

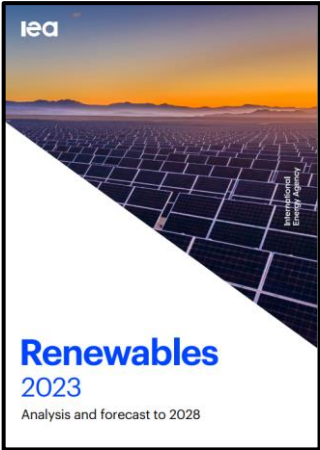
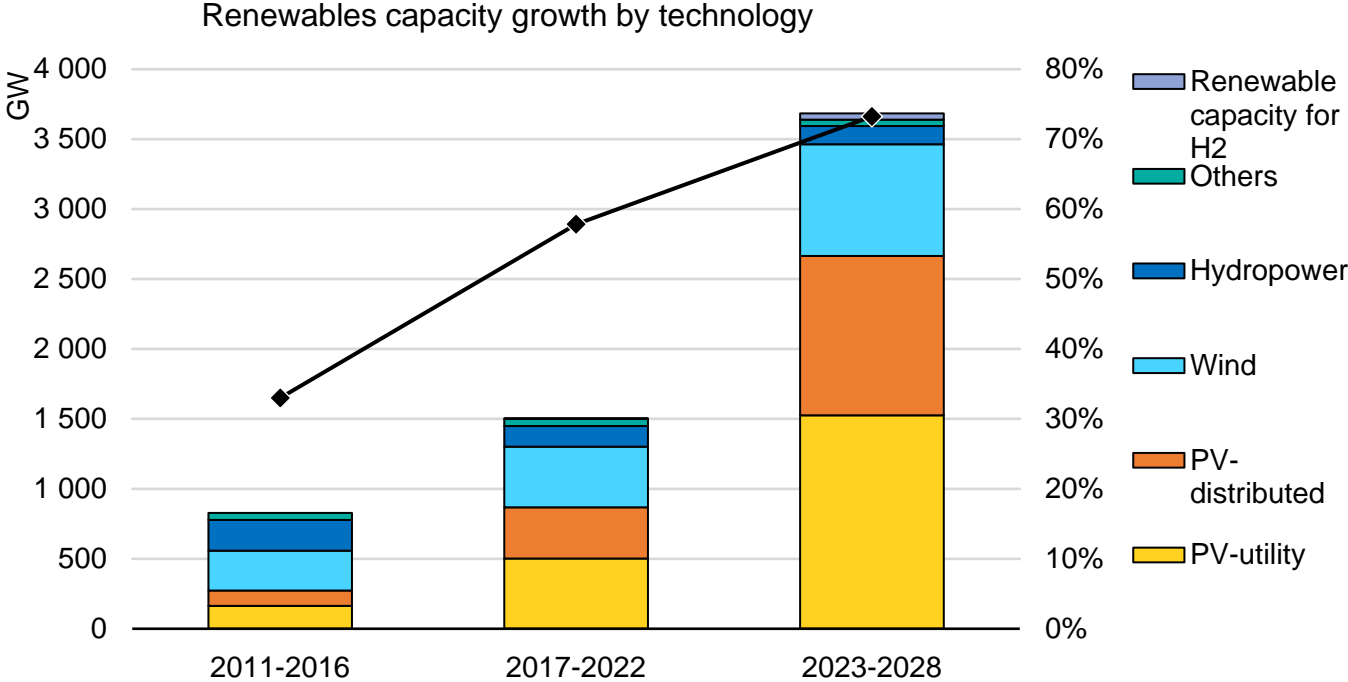


# Tracking Progress towards Tripling Renewable Capacity Pledge by 2030

Dr. Paolo Frankl, Head Renewable Energy Division IEA

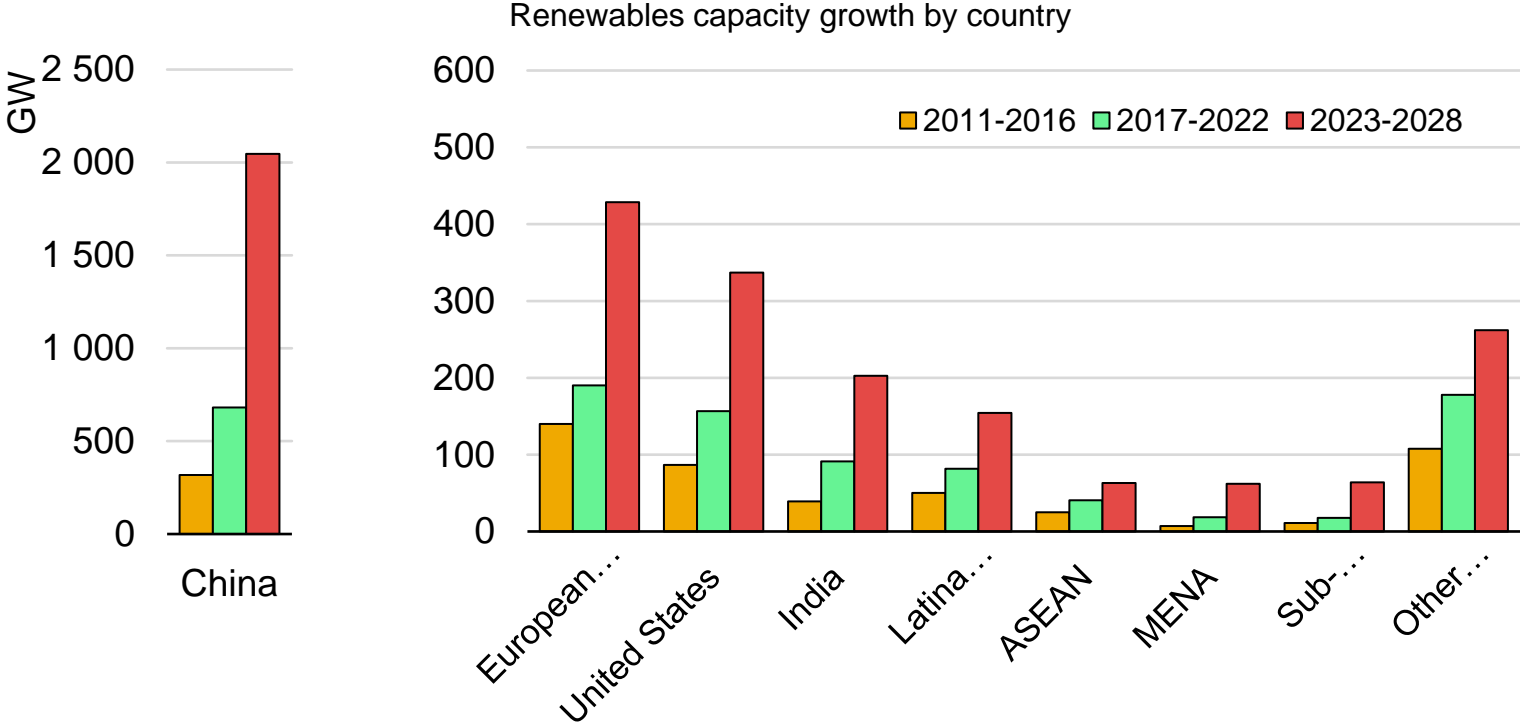
REI event Decarbonisation Scenario for Japan  
21<sup>st</sup> June 2024

# Unprecedented expansion of renewables driven by solar PV



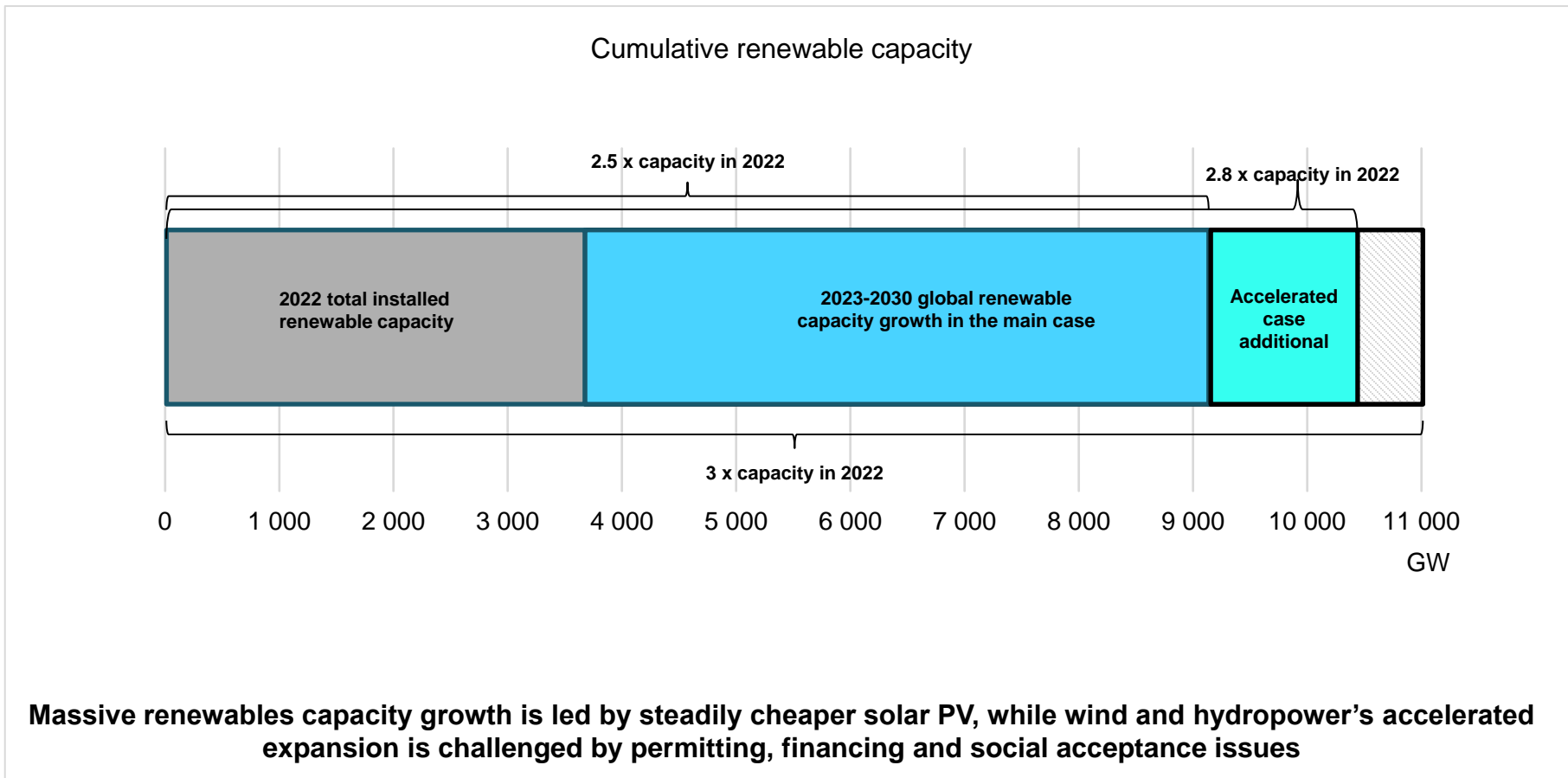
**Declining prices and faster adaption of rooftop systems push PV forecast up. Wind forecast outside of China is less optimistic due to higher costs and slow permitting. RE capacity for hydrogen growth only account for 7% of announced projects**

# Policies accelerate renewable deployment everywhere



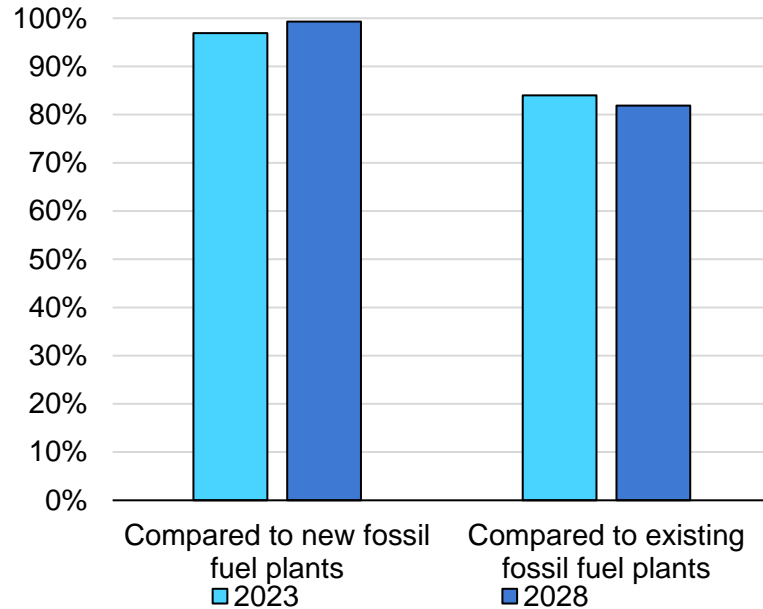
**China, EU, US and India account for almost 85% of global expansion but renewables expansion rapidly catches up also in other parts of the world. For instance, growth in MENA and Sub-Saharan Africa matching ASEAN.**

# Tripling of RE capacity by 2030 is within reach but more effort is needed

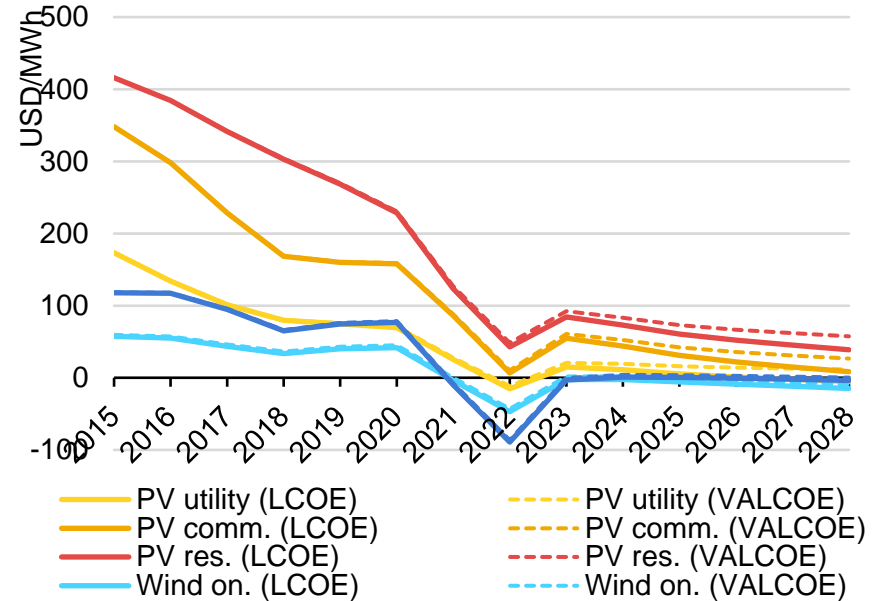


# Wind and PV are the cheapest electricity generators almost everywhere

Share of new PV and onshore wind generation at lower cost than generation from new or existing fossil fuel plants, 2023-2028



Implied support for PV and wind generation per MWh, 2015-2028



**Generation from PV and wind is increasingly competitive with fossil fuels. In 2020-2023, average global support for VRE generation decreased from 70 to 20 USD/MWh and is expected to reach close to zero in 2028.**

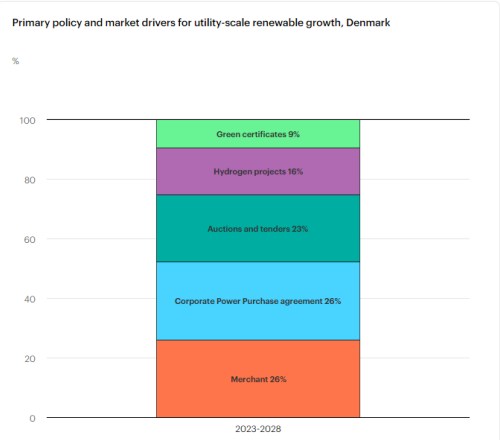
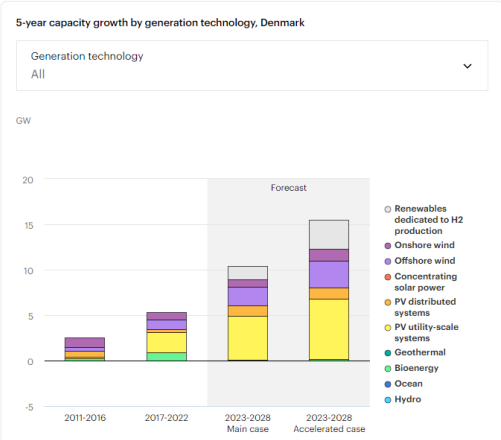
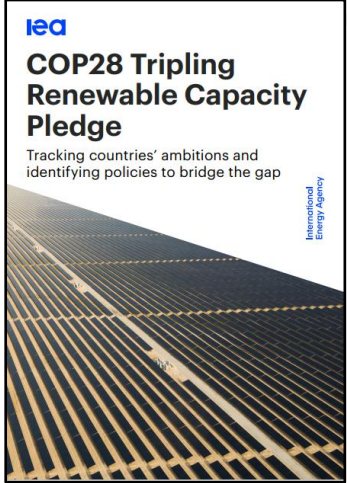
## Renewable Energy Progress Tracker

Explore electricity, heat and transport data from Renewables 2023

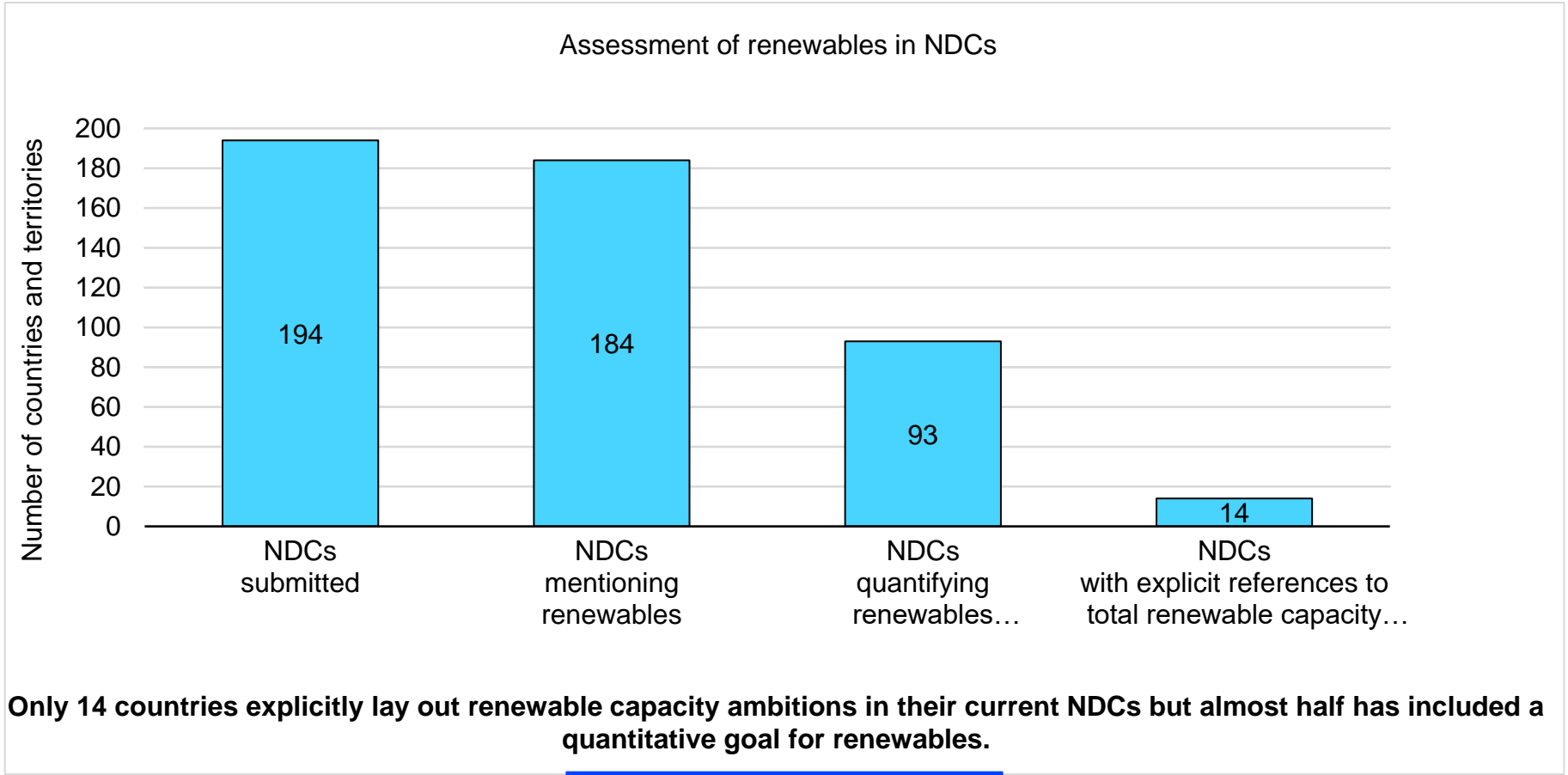
[↓Link available↓  
Renewable Energy Progress Tracker – Data Tools - IEA](#)

Country/region  
**Denmark**

Renewable electricity Transport biofuels Renewable heat

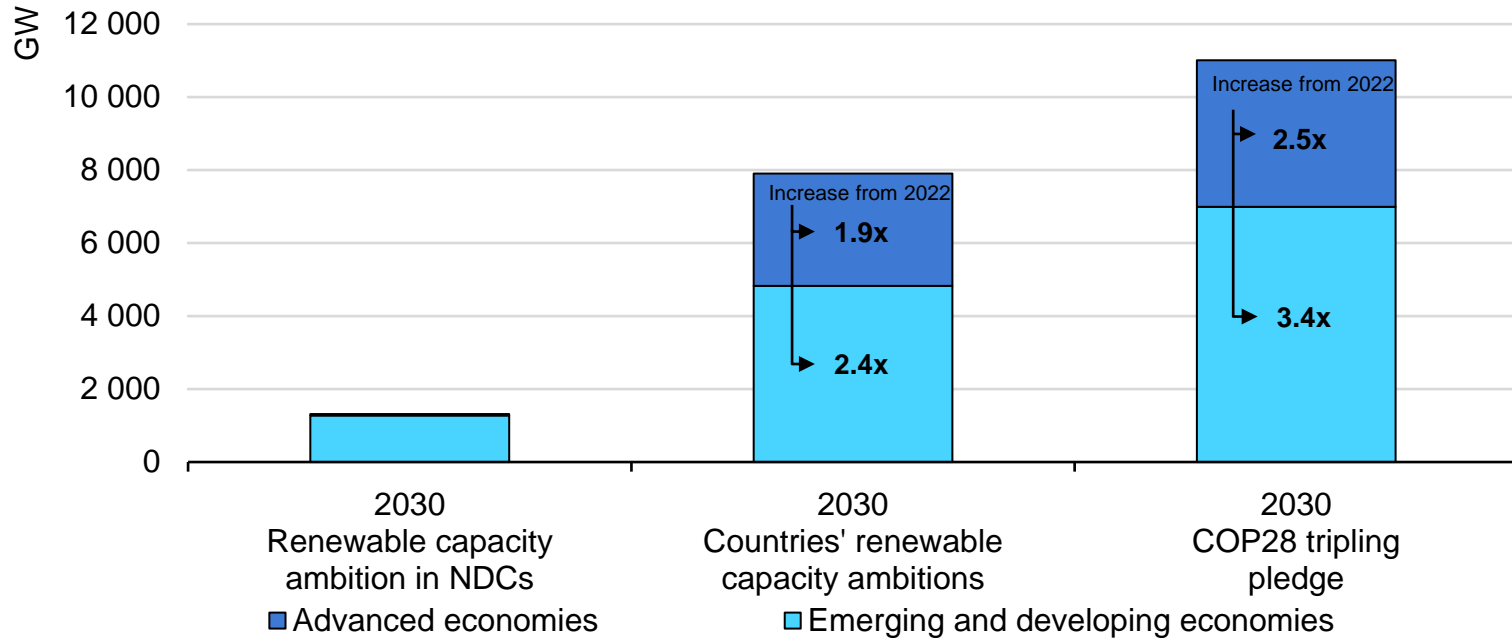


# Countries have a major opportunity to set stronger plans for tripling



# Countries' ambitions exceed NDCs but ambition gap remains

Global renewable electricity capacity ambitions for 2030

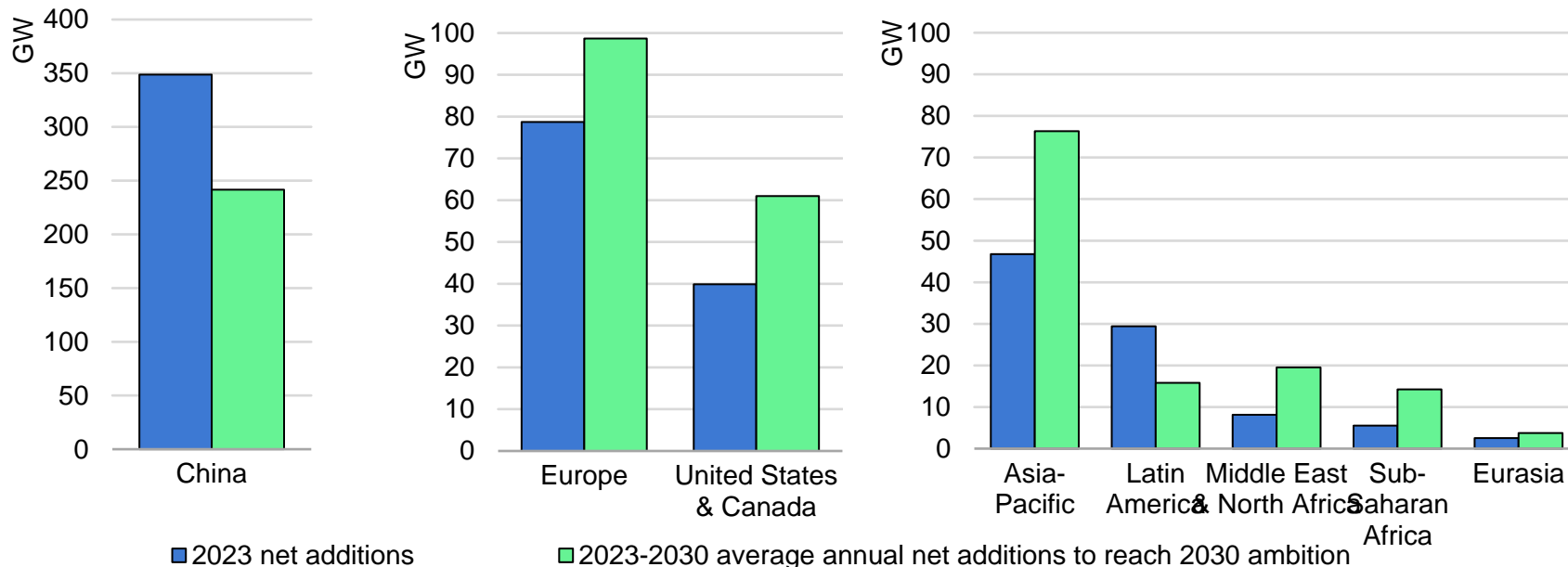


**Permitting and grid integration are key challenges hampering faster expansion in advanced economies. In EMDEs, addressing policy uncertainties and derisking financing would be critical**



# Most countries need to accelerate to close the implementation gap

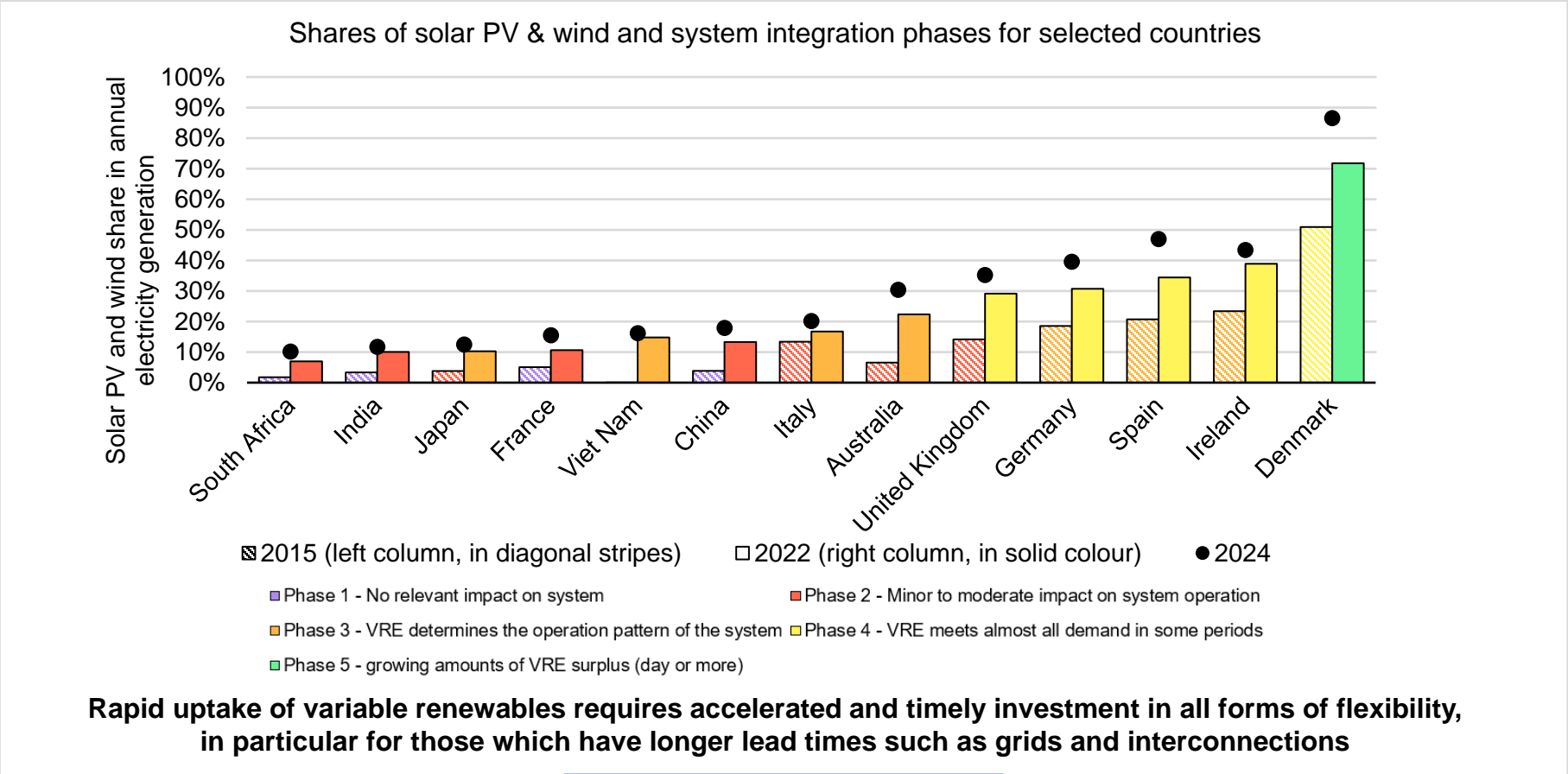
Renewable capacity additions in 2022 and 2023 vs what is needed to realise 2030 ambitions



**Nearly 50 countries are on track to reach or surpass their current plans. Permitting & grid integration are key challenges in advanced economies. In EMDEs, addressing policy uncertainties and derisking financing would be critical**

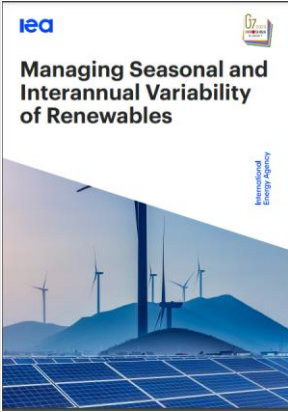
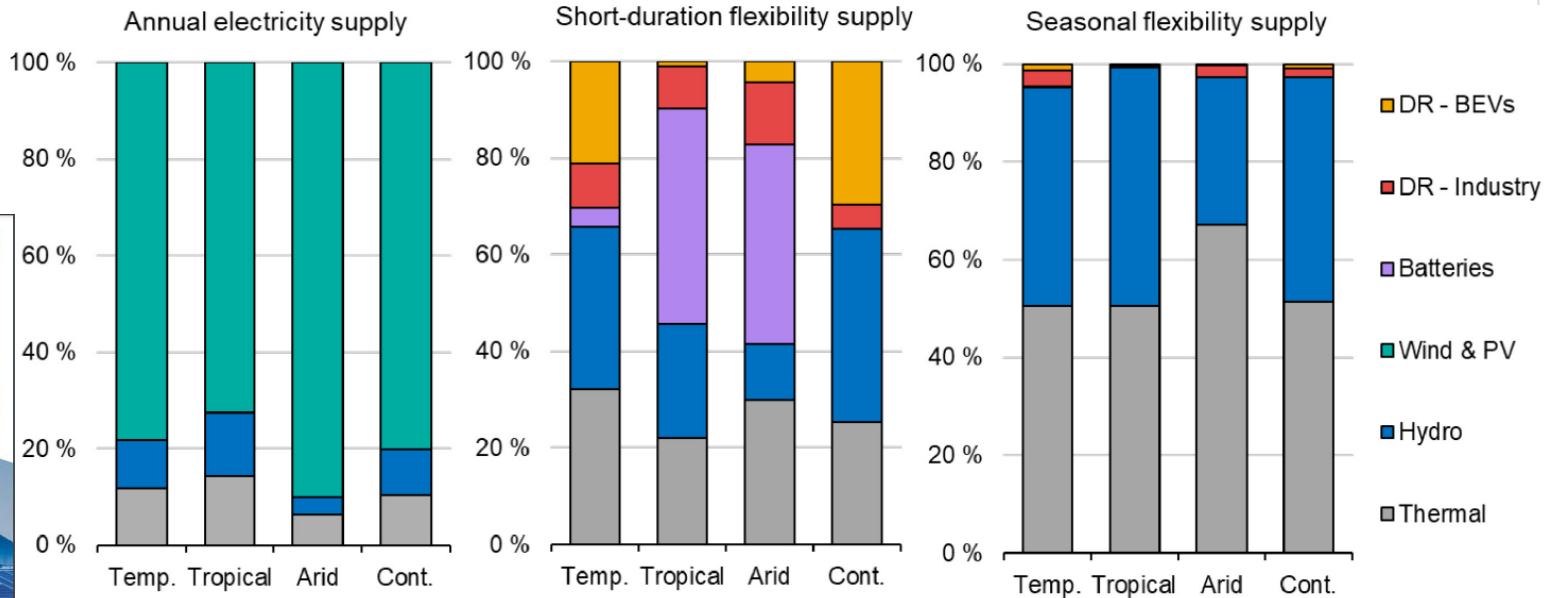
# Opportunities and challenges ahead

# Secure & cost-effective system integration of wind and PV is crucial



# Thermal plants are a key source of flexibility in high-VRE systems

Electricity and flexibility supply by technology in different climatic conditions.

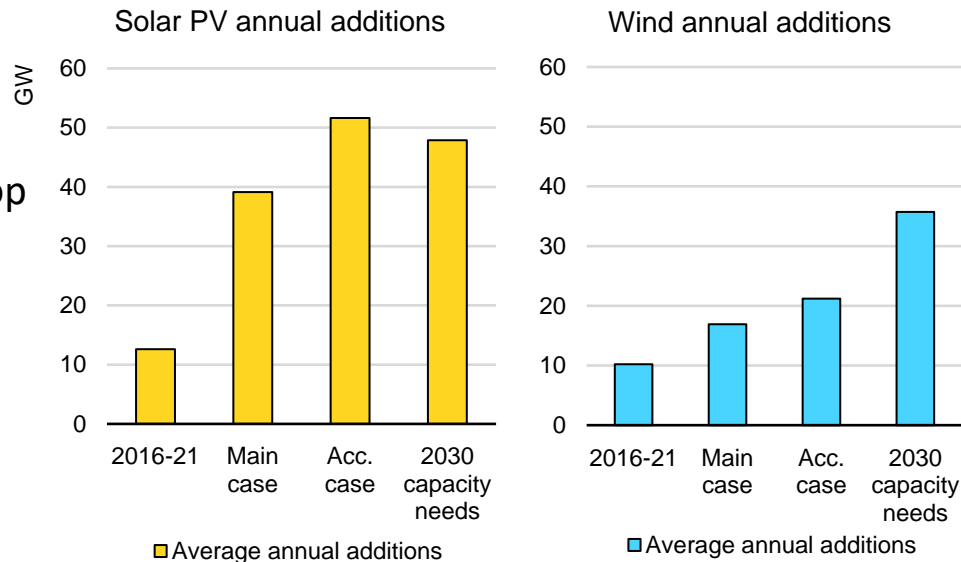


**At 70%-90% share of VRE from annual generation, thermal plants cover half to two-thirds of seasonal flexibility supply with hydropower covering most of the remaining needs.**

# Faster permitting is key to significantly accelerate RE deployment

- Obtaining a permit can take more than 4 years for ground-mounted solar projects and up to 9 years for wind in some EU countries
- EC Recommendation on Permitting (May) and Council Regulation to speed up permits (Dec)
- Top priority policy actions identified at workshop
  - Coordinated approach among administrative authorities, defining responsibility & deadlines
  - Secure adequate human resources
  - Proper identification of priority areas for renewable energy projects
  - Encourage public involvement to address social acceptance
  - Revisit the threshold of renewable energy projects subject to environmental impact assessment (EIA)

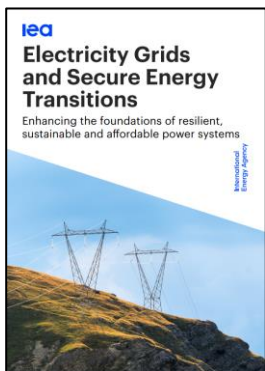
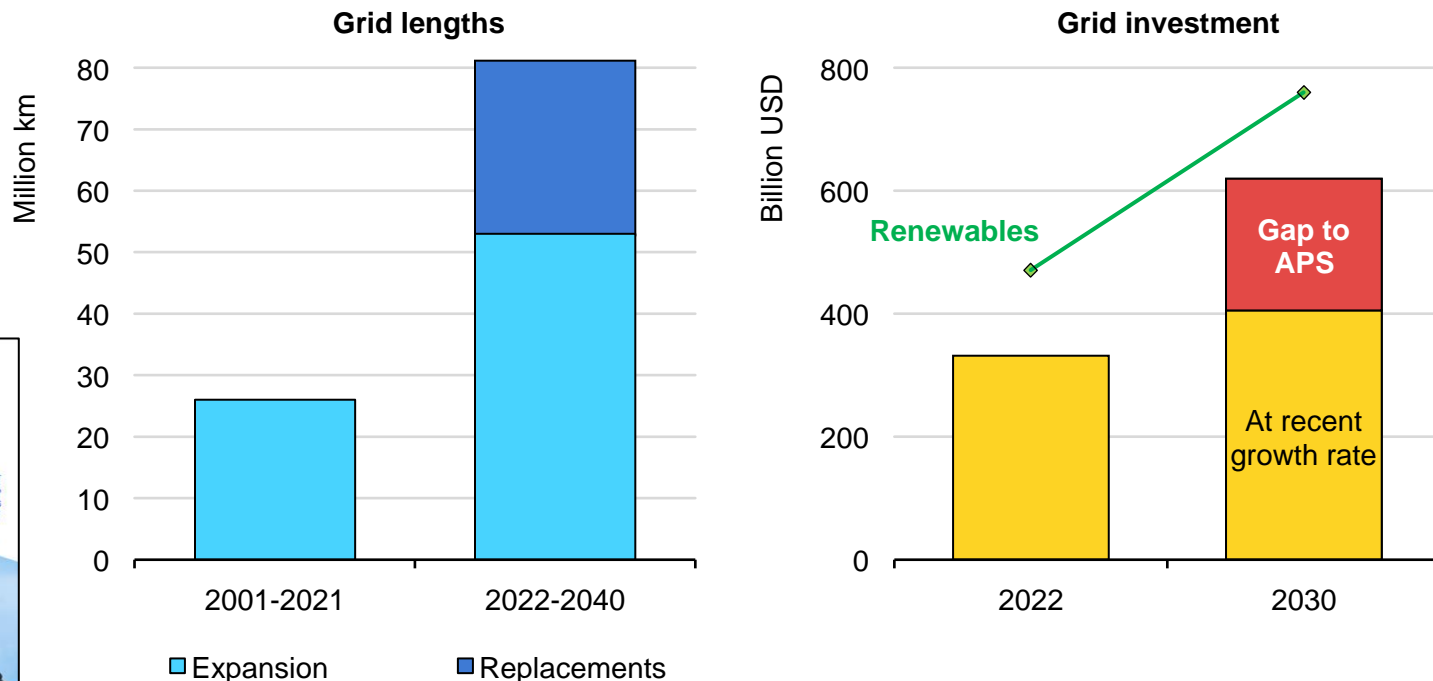
European Union solar PV and wind capacity average annual additions 2016-21, forecast 2022-27, vs. 2030 REPowerEU target needs



**Annual renewable capacity additions in the EU must grow at least 10 GW per year to reach 2030 REPowerEU targets. Facilitating permitting for all technologies will be crucial**

# Grid development needs to accelerate to keep up with transitions

### Grid development in the Announced Pledges Scenario



**Over the next two decades, 80 million km need to be added or replaced, as much as the global grid length today, calling for grid investment to double by 2030, in step with renewables, raising material needs.**