MINISTRY OF FOREIGN AFFAIRS
OF DENMARK

Vietnam

Perspectives on the renewable energy market

Ambassador, Nicolai Prytz – August 2024

AGENDA

1. INTRODUCTION
2. The power sector
3. The future of renewable energy
4. Offshore wind status
5. Drivers and barriers in the energy transition

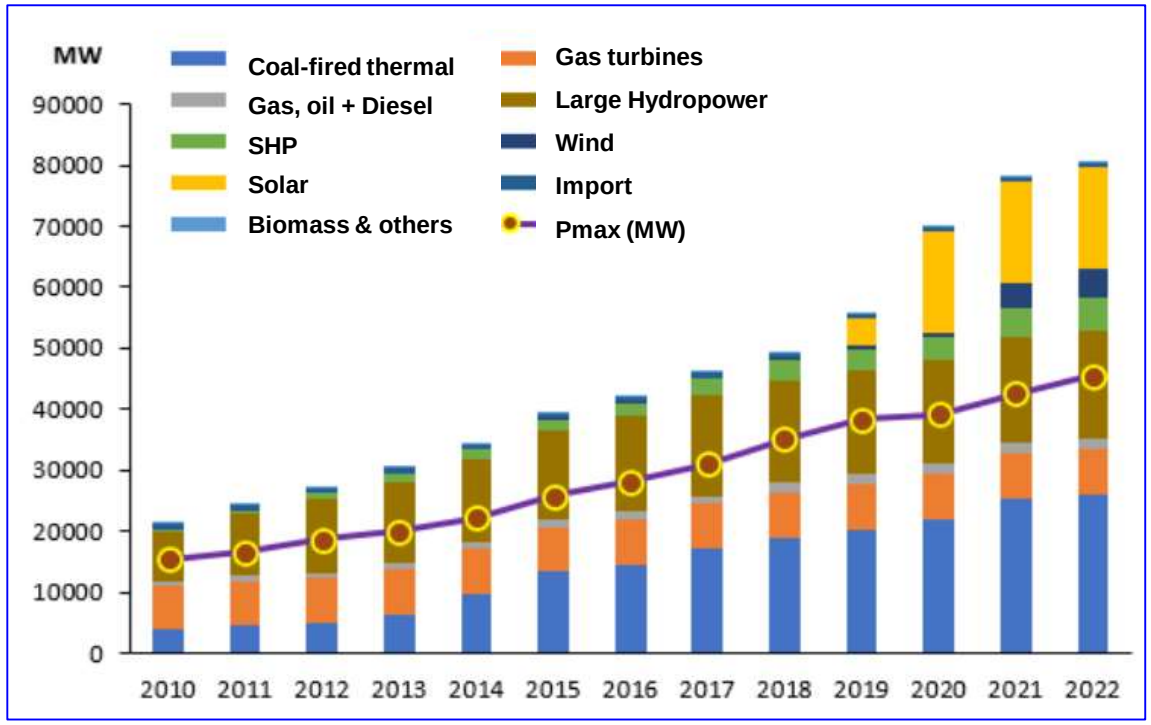
Vietnam at a glance…

- Fast growing economy and energy demand
- Large and young population
- Competitive labor costs
- Proximity to China, attractive for diversification
- Many bilateral and multilateral FTAs (EVFTA)
- Renewable energy leader in SEA (22 GW)

- Corruption as a key barrier to foreign investment
- Administrative procedures/bureaucracy
- Heavy dependence on imported inputs for its export and manufacturing
- Over-reliance on FDIs and exports

The power sector

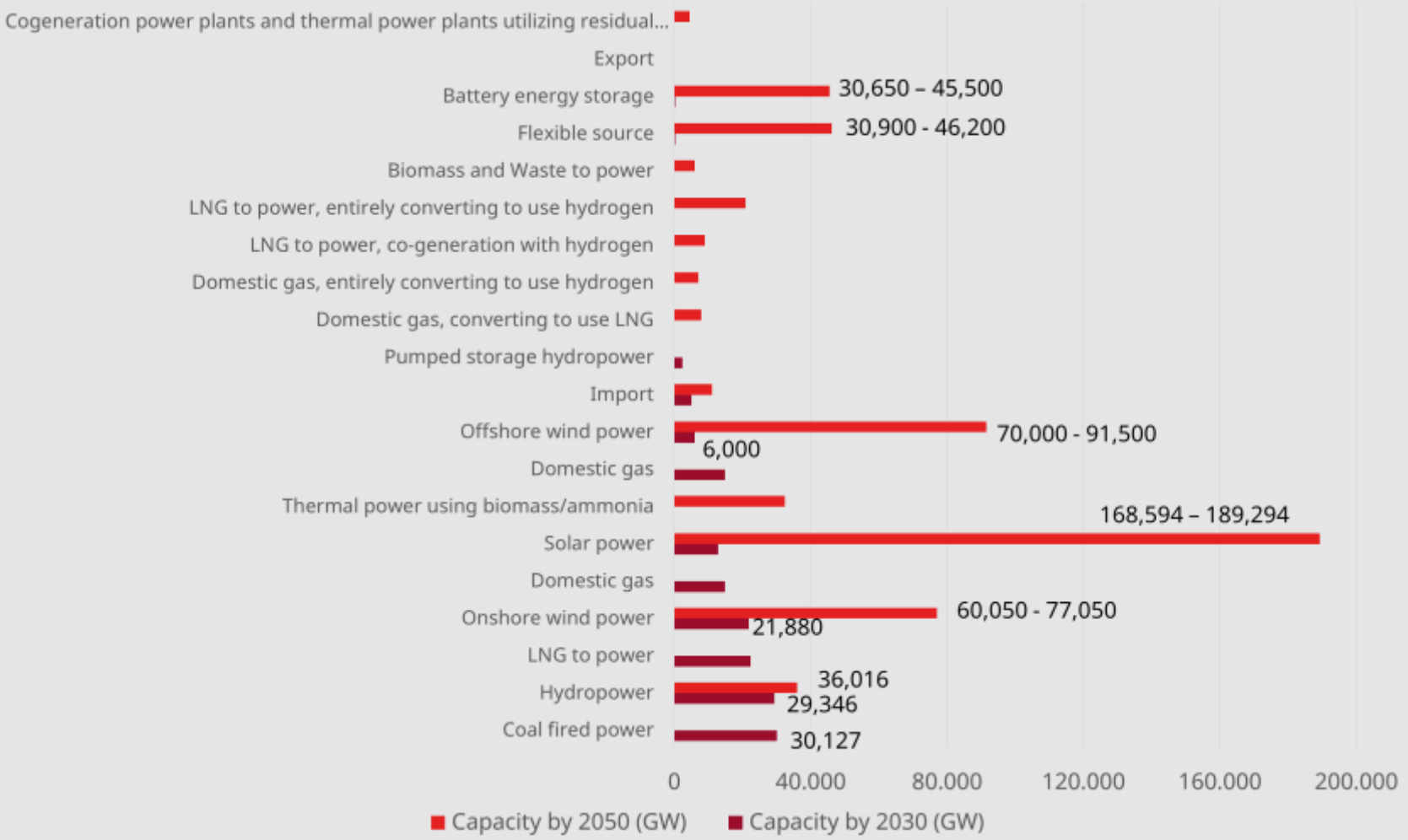
Installed capacity (MW) from 2010-2022 (Source: MOIT)



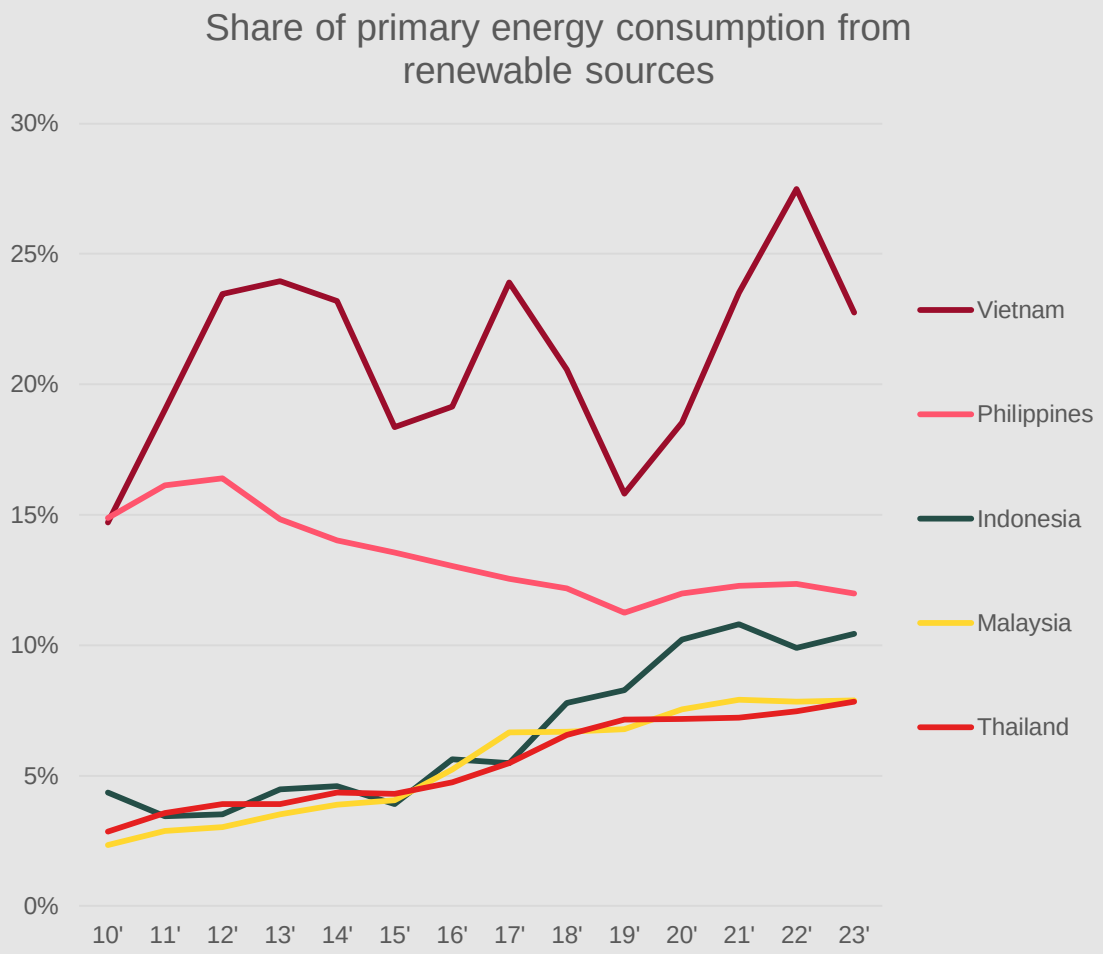
Overview and trends

- Vietnam's power sector has grown substantially driven by economic expansion and an increase in industrial demand
- Coal still accounts for 40% of power generation today
- Rapid development of solar power and onshore wind power in 2019-2021
- Onshore and offshore wind are key to the energy mix as per Power Development Plan 8
- Solar power, despite its low cost, is politically undesired due to mismanagement cases under previous FiT scheme

Power development plan 8 targets



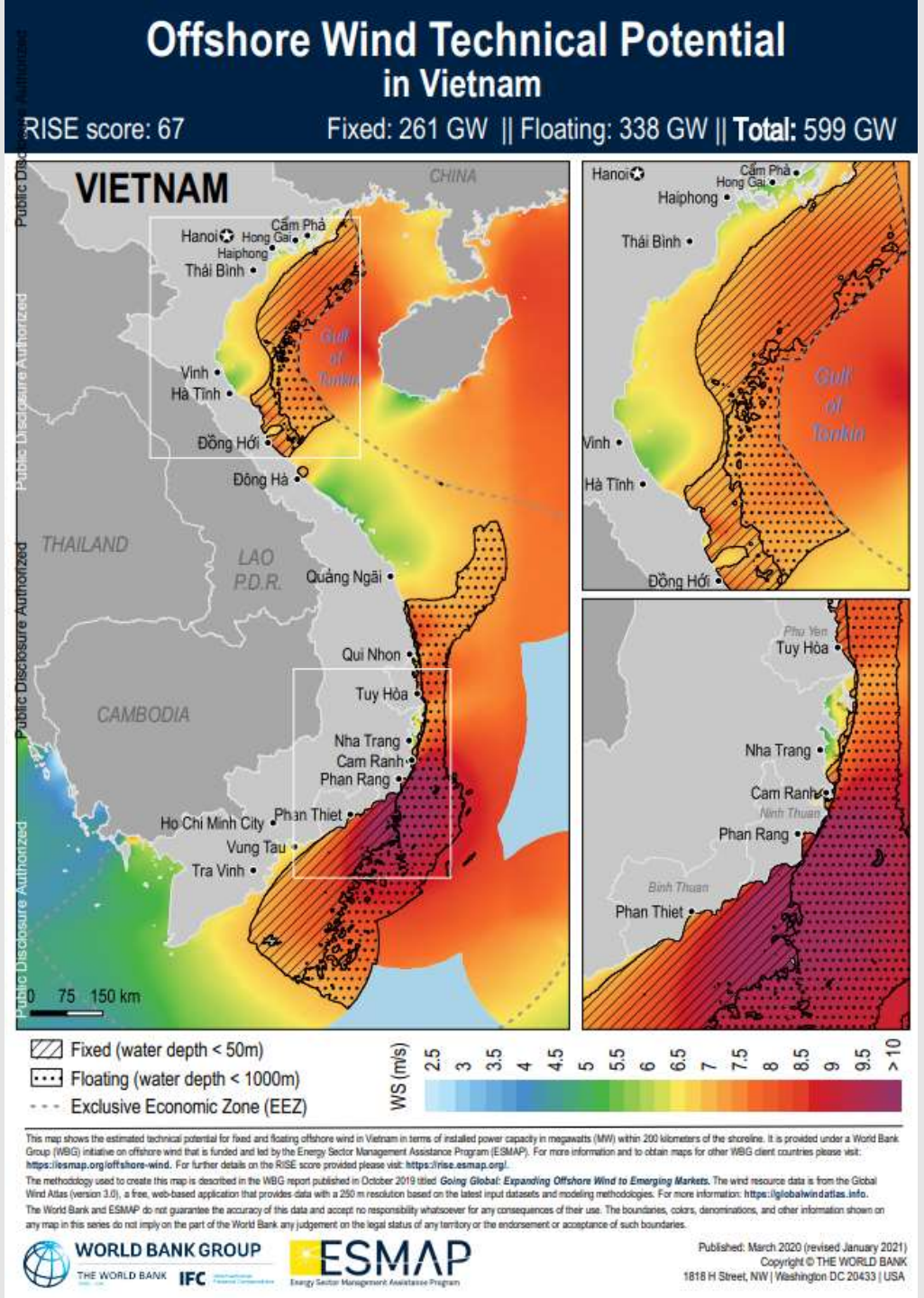
The future of renewable energy



- dPPA decree approved 07/2024 for consumers > 200MWh/month and capacity capped by existing master plans (PDP8,..):
  - Option 1: Direct wire
  - Option 2: Virtual w min. 10MW wind/solar, approval by SO required
- RTS PDP8 limited to additional 2,6 GW by 2030.
- Carbon market: Pilot phase for domestic ETS and carbon credits from 2025 (planend) – quotas allocated to large emitters incl. TPP and heavy industry
- EVN procurement continues on negotiated terms w ceiling price post-FiT to be set annually with more regional variation. PPA not bankable internationally.

Offshore wind status

- Strong fundamentals for OSW
- Clear long-term ambition and need (80-90 GW)
- Growing supply chain capability (substations, foundations, towers)
- Local content prioritised
- SOE-led ‘pilot’ projects, foreign partners not excluded
- Geopolitics and security concerns
- 1.4GW export project to Singapore



Drivers and barriers in Vietnam's energy transition

‘Drivers’

1. Fossil fuels have become less attractive / viable
2. Green energy attracts new investments
3. Less import dependence for the energy sector

‘’Barriers’

1. Ceilings for public debt (incl. state-owned companies)
2. Lack of clear legislation and regulation
3. Political-institutional challenges

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Thank you

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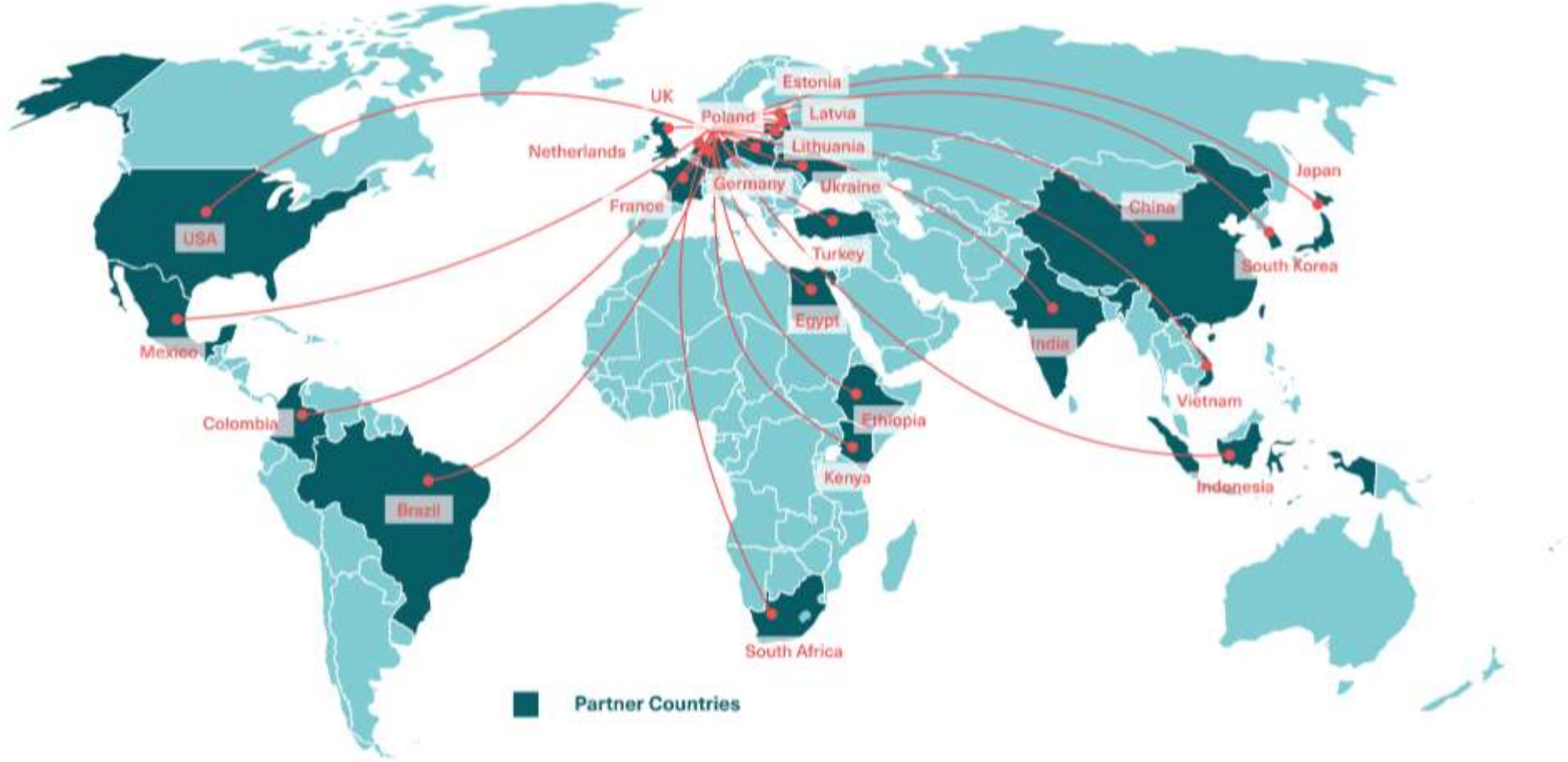
Danish Energy Partnership Program with Vietnam

Loui Algren, Country lead for Vietnam

Danish Energy Agency

Global Cooperation

Collaborations with 24 countries – Vietnam one of the four longest and largest collaborations



Energy Partnership Programme – main features

Government-to-Government
Danish Energy Agency and
Ministry of Industry and Trade (MOIT)

Approach
Capacity building

Timeline
Collaboration since 2012
Third phase: 2020-2025

Vietnam-DEPP III content

Long-term energy planning

- Vietnam Energy Outlook
- Energy system modeling
- Data development incl Technology Catalogues

Offshore wind

- Assessment of potential
- Marine Spatial Planning
- Port Study

Integration of variable renewbles

- Grid codes
- Demand-response
- Power plant flexibility
- Power system operation - with Energinet and National Load Dispatch Centre

Energy efficiency in industries

- Voluntary Agreement Schemes
- Energy Audits
- Center of Excellence

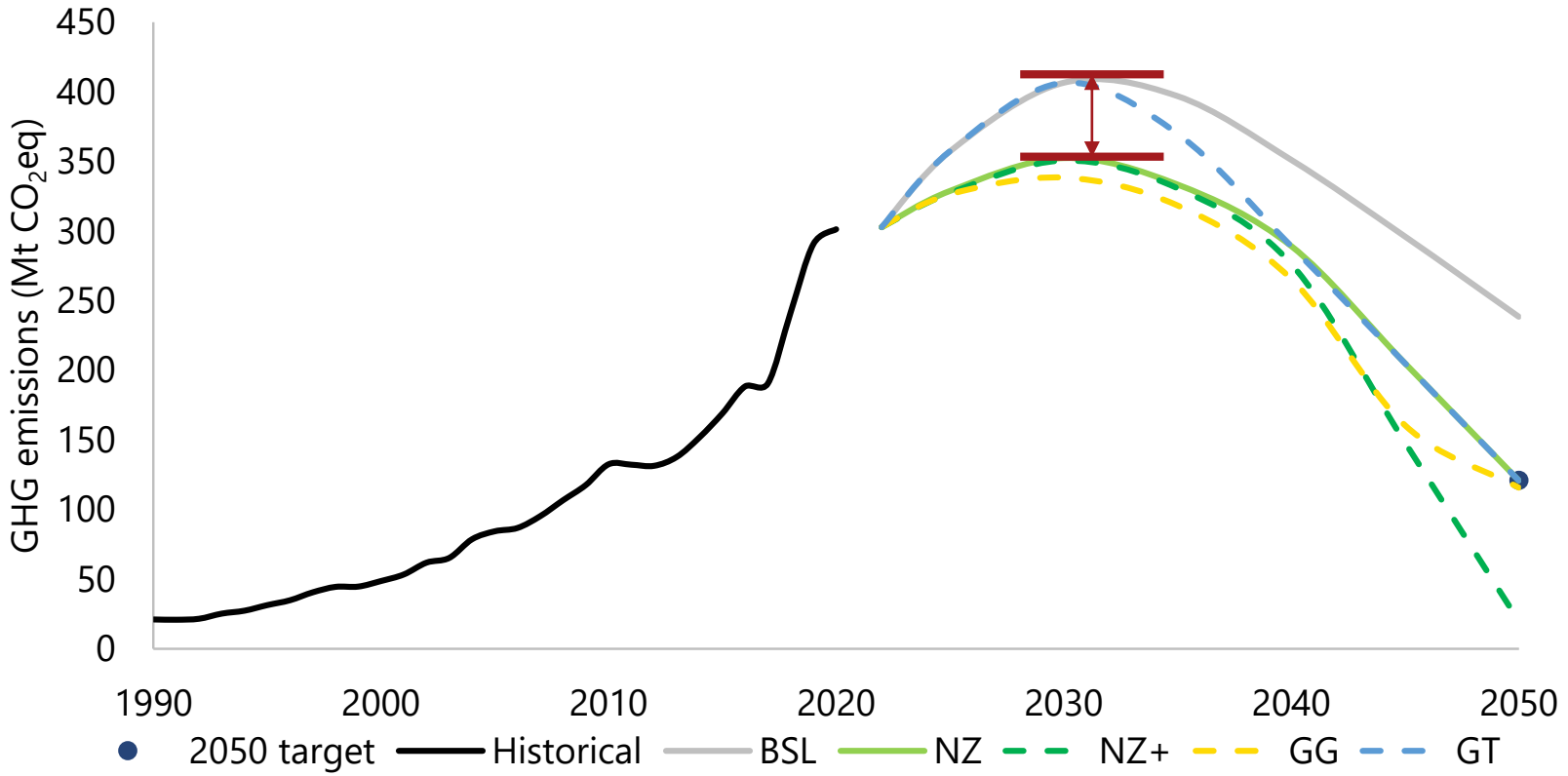
Danish Energy Agency

Long-term Energy Planning

2013-2016	2017-2020	Sept 2017	Nov 2019	2020-2025	2022	June 2024
DEPP	**DEPP II**	Energy Outlook Report 2017	EOR 2019	**DEPP III**	EOR 2021	EOR NZ

- Advanced optimization models
- Whole energy system
- Data gathering
- Emissions
- Air pollution

CO_2-peak around 2030 is economically efficient



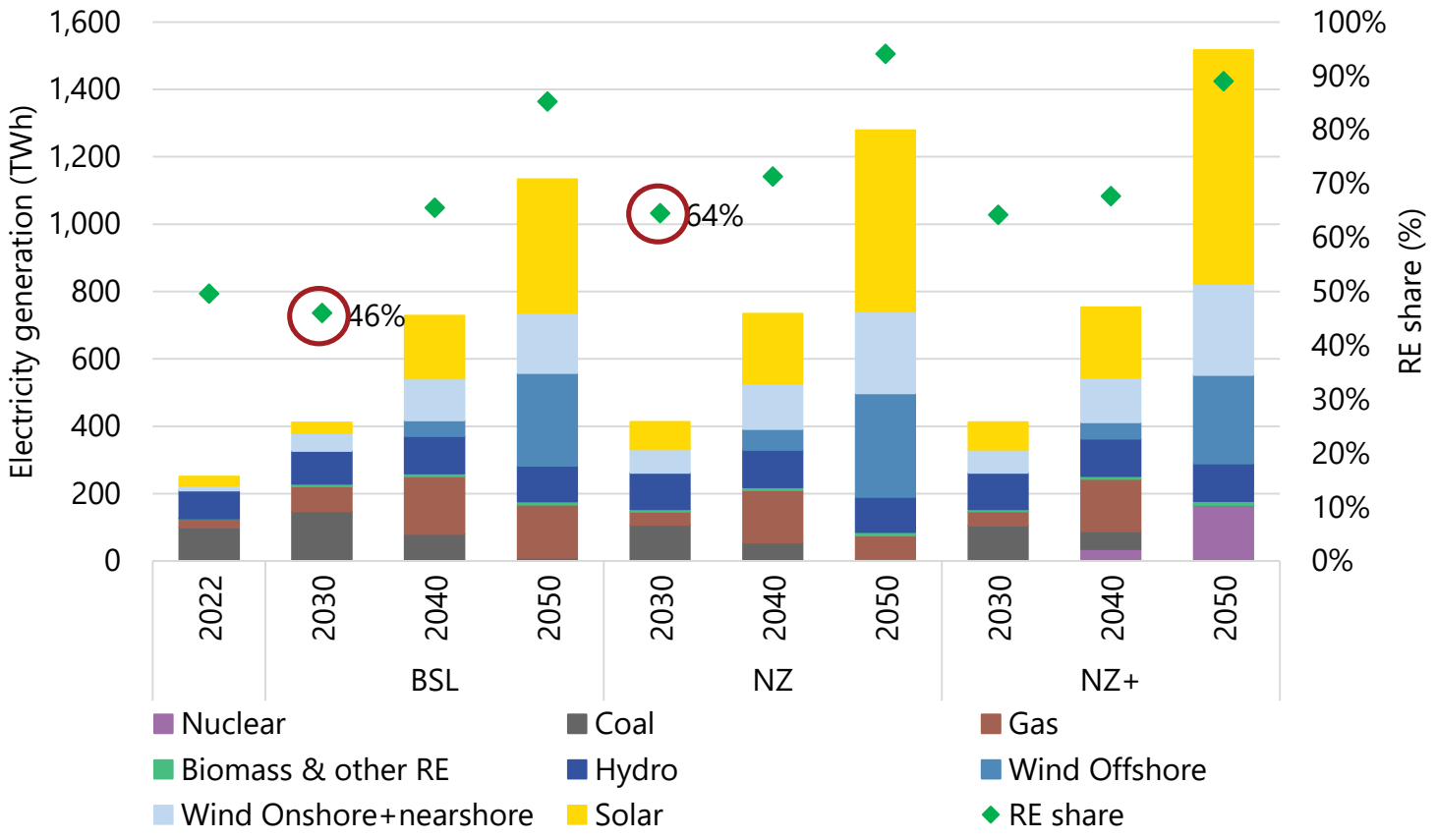
- Emissions peak in 2030, regardless of Net-Zero targets.
- Higher peak emissions in 2030 requires very steep reductions to 2050.

Recommendation

Early power sector decarbonisation is a pre-requisite for a cost-efficient transition.

BSL=Baseline. NZ=Net-Zero. GT=Green Transport. NZ+=Net Zero increased ambitions. GG=Green Growth.

Power production



- 4-6 fold increase in electricity demand
- Wind and solar dominating in all scenarios
- Nuclear

Recommendations

Set ambitious short-term targets for RE deployment, and reduce risks and delays in approving renewable energy projects.

Support the ambitious transport sector targets with similar ambitious targets for RE integration in the power sector.

Key messages from Vietnam Energy Outlook

Reaching Net-Zero in 2050 is economically desirable for Vietnam.

But early action is required = CO_2 peak around 2030

Energy demand to increase 50-100% by 2050

Electricity demand to increase 400-600% by 2050

First:
Energy efficiency, Wind, Solar, Grid

Later:
Electrification, Storage, PtX, CCS on industry

Not part of the solution:
DAC, hydrogen2power

Nuclear?

Thank you for coming

Find more information here:

www.depp3.vn

Danish Energy Agency