Malaysia speaker: **Mr. Austin Lim**

Working Experience

- Green Building Consultant, IEN Consultants Sdn Bhd
- Certified GreenRE Manager
- Area of Interest: Solar photovoltaic & thermal design, passive building design, building thermal transfer, etc.
- LEED (US), GBI (Malaysia), GreenRE (Malaysia) & Green Mark (Singapore)

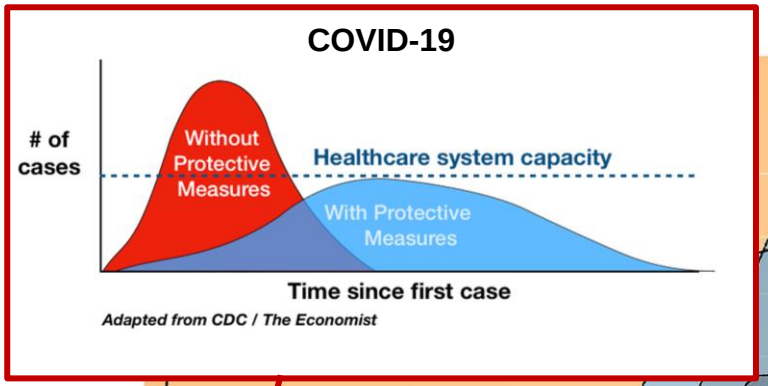
Education background

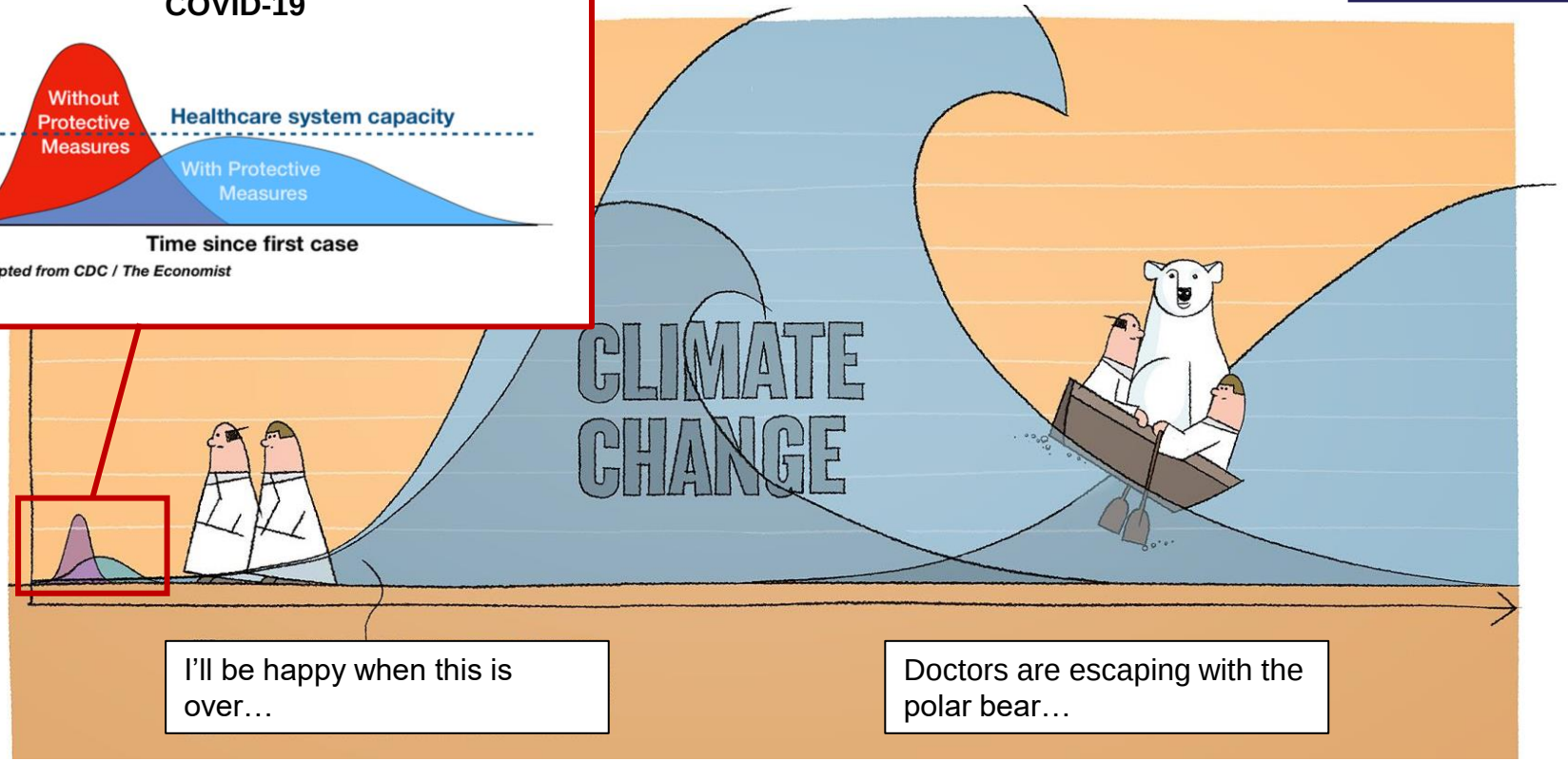
- University Malaya, Master's degree (Renewable Energy)
- University Malaysia Pahang, Bachelor's degree (Energy & Environmental Engineering Technology)

Transition to Renewable Energy

AUSTIN LIM

WHAT WILL HAPPEN NEXT?





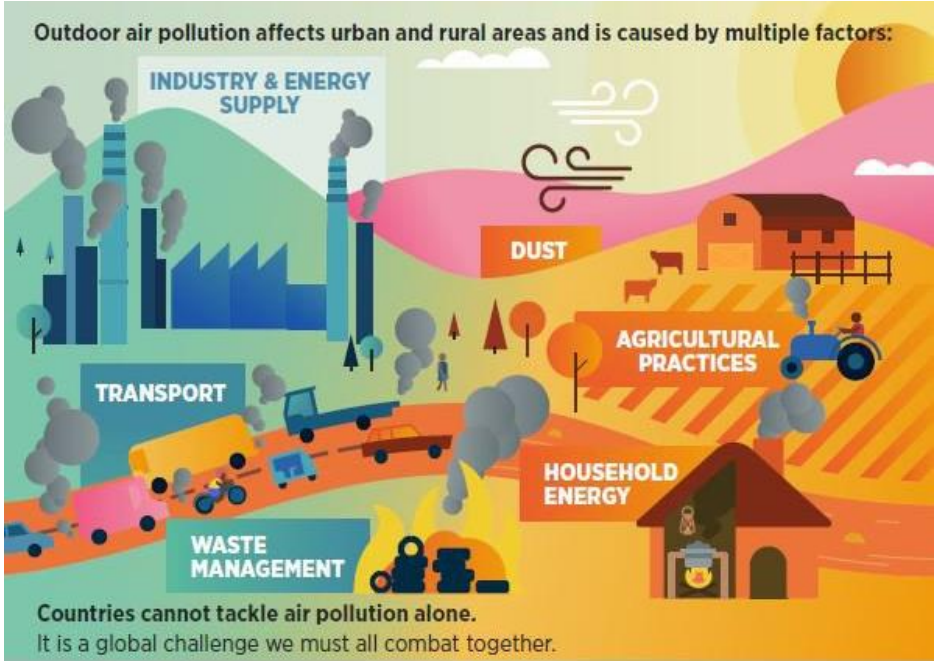
Are we able to handle the curve?

How about this?
Are you ready for bigger trouble?

AIR POLLUTION VS COVID-19 & CLIMATE CHANGE

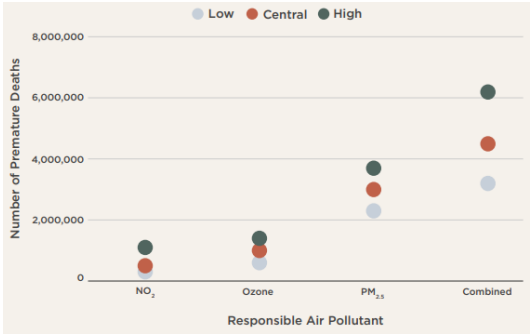
According to researchers of Harvard University,

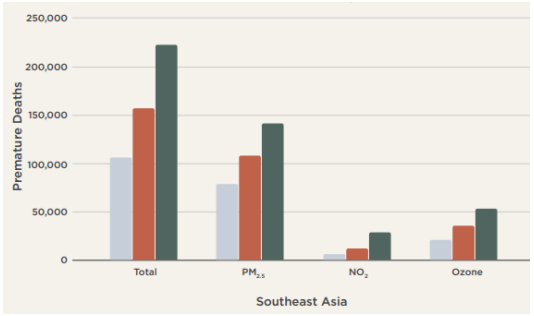
- Air pollution linked to COVID-19 mortality
- 1 μg/m^3 increase in $PM_{2.5}$ is associated with an 8% increase in COVID-19 death rates



Source: World Health Organization (WHO)

Estimated Number of Premature Deaths in 2018



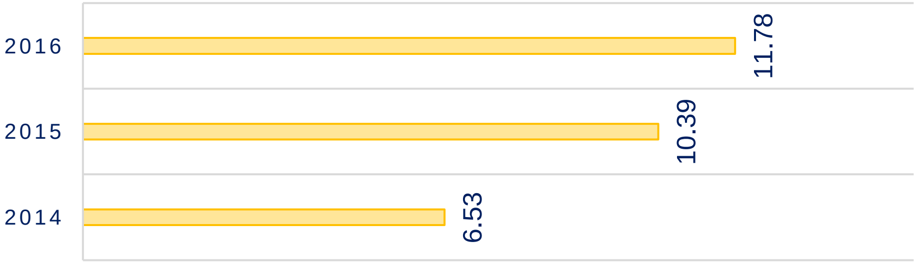


Estimated **4 million premature deaths** each year contributed to cardiovascular disease, respiratory disease & lung cancer through exposure to $PM_{2.5}$.

(Source: Greenpeace)

TRUE COST OF FOSSIL FUEL

MALAYSIA FOSSIL FUEL SUBSIDIES IN BILLION U.S. DOLLARS



Source: International Energy Agency


10 ecowatch

Hidden costs of fossil fuels

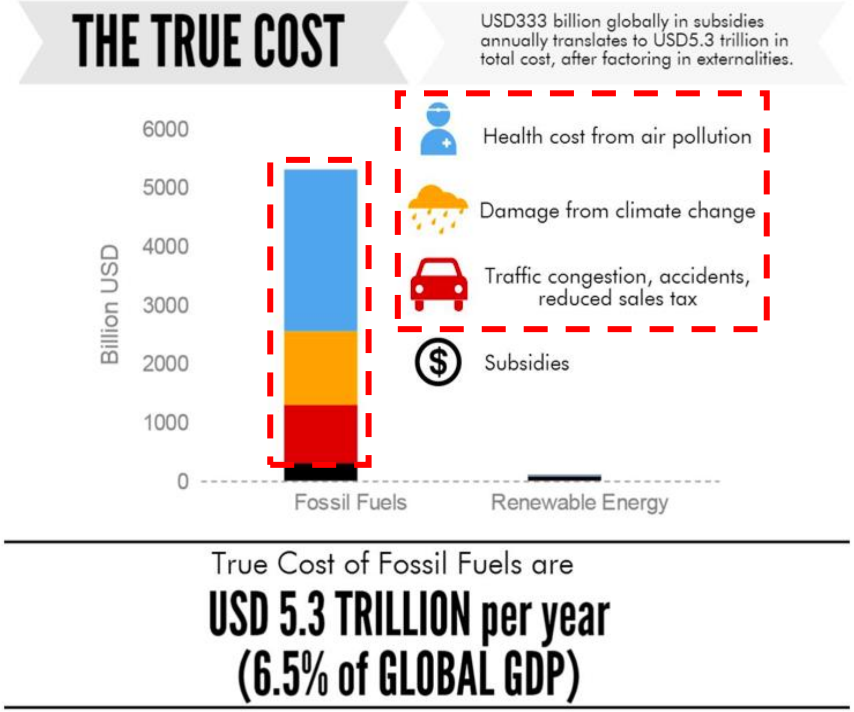
By GREGERS REIMANN

New studies shed light on the substantial external costs of fossil fuels, arising mostly from air pollution.

The real price: Cost of **damage to health & environment** is not reflected in current price of fossil fuel.

An IMF study from 2013 showed that annual cost to Malaysian society from **domestic fossil fuel use is RM 88 billion**, which makes the **RM 800 million cost in severe haze** years look miniscule in comparison.

(Source: IEN's article in The Star Malaysia)



Source: International Monetary Fund (IMF)

NO ONE IS PAYING

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LEVELING THE PLAYING FIELD

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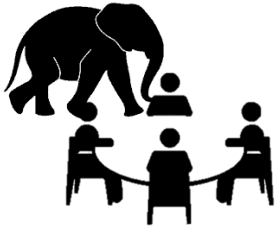
Energy pricing

"I have no comment on it."
"Let's move on to next topic."
"I think we have an **elephant in the room**."



Fossil fuels are subsidized & underpriced

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GLOBAL COAL POWER PLANT STATUS

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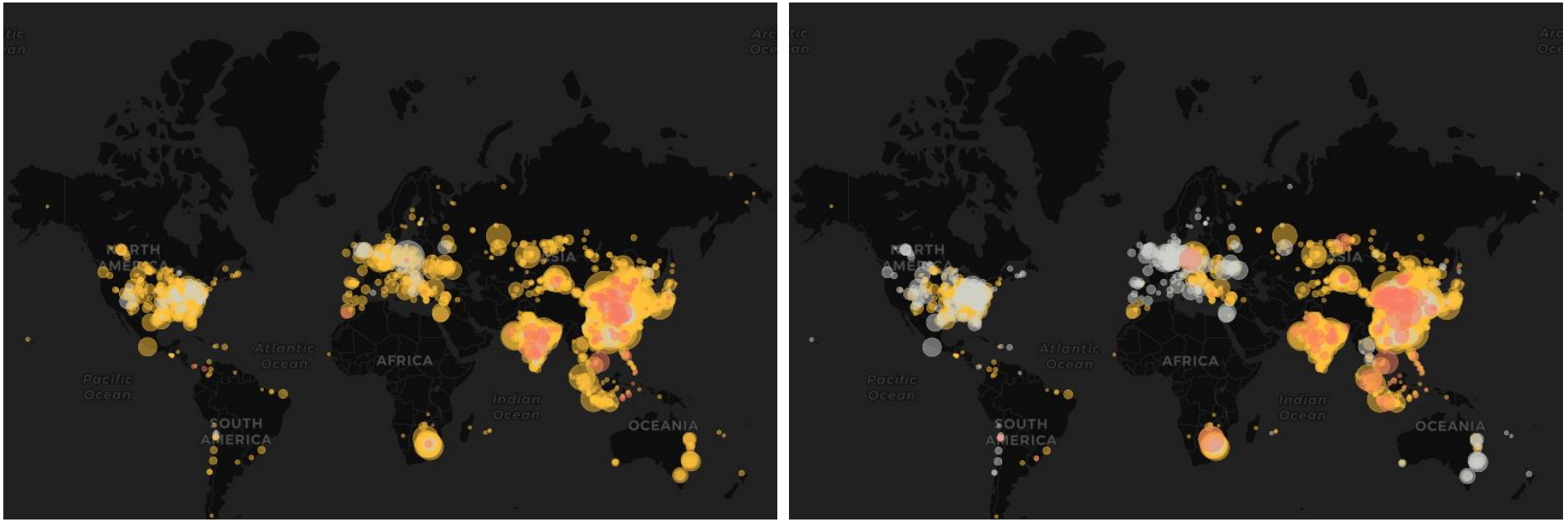
2018

Closing Operating New Under construction

2019



Source: Carbon Brief

Belgium quits coal power with Langerlo plant closure

Austria's last coal power plant shuts down

Sweden Shuts Down Its Last Coal Plant Two Years Early

Portugal ends coal burning two years ahead of schedule

U.S. coal-fired power plants closing fast despite Trump's pledge of support for industry

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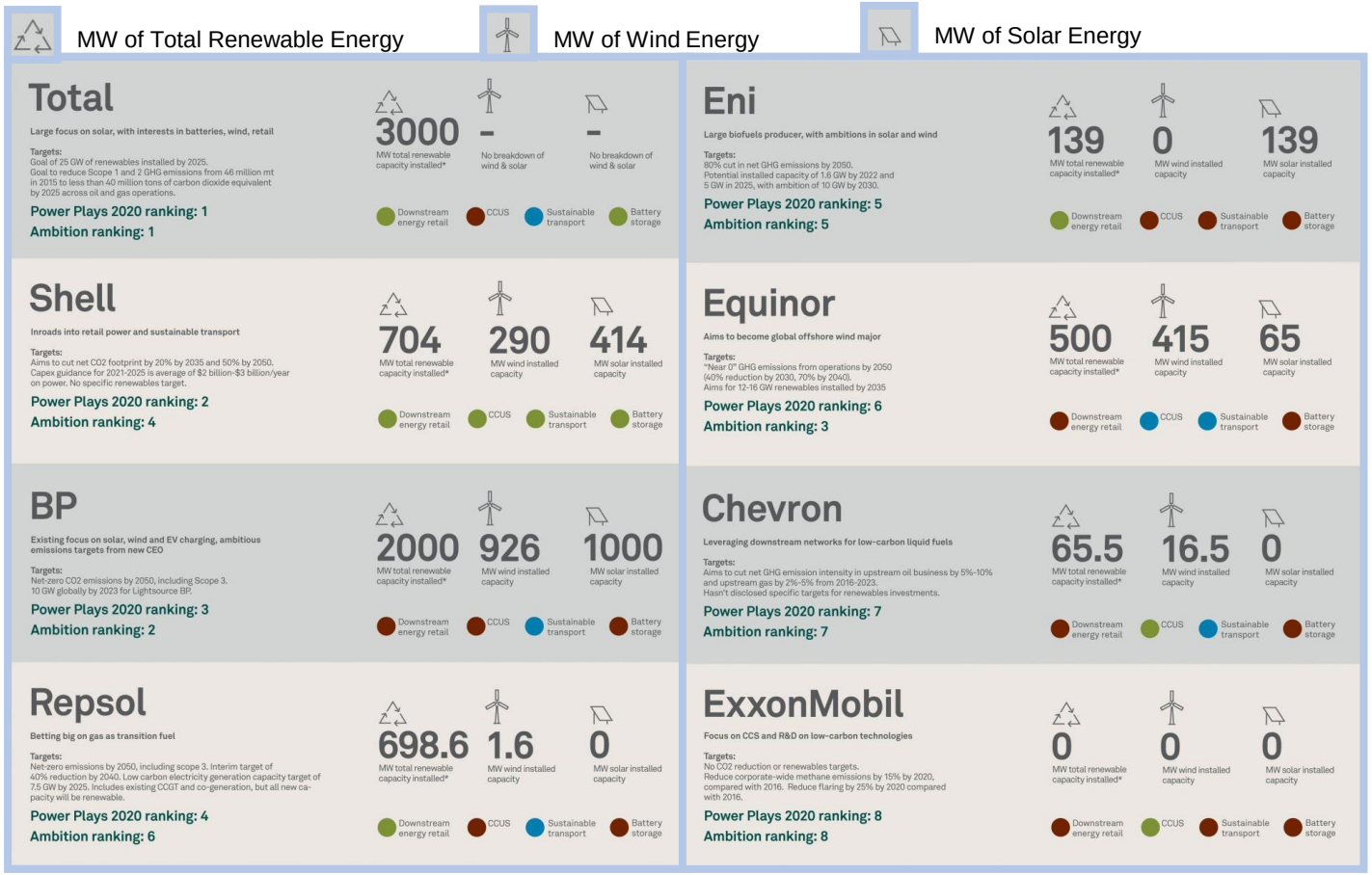
ENERGY MAJORS' TRANSITION STRATEGIES



Source: S&P Global Platts Power Plays Database

Power Plays Ranking

- Existing footprint in renewable power generation
- Downstream energy retail
- Carbon capture, utilization & storage (CCUS)
- Sustainable transport
- Battery storage

Ambition Ranking

- Targets for scale of renewable power capacity
- Speed of further development
- CO_2 emissions target

IMPACT OF COVID-19 ON RENEWABLE ENERGY GROWTH

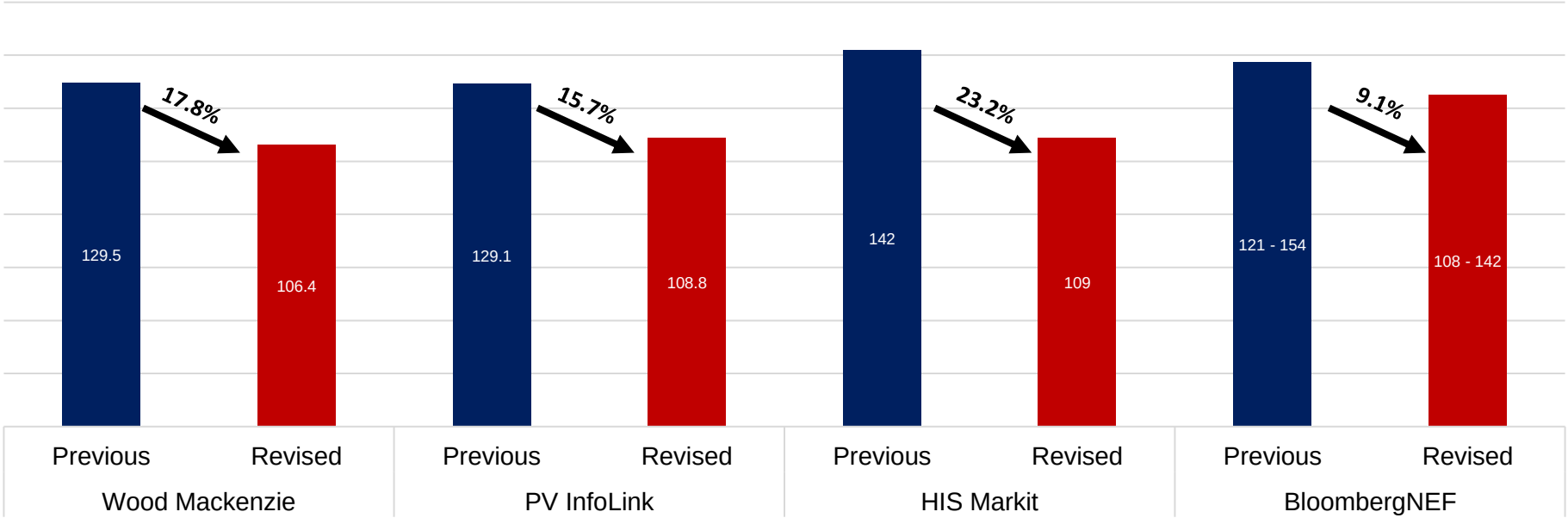
- Project delays & cancellations
- Cutback in capital spending
- Complete or partial lockdowns - trigger supply chain disruption & commissioning works
- Restrictions on business activities, travel & border – Reduce energy demand in transport & industry

Country	Policy change	Impact year
Austria	Extension of the construction period for wind farms by 6 months	2020-2021
Denmark	3-5-month extension of commissioning deadlines for household wind turbines; 2-month extension for subsidy applications for biogas projects	2020
France	Extension of commissioning deadlines by 2-6 months	2020-2021
Germany	Federal network agency announced flexibility in project commissioning for previously auctioned projects	2020-2021
Greece	6-month extension for projects due to come online in mid-2020	2020-2021
India	30-day extension of commissioning deadlines for renewable projects after the lockdown	2020-2021
United Kingdom	6-month extension of the FIT completion deadline for community solar projects	2020
United States	Extension of PTC/ITC safe harbour provision proposal	2020-2021

Source: International Energy Agency

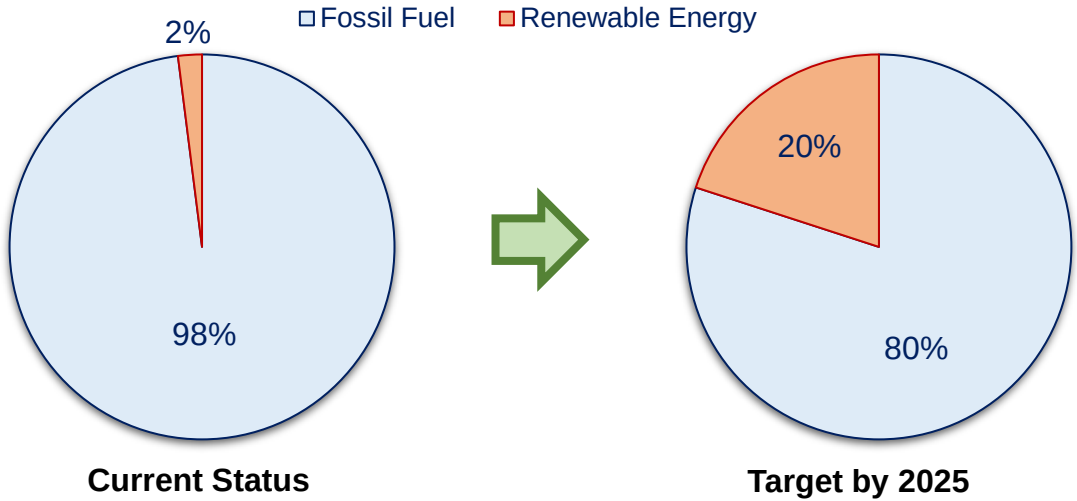
IMPACT OF COVID-19 ON GLOBAL SOLAR GROWTH

Latest Solar Market Estimates of Leading Analyst (GW)



Source: Taiyang News

CAPACITY MIX TARGET



Think Deeply, Today Onwards

- Stop Fossil Fuel Subsidy programme?
- Less road congestion?
- More developed public transit?
- Reduce carbon emissions?
- More fund for economic stimulus package & RE growth?
- Improve rural electrification?

GREEN WAVE IS COMING

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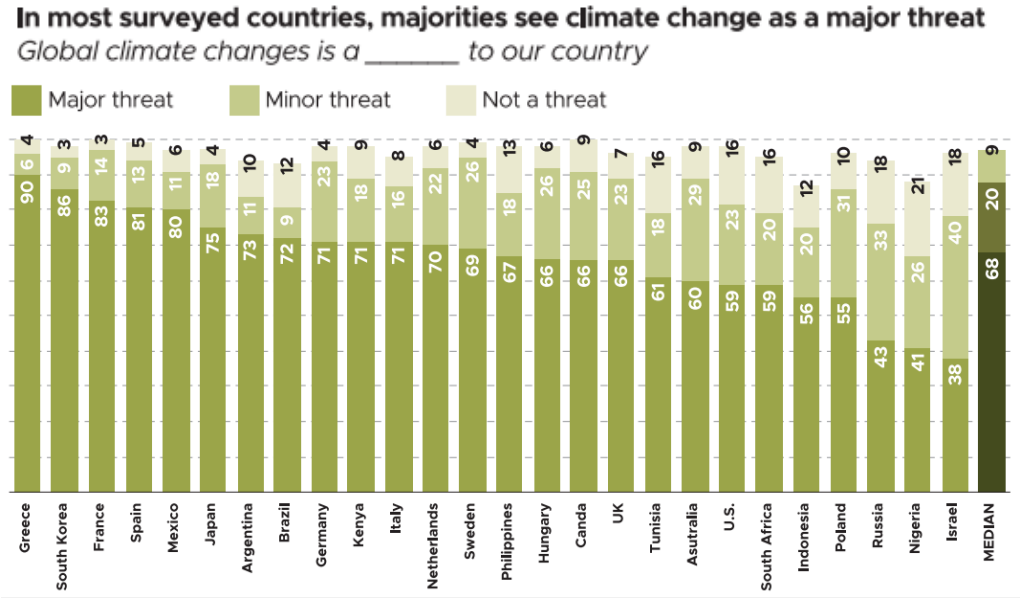

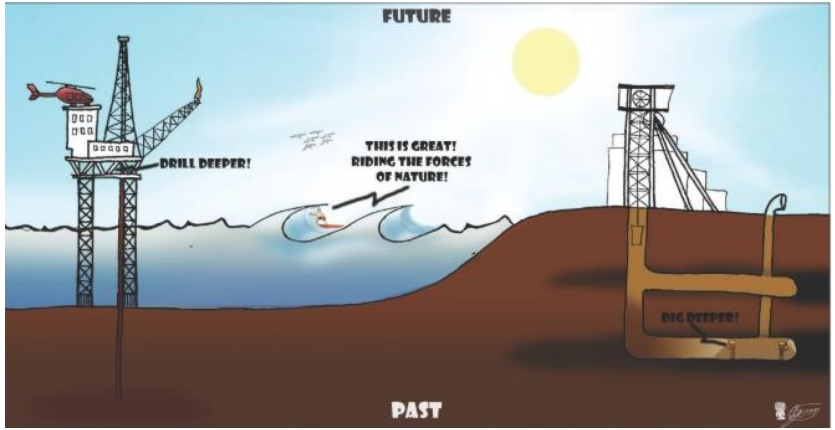

The energy solutions of tomorrow are no longer found below the ground. Time to utilize renewable energy like wind and sun – and to ride the **Green Wave**!

Source: IEN's article in Green Plus Magazine

*Climate change is an "**existential threat**" to humanity (António Guterres, UN Secretary-General, Viennea, 2018)*

*The climate crisis is our "**third world war** and needs a bold response because we **cannot afford not to act**, as our **civilization is at stake**" (Joseph Stiglitz, Chief Economist of the World Bank, 2019)*

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Thank you.

Questions?

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