

THE ROLE OF SUSTAINABLE ENERGY IN ECONOMIC RECOVERY PACKAGES

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Webinar Series Whitepaper



The Abdullah Bin Hamad Al-Attiyah International Foundation for
Energy & Sustainable Development



INTRODUCTION



THE ROLE OF SUSTAINABLE ENERGY IN ECONOMIC RECOVERY PACKAGES

The Abdullah bin Hamad Al-Attiyah Foundation for Energy and Sustainable Development provides robust and practical knowledge and insights on global energy and sustainable development topics and communicates these for the benefit of the Foundation's members and community.

In 2020, the Foundation hosted a webinar series, in partnership with Refinitiv, to explore key trends and insights into how the coronavirus pandemic has impacted the energy industry and how it can recover from the unprecedented turmoil caused by Covid-19. The most recent webinar in the series examined the role that sustainable energy will play in national and regional economic stimulus plans.

Webinar Series

H.E. Abdullah Bin Hamad Al-Attiyah founded the Webinar Series as a platform for knowledge exchange and support for the global community in the quest towards a sustainable energy future. The quarterly events which have been hosted in Qatar for three-years are a crucial networking and learning opportunity in the calendar of industry CEOs.



MONEY MAKES THE GREEN ECONOMY COME AROUND

Governments worldwide plan to inject huge amounts of money into their economies as they seek to bounce back from lockdown. By using the momentum created by the global pandemic, both policymakers and global businesses endeavour to have a fresh start and ensure that these stimulus packages and fiscal incentives shape a sustainable future.

Even prior to the pandemic, renewables were ascendant, with renewable energy capacity expanding by a record amount in 2019, according to a report co-authored by the United Nations. This capacity grew by 184 gigawatts last year, although annual investment was near-flat at \$282.2 billion.

- Effective carbon pricing mechanisms, along with the removal of hydrocarbon subsidies, are fundamental to reducing fossil fuel consumption.
- Low interest rates and economic stimulus packages, which often include generous incentives, provide carbon-intensive industries with an unprecedented opportunity to become more sustainable.
- Plunging solar panel costs are bringing power to societies beyond the electricity grid, providing greater economic opportunities for marginalised peoples.

Effective carbon pricing mechanisms will be key to accelerating the transition to renewable energy, while low-cost solar panels will provide off-grid power to societies currently living without electricity.

Yet policymakers face a tough task in convincing the public that going "green" should be as great a priority as reversing the steep decline in economic activity and bringing back lost jobs.



Jos Delbeke, Professor, European University Institute & KU Leuven

These aims are not mutually exclusive. Green policies can accelerate, not slow, recovery, and the European Union's (EU) recent actions could provide an example to other regions in how to marry economic stimulus with climate-conscious energy strategies.

In July, the EU announced a €1.8 trillion recovery plan, with around 30% of this funding to be spent on climate-related projects. This followed last December's unveiling of The European Green Deal, which details how the EU will become climate neutral by 2050.

"At the heart of this is the Emissions Trading System," said Jos Delbeke, a professor at the European University Institute and KU Leuven research university and former head of the European Commission's Directorate General for Climate Action.

"What matters a lot to the European experience is the combination of targets, finance and incentives. All this has been reinforced due to the Covid crisis."

The carbon trading system will likely be reviewed in 2021; at present, the EU aims to reduce the

UTILISING THE MARKET TO LIMIT CLIMATE CHANGE

bloc's annual carbon emissions - 40% by 2030 - versus 1990 emission levels. This could be revised to 55%, said Prof Delbeke.

Carbon pricing will be key to accelerating the transition to renewable energy, either through a market-based carbon trading system or carbon taxes, he predicts.

"It's very important there's an explicit price for carbon," Prof Delbeke said. Such a premium will help make renewable energy more competitive and attractive versus investing in coal-fired power plants, for example.

"Investments in coal are very risky because they may be built for a lifetime of 30–50 years, but with current developments, particularly in the field of renewables, and if we put on top of that a price on carbon, the lifetime of a new coal-fired plant will be much less than what many investors anticipate," the professor stressed.

Yet attempts to create an international carbon market through the United Nations have floundered, so rather than focusing on creating complex and hard-to-agree international carbon markets, countries should start domestically, said Prof Delbeke.

"National regulations matter the most," he said. **"Putting a price in a national context as part of a national energy policy ... when you do that, it opens up an avenue for a much broader debate about development goals. A carbon market can be established because we know how to do the measurements, reporting, all this infrastructure you need, we have plenty of good experience. Once that's in place you can have a solid carbon market."**



Carbon taxes not only generate revenue for governments, but also give investors comfort to invest in renewable energy. Similarly, fossil fuel subsidies – common in many developing countries – should be phased out.

The professor stated that "**Revenue is important, but the most important (aspect) is the explicit price on carbon to encourage carbon-free investment and to discourage carbon-intensive investment such as in new coal facilities.**"

"We have to recognise the difference between national realities and national policies ... let's start at the national, not the international level," Prof Delbeke added.

The future of carbon-intensive industries is within their own hands – they must embrace carbon capture and storage (CCS) to survive in the long term. Yet such technologies are expensive. Historically low interest rates, which were slashed in the wake of the pandemic, offer such sectors the opportunity to invest in the necessary technologies to "green" their activities.

The incidental costs associated with fossil fuel consumption and carbon emissions should also be factored into calculating the overall economic costs of using the likes of oil and coal, said Thomas Rieger, Co-founder and CEO of Solarkiosk, which installs off-grid renewable electricity infrastructure in developing countries. These costs include additional healthcare expenses and the heavy price of responding to the devastating effects of climate change.

"I'd rather invest now in technologies to decarbonise the economy and later don't have the costs inevitably arising from further carbon emissions," said Mr Rieger.



Thomas Rieger, Co-founder and CEO, Solarkiosk

Europe – and other entities – seems to agree. The European Investment Bank will stop funding fossil fuels at the end of 2021. Private investment funds are increasingly following suit.



GOING SOLAR

Developed countries have the luxury of mulling whether to persist with fossil fuel-fired power stations or switch more to renewables. But in much of the developing world no such luxury exists, and so the plunging costs of photovoltaic (PV) cells is having a transformational effect in many low-income countries.

Plunging hardware costs have slashed solar electricity production prices to record lows, with Gulf state-run projects leading the world. In April, Abu Dhabi set a world record low tender price of \$0.0135/kWh for a PV power plant.

The same trend of plunging prices is forecast for battery storage, said Mr Rieger, whose firm has invented solar powered infrastructure solutions and provides last-mile electricity connectivity to rural communities, as well as PV-based utility-scale projects. Its geographical focus is on sub-Saharan Africa and South East Asia.

"The most important change we're experiencing worldwide is the fantastic cost reduction in renewable energy technology combined with new technological developments such as battery storage and – in the case of Europe – the upcoming digitalisation of the energy system," said Prof Delbeke. "That raises new questions for policymakers and one of the most important questions, now that the share of renewables is drastically increasing, is how do we cope with the flexibility (variability) of electricity production due to solar and wind? If the wind isn't blowing or the sun isn't shining, there's no electricity."

WEBINAR SPEAKERS:

Moderator:



Dr Matthew Kennedy,
Associate Director,
Arup

Speaker:



Jos Delbeke, Professor,
European University
Institute & KU Leuven

Speaker:



Thomas Rieger, Co-
founder and CEO,
Solarkiosk

Pricing could be structured to incentivise energy-intensive industries to maximise their activities when climactic conditions permit renewable electricity production. 'Internet of Things-based technologies' will enable consumers to do the same with their home appliances such as washing machines and dishwashers.

According to Prof Delbeke, the "**increasing flexibility is being catered for, but it's not completely embedded yet in the regulations for the power sector.**

"Electricity production is based on a top-down structure, with large plants – whether powered by fossil fuel or renewables – delivering electricity to end users via a vast transmission network. This will gradually evolve into a decentralised generation and transmission model in the long term.

"What do we do with those areas where there is no grid and there will never be a grid because the cost of the last-mile connection is just too high?" said Mr Rieger.

Around US\$1.7 billion had been invested in off-grid electricity infrastructure up to the end of 2018, according to energy consultants Wood Mackenzie. This investment enabled 400 million more people to access electricity via off-grid solar energy from 2010-2017

According to Wood Mackenzie, 71% of new electricity connections will be via mini-grid or off-grid technology to 2030.

In conclusion, Covid-19 has devastated economies and caused a terrible loss of life. With the pandemic still far from over, and amid this turmoil, there is also the opportunity for societies – rich and poor – to re-evaluate their priorities and shift their emphasis away from economic growth at all costs to a more nuanced, inclusive approach that embraces renewable energy and can deliver greater prosperity in the long term.



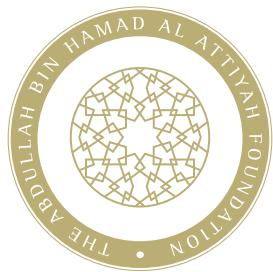
OUR MEMBERS

Currently, the Foundation has over 15 corporate members from Qatar's energy, insurance, and banking industries as well as several partnership agreements with business and academia.



Our partners collaborate with us on various projects and research within the themes of energy and sustainable development.





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