Australian Gas Infrastructure Group

Gas Network's Role in the Energy Transition

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Dampier Bunbury Pipeline

Multinet Gas Networks

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Introduction

Optimal Placement

- The Golden Triangle
- Electricity Network Constraints

Technical Specifications

- Energy Storage – network support/backup
- Grid Stability + Ancillary Services

Risk Sharing

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Optimal Placement of Gas-Powered Generation

The Golden Triangle

Coincidence of :

- electrical assets in need of support
- gas distribution assets
- suitable land

Close to substations reducing grid connection times + costs

Suitably sized land available for development

Proximity to gas distribution assets

- Transmission Pressure 12 MW+
- High pressure 2-12 MW

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Optimal Placement of Gas-Powered Generation

Electricity Network Constraints

Distribution Annual Planning Report (**DAPR**) Visualisation Tools

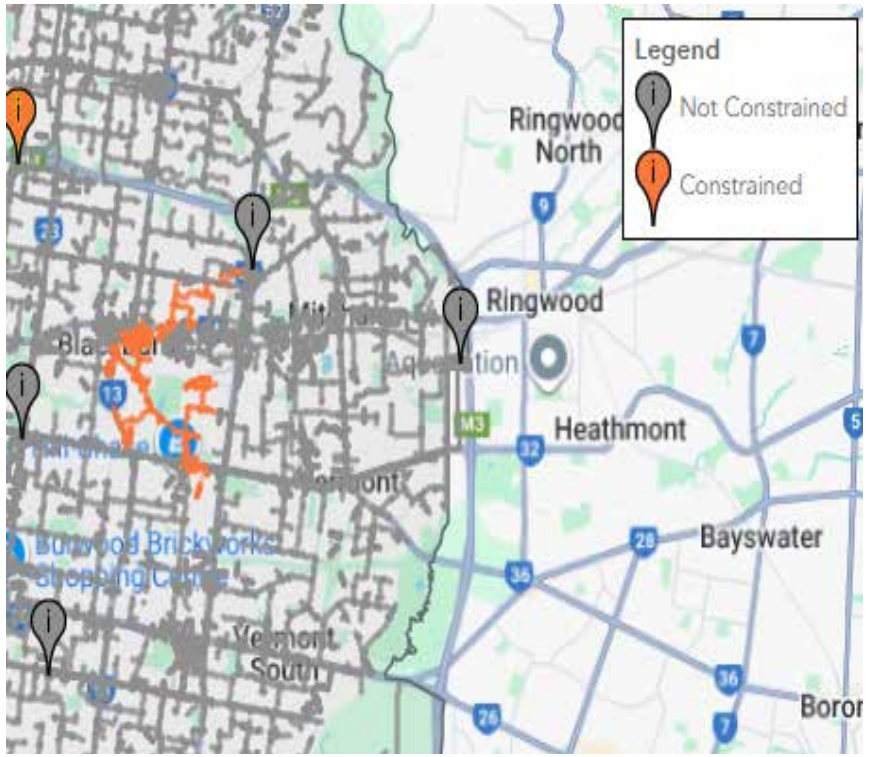
Many small-scale opportunities for non-network solutions reducing power network expenditure

Constraints:

- Subtransmission Feeder
- High Voltage Feeder
- Zone Substation

Embedded generation as non-network support

Piclo-flex marketplace indicates non-network opportunity value, term and location



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Technical Specifications

Energy Storage – Network Support / Backup

- Summer support most feasible – spare gas network capacity
- Power network thermal constraints + peak summer power demand
- Most likely strategic opening
- Paves way for Grid Stability + Ancillary Services

Containerised Gas Reciprocating Units

2 – 12 MW embedded generation as non-network support **250-500 KPA, lower diameter pipe**

Limited run hours per year = low emissions

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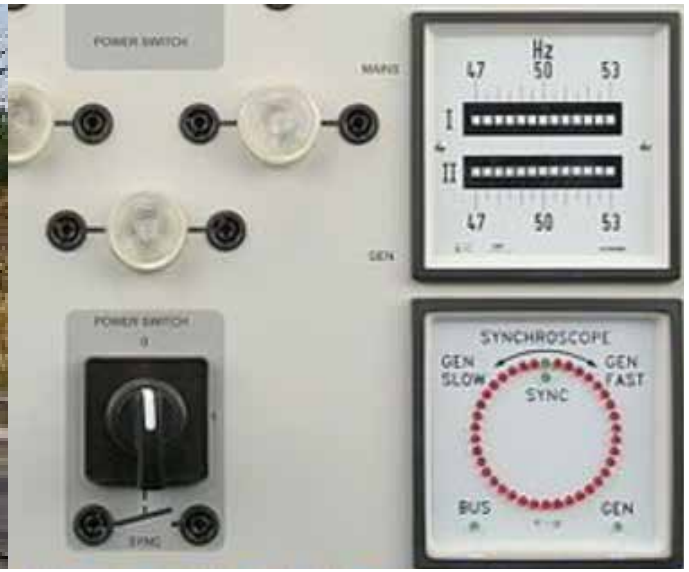
Technical Specifications



Grid Stability + Ancillary Services

Transmission to distribution substations = larger opportunities (**12 MW+**)

Loss of gas demand to electrification increases gas distribution system winter capacity

1800 -2900 KPA, 150 mm+ pipeline

Larger clutched gas-powered generation units act as synchronous condensers

Ability to grid synchronise = more revenue generating opportunities + feasiblity

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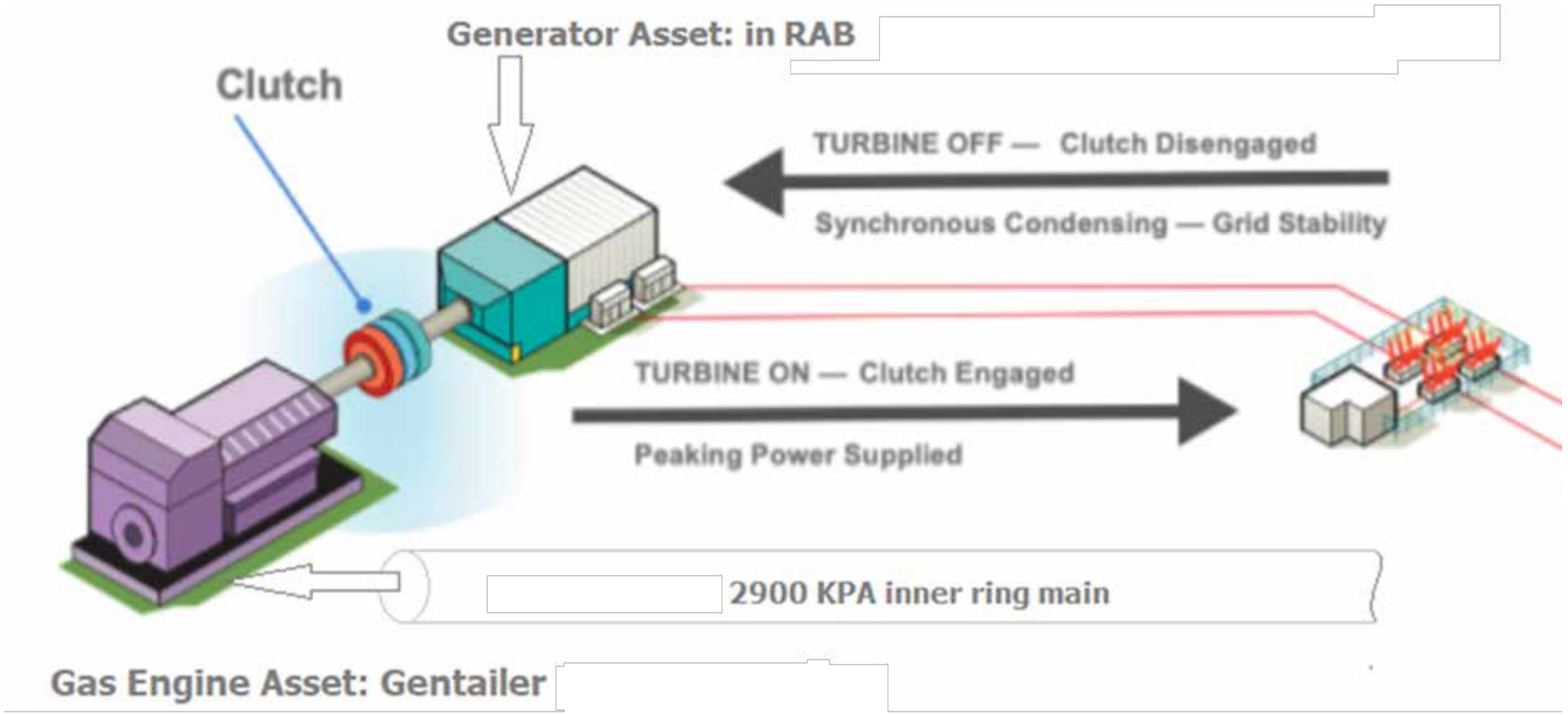
Risk / Cost Sharing



Clutch, engine and substation graphics courtesy of ***SSSgears***

Generator Asset **cost sharing with electricity NSP RAB improves feasibility by $35 million + saving on synchronous condenser investment**

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