CASE for Southeast Asia

On behalf of
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
of the Federal Republic of Germany

Energy Transition Status in Indonesia

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Energy Transition is more than just building renewables

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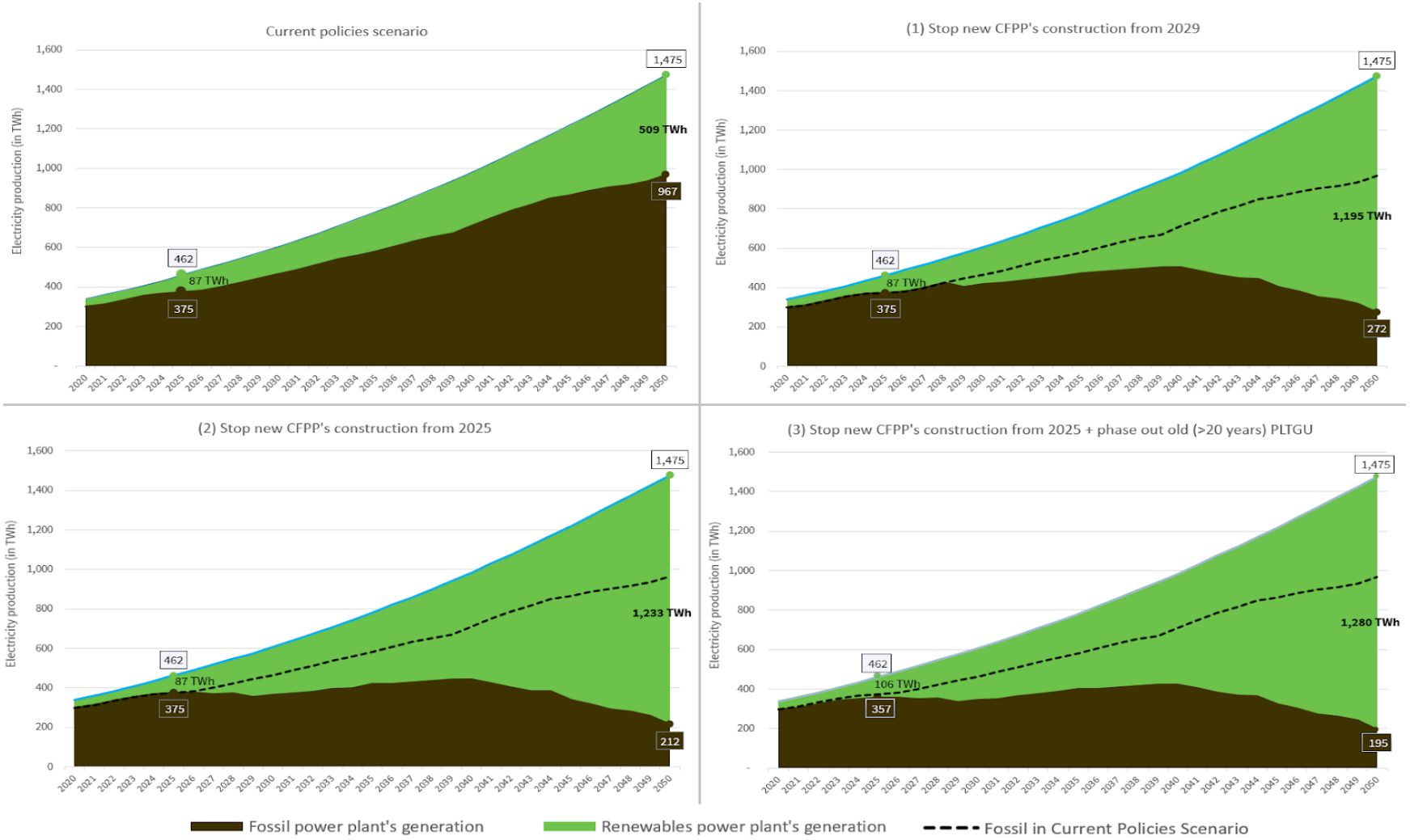
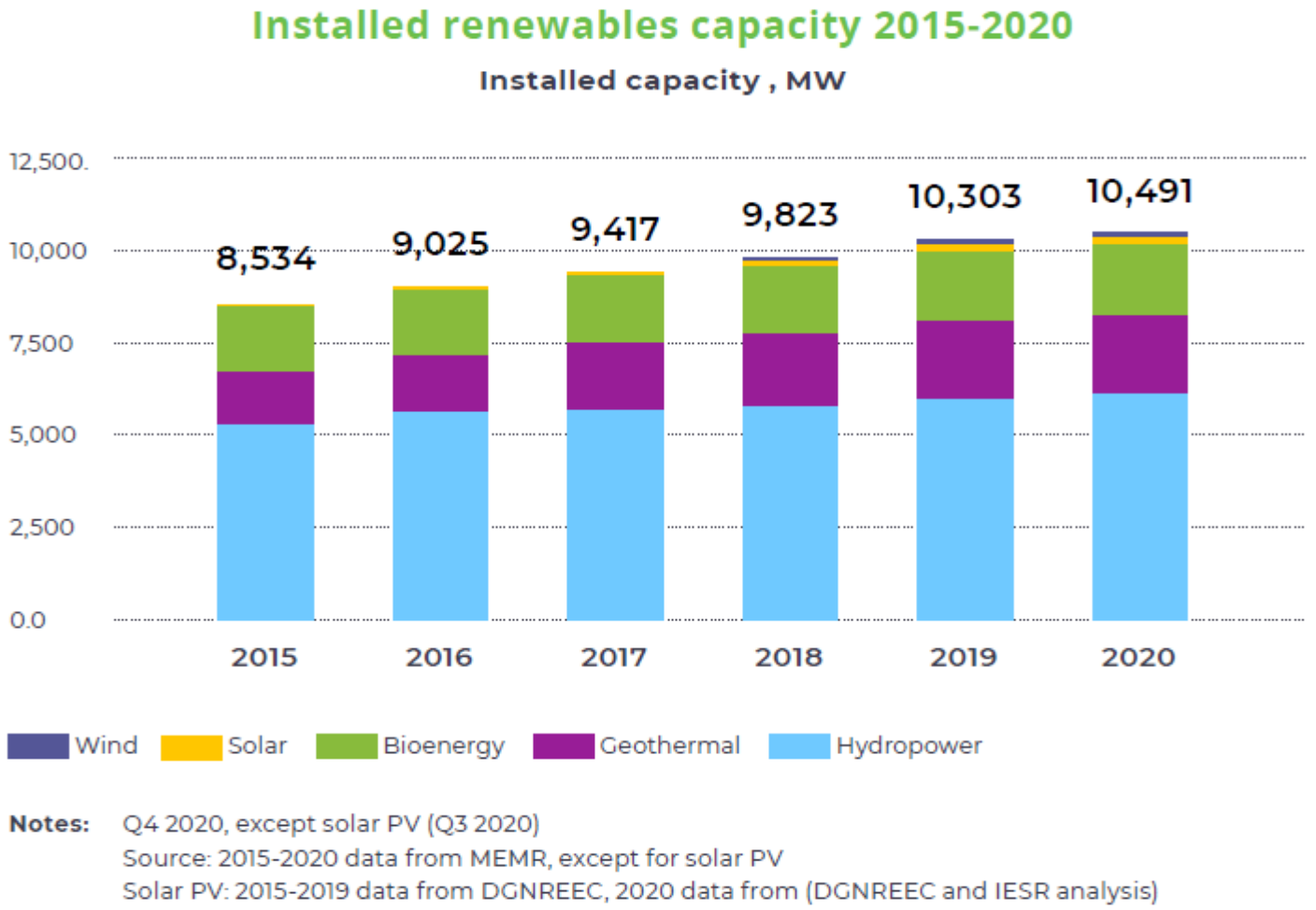


- Under IESR's energy transition scenario[1], renewable energy mix and installed capacity will increase significantly from the time period when there is no new coal-fired power plant (CFPP) is built and all CFPPs older than 30 years are phased-out.
- Renewable energy contribution to the electricity generation will gradually increase with the reduction of fossil fuels installed capacity, with renewable energy generation reaching 1,280 TWh (out of a total of 1,475 TWh) in the third sub-scenario in this energy transition scenario.

[1] IESR (2020). RUEN Report.

Renewables installed capacity only grew 187.5 MW in 2020



- Renewable installed capacity grew modestly in 2020, mostly from hydropower, followed by solar at 28.8 MW.
- Solar capacity installation comes mainly from rooftop solar installation and 2017's IPP projects that came online last year.
- Total renewable installed capacity in Indonesia by 2020 reached 10,491 MW, a 1.8% increase yoy.

Source: IESR (2021). IETO.

Renewables electricity generation until first Semester 2020 increased by 2.9%

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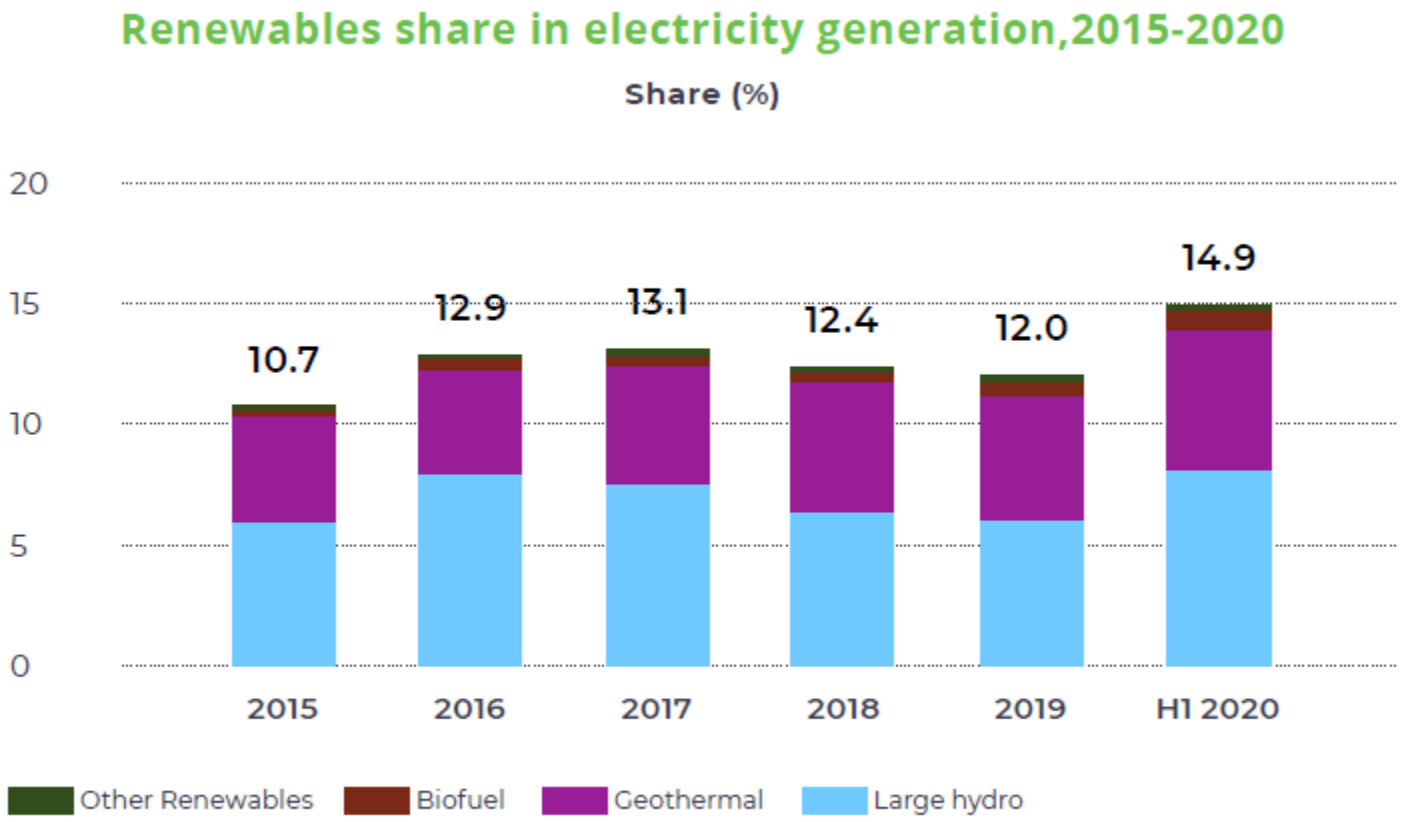

Source: **MEMR (DGE and DGNREEC); IESR Analysis**

- The share of renewable energy in electricity mix increased to 14.9% by semester I 2020, driven by mainly the increased generation from hydropower, and less significantly geothermal.
- Despite increase in renewables share, Indonesian electricity generation is still dominated by fossil fuels. Until first Semester 2020, coal-fired power plants share was 64.3%, followed by gas at 17.8% and diesel at 3%.

Source: IESR (2021). IETO.

Tremendous PV resources is yet to be tapped to increase Indonesian renewables adaptation

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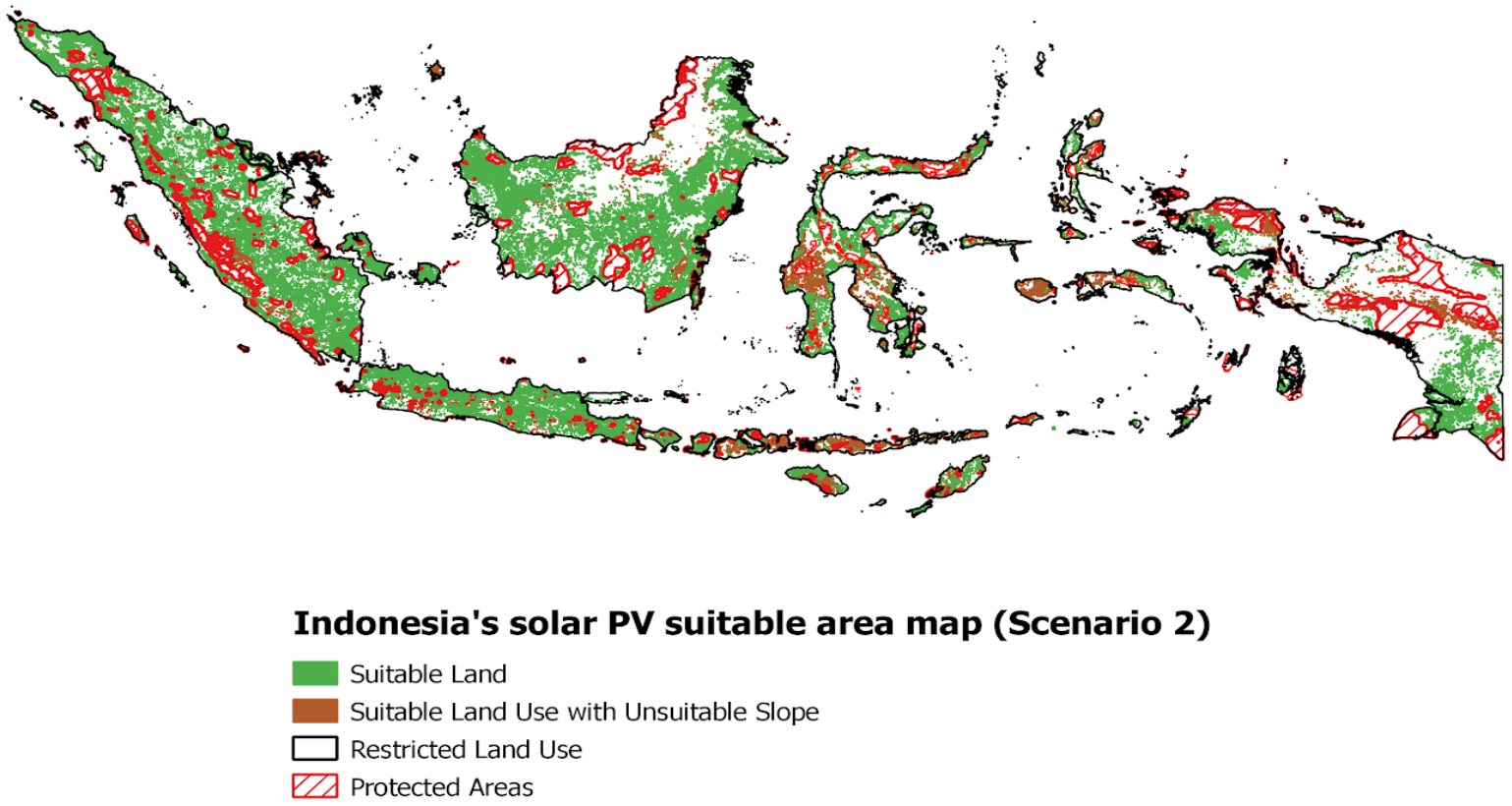
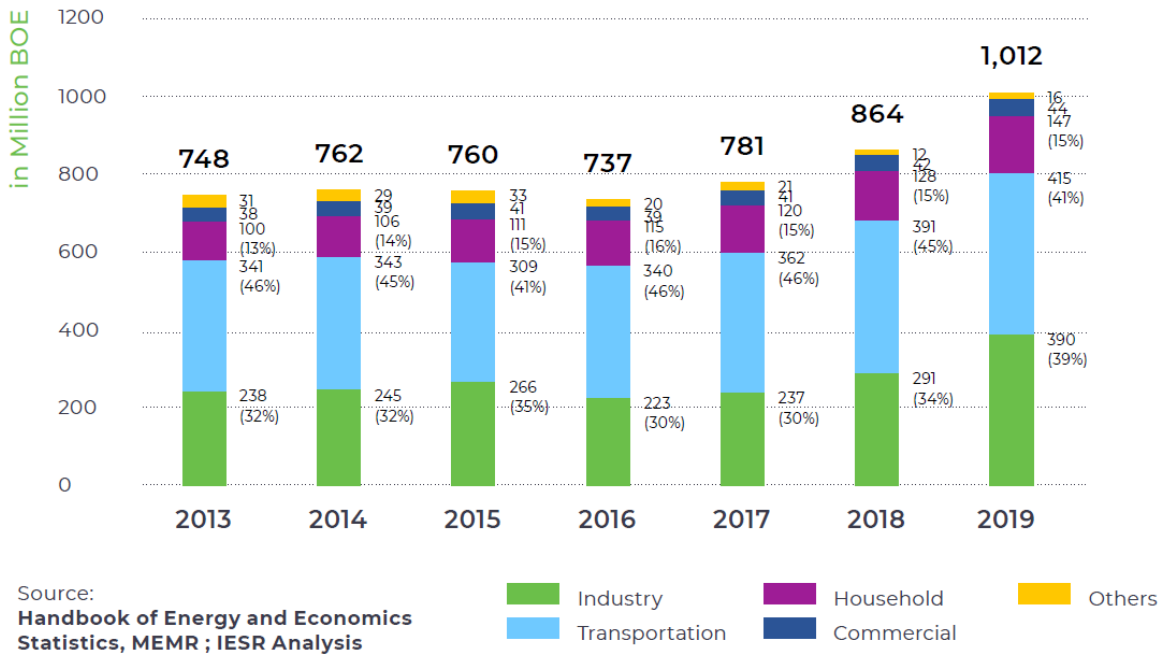


- Under Scenario 2 in IESR report on solar PV technical potential for Indonesia, Indonesia has a potential of 7,700 GWp solar PV with yearly generation at 10,508 TWh/year.
- These capacity and generation are produced from a total area of 187,806 km2 or 9.85% of the total Indonesian land mass.

NOTE:
Scenario 2 calculated areas are dry shrub, savanna, bare land, mining, transmigration and settlements.

Source: IESR (2021). Beyond 207 Gigawatts: Unleashing Indonesia's Solar Potential to Join The Gigawatt Club

Energy efficiency sector's homework : From reducing transportation sector consumption, updating and introducing MEPS to tapping green building potential.



Source:
Handbook of Energy and Economics Statistics, MEMR ; IESR Analysis

- Indonesia energy intensity increased from 2017-2019, largely due to the increase in the transportation sector.
- Despite increase in renewables share, Since 2018, MEMR started the extensive discussions to increase Minimum Energy Performance Standards (MEPS) for Air Conditioners and introduce MEPS for other appliances. Nevertheless, there were no further updates until the end of December 2020.
- Huge potential of achieving energy efficiency target through green building concept is wasted, primarily due to funding shortfall and lack of monitoring and implementation.

Source: IESR (2021). IETO.

CASE Indonesia Analysis (2020):
Challenges to Decarbonize the Power Sector

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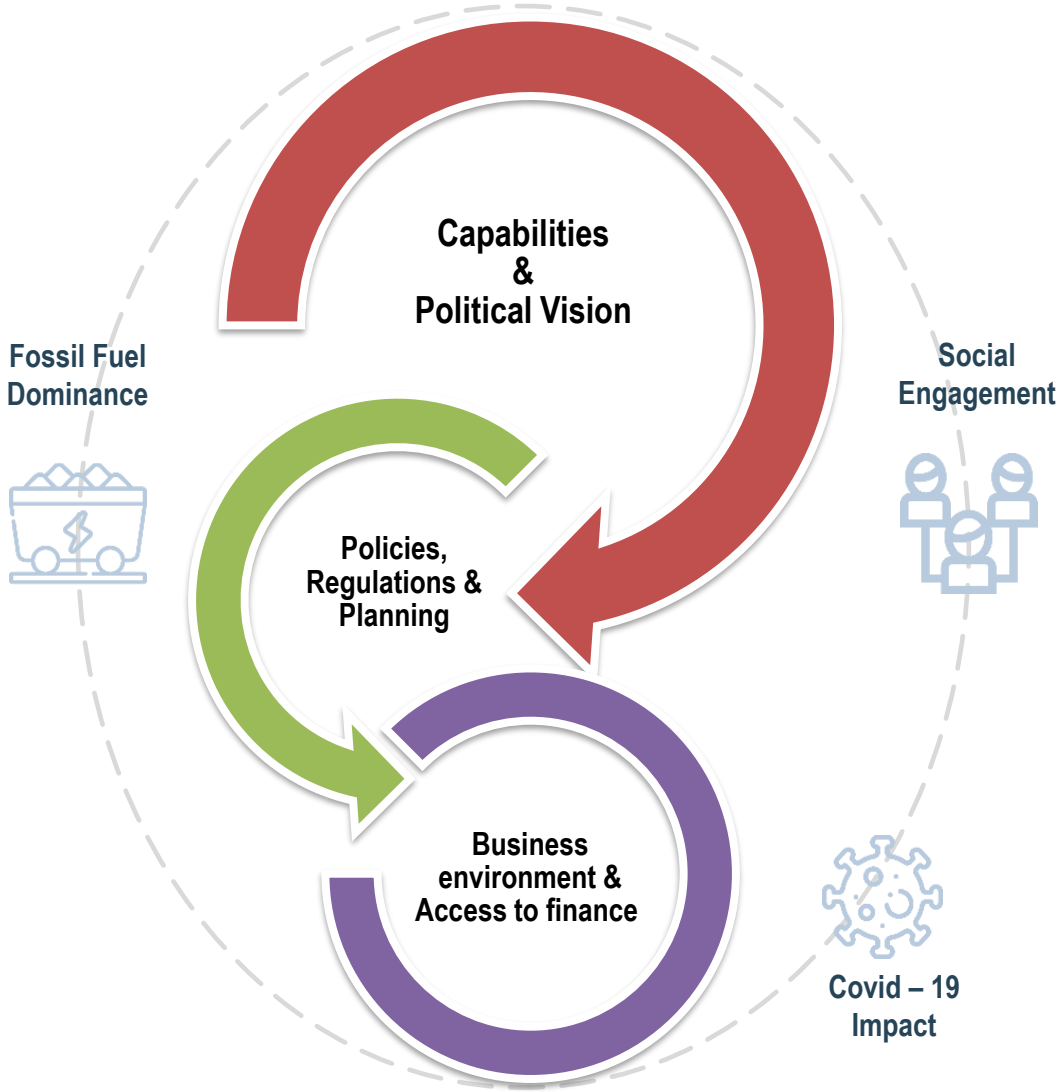

- Stakeholder's **knowledge & awareness**
- **Sector coordination and dominant sectoral agendas** in the Energy Transition

- Cross-sector **alignment & consistency** of policies and strategies
- Fossil fuel **dominance** and infrastructure **lock-in;**
- Inclusion of energy transition in **Green recovery**
- Consideration and technology application **decentralized RE** options

- **Access to finance**
- **Low ease of business making & insufficient business environment**

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Contact Us

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