

SOLARVEST 

ENERGIZING THE NEXT

Global Energy Transition: The New Energy Reality

Global electricity demand continues to rise due to:

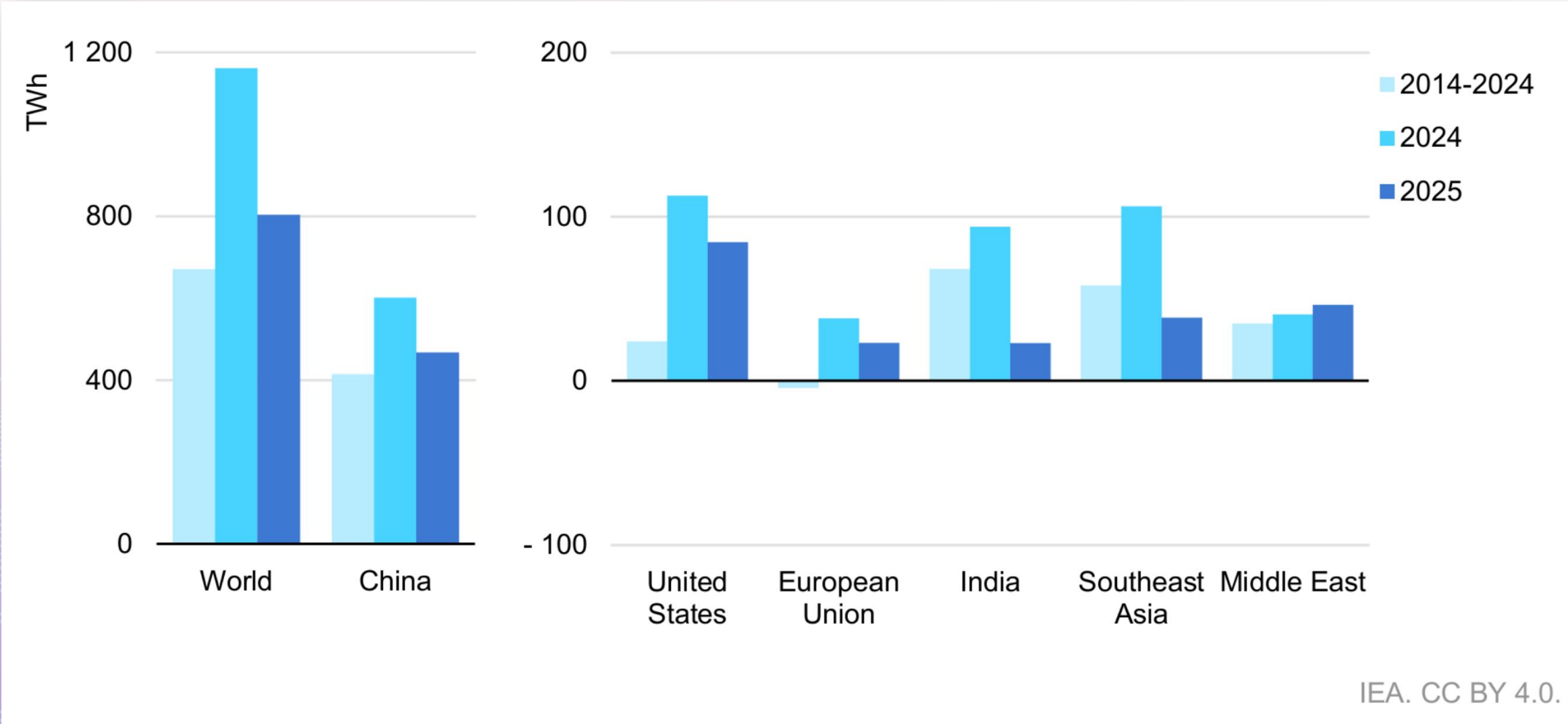
- Electrification
- Data centres
- AI
- EVs
- Industrial decarbonisation

At the same time:

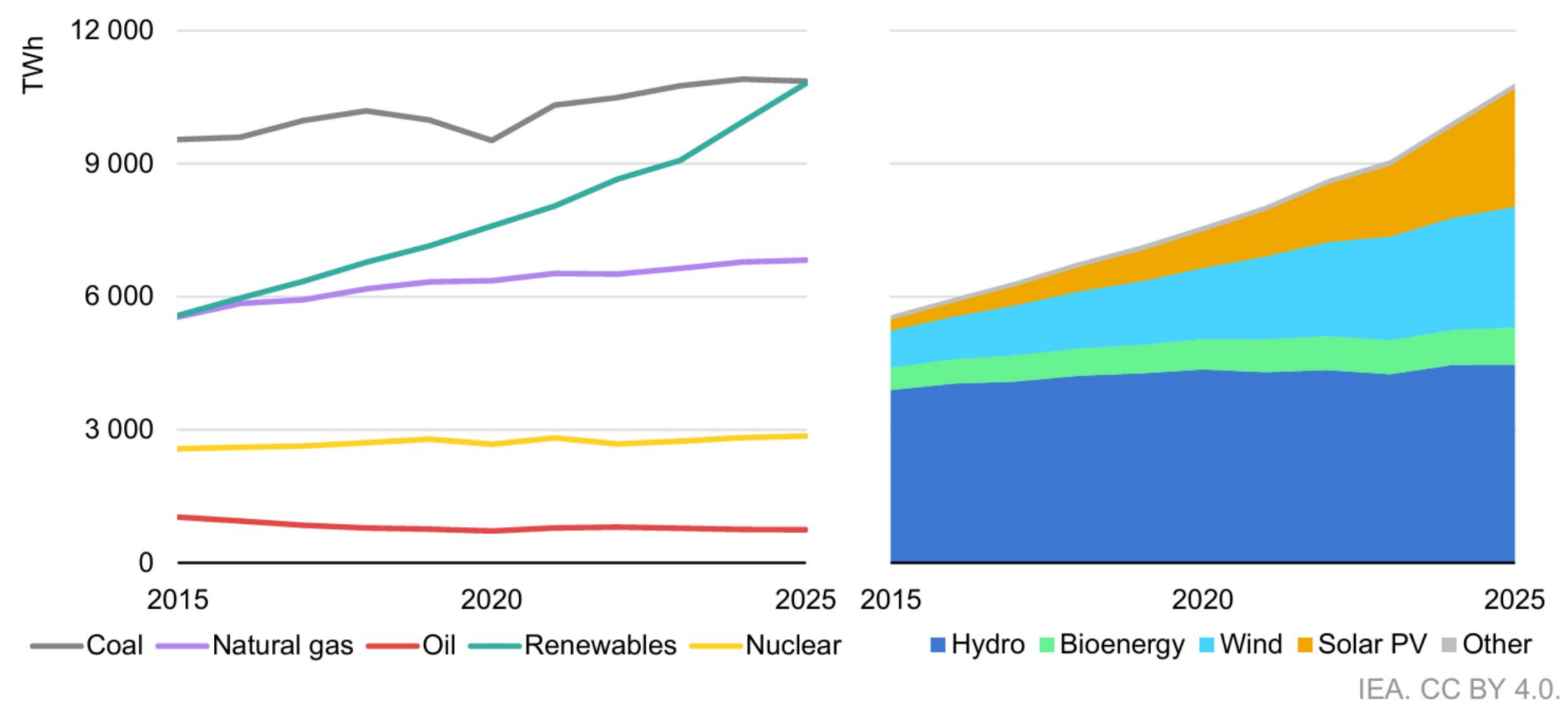
- Renewable energy accounted for most new generation additions globally.
- Solar remains the fastest-growing power technology.
- Global CO₂ emissions growth has begun to decouple from economic growth due largely to renewables and electrification.



Average Annual Change in Electricity Demand by region, 2014 - 2025



Global Electricity Generation and Renewable Generation by Source, 2014 - 2025



Note: 'Bioenergy' includes bioenergy and waste, 'Other' includes geothermal, concentrating solar power (CSP) and marine.

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Solar: From Alternative Energy to Dominant Energy Source

By 2030:

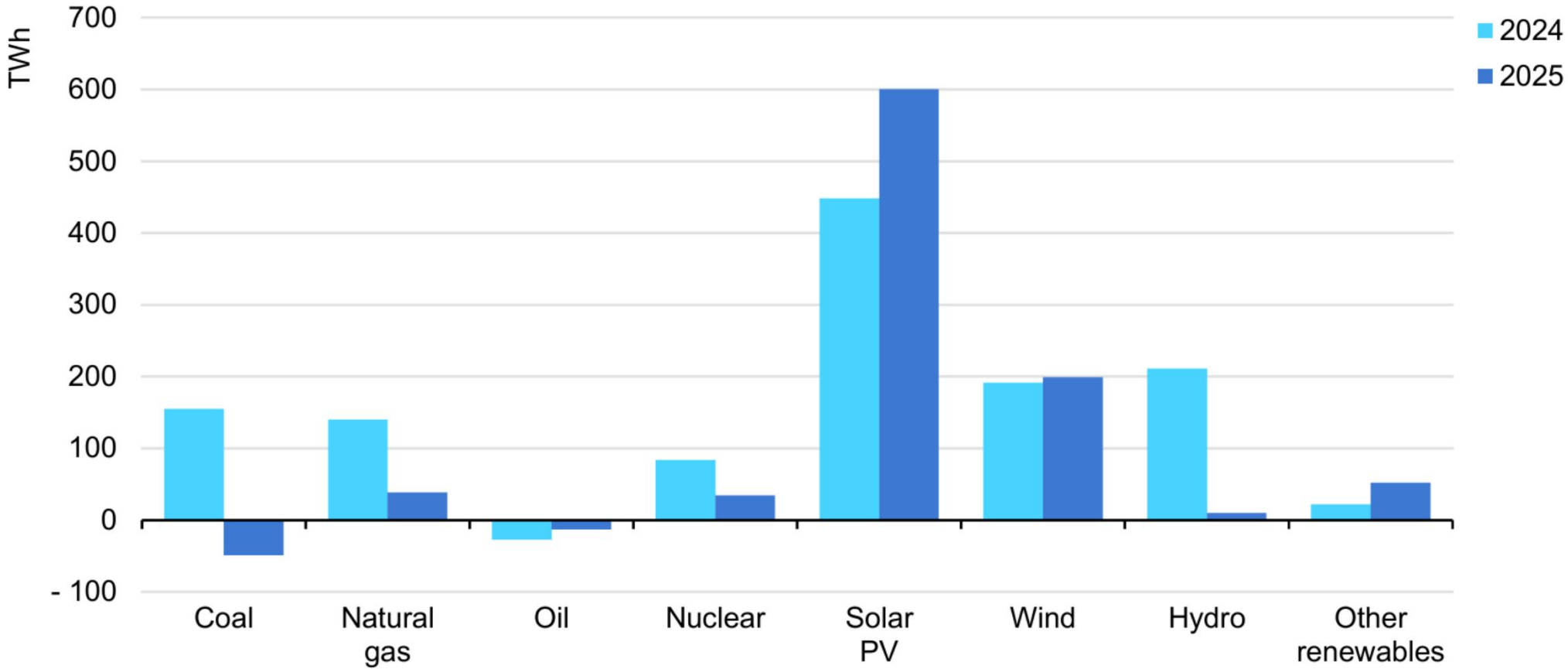
- **Renewables expected to supply nearly half of global electricity generation.**
- **Solar PV expected to account for approximately 80% of global renewable capacity additions.**
- **Global renewable capacity expected to more than double from current levels.**

Why Solar Leads:

- ✓ **Lowest cost renewable technology**
- ✓ **Fast deployment**
- ✓ **Modular scalability**
- ✓ **Suitable for utility-scale and distributed systems**

Annual Change in Global Electricity Generation by Source, 2024 - 2025

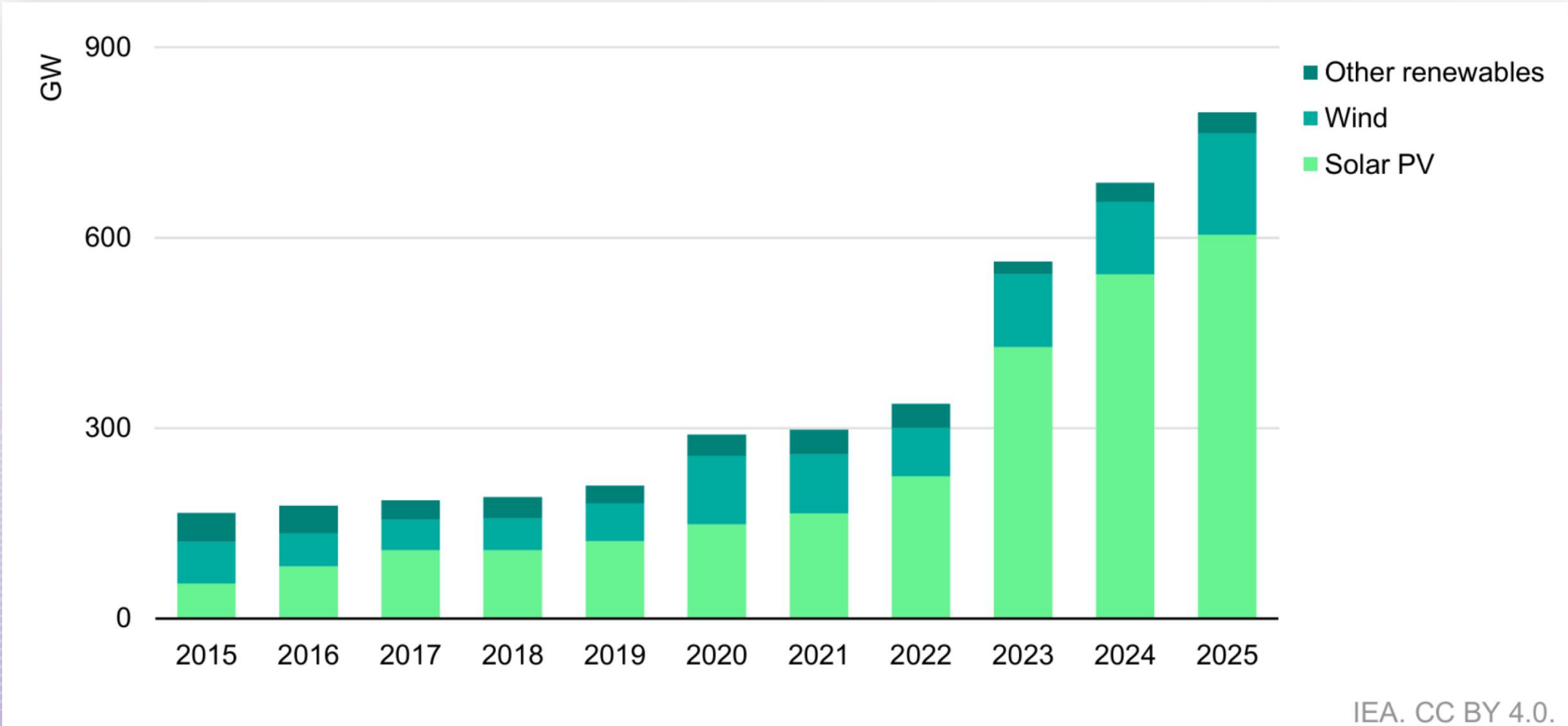
Annual change in global electricity generation by source, 2024-2025



IEA. CC BY 4.0.

Note: 'Other renewables' includes geothermal, bioenergy and waste, concentrating solar power (CSP), and marine.

Total Renewable Capacity Additions by Technology, 2015 - 2025



IEA. CC BY 4.0.

Notes: 2025 values are based on both actual and estimated additions for regions where full-year data is not yet available. "Other renewables" include hydropower, bioenergy, geothermal, concentrating solar power and marine energy.

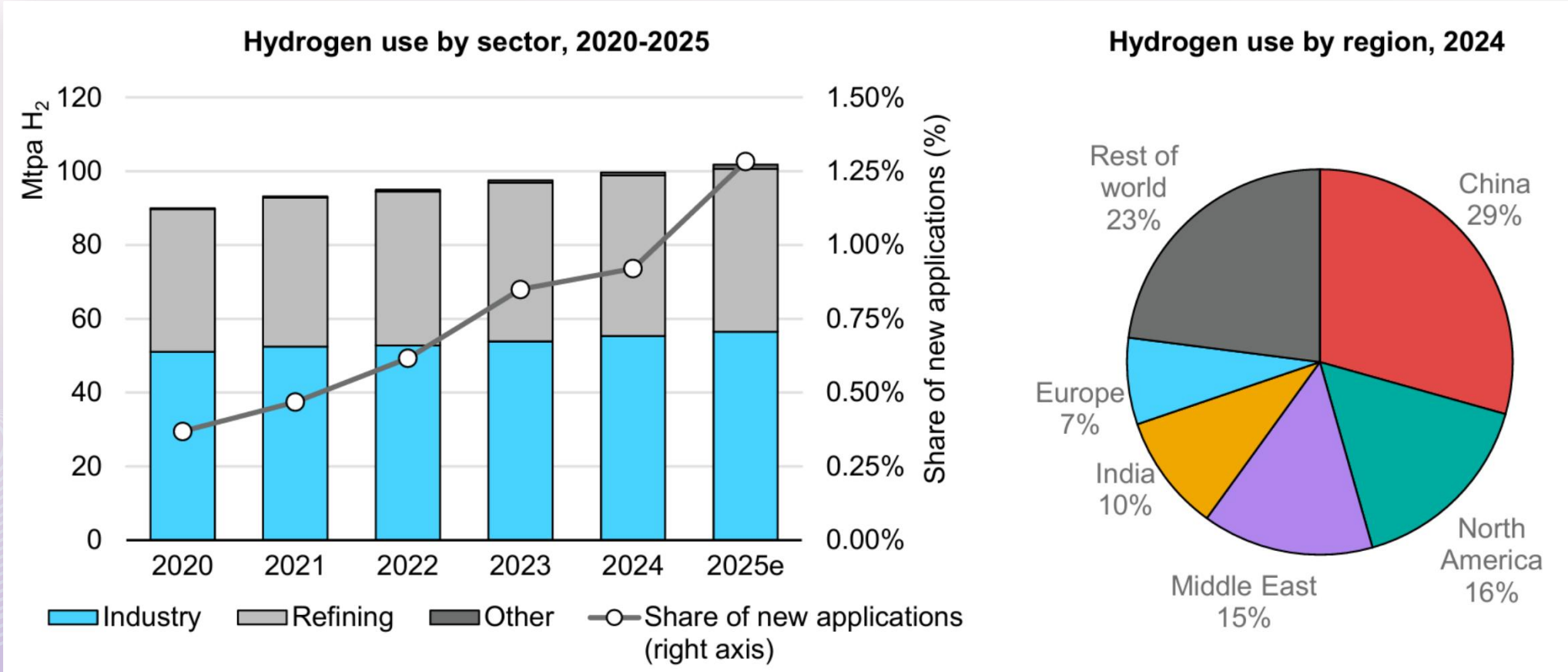
How do we maximise the value of solar generation beyond daylight hours?

Hydrogen is most valuable where direct electrification is difficult:

- Heavy industry
- Fertiliser
- Shipping
- Aviation fuels
- Long-duration energy storage



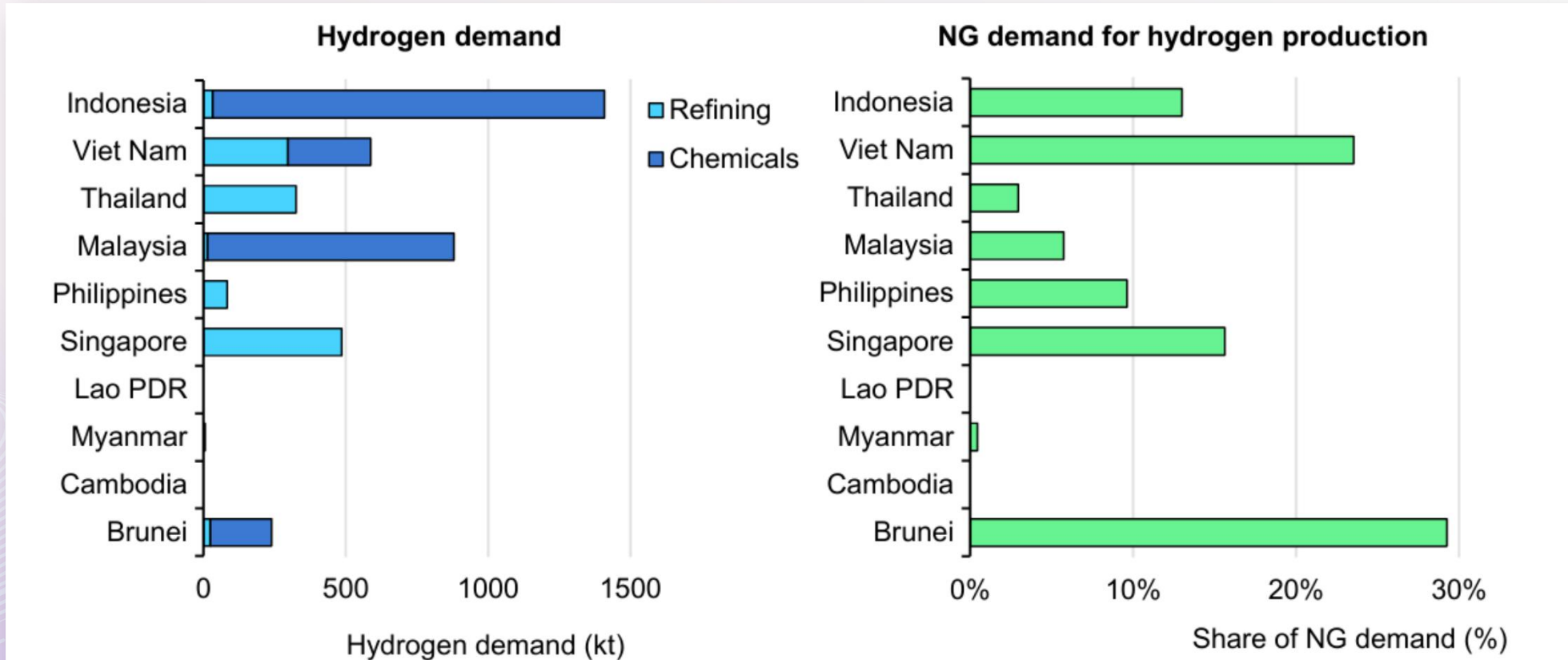
Hydrogen Demand by Region, 2020 - 2025



Notes: "Other" includes transport, power generation, production of hydrogen-based fuels, buildings and biofuels upgrading. The estimated value for 2025 (2025e) is a projection based on trends observed until July 2025.

Sources: IEA analysis based on data from [Argus Media Group](#), All rights reserved, [International Fertilizer Association](#), [World Steel Association](#).

Hydrogen Demand by Sector and Country and Natural Gas Demand for Hydrogen Production in ASEAN, 2024



IEA. CC BY 4.0.

Notes: NG = natural gas. Chemicals include hydrogen demand for ammonia and methanol. Natural gas demand is based on 2022 numbers (last data point available from national statistics). There is lack of country-level data for the split of hydrogen production and industrial by-product, so the figure assumes all countries have the same split as the regional average (about 80% from natural gas reforming).

Global Hydrogen Market Baseline

Current Reality

Most hydrogen produced globally today is still:

- Grey hydrogen (~95%+ globally)

Produced from:

- Natural gas
- Coal

Future Direction

Governments worldwide are investing in:

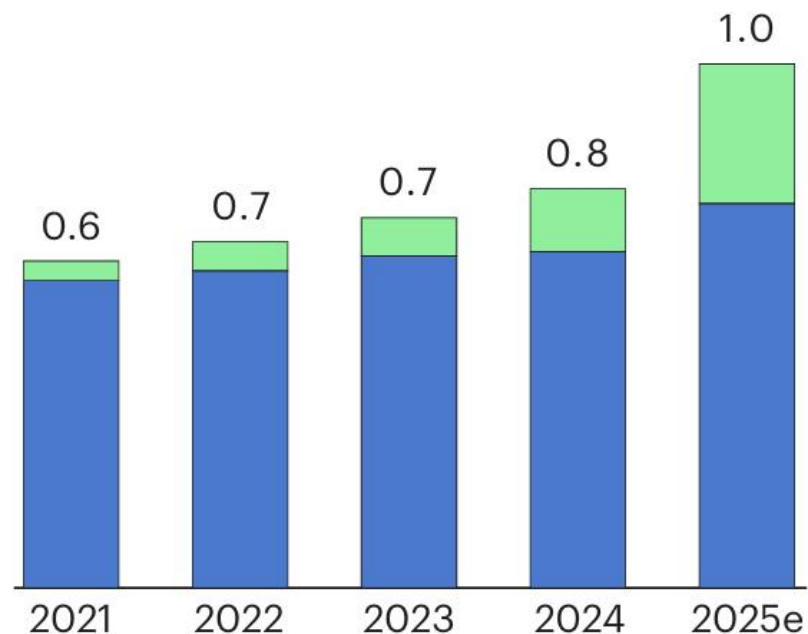
- Green hydrogen
- Green ammonia
- Hydrogen derivatives

Production

Low-emissions hydrogen

Mtpa

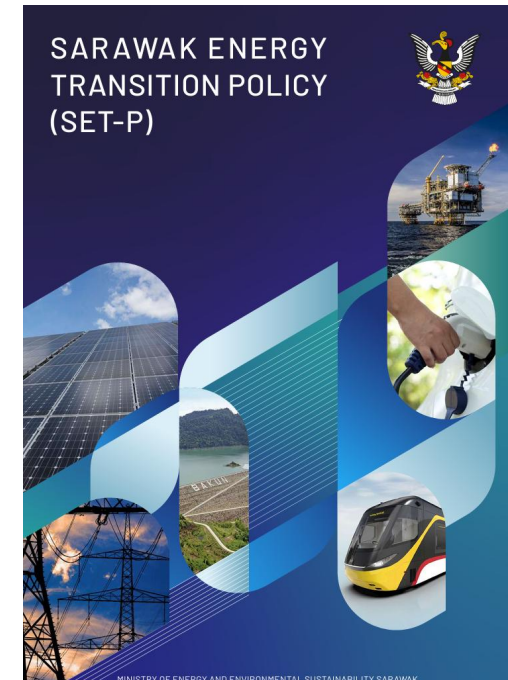
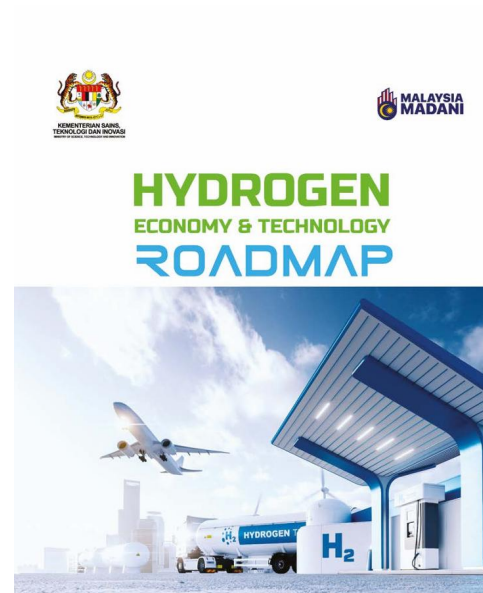
● Renewables ● Fossil fuels with CCUS



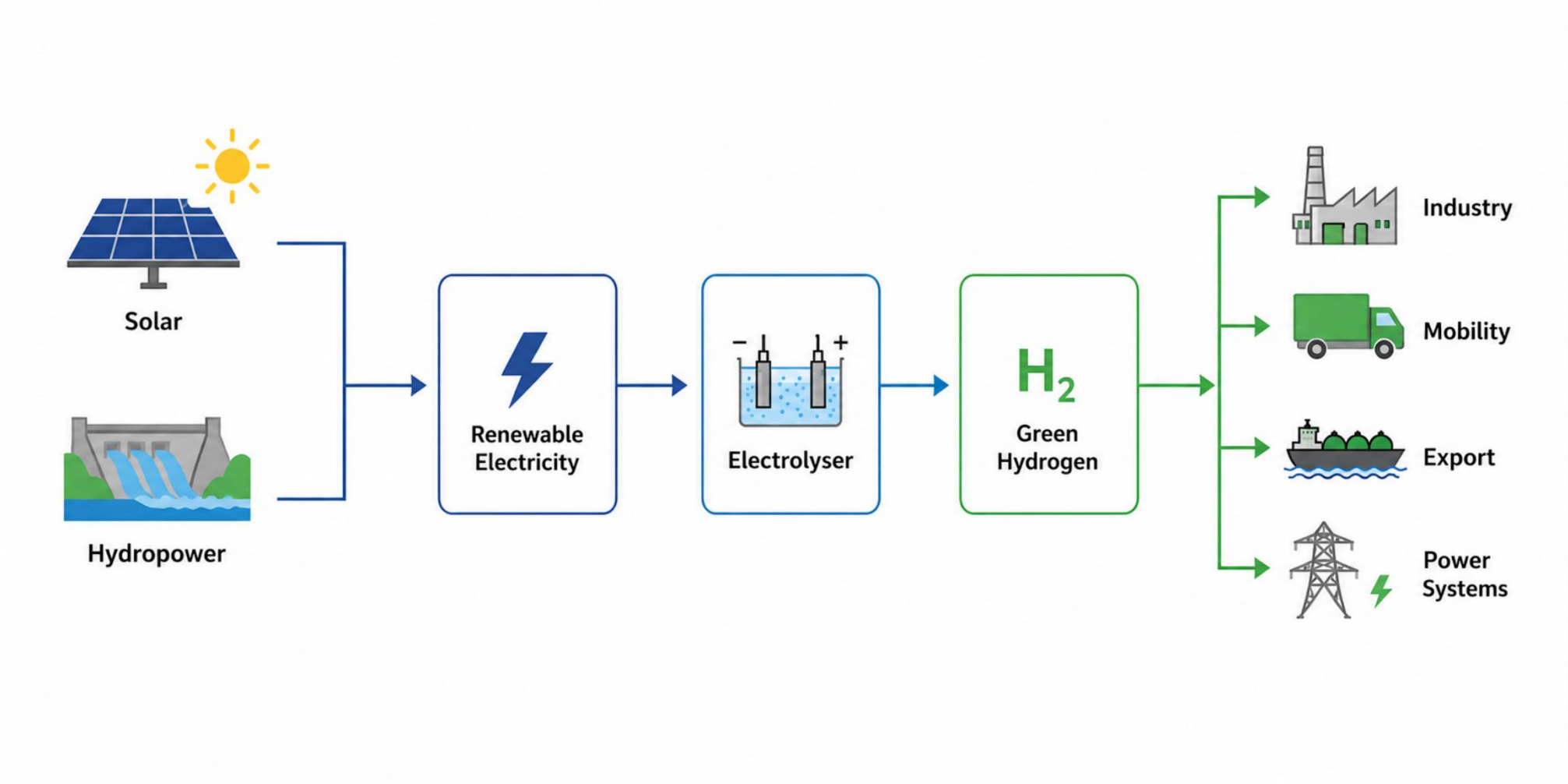
60%
growth
since 2021

Hydrogen Ecosystem in Sarawak & Solar's Contribution

Sarawak's hydrogen ambitions are supported by policy, resources & infrastructure



Sarawak Hydrogen Ecosystem



How Solar Contributes to the Hydrogen Ecosystem

1. Renewable Power Source

Electrolysers require significant electricity.

Solar provides:

- Clean energy
- Scalable deployment
- Falling costs

2. Cost Reduction

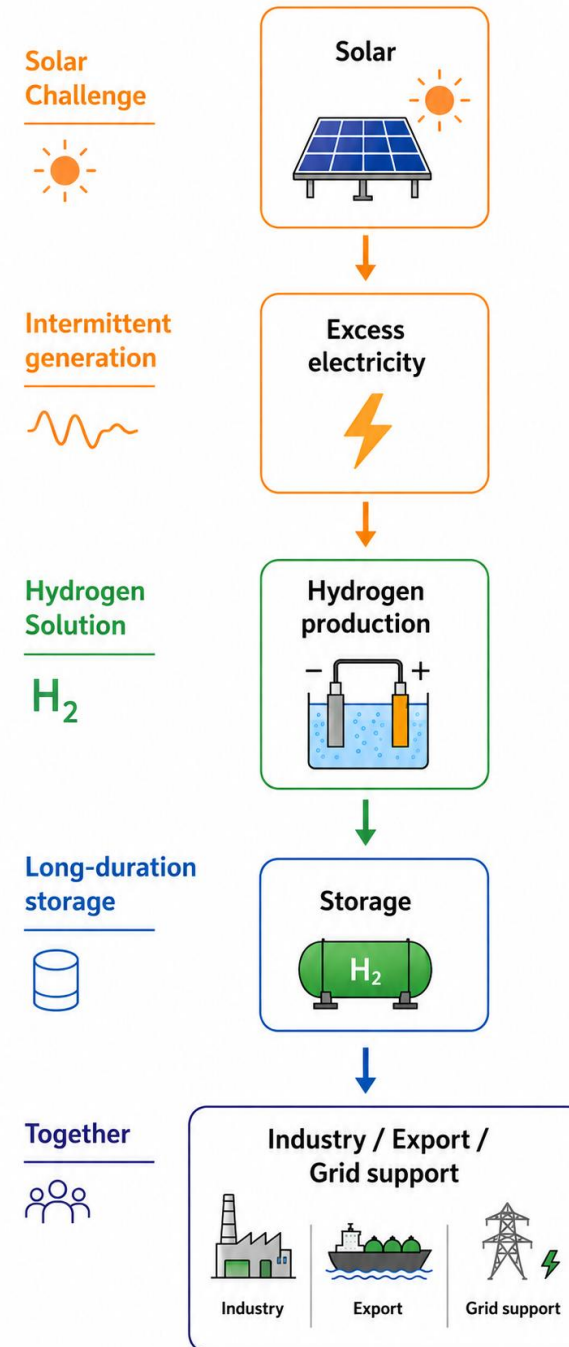
Electricity typically represents 60–80% of green hydrogen production cost.

Lower solar costs = lower hydrogen costs.

3. Hybrid Renewable Systems

Solar can be integrated with:

- Hydropower
- Battery storage
- Hydrogen storage





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