NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND

2019 SEAAOC ADDRESS

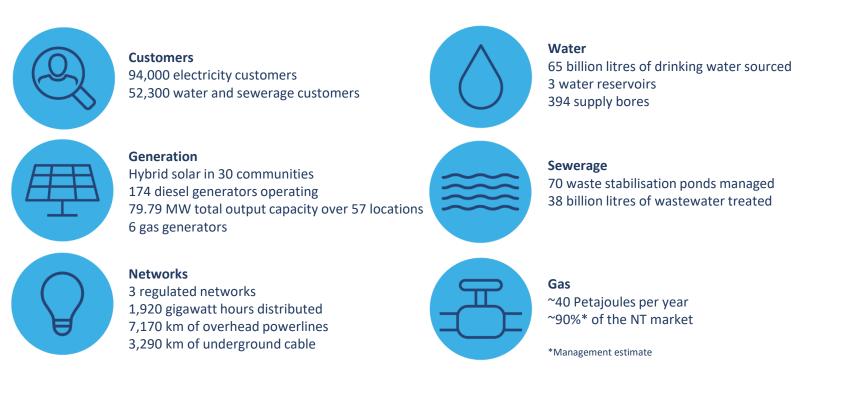
Antoni Murphy General Manager Gas Services, Power and Water Corporation



WATER - NETWORKS - GENERATION - SEWERAGE - GAS

Power and Water Corporation provide services to the community across the entire water and electricity supply chains and gas services, in addition to our regulatory obligations as the Power System Controller and Market Operator.

We have a proud history spanning several decades of providing essential services to Territorians in some of the harshest and most challenging environments in the country.



NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND



OUR SERVICE DELIVERY AREA

5 major centres

13 minor centres

72 remote communities

66 outstations

Services delivered 24 hours a day

Services delivered 7 days a week

Remote monitoring of water supply and quality, power supply and network management



Image: Solar supply and sewerage Image: Solar site Image: Power stations Image: Solar site



NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND





WHAT WE DO

Provide utility services Water, generation, networks, sewerage and gas

Support new NT baseload and firming generation Support mining and industrial development in the NT

Foundation Partner for Gas Field Development **Foundation Partner** for Gas Pipeline Development

Service east coast supply gaps

NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND



PROVIDE UTILITY SERVICES – WATER, GENERATION, NETWORKS, SEWERAGE AND GAS

Power and Water provides diverse services in remote towns and communities in the NT including:

- End-to-end electricity supply, including a mix of gas, diesel and solar generation
- Water and wastewater treatment services
- Gas services.



NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND



SUPPORT NEW NT BASE LOAD AND FIRMING GENERATION

Gas supply and transportation agreements for 90% of the NT electricity generation sector, with major customers including Territory Generation and Rimfire Energy.



NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND



SUPPORT MINING AND INDUSTRIAL DEVELOPMENT IN THE NT

- Approached Newmont in 2013 to consider a change to natural gas.
 After a number of joint studies, we entered into a 10-year gas supply agreement for their Tanami mine.
- Natural gas supply mitigates trucked diesel fuel supply risks, increases available power and reliability, lowers energy costs, reduces carbon emissions by 20% and increases mine life.
- We are working with Coogee Chemicals and the NTG Gas Taskforce to progress the recently announced methanol project.



NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND



FOUNDATION PARTNER FOR GAS FIELD DEVELOPMENT

- Gas purchase and transportation agreements with Eni and APA to deliver gas from the Blacktip offshore field. with a contract value in excess of \$5 billion over a 25 year term.
- Palm Valley gas field near Alice Springs over 30 years ago,
- Mereenie gas field in the 1980's.



NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND



FOUNDATION PARTNER FOR GAS PIPELINE DEVELOPMENT

- Foundation customer for the NGP facilitating the interconnection of the NT and east coast gas pipeline, delivering gas from NT gas fields to the east coast gas market.
- Foundation customer of APA to transport gas through both the AGP and BGP which could go to mid-2030.



NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND



SUPPORT EAST COAST SUPPLY GAPS

Gas supply agreement via NGP worth about \$500 million over 10 years with Southern Cross Fertilisers in Queensland as well as other customers.



NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND







*Management estimate

NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND





NORTHERN GAS RESERVES

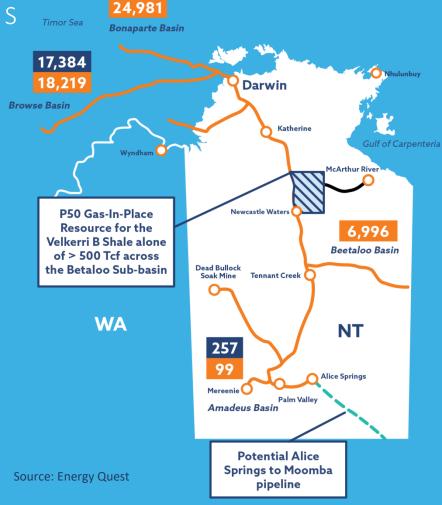
20-40% expansion in AGP & BGP capacity in conjunction with APA.

Enabling increased ability to service supply gaps on the east coast.

Significant NT reserves to enable:

LNG and NT industrial development as well as east coast supply.

Actively Reviewing McArthur River gas pipeline capacity to aid Betaloo development.



1,107

NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND



2019 SEAAOC ADDRESS

Legend

18,748

Source: Energy Quest

Potential pipeline

(Proved and probable)

2C contingent resources in PJ

Natural Gas and Ethane reserves in PJ

Gas pipeline PW Gas owned pipeline

NT AND EAST COAST GAS RESERVES AND CONTINGENT RESOURCES



NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND



2019 SEAAOC ADDRESS

Legend

18,748

50,295

Gas pipeline

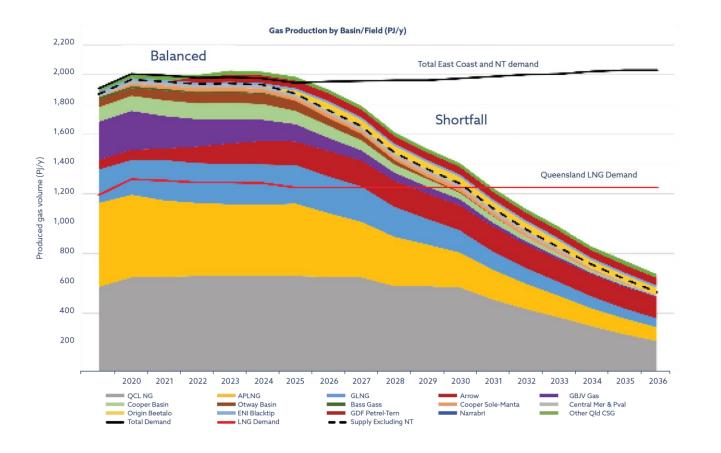
Gas pipeline (proposed)

(Proved and probable)

2C contingent resources in PJ

Natural Gas and Ethane reserves in PJ

East Coast & NT Gas Markets : Forward looking gas supply & demand



Source: Energy Quest

NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND



AUSTRALIAN GAS: AN EVOLVING MARKET LANDSCAPE

- Exploration <u>NT bans lifted</u>, Southern Australia remain
- LNG New NT fields and pipelines <u>will</u> be developed
- East coast gas <u>volume uncertainty</u> impacting both price and term
- Energy-intense <u>manufacturing struggling</u> against import competition
- Economy record low interest rates inferring <u>financing is available</u> for infrastructure projects
- Climate change:
 - Growth in renewables impacting network stability
 - Renewables aspiration indicate significant further growth required
 - Coal retirements dependent on alternative base load generation
 - Long-term gas supply is critical for <u>electricity firming options.</u>



NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND



What role can the NT's vast gas resources play in

- Developing the North ?
- Supporting growth in renewables ?
- East Coast energy security ?

Is there a window of opportunity...is success time critical ?



NTGAS SUPPORTING DEVELOPMENT IN THE NORTH AND BEYOND

