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Hello and Welcome to the Ecofin podcast. Thank you for joining us. I'm Jerry Polacek, Managing Director and Group Lead for Private Renewable Energy and today I will discuss the dynamics behind the enormous growth in renewable energy markets – both in the US and across the globe.

The latest Renewable Energy Market Update was released by the International Energy Association, or IEA, and the headlines are impressive – globally, renewables were the only energy source that saw demand increase in 2020 despite the pandemic headwinds. Even more impressive, global renewables capacity additions in 2020 increased by 45%, the highest annual increase since 1999. In interpreting this data, it is worth highlighting that China represented approximately 80% of the global capacity additions. Renewable policy sunset dates in China, the US, and other countries influenced the pace of growth in 2020.

With the pandemic receding, the IEA is forecasting this trend will continue with renewables accounting for 90% of new global power additions in 2021 and 2022. Forecasted global wind capacity additions of approximately 80 Gws annually for 2021 and 2022 would be 50% higher than the 2017-2019 average. Similarly, solar pv capacity additions of 162 GWs in 2022 would approach 50% higher than 2019 levels.

The sustained long term growth of solar and wind is being propelled by these proven technologies offering the lowest cost unsubsidized power in most markets. Beyond pure economics, growth will come from multi-year policy support in the US and elsewhere directed at achieving greenhouse gas reduction targets called for in the Paris Agreement. Finally, energy consumers ranging from corporations to governments to individuals are consciously seeking renewables to achieve their sustainability objectives.

Shifting to the US, the alignment of supportive economics, policy, and consumer demand for renewables continues unabated. The US, which has very little offshore wind in relation to Europe, is set for dramatic growth particularly off of the East coast where many states have established policies to promote the industry. Historically, US offshore wind has been hamstrung by lack of infrastructure and local supply chains along with a lengthy federal permitting process. The Biden administration has signaled its support for offshore wind with a policy objective of reaching 30,000 MWs by 2030. On May 11th, the federal government acted on this objective with the Interior Department's approval of Vineyard Wind, a \$2.8 billion, 800 MW project off the coast of Massachusetts, setting the stage for a series of large offshore wind projects to follow in its wake.

President Biden has also established a goal of 100% carbon-free electricity by 2035. During his recent two-day climate summit with world leaders, the President announced that the US will target reducing greenhouse gas emissions 50-52% below 2005 levels by 2030, which is almost double President Obama's emission cut goal. Some critics are skeptical of the US achieving this objective given the magnitude of change required in power and transportation sectors, which will require substantial state and federal policy support. Most agree though that the power sector will play a primary role by retiring the coal fleet and replacing it with renewables over this decade.

Many policy makers believe that extending and expanding tax credits for renewable energy will serve as a key lever to achieve Biden's power sector decarbonization goals. Right now, there are several bills in Congress that are proposing several year extensions to tax credits for wind and solar. Some of the bills also propose tax credits for hydroelectric, biomass, geothermal, nuclear energy, standalone battery storage and emerging technologies such as carbon capture.

Surprisingly, the prospect of higher corporate tax rates in the future may provide an unintended boost for renewable energy. Presently, tax credits are principally monetized by large corporate tax payers such as insurers and banks who invest tax equity in wind and solar projects. With the potential for higher tax rates, more corporations will have tax liabilities to offset creating a greater supply of capital for tax equity investments.

An even more potent growth catalyst for renewable energy, particularly for commercial solar, which includes sub 1 MW sized projects, would be the direct-pay in lieu of tax credits that is contained in the Infrastructure Bill. A direct-pay or refundable tax

credit would break through the current bottleneck of tax equity supply. In our discussions with solar and wind developers, we repeatedly hear this being at the top of their wish list to unleash growth by reducing transaction costs, simplifying the capital structure, and driving down the high cost of tax equity.

Any way you look at it, renewable energy is now at the forefront of the energy transition and the coming months are sure to be dynamic with potential for a number of meaningful US policy driven growth catalysts for solar and wind.

Thank you for listening and have a great day.

Thank you for joining us. And stay tuned for our next episode. Have topics you want covered or other feedback to share? Write us at info@ecofininvest.com.

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NOTES:

<https://www.bloomberg.com/news/articles/2021-05-11/offshore-wind-farm-near-martha-s-vineyard-wins-u-s-approval>
vineyard wind

<https://www.pv-tech.org/iea-upgrades-renewables-forecast-as-solar-pv-continues-to-break-new-records/> IEA (Jake has full report on the network)

<https://www.pv-tech.org/biden-commits-to-halving-us-emissions-in-week-of-new-climate-pledges/> US emissions cut 50-52%, Biden, etc.

<https://www.cnbc.com/2021/05/10/biden-infrastructure-plan-mitch-mcconnell-says-bill-should-cost-up-to-800-billion.html>
infrastructure plan

<https://www.bloomberg.com/news/articles/2020-04-28/solar-and-wind-cheapest-sources-of-power-in-most-of-the-world?sref=ZakvL7Ar> unsubsidized renewables lower cost than most power

<https://www.jdsupra.com/legalnews/will-direct-pay-change-the-renewable-5693823/> direct pay / refundable tax credit