



Lancium and the Stargate Project in Abilene, TX

Bringing Hyperscale Campuses to Texas

May 2025

Lancium is an energy technology and infrastructure company uniquely well positioned to deliver critically needed power on the largest scale in history to the AI data center industry

Since 2017, Lancium has been solely dedicated to understanding, managing, and controlling large loads in the most cost-effective manner

Lancium's vision was to pioneer the model of bringing large loads to abundant renewable energy resources and optimizing power prices via flexible assets in conjunction with our IP portfolio

Lancium has developed proprietary software which currently manages hundreds of MW of load, delivered the first load-only Controllable Load Resource (CLR), developed and defended a large portfolio of intellectual property (38 granted patents) on managing loads and the grid, and achieved industry-leading energy cost savings.

We are the world's leading expert in developing, connecting, and integrating very large loads with a focus and leading position in the ERCOT market, which is optimally positioned for AI data centers

Our technical know-how, team, and technology are critical components of the future grid as AI data centers scale to become the largest consumer of energy in the world

Lancium at-a-Glance



Power is the major obstacle to realizing the potential of AI. Lancium is positioned to capitalize on this opportunity

Executive Summary

Lancium is **a power infrastructure company** that builds grid interconnections, owns land, and provides power management services to **AI data center developers**

- Owns five sites in West Texas that will have **6.1 GW of total capacity** when fully developed, located near **excess, low-cost, renewable power generation**
- Builds interconnections and charges customers a **\$ / MW take-or-pay fee** for allocated power capacity
- Has **1.2 GW contracted** for AI data centers at our campus in Abilene, TX **online by YE2025**

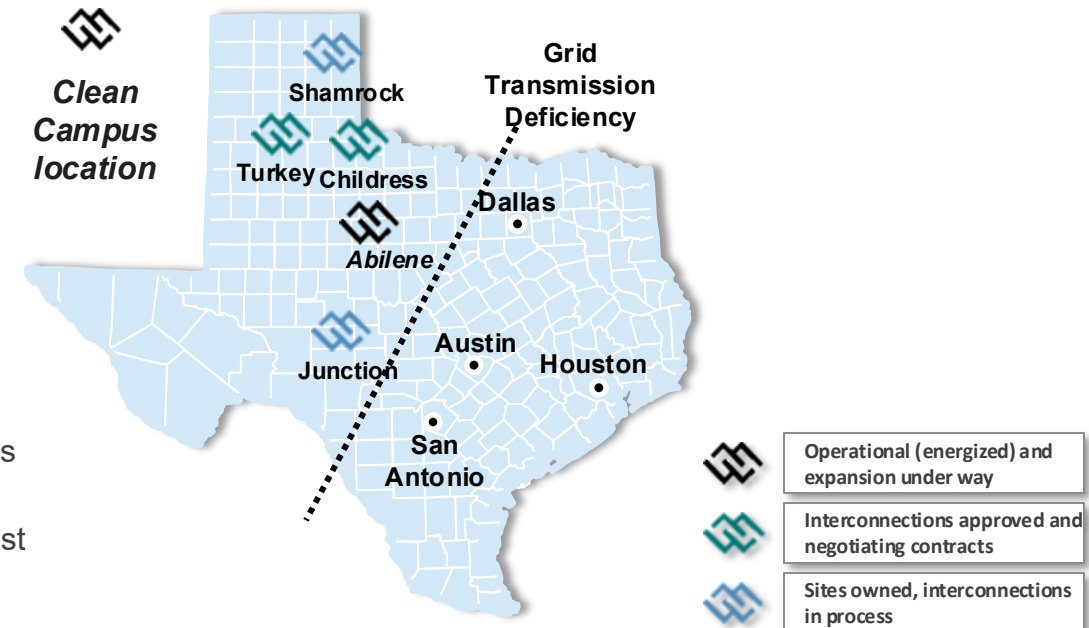
Development Outlook

- Develop gas generation to provide bridge power until grid connections come online
- After initial bridge to interconnect, gas generation can enable additional data center MWs to be brought online at each site by serving as base load or backup power
- Develop additional renewable generation and BESS to play a long-term role in power cost management at each of our sites

Lancium Highlights

Large, Existing Footprint 3.2 GW <i>of approved interconnections in ERCOT</i>	Strong Pipeline 6.1 GW <i>of total capacity at five currently owned sites</i>	Market Tailwinds ~5x <i>AI power consumption vs. current data centers by 2030</i>	Low-Emissions, Low-Cost Power ~25-50% <i>delivered energy savings to clients</i>
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Lancium locations access power at scale



Lancium Business Model | Clean Campuses and Power Management Services to Unleash Value



Easy to understand price structure, locked-in customers over long horizon



Data center tenant signs long-term contract for all inclusive \$/MW fee



Receives 24/7 energy



Customer determines carbon free energy (CFE) target, Lancium delivers

Lancium Clean Campuses

Physical infrastructure positioned to enable the largest, lowest cost, lowest emission data centers in the world with a time to energize advantage

Lancium Power Management Services

Integrated power optimization and orchestration services unlock infrastructure value

- Site Selection Analysis – Market design, grid withdrawal, congestion basis analysis, land availability, and terms
- Asset Acquisition – Land, easements and abatements procured
- Located next to abundant wind and solar resources
- Electrical infrastructure in development
- Project Development – Permitting, approved load interconnection / executed Facilities Extension Agreements
- Approved multi-GW load connection for time to energize advantage

Power Mgmt.

- Retail Electric Provider
- Qualified Scheduling Entity – Level 4
- Credit strategy
- Resource
- Monthly power usage audit

Energy Structuring

- Optimal energy supply strategy
- PPA procurement

ML/AI Orchestration

- Automated ML/AI platform for delivering low cost green energy for large loads

Risk Mgmt. & Reporting

- Prior to DA optimization
- Energy hedging & optimization
- Environmental Attribute management
- Position Reporting

Single \$/MW fee inclusive for all assets technology and services

Comprehensive portfolio enables speed, interconnect viability, and lowest cost

The Stargate Project

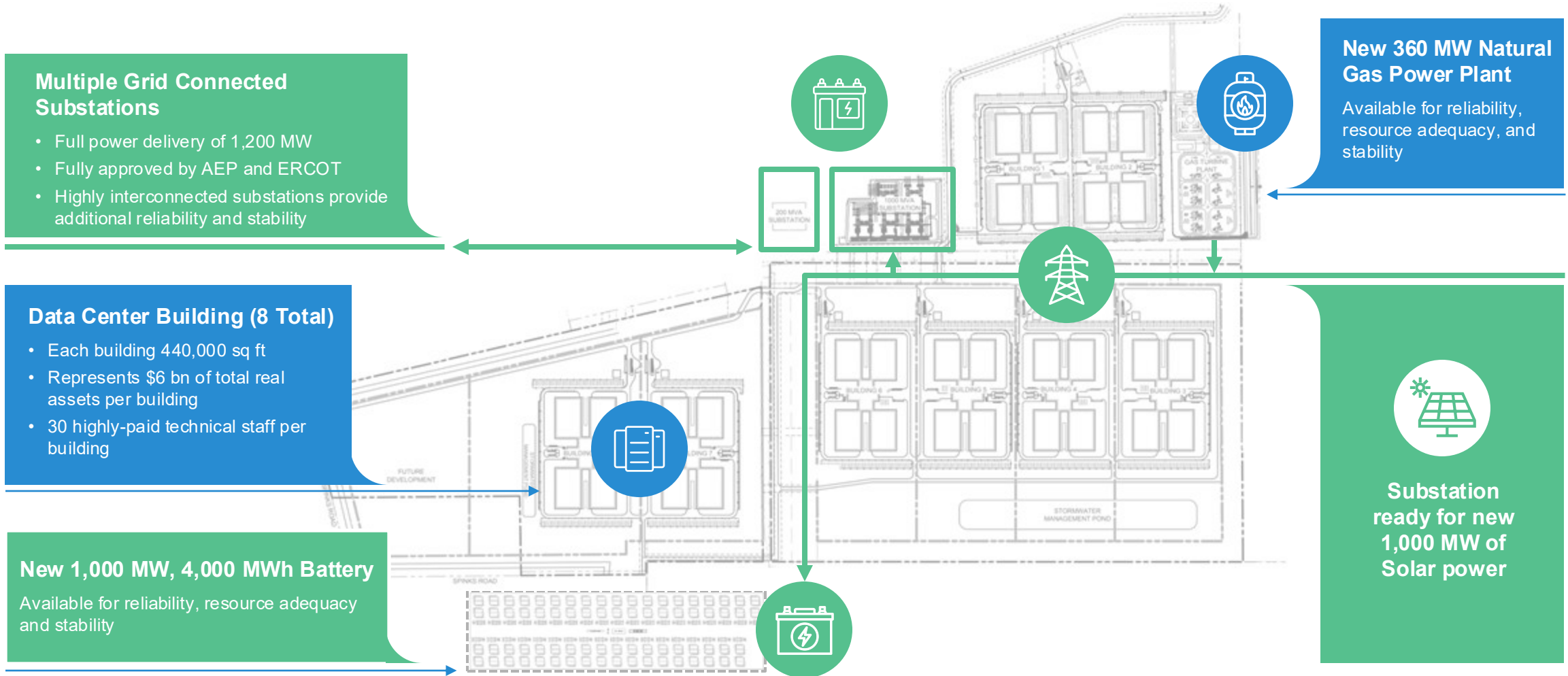
- The Stargate Project is a company founded by SoftBank, OpenAI, Oracle, and MGX
- Announced in January 2025 with strong support from the Trump administration
- Stargate intends to invest up to \$500 billion into AI infrastructure for OpenAI over the next four years, with the first \$100 billion being deployed immediately
- Lancium's Clean Campus in Abilene, Texas is the site of the first Stargate data center
- Abilene will host 1.2 GW of total power, potentially generating over \$10 billion in annual revenue for Oracle per analysts estimates
- NVIDIA, Microsoft, and ARM are also technology partners for the project
- Stargate vision is for a network of GW+ scale data centers, potentially consuming 10+ GW of total power when complete



January 22, 2025 – President Trump announces Project Stargate in the Oval Office with SoftBank CEO Masayoshi Son, Oracle Chairman Larry Ellison, and OpenAI CEO Sam Altman

Texas has the early lead in the race to become a leader in AI infrastructure

Abilene Stargate 1: 1,200 MW Under Development



Abilene Development Speed: "Project Ludicrous"



March 2024

Cowboys Stadium to scale.



March 2025

Economic Impact of Gigawatt Scale Data Centers, Uniquely Enabled by the Panhandle Transmission Plan



1.2 GW Lancium Clean Campus under construction in Abilene, Texas

A 5 GW data center could create...

- 30 million square feet
- 14,000 new construction jobs
- 4,000 new data center jobs
- 28,000 jobs in the community
- \$20 billion in GDP

...but customers need gigawatts of power delivered on time, or will turn to other markets

Texas can keep the early lead in the AI infrastructure race with improved transmission

Priority #1: Enabling safe, reliable, and flexible operation of Oracle's AI-driven workloads without compromising grid reliability or violating ERCOT operational standards.

Voltage Ride Through

Description: In the event of a fault on the grid, and subsequent voltage sag, the datacenter load does not trip offline and the grid experiences constant power draw. The extent of a specific ride-through standard is yet to be determined officially by ERCOT, but assumptions based on IEEE standards and past proposals can be used as approximations. This characteristic is incredibly important if datacenters want to grow larger than 1 GW.

Measurements: Demonstrated VRT capabilities in stability studies and during operations.

Load Swings

Description: Large and sudden load swings caused by AI training workloads have the potential to negatively impact local/system frequency, voltage, and cause oscillations. The net load profile of the campus must be sufficiently smoothed to avoid these issues. The larger the facility, the more impactful the load swings are. (What is ok at 200 MW is not ok at 1 GW).

Measurements: No calls from TSP/ERCOT and net load consumption at POI is smooth and does not negatively impact local or system wide voltage and frequency.

Range of Potential Solutions

	BESS	Synchronous Condenser	Statcom
Load volatility	✓(milliseconds)	✗	✗
Voltage ride through (small sag)	✓	✓	✓
Voltage ride through (large sag)	✓	✗	✗
Economic optimization	✓	✗	✗
Active power	✓	✗	✗



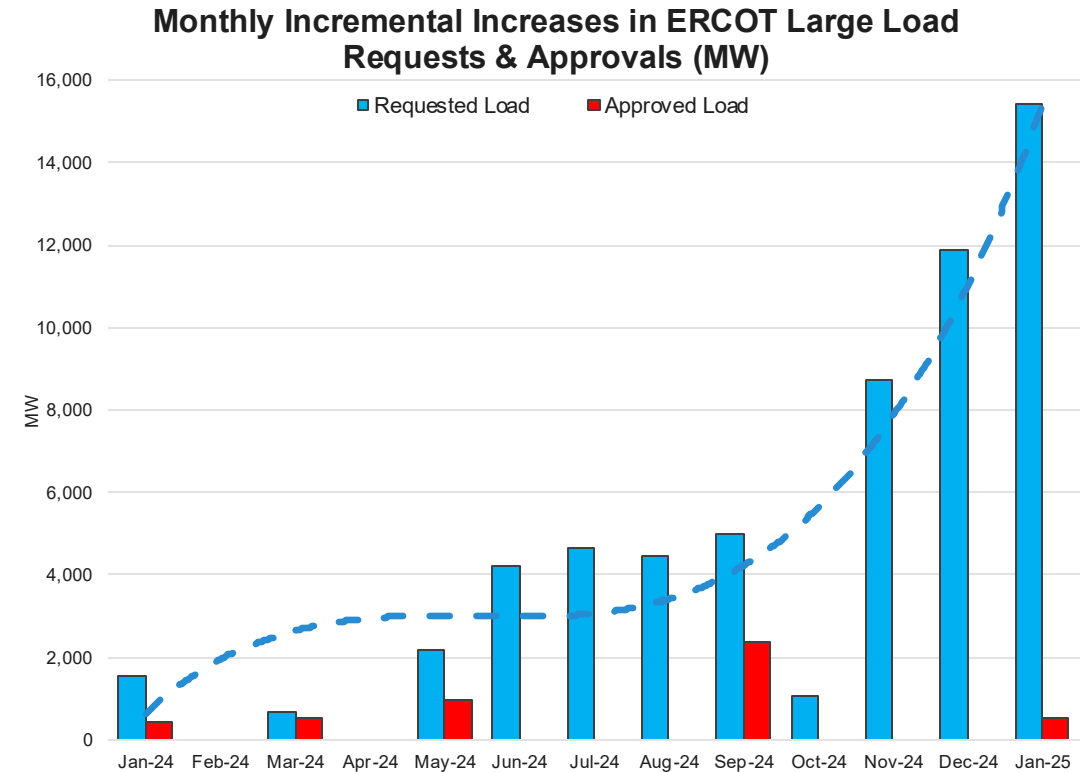
765 kV Enabled Expansion

Bringing Hyperscale Campuses to Texas

March 2025

Current Transmission System is “Sold Out”

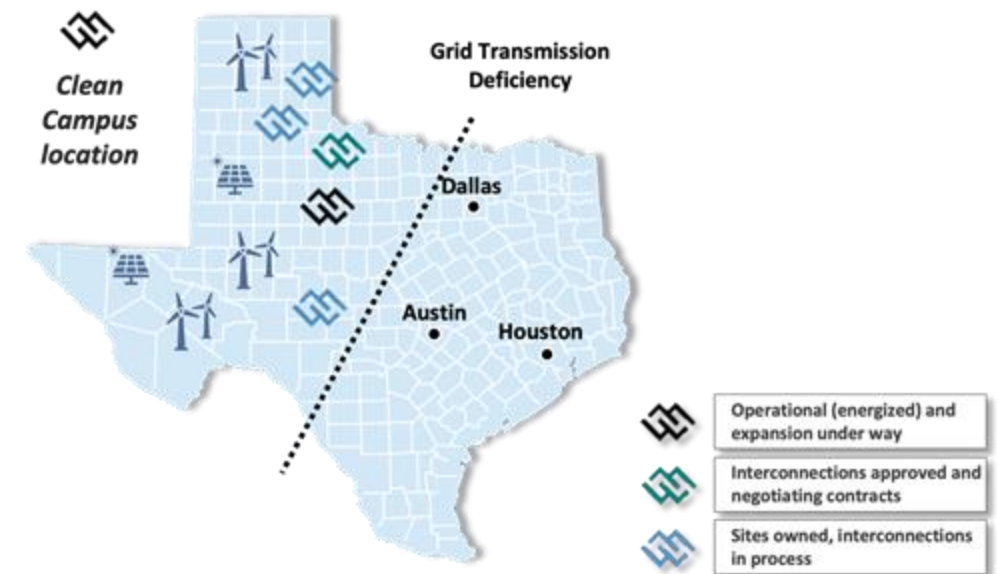
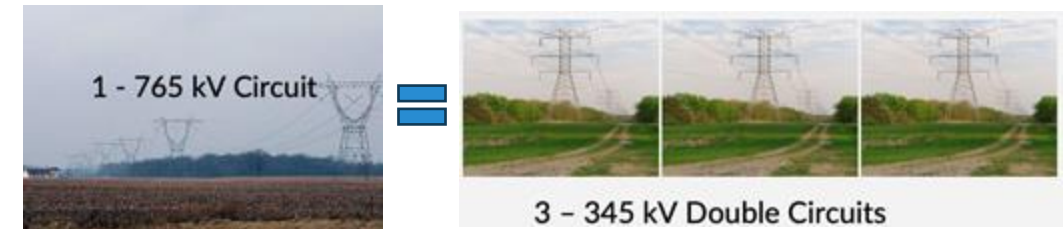
- New Large Load growth is happening faster than can be accommodated by the current planning process
- Large Load interconnection approvals have stagnated in the past year as new load requests outpace approvals by over 1,300%
- Most new Large Load interconnections require new transmission projects that are planned locally through ERCOT RPG (band-aid solutions)
- A system-wide plan is necessary to construct an efficient transmission system that holistically accounts for future load growth



System wide EHV planning is needed to most efficiently serve the coming load growth

New Large Loads are Energy Dense, Requiring Strong Nodes

- The demand trends in the Permian are analogous to what we're seeing in the Panhandle and other parts of the state
- Paradigm shifts and growth in industry and tech has created an inflection point for system planning
- Future transmission will need to deliver large quantities of power to single locations, rather than general growth areas
- Existing 345 kV planning practices would simply require too many rights-of-ways and build a sub-optimal system as it plays catch-up to load growth
- A comprehensive 765 kV plan is needed to create an efficient, N-1 secured system capable of quickly and reliably serving next-generation load centers
- 765 kV enables firm market signals for load and generation from high-quality, long-term counterparties who want to invest in Texas



How to integrate multiple 5 GW data center loads at single locations: The Panhandle Plan (to be integrated with the 765 kV Permian Plan)

Approximately 1,000 miles of transmission and substation infrastructure upgrades (ratepayer-neutral with 18 GW+ of load growth)

24 GW of data center capacity representing \$500+ billion in capital investment (private capital)

A new 42" gas pipeline from the Permian Basin that would support 6+ GW of reliable natural gas generation (private capital)

Potential 35+ GW of new generation in support of offtake demand (private capital)

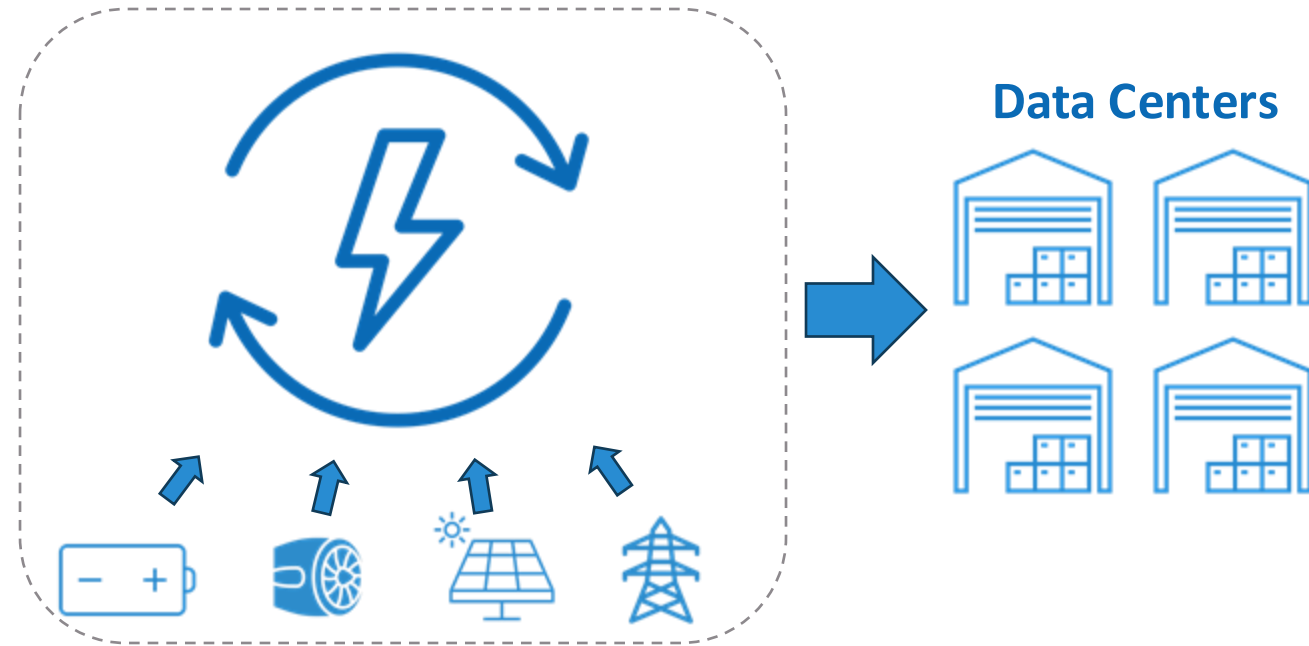


At full scale, net impact to ratepayers is beneficial for transmission costs while improving system strength and reliability

765 kV Node Campuses: Assets to the Grid

- Networked 765 kV nodes are necessary for delivering hyperscale amounts of power to next-generation loads
- The nodes will also serve as ideal generation hubs for developers seeking minimal basis risk
- Additional co-located resources will bring dispatchable generation, storage, and solar as backup and to aid resource adequacy
- Orchestrated load campuses will have the ability to mitigate load ramps and voltage-ride-through concerns, enhancing reliability without socializing costs through additional ancillary services
- Seek nodal pricing through CLR participation

Lancium Load Campus Orchestration



765 kV node campuses will dually serve as generation hubs and mitigate Large Load reliability concerns

Lancium contracted the Brattle Group and Electric Power Engineers (EPE) to perform an independent analysis of a potential 765 kV network in the Panhandle. The modeled project would enable 24 GW of new load and associated new generation in the most reliable and robust way without substantially increasing transmission rates for other customers. Preliminary results indicate:

- It is approximately rate-neutral regarding transmission rates, as EHV efficiently accommodates large amounts of load
- It is approximately rate-neutral from an energy perspective, too, since the project opens access to new gas-fired /wind/solar/storage generation in a favorable location (Panhandle)
 - Other approaches may not expand generation possibilities so efficiently (765 kV increases thermal and voltage capabilities of the system, increasing grid stability and enabling higher throughput)
 - Other approaches may lean on existing system resources more heavily, adding to resource adequacy concerns and raising energy prices
 - Energy prices might even slightly decline if the project relieves congestion and/or adds net generation to the system (dispatchable and intermittent)
 - Brattle study assumes new customers pay their full share of transmission costs

Brattle Analysis: T-Cost Estimates for Panhandle 765 kV



- Total project cost is estimated to be \$8.7 billion
- Transmission line costs are estimated using project specifications and per-unit cost assumptions from MTEP 2024
- Substation costs are estimated based on inputs provided by EPE:
 - Four 765 kV/345 kV substations for serving 6 GW at each node, at \$155 million per substation, with each substation having:
 - Three 2500 MVA transformers and 3-4 positions on the 765 kV and 345 kV voltage levels, at \$30-35 million per transformer
 - \$40-50 million for other equipment and facilities, depending on the configuration and required number of circuit breakers

Assumption	Unit	Panhandle Plan System Cost
Transmission Line Description		
Transmission Line Size (Base Assumption)	MW	10,000
Transmission Line Length	miles	1,071
Adjusted Length	miles	1,071
Transmission Line Voltage	kV	765
Right of Way Width	Feet	200
Transmission Line Costs		
RoW acres purchased	#	25,973
Cost per acre	\$/acre	\$7,500
Land Cost	\$ million (2024 \$)	\$195
Transmission Miles	miles	1,071
Cost per Mile	\$ million (2024 \$)	\$6
Transmission Line Cost	\$ million (2024 \$)	\$6,428
Substations	#	7
Cost per Substation	\$ million (2024 \$)	\$155
Total Substation Cost	\$ million (2024 \$)	\$1,085
Planning and Engineering	\$ million (2024 \$)	\$600
Other System Upgrades	\$ million (2024 \$)	\$400
Total Cost	\$ million (2024 \$)	\$8,708

Transmission Rate Impacts: 2030

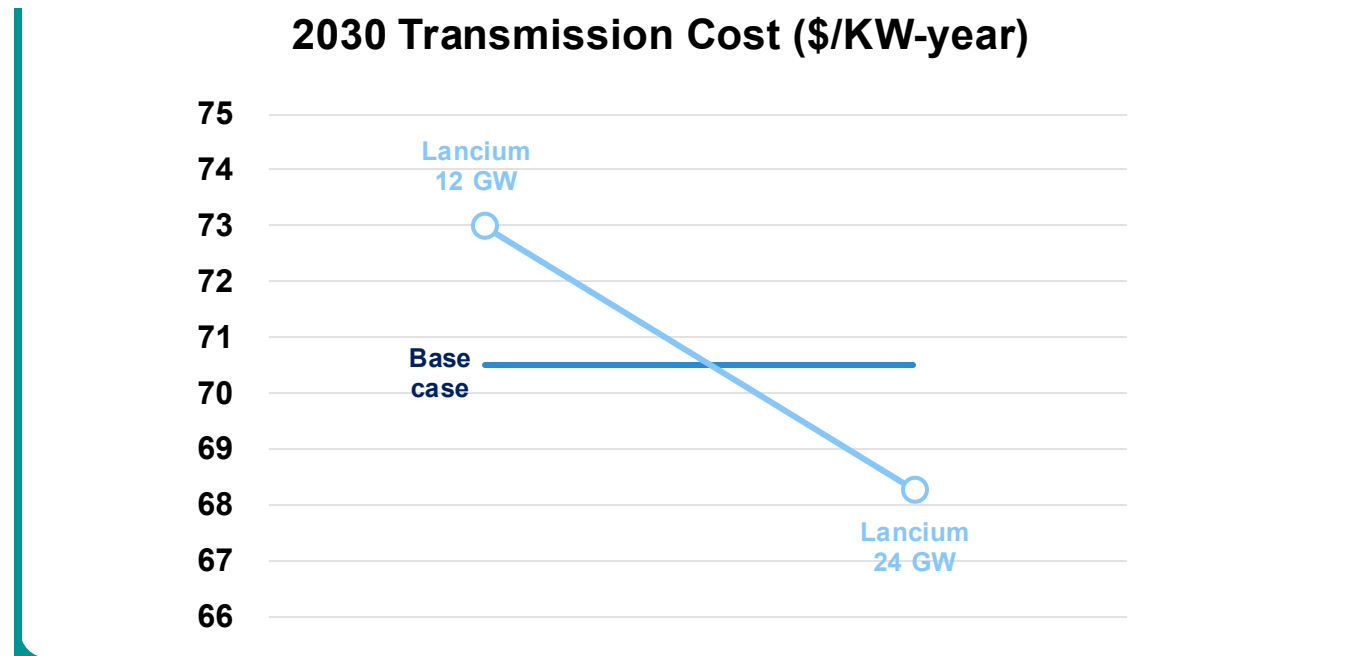


		ERCOT 2024	2030 ERCOT (w/ 2024 RTP & Permian Basin)	2030 ERCOT with 12 GW Load	2030 ERCOT with 24 GW Load
Existing ERCOT Transmission TCOS	\$ million/yr	\$5,054	\$9,356	\$9,356	\$9,356
Lancium Incremental TCOS	\$ million/yr			\$1,158	\$1,158
New ERCOT TCOS	\$ million/yr			\$10,514	\$10,514
ERCOT 4 CP Peak Demand	MW	83,685	145,920	157,920	169,920
ERCOT Transmission Rate	\$/kW-yr	\$66.8	\$70.5	\$72.9	\$68.2
Impacts of Panhandle Plan on the rate of other ERCOT customers	\$/kW-yr			+\$2.5	-\$2.2

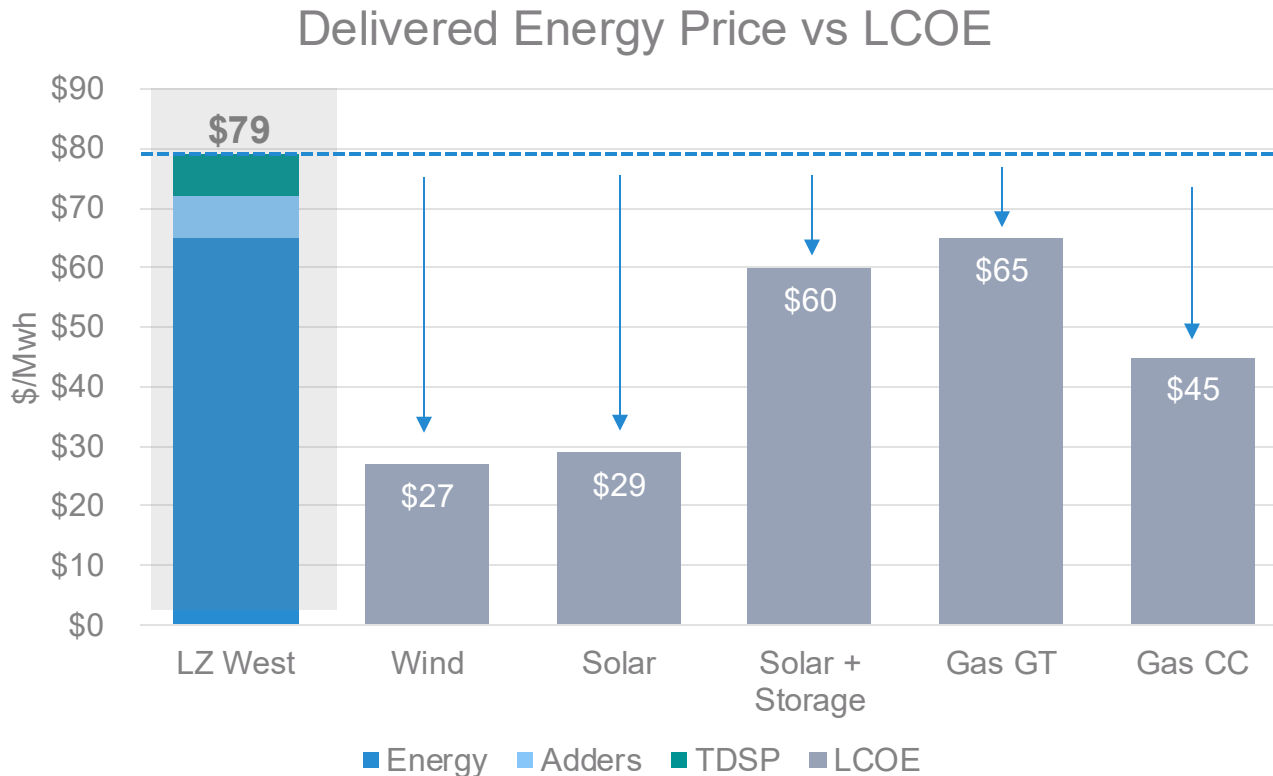
- **2030 (includes ERCOT load growth, Permian Plan, and other upgrades identified in RTP)**
 - At 12 GW of added load the ERCOT rate would increase to \$72.5/kW-yr
 - At 24 GW of added load the ERCOT rate would reduce to \$68.2/kW-yr
 - **18 GW** of load would need to be added to keep the ERCOT rate neutral

Scale Drives Transmission Costs Down for All Users

- Larger transmission networks spread fixed infrastructure costs over a wider base, creating economies of scale and reducing the per-MW cost for all users



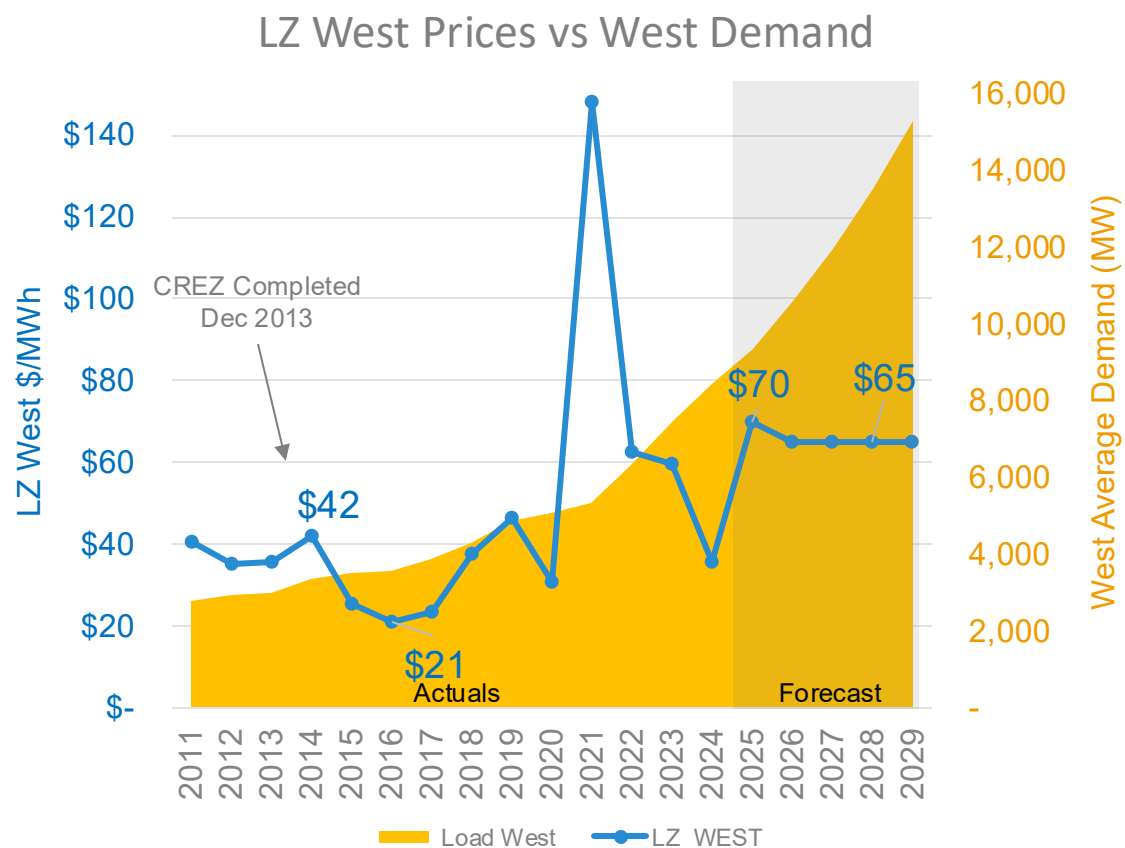
West Load Zone Delivered Energy Price vs LCOE



- Compared to the delivered energy price in Load Zone West, the Levelized Cost of Energy (LCOE) for wind, solar, solar + battery, and natural gas combined cycle is lower
- The market is functioning efficiently, and generation will follow as prices remain where they are
- West Texas is undoubtedly the best place to build, and a 765 kV system will unlock significant new power development—incremental to our own plans

Renewables and efficient gas generation outcompete delivered energy prices in West Load Zone, and a 765 kV system will unlock even greater opportunities for growth

Post CREZ Growth in West Demand and Power Prices



- The Competitive Renewable Energy Zone (CREZ) transmission lines in ERCOT were completed in December 2013
- Following the completion of CREZ, prices declined significantly due to an abundance of newly integrated wind generation
- From 2012 to 2025, average load growth in the West has been approximately 9% per year
- With continued load growth expected, Load Zone West power prices over the next five years are projected to be around \$65/MWh, with an all-in delivered cost approaching \$80/MWh

Post CREZ demand growth in the West is driving power prices upward, signaling a need for more generation

Additional Considerations and Risk Mitigations



Resource Adequacy

- We are building on-site solar and storage
- Baseload gas generation w/ supply pipelines are coming
- These are all assets to the grid

Fair Cost Allocation

- Volume of incremental power increases base to amortize transmission costs
- Customers ready to make upfront payments
- All ratepayers will benefit from cost stability with more counterparties

Transmission Asset Utilization

- Customers have committed to multi-billion dollar investments
- Transmission network is open access to serve all loads and industries
- National electrification megatrend means that spare capacity will attract users

Speed, Scale, and Certainty

- Race is on and time is of the essence – Texas should think big
- Coordinated 765 kV allows us to get ahead of the competition
- Minimal added cost over smaller 345 kV solutions

Supply Chain

- Currently engaged in dialogs with several OEMs to ensure supply
- Demand will drive creation of additional manufacturing capacity in Texas

Benefits to Texas Stakeholders



Ratepayers

- Increased access to renewable energy through better connection to renewables-heavy West Texas
- Increased grid stability
- Potential for lower electricity bills through access to cheap power



ERCOT & the Texas Grid

- Larger and more stable grid
- Promote economic activity through the creation of jobs and manufacturing needs
- Provides the foundation to allow load growth throughout ERCOT



Transmission & Distribution Service Providers

- Ability to develop hundreds of miles of high-voltage transmission
- Ability to increase rate base and returns for shareholders



Power Generators

- Decrease curtailment of existing stranded renewable assets
- Provides opportunity to expedite interconnection for new build renewables and gas generation



Electrical Manufacturing

- Will require local manufacturer to supply cables, transformers, and other key electrical equipment
- Ability to establish factories with guaranteed long-term demand



Oil & Gas

- Increased demand for natural gas as a fuel source to provide reliable dispatchable power for new hyperscale data centers
- Will electrify the Permian Basin, help expand production and secure American energy independence



Data Centers Developers

- Will expedite reliable, grid supplied power for data center developers
- Ability to provide multi-GW campuses required for cutting edge AI training



Hyperscalers

- Rapid access to power through reliable service
- Access to clean energy
- Lower cost of power supply (including transmission) relative to prices in other states

The plan will secure Texas' role as the leading data center hub in the U.S. and further bolster our robust economy



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BALANCING ENERGY

Appendix