Energy Developments Along the US-Mexico Border:

An Overview of the Laws, Rules, Agencies and Growing Energy Trends

Public Utility Law Section of the State Bar of Texas
Lunch and Learn Webinar
June 26, 2024, Noon CDT

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The development and operation of utility scale energy development and operations is an extremely complex process governed by various regimes. The content presented here is intended solely for informational purposes and educational purposes. It is not designed to substitute for legal counsel or business advice tailored to a specific circumstances or project. It should be noted that language, technical terminology, and rules and regulations can differ across various companies, sectors, regions and regulatory bodies and there are likely exceptions to most guidelines here. In this presentation, such elements are employed in a descriptive capacity. We encourage participants to consider the context of their own usage rather than focusing on the precise terms used here. The views and opinions expressed are those of the presenters and do not necessarily reflect the official policy or position of the Public Utility Law Section of the State Bar of Texas.

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The Big 6 of Project Development

- Finance
- Land and Site Control
- Permitting and Regulatory
- EPC (engineering-procurement-construction)
- Interconnection
- O&M (Operations and Maintenance), including end-of-life phase

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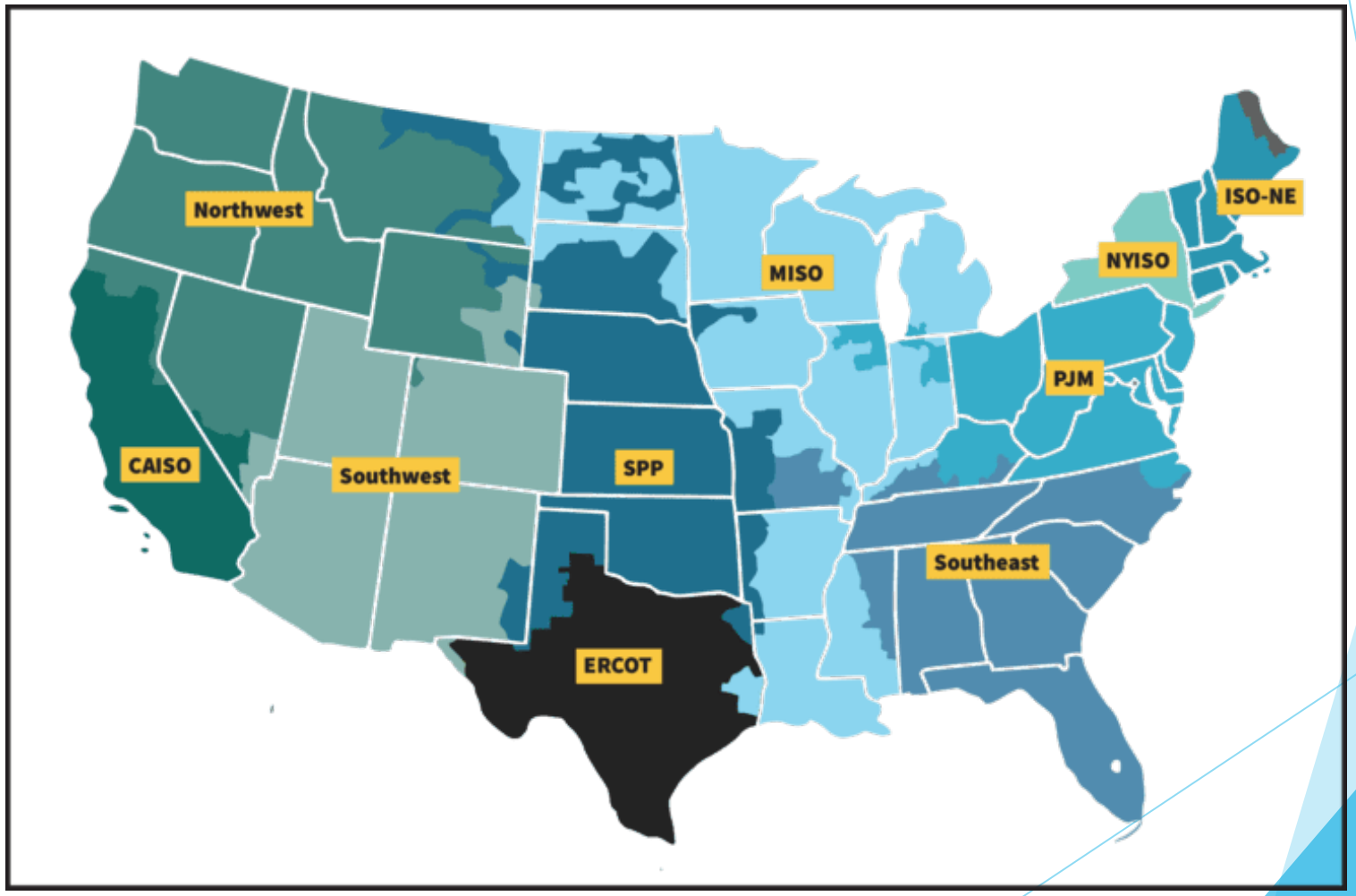
RTO/ISO vs. non-RTO/ISO regions



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A Sampling of the Regimes Governing Utility Scale Energy Development on the Border (Laws and Authorities Having Jurisdiction (AHJ))

Type of Permission	Governing Laws and Rules	Key Factors Considered	AHJ
Cross Border (Mexico into USA): Presidential Permit	Executive Order 12038 10 CFR 205.320	• Reliability impacts on bulk power system • Environmental Impacts	• Department of Energy • NERC • Secretary of State • Secretary of Defense • Environmental Protection Agency (contingent on project)
State-Texas (Local): Principal authority for granting of zoning and siting permits for energy projects lies locally	• Municipal governments and, in certain unincorporated areas, county governments oversee all zoning and siting for buildings and other structures (Tex. Loc. Gov't Code §§ 211.003 (municipal zoning); §§ 231.001 et seq. (county zoning)). • Chapter 35, PURA • ERCOT Protocols • PURPA (QF) or PUHCA 2005 (EWG)	• Land use compatibility • Environmental impact • Safety • Economic Impact • Agricultural land presentation • Compliance with market rules and protocols • Compliance with state commission rules and governing laws • Wholesale Market participation rights • Registration as a NERC Registered Entity, if applicable	• Local city councils or board of adjustments • County commissions, etc. • Appeals to district, county courts • Texas PUC • ERCOT • FERC • NERC

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Type of Permission	Governing Laws and Rules	Key Factors Considered	AHJ
State-California (Local or state): Siting authority is based on project size. Generally, authority to approve projects rests with counties. However, project developers may opt in to the California Energy Commission (CEC) siting process for projects of at least 50 MW. Opting in gives principal and preemptive authority to the CEC.	• The County Board of Supervisors oversees local siting of renewable energy projects unless the developer of a large project opts in to review by the state. (Cal. Government Code § 65000 et seq.).	• Environmental considerations • Reliability concerns • Resource valuations • Costs • Aesthetics • Congruence with local land use (agricultural vs suburban vs rural)	• California Energy Commission • California Public Utilities Commission • CAISO • FERC • NERC
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Utility Scale Project Development

Pre-NTP	NTP	COD	End of Life
Objective: Preparation for construction and finalization of planning. Key Activities: Site selection, securing permits and approvals, finalizing project design, arranging financing, and entering into power purchase agreements (PPA) or other offtake agreements. Environmental and feasibility studies are completed during this phase to ensure the project is viable and compliant with local regulations. Outcome: All necessary permits, contracts, and financing are in place to begin construction. The project is ready to move to the construction phase upon receiving the Notice to Proceed.	Objective: Official start of construction. Key Activities: Mobilization of equipment and labor to the site, beginning of physical construction activities. This phase includes groundwork, installation of infrastructure (like turbines for wind farms or panels for solar projects), and construction of support facilities (such as substations and access roads). Outcome: The project is under construction with a clear timeline for completion. Regular progress reports and adherence to safety and environmental standards are crucial during this phase.	Objective: Transition from construction to operational status. Key Activities: Testing and commissioning of installed equipment to ensure it meets design specifications and operational requirements. Final inspections and approvals are obtained from relevant authorities. The project begins generating power and delivering it to the grid or specific off-takers under the terms of PPAs. Outcome: The project is fully operational and starts generating revenue. It operates under a set framework for maintenance, monitoring, and compliance with regulatory requirements.	Objective: Decommissioning and site restoration upon the project's conclusion. Key Activities: Dismantling of project infrastructure, recycling of materials, and restoration of the site to its original condition or repurposing for future projects. Environmental assessments may be conducted to ensure the site is left in a satisfactory state. Outcome: The project site is cleared, with minimal environmental impact, and is ready for new development or returned to its original state. This phase includes final settlements of accounts and contractual obligations. Each phase is critical to the lifecycle of a utility-scale project, with specific challenges and requirements that need to be managed to ensure the project's success from inception through decommissioning.

pre-NTP (pre-Notice to Proceed)

Concept	Initial feasibility Studies and Financial Investment decision (FID)	Design and Engineering	Environmental
• Why are we doing the project? • What do we hope to accomplish?	• Analyzing site suitability • Engineering feasibility and fatal flaw analysis • Interconnection and system study • "Back-of-napkin" revenue and cost estimate • "No-go" environmental analysis • Identify stakeholders, communities	• Specifications • Outline and detailed design • Energy estimates • Legacy vs. new technology • Fuel supply • Generation and storage considerations • Wires (transmission line and distribution lines) • Security and control aspects (e.g. SCADA, EMS, etc.)	• NEPA-DOPAA, EA, EIS • State environmental act • Federal lands • Critical environmental concerns • Wilderness areas and study areas • Endangered species • Air • Critical habitat • Wetlands and streams • Cultural • Historic • Other

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pre-NTP (pre-Notice to Proceed) cont'd.

Site Control, land	Permitting and regulatory (including siting)	Contractual	**Financial**

• Conditional use permits (CUPs), pre-existing land use, zoning
• State (BLM) or federal land involved?
• Purchase or lease
• Land and water access
• Waste and Hazardous materials
• The land
  • Title issues
  • Options
  • Land surveys
  • Rights of way
  • Easements
  • Subsurface and mineral
	• Federal (FERC, NERC etc., other federal))
	• Regional (ISO/RTO)
	• Utility and other non-RTO/ISO (tariff, schedule, and business protocols)
	• State PUC
	• County
	• City
	• Other AHJs
	• International, cross-border considerations, e.g. Presidential Permits
		• PPA (Power Purchase Agreement)
		• Interconnection Agreement
		• Engineering contracts
		• Procurement and equipment contracts (supply chain)
		• Labor
		• Financial
		• Corporate
			• Financial Modeling
			• Insurance
			• Grants and loans
			• Tax credits, incentives, bonuses, deductions, depreciations
			  • Federal
			  • State
			  • Local
			• Tax equity investments
			• Bonds

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NTP (Notice to Proceed)

Procurement and site prep	Construction	Commissioning and Interconnection	Other
• Major equipment purchased and contracts signed • Bidding process and selection of contractors for land prep, subsurface rights, civil works, electrical etc. • Site Prep • Required permits and regulatory approvals obtained • Project management in full gear	• Build and transfer (BT) • Build, transfer, and operate (BTO) • Build, Own, Operate and Transfer (BOOT) • Build, Own and Operate (BOO) • Public-private Partnerships (PPP) • Development timeline • Milestones and updates • Quality control • Health and safety • Security and surveillance • Force majeure • And more....	• Modeling • System impact studies • Registration or certification • Outage and maintenance scheduling • National Electrical Safety Code • SCADA, EMS system • Meter, telemetry • Testing • Cybersecurity and critical infrastructure protection	• Regulatory and Permitting, continued • Environmental compliance • Site compliance • Contractual and financial compliance • Litigation • Public and private stakeholders • Impacted communities • NIMBY-ism

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COD (Commercial Operations)

Ongoing Federal Compliance	System Reliability and Security, O&M	Other
• FERC • NERC • TSA • Executive Orders • Other federal agencies	• Regular monitoring of system performance and production and/or storage • Preventive maintenance • Vendor management • Optimization as asset ages • System expansion	• State and local compliance • Utility or RTO/ISO compliance and market rules • Financial adjustments, adjustments to updated regulations and laws • Litigation and risk management • Compliance with PPA and IA

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Other Key Trends Driving Integration

Reliability Risks are Driving Interregional Transfer Capability

- Weather related reliability risks
- Increased demand in various regions
- Changing resource mix and state clean energy goals

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OCTUBRE 5, 2023

Pide Tesla a Gobierno del Estado arranque trabajos de infraestructura para construcción de su "gigafactory"

COMPARTIR

Solicita multinacional obras en materias energética, hídrica, vial y ferroviaria

Santa Catarina, Nuevo León.- La armadora Tesla pidió al Gobierno del Estado de Nuevo León inicie la construcción de infraestructura que requiere para comenzar la edificación de la Gigafactory en el municipio de Santa Catarina.

A través de un memorándum la empresa propiedad de Elon Musk, solicita oficialmente, la construcción de un conjunto de obras en materia energética, hídrica, vial y ferroviaria, de manera previa a la edificación de su nueva planta.

Se precisa la construcción de una subestación de energía eléctrica, así como infraestructura para la transmisión de energía eléctrica a las Propiedades.

La construcción y ampliación de ramales ferroviarios a las Propiedades, de acuerdo con los planos autorizados por la autoridad competente, así como la construcción de un patio ferroviario en coordinación con el operador ferroviario seleccionado.

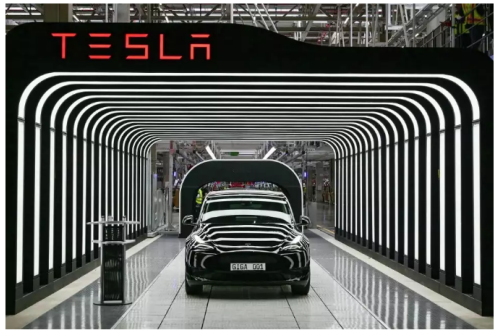
"La construcción de una subestación de energía eléctrica, así como infraestructura para la transmisión de energía eléctrica a las Propiedades".

BUSINESS

Tesla's Mexico Giga factory nears groundbreaking in Monterrey area

It will be the first Tesla factory in Mexico.

By **Gabriel Romero**, *Hill Country Reporter*
Feb 22, 2024



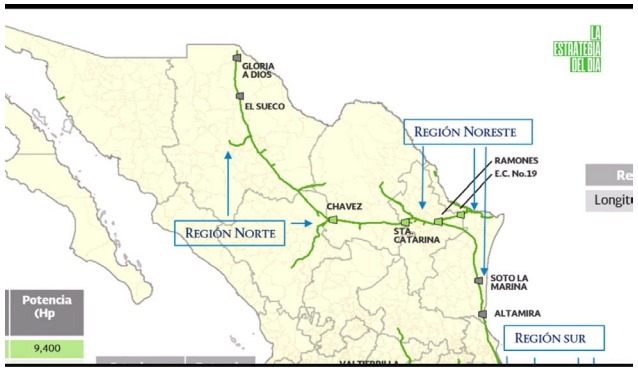
An electric vehicle of the model Y is pictured during the start of the production at Tesla's "Gigafactory" on March 22, 2022

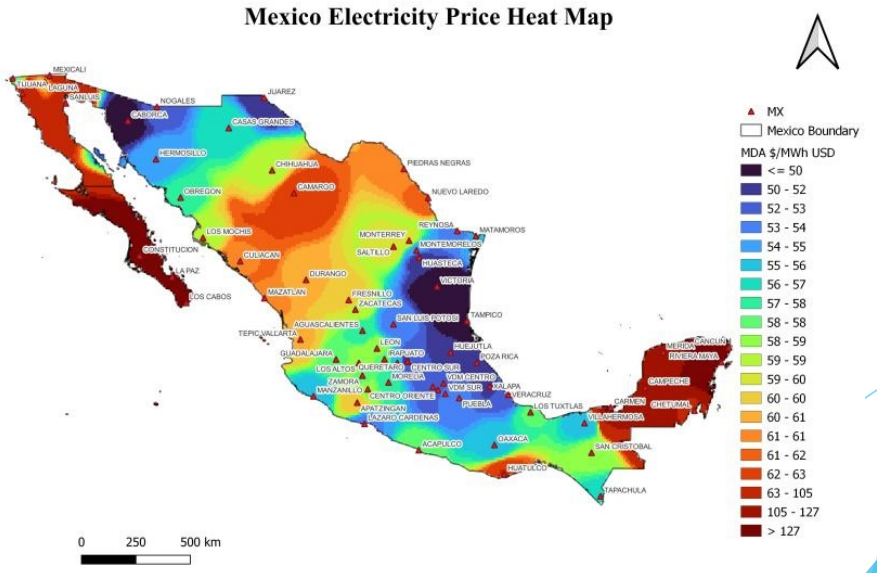
URBAN EDGE

It is time to recognize the Rio Grande Valley as a rising borderland metropolis

PERSPECTIVES : Jun. 15, 2022 ECONOMIC DEVELOPMENT | URBAN PLANNING

RODNEY GOMEZ, LUIS GUAJARDO, EDNA ELY-LEDESMA





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Questions?

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