

United Towards a Sustainable FutuRE: Advancing the Energy Transition for *Indonesia Emas* and Net Zero Emissions

Indonesia Sustainable Energy Week (ISEW)

10 September 2024



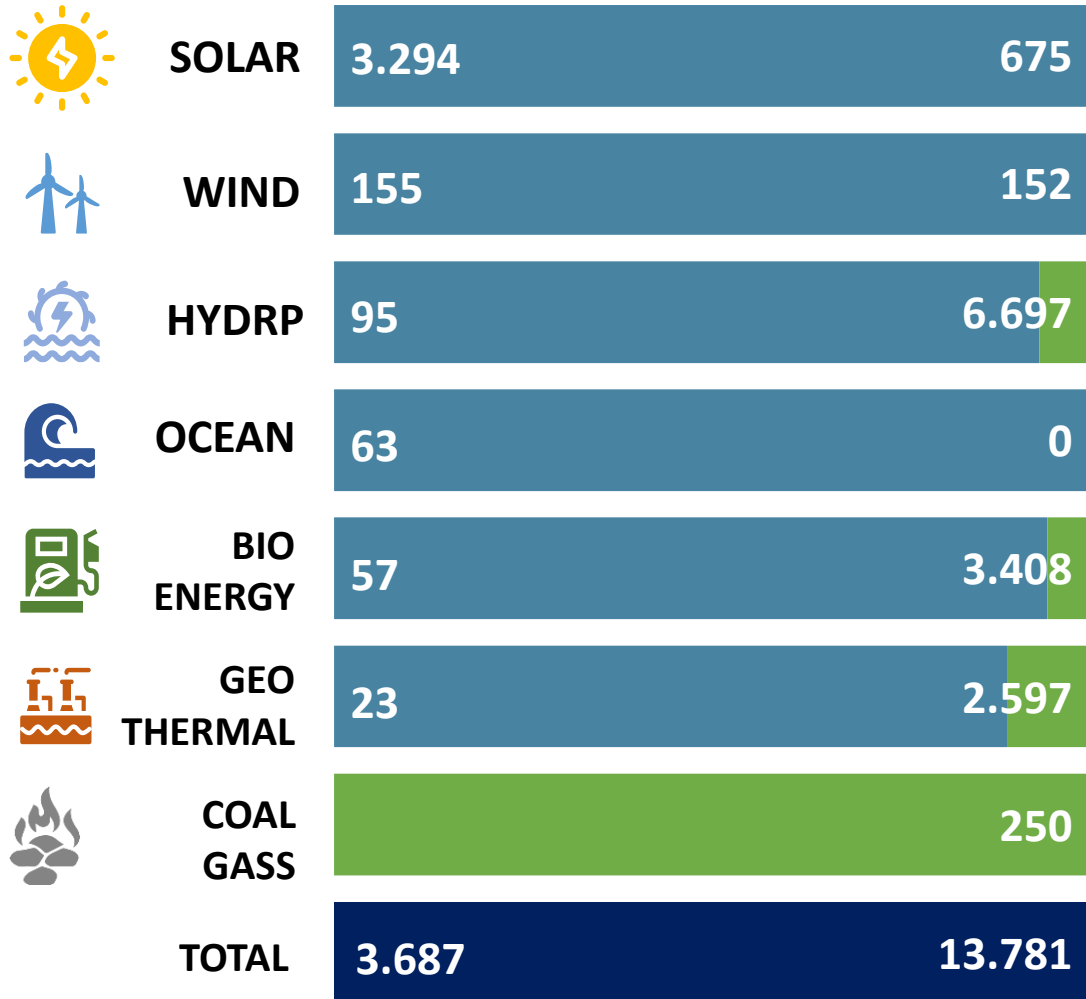
Floating PV Cirata, 192 MWp
in West Java

POTENTIAL & UTILIZATION OF NEW AND RENEWABLE ENERGY

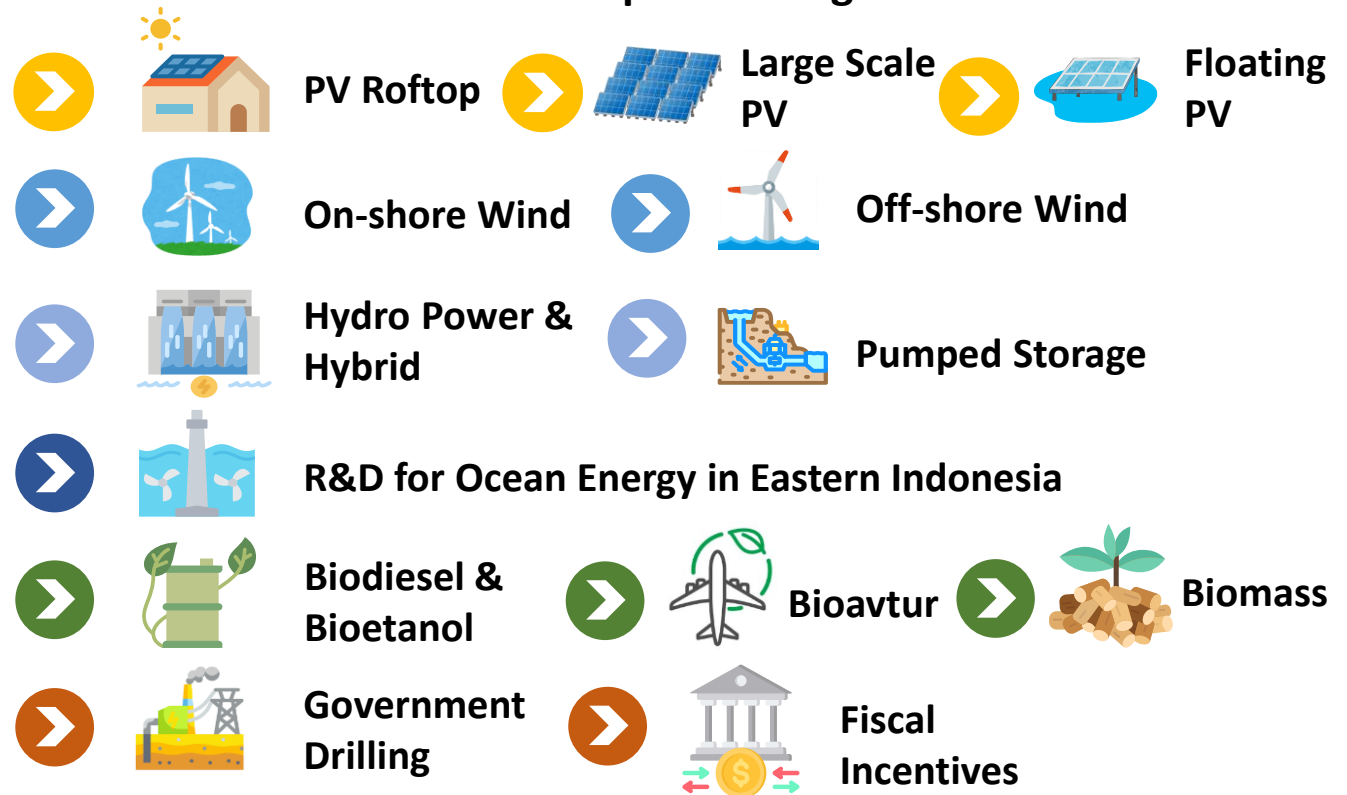


Indonesia has **large and diverse** renewable energy potential to support national energy security and achieve renewable energy mix target

Potential (GW) Utilization (MW)*



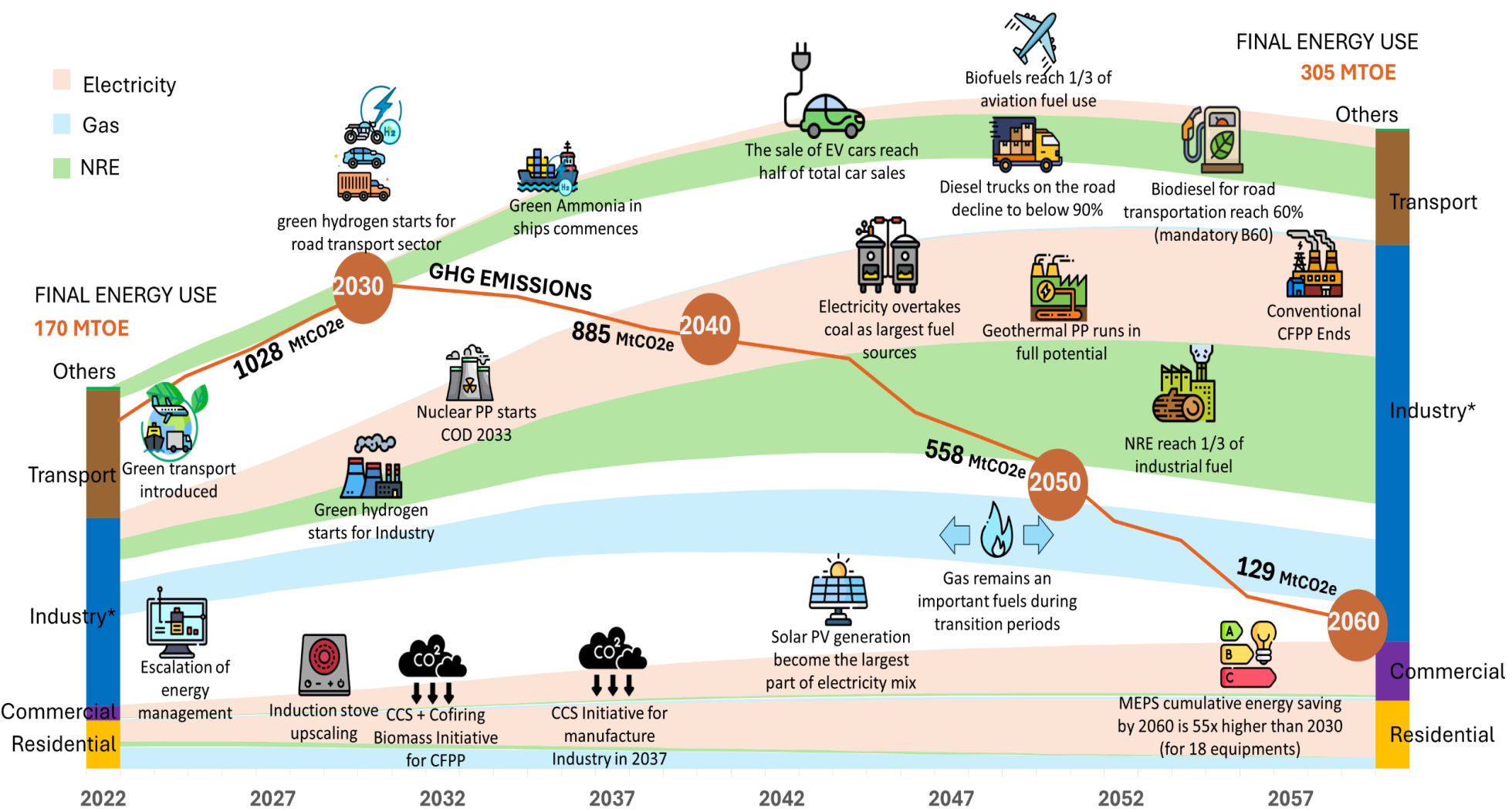
Development Program



0,3%

New & Renewable Energy that currently utilized

NZE ROADMAP FOR ENERGY SECTOR

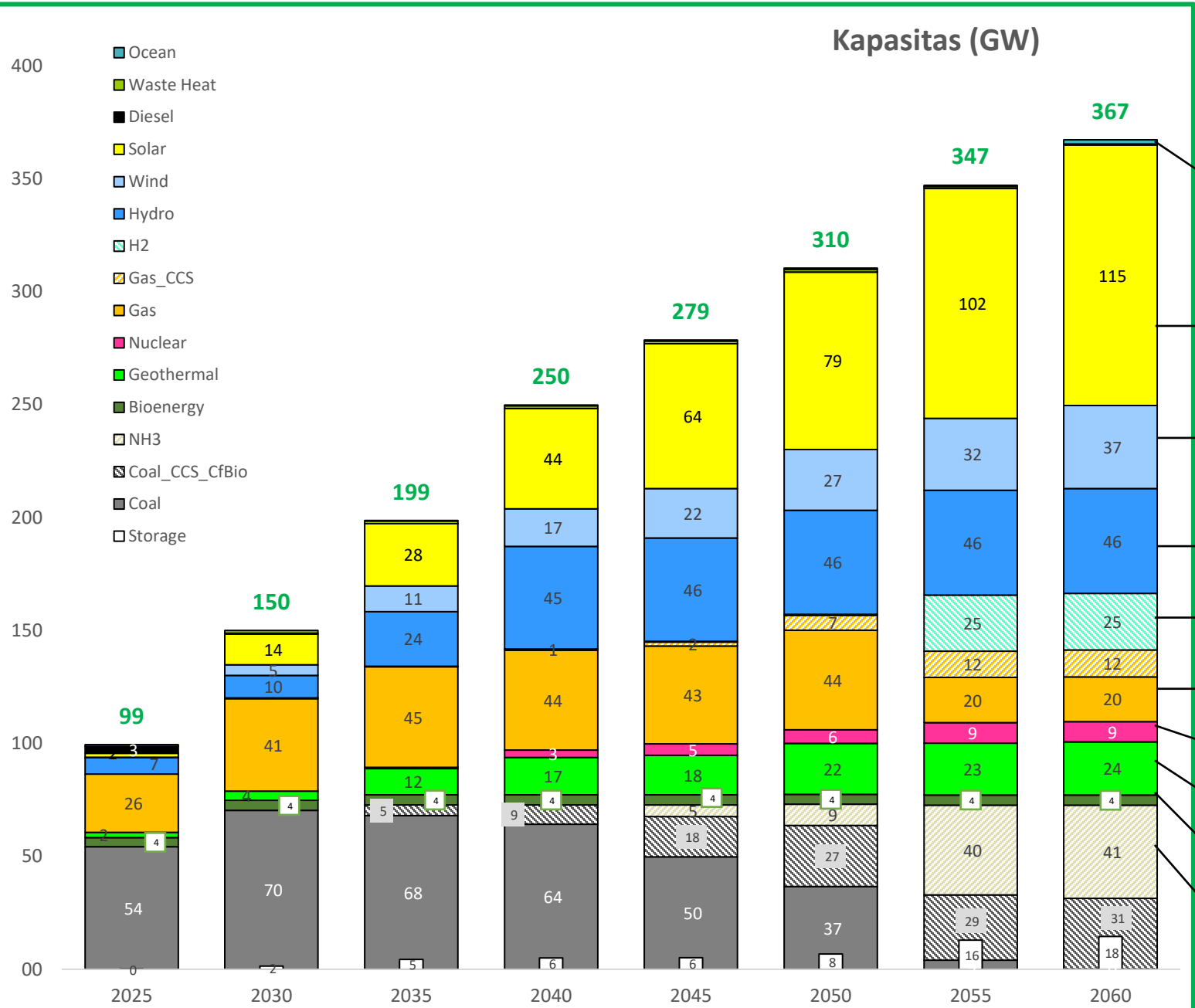


*Note: Industrial fuels and feedstock (non-energy use).

STRATEGIES TO ACHIEVE NZE 2060

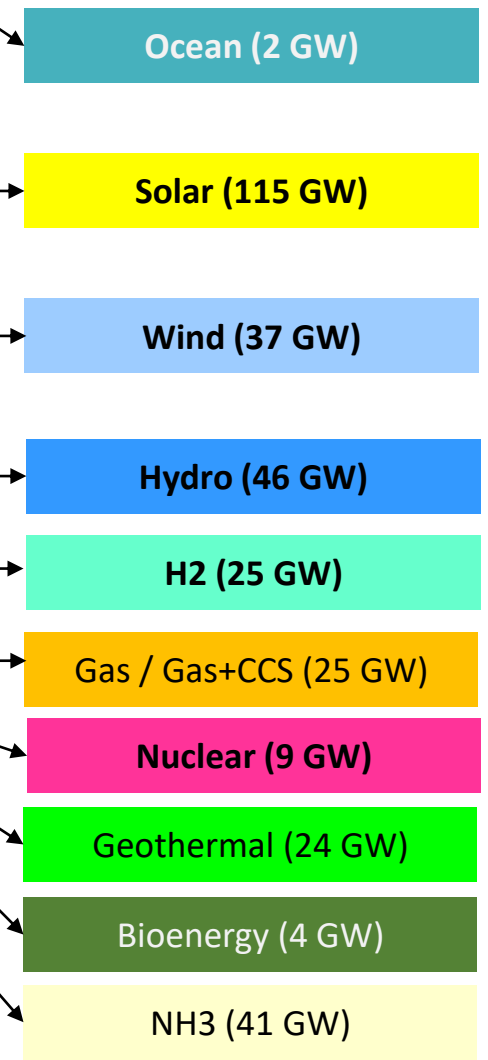
- 1 Energy Efficiency**
- 2 Electrification** (EV, electric for cooking, agriculture, etc)
- 3 Moratorium for New Coal-Fired Power Plant & coal phase down**
- 4 Renewable energy** (on-grid, off-grid & biofuel)
- 5 New Energy** (nuclear, hydrogen, ammonia)
- 6 CCS/CCUS**

DRAFT ROADMAP OF ELECTRICITY SUPPLY



Installed Capacity (DMN) 2060 is 367 GW consist of

- **42% VRE with storage 18 GW**, and
- **58% Non VRE (dispatchable)**



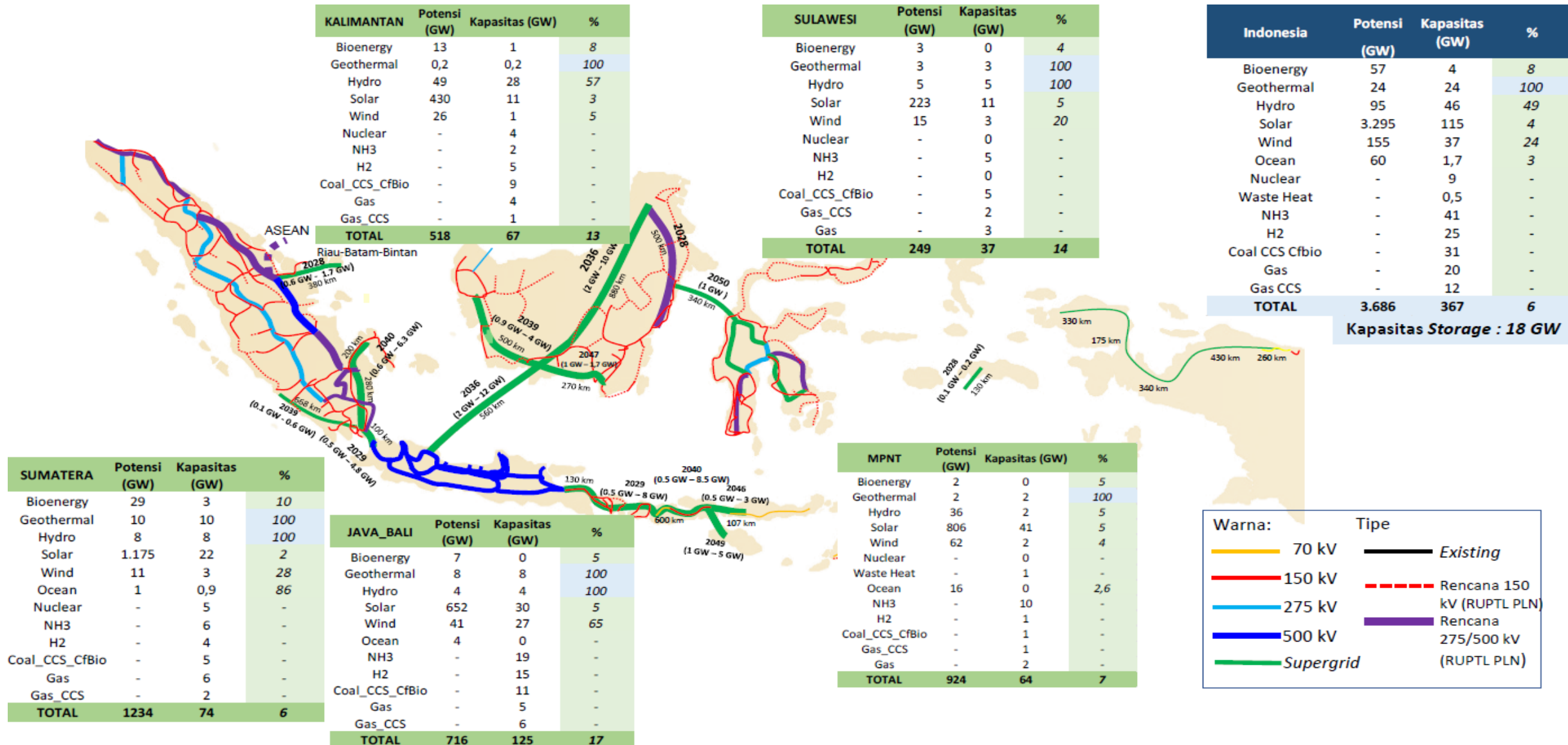
**VRE
42%**

**Non
VRE
58%**

Disclaimer: draft for discussion only

SUPERGRID AS KEY TO ENERGY TRANSITION TOWARDS NZE 2060

“The Supergrid would allow for more resource sharing between systems and higher penetration of VRE, including Solar”



Advancing Innovation and New Energy Development

Hydrogen



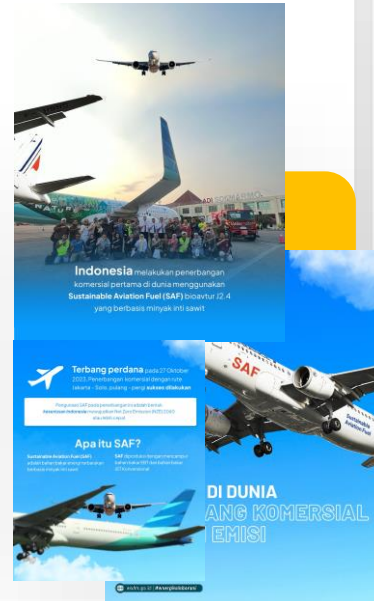
Hydrogen is projected to start growing after 2030, with wider uses including hydrogen vehicles (fuel cell or synthetic fuel), power generation, and as energy storage.

Hydrogen will also be used as part of decarbonization efforts in hard to abate sectors (shipping, aviation, steel production, manufacturing, long distance transportation).

SAF (Sustainable Aviation Fuel)

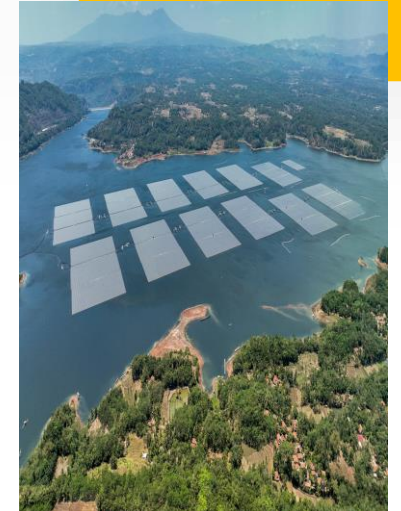
Indonesia successfully conducted the world's first commercial flight using Sustainable Aviation Fuel (SAF) *bioavtur* J2.4 based on palm kernel oil on October 27, 2023 on the Jakarta-Solo route.

The SAF is produced by blending bio-based fuel and conventional JET fuel. This flight is a form of Indonesia's seriousness to realize Net Zero Emission (NZE) 2060 or sooner.



Floating PV

Last year, Indonesia has officially developed 192 MW floating solar PV in Cirata Dam, making it the third largest globally.



The success of Cirata floating solar PV project opens wide opportunities to be replicated. In Indonesia, the total potential for floating solar PV on dams and lakes is estimated to reach more than 89 GW in 293 locations



TERIMA KASIH

Sidrap 72 MW Wind Energy
in South Sulawesi