



RENEWABLE ENERGY PREVAILS DESPITE PANDEMIC ECONOMY

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2020 has warranted many reflections: from comparisons between the present and 1918, 1932, and 1968, to interpreting our reactions during times of crisis. One of these reflections that I have found to be important is comparing how the world is and is not coming together to battle the virus and climate change. Is this crisis blinding us to the climate-related crises lurking in the background, or is it opening our eyes to our crisis responses? Has our climate crisis prevention come to a halt in the wake of the virus?

A decade ago, renewable energy technologies were nearly ready for prime time. Government support and subsidies were still necessary for them to compete, on an economic basis, with coal and natural gas. Now the tables have turned: onshore wind and utility scale solar are now generally cheaper than installing new fossil fuel capacity¹, coal fired power plants could be considered an endangered species², and even gas powered generation capacity isn't safe from the threat of being replaced by cheap renewables³.

¹International Renewable Energy Agency. (2020, June 2). How Falling Costs Make Renewables a Cost-effective Investment. Retrieved November 24, 2020, from <https://www.irena.org/newsroom/articles/2020/Jun/How-Falling-Costs-Make-Renewables-a-Cost-effective-Investment>

²Watts, J., & Ambrose, J. (2020, May 17). Coal industry will never recover after coronavirus pandemic, say experts. Retrieved November 24, 2020, from <https://www.theguardian.com/environment/2020/may/17/coal-industry-will-never-recover-after-coronavirus-pandemic-say-experts>

³Lambert, F. (2020, June 17). Tesla secures massive new Megapack project that replaces gas peaker plant. Retrieved November 24, 2020, from <https://electrek.co/2020/06/17/tesla-massive-megapack-projec-replaces-gas-peaker-plant/>

Deloitte, in their 2020 Renewable Energy Outlook⁴, proclaimed that the industry was poised to enter a new growth phase: “The year ahead promises further growth in the renewable energy sector. This will likely come against a backdrop of increased innovation and collaboration among multiple stakeholders. Renewables are likely to continue moving into the driver’s seat in electricity markets as utilities and regulators prefer them to replace retiring capacity and customers increasingly choose them to save costs and address climate change concerns.” That was in published in November 2019, and things have changed since then, to put it mildly. So, what is the future, near and far, for renewable energy?

“Solar PV is consistently cheaper than new coal - or gas fired power plants in most countries, and solar projects now offer some of the lowest cost electricity ever seen.”⁵



A Matter of Scale

As an investor in renewable energy for more than 15 years, I have to be an optimist. This time, however, things have actually changed. Namely, the prices of renewables have plummeted over the last decade. According to the International Renewable Energy Agency’s June 2020 study of the cost competitiveness of renewable energy, the cost of solar PV power fell 82%, onshore wind fell 39%, and offshore wind 29% from 2010-2019. According to the same report, “56% of capacity additions for utility-scale renewable power in 2019 achieved lower electricity costs than cheapest new coal plant.” And in October, the International

Energy Agency’s World Energy Outlook 2020 proclaimed solar the “new king of electricity” as “solar PV is consistently cheaper than new coal - or gas fired power plants in most countries, and solar projects now offer some of the lowest cost electricity ever seen.”⁵

After years of hand wringing about how renewable energy would impact the electric grid, renewable energy has now proven it can play nice with the rest of the grid, and even win. This spring, as citizens hid in their homes from the virus, the United Kingdom’s electric grid ran for a record of more than 66 days without any coal power, beating the prior record of 18 days set last June.⁶ During this spring’s run, while power demand was dramatically lower, renewables made up 36% to gas’s 33% and nuclear’s 21%. Power grid operator National Grid expects to be able to run the U.K.’s grid without any fossil fuels by 2025. Meanwhile at home, for the first two quarters of 2020, solar, wind, and hydropower combined produced more power than coal in the U.S. for the longest consecutive period ever recorded, despite winter normally being a coal-heavy season^{7,8}.

What’s Next?

This year, all businesses in all industries around the globe have been forced to navigate the physical and economic devastation from the Covid-19 pandemic with little certainty of what the future will hold. Economic curtailments were estimated to reduce energy demands by 20% this past winter, leaving renewable industry participants to question if renewables would continue to grow in the face of reduced demand.

As the spring progressed, the answer appeared to be a resounding commitment to the renewable energy transition. In June, Greentech Media declared “Fears that the coronavirus outbreak would sideswipe the U.S. clean energy market appear overblown so far — and the proof is in the projects.”⁹ It noted that energy industry consultant, Wood Mackenzie, increased their wind installation projections and expects record solar and storage installations in the U.S. this year. A story in the New York Times

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⁴Deloitte Marlene Motyka US and Global Renewable Energy Leader mmotyka@deloitte.com +. (2020, July 08). 2020 Renewable Energy Industry Outlook. Retrieved November 24, 2020, from <https://www2.deloitte.com/us/en/pages/energy-and-resources/articles/renewable-energy-outlook.html>

⁵Iea. (2020, October 13). World Energy Outlook 2020. Retrieved November 24, 2020, from <https://www.iea.org/reports/world-energy-outlook-2020>

⁶Cockburn, H. (2020, June 17). Climate crisis: UK’s record coal-free power run comes to an end. Retrieved November 24, 2020, from <https://www.independent.co.uk/environment/coal-free-power-uk-record-time-2020-how-long-renewable-energy-a9570891.html>

⁷Feaster, S., & Wamsted, D. (2020, April 16). Utility-scale renewables top coal in U.S. electricity generation for entire Q1 2020. Retrieved November 24, 2020, from <https://www.renewableenergyworld.com/2020/04/03/utility-scale-renewables-top-coal-in-u-s-electricity-generation-for-entire-q1-2020/>

⁸Institute for Energy Economics & Financial Analysis. (2020, August 28). Renewable energy tops coal, nuclear for second spot in U.S. electricity market in Q2 2020. Retrieved November 24, 2020, from <https://ieefa.org/renewable-energy-tops-coal-nuclear-for-second-spot-in-u-s-electricity-market-in-q2-2020/>

⁹Stromsta, K. (2020, June 16). 5 Key Clean Energy Projects That Barreled Through the Coronavirus Lockdowns. Retrieved November 24, 2020, from <https://www.greentechmedia.com/articles/read/5-us-clean-energy-projects-that-barrelled-through-coronavirus-lockdown>



this spring found the same, with a headline from late June proclaiming “With Much of the World’s Economy Slowed Down, Green Energy Powers On,”¹⁰ detailing mid-pandemic work on installing a large offshore wind project in the U.K. In May, a French renewables developer signed contracts to develop Australia’s largest solar farm.¹¹ And back in the U.S., Dominion announced in late June that it had installed the turbines at its Coastal Virginia Offshore Wind near Virginia Beach.¹² While it is a pilot project in advance of development at an adjacent site later, these turbines are only the second offshore set in the U.S., as developers now race to catch up to the rest of the world. And in November, at an event to launch the International Energy Agency’s annual renewables outlook, the agency’s head Executive Director, Fatih Birol, said that while the energy system is experiencing its worst year since the Second World War...[r]enewable energy appears to be immune to COVID-19.¹³

It appears that the demand for renewable energy projects remains as strong as ever, and based on my observations, numerous companies and industry analysts seem to agree. Large utility scale projects take years of planning and are dependent on the physical location of the plant. One participant commented that given the trajectory of the renewable energy transition, project developers and offtakers are able to look through months of delay or even 1-2 years of reduced demand on a project with a 30-year life. In addition, the European Union declared that supporting the transition to renewables is one of the keys to the bloc’s Covid-19 economic recovery, with the proposed recovery plan directly supporting building efficiency, renewables, and the notion of the Just Transition to support impacted workers.¹⁴ The U.S. also elected former Vice President Biden and Senator Harris to replace Trump and Pence in January. This hopeful news allows the renewable energy industry to plan for improved national support of projects through potential increases to renewable energy

incentives and mandates, and possible creation of other laws/regulations/legislation that will help transition the U.S. economy and support renewable energy.

Of course, Covid-19 has not spared all aspects of the renewable energy industry. The cessation of in-person work has painfully impacted some areas of clean technology.¹⁵ Home energy efficiency projects, such as the in-home energy audits many utilities sponsor, has been hit hard, with fears of permanent job losses. Similarly, residential solar has long relied on face-to-face sales techniques. An industry analysis in mid-July suggested that employment in the sector is 15% below where it started the year¹⁶, with no indication the current federal government intends to support the sector, which had been growing jobs 70% faster than the overall economy for the previous five years. We are hopeful, however, that the sector will resume job creation as the new federal administration takes office. There seem to be green shoots of recovery as several large, publicly traded residential solar installers have indicated spring installation numbers that were better than the industry projections.

We are all faced with an incredible number of unknowns at the moment: the virus, the economy, the political climate, and the physical climate – all of which are interrelated and in flux. Decisions made now in any of these areas may have ramifications in others for years. When we hunkered down at home in March to prevent spread of the virus, I was quite fearful that progress made in the energy transition could grind to a halt, with a short term crisis overwhelming long term planning needs. I’m relieved to find that, for the most part, that hasn’t happened. Utilities and governments are not backing away from their plans to transition from fossils to renewables. There is still much work to be done to avoid the worst that climate change might bring, but this progress did not fall victim to Covid-19.

¹⁰ Reed, S. (2020, June 30). With Much of the World’s Economy Slowed Down, Green Energy Powers On. Retrieved November 24, 2020, from <https://www.nytimes.com/2020/06/30/business/renewable-energy.html?searchResultPosition=1>

¹¹ Maisch, M. (2020, May 06). Neoen to build Australia’s largest solar farm after power deal with CleanCo. Retrieved November 24, 2020, from <https://www.pv-magazine-australia.com/2020/05/06/neoen-to-build-australias-largest-solar-farm-after-power-deal-with-cleanco/>

¹² Stromsta, K. (2020, June 29). Second US Offshore Wind Project Finishes Construction Off Virginia. Retrieved November 24, 2020, from <https://www.greentechmedia.com/articles/read/second-us-offshore-wind-farm-finishes-construction-off-virginia>

¹³ Naschert, C. (2020, November 10). ‘Immune to COVID-19’: Renewables behind 90% of new capacity in 2020 – IEA. Retrieved November 24, 2020, from <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/immune-to-covid-19-renewables-behind-90-of-new-capacity-in-2020-8211-iew-61189791>

¹⁴ Jaeger, J. (2020, June 2). Europe Charts a Course for Sustainable Recovery from COVID-19. Retrieved November 24, 2020, from <https://www.wri.org/blog/2020/06/europe-charts-course-sustainable-recovery-covid-19>

¹⁵ Renewables Now. (2020, June 16). US loses nearly 100k renewable power jobs due to virus. Retrieved November 24, 2020, from <https://renewablesnow.com/news/us-loses-nearly-100k-renewable-power-jobs-due-to-virus-702849/>

¹⁶ Business and Industry Connection Magazine. (2020, July 13). Some clean energy employees are returning to work, but sector’s full recovery unlikely if Congress doesn’t act. Retrieved November 24, 2020, from <https://www.bicmagazine.com/departments/operations/some-clean-energy-employees-are-returning-to-work-but-sector/>



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