



Impacts of COVID-19 on Renewable Energy Development

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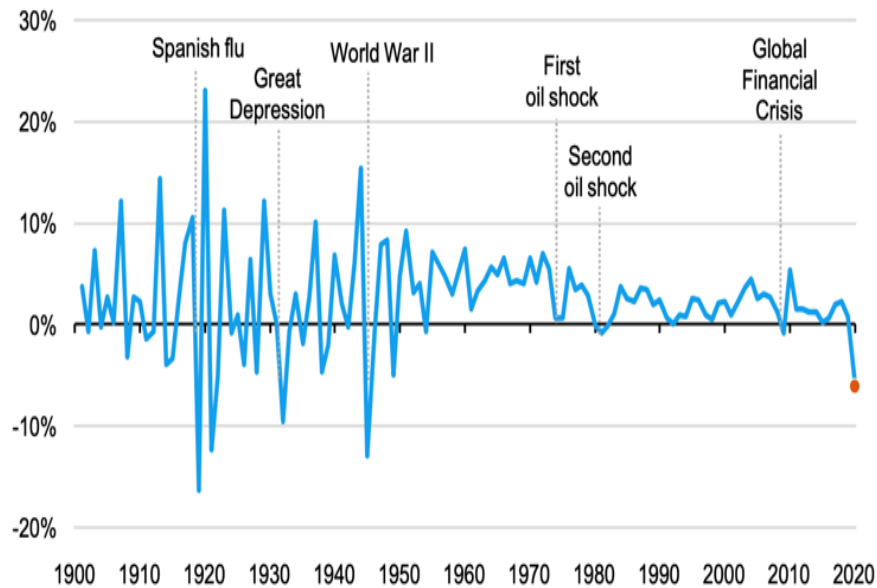
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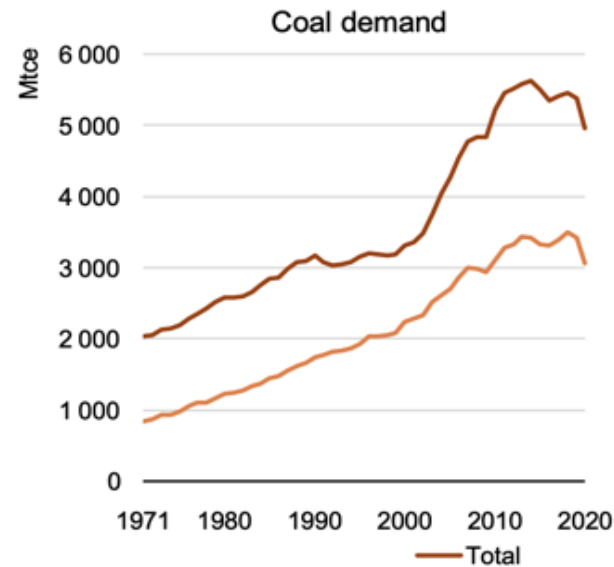
The 54th Meeting of APEC Expert Group on New and Renewable Energy Technology
Virtual meeting hosted by the Philippines, November 10-11, 2020

Impacts of the COVID-19

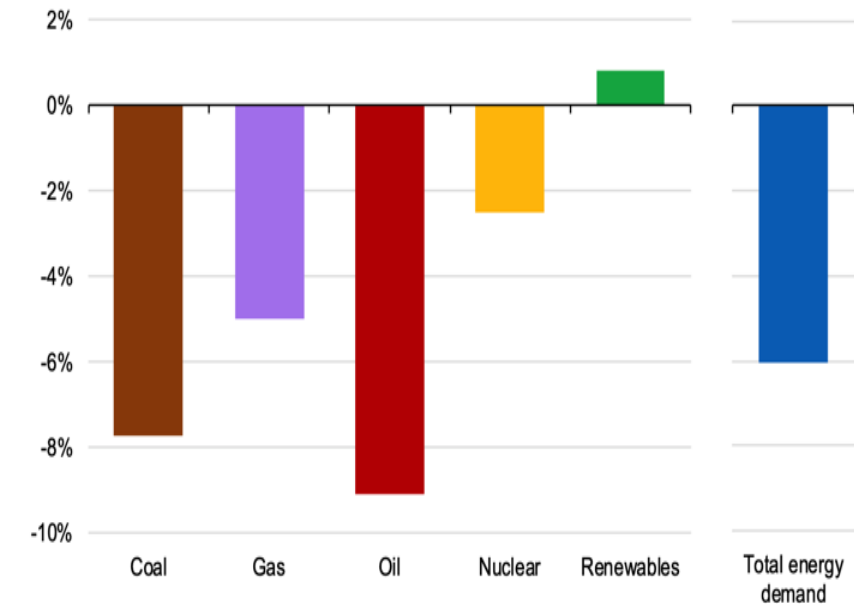
- **Drop in global primary energy demand** in 2020, the biggest since WW2
- Expected biggest **reduction** are **fossil fuels consumption**, particularly coal and oil
- Renewable energy shows resilience, showing growth continued, but at a lower pace
- **Impacts on renewable industry** and project development



Rate of change in global primary energy demand, 1900-2020



Global total coal demand, and coal demand for power generation



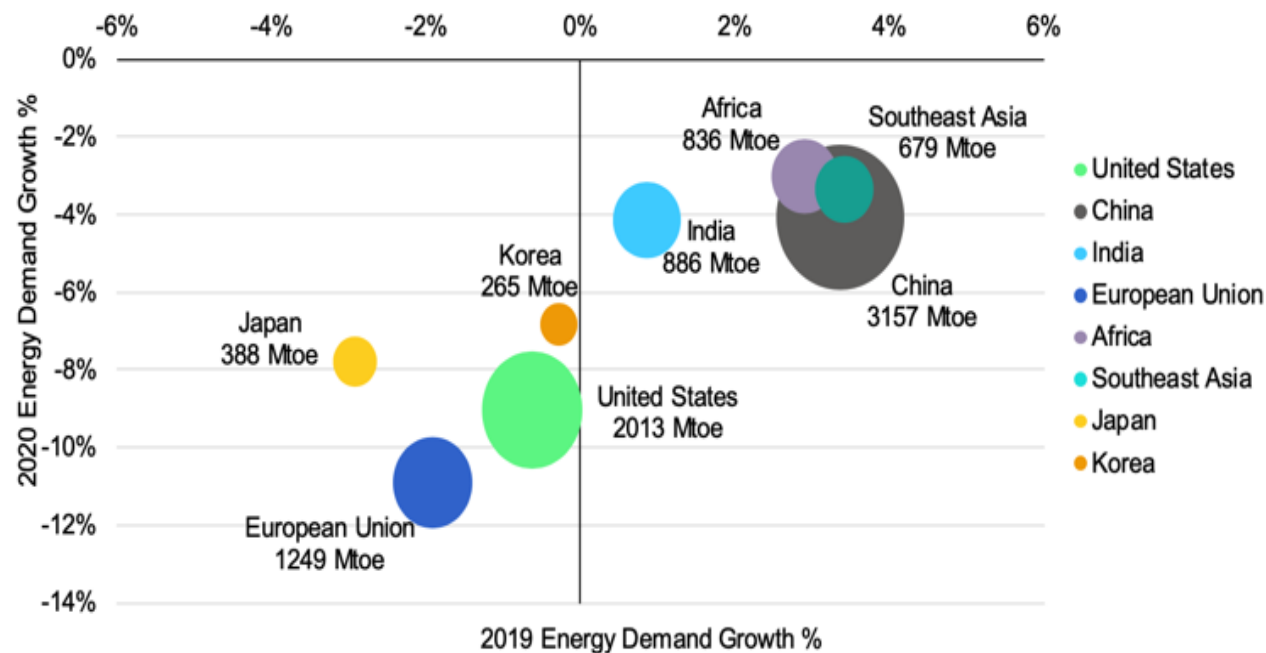
Projected change in primary energy demand by fuel in 2020 relative to 2019

Source: IEA, 2020

Impacts of COVID-19

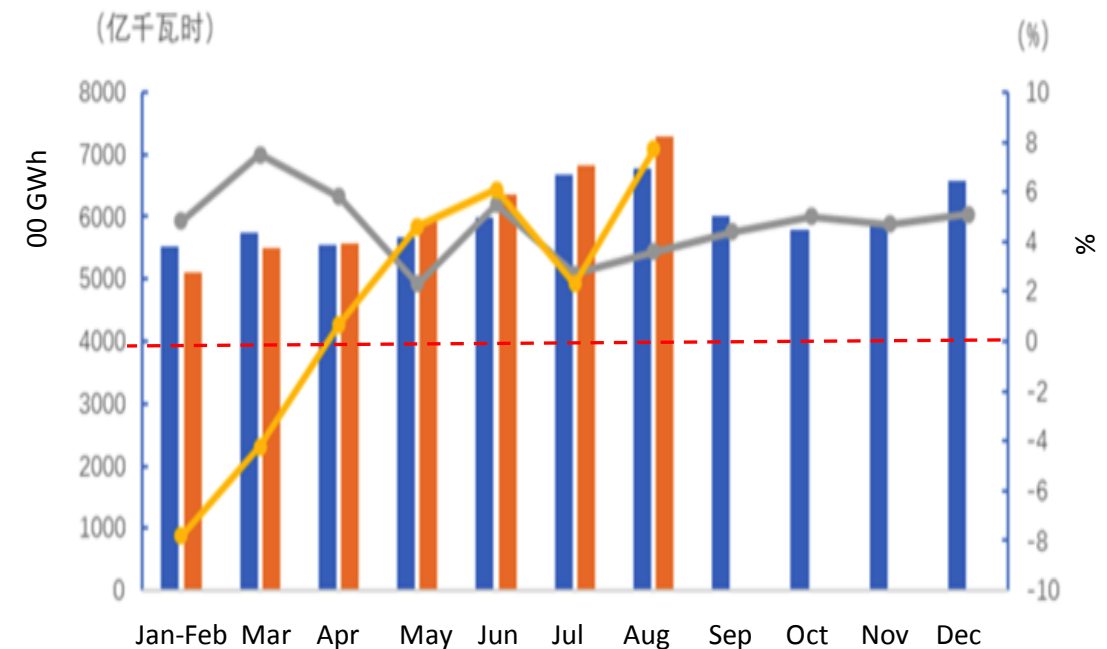
Different across the economies

Impacts on each economy are **different** subject to the **government policy** and its **effectiveness of its implementation**, and the **response from the public**.



Energy demand growth by region in 2019 and 2020

Source: IEA, 2020



Monthly electricity consumption and growth rate in China, 2019 and 2020

Source: CEC, September 2020

Impacts of COVID-19 on RE projects

Projects under development

- Access to the site to assess a multitude of risks and condition
- Highly quoted prices for material and equipment of the projects
- Lenders commitment of funds and their ability to adequately assess and withhold the risks
- All the above might result in a non-bankable project

Projects under construction

- construction postponements anticipated mainly due to equipment delivery delays
- Supply chains issue of RE industry
- Workforce shortage
- Delays in meeting key construction and work millstones
- Developers and off-takers may attempt passing the liability and consequences to contractors, or reschedule the project milestones
- The actual impacts of the virus on these industries will depend on how quickly supply chain can return to full production

Projects in operation

- Fall in electricity demand, and reduced amount of electricity generation of the power plants
- As a consequence of lower energy use and lower capacity demands for power systems, potential shrinking revenues for power utilities

Trajectory of Post-COVID Recovery

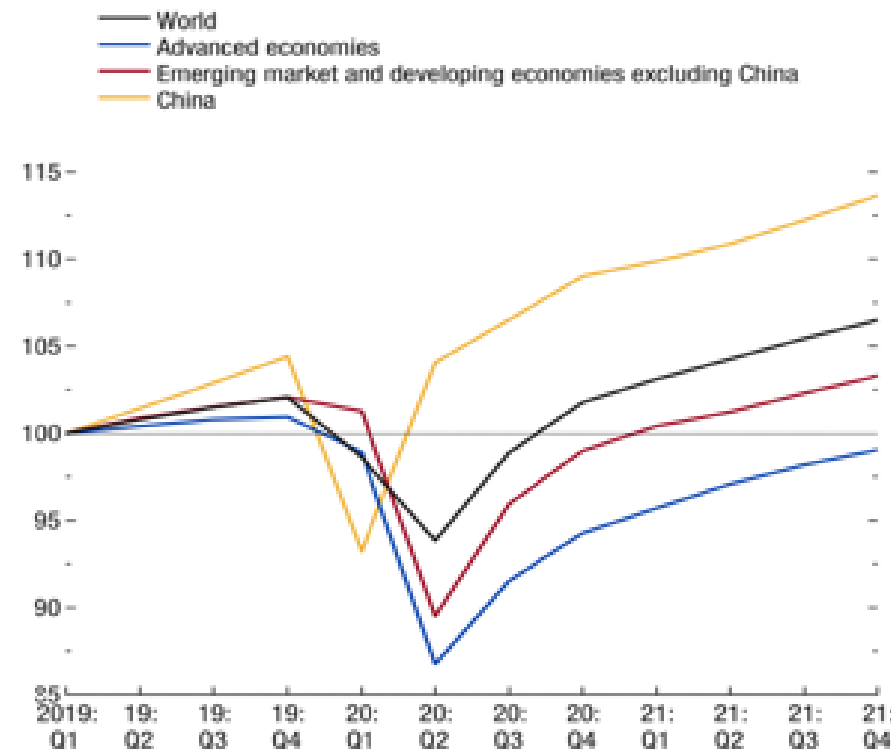
Uncharted water: uncertainty about the current global crisis and trajectory of recovery

Projected economic growth

(real GDP, annual percent change)	2019	2020	2021
World Output	2.9	-4.9	5.4
Advanced Economies	1.7	-8.0	4.8
United States	2.3	-8.0	4.5
Euro Area	1.3	-10.2	6.0
Germany	0.6	-7.8	5.4
France	1.5	-12.5	7.3
Italy	0.3	-12.8	6.3
Spain	2.0	-12.8	6.3
Japan	0.7	-5.8	2.4
United Kingdom	1.4	-10.2	6.3
Canada	1.7	-8.4	4.9
Other Advanced Economies	1.7	-4.8	4.2
Emerging Markets and Developing Economies	3.7	-3.0	5.9
Emerging and Developing Asia	5.5	-0.8	7.4
China	6.1	1.0	8.2
India	4.2	-4.5	6.0
ASEAN-5	4.9	-2.0	6.2
Emerging and Developing Europe	2.1	-5.8	4.3
Russia	1.3	-6.6	4.1

Source: IMF June 2020

V, U and L shapes of recovery?



Source: IMF, 2020

Possible impacts of COVID:

- Carbon emissions decline, but not expect a sustainable reduction after the pandemic. (UN, 2020)
- RE shows resilience, but at a slower pace, the momentum should be maintained and accelerated. (IEA, 2020)

Sustainable Post-COVID Recovery Policy

- Depends on the situation of economic recovery.
- Governments to put clean energy at the heart of their economic recovery plans in order to avoid the kind of sharp rebound in emissions that followed the 2008-2009 crisis. (The IEA Clean Energy Transitions Summit in July 2020.)
- Renewables have proven to be the most resilient energy sources throughout the current crisis. “This evidence should allow governments to take immediate investment decisions and policy responses to overcome the crisis.”
- Formulate and implement sustainable Post-COVID recovery policies.
 - Accelerating clean energy transitions by making investment in renewables a key part of stimulus packages and sustain the momentum of more electricity from renewables.
 - Investing in renewables, whose costs have continued to fall rapidly, can stimulate job creation and economic development. Leveraging local capacities and skills and create industries and jobs across the value chain.
 - Support emerging technologies such as energy storage and green-hydrogen, and deployment of key electrification and flexible technologies such as electric vehicles; new infrastructure development.
 - Public funded R&D on technology and innovation are critical, along with corporate efforts.
 - Policies and programs toward functional and effective international collaboration.

Assessment of Covid-19 impacts on renewable energy development

Approach

Investment on renewable capacity in APEC countries would depend on economic recovery (GDP growth), quick or delayed availability of vaccine and dealing with the virus if wave would continue requiring lockdown leading to home confinement of workforce, revitalization of the supply chain, prioritization set by the individual government on renewables and so on.

Based on the available projections and studies from the international organizations and APEC governments on economic recovery and development prioritization, expected dealing with COVID situation, the assessment needs to develop scenarios with drivers include expected GDP growth, energy demand recovery etc. and assess investment on renewable capacity in these scenarios in selected APEC economies .

- Stated Policies Scenario
- Delayed Recovery Scenario
- Sustainable Development Scenario



THANK YOU!

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