



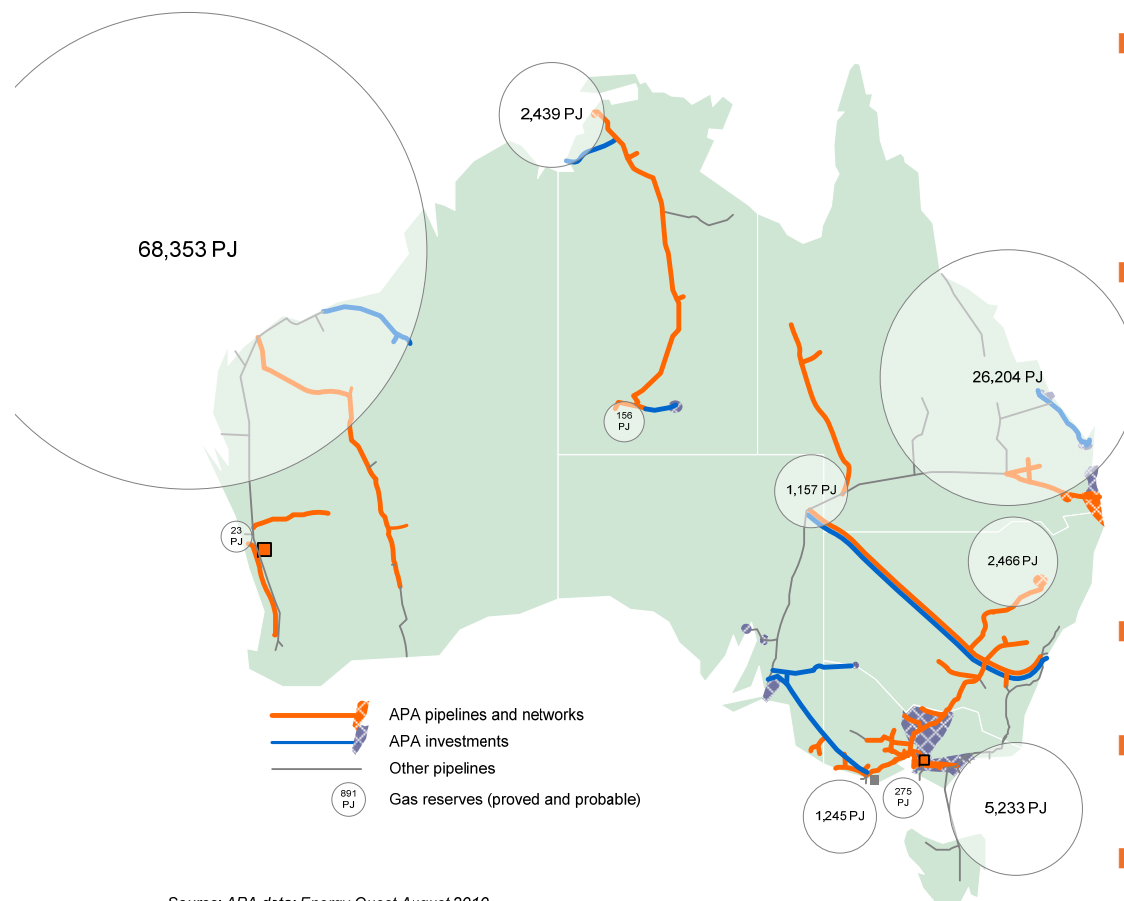
## **Gas-fired generation driving infrastructure growth**

Mick McCormack, Managing Director

Citi Australian Investor Conference, Sydney  
25 October 2010

# APA Group overview

## Australia's leading gas transmission and distribution business



Source: APA data; Energy Quest August 2010

- Infrastructure owner and operator – managing over \$8 billion assets
  - >12,700 km gas transmission
  - >23,000 km gas distribution
- Delivering gas from all major gas production sources to all major gas markets
  - transporting more than 50% of natural gas used in Australia
  - and more than 70% in Australia's eastern states
- Generating secure cash flows from contractual and regulatory arrangements
- Internally managed and operated business
- Listed on the ASX – June 2000  
Entered S&P/ASX 100 – Oct 2009

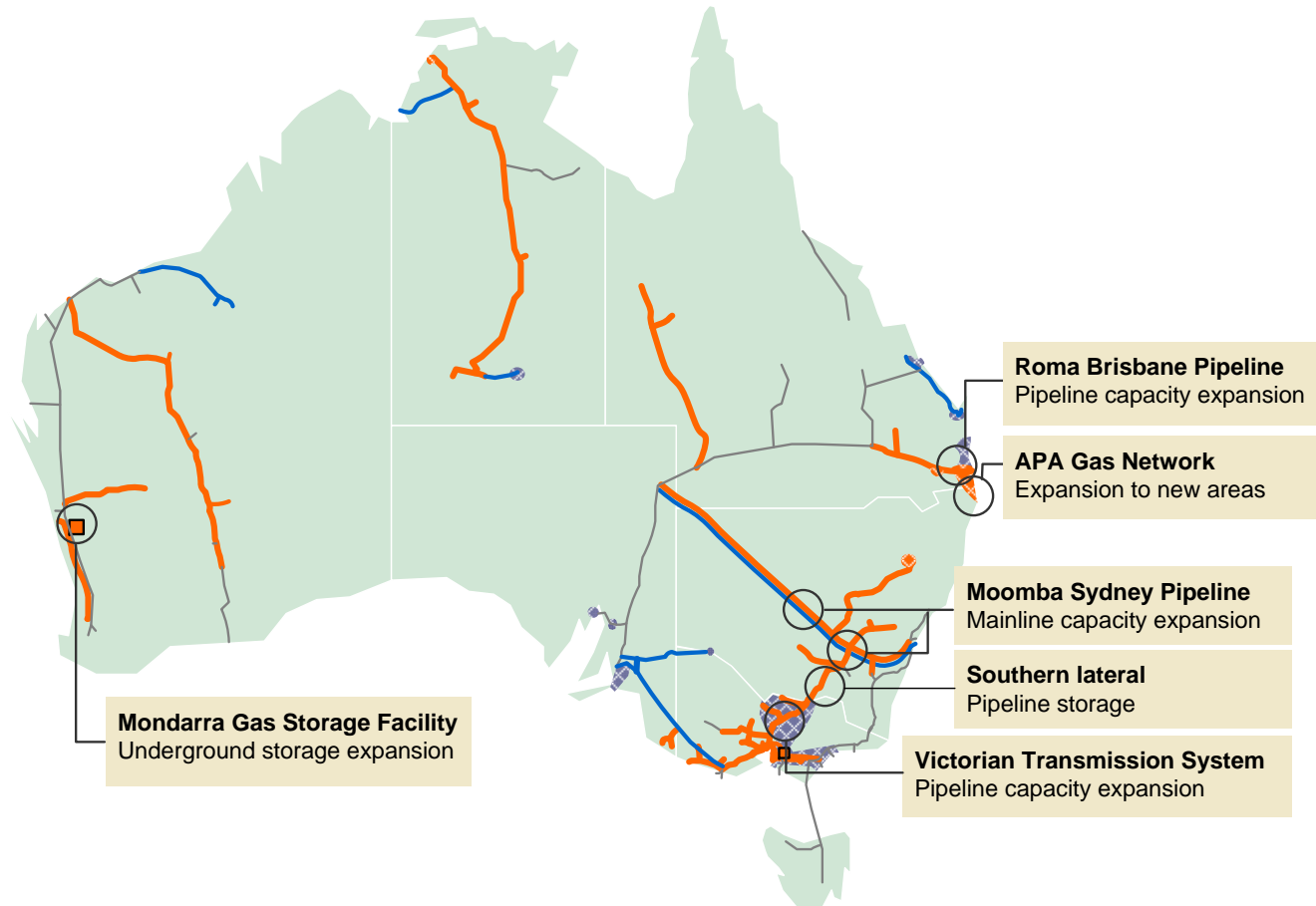
**APA is well positioned in a growing industry**

# APA growth drivers and opportunities

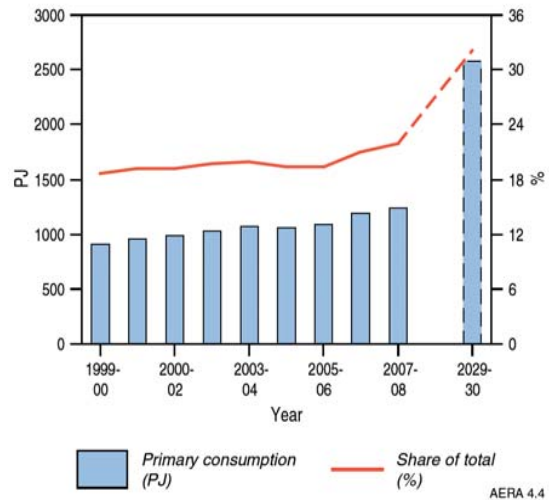
## Growth drivers

- Gas supply and demand
- Gas fired power generation**
- Gas storage
- Integrated market
- Strategic investment management

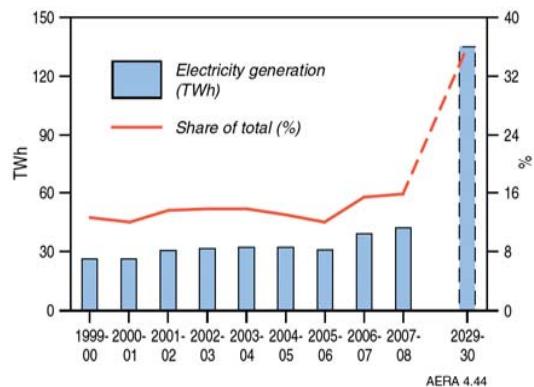
## APA's current development opportunities



# Electricity generation driving gas demand



**Figure 4.43** Outlook for Australian gas consumption,  
Source: ABARE 2010



**Figure 4.44** Outlook for Australian gas-fired electricity generation  
Source: ABARE 2010; IEA 2009a

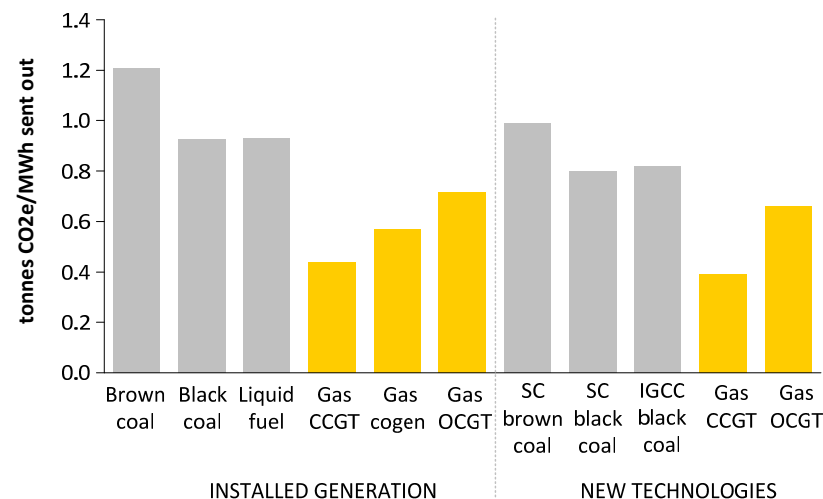
- Growth in gas volumes\*
  - Average annual growth rate of 3.4% pa over the next 20 years (compared with 1.4% for primary energy)
  - 1,240 PJ in 2007-08, doubling to 2,570 PJ in 2029-30
  
- Factors influencing gas demand increase
  - Investments in new gas-fired electricity generation
  - Mining sector (gas mainly used for electricity generation)
  - Government policies supporting gas uptake as relatively clean energy source
  - Population growth of 1.3% pa and GDP growth of 2.9% pa
  
- Growth in gas-fired electricity generation\*
  - Average growth rate of 5% pa
  - Share of total generation: 19% in 2007-08 increasing to 37% in 2029-30.

\* "Australian energy projections to 2029-30", ABARE March 2010

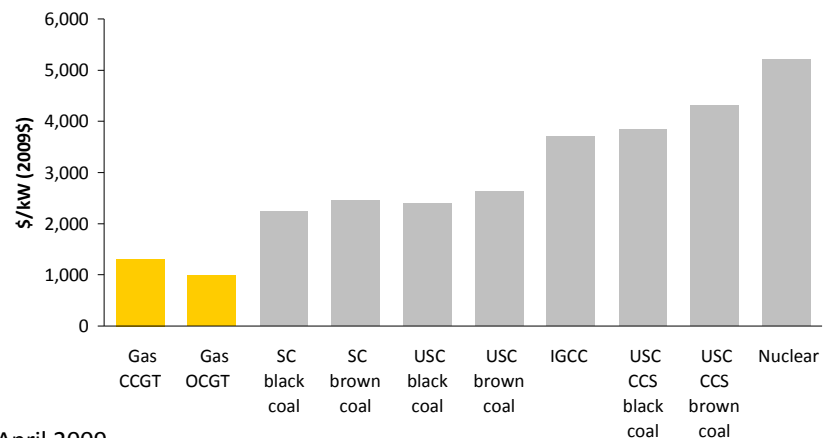
# Good reasons for gas-fired generation

- Reduced carbon emissions
  - Produces 30 to 50 per cent of the emissions produced by current coal technologies in generating electricity
- Quick start generation
  - Suitable for managing peak demand
  - Provides ‘natural hedge’ for electricity retailers
  - Provides back-up power for intermittent wind generation
- Fuel availability
  - Relatively cheap fuel source
  - Abundant indigenous gas supply
- Mature technology, competitive capital cost
  - Proven performance
  - Lower capital cost and construction lead time

Emission intensity - electricity generation



Capital cost - electricity generation



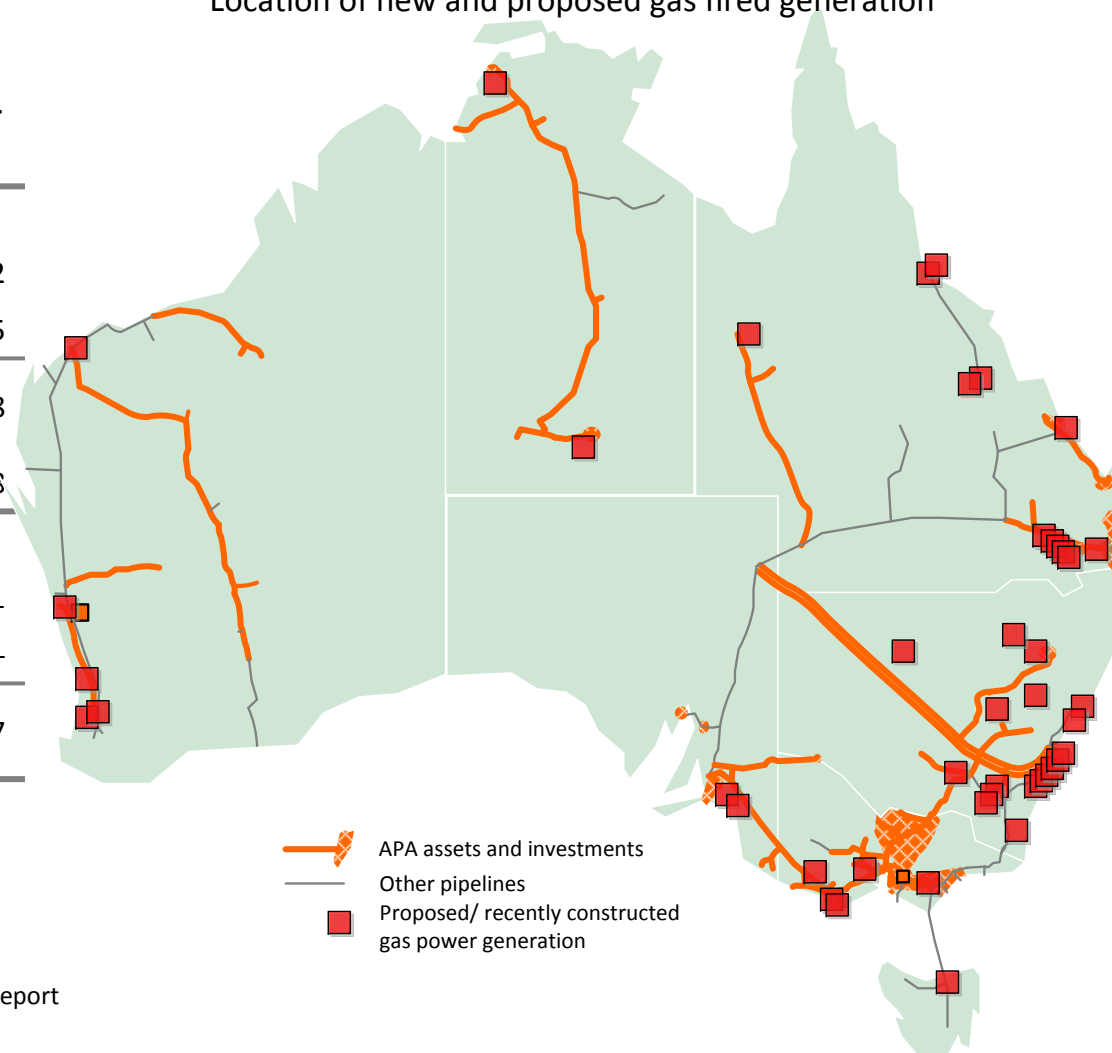
Source: “Fuel resource, new entry and generation costs in the NEM”, ACIL Tasman, April 2009

**Natural gas - the optimum transition fuel for lower carbon emissions**

# A well positioned portfolio

Location of new and proposed gas fired generation

| Generation (MW)                         | Eastern market | WA & NT market |
|---|----------------|----------------|
| <b>Gas generation</b>                   |                |                |
| Existing - network                      | 8,446          | 4,122          |
| Existing - non network                  | 333            | 1,495          |
| Under construction/<br>planned          | 4,597          | 1,248          |
| Proposed                                | 14,622         | 528            |
| <b>Wind generation</b>                  |                |                |
| Existing - network                      | 493            | 191            |
| Existing - non network                  | 998            | -              |
| Under construction/<br>planned/proposed | 10,644         | 647            |



Source: APA data; ESAA – Electricity Gas Australia 2010 Report

# Infrastructure and service requirements

## Gas related services and infrastructure requirements

- Transport services → pipelines to transport gas
- Storage services → pipelines and storage facilities to ensure gas availability
- Gas flexibility → pipeline network and storage facility interconnection to access gas from multiple sources
- Optimal gas price → producer on producer competition
- Gas security → minimal supply interruptions
- Growth options → ability to expand services and infrastructure in line with growth

## APA services and infrastructure

- Gas pipelines providing transportation and storage services
- Underground storage facility (WA) providing storage services
- Interconnected pipelines providing flexibility to source gas from multiple basins, enhancing producer competition and strengthening supply security
- Expanding infrastructure in line with customer growth

## Other requirements

- Access to the electricity transmission grid; access to water; close to market

# Currently delivering services to gas-fired generation



## Uranquinty power station

### ■ Multiple gas sources

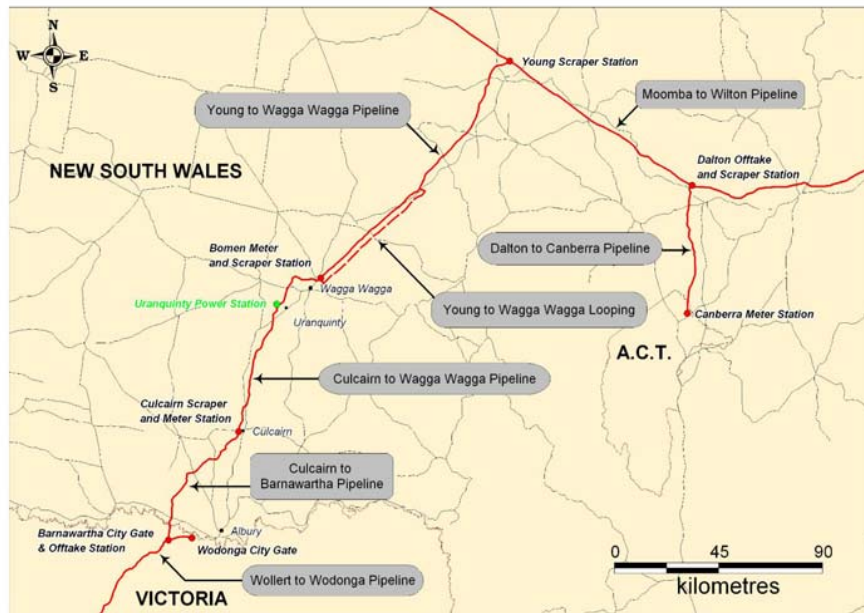
- Queensland and Cooper Basin gas via the Moomba Sydney pipeline
- Victorian Gippsland and Otway basin gas via the Victorian Transmission System and NSW interconnect

### ■ Flexibility

- Connected to bidirectional pipeline that can move gas to the power station from either direction

### ■ Storage

- Adjacent pipeline storage, including current pipeline expansion (Young Wagga looping), provides sufficient gas for 8 hours continuous power station operation

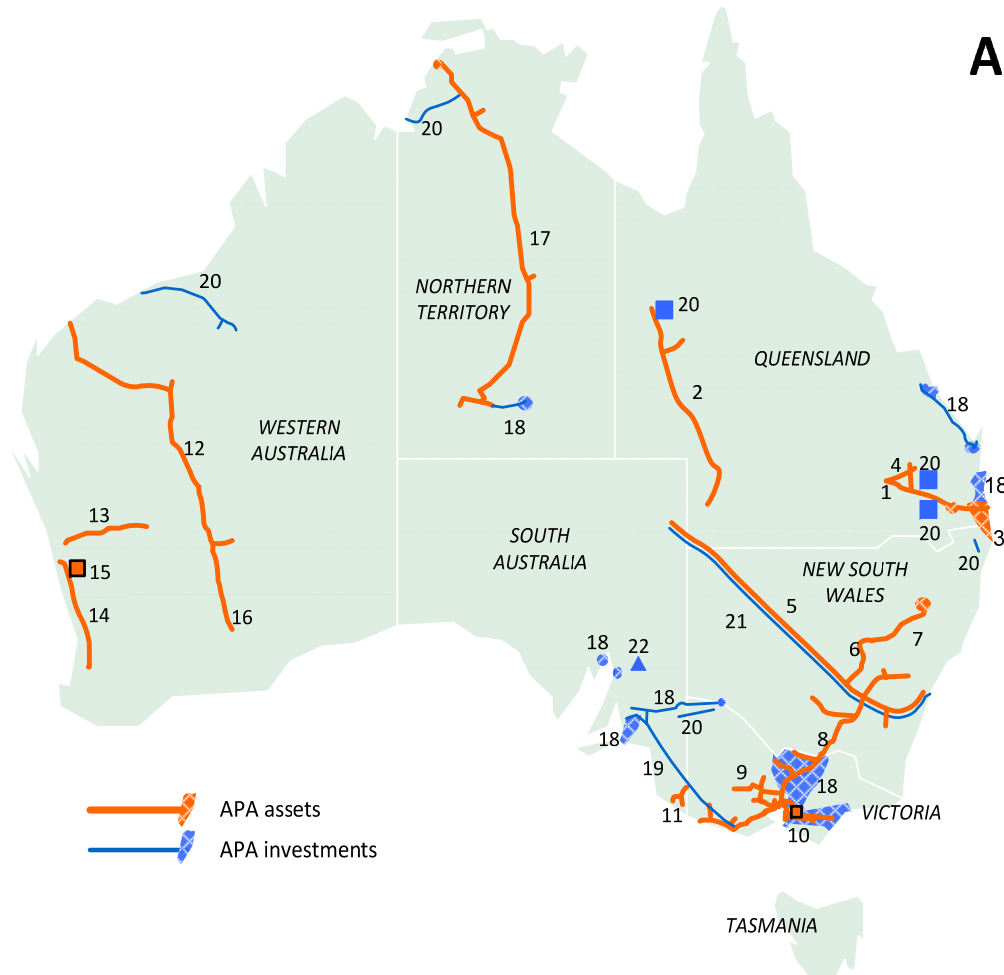


## Summary

- Growth in gas fueled electricity generation
  - Forecast to grow on average 5% per year – tripling over the next 20 years
- Gas fired power generation benefits
  - Reducing carbon emissions – transition fuel
  - Providing peak services and wind generation back-up
  - Mature technology, with relatively low capital cost
- Gas infrastructure assets well positioned to facilitate generation growth
  - Pipelines across Australia transporting more than half the nation’s gas use
  - Interconnected portfolio of pipelines and storage – flexibility
  - Easily expanded to meet generation requirements
- APA actively encouraging development of gas generation on its pipelines
  - Providing tailored and comprehensive services

# APA's energy infrastructure portfolio

## APA Group assets and investments



| Gas transmission and distribution   |
|---|
| <b>Queensland</b><br>(1) Roma Brisbane Pipeline<br>(2) Carpentaria Gas Pipeline<br>(3) APA Gas Network<br>(4) Berwyndale to Wallumbilla   |
| <b>New South Wales</b><br>(5) Moomba Sydney Pipeline<br>(6) Central West Pipeline<br>(7) Central Ranges Pipeline<br>(8) NSW interconnect with Victoria                              |
| <b>Victoria</b><br>(9) Victorian Transmission System<br>(10) Dandenong LNG facility   |
| <b>South Australia</b><br>(11) SESA Pipeline  |
| <b>Western Australia</b><br>(12) Goldfields Gas Pipeline (88.2%)<br>(13) Mid West Pipeline (50%)<br>(14) Parmelia Pipeline<br>(15) Mondarra Gas Storage<br>(16) Kalgoorlie Kambalda |
| <b>Northern Territory</b><br>(17) Amadeus Gas Pipeline (96%)  |

| Asset Management   |
|--|
| <b>Commercial and operational services to:</b><br>- Energy Infrastructure Investments<br>- Envestra Limited<br>- Ethane Pipeline Income Fund                       |
| <b>Operational services to:</b><br>- SEA Gas Pipeline<br>- other third parties   |
| Energy investments   |
| <b>(18) Envestra Limited (32%)</b><br>Gas distribution networks and pipelines (SA, Vic, Qld, NSW & NT)   |
| <b>(19) SEA Gas Pipeline (33.3%)</b>   |
| <b>(20) Energy Infrastructure Investments (19.9%)</b><br>Annuity gas pipelines, electricity transmission, small gas-fired power stations and gas processing plants |
| <b>(21) Ethane Pipeline Income Fund (6%)</b>   |
| <b>(22) North Brown Hill wind farm (20.2%)</b>   |
| <b>Hastings Diversified Utilities Fund (17%)</b>   |

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## Celebrating 10 years of delivering Australia's energy

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**About APA Group (APA)**

APA is Australia's largest natural gas infrastructure business, owning and/or operating more than \$8 billion of gas transmission and distribution assets. Its pipelines and assets span every state and territory on mainland Australia, delivering more than 50% of the nation's gas usage. Unique amongst its peers, APA has direct management and operational control over its assets and the majority of its investments. APA also holds minority interests in energy infrastructure enterprises including Envestra, SEA Gas Pipeline, Hastings Diversified Utilities Fund and Energy Infrastructure Investments.

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