Renewable Power Post US Election

Implications for Sustainability and Energy Procurement Strategies

March 2, 2021
WE MAKE IT EASY AND AFFORDABLE TO BUY GREEN ENERGY

- 33 transactions
- 5 ISO regions plus regulated market activity
- 8 different renewable developers in our transactions
- 100% renewal rate

- Established 2014
- Experienced team across wholesale and retail energy markets
- Commercial partners with strong balance sheets and credit capability
- Contracted renewable energy of over 1.2 million MWhs across all customer segments
- Winner of 2019 Innovation Award for developing the Intuit corporate off site program

We don’t compete with our webinar participants; rather, our role is to enable each of you to be more successful.
Elections Have Consequences

I. Summary

II. Administrative Overview
  - Key Officials
  - Regulatory Outlook
  - Additional Climate Items

III. Legislative Overview
  - 117th Congress Breakdown
  - Biden’s Legislative Agenda
  - Clean Energy Standard

IV. FERC
Summary

➢ Environmental issues will be front and center throughout the Biden administration

➢ The administration will employ a multi-pronged approach to environmental regulations
  ➢ Carbon regulations for existing sources
  ➢ More “traditional” air quality regulations using NAAQS, CSAPR, other
  ➢ Rolling back Trump agency actions

➢ The Administration’s initial legislative agenda will focus on getting items through budget reconciliation:
  ➢ COVID relief package
  ➢ Infrastructure, clean energy, and possibly tax provisions through a second reconciliation package later this year
  ➢ Clean Energy Standard part of the mix

➢ FERC will re-examine rules that mitigate impact of state clean energy procurement on capacity markets (MOPR), as well as possibly re-examining transmission rules to facilitate renewables.
### Nominees and Appointments

#### Department of Energy
- **Jennifer Granholm**
  - Secretary

#### Department of Interior
- **Deb Haaland**
  - Secretary
- **Elizabeth Klein**
  - Deputy Secretary

#### Department of Transportation
- **Pete Buttigieg**
  - Secretary

#### Securities and Exchange Commission
- **Gary Gensler**
  - Chair

#### Environmental Protection Agency
- **Michael Regan**
  - Administrator
- **Dan Utech**
  - Chief of Staff
- **Avi Garbow**
  - Senior Counselor to the Administrator
- **Janet McCabe**
  - Deputy Administrator
- **Vicki Arroyo**
  - Associate Administrator for Policy
- **Joseph Goffman**
  - Principal Deputy Assistant Administrator, Office of Air and Radiation (OAR)
- **Tomás Elias Carbonell**
  - Deputy Assistant Administrator for Stationary Sources (OAR)

Pending: General Counsel, Assistant Administrator for OAR, Deputy Assistant Administrator for Mobile Sources
On January 20, 2021, President Biden released several Executive Orders (EO), including:

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<tr>
<th>Rejoining Paris Agreement</th>
<th>Directing OMB to begin a process to improve and modernize regulatory review</th>
<th>Directing CEQ to rescind NEPA GHG guidance and review and update 2016 guidance</th>
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- Revising or rescinding actions as follows:
  - Oil and Gas New Source Performance Standards, by **September 2021**
  - SAFE Vehicles Rules, by **July 2021**
  - MATS Supplemental Finding and Risk and Technology Review (RTR), by **August 2021**
  - Science Transparency, **as soon as possible**
  - Cost-Benefit Rule, **as soon as possible**
  - Building Efficiency Standards, by **March 2021** and **June 2021**, depending on standard

- Revoking permit for Keystone XL Pipeline
- Re-establishing Interagency Working Group for Social Cost of GHGs; finalizing costs by **January 2022**
- Advancing racial equity and support for underserved communities

*“...the policy of my Administration is to listen to the science; to improve public health and protect our environment; to ensure access to clean air and water; to limit exposure to dangerous chemicals and pesticides; to hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; to reduce greenhouse gas emissions; to bolster resilience to the impacts of climate change; to restore and expand our national treasures and monuments; and to prioritize both environmental justice and the creation of the well-paying union jobs necessary to deliver on these goals.”*
The 117th Congress

House of Representatives

Democrats: 222
Republicans: 211
Vacant: 2
LA 5th & NY 22nd districts

Leadership

Speaker – Nancy Pelosi
Majority Leader – Steny Hoyer
Republican Leader – Kevin McCarthy
Energy & Commerce Chair – Frank Pallone
Energy & Commerce Ranking Member – Cathy McMorris Rodgers

Senate

Democrats: 50/51
Republicans: 50
Include VP Kamala Harris (tiebreaker) & 2 independents who vote with the caucus

Leadership

Senate Majority Leader – Chuck Schumer
Senate Minority Leader – Mitch McConnell
Energy & Natural Resources Chair – Joe Manchin
Energy & Natural Resources Ranking Member – John Barrasso

RPD Energy Webinar March 2, 2021
The Biden Administration’s 2021 Legislative Agenda

The Administration’s goal is to make two major legislative pushes this year.

- The first will be a COVID-focused bill addressing funding for vaccine deployment, direct payments to individuals, and funding for state and local governments.
- The second will be a broader economic relief and infrastructure bill focused on highway funding, clean energy, and other measures.

To enact these priorities, we can expect Democrats to employ a procedural mechanism called “budget reconciliation” that will allow them to bypass the filibuster and enact a limited scope of legislation by a simple majority.

Timing:

- COVID bill push has begun.
- The economic relief push will begin in late summer, with passage targeted for mid-fall.

One of President Biden’s top priorities is to work with Congress to pass sweeping legislation by the end of his first term that puts the United States on an irreversible path to achieving economy-wide net-zero emissions no later than 2050.
Clean Energy Standard and Reconciliation

- Budget reconciliation measures are not meant to create new programs or set new emissions limits - a Clean Energy Standard as a stand-alone bill would not meet this “reconciliation test”, but there are other ways to frame it that might comply.

- One example could be a Clean Energy Credit Trading System:
  - Where utilities would have to meet a target for zero-emissions electricity.
  - If they don't, they must buy credits from the government or pay an alternative compliance fee.

- An alternative support for renewables & storage could be ITC/PTC extensions for clean energy resources.
With a change in administration, the Democrats will control the agenda, but the Republicans will maintain a majority until Commissioner Chatterjee is replaced.

- His term ends on June 30 with the ability to stay until his replacement is nominated and confirmed (he must leave by the end of 2021).

- Commissioner Chatterjee is a swing vote on certain issues; similarly, we don’t know how Commissioner Christie will respond to many of the issues before FERC.
Possible Democratic Agenda – Transmission & Interconnection Reform

Encouraging Transmission Expansion to Move Renewables to Market

FERC has authority to consider transmission planning and cost allocation

Order No. 1000 has not resulted in much transmission build-out

Possible new rulemaking to address transmission planning, cost-sharing, and revise the interconnection rules

- States may be interested in coordinating transmission build-out for offshore wind (e.g., recent NJ/PJM agreement)
- Americans for a Clean Energy Grid recently issued a paper proposing to revamp FERC’s transmission planning and cost allocation processes
- Socializing the cost of transmission build-out will be supported by renewable interests and others

Addressing these policy issues could garner bi-partisan support at FERC
Max Duckworth, Chair
RPD Energy

Wholesale Energy Markets
Renewable Energy Is Driving New Grid Capacity

- Wind and solar capacity additions have overtaken natural gas over the last year
  - 100% of new additions in Nov 2020 were from renewable generation!

Three-year projections*:
- 128 GW of solar and 86 GW of wind capacity additions
- 55 GW of natural-gas fired additions
- Retirement of coal, other fossil and nuclear power plants

Renewable energy is rapidly expanding its market share

* FERC E71B6 data from CleanTechnica Feb 8, 2021
How Can We Get All This Renewable Energy to the End User?

- **Firm, physical green energy products** involve much more complexity than standard, undifferentiated power purchases.

- Intermittent and shaped profile of wind & solar generation mean that **wholesale market services** are required to “package” green energy for sale (via retail energy providers) to end users:
  - Forward price risk / volumetric risk / firming of supply / delivery point
  - Hedging of ancillary and other load-serving products
  - Renewable energy pipeline from different developers across several regions

- RPD Energy has vast experience in wholesale energy markets and announced **strategic partnership with Axpo US** in April 2020:
  - Deal structuring
  - Market-making & risk management
  - Balance sheet & credit
  - Deep relationships with largest renewable developers across the U.S.

Right-sized, physical green energy products tailored to your desired volume, term, and delivery point
Corporate Renewable Energy
Strategy in 2021
ClimeCo is a boutique ESG advisory and environmental commodities firm.

**ADVISORY**
- ESG, climate, & renewable energy strategies
- Reporting
- Impact measurement (GHG accounting, LCA, etc.)
- Risk assessment
- Policy & market advisory

**TRANSACTIONS**
- Environmental commodity sourcing, marketing, & trading
- RE100 fulfillment
- Environmental commodity commercial expertise
- Hedge strategy optimization
- Management process development

**PROJECT DEVELOPMENT**
- GHG abatement projects
- Environmental commodity creation
- Project development, implementation, & operation
- Project finance
- Protocol & methodology development

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Three Time Project Developer of the Year Winner 2018, 2017, and 2015

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Corporate Sustainability/ESG Context

**SUSTAINABILITY DRIVERS**
- Peers
- Public opinion
- Suppliers
- Employees
- Investors/Shareholders/Owners
- Raters & Rankers
- Customers
- Consumers
- Board of Directors
- NGOs
- Policy
- Media

**COMPANY**
- Measure Impacts
- Develop Strategy
- Communicate
- Execute

**RESULTS**
- Reputation
- Resilience
- Growth
- Return on Capital
- Access to Capital
- Risk Mitigation

RPD Energy Webinar March 2, 2021
Exhibit 14  Sustainable Funds Annual Flows and Assets

Source: Morningstar. Data as of 12/31/2020. Includes Sustainable Funds as defined in Sustainable Funds U.S. Landscape Report, Feb. 2020. Includes funds that have been liquidated; does not include funds of funds.
Fighting for ESG Dollars

- Reporting, ratings, and rankings steer the flow of ESG dollars
- Within ESG universe, climate change is a focal point
- For resource-constrained corporate sustainability teams, renewable energy can be more (time-)efficient than efficiency
Corporate RE Procurement through 2020

REBA Deal Tracker
Large Energy Buyers Accelerate Renewable Energy Deals

2008
First renewable energy deal announced by large energy buyer.

2009–2013
Renewable energy deals grow as large energy buyers enter market and learn to navigate contracting structures, emerging technologies, and policy and regulatory frameworks.

(Pre-REBA deal tracking)

2014
REBA Deal Tracker created to measure market growth and track US-based corporate renewables announcements.

2018
Renewable Energy Buyers Alliance founded with the sole purpose of accelerating renewable energy procurement by helping energy buyers navigate the complexities of the energy market.

2020
Large energy buyers drive record-breaking announcements despite facing numerous overlapping market crises.

As of December 31, 2020. Publicly announced contracted capacity of corporate Power Purchase Agreements, Green Power Purchases, Green Tariffs, and Outright Project Ownership in the US, 2015 - 2020. Excludes off-site generation (e.g., rooftop solar PV), sales with operating plants and deals meant to meet RPS requirements. (F) indicates number of deals each year by individual companies.

Copyright 2021 Renewable Energy Buyers Alliance

RPD Energy Webinar March 2, 2021
Corporate RE Procurement through 2020

Source: ClimeCo (using REBA Deal Tracker data)

# DEALS - NEW RE BUYERS

# DEALS - REPEAT RE BUYERS

# - NEW RE BUYERS

CORPORATE RENEWABLE ENERGY DEALS

Number of deals

Number of new buyers

Source: ClimeCo (using REBA Deal Tracker data)
Corporate RE Procurement through 2020

Renewable Energy Sourcing Methods
RE100 Members, 2020

Source: ClimeCo (using RE100 data)
...We know that climate risk is investment risk... we are asking companies to disclose a plan for how their business model will be compatible with a net zero economy...

Sincerely,

Larry Fink
Chairman and Chief Executive Officer
SBTi Net Zero Guidance

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<th></th>
<th>Within Value Chain</th>
<th>Outside Value Chain</th>
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<tbody>
<tr>
<td>Prevent, reduce, or eliminate GHG emissions</td>
<td>Abatement</td>
<td>Compensation</td>
</tr>
<tr>
<td>Remove GHGs from atmosphere</td>
<td></td>
<td>Neutralization</td>
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</tbody>
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Public consultation currently underway: [https://sciencebasedtargets.org/net-zero#consultation](https://sciencebasedtargets.org/net-zero#consultation)

Simplified net-zero target trajectory

- 1. Interim SBT
- 2. Net-zero target
- 3. Optional compensation

1.5°C-aligned mitigation pathway

- Gross GHG emissions
- Carbon removals
- Compensation activities

Public consultation currently underway: [https://sciencebasedtargets.org/net-zero#consultation](https://sciencebasedtargets.org/net-zero#consultation)
Corporate Renewable Energy Strategy - 2021+

- New renewable energy targets, commitments, and collaborative initiatives
- Increasing corporate demand for renewable energy
  - New buyers entering
  - Repeat buyers looking for new solutions
- Supply chain increasingly important
  - Lifecycle impacts from renewable energy production
  - Supporting supplier facility/company use of renewables

“If companies with 100% renewable energy goals today achieve them, it will catalyze as much capacity as was installed from all US Renewable Portfolio Standards since 2011.”

- Renewable Energy Buyers Alliance
Retail Markets and Solutions
Retail Market - Simplified Overview

What do Retail Providers do?

- **Buy power from the wholesale market, and their own trading desk**
- **Market pricing data, weather data, load forecasting, T&D rates, and more**
- **Price a variety of standard products for customers**
- **Schedule power; balance load and usage; settle across parties; produce invoices**
- **Load data**
- **RFPs**
- **Customer**

So, why do up to 70% - 80% of corporate buyers use Consultants/Brokers?

- Obtain pricing across a variety of standard products from multiple REPs to create competitive pricing options
- Analyze load data and forward pricing to create recommendations to buyer
- Provide bill management, energy efficiency, load management and other services
The Retail Market Is About Efficiency

Retail Market Participants Have One Very Important Thing in Common

*With razor thin margins, both REPs and Consultants are driven by efficiency in processing transactions*

- Retail Energy Providers (REPs) have become exceptionally good at driving transaction efficiency
  - REPs have become conditioned to being most efficient and cost effective when they are processing STANDARD products
- Consultants/brokers have become exceptionally good at customer relationship management and providing a variety of energy related services
  - Their business models, like REPs are driven by the standardization of offers to garner the lowest efficient price for traditional transactions to help buyers meet cost-based targets
Key Implication: Change Becomes the Norm

What will customers need from us to meet their sustainability goals for renewable power?

- Make it easy  
- Make it affordable  
- Make it right sized

- Make it impactful enough to meet increasingly stringent reporting requirements
- Make it flexible enough to not get locked into today's model in an everchanging environment where options (and requirements) may be totally different in the next few years

Does this sound like a PPA/VPPA?

Does it sound like brown + RECs?

Aye! There’s the rub...

- As market participants, we must recognize that we all exist to serve the end use customer
- It’s our job to find the most efficient way to develop solutions that meet customer needs

We need new solutions that preserve the core competencies of Retail Market participants, but still meet customers where they live.
Solving for All Transactional Parties

Simple for the Buyer, the Consultant, and the REP

Buyer receives:
1. Knowledge of where renewable energy is sourced and why it's green
2. Ability to demonstrate impact
3. Auditable contract & scheduling path to support reporting requirements
4. Right sized for your load, shorter, flexible terms

How We Make it Happen

We create local, physical renewable energy solutions for customers that can be delivered efficiently through existing transactional models.
Conclusions – Implications for the Retail Market

1. The rapidly changing landscape for renewable energy is CHAOTIC not STANDARD
2. Buyers will need customized attention and solutions that don’t fit today’s retail model
3. Changes in regulations, renewable generation project incentives, and reporting requirements will threaten the core efficiencies upon which our business models are built
4. Risks associated with load balancing, settlement, and operational considerations will increase
5. The opportunity costs associated with tasking “A” player skillsets to renewable product development will be substantial

How can the retail market respond?

- Learn from other industries that operational efficiencies can be retained by off-loading inefficient processes
- Focus on bringing value through managing the increasingly complex operational risks of serving load with renewable power supply
- Leverage other participants who can bring non-standard, innovative solutions to REPs, consultants and brokers in a way that fits existing transaction processing models

Solution architects like RPD Energy have developed efficiencies in areas that are inefficient for other models to tackle
What Does It All Mean for Buyers?

1. The challenges presented by policy change, stakeholder pressure, new reporting requirements and the race to be green are significant but you are not alone

2. The network of service providers in the wholesale market, the retail market, and the consulting arena are here to serve

3. Through collaborative effort allowing each segment to focus on its core competencies you can create sustainability wins

4. You can make an impact on your sustainability goals NOW – but in a way that makes sense for your organization

5. Seek out solutions that meet your needs and push market participants to deliver the right answers

Coming together is a beginning; keeping together is progress; working together is success.
- Henry Ford

Sometimes it takes a village to create true breakthroughs...
- paraphrase
Q&A with Our Speakers

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