Economic Impact of COVID-19 will Make the Fight Against Climate Change Harder

Bending the Keeling Curve remains bleak, but technological advances provide hope for the planet

By Christine Clark | UC San Diego News

Measures to slow the spread of the coronavirus have reduced the demand for fuel and slashed oil prices. Global emissions of carbon dioxide (CO_2), the chief long-term cause of climate warming, have slid perhaps by one-fifth and pollution is down, but can we expect COVID-19 to create lasting change in reversing global warming?

“I doubt it,” said David Victor, professor of international relations at the University of California San Diego School of Global Policy and Strategy. “While the pandemic might alter societies permanently, the same market forces that drive our dependence on fossil fuels are still in play and may even be reinforced with the economic fallout of COVID-19.”

Hard economic times may not bode well for societies to get serious about

climate change

While energy markets try to stabilize during the economic free-fall COVID-19 has caused, the atmosphere is catching its breath. The results are visible, as evidenced by images that went viral last week of Delhi, India that showed before and after shots of city streets with improved air quality.

However, the greenery has come at a huge, unacceptable cost, Victor noted. And though shock of the novel coronavirus may be expected to catalyze serious solutions to other shared global problems, such as of climate change, prospects appear bleak.

"Just by looking around today—with everyone stuck at home for the moment and holding meetings on Zoom—it is easy to envision a future with a lot less travel," Victor said. "But history suggests that when incomes start growing again and the constraint of locality is lifted then people will spend, again, on mobility. The higher the incomes, the more the money and the more the emissions, at least historically."

Furthermore, Victor points out that hard economic times are usually bad times to mobilize support for aspirational missions such as mitigating climate change which still has abstract benefits to many members of the public.

"The best polling data show that the public wants clean energy, to be sure, but they also want cheap energy," Victor notes. "When pocketbooks are empty, every extra costs looks expensive."

The oil industry is hurting, but likely to make a comeback

The sharp declines in the demand for oil recently spurred OPEC and allies led by Russia to approve the biggest-ever cut to the world's oil supply to arrest the price decline.

With the economic shake up, what changes can we expect from the industry? According to Victor, it will rebound; however, it will likely look a lot different.

"Pecking orders will change a lot," Victor noted in a recent piece for the Brookings Institution on forecasting the future of energy. "In oil, American shale suppliers will be hammered while the core of OPEC – Saudi Arabia and Abu Dhabi, plus perhaps Russia – will have more control. In electricity, reliable firms will remain on top. Consolidation of weak into stronger, bigger firms is likely across the industry. We could even see some large, financially sound state-

connected firms take over parts of the industry—for example, Chinese state-owned enterprises that could buy distressed assets on the cheap."

Victor worries, in particular, that all the economic distress caused by the global pandemic will hit small firms and entrepreneurs really hard. "Much of what could really transform the global energy system has been coming from smaller firms that have the flexibility to back radically new ideas, which is much of what we need in effort to reduce emissions."

Political obstacles notwithstanding, deep decarbonization is within reach

Today, energy sources that do not emit are more expensive; however, in the decades to come, innovation could make severe cuts in emissions, also known as "deep decarbonization," achievable at reasonable costs. Victor and collaborators including Michael Davidson, an assistant professor of energy systems who holds a joint appointment with the School of Global Policy and Strategy and the Jacobs School of Engineering, lay out what decarbonization can look like in a new Foreign Affairs article authored by the researchers.

"Deep Decarbonization translates into reshaping about 10 sectors in the global economy—including electric power, transportation and parts of agriculture—by reinforcing positive change where it is already happening and investing heavily wherever it isn't," they write.

This work is a major driver for Victor and Davidson who both are involved with UC San Diego's Deep Decarbonization Initiative. Victor co-leads the interdisciplinary effort focused on helping the world cut emissions of warming gases given the very real technology, economic and political constraints that exist. Davidson is a key researcher involved in the program.

They note that the power sector offers the most promising avenue for weaning off greenhouse gas emitting energy sources for various reasons.

The impact of electricity use on emissions depends on how clean the energy was that was used to generate it; however, "electrifying" the economy by designing more processes to run on electricity rather than the direct combustion of fuels—is essential.

"This is because, compared with trying to reduce emissions in millions of places where they might occur, it is far easier and more efficient to reduce emissions at a modest number of power plants before distributing the clean electricity by

wire," the authors write.

Investments in tech and state support are key ingredients to a greener future

In sectors such as transportation, steel, cement and plastics, companies can be expected to continue to resist profound change unless they are convinced that decarbonization represents an opportunity to increase value and revenue.

Key in these efforts is governments and businesses coming together now to change that. "Not simply with bold-sounding international agreements and marginal tweaks such as mild carbon taxes, but also with a comprehensive industrial policy—there will be little hope of reaching net-zero emissions before it's too late," Victor and Davidson noted.

They added, the world needs new technology, and that means more much R&D and a lot of practical experience in testing and deploying new technologies and business strategies at scale.

"Setting bold goals can help," they write. "But new technological facts on the ground—sped along by active industrial policy and international cooperation—are what will transform the politics and make deep decarbonization a reality."

Victor and Davidson will speak on COVID-19's impacts to energy systems and climate change policies on May 14 at noon, as part of the School of Global Policy and Strategy COVID-19's webinar series. Visit the event website for more information and to register.