

How Corporate Buyers Are Changing The Marketplace For Renewable Energy

October 29, 2019



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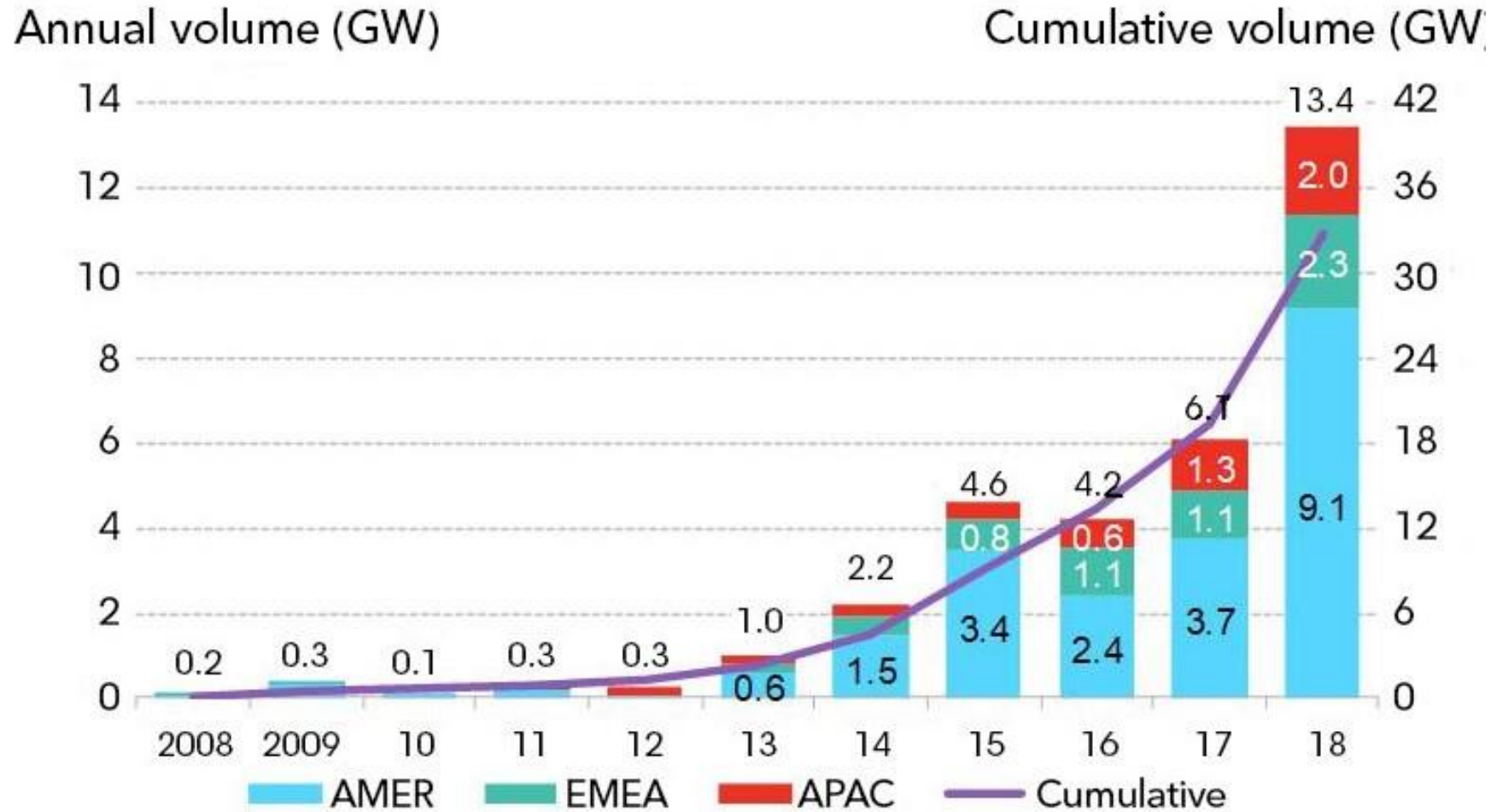
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Increasing Corporate Demand for Renewable Energy

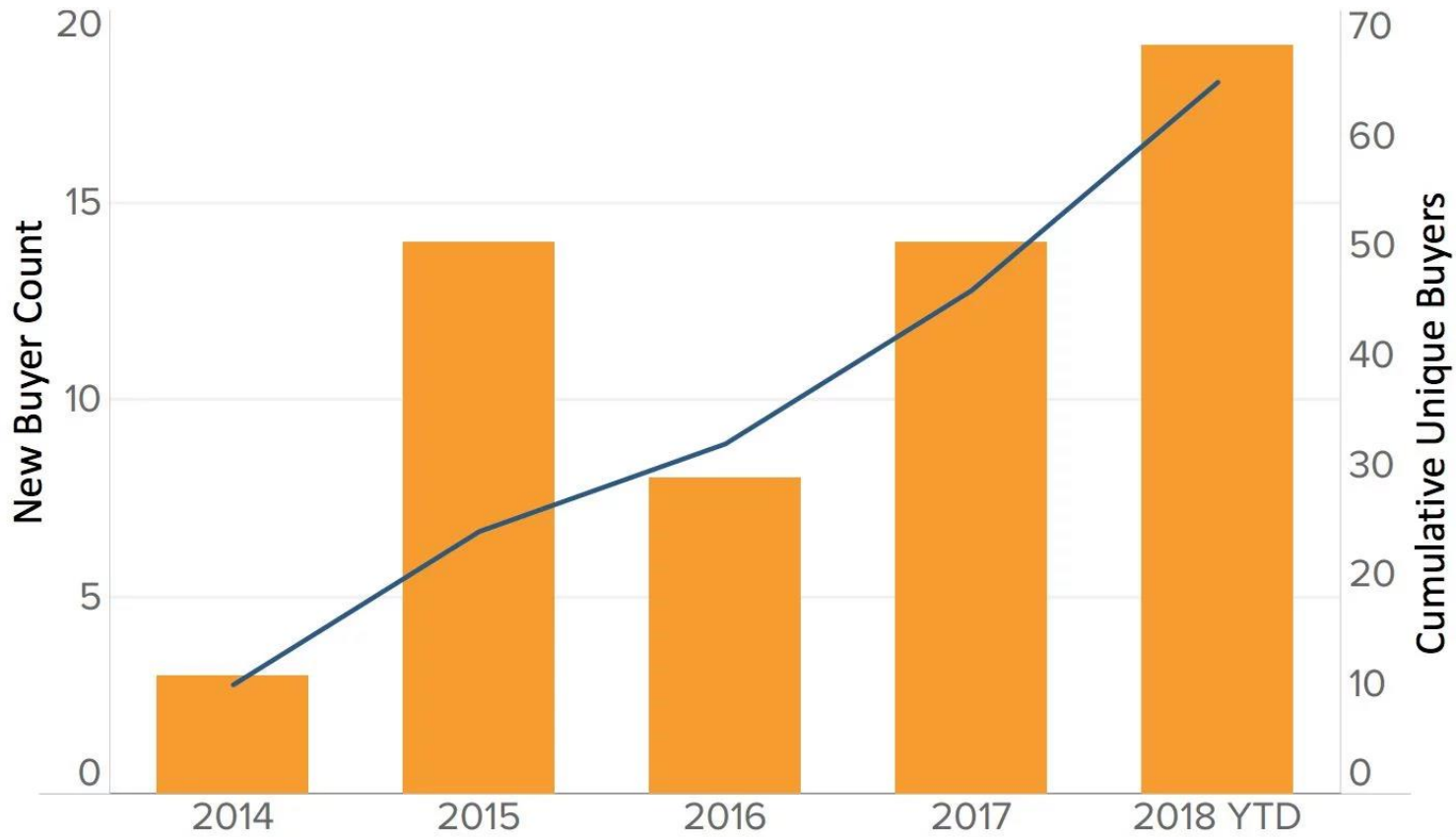
- Clean energy contracts signed by corporations globally more than doubled last year
 - 13.4 GW
 - 121 corporations
 - 21 countries
- 4.2 GW in new contracts in U.S. alone (66% increase last year)

Corporate Purchase of Renewable Energy





Steady Stream of New Buyers



Why?

- Corporate commitment to renewable energy
 - Shareholder and consumer demand
- Social & peer pressure
 - RE100
 - The Climate Group
 - Buyers Principles
 - Climate Collaborative
 - Sierra Club

Who's Buying?



Who's Buying Locally?



Renewable Energy Purchasing Options

- Virtual PPA – most common corporate purchase option
 - Financial transaction
 - Purchaser need not be in same state/region of producer
- Traditional PPA
- Wholesale Purchasing Authority (FERC)

Other Renewable Options

- RECS – purchase of unbundled renewable energy certificates
- Green utility tariffs
- Self-generation

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Monica Testa, *Lincoln Clean Energy*



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RENEWABLE ENERGY FOR REAL ESTATE
Cost Certainty | Price Predictability | Tenant Satisfaction



NEBRASKA WIND & SOLAR CONFERENCE
October 29-30, 2019

Why Are Companies Contracting for Renewables?



✓ No capital investment



✓ Protect your company from future electric price increases



✓ Attain corporate sustainability goals - additively or impactfully



✓ No need to change your current electric provider



✓ Increase public relations, customer loyalty and brand awareness



✓ Be a part of a coalition of like-minded corporations

Community Impacts of Large-Scale Renewables

Help Bring Millions in Economic Impact to Local and State Economies



✓ New jobs



✓ New local tax revenue



✓ New income for local landowners and farmers



✓ Increased local and state spending



✓ New charitable funding for host communities – unique to Geronimo

Experience with Virtual Power Purchase Agreements

Virtual Power Purchase Agreement (VPPA) Experience

- ~500 MW VPPAs contracted
- Individual contracts range from 5 to 150 MW

Community Solar Subscription Experience

- 200+ companies subscribed
- Large corporations, local companies, universities, hospitals, schools, non-profits and government entities

Walmart

Apple



Expertise as Top U.S. Renewable Energy Company

- Geronimo is a leading North American independent developer and operator of utility-scale renewable energy projects
- We have successfully developed over 2,400 megawatts (MW) of wind and solar projects (currently in operation or under construction)
- Our experience team of ~75 professionals are experts in development, construction and operations
- The 7,000+ MW Geronimo Energy pipeline stretches across the United States, including ~3,000 MW in advanced development phases



Farmer-Friendly, Community Driven



A National Grid Company

Who is National Grid?

- British based multinational electricity and gas utility company
 - Owns electricity transmission network in England and Wales, operates in Great Britain
 - Supplies 20+ million people in the NE US with electricity and gas
- Geronimo Energy is a subsidiary of National Grid's unregulated arm, National Grid Ventures, and is the company's renewable energy platform



What is the value-add to customers?

- **Long-term Ownership Partner**
 - We develop, construct, own and operate our projects.
- **Financial Strength**
 - National Grid is one of the largest and strongest energy companies in the world with a fortified balance sheet.
- **Competitive Renewables**
 - Scale and access to capital create efficiencies that result in low-cost renewable pricing.



2.4 GW in Operation – 7GW in Development

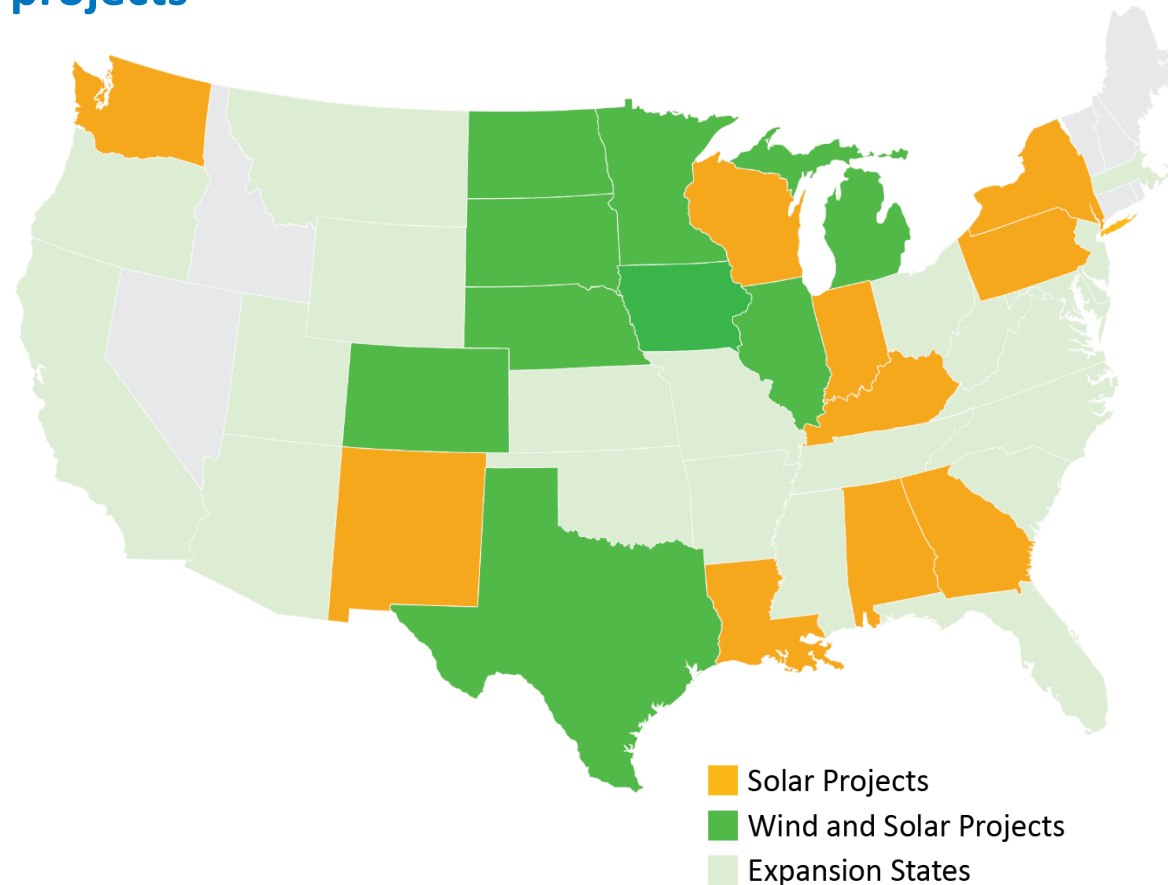
Leading clean energy company: develop, construct, operate and own projects

Projects: 18 U.S states

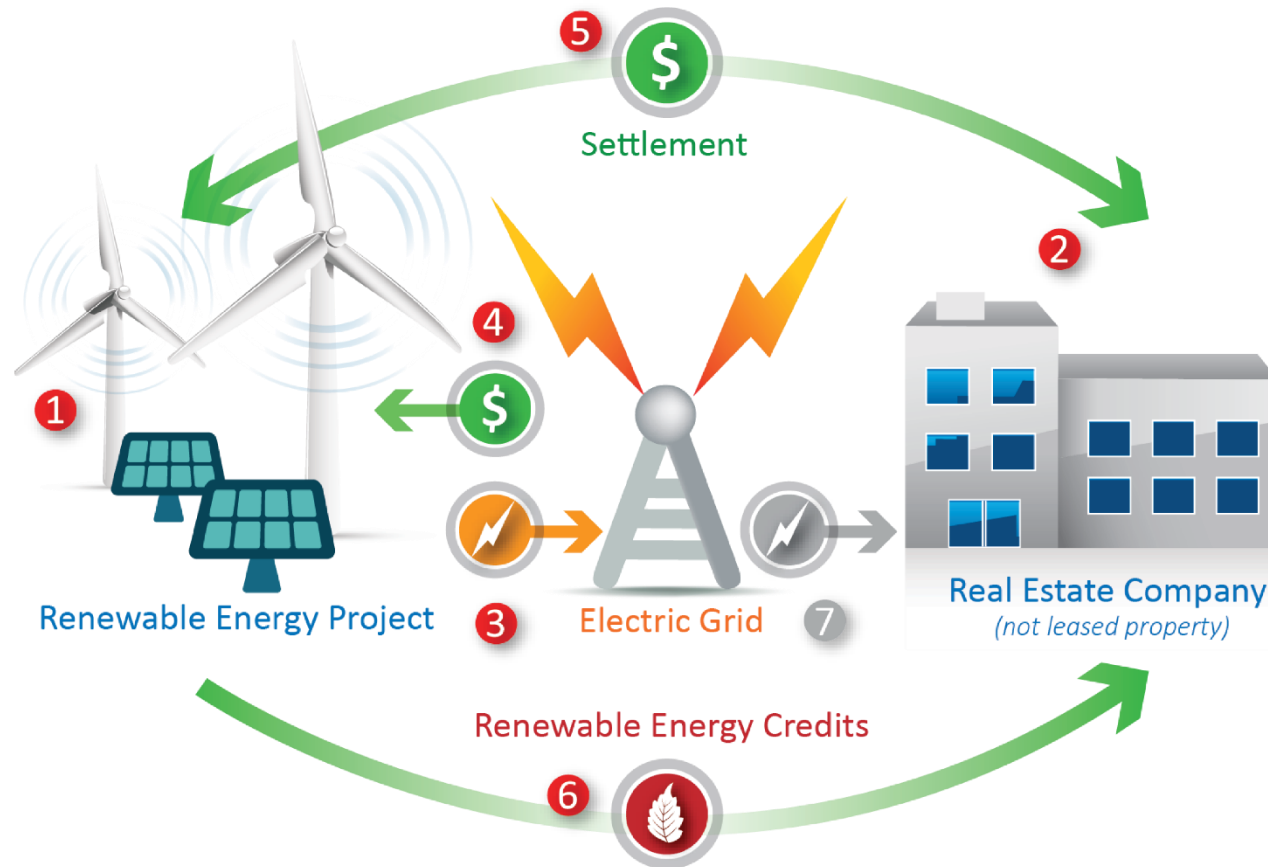
Operating:
~1,675+ MW – 13 projects

Construction:
~800+ MW – 4 projects

Development:
7,000+ MW – 100+ projects

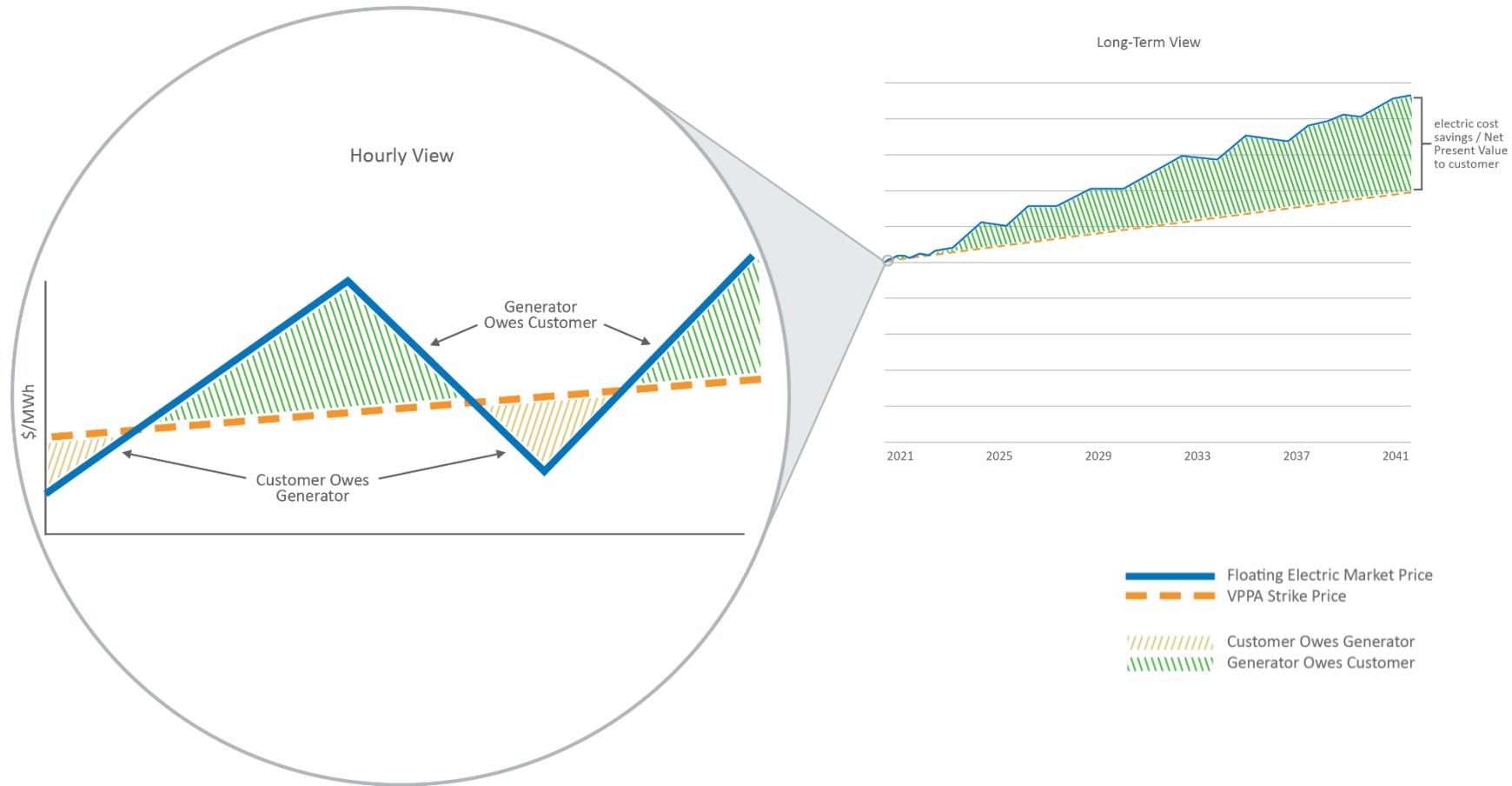


How Does a VPPA Work?



- 1** Geronimo builds a renewable energy project in a suitable, efficient, and low cost location – not on your property’s site
- 2** The real estate company and Geronimo agree to a fixed price for the power and/or Renewable Energy Credits (RECs)
- 3** Geronimo delivers the power to the grid
- 4** The grid operator pays Geronimo the market price for the power
- 5** Geronimo and the real estate company settle the difference between the market price and the fixed price
- 6** Geronimo delivers the RECs to the real estate company
- 7** The real estate company continues to receive and pay for electricity in its usual fashion

VPPA Value: A Simple Way to Save on Electric Costs



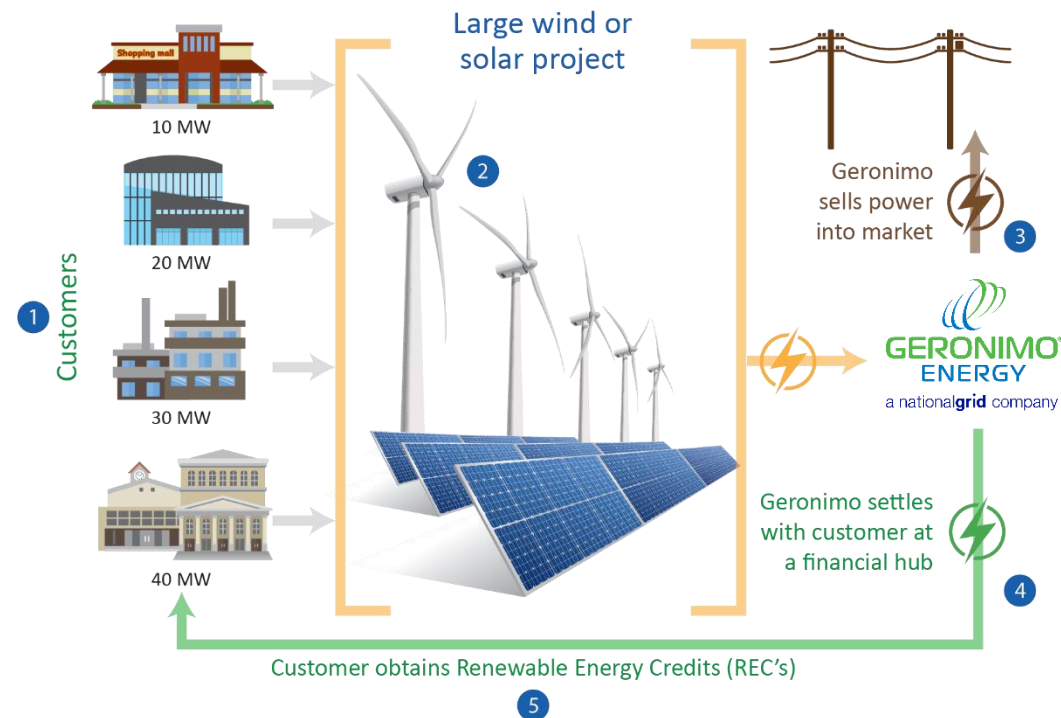
✓ Increase certainty and predictability

✓ Reduce risk

✓ Save money

Aggregation through the ARC Program

- Aggregated Renewable Contracts (ARC) offers financially settled contracts for energy and/ or Renewable Energy Credits (RECs) for small portions of a large wind or solar project's energy production
- There are multiple individual higher education institutions attributed to a single project
- Because the aggregated ARC fulfills the entire project's contracting needs, universities and colleges benefit from economies of scale and enjoy significant savings as compared to individual, small-scale energy contracts
- Higher education institutions can purchase as small as 10 MW increments of a project's total production, and those who choose to contract for more than one ARC receives volume discounts



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Ian Schonwald *EDF Renewables*



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EDF GROUP

70 yrs experience

\$79 B annual revenue

EDF RENEWABLES

\$867 M EBITDA

22 operating counties

18.1 TWh green electricity

EDF RENEWABLES NORTH AMERICA

16 GW
developed

10 GW
O&M contract

24 GW
pipeline

30+
years experience

EDF RENEWABLE DISTRIBUTED SOLUTIONS

850+
megawatts

Distributed Solutions has developed more than 850+ MW of solar photovoltaic projects across the U.S.





2000+
installations

Continuous growth and development means incorporating comprehensive integration makes energy easy for clients.

330+
megawatts

Energy storage systems in operation in 3 countries, 100 MW under construction across North America.

Business Solution Comparison

	 Purchase	 Power Purchase Agreement (PPA)	 Shared Savings	 PPA and Shared Savings
Facility Responsibility	High	Low	Low	Low
Facility Reward	High	Less	Shared	Shared
Upfront Cost	Facility Responsible	No upfront cost for Facility; EDF is Responsible	No upfront cost for Facility; EDF is Responsible	No upfront cost for Facility; EDF is Responsible
Technology Performance	Facility Responsible	EDF is Responsible	EDF is Responsible	EDF is Responsible
Savings	Customer Captures 100% Savings	Difference in Fixed PPA Rate and Rising Utility Rate	Defined Share of Savings generated by Battery's Performance	100% Based on Solar and Storage Performance
Annual Payments	Customer is Responsible; Fixed Annual O&M Payments	Based on Solar Generation Performance	Based on Share of Savings generated by Battery's Performance	Based on Battery and Solar Performance
Guarantees	Mechanical, Equipment, and Installation Quality Guarantees and Warranties	Production Guarantees	Guarantee that Storage will not Increase Bill	Production Guarantee; Storage Payment 100% Performance Based

KNOW YOUR OPTIONS



Diversify renewable energy purchases; consider grid-scale and distributed



Determine regional renewable strengths; secure these resources; wind, solar, storage



Build on 'greener' community capturing synergies; solar/storage/EV



Message the purpose and emotion; weave into your branding

Questions to Ask Within Your Organization

- Why are we REALLY considering a renewable project? Price, marketing, sustainability goals, etc. ➡ The answer will guide your preferences for project type
- Who else should be/will be part of this decision-making process? I.e. Finance, engineering, sustainability committee, facilities, etc. ➡ Get all decision-makers involved early
- Is price certainty or price upside more important? ➡ Onsite projects have certainty and limited upside; VPPAs have variability
- What pricing metrics are most important? "Day One" savings versus NPV

Bigger Project. Bigger Impact.

Grid-Scale (>50 MW)

Technology: Wind, Solar, Storage

- PPA or VPPA
- Green tariffs
- REC's

Long-term power pricing



Benefits

- Gain economies of scale
- Proven track record
- Ease of transaction
- Financial transaction

Grid-Scale Power Options

LOW-COST ENERGY MEETS AMBITIOUS SUSTAINABILITY GOALS

PPA OR VPPA

- **WHO:** Corporate Customer
- **WHAT:** Renewable energy
- **WHERE:** Organized markets such as ISO or RTO (MISO, SPP, PJM)
- **WHY:** Control costs and obtain renewable energy
- **HOW:** Sign an agreement

GREEN TARIFF

- **WHO :** Corporate customer in electric utility's service territory
- **WHAT:** Specified Rate
- **WHERE :** Within jurisdiction of utility
- **WHY:** Controls costs, risks, receive renewable attributes
- **HOW:** Participate in program

REC'S

- **WHO:** Any company
- **WHAT:** Rate determined by market
- **WHERE:** REC trading platform
- **WHY:** Easier way to offset emissions in the short term
- **HOW:** Purchase from a utility, broker, or trading platform.

Simple. Reliable. Integrated

Distributed (<50 MW)

Technology: Solar, Storage, Electric Vehicle Charging

- Wholesale Solar Power & RECs
- Turn Key Project Sales
 - On-site or off-site
 - EPC only (cash purchase)
 - EPC w/ 3rd-party financing options (PPA, VPPA, Lease)

Total site integration



Benefits

- Local and visible
- Direct bill savings
- Opportunity for easy integration of multiple technologies
- Price certainty
- Energy independence
- Employee engagement and satisfaction

Distributed Power Options

WHOLESALE AND BEHIND-THE-METER ENERGY SOLUTIONS TAILORED TO ORGANIZATIONAL NEEDS

Wholesale Solar Power & RECs

- **WHO:** Investor-owned utilities; munis; cooperatives
- **WHAT:** Solar electricity and RECs Green tariffs to grid; CSGs
- **WHERE:** Typically within that service territory
- **WHY:** Finances; customer demand
- **HOW:** Sign a PPA, with EDF as turn-key provider

Turn Key Project Sales (everyone on this webinar!)

- **WHO:** Corporate entities; 'MUSH' market
- **WHAT:** Behind the meter projects that lower electric bills with existing electric provider
- **WHERE:** Typically on-site (off-site if allowed by utility) rooftop, ground-mount, carport
- **WHY:** Finances; internal sustainability goals
- **HOW:** Partner with a knowledgeable organization to explore options (site suitability, \$\$ impact, financing/ownership options)

Questions?



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