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Infrastructure Reimagined and Delivered

Industry Strategy for Gas-to-Power Market Development

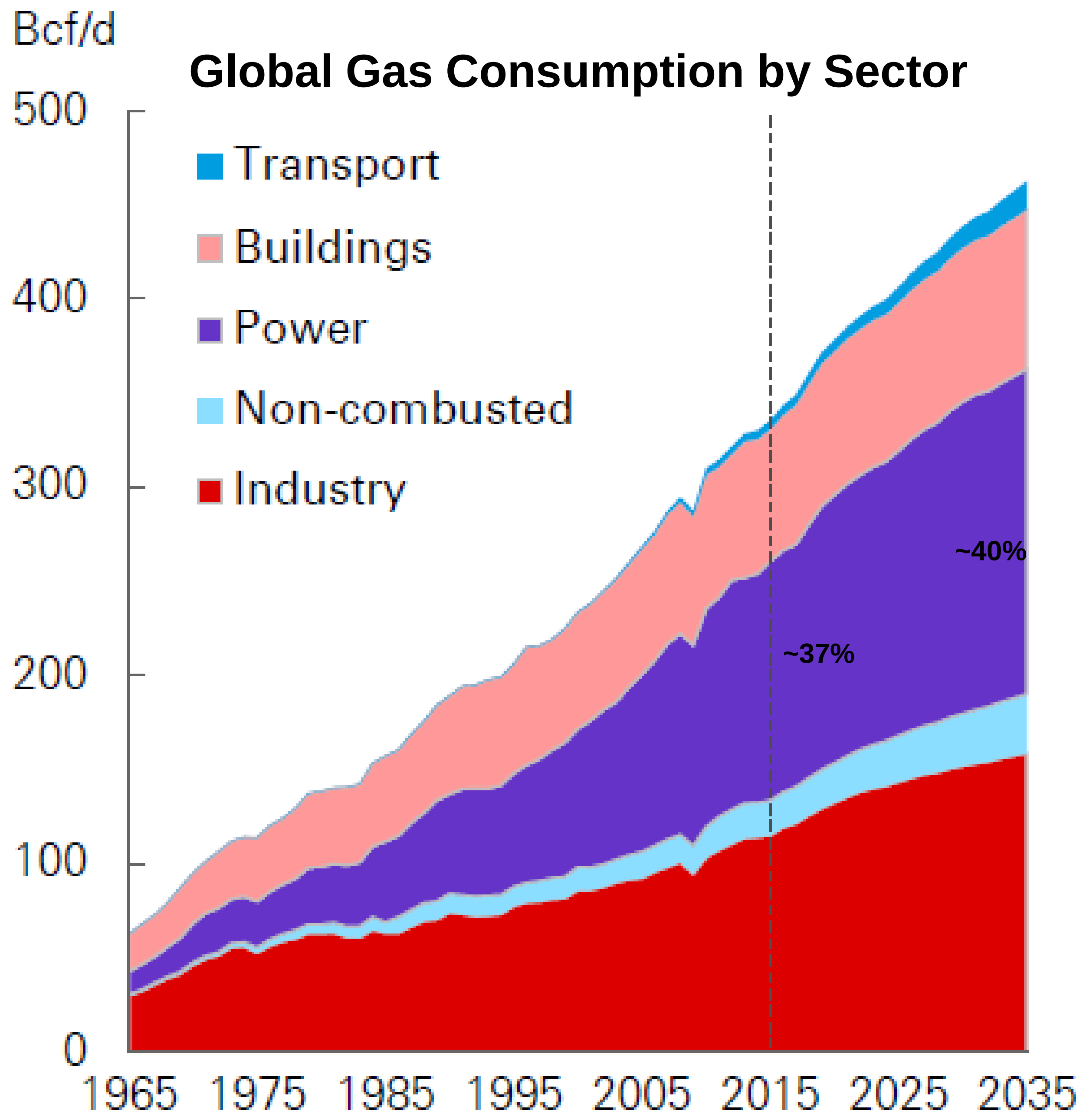
Mr. Karthik Sathyamoorthy, AG&P LNG Marketing

January 24, 2018

Agenda

1	Power sector – a key driver for gas demand
2	Liquid fuel to gas switching
3	Emerging need for gas demand aggregators
4	AG&P's approach to gas demand aggregation
5	AG&P is establishing a hub and spoke business model
6	Key takeaways

Power sector continues to be the key driver for growing global gas demand

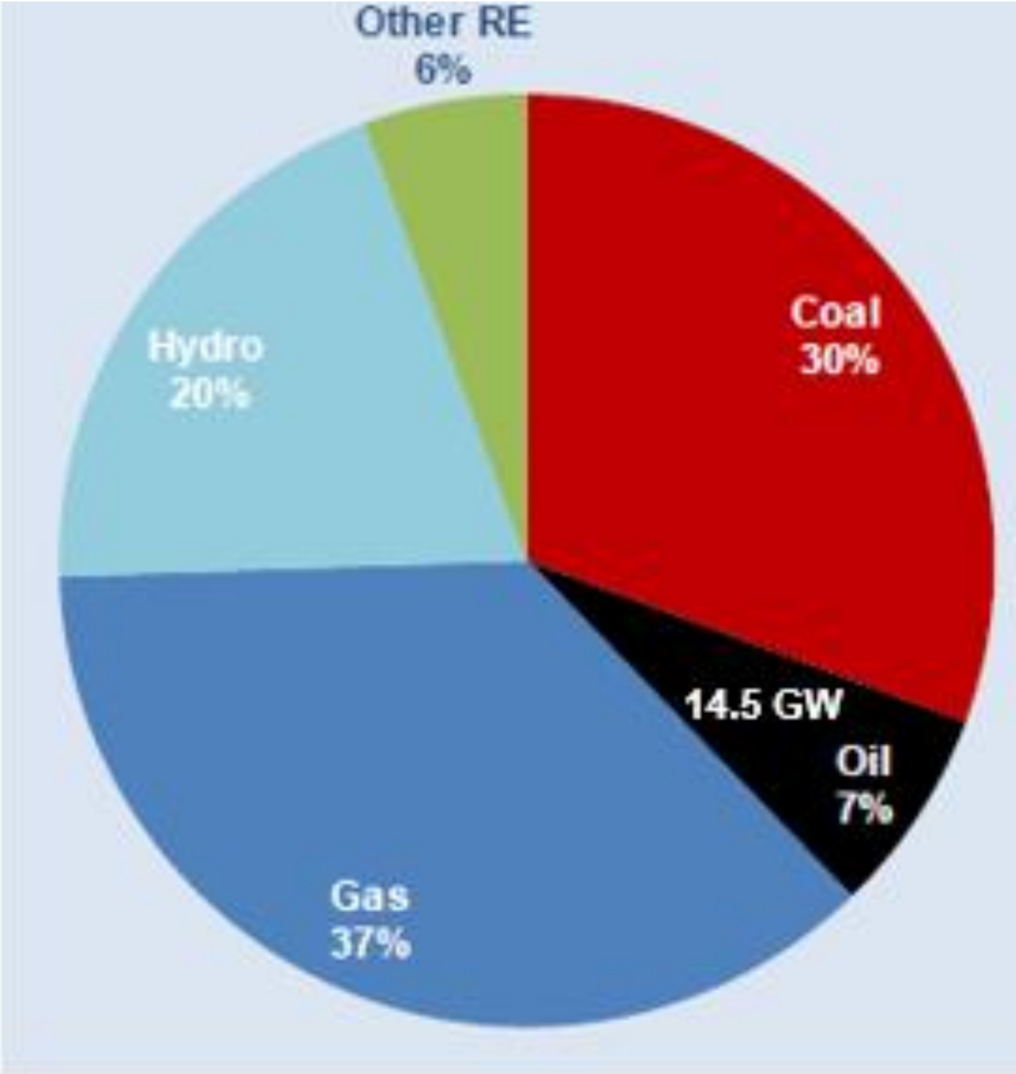


- Increased availability of natural gas
- Affordability of LNG – more competitive than liquid fuels
- Ideal fuel source for more efficient power generation
- Diminishing attractiveness of coal-fired generation due to environmental considerations
- Complement for renewables
- Proven technology and attractive commercial viability of LNG import terminals

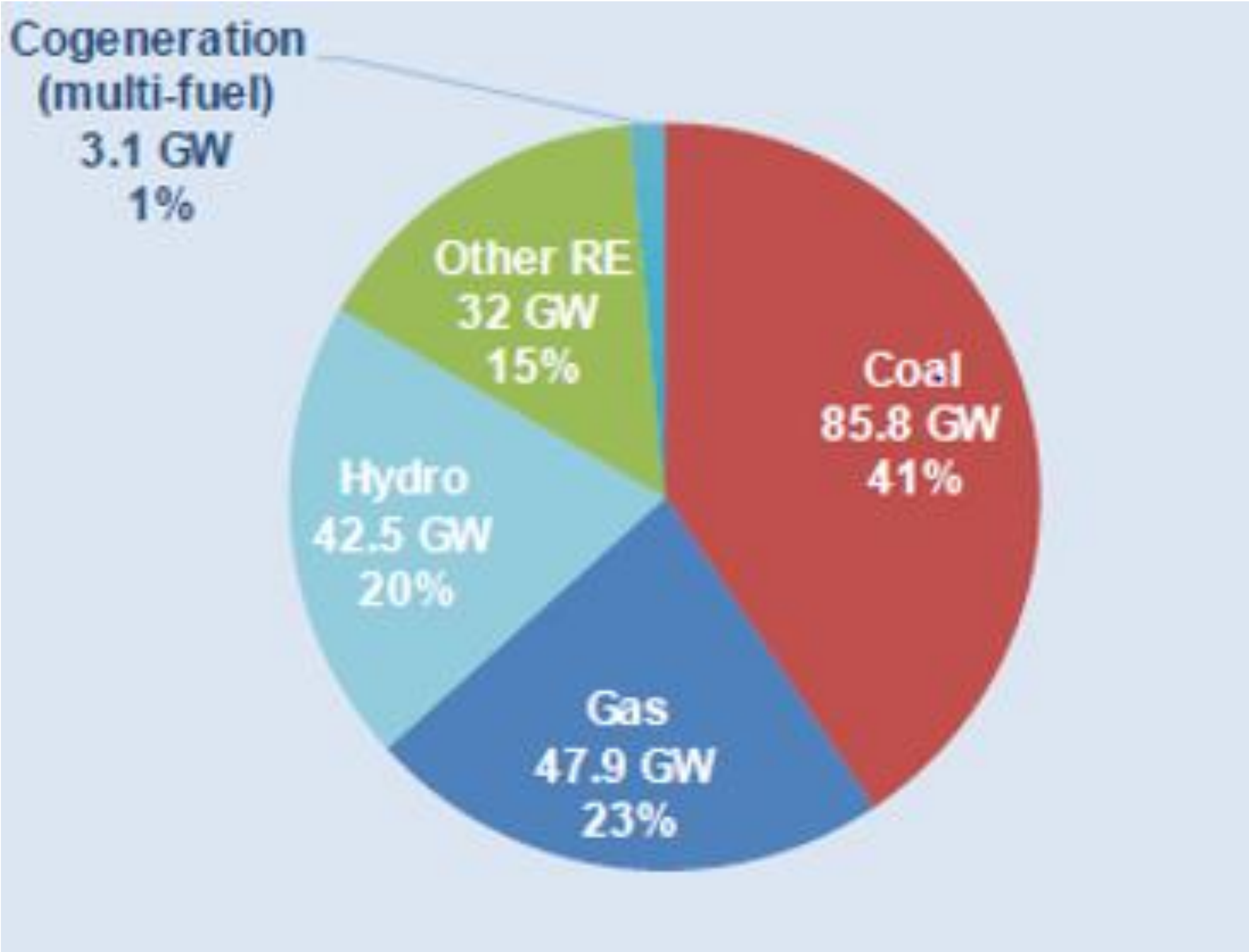
Source: BP 2017 Global Energy Outlook

Future gas-to-power developments in Southeast Asia will face challenge from coal-fired power. However, gas will replace oil-fired power

ASEAN Power Capacity in 2015: 205 GW

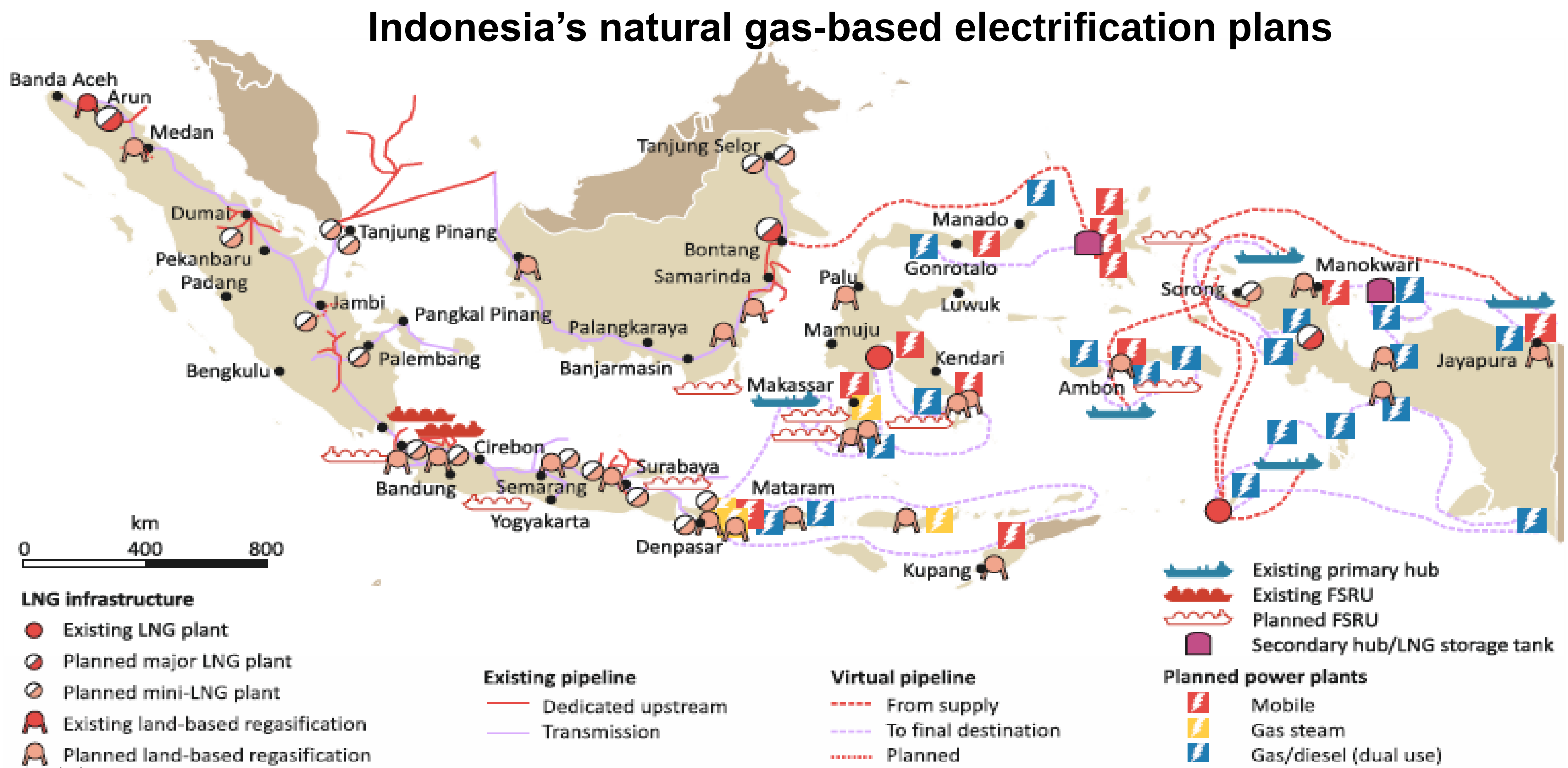


Capacity Additions by Fuel Type (2016 to 2025)



Source: Oxford Institute of Energy Studies

These liquid fuel power plants are small and stranded without access to gas supply…



Source: IEA World Energy Outlook 2017

…hence the need for downstream gas demand aggregators

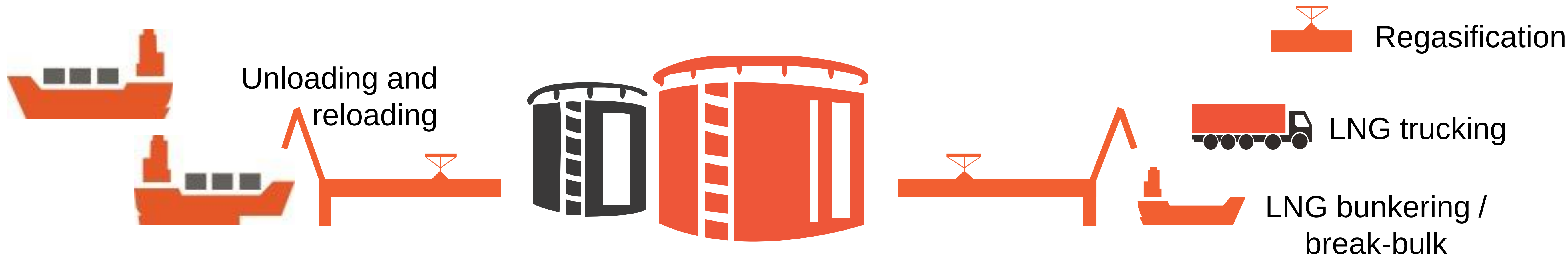
- Most liquid fuelled power plants are remotely located and cut-off from the main grid
- Their LNG demand is too small to be served on a standalone market basis. Need smaller “right-sized” LNG terminals servicing these power plants
- These terminals require minimum throughput to make commercial sense
- Hence the need for gas/LNG demand aggregators
  - By optimizing their supply and infrastructure, demand aggregators provide LNG to stranded power plants and can replace other liquid fuels on the basis of cost advantage
  - Ensure supply reliability and flexibility 24/7
  - Connect and enable ‘disaggregated’ investment opportunities providing the confidence to invest and the reassurance that value will be maintained

AG&P's approach to gas demand aggregation

- Taking advantage of Singapore's LNG-hub status
  - Vibrant LNG sourcing platform and proximity to the world's fastest growing gas economies
  - Developing the gas market in South and Southeast Asia
- Leveraging AG&P's innovative, standardized LNG supply chain model
  - Providing pipeline gas/regasified LNG swaps, LNG bunkering supply and the diversion of LNG cargoes
  - Solutions scaled to match current demand which reduces upfront capital costs making them extremely cost-effective
  - With a more commercially compelling infrastructure solution, AG&P LNG Marketing aggregates demand from the growing number of smaller, distributed demand centres and links it with suppliers

AG&P is establishing a hub and spoke business model in LNG

Transport | **Storage** | **Distribution**



Transport

- Unloading and reloading (including transshipment)
- Additional customers for reloading
- Subordinated slots

Storage

- Multiple customer model or dedicated LNG-to-power and/or industrial facilities
- Experienced in commingled storage tanks
- Suppliers, portfolio players, traders, end-users and city gas players

Distribution

- Different services for further distribution
- Additional customers for LNG trucking, bunkering and break-bulk

Key takeaways

The emergence of gas demand aggregators will support the development of stranded GTP projects through:

- Speed of development
- Access to new and diverse gas supply options
- Lower capital intensity
- Flexibility to support the expansion of renewables in the power mix
- Increasing price competitiveness

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