

EnergeA Power Advisory Services

Mexico City, Mexico Boston, USA

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I. EnergeA Power Advisory Services: Overview

EnergeA Power Advisory Services (EpaS) is a US-Mexican partnership bringing together energy sector experts from EnergeA, Longwood Energy Group, Tabors Caramanis Rudkevich, & Vector Consultants. EpaS provides strategic, financial, and regulatory advisory services within Mexico's newly restructured electricity market.

The EpaS team offers extensive experience in strategy, operations, and investment in electricity markets. Team principals have worked as advisors for governments, corporations, and investors in electricity markets across the world. Moreover, clients look to EpaS for their deep and current relationships across the US and Mexican electric sectors.



I. EnergeA Power Advisory Services: Team Principals



Jesus F. Reyes-Heroles, Ph.D.

Currently CEO of StructurA / EnergeA. Board member of Santander Mexico and Mitsui Mexico. Former Secretary of Energy of Mexico, former head of Pemex, and former ambassador to the US. Ph.D in Economics from MIT.



Scott Englander

President of Longwood Energy Group, former Director of Charles River Associates. Over 30 years of experience in the power sector with IPPs, utilities, commodity traders, and government agencies. M.S.E. from Princeton University.



Raul Livas, Ph.D.

Consulting partner in EnergeA with over 22 years of experience in the energy and financial sectors. Former Head of the Energy Policy Unit at SENER, former COO of Pemex, and former CEO of Pemex Petrochemicals. Ph.D. in Economics from MIT



Richard Tabors, Ph.D.

President and founder of Tabors Caramanis Rudkevich. Over 35 years of experience in energy planning & modeling. Member of the original team at MIT that developed the theory of spot electricity pricing. Ph.D. from Syracuse University.



Alex Rudkevich, Ph.D.

President of Newton Energy Group and Partner in Tabors Caramanis Rudkevich. Over 30 years of experience in energy economics and quantitative analyses of power and gas markets; lead developer of Enelytix. Ph.D. from the Melentiev Energy Systems Institute.



Brett A. Perlman

President of Vector Advisors. Former Commissioner of the Texas PUC, overseeing the restructuring of Texas' electric power sector. Former consulting advisor to KKR, TPG, & GE Capital. Former consultant at McKinsey & Company. M.P.A. from Harvard University.



Shaheer Muqtasid Hussam

President of Astrid Energy. Over 13 years of experience in power, primarily with IPPs & investors. Recent engagements with CFE and SENER. Bachelors in mechanical engineering from MIT.



EnergeA Power Advisory Services provides an in-depth understanding of the industry, strength in analytics, and extensive experience working in Mexico's energy sector.

We provide valuable guidance to clients in a range of key areas, including:



Market
Forecasting &
Transaction
Advisory



Economic & Policy Analysis



Regulatory & Legal Support



Corporate
Strategic Planning



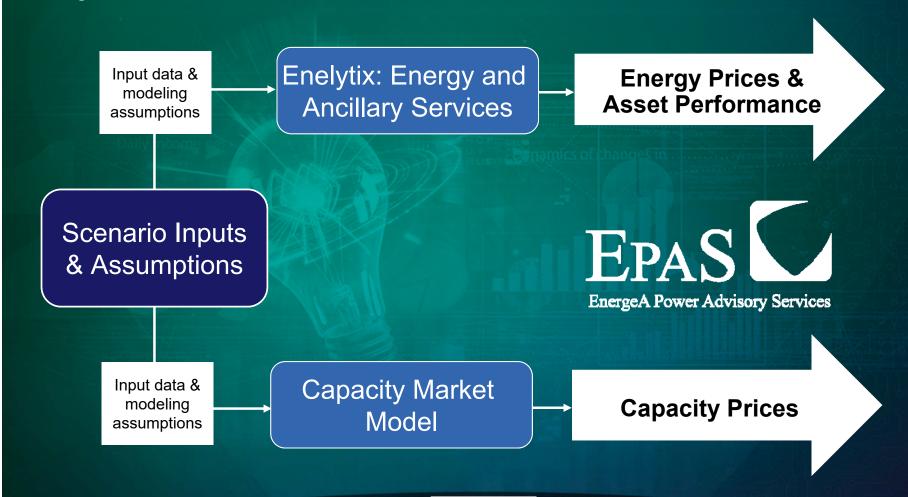
Financial
Analysis &
Evaluation



Many of our clients engage us to analyze details of market rules and propose changes to encourage market efficiency, competition, and fair access. We're often able to facilitate discussions aimed at such improvements.

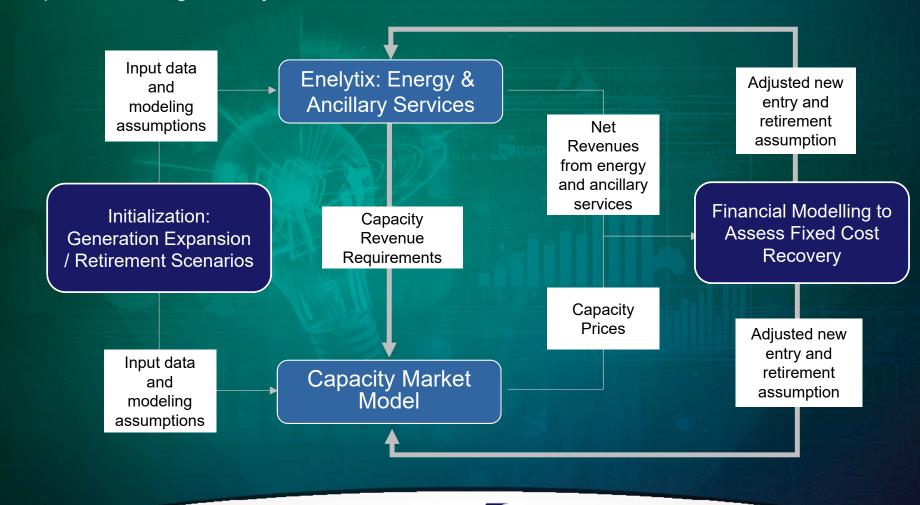
We provide our clients with detailed projections of asset and transaction economics. One of our core advantages lies in our proprietary modeling software for the Mexico power market -Enelytix. The Enelytix platform has been used in analyses for a wide range of energy industry clients to perform detailed modeling of power systems across North America, including clients in Mexico.

Enelytix has been deployed for a range of clients in the US and Mexico. It is one of the most powerful tools for fundamentals-based modelling of wholesale electricity markets used in these regions.



Private & Confidential

Enelytix deploys a rigorous, iterative simulation in order to arrive at the most realistic long-term energy, ancillary services, and capacity market prices, and to understand the impacts of potential changes in key drivers



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A breakdown of the power systems modeling methodology used by the Enelytix platform

Inputs

Demand forecasts

Generation and transmission expansion

Fuel prices

Emission allowance prices

Models

Loads / demand response

Transmission

- Existing, upgrades
- Constraints, contingencies

Generation

- Existing, additions
- Storage
- Variable generation

Market rules

Algorithms

- Maintenance scheduling
- Contingency analyses
- Commitment / dispatch
- Energy / ancillary services cooptimization
- Topology control
- Capacity market

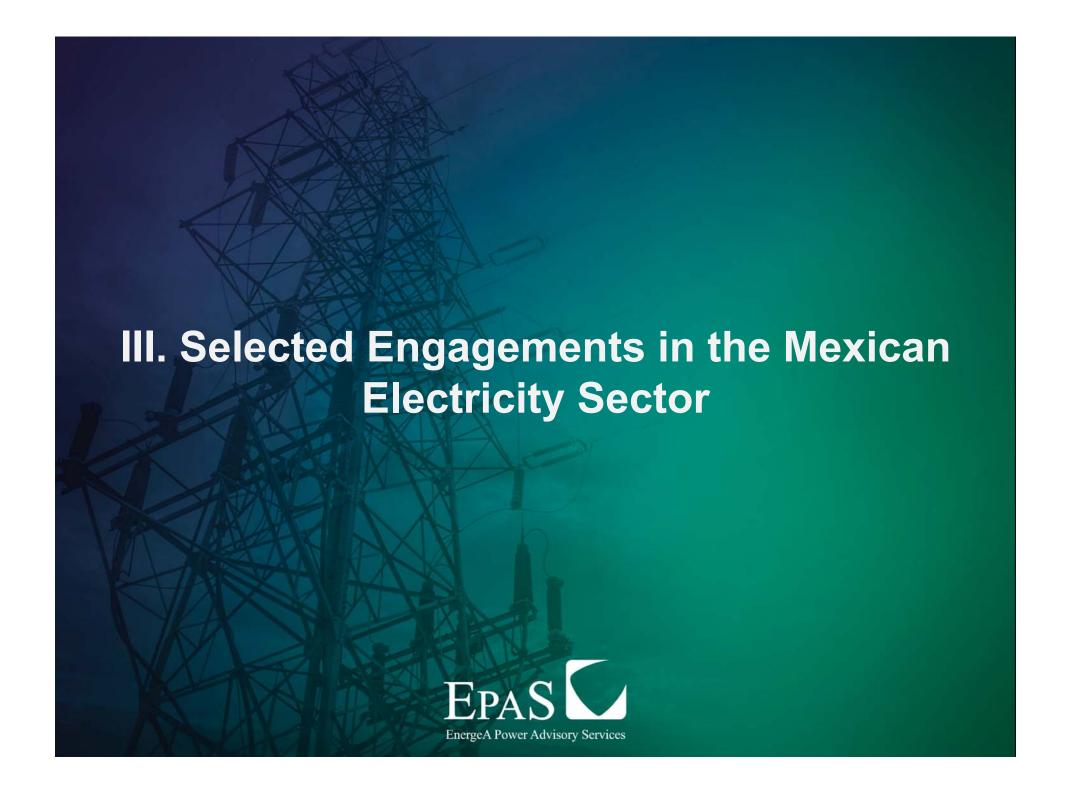
Outputs

Physical

- Generation / reserves schedules
- Power flow
- Fuel use
- Emissions
- Curtailments

Financial

- Energy prices
- Capacity prices
- Revenues
- Costs
- Margins



III. Selected Engagements in the Mexican Electricity Sector



Forecasting of Electricity Prices



Valuation of Mexican Generating Assets



Coordination of Power Generation Projects



Impact Analysis of Renewables



Formulation of Energy Policy in Mexico



Electricity Market Training



Restructuring of the Mexican Electricity Industry



Solar Program Design and Planning



IV. Selected Engagements in the International Electricity Markets



Transmission Legislation



Comparative **Ancillary Services Analysis**



National Electric Transmission Congestion Study



Study of Market Power and Local Pricing



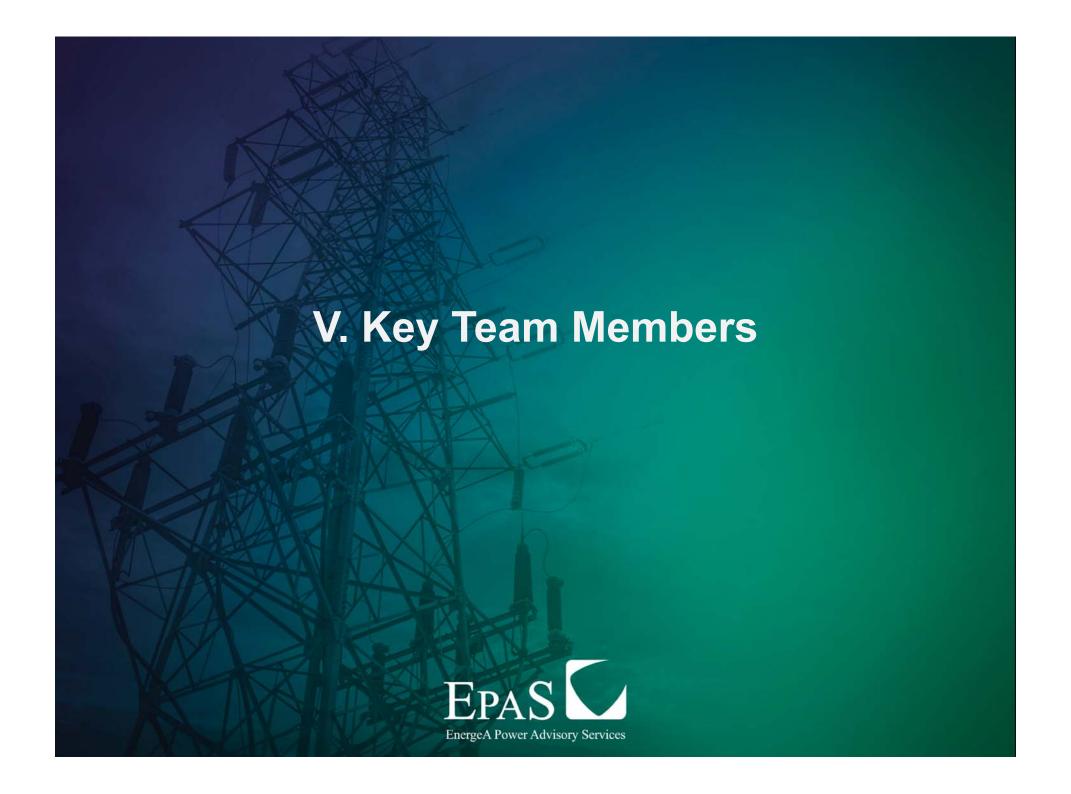






Analysis

Comparative Market Cost-Benefit Study, Restructuring the Hong Capacity market design **ERCOT Nodal Market Kong Electricity Industry and business process**



V. Key Team Members



Jesus F. Reyes-Heroles, Ph.D.

B.A. Economics (ITAM) Ph.D. Economics (MIT)

Mr. Reyes Heroles' professional career is a combination of private practice with public service with over 22 years of experience in the energy sector.

Experience in the public sector:

- Secretary of Energy (1995-1997).
- Petroleos Mexicanos (Pemex) CEO (2006-2009).
- Member of the Board of Pemex, Comisión Federal de Electricidad (CFE) and Luz y Fuerza del Centro (LyFC).
- Ambassador of Mexico to the United States.
- CEO of Banobras, the national development bank for infrastructure.

Experience in the private sector:

- Currently, he is Executive President of StructurA, an organization that groups GEA, PROA, MBD and EnergeA.
- He serves on the Board of Directors of Santander Mexico, he is a member of the Advisory Board of Energy Intelligence Group (EIG), Mitsui Mexico and the Centro Mario Molina para Estudios Estratégicos sobre Energía y Medio Ambiente AC.

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V. Key Team Members



Scott Englander

M.S.E. Mechanical & Aerospace Engineering (Princeton)

B.A. Energy Studies / Agriculture (Evergreen State College)

President of Longwood Energy Group (LEG), and a respected expert with 30 years of experience, Mr. Englander advises clients in renewables, electricity market economics, design, and operation, transmission, and generation, leading advisory engagements in the Mexican power sector since 2009.

Experience:

- President, Longwood Energy Group (2012-2016)
- Director, Charles River Associates (CRA, 2004-2012)
- VP, Tabors Caramanis & Associates (TCA, 1995-2004)
- Senior Analyst, New England Electric (1990-1994)

At LEG and CRA, Mr. Englander has led projects to quantify the economic benefits and value of power sector investments, procure energy supply and provide strategic and transaction advisory services. At TCA, he focused on transmission pricing, contracts, and power market design, evaluating and shaping the restructuring of the electricity industry in the U.S. Mr. Englander is proficient in Spanish.

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V. Key Team Members



Raul Livas, Ph.D.

B.A. Economics (ITAM) Ph.D. Economics (MIT)

A Consulting Partner at EnergeA with more than 22 years of experience in the energy and financial sectors, Mr. Livas develops projects in Mexico's energy sector.

Experience in the public sector:

- Chief Operating Officer at Pemex (2006-2009).
- CEO of Pemex Petroquímica (1997-1998).
- Corporate Director of Planning of Pemex Petroquímica (1989-1999).
- Head of the Energy Policy Unit in the Ministry of Energy (1996-1997).
- Chief of Staff to the Secretary of Energy in the Ministry of Energy (1995-1996).

Experience in the private sector:

- Business Development Director of Intellego, an information management and business intelligence consultancy (2005-2006).
- CEO at MXV Capital ventures (2003-2005).
- Consulting Partner of GEA (2001-2003).
- Head of Research at VECTOR, Casa de Bolsa (1999-2001).