Pertamina Energy Outlook 2015

"Gas Outlook 2015 - Moving Forward"

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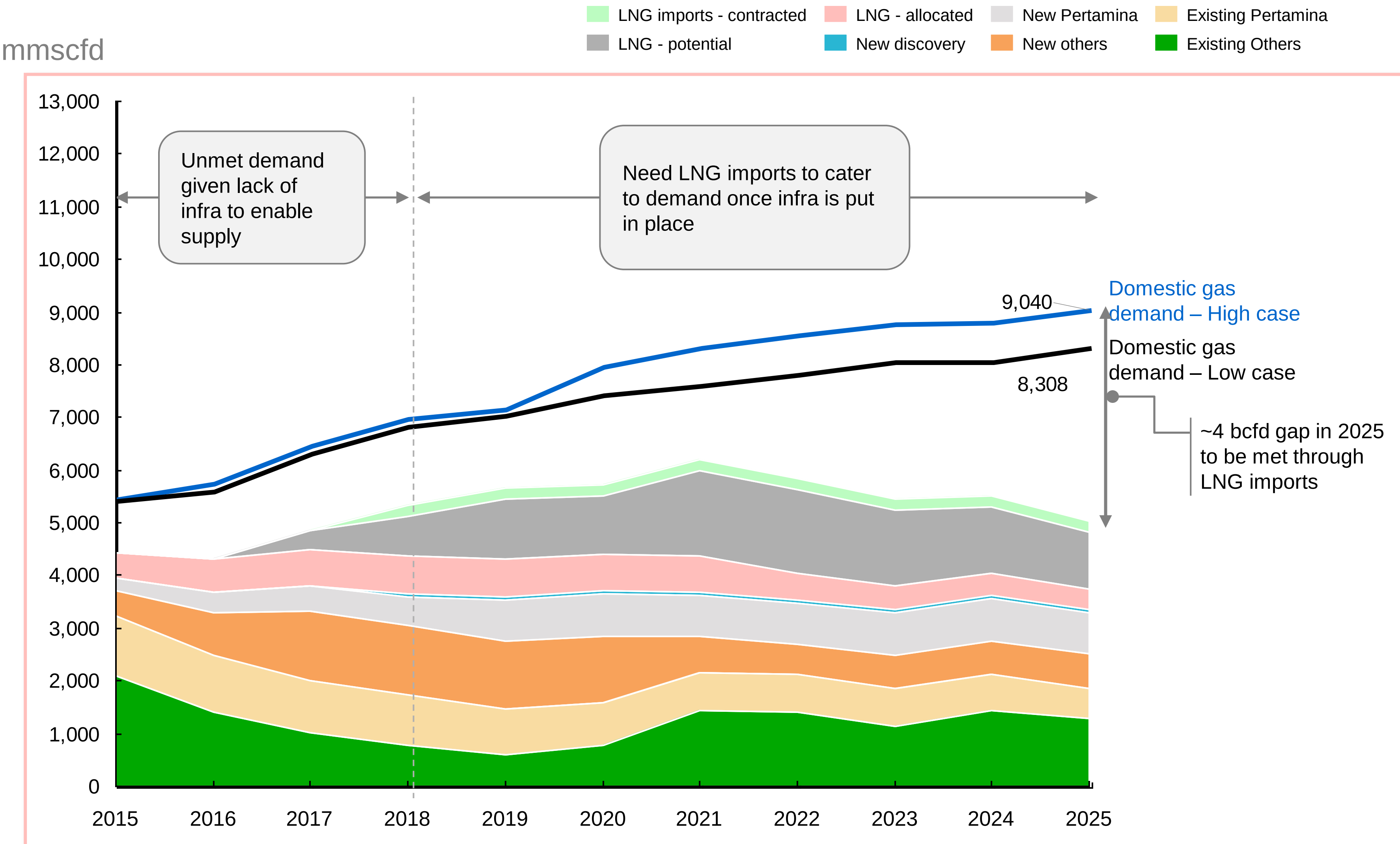
Perspective of Gas Demand in Indonesia from 2015



1 Assuming that no estimated technical reserves and new discoveries will convert to production in the future
2 Assuming LNG imports of ~210mmscfd (1.6 MTPA) from U.S started from 2018
3 Assuming excess gas supply is not exported and is available for domestic LNG use

Source: Pertamina Gas Directorate

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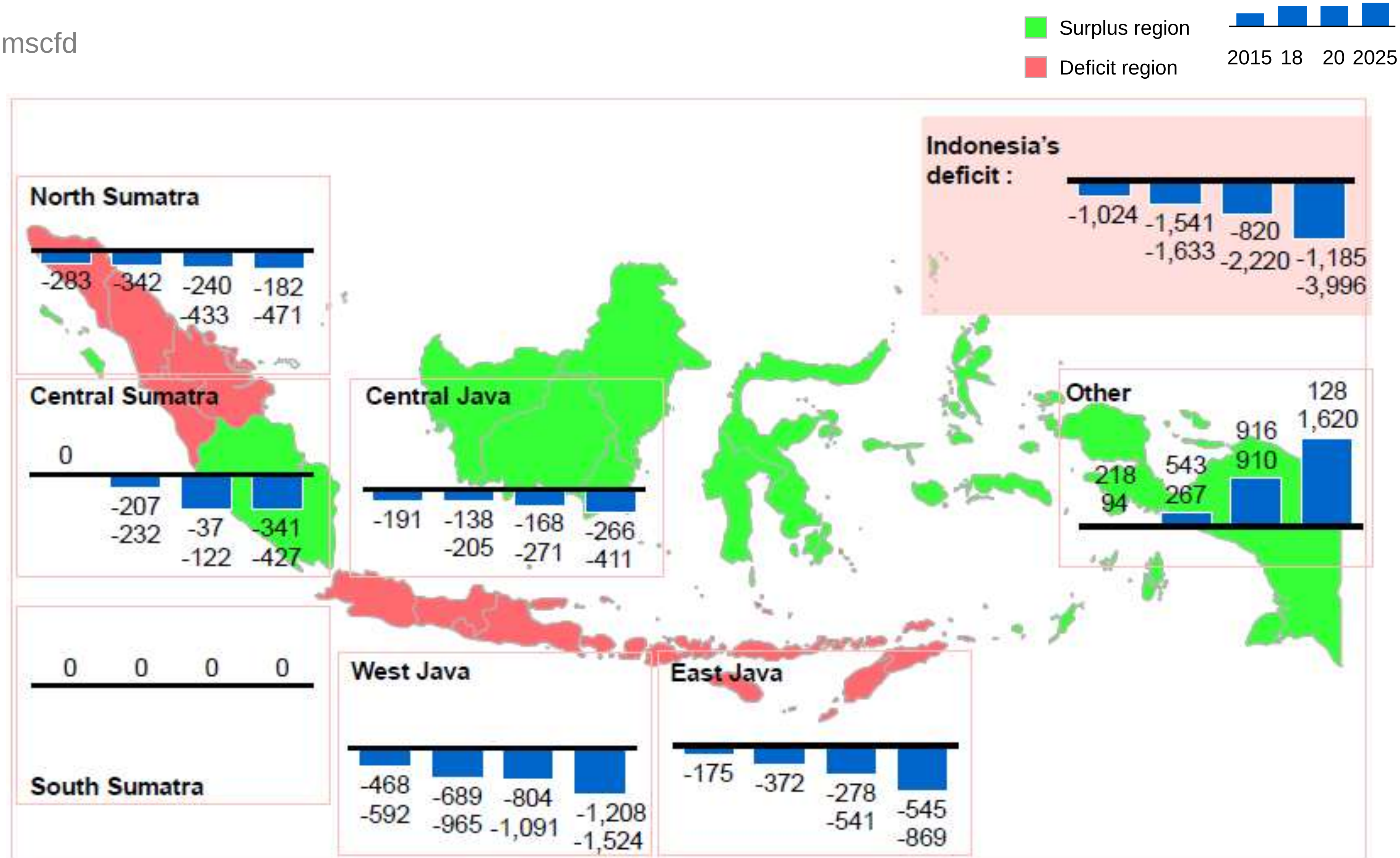
Deficit Gas in Java is Expected to be ~1.9-2.8 bcfd by 2025, with Kalimantan, Papua is Expected to Remain Surplus Regions

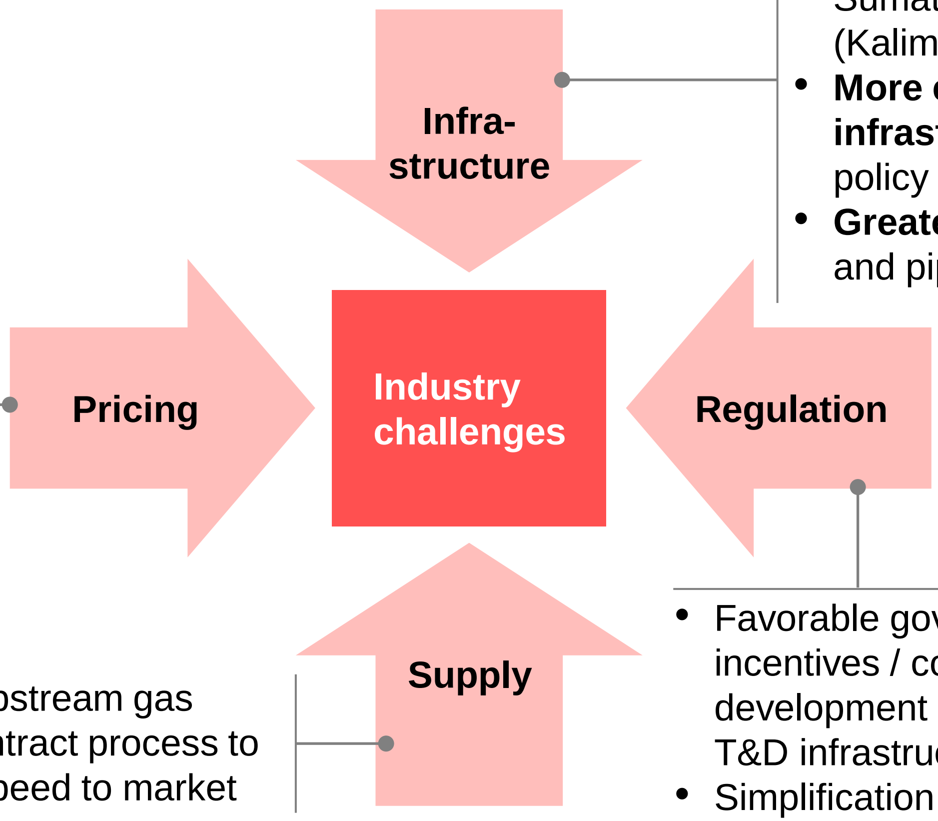
mmscfd



Indonesia will need to address key challenges to bring gas to unmet demand centers

- **Construction of new gas pipelines, liquefaction & regas infrastructure** to address geographical dispersion between demand centers (Java and Sumatra) and supply centers (Kalimantan, Papua and Sulawesi)
- **More efficient use of existing infrastructure** through national gas policy linked to industrial development
- **Greater open access** to gas markets and pipeline infrastructure

- Address disparity between domestic gas prices and global LNG prices
- Addressing fuel subsidies creating artificial barriers to adoption of gas as fuel



- Simplify upstream gas supply contract process to improve speed to market

- Favorable government policies and fiscal incentives / contract terms to support development of upstream fields and gas T&D infrastructure
- Simplification of land acquisition process for development of gas infrastructure

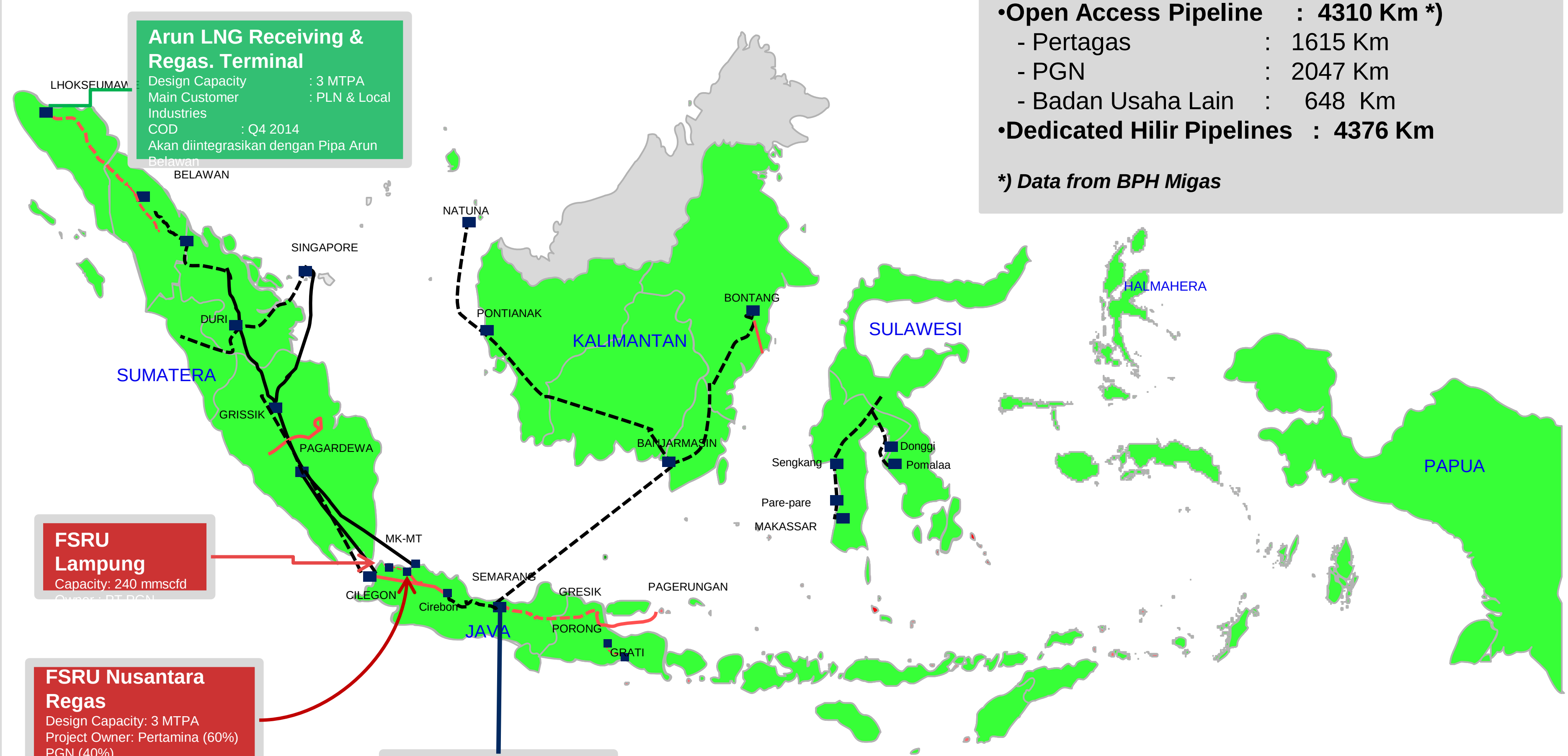
Source: Pertamina Gas Directorate

Indonesia Gas Infrastructures Network

Existing Pipelines:
•Open Access Pipeline : 4310 Km *)
- Pertagas : 1615 Km
- PGN : 2047 Km
- Badan Usaha Lain : 648 Km

•Dedicated Hilir Pipelines : 4376 Km

) Data from BPH Migas



FSRU Semarang & Mini FSRU Cilacap
Project Owner : Pertamina (100%)

■ Existing	■ Construction
■ Planning	

Open Access Transmission Pipelines:
- Existing Pielines
- Planned Pipelines
- Existing Pipelines PERTAGAS
- Pipeline PERTAGAS Under Construction

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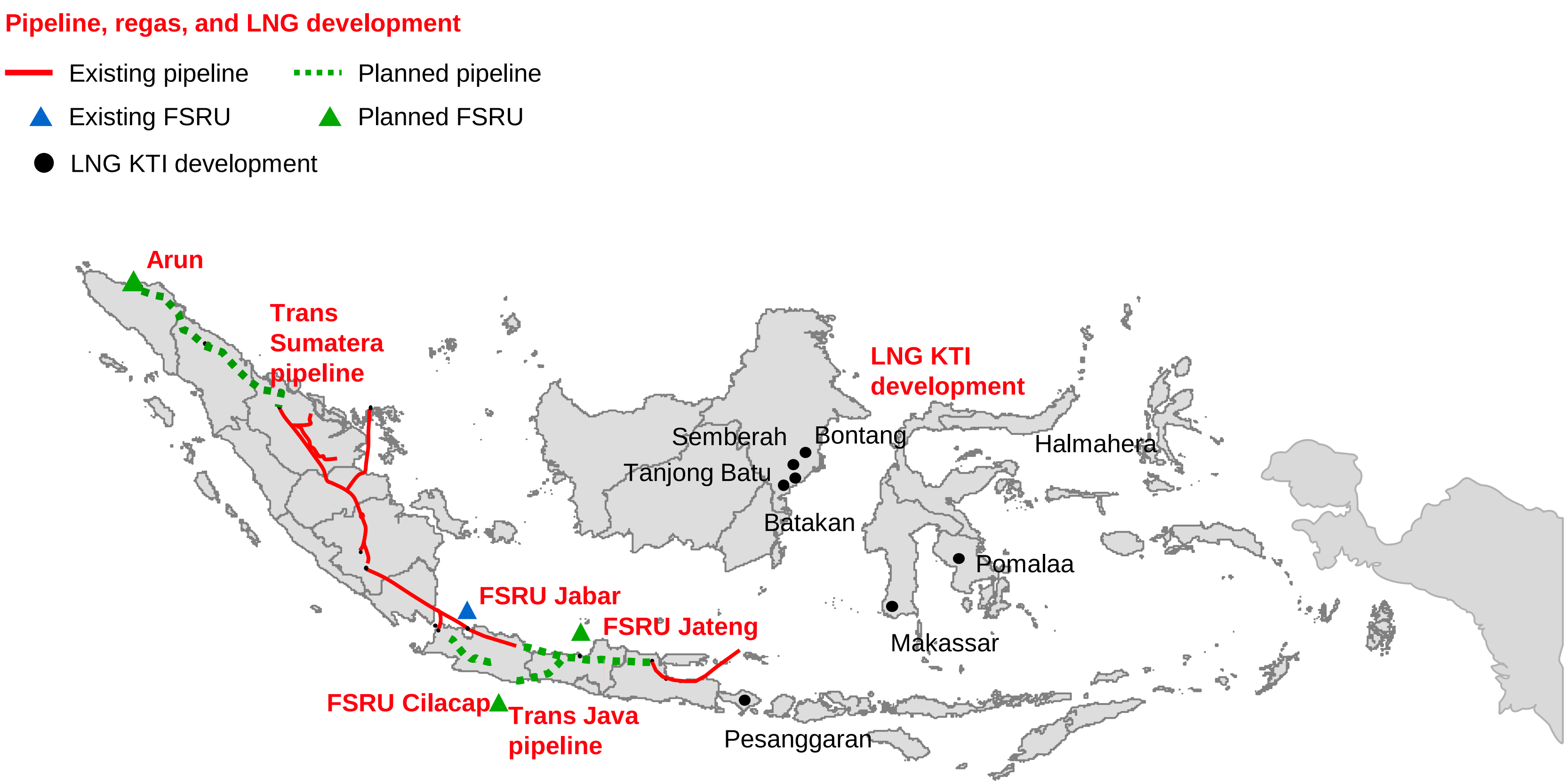
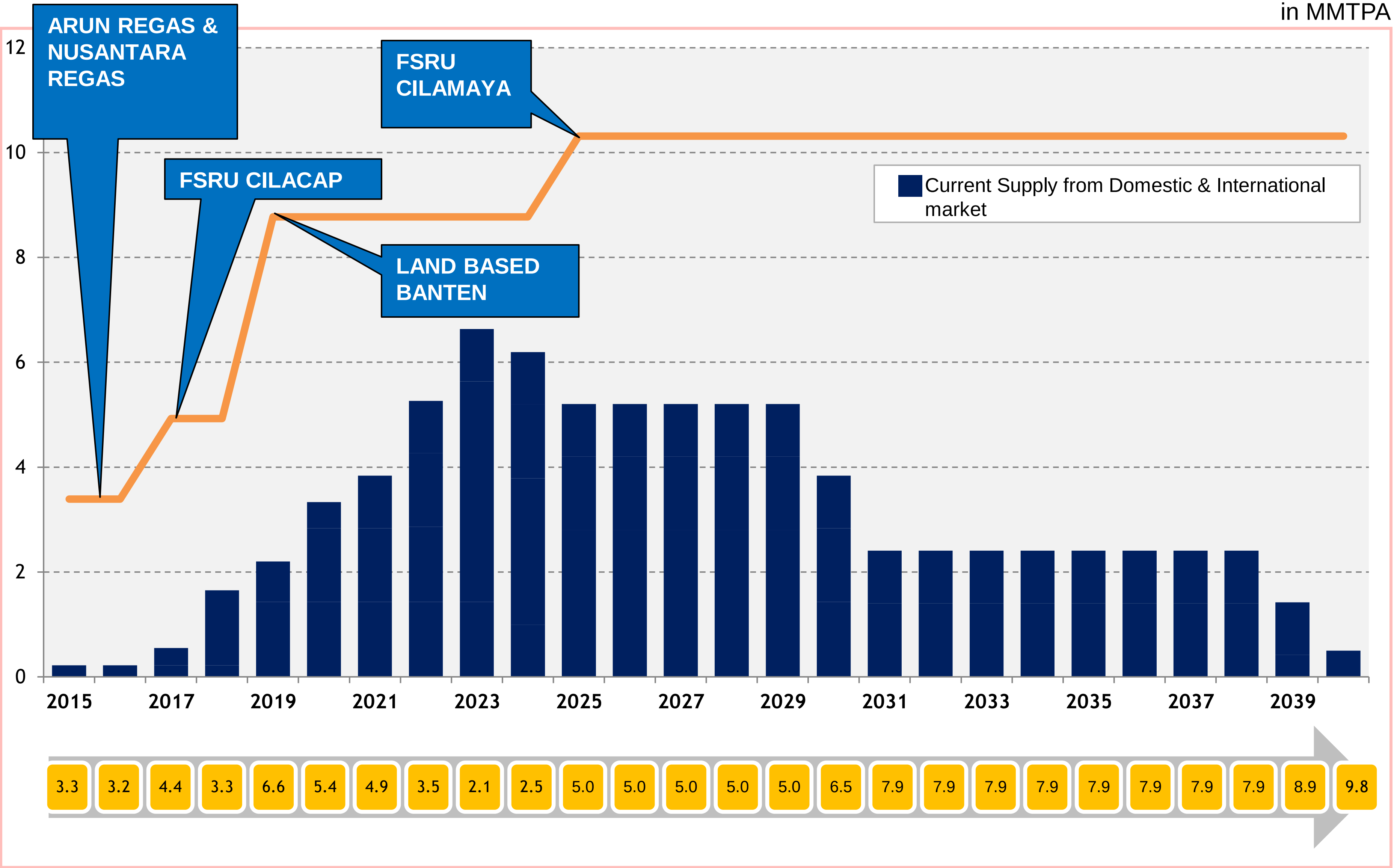
Pertamina is taking the lead in developing Infrastructure covering all major regions in Indonesia to meet growing gas demand



LNG Supply Demand Profile



Pertamina have defined the strategy to develop a 3.2 GW power business by 2025

Pertamina Power Business

i Flare and distributed gas

Monetize small stranded and flared gas sources in different part of Indonesia

- Total 40-50 mmscfd of flare gas; 4 locations offer most viable power generation opportunities – Sukowati, Tiaka, Ramba, PEPC

ii IPP (on-grid and off-grid)

On-grid IPP: Monetize upcoming gas supply through power to PLN

- Monetize new upstream gas
- Seek opportunities for monetization by mapping gas supply against deficit areas
- Build IPP to sell power to PLN

Off-grid IPP: Supply captive power to ports and industrial estates

- Partner with key players in two customer segments
  - Developers of industrial estates
  - Developers of ports

iii Solar & Geothermal

Small distributed solar opportunities

- Two opportunities in solar
- Monetizing steam from upstream Geothermal assets

iv Other potential

Future long term potential

- Look for technology development/ work closely with upstream on monetizing CBM assets
- Explore captive power for refineries
- If the JV company is spun off, could potentially get into coal fired power plants

Source: Pertamina, team analysis

Conclusions

- Indonesia is expected to have **up to 4 bcfd of deficit in gas by 2025** (low supply case)

- Based on current plans, **Pertamina will handle more than 13 MT of gas supply** over the next 10 years for domestic markets

- Gas supply will flow from **a portfolio of domestic and international gas assets**

  - **Pertamina is securing gas supply,** preferably on long term basis, with flexible terms and conditions

- **Structural challenges** relating to development of gas infrastructure, gas pricing, supply side processes and regulation need to be urgently addressed

- **Pertamina is building substantial gas processing and inter island transport infrastructure** across Indonesia to address infrastructure constraints

Source: Pertamina Gas Directorate

Thank You

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