

Integrated Renewable Energy – A Simpler Renewable Solution

Organizations across the globe are looking to integrate clean energy commitments as part of their business plans. Whether it's driven by expressed interest from shareholders and tax payers, concerns around environmental impact or a desire to keep up with the competition, organizations find the need for renewable and sustainability goals greater than ever before.

Last month's edition of *Customer Insights* highlighted how the generation fuel mix has changed over the past ten years. We are seeing a shift away from fossil fuels as the primary contributor and growth driver and into renewables – specifically solar and wind. Improvements in technology, economies of scale and more competitive supply chains will continue to support development of the renewable landscape.

What is Integrated Renewable Energy?

At AEP Energy, we recognize there are organizations seeking a straightforward renewable energy solution. We call that solution Integrated Renewable Energy. Integrated Renewable Energy is a fully-bundled retail energy solution

that protects your organization from congestion plus volumetric risks. And, with Integrated Renewable Energy, your organization can easily reach your environmental, social and corporate governance (ESG) sustainability goals.

Our Integrated Renewable Energy solution helps you reach your sustainability goals because:

- 1. You receive a fully-integrated, long-term delivered retail energy solution.
- 2. The 100% renewable energy is from new, locally-sourced wind and solar assets.
- 3. Environmental attributes or certificates are credited to your organization for Renewable Portfolio Standards (RPS) and Renewable Energy Certificates (RECs) retirement.

 AEP Energy will do this on your behalf.
- 4. Your organization does not incur more risk than a traditional energy plan.
- 5. Your organization is not required to dedicate resources nor provide up-front capital.

AEP Energy has taken a portfolio approach by entering into

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multiple Power Purchase Agreements (PPAs) across PJM to deliver retail energy while offsetting 100% of a customer's electric supply with renewable energy. We fully assume the cost, risk and management responsibilities associated with these PPAs. This approach allows us to present organizations like yours with a competitive, long-term, fixed energy price solution that transacts like a traditional energy supply agreement.

Energy is our core business, but likely not yours. By participating in our Integrated Renewable Energy solution, AEP Energy assumes these obligations, allowing you to focus on the fundamentals of your business.

Why now?

Solar and wind generation have historically come at a "premium" price, but due to changes in market conditions we are now seeing the opportunity to capture renewable energy at minimal cost differences against traditional power.

The energy industry is at an inflection point. The technology that generates renewable energy is getting steadily cheaper which drives PPA prices down (and will continue to do so). By receiving tax credits, developers of renewable energy assets can keep costs down for organizations like yours, who take power from those assets.

Soon, these tax credits will be phased out. The timeline to build renewable energy assets benefiting from those tax credits is running out.

At AEP Energy, we believe now is the right time for organizations to make purchasing decisions for an Integrated Renewable Energy solution. As tax credits expire, developers will need to raise the PPA prices. Only as technology improves, making new installation cheaper, will developers be able to offer lower prices again.

Why does a portfolio approach matter?

AEP Energy's portfolio approach provides diversity in asset technology and location, resulting in a better overall dollar per megawatt-hour price when compared to a single PPA.

Think of this approach like a stock portfolio. While you could be successful investing everything into a single stock, with

a diversified portfolio you greatly reduce risk and increase potential for long-term gain. In that same way, being tied to a single PPA can add cost and risk to your business.

Solar performs best during on-peak, summer hours, while wind is typically better suited for off-peak, non-summer months. Both types of solar and wind assets have different performance capabilities dependent on their physical location. Having a mix of assets located across PJM allows us to provide a solution best aligned for how, when and where your organization uses electricity.

Did you know that only two percent of organizations reach their ESG goals? While organizations' intentions are good, most are focused on their core business.

Meeting ESG goals can be challenging for these reasons:

- 1. Managing PPAs require significant capital and human resources.
- 2. Sustainability programs need to be tailored to your organization's goals.
- 3. Successful PPAs require a dedicated team with extensive energy and management expertise.
- 4. Timing is an essential component to maximizing your PPA.

Organizations interested in pursuing a PPA should consider these key points. Being unaware or unable to manage the associated responsibilities of a PPA can quickly turn a low price into an unfavorable deal. Partnering with an experienced energy supplier, like AEP Energy, removes these burdens from your organization.

Benefits of a portfolio approach

AEP Energy has the experience and expertise to provide your organization with a turn-key Integrated Renewable Energy solution. We work with developers and utilities to secure solar and wind assets that are locally-sourced.

Our team will manage these responsibilities on your behalf:

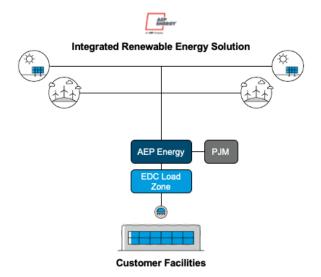
- 1. Managing development risk Time and resources dedicated to ensuring the chosen developer provides adequate credit assurance and is adhering to development milestones to ensure timely delivery of Commercial Operation Date.
- 2. Potential underperformance and undetected outages These scenarios can be difficult to quickly identify and can

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be costly due to unanticipated real-time costs during these periods. Extended periods of underperformance or outages may impact your ability to accurately fulfill renewable claims.

3. Financial burden and risk of becoming an energy market participant with PJM – Time associated with obtaining authority from the Federal Energy Regulatory Commission (FERC) to purchase wholesale power, legal filing costs, operational risk and expense in market participation after obtaining authority including scheduling, accounting and reporting responsibilities.

The below graphic illustrates AEP Energy's Integrated Renewable Energy solution. As a market participant of PJM, we utilize our portfolio of solar and wind assets to schedule renewable energy to be delivered directly into the grid. Our team of experts then forecasts your load with PJM, shouldering responsibility for all associated costs. The energy scheduled into the grid offsets 100% of your electricity usage with renewable energy.



How do I know if Integrated Renewable Energy is the solution for me?

There is no "wrong" type of organization for a renewable offering. If there is interest in a renewable solution, AEP Energy will provide the answer.

Specific considerations to help determine if our Integrated Renewable Energy offering is the right solution for your organization include an interest in a long-term renewable solution and a footprint within PJM.

In general, we find strong synergies within the customer types listed below and we're happy to facilitate further discussion with those outside of these customer groups.

- Medium-to-large commercial and industrial users
- Government federal, state and local
- Universities and colleges
- Healthcare

Our experience/AEP Energy history

As a wholly owned subsidiary of American Electric Power, AEP Energy benefits from the financial resources and technical expertise that comes from 100+ years' experience of matching electric generation with client needs. As an active participant in energy markets and new energy technology application throughout the country, AEP Energy is at the forefront of modern developments within the renewable landscape.

Interested in learning more?

If you are interested in learning more about our Integrated Renewable Energy Solution or how your company might take advantage of low renewable energy costs, contact Erin Schmerschneider, Director, Energy Solutions at eschmer@aepenergy.com or call Erin at 312-488-5124. If you are already working with an AEP Energy Sales Representative, they will happily provide more information about this approach.

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