

## However, PLN is committed to energy transition and net zero emissions by 2060 while sustaining growth

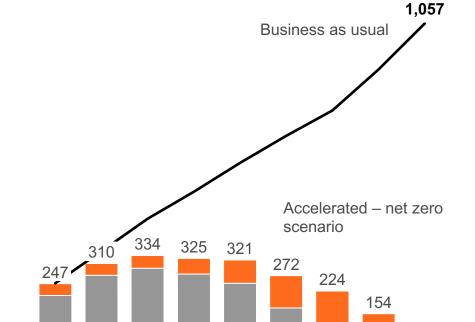


## Proyeksi CO2 sektor ketenagalistrikan, juta tCO2e/tahun

2020

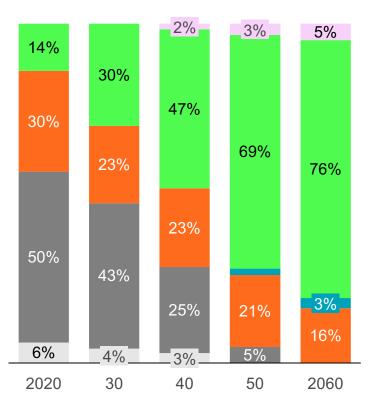
0.89

30



0.50

## Pembagian kapasitas berdasarkan teknologi untuk skenario net zero<sup>1</sup>, %







PLN is on a journey to become a clean power company

PLN will ensure that social impact will be created throughout its journey

PLN to ensure sustainable good corporate governance in the execution

50

0.21

55

2060

<sup>1.</sup> Berdasarkan kapasitas eksisting dan penambahan kapasitas dalam skenario Accelerated, dengan asumsi natural retirement

<sup>2.</sup> Gas dengan hydrogen cofiring hingga 75% pada tahun 2060 3. CCS batubara dengan biomass cofiring hingga 30% pada tahun 2060

## PLN will continue to implement all energy transition initiatives, to walk the net zero 2060 commitment



## Aspiration Net Zero emissions by 2060

Shift away from high carbon power generation

(A)

### Short-term (2021-30) goal: Deliver on NDC

Renewables

De-dieselization

Coal plant retirement<sup>2</sup>

Biomass co-firing

Energy efficiency & grid loss improvement

Gas expansion

Clean coal

B

#### Long-term (2031-60) goal: Achieve Net Zero Emission

Renewables

- + Battery Storage
- + Interconnections

Hydrogen co-firing

Carbon Capture Utilization & Storage (CCUS)

Additional coal plant retirement<sup>2</sup>

Nuclear

Growth powered with new technologies / businesses



### Develop supporting technologies and ecosystem

**Electric Vehicles** 

Rooftop solar

Energy as a Service

REC1 / Carbon credits

Emissions trading scheme

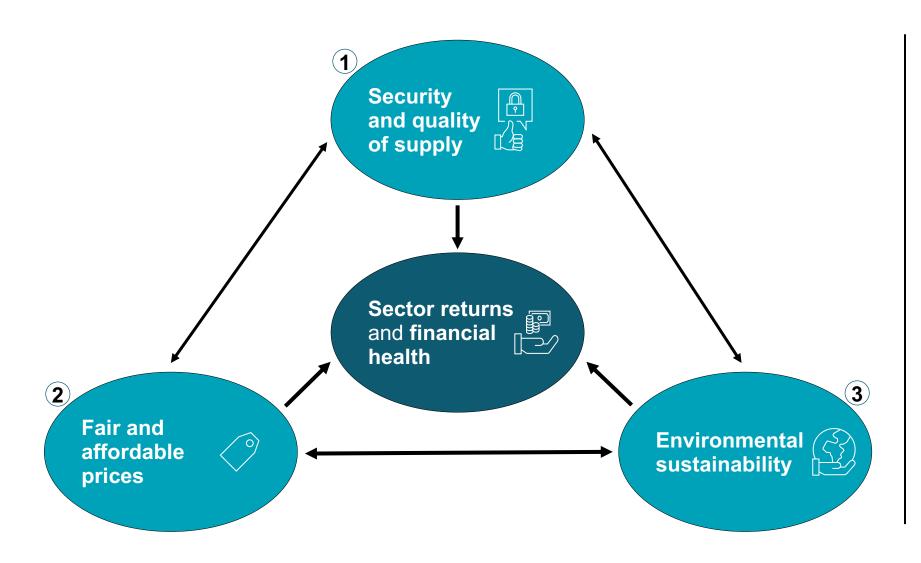


Build new internal capabilities and technologies supported by innovation, financing, and policies

More than USD 700 Bn total investment cost to reach net zero emission by 2060

## PLN needs to balance supply security, affordability, and sustainability while ensuring financial health in achieving net zero





- 1 Security of supply satisfy growing demand needs

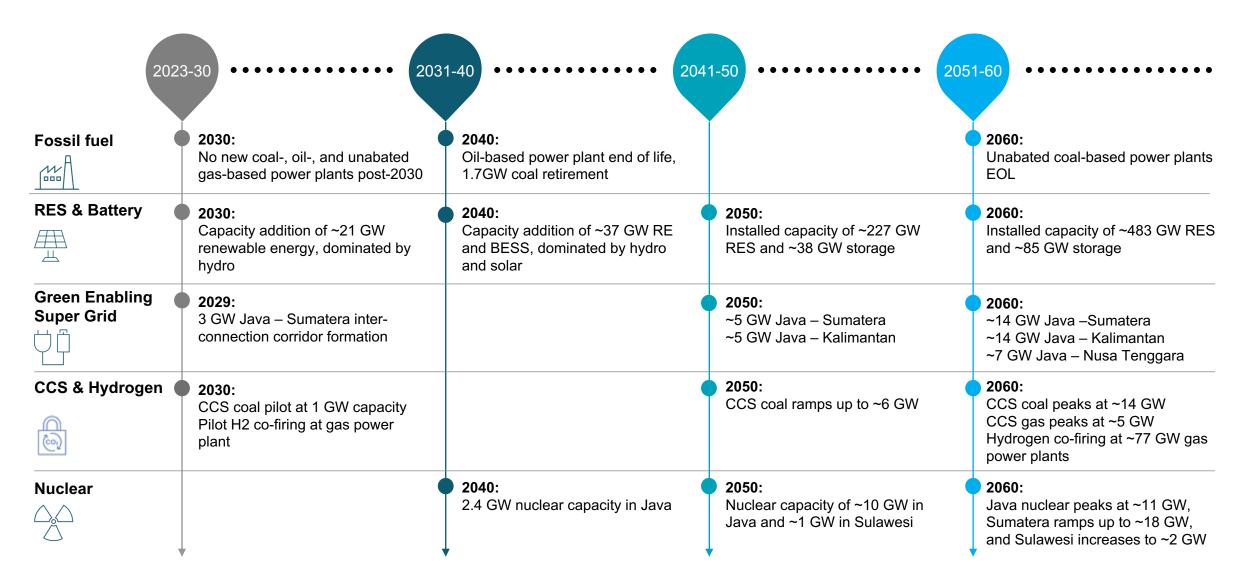
  Quality of supply improve SAIDI/SAIFI
- Consumer tariffs –
   maintain affordability
   Consumer subsidies –
   balance subsidy to vulnerable consumer
- 3 CO<sub>2</sub> emissions reduce emission

  Renewables penetration expand renewable capacity

Sector returns and financial health – ability to finance growth, repay debts, and respect covenants, while controlling subsidies and compensation requirements



### **Key Milestones for PLN's NZE 2060 Roadmap**



# # PLN