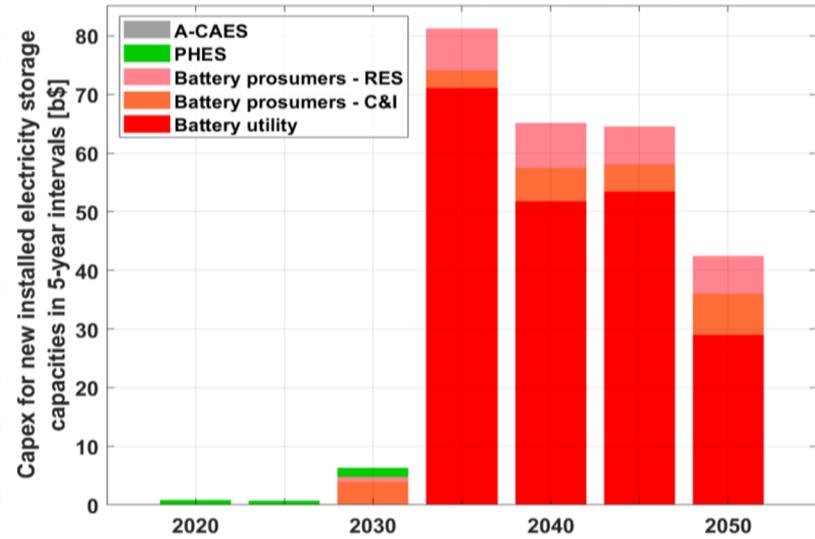
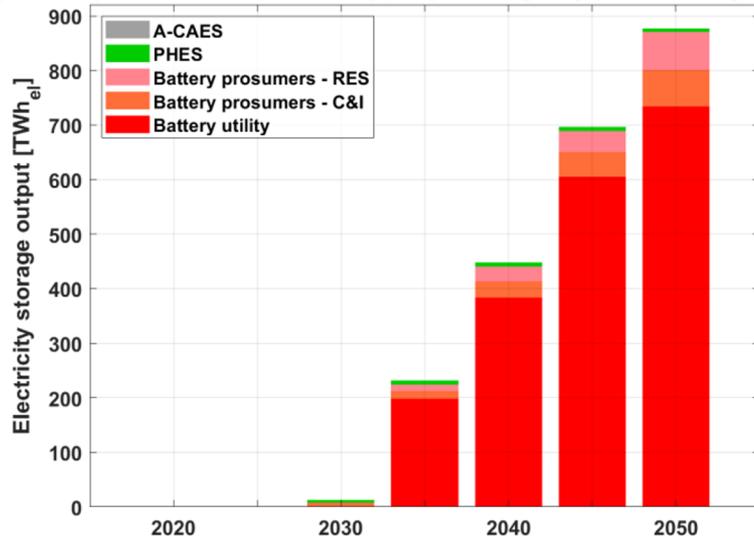


# Battery Energy Storage System (BESS) market di Indonesia

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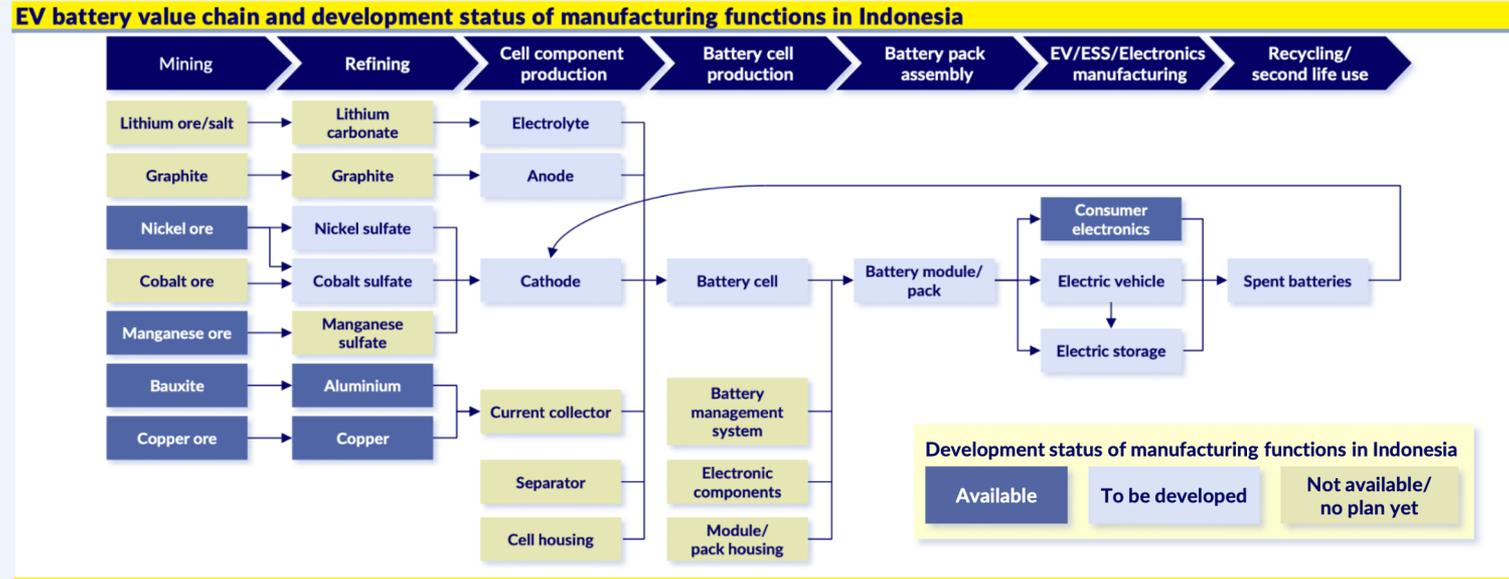
RE Invest Indonesia  
Jakarta, 20 April 2021

# Utility-scale and prosumer batteries play a major role in enabling the transition towards 100% renewables and zero GHG emissions by 2050



The need for storage increases from 2030 onwards with capex of electricity storage grows to around USD 82 billion in 2035 and further declines to USD 42 billion in 2050.

# The Indonesian gov't's efforts in establishing the battery industry supply chain



Source: CLSA, 2021

- Mineral ore export ban reinstatement** (in Jan 2020) has accelerated Indonesia's nickel downstream industrialisation and led the formation of strategic ventures in stainless steel and EV battery productions

# The first utility-scale solar + storage to replace peaker generation is in the pipeline



## Power sector: Solar PV + storage project

### Indonesia Power's Hijaunesia "equity partner" auction:

- **100 MW solar + storage project in Lampung**
- **Winning bid: 0.09075 USD/kWh** (IJGlobal, 2020)
- **Battery capacity:** Undisclosed

### Other potential application: PLN's de-dieselization 5,200 units with a total of ~2 GW until 2024

- **First phase: 300 MW in 200 locations (announced)**
- **Second phase: 300 MW** (undetermined)
- **Third phase: 1500 MW** (undetermined)

# Market readiness: Recommendations for developing BESS market

Create a subsidy or incentive program for energy storage application for grid-connected solar PV system

Examples in Germany:

## KfW-BMU's Renewable Energy Storage Program:

- The program **aims to encourage further technical development of solar + storage installations and to increase their market penetration**
- Started in 2013, **provides low-interest loan and repayment subsidies.**
  - **Financing (loan) is available up to 100%** of the eligible net investment costs
  - **Subsidy amounts to a max 30%** of the total investment cost
- **Initial run:** May 2013 – End of 2015
- **Second run:** 2016–2018 (incl. degressive level of repayment)

## Brandenburg's home storage incentive program "1000-Speicher-Förderprogramm"

- **Aims to support private individuals in increasing own consumption from solar, while relieving the burden on the power grid** in the state of Brandenburg.
- Solar-home storage with a capacity of 2 kWh will be subsidized
- Subsidy consists of a non-repayable loan covering up to 50% of the investment, for a maximum of €7,000
- Program runs between March 2018 – December 2022

# Terima Kasih

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