The Renewable Energy Landscape is About to Get Crowded

Understanding the key drivers

BY JASON UTTON

The Inflation Reduction Act of 2022 — the single largest investment in renewable energy — was signed into law on August 16, 2022. This once-in-a-generation energy transition law expands both the time horizon and value of tax credits for clean energy technologies. It will remain in place for at least the next decade, providing certainty to developers and manufacturers who have faced regular incentive lapses over the previous two to three decades. In all, the law will help more than triple the clean power production in the country, adding up to an additional 550 gigawatts of electricity from wind, solar and other clean power technologies, according to analysis from the American Clean Power Association.

The initial bill caught everyone (myself included) by surprise. I've never seen anything as comprehensive in reducing the cost of renewable energy, and I've been in the industry for more than 14 years, spending the majority of those years developing clean energy projects across the country. This law sends a clear message to the world that the U.S. is taking a leadership position in ensuring energy security, increasing energy innovation and reducing annual carbon emissions 75% from 2022 levels.

Many companies are trying to understand how they're impacted and how best to leverage it in their favor. Speed to market is critical and having a thought-out, strategic approach will help identify and prioritize actions when it comes to smartly investing time and dollars. Clients should clearly understand five key drivers to develop successful renewable energy projects — the best location, the right technology, a "right-sized" project or program pipeline, the best spot to interconnect the project (in the right Interconnection Queue) and the necessary permits needed to complete development. According to Enverus, a data analytics company, this law is expected to lower wind and solar project costs (LCOEs) by 10% to 50%, especially in areas that have previously lagged, and the umbrella covering the five key drivers is ensuring your project will be cost competitive enough to win a long-term power contract.

1. Location is everything

Where you decide to develop starts you down a path, and it is essential to understand the best technology and optimal size for a given area. The new law gives solar projects the option to claim the Production Tax Credit (PTC) in lieu of the Investment Tax Credit (ITC). If you develop in a location that has a strong capacity factor, it may be more economic to claim PTC in lieu of ITC (SPP, CAISO, ERCOT). Developers need to perform the economic calculation on which is better to utilize. If your company is looking to expand into a new geography, you may be unsure about the pitfalls that are prevalent in certain areas. States have different permitting rules and requirements. It's extremely helpful to understand a new environment and where you should focus your attention.

2. The type of technology you choose matters

Wind, solar, battery storage, hybrid, carbon capture, hydrogen — how do you choose the right type of technology? Stand-alone renewable energy facilities like solar and wind are intermittent; their output is based on weather and time of day. If you are targeting a customer who needs on-peak power, they will be interested in a solar project. If technology doesn't matter, and they just want a renewable resource, then it's a purely economic decision — and depending on location and capacity factor, it may be better to go with a wind project. With the new stand-alone battery storage ITC coming from this law, it may make sense to add a battery to a solar or wind project. Consider all the pros and cons as you decide which technology best suits your company's goals.

3. Right size your pipeline
Challenges occur throughout every project's development life cycle and right sizing your renewable energy pipeline is key. If you are targeting two projects, it makes sense to prospect and begin developing on more. Fatal flaws can pop up throughout development from many different areas. A project can fail from not signing an anchor landowner, receiving an interconnection study that exceeds your financial thresholds or not receiving an environmental permit. If you don't have backups in place, you run the risk of not meeting your goals and falling months behind the competition. A good consultant can help you develop a right-sized pipeline or help you add to your existing pipeline based on what you currently have and where you want to go.

4. The Interconnection Queue is about to explode
The Generator Interconnection Queue is a list of every generation project currently proposed to gain access to the grid. Each grid operator controls its own queue and has a unique set of rules on how projects are studied and how long it takes to complete the study process (some take years to complete). It's safe to say the rush to secure interconnection rights for renewable energy projects is about to significantly expand throughout the country. Many of the interconnection queues are already overloaded, and delays continue to grow. Unfortunately, the new law did not directly address this challenge — so it's essential to be prepared and act fast.

5. Understand the cost competitive umbrella
At the end of the day, every renewable energy project must be cost competitive to get built. Most projects compete for long-term power contracts when potential customers issue RFPs, and it's a very competitive process. Customers (utilities, municipalities, commercial & industrial) expect affordable projects that meet their needs before they execute long-term contracts (5 to 30 years). Cost competitiveness begins when you create a development budget and lives throughout the entire development lifecycle. Cost is impacted from every aspect of development: the financial structure offered to landowners, how much financial impact do community imposed setbacks have on the energy resource, how much will it cost to interconnect onto the grid (network upgrade costs) and the type of supply chain contract you have from major equipment manufacturers (less than Tier 1 suppliers may impact borrowing capability). If you haven't been focused on every economic driver, you may not realize that your project is out of the money and won't be selected in a future RFP.

The future of renewable energy developments

The Inflation Reduction Act of 2022 is super positive for all things energy transition. The ambiguity we've all grown accustom to surrounding renewable energy tax credits is finally removed for at least the next decade. This exciting law creates an opportunity that renewable developers can't ignore, but with so many new incentives and different ways to go, it can be difficult to know where to begin. As the development landscape gets more crowded, finding the right advisor helps you create a strategic approach and get an advantage over the competition. ✪

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