



Australian Government

Department of Foreign Affairs and Trade

RENEWABLE ENERGY DEVELOPMENT IN VIET NAM & AUSTRALIA'S ENGAGEMENT

Prepared for The 1st Meeting of VEPG's Technical Working Group 2 - Renewable Energy

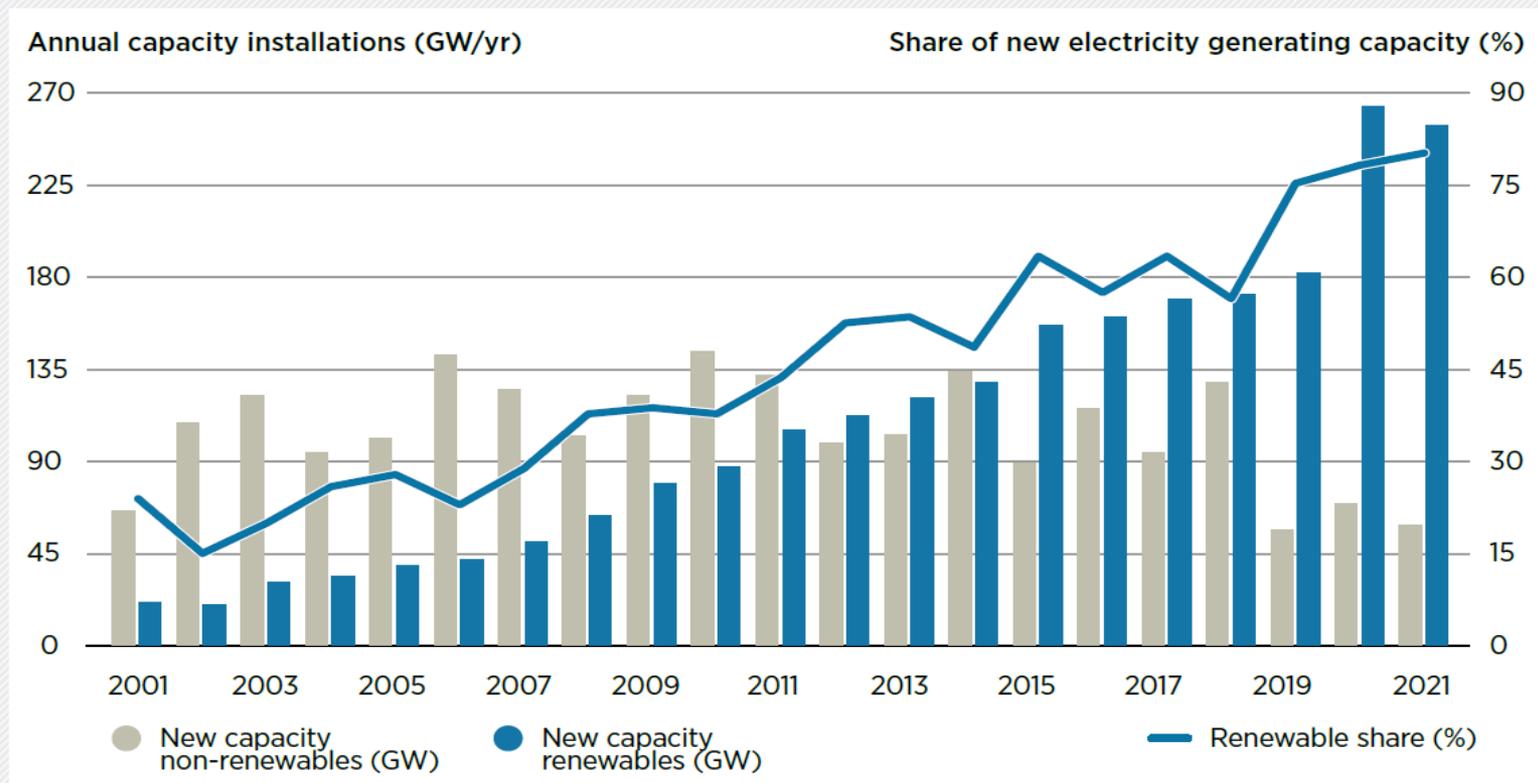
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CONTENT

- ❑ Global RE Development Trend
- ❑ Vietnam's RE development and challenges
- ❑ Australia's increasing engagement in energy space in Vietnam

GLOBAL RENEWABLE ENERGY DEVELOPMENT TREND

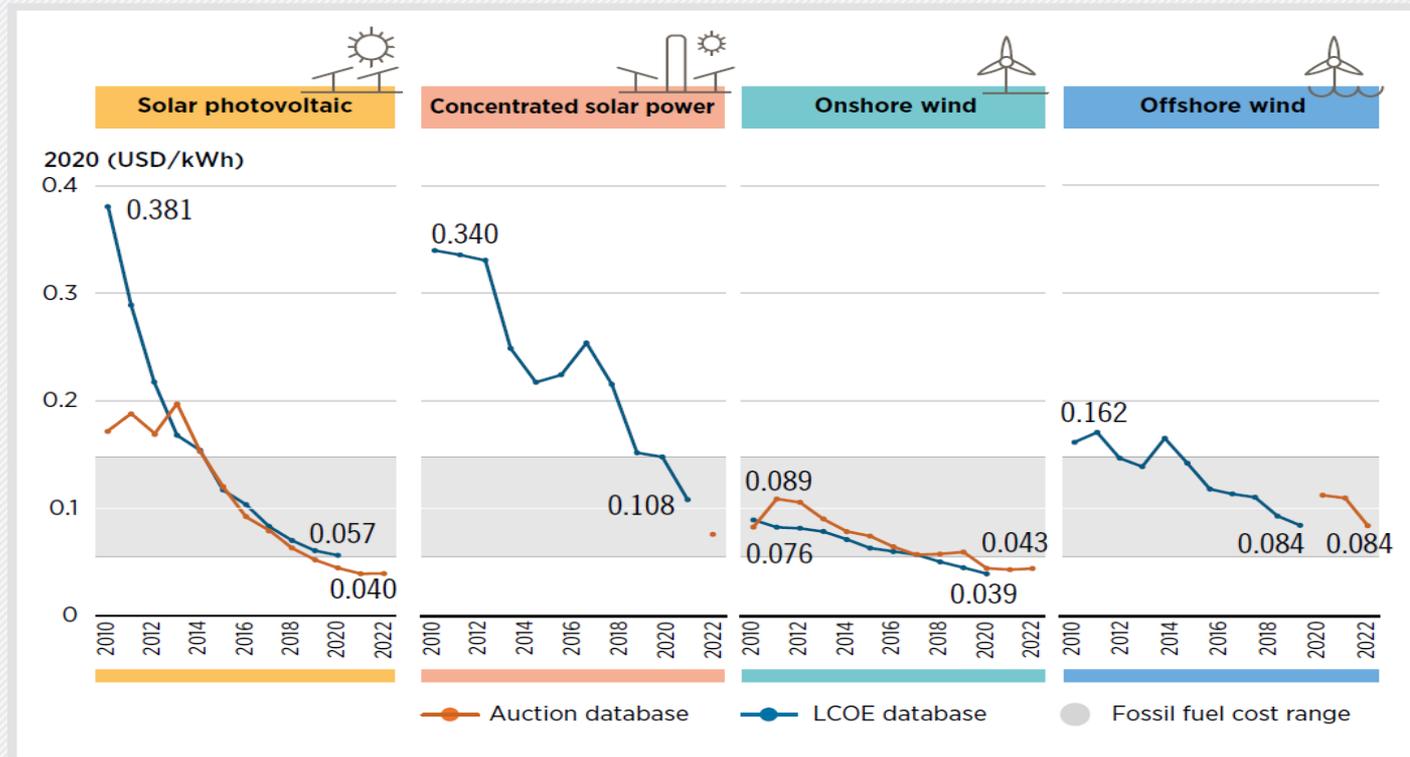
Share of new electricity capacity 2001-2021¹



¹ [World Energy Transition Outlook 2022, IRENA, March 2022](#)

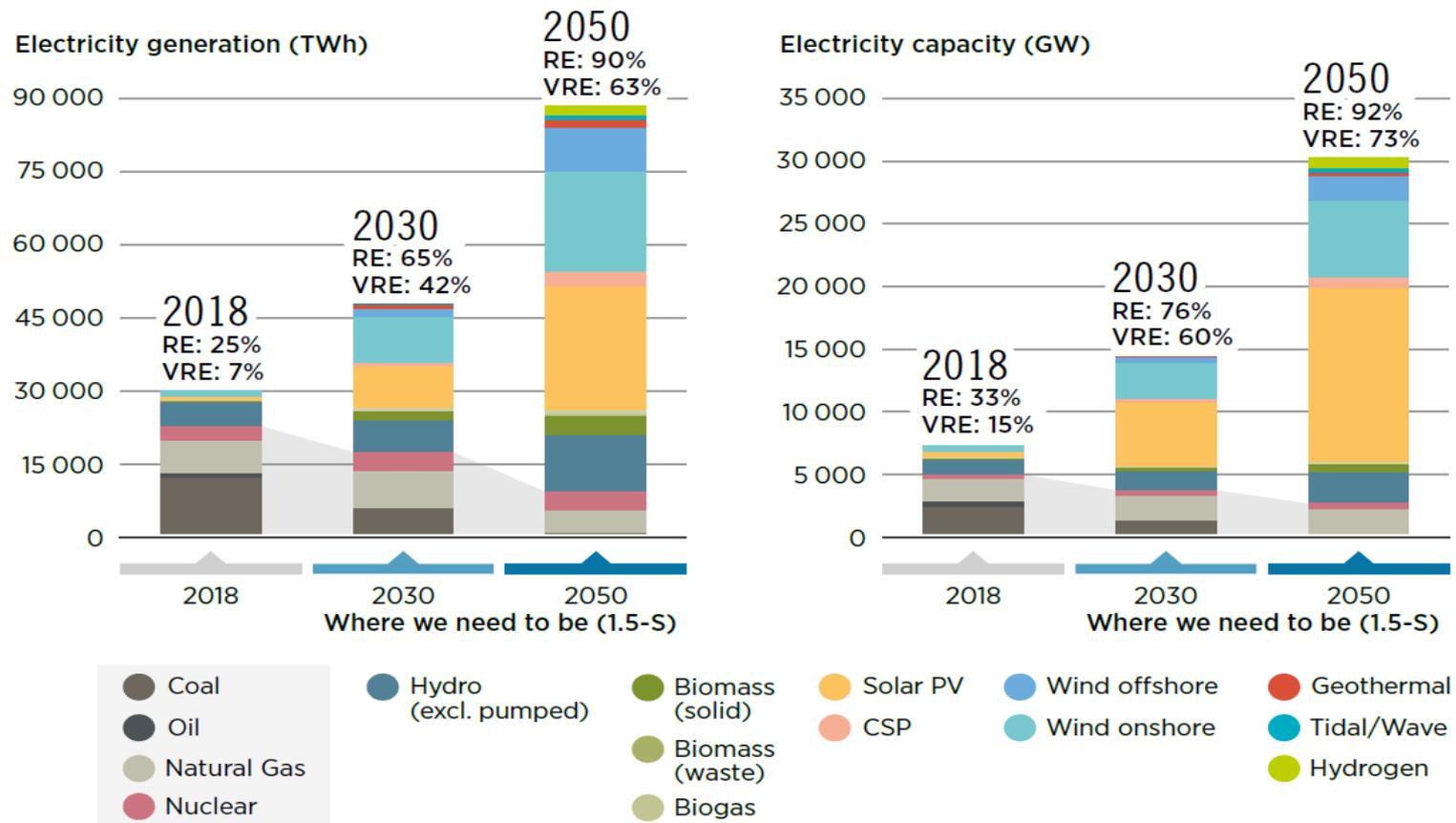
GLOBAL RENEWABLE ENERGY DEVELOPMENT TREND

The global weighted-average LCOE of newly commissioned utility-scale solar PV projects fell by 85% between 2010 and 2020



GLOBAL RENEWABLE ENERGY DEVELOPMENT TREND

Global total power generation and the installed capacity of power generation sources in 1.5°C Scenario in 2018, 2030 and 2050



Note: 1.5-S = 1.5°C Scenario; CSP = concentrated solar power; GW = gigawatts; PV = photovoltaic; RE = renewable energy; TWh/yr = terawatt hours per year; VRE = variable renewable energy.

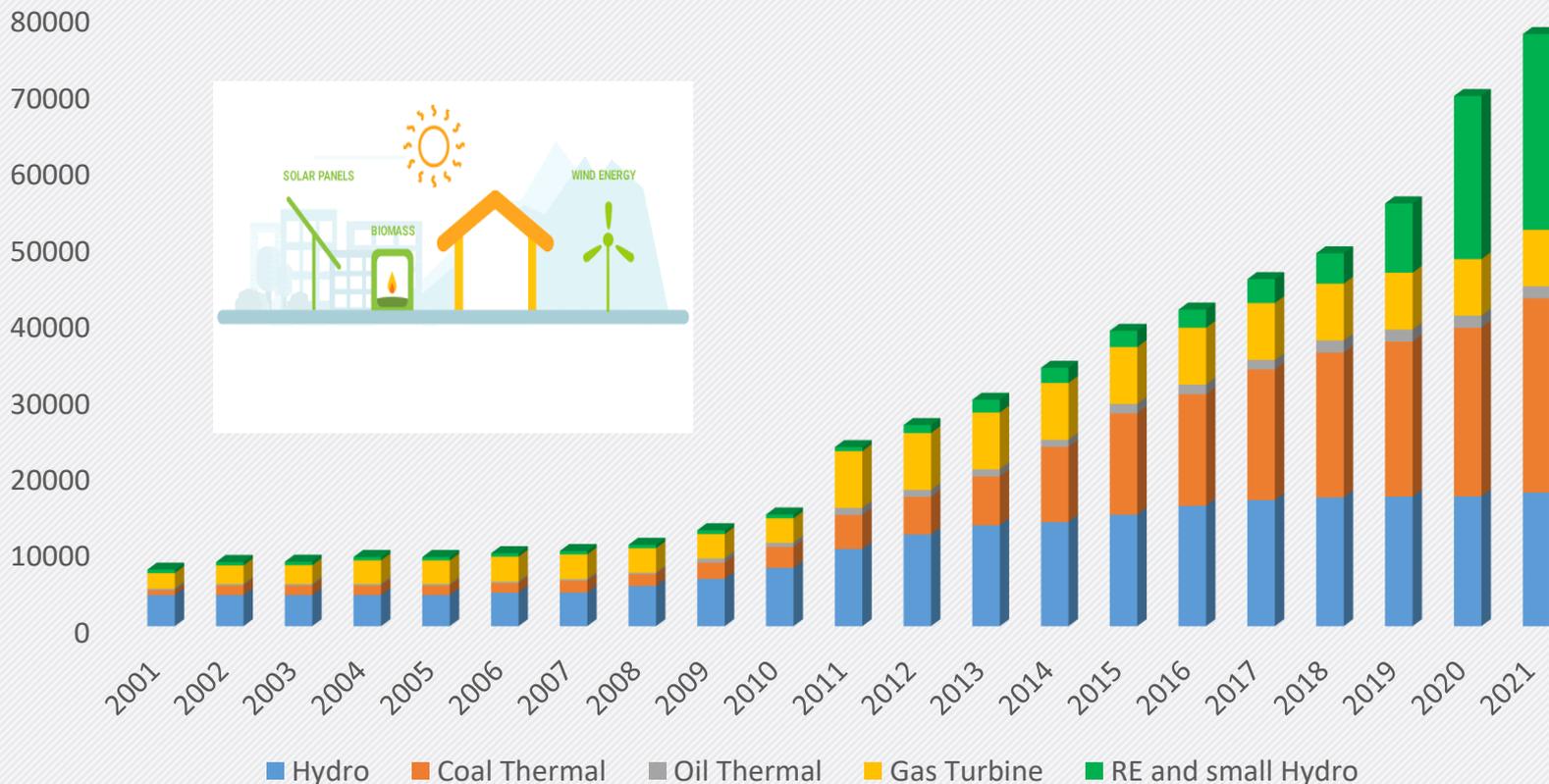
GLOBAL RENEWABLE ENERGY DEVELOPMENT TREND

Key trends might define the global power and renewable markets in forthcoming time²:

- Electricity demand growth shifts closer to pre-pandemic levels
- The on-going global energy supply crunch means another year of high and volatile power prices
- Supply chains are putting pressure on renewable costs
- Renewables are expected to grow despite supply chain issues
- Infrastructure challenges and grid reliability will dominate policy discussions
- The mix of clean technologies gaining policymaker and investor attention is broadening

VIETNAM'S RE DEVELOPMENT & CHALLENGES

Vietnam's RE development has a remarkable growth in recent years³



2019: ~56 GW - Pmax: 38.2GW

2020: ~70 GW - Pmax: 38.7 GW

2021: ~ 78 GW - Pmax: 42.48 GW

³ Source: ERAV

VIETNAM'S RE DEVELOPMENT & CHALLENGES

RE Development Orientation:

- Vietnam commits to Net Zero Target by 2050 and pledges to phase out coal power by 2040s
- Resolution 55/NQ-TW and Decision 2068 sets out the targets of RE development
- Decision 1658/QD-TTg stipulates the strongly promotion of RE sources
- Draft Power Development Plan No. 8: 2021-2030 with a vision to 2045:
 - *Wind*: Increase from 0,6 GW in 2020 to 23,1 GW in 2030 (include 7 GW offshore)
 - *Solar*: Maintain capacity 16,5 GW in 2020 till 2030 and strongly develop after 2030 to reach 82,9GW in 2045
 - *Hybrid, pump storage, battery storage*: Up to 3 GW in 2030

VIETNAM'S RE DEVELOPMENT & CHALLENGES

How challenges addressed?

- Need a predictable, long-term stable and appropriate legal framework
 - a national power development plan synchronizing the development planning of power sources and grid, with a suitable power generation mix.
 - an appropriated pricing mechanism (FIT or auction or others?)
 - PPAs fits to international standards (bankable requirements?)
- Technical and technology difficulties
 - inadequate infrastructure of power transmission grid
 - under-integration of supporting technologies such as storage, smart grid
 - lack of tools and capacity for operating stably and reliably the power system (e.g. RE generation forecasting and ancillary services)
- Investment and financing
 - require a huge amount of investment capital, especially large-scale RE projects
 - require effective schemes to mobilize private and foreign capitals: transparent and fairness investment mechanisms with appropriate risk-sharing regulations

AUSTRALIA'S INCREASING ENGAGEMENT IN VIETNAM'S ENERGY SPACE

- 45 years of diplomatic relations - a deep and broad economic partnership
- Shared interest for energy security and net-zero ambitions
- Our Enhanced Economic Engagement Strategy (EEES) launched in late 2021
 - A key pillar of the EEES is deepening cooperation on energy
 - Establishing a Ministerial level dialogue on energy and minerals
- Last year, completed a scoping study to identify opportunities to engage in energy areas in Vietnam
- Working currently to provide assistances for Vietnam's RE development through regional and bilateral initiatives
- Australian companies is exploring and expanding its business plan in Vietnam's energy market, such as Macquarie Group

AUSTRALIA'S INITIATIVES AND ON-GOING ACTIONS

- Partnership for Infrastructure (P4I)
 - a new \$141 million flagship initiative for Southeast Asia
 - to drive inclusive growth of quality infrastructure in sectors as diverse as transport, energy and telecommunications
 - currently working to confirm potential assistances in energy areas as:
 - the stable and reliable operation of power system and market to able to incorporate a greater capacity of variable RE
 - issues relating to demand response programs, pricing regulatory mechanisms for transmission and distribution utilities
 - supports on offshore wind industry development
 - Facilitating the peer-to-peer partnership between two countries' energy agencies, such as AER and ERAV.

AUSTRALIA'S INITIATIVES AND ON-GOING ACTIONS

- [Mekong Australia Partnership: Water, Energy and Climate](#)
 - A four-year \$232 million program (FY20-21 – FY23-24) aimed to fostering an inclusive and sustainable recovery in Southeast Asia
 - Under MAP's Building Human Capital pillar, Australia Awards short courses on transforming energy markets and carbon markets have been designing
- [Business Partnerships Platform \(BPP\)](#) – a initiative supports partnerships between the Australia Government and inclusive businesses to create both development impacts and sustainable commercial returns
- Australia has provided supports through multilateral banks' initiatives or programs
 - Cooperating with ADB to support PVN in developing its greener business strategy
 - Financing the activities relating to clean energy transition and demand side decarbonization under the pillar “Low Carbon Infrastructure Development” of Australia – World Bank Partnership scheme

AUSTRALIA'S INITIATIVES AND ON-GOING ACTIONS

- Initial discussion on new activities in energy areas, including:
 - A Future of Electricity in Vietnam - a structured program of policy dialogues to exchange experience, shared challenges and potential solutions for Vietnam's future power sector, which might prioritize topics of transmission grid and consumption side
 - A leading voice research on the potential to utilise public-private partnerships for offshore wind power development in Vietnam
- Australia is also facilitating the partnerships and schemes to finance RE projects, such as:
 - [The Australian Climate Finance Partnership \(ACFP\)](#) - a concessional financing facility managed by ADB and funded by DFAT (up to AU\$140 million)
 - [Export Finance Australia](#) is developing a healthy pipeline of activities in Vietnam and the region, including RE projects:
 - provided a US\$35 million (AU\$46 million) loan for PCC1 last year to develop an onshore wind farm in Quang Tri



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