



# Resilience in Energy: Collective action to weather the storm

**KPMG Global Energy Institute**

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# Climate change, decarbonization, and the renewable energy sector

A Global Perspective



# Climate change and decarbonization

The decarbonization agenda has gone past the point of no return and has become a dominant feature of the global landscape for corporates



Corporate decarbonization across all sectors is accelerating quickly pre and post new reality



Focus on net zero objectives at a national, municipal and corporate level e.g. EU Stimulus Plan



Wide range of decarbonization solutions being adopted:

- Renewable Energy
- Energy efficiency
- Circular economy
- Supply chain
- Carbon reduction using technology solutions
- Carbon offsetting
- Internal corporate actions



Greater focus on decarbonization of heat and transport



Innovation agenda assuming much greater importance to help achieve 2030 targets

# COVID-19 is the dress rehearsal for climate change

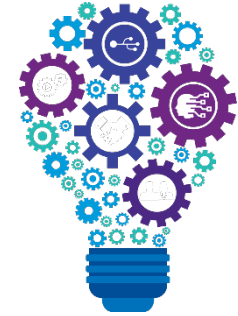
**The lessons learned from the COVID-19 could serve to strengthen the momentum towards a zero carbon world...**

- The similarities between COVID-19 and climate change (e.g. major public health issue, the need for pre-emptive action and global coordination and the threat to our financial system) will not be lost on governments and institutions such as the EU and UN, which may therefore result in even more ambitious actions to achieve a zero carbon future.
- Corporates, exposed to the financial implications of COVID-19, will be all too aware of the climate-related financial risks and will therefore be at the forefront of driving a renewed push to develop and implement decarbonization strategies, a by-product of which will likely be a further increase in global renewables capacity.



# Polling Question 1

**Do you think that COVID-19 could serve to strengthen the momentum towards a zero carbon world?**



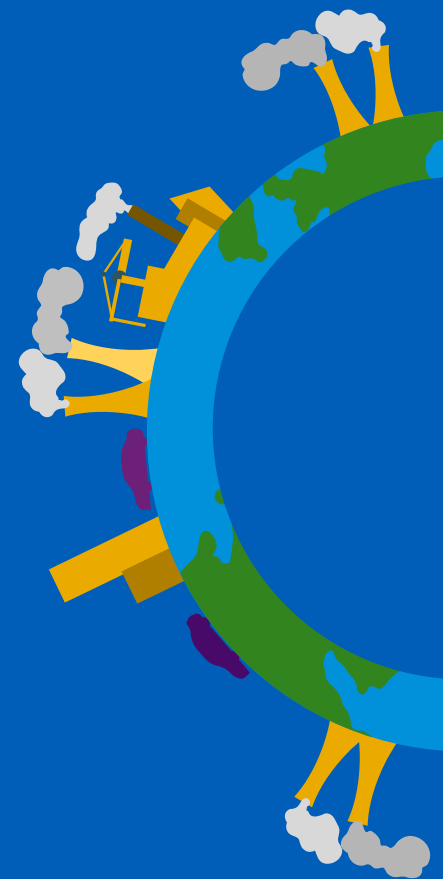
- A.) Not at all
- B.) No connection between the two issues
- C.) Will have some impact but not significant
- D.) Will result in much greater focus on the climate agenda in the future

# Climate change and decarbonization

## EU Green Deal/EU Green Recovery

- 1 Support for hydrogen economy – in July 2020, the European Commission released its strategic roadmap for the development of a European hydrogen economy
- 2 15GW renewable energy support schemes at a cost of €25billion
- 3 Make the EU Block carbon neutral by 2050
- 4 Focus on sustainable manufacturing and consumption of goods
- 5 Carbon tax issues assuming greater importance

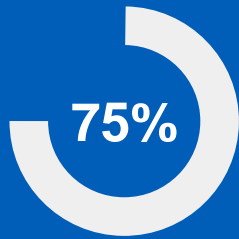
**Similar actions being taken by other governments including UK, France, Germany, Australia and Ireland.**





# Climate change and decarbonization

Climate risk represents a real threat to the global economy...



of CEOs have identified it as one of their biggest risks over the next 5 years

It claimed all top 5 spots in the WEF 2020 Global risk report

...and it's coming at us

**£20** trillion of assets could be wiped out if we do not prepare



Source: Carbon Disclosure Project, World Economic Forum



# Climate change and decarbonization

## Focus on renewable energy sector

Renewable energy continues to thrive notwithstanding Covid-19 and developers and investors are very confident that the sector will grow significantly over the next 10 years. This is due to factors such as the global regulatory landscape, falling LCOE and new innovation. Some highlights include:



Offshore wind sector (see next slide)



Corporate power purchase agreements continue to be implemented – largest CPPA announced recently involving an offshore windfarm developed by Orsted in Taiwan



Hydrogen as a storage solution and as a fuel solution emerging quickly due to regulatory support and falling cost. Focus on both green and blue hydrogen solutions



Greater emphasis on bringing renewable energy projects to some emerging markets



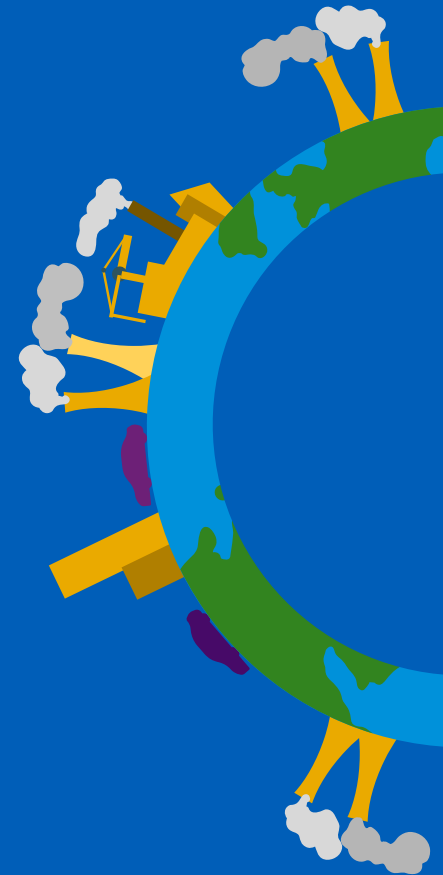
While overall energy demand may decrease, renewables share in the overall energy mix is expected to increase due to various factors including the decarbonization of transport



# Climate change and decarbonization

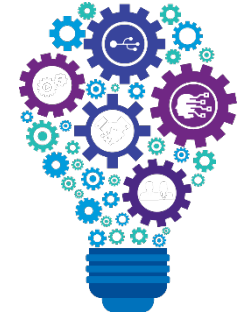
## Offshore wind – the big success story in renewables

- 1 Offshore wind continues to expand into new markets globally – US, South Korea, Taiwan, Vietnam, Japan, Poland, Ireland, France
- 2 Significant cost reductions being achieved through technology improvements – in particular turbine sizes now moving to 12/15 MW. We will eventually see 25 MW turbines.
- 3 Largest ever renewable corporate PPA signed in Taiwan and it was for an offshore project with Orsted ( 920 MWs)
- 4 Floating offshore wind is becoming a reality quickly and this will allow for larger projects into deeper waters. Demonstration projects under way in Western Europe.
- 5 Emerging as an attractive investment proposition for financial investors as well as utilities now that the risks are better understood



# Polling Question 2

**Which alternative source of energy do you believe has the most long-term promise to scale and meet demand to offset crude consumption?**



- A.) Solar
- B.) Onshore wind
- C.) Offshore wind
- D.) Hydrogen
- E.) Carbon Capture and Storage
- F.) Biomass

# Climate change and decarbonization

## The global investment environment for low carbon projects



**Renewable energy assets remain a highly attractive investment opportunity notwithstanding falling rates of return**

**More sophisticated investors want to go beyond renewables and are seeking new sustainable investment opportunities in areas such as:**

- Hydrogen
- Mobility
- Storage and grid flexibility solutions
- Offshore wind

**EU Action Plan on Sustainable Finance**

- Taxonomy developed to define sustainable business activities
- Measures designed to re-orientate the capital markets into sustainable business activities
- These initiatives will go global and are being copied by other countries
- Network for greening of the financial system (central banks)

“Achieving net zero emissions will require a whole economy transition – every company, every bank, every insurer and investor will have to adjust their business models. This could turn an existential risk into the greatest commercial opportunity of our time.”

– Mark Carney



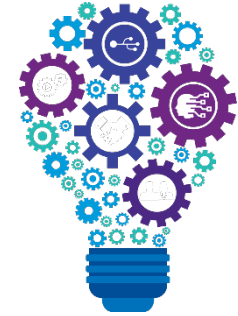
Source: *Climate Home News Web site, Politics section, February 2, 2020*



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# Polling Question 3

**When do you think is the earliest year when more than 50% of all companies will have achieved the goal of net zero carbon reduction?**



- A.) 2030
- B.) 2040
- C.) 2045
- D.) 2050
- E.) 2060
- F.) Never



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