



A Commercial Perspective of the Mexican Solar Energy Market



NORTH AMERICAN ENERGY FORUM

Wilson Center: Mexico Institute

HENRY GENTENAAR
Managing Partner

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About Us

- Renewable energy company active exclusively in Latin America
- Established 2013
- Focused primarily on the commercialization of on-site, behind-the-meter clean energy projects
 - 'Distributed Generation' (DG)...('Techos y Terrenos')
 - Solar
 - Combined Heat and Power
 - Energy Optimization
- Mission: To increase the diffusion and adoption of environmentally sustainable energy technologies

Mexico Solar Market History



- Strong commercial & industrial sector interest in solar and other cost-saving measures
- Cash purchase of solar energy and other systems
 - Debt financed via local lenders
 - System installers pair customer with lender
- Respectable, though minimal, on-site DG adoption
 - Estimated market penetration (2014): <100mw
 - Comparison: San Diego 250mw
- >10% electricity price increase per year since 2004
 - Tariff volatility last 12 months
- Progressive enterprises are choosing solar and more as a hedge against the future

Our Model



- Third-Party financed projects via Power Purchase Agreements or Lease Agreements; (some Shared Savings projects).
- Value Proposition:
 - Zero investment by the customer (*"CERO INVERSIÓN"*)
 - Immediate Savings (*"AHORROS INMEDIATOS"*)
 - Energy Certainty & Control (*"CERTIDUMBRE"*)
 - Increased property value (*"INCREMENTO EN EL VALOR DE SUS BIENES RAICES"*)
 - Environmental Sustainability (*"SUSTENTABILIDAD"*)
- Reasons Ranked:
 1. *Certidumbre*
 2. *Ahorros/Cero Inversion)*
 3. *Valor de Bienes Raices*
 4. *Sustentabilidad*

Commercialization Challenges



- Customer-Level
 - Low familiarity with solar
 - Low-to-No experience with advanced financing
 - Power Purchase Agreements
 - Lease Agreements
 - Distaste for long-term (15+-year) agreements
 - Preference for ownership/Use of Debt
- Market-Level
 - Policy Uncertainty
 - Regulatory Uncertainty

High-Altitude Analysis: Mexico Market

- Solar and Renewables are emerging sectors in a promising—but still emerging—market
- CFE is supporting DG and is often a dependable, workable institution
- Lots of questions and growing pains to come
- Federal vs. Regional
 - One CFE, but each state has its own market dynamic
 - Just because you have a resource, doesn't mean you have a market
- Size Doesn't Matter
 - 120 million people/14th largest country by area
 - BUT: Texas has a larger economy than Mexico
- The modern solar energy market in the United States is 12 years old and is still unsettled:
 - Utility push-back, Regional tensions, Policy shifts

What's Next



- Settle The Market
 - Convince international & institutional investors that Mexico is a stable, investible market
 - Achieve 'Tariff Confidence'; i.e., stop the manipulation of electricity rates
 - Resolve outstanding issues:
 - Green Certificates: Their existence, their value, their timing
 - Clarify tax breaks on payroll and water tariffs for business that adopt solar
 - What will the more sophisticated engineering requirement for DG systems be?
- Remove Obstacles, Create Pathways:
 - Provide regulatory information (CFE & CRE)
 - Move the laws forward
- Frame the entry of renewable energy as economically developmental—for the nation, for the individual

Thank You



MEGASOLAR



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MegaSolar, LLC
528 F Street Terrace
Washington, DC 20003

www.megasolarpower.com



Henry Gentenaar, Managing Partner
Tel.: 646-522-4016



hgentenaar@megasolarpower.com