

SEPTEMBER 27, 2017



Scaling Renewable Energy

MWCOG Discussion

Today's Discussion

Intro to Edison Energy – Powered by Altenex

Renewables 101: PPA Basics & Fundamental Challenges

Getting to Scale: Challenges & Our Approach

Edison Energy & Clean Economy Development



Renewable Energy Advisory

- › Fully independent advisor
- › Comprehensive market analysis
- › Needs, economics, risk analysis
- › Onsite & offsite strategies
- › Commercial execution
- › Ongoing audit & performance assurance

Sustainability Consulting

- › Insights, analysis & innovative strategies to set & achieve sustainability goals
- › Knowledge & insights to inform decisions for your organization
- › Improve energy & carbon performance
- › Expert support & training to achieve leadership status

Energy Supply Advisory

- › Best-in-class energy procurement
- › Optimized supply & risk management
- › Quality energy data collection & reporting
- › Leading-edge rate & price analytics

Engineering Solutions

- › Full-service energy consulting, engineering & project development
- › Analysis, design, development & implementation of energy efficiency projects
- › Building system optimization
- › New and existing Cx
- › Real-time energy management
- › Power generation solutions

Company History

\$5 Billion+
of energy spend managed

7,500+
customer sites
and 250 solar project sites

>\$3 Billion
in energy projects funded

12 of the Fortune 50
are customers

2.2+
gigawatts of offsite renewables procurement

Managing 500 M+ sq. ft.
of client facilities' energy demand

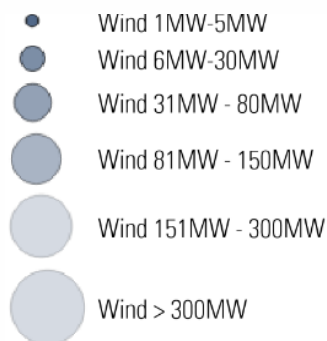
SELECT LIST OF CUSTOMERS



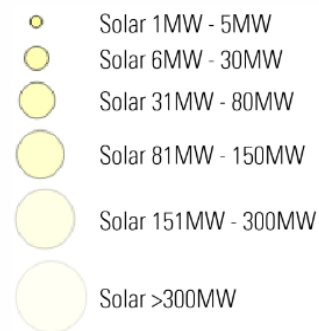
The Offsite Renewables Market – A Lightning Orientation

- › Historically, the offsite renewable energy market has been difficult to access and has lacked transparency. Edison Energy has developed a proprietary database that provides detailed information and analysis on over 5,000+ renewable energy projects. This data is used to help customers identify clean power purchasing opportunities that meet their selection criteria.

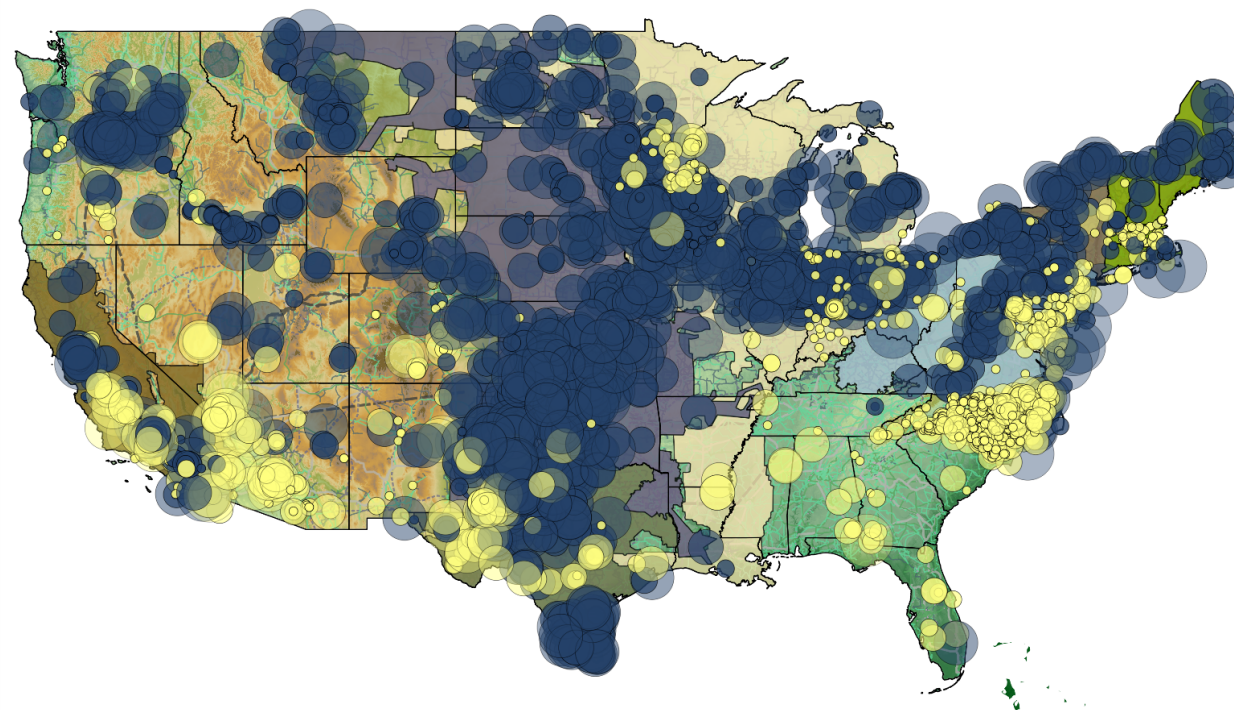
Wind Projects



Solar Projects



U.S. Power Markets



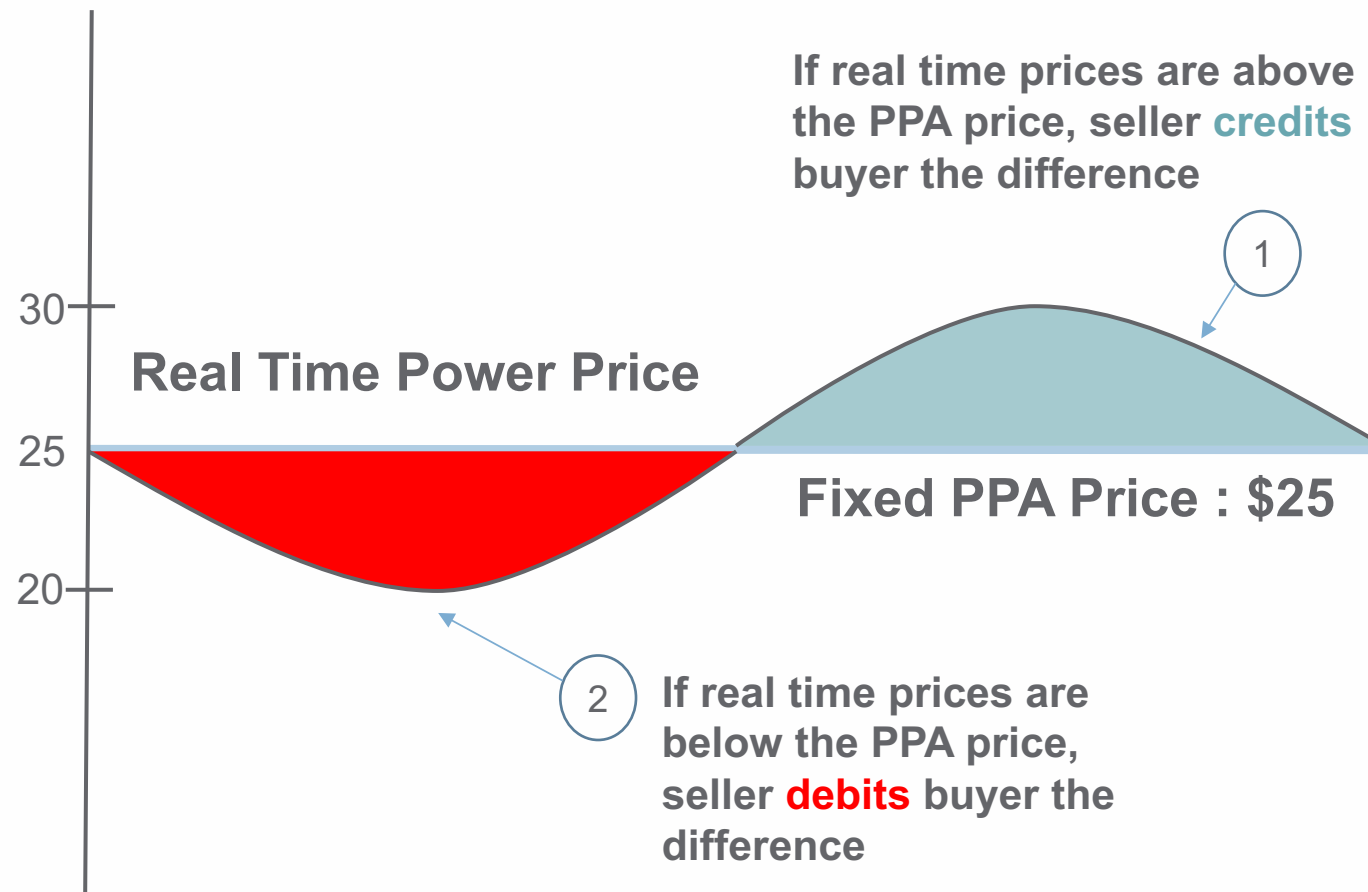
Financial PPA / Contract for Differences – Structure

- › **The majority of large-scale renewable energy purchase agreements are structured as contracts for differences:**
 - Mostly wind and solar projects with 10-15 year contract terms
 - Project sells unit contingent generated renewable energy to the ISO/RTO and receives the spot price (floating market valuation)
 - Project provides environmental attributes to the buyer (as well as the generated energy if physical delivery is structured)
 - Buyer pays fixed \$/MWh for the energy delivered and captures the difference between market (floating) and fixed PPA price



Financial Contract for Differences – Settlement

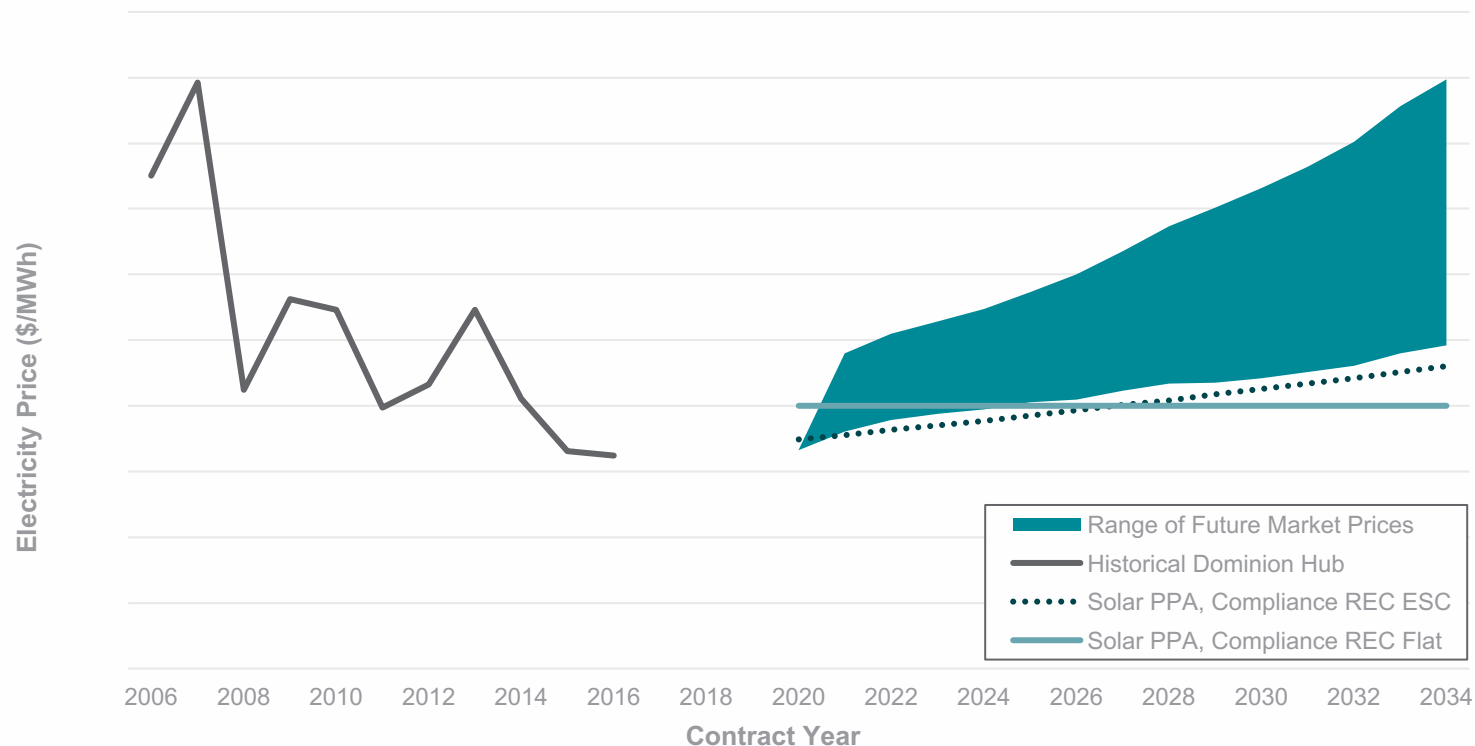
- **Monthly Financial Settlement**
- **Seller credits buyer** if real time power settles above NMCA price:
 - Fixed NMCA price: \$25/MWh
 - Real time: \$30/MWh
 - Seller credits Buyer \$5/MWh
- **Seller debits buyer** if real time power settles below NMCA price:
 - Fixed PPA price: \$25/MWh
 - Real time: \$20/MWh
 - Seller debits Buyer \$5/MWh



Sample Offsite PPA Economic Basics

Sample project is an 18 MW solar project in PJM with competitive economics, sized to the client's needs.

Expected Performance, Sample Project vs Market



How Do We Get to Scale on Renewables?

ONSITE RENEWABLES: Compelling, but scale-challenged.

OFFSITE PPAs: Scalable, but complex.

The market is ripe for innovation and evolution:

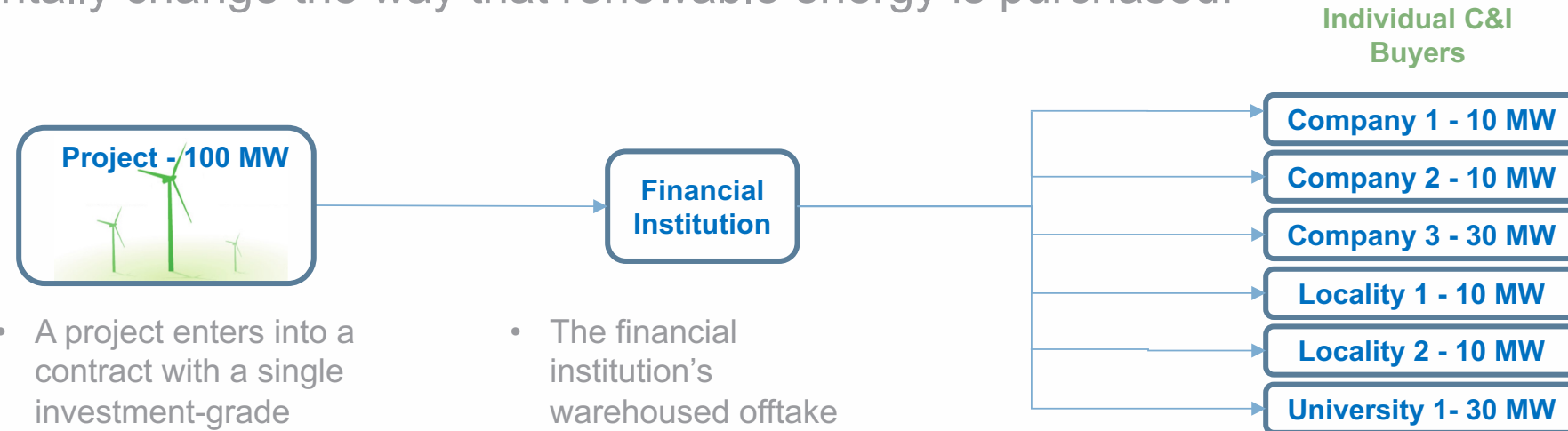
Utilities: A mixed landscape, but some progress.

New products: Starting to come to market.

Aggregation: A lot of history here: Let's talk about it...

Altenex PowerBlok™

Altenex has partnered with investment-grade financial counterparties to fundamentally change the way that renewable energy is purchased:



- A project enters into a contract with a single investment-grade financial counterparty that assumes and warehouses the project offtake.
- This provides the project with the certainty required for financing.

- The financial institution's warehoused offtake is structured into PowerBlok PPA's.
- Edison Energy customers can access PowerBlok as another renewable energy option.

- Buyers sign a 10 year PPA directly with the financial institution.
- Every PowerBlok is a 10-year, 10 MW tranche of power with consistent commercial terms.
- Buyers make purchasing decisions independently and on their respective schedules.

Thank You.

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INSIGHTS.
ACTIONS.
RESULTS.





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