# 2019 TRENDS IN UTILITY RENEWABLE ENERGY FINANCING

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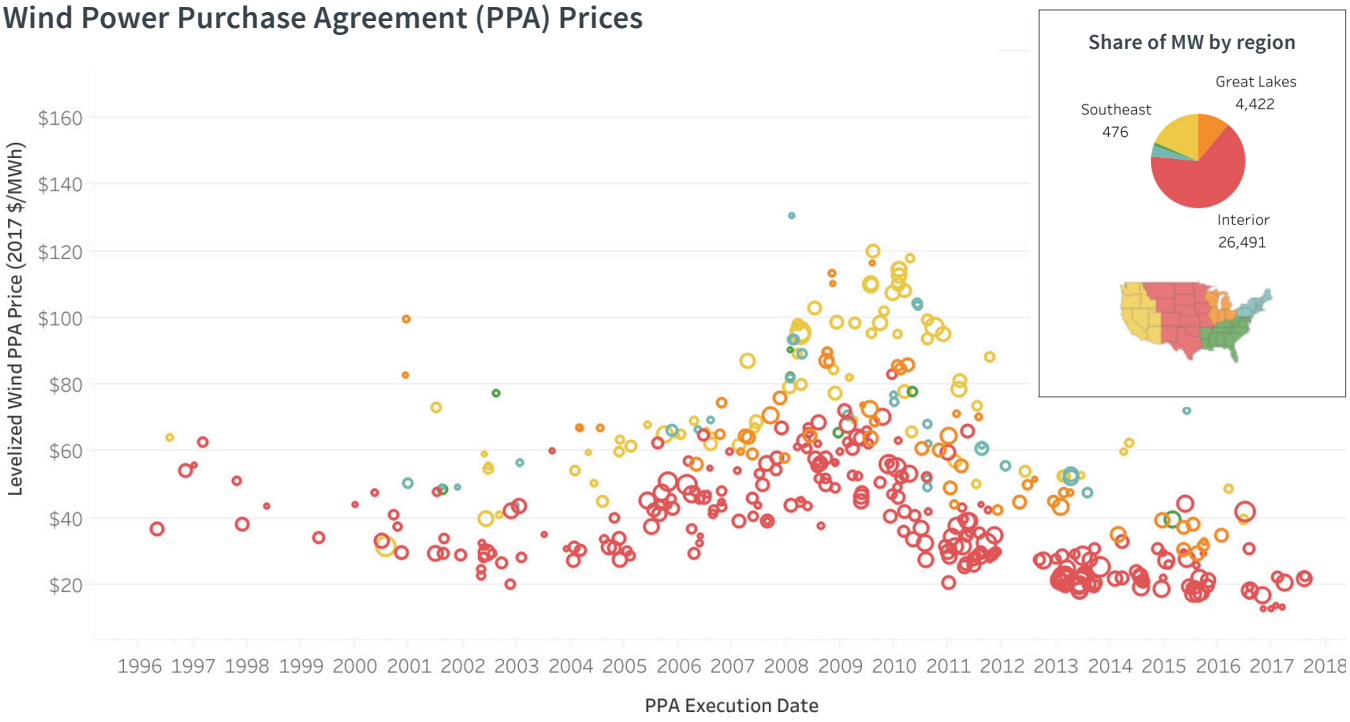
**In many ways, the broad themes shaping the regulatory and financial landscape around renewable energy in 2019 and 2020 are familiar for utilities that have been watching these trends unfold over the past decade.**

Driven by continuously improving economics and evolving mandates, interest among utilities in owning wind and solar assets is steadily growing, and the mechanisms for building and acquiring renewables are quickly evolving.

Utilities are also in a crowded field as new market entrants want to take part in renewable deals and take advantage of the expiring Production Tax Credit for wind and the step-down of the Investment Tax Credit for solar.

## Wind Power Purchase Agreement (PPA) Prices




From the 2017 Wind Technologies Market Report
Source: Berkeley Lab



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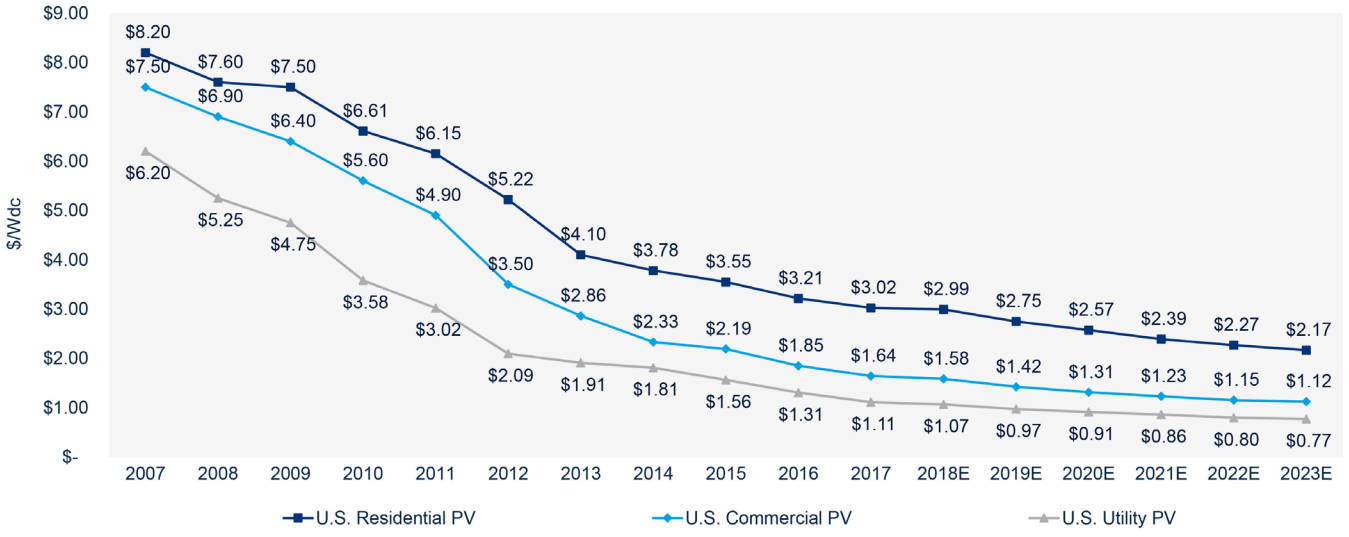
# CORPORATE CONTRACTS ACCOUNTED FOR 22 PERCENT OF RENEWABLE POWER-PURCHASE AGREEMENTS IN 2018.

**Historical and forecasted U.S. PV system pricing by market segment, 2007-2023E ($/Wdc)**




Source: Wood Mackenzie Power & Renewables

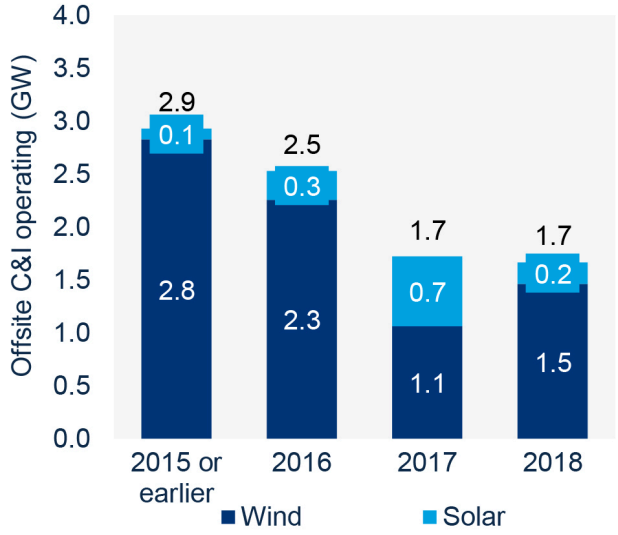
## A PROACTIVE APPROACH TO CLEAN ENERGY

U.S. utilities of all sizes are now actively investing in lowest-cost energy options while also seeking low-carbon alternatives as states step up their clean energy mandates, with various states looking at 50 to 100 percent clean energy standards between now and 2050.

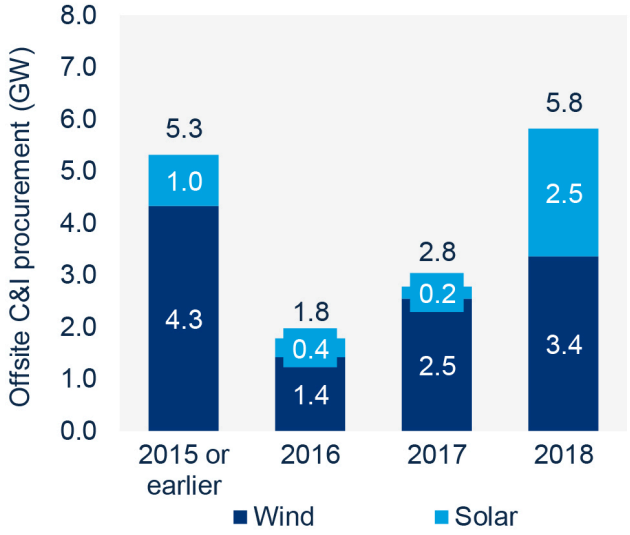
For example, Colorado's Xcel Energy announced it would replace 660 megawatts of coal powered generation with 1,800 megawatts of wind and solar and 275 megawatts of battery storage. Other utilities have also announced plans to phase out coal generation – including Midwestern U.S. utilities like Northern Indiana Public Service Company – a trend that is likely to accelerate due to the underlying economics.

Even where regulators aren't asking for high penetrations of renewables, many large-scale energy users are demanding it as they seek to meet their own sustainability goals. Corporate contracts accounted for 22 percent of 2018's renewable power-purchase agreements, according to WoodMac. Meeting that demand is a pressing priority for many utilities. For example, gaming resort giant MGM was willing to pay nearly $90 million for the ability to break with NV Energy in 2016 in order to secure more renewables on the open market.

### C&I capacity additions, U.S.




### C&I by procurement year, U.S.




Source: Wood Mackenzie Power & Renewables

Many utilities are answering the call by exploring novel ways to meet mandates and serve customers in new ways. Yet there is no single path forward for utilities seeking to achieve scale with renewables. Too much variation exists in regulatory requirements from state to state, and in some states, utilities may not have the ability to make proactive platform-level investments that would enable higher penetrations of renewables.

Although the path for utilities to achieve scale in renewable investment varies, there are some interesting near-term issues that are relevant to a large swath of utilities that we will dissect in this paper, including:

- The impact of build-transfer agreements
- The role of third-party tax equity
- The opportunity with large energy users

## THE IMPACT OF BUILD-TRANSFER

Vertically integrated, regulated utilities have traditionally signed power-purchase agreements (PPA) with independent power producers that construct large solar or wind projects. This has primarily been due to a lack of tax capacity to make use of tax incentives, inexperience with tax equity structures, and regulatory constraints that have prevented utilities from building these power plants themselves and efficiently including them in their rate base.

As the costs of renewable energy projects have continued to decline, more utilities have actively explored utility-owned renewables. One method utilities are using is the build-transfer agreement (BTA). In a BTA, a project developer handles all of the work involved with building a wind or solar power plant, everything from securing the land, procuring the solar panels or wind turbines and securing the interconnection rights.

Once the project has been commissioned, the utility takes ownership of the power plant. This is an arrangement that typically requires the approval of regulators, which is likely poised to happen more frequently.

In November 2018, for example, Entergy Mississippi announced it was entering into a BTA with Canadian Solar subsidiary Recurrent Energy for the construction of a 100-megawatt solar farm.

# WHETHER TAX EQUITY WILL REMAIN AN IMPORTANT TOOL FOR UTILITIES SEEKING TO SCALE AND OWN RENEWABLES IN THE FUTURE IS A SIGNIFICANT QUESTION.

## STRUCTURE MATTERS

BTAs are generally structured so that the utility can claim the benefits of the federal Production Tax Credit (PTC) or Investment Tax Credit (ITC), as well as accelerated depreciation. In the past, so-named "normalization" rules have been a disincentive, because they require that for rate-making purposes the majority of the tax benefits can't be realized upfront but rather must be spread out over multiple years, typically the life of the energy facility. With certain BTA structures, however, the utility may be able to follow regulatory rules of normalization while more rapidly realizing more of the tax benefit.

Given the impending expiration of the PTC in 2020 and the step-down of the ITC to 10 percent, many utilities are focusing on how to employ BTAs and other tax equity structures in the near term. But that's only part of the story. Importantly, some state regulators are also on board with these novel structures. Some state regulators, particularly in California and New York, have made it clear that they expect regulated utilities to figure out effective and cost-efficient ways to develop renewable energy at scale.

For some utilities, this means getting clarity on how tax equity transactions can affect them from the perspective of financial accounting and earnings per share. Also important for utilities to understand and to include in financial modeling is how solar and wind projects compare to other forms of generation on a levelized cost of energy (LCOE) basis.

These are not simple questions to answer, and the answers may vary from state to state. Does the inclusion of a tax equity investor lower the LCOE and provide a benefit to the ratepayer? At the same time, how does bringing in a tax equity investor alter transaction costs?

Utilities need to understand the unique features and differences of various structures, such as date-certain partnership flips, yield-based partnership flips, lease pass-through transactions, and sale-leaseback transactions. The resources required from the utility side to navigate these options are considerable and generally involve teams with knowledge of regulatory accounting, financial accounting and reporting, and tax.

Utilities that are not tax-efficient are particularly motivated to figure out the most effective ways to take advantage of tax equity structures before changes to the ITC and PTC occur. Whether tax equity will remain an important tool for utilities seeking to scale and own renewables in the future is a significant question.

## LEVERAGING THIRD-PARTY TAX EQUITY

Third-party tax equity has been instrumental to the growth of renewable energy in the U.S. However, its role in financing future projects has been a legitimate question since the Tax Cut and Jobs Act was signed into law in 2017, lowering the corporate tax rate from 35 percent to 21 percent.

One impact of this is clear: Lower corporate tax rates means a reduced appetite for tax credits generally, which creates a serious challenge for renewable energy project financing, since tax equity makes up between 40 percent and 60 percent of the total financing for most of these undertakings. In fact, in the wake of the passage of the Tax Cut and Jobs Act, Bloomberg reported that $3 billion worth of tax equity deals were on hold.

# IN THE U.S. ALONE, THE NUMBER OF CORPORATE PPAS IN 2018 WAS TRIPLE THE NUMBER OF THOSE SIGNED IN 2017.

Add to that uncertainty fueled by the upcoming ramp-down of the PTC and ITC, and it's understandable that the role of tax equity in aiding the scale-up of renewable energy is in question. Still, there are reasons to believe that tax equity will continue to be an important tool for utilities seeking to finance projects.

One positive sign is that the tax equity market has continued to attract new entrants, including corporates, community banks and insurers. Strategic investors, including utilities, continue to pursue the market and have been behind a number of renewable project acquisitions.

## TAKING BACK C&I

Not only are there new entrants to the tax equity market, but there are also new entrants looking to procure renewable energy directly. The list of companies seeking to achieve ambitious sustainability and clean energy goals consists of a who's who of American corporations: Walmart, AT&T, Apple and Nike, to name just a few. Worldwide, 121 corporations in 21 countries signed contracts for 13.4 gigawatts of clean energy in 2018, with 8.5 gigawatts of that total coming from the U.S., according to Bloomberg New Energy Finance.

This represents a significant uptick in corporate demand for clean energy. In the U.S. alone, the number of corporate PPAs in 2018 was triple the number of those signed in 2017. Stakeholder demands, sustainability targets, energy cost certainty, and the increasing cost-competitiveness of renewables will only increase the demand for clean energy in the corporate and municipal sectors.

Utilities around the country are rolling out ways to help their largest customers meet their sustainability goals. A recent trend is to offer renewable energy tariffs, or green tariffs, that ensure additionality and long-term price stability without the need to repeatedly negotiate power-purchase agreements.

For example, Duke Energy Carolinas and Duke Energy Progress filed a petition for a 600-megawatt Green Source Advantage Program to better serve North Carolina's large commercial and industrial customers, military, and the University of North Carolina system. Virginia's Corporation Commission also gave a green light to Dominion Energy's Renewable Facility and Renewable Generation tariffs that allow commercial and industrial customers to pay for and receive environmental credits attached to new renewable energy facilities that meet their demands.

Examples of green tariffs that help corporations achieve their clean energy goals can be found in Missouri, Nevada, Oregon, Michigan, Indiana and elsewhere. It's just one of the ways utilities can achieve renewable scale by meeting the demand of their largest customers.

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**MINI BRIEF 2019**



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