 years

- **exogrid™ cost estimate:** ~ **\$500M** (approx. $\frac{1}{2}$ the cost)
- **exogrid™ time estimate:** ~ **2-3 years** (approx. $\frac{1}{4}$ the time)

AMPJACK® tower raising services

Think of the AMPJACK® system as a crane that fits easily into job boxes.

Deployed by a small crew anywhere in the world, it adapts to nearly every tower design, **from simple single circuits to complex multi-circuit structures.**

The system mounts inside the tower body, keeping crews in a safe working zone. Once engaged, the AMPJACK® takes the entire structural and conductor load, lifts to the exact height required, and creates space for new framing. After the extension is complete, the system is removed, **no cranes, no outages, no unnecessary risk.**



Benefits

Low environmental impact compared to traditional tower lifting methods

Shorter return on capital investment

No suspended loads increases safety while raising the tower

Lines remain fully energized while being upgraded!

Save thousands or millions of dollars in costly outages choosing AMPJACK® to safely lift towers with zero downtime or outages.

A fully engineered solution

Every project begins with data. We align lift requirements with thermal ratings, then build or verify precise PLS models. From there, we engineer AMPJACK® loads tailored to each structure.

Our process includes detailed foundation and structural analysis to guarantee integrity. We design tower extensions that integrate seamlessly, with full construction packages (drawings, fabrication details, and build plans) to support execution in the field.

We don't just deliver hardware. We provide training, technical support, and upgraded PLS CADD/TOWER models that empower your team long after the lift is complete.



Eco-friendly, timeline-friendly.

Choosing AMPJACK® can greatly reduce the environmental permitting process, expedite the construction plan, and reduce permitting and ROW access costs.



We don't need a fleet of cranes.

The AMPJACK® system ships in 8-12 compact job boxes. Crews can tow them on a flat-deck trailer, move them down narrow ROWs, or heli-lift them to remote sites where heavy equipment can't reach. Modular, mobile, and purpose-built.

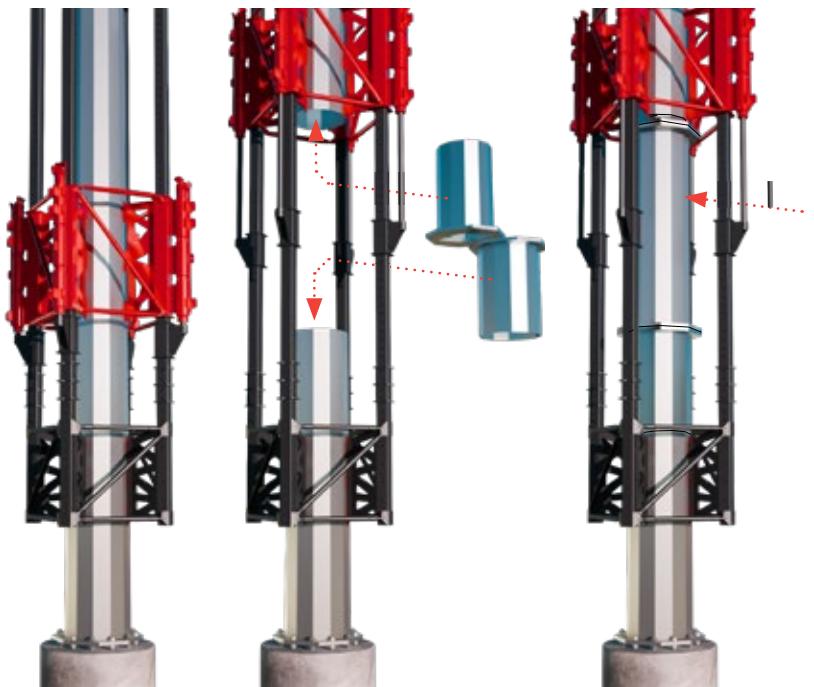
AMPJACK® goes where your towers are.



Tubular steel pole raising

For decades, utilities have leaned on tubular steel structures to handle added loads and evolving system needs. But like lattice towers before them, these structures now face thermal sag and capacity demands beyond their original design.

Ampjack brings proven expertise from decades of lattice tower lifts into this new era. We've engineered the industry's first scalable solution to safely raise and extend tubular steel structures, **giving utilities a future-ready option without wholesale rebuilds.**



Pre-raise

Mid-raise

Post-raise

Monopoles

Reach new heights with Ampjack's expert handling of monopole structures.

H-Frames

Elevate H-frames effortlessly using Ampjack's innovative hydraulic technology.

Direct embedded

Seamlessly raise direct embedded towers with Ampjack's precision approach.

Piered foundations

Lift towers on piered foundations confidently with Ampjack's specialized expertise.



Corrosion repair services

The moment a tower goes into service, corrosion begins.

Left unchecked, small weaknesses can compromise an entire line. That's why proactive inspection and repair programs are mission-critical. Transmission systems are only as reliable as their weakest tower. Ampjack helps owners extend life, maintain reliability, and keep lines energized **by finding, fixing, and preventing foundation and steel deterioration before it threatens the grid.**



Factory applied galvanic coatings deteriorate



Corrosion reduces service life



Corrosion creates safety risks



Corrosion increases costs and delays to replace structures

Non-destructive testing (NDT)

Ensure structural integrity with Ampjack's precise non-destructive testing methods.

Development of maintenance programs

Optimize longevity with Ampjack's comprehensive maintenance program development.

Engineering tower upgrades

Elevate tower performance with Ampjack's tailored engineering upgrade solutions.

Geotechnical studies

Navigate foundation challenges with Ampjack's thorough geotechnical studies and analyses.

Above and below-grade steel inspections

Enhance structural resilience through meticulous above and below-grade steel inspections.

Coatings

Protect against corrosion with Ampjack's advanced and durable coating solutions.

Cathodic protection design and Installation

Shield against corrosion with Ampjack's expertly crafted cathodic protection systems.



Before corrosion repair



After corrosion repair

Foundation repairs

Strong towers start with strong foundations. Ampjack's foundation repair services address everything from hidden below-grade damage to surface deterioration.

We deliver targeted solutions: concrete rehabilitation, coating restoration, structural reinforcement, and full modernization upgrades. Every repair is engineered for long-term resilience, protecting assets against today's stressors and tomorrow's demands.

Above and below-grade inspections

Ensure foundation integrity with Ampjack's meticulous above and below-grade inspections.

Surface coating restoration

Renew surface coatings with Ampjack's specialized restoration techniques.

Structural repairs

Restore structural integrity with Ampjack's precise and efficient repair services.

Foundation leveling

Achieve stability and alignment with Ampjack's professional foundation leveling services.

Concrete rehabilitation

Revitalize foundations with Ampjack's expert concrete rehabilitation solutions.

Subsurface restoration

Strengthen foundations from within with Ampjack's advanced subsurface restoration methods.

Upgrade designs

Modernize foundations with Ampjack's innovative upgrade design solutions.

Grillage repairs

Reinforce support structures with Ampjack's reliable grillage repair expertise.



From crumbling foundations to fortified strength

Customized construction methods

Ampjack looks at every project as unique, and often clients come to us with situations that have never been attempted. Our skilled and knowledgeable engineering and operations teams work together to develop solutions for our clients most challenging problems.

Guyed tower repairs

Restore stability with Ampjack's specialized guyed tower repair solutions.

Underwater inspection and repairs

Ensure underwater infrastructure integrity with Ampjack's comprehensive inspection and repair services.

FAA lighting

Comply with regulations using Ampjack's expert FAA lighting installation and maintenance.



Construction of custom tower



Leg repair during and after

Tower erecting without conventional cranes

Achieve precision erection with Ampjack's innovative crane-free methods.

Voltage re-ratings

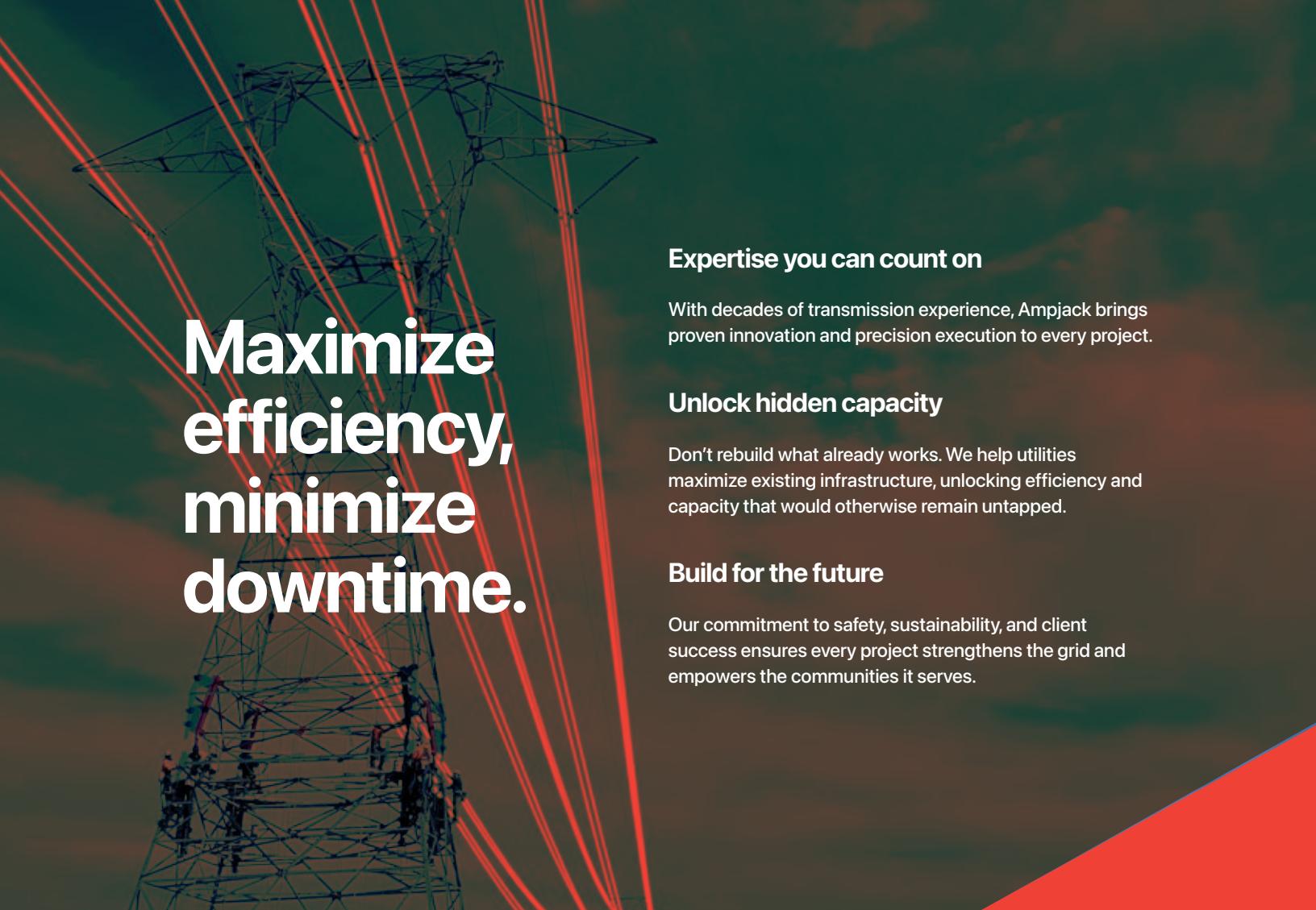
Enhance capacity with Ampjack's reliable voltage re-rating solutions.



Before and after tower leveling



Guyed tower repair



Maximize efficiency, minimize downtime.

Expertise you can count on

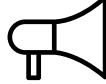
With decades of transmission experience, Ampjack brings proven innovation and precision execution to every project.

Unlock hidden capacity

Don't rebuild what already works. We help utilities maximize existing infrastructure, unlocking efficiency and capacity that would otherwise remain untapped.

Build for the future

Our commitment to safety, sustainability, and client success ensures every project strengthens the grid and empowers the communities it serves.

 **Reach out**
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