Eastern Australian Gas Markets
A Point in History

J. K. McDonald

Interconnect 2001 Conference

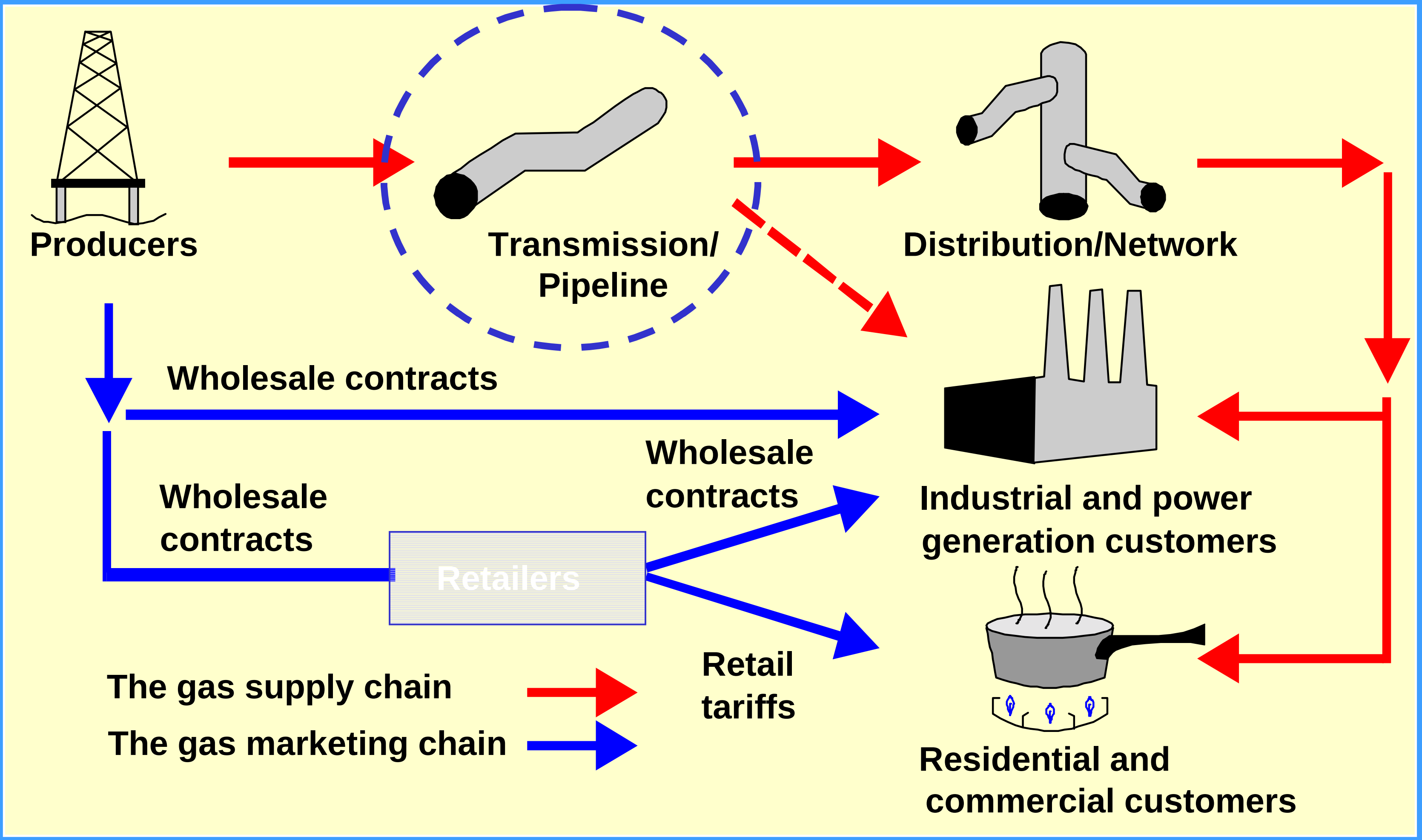
21 September 2001

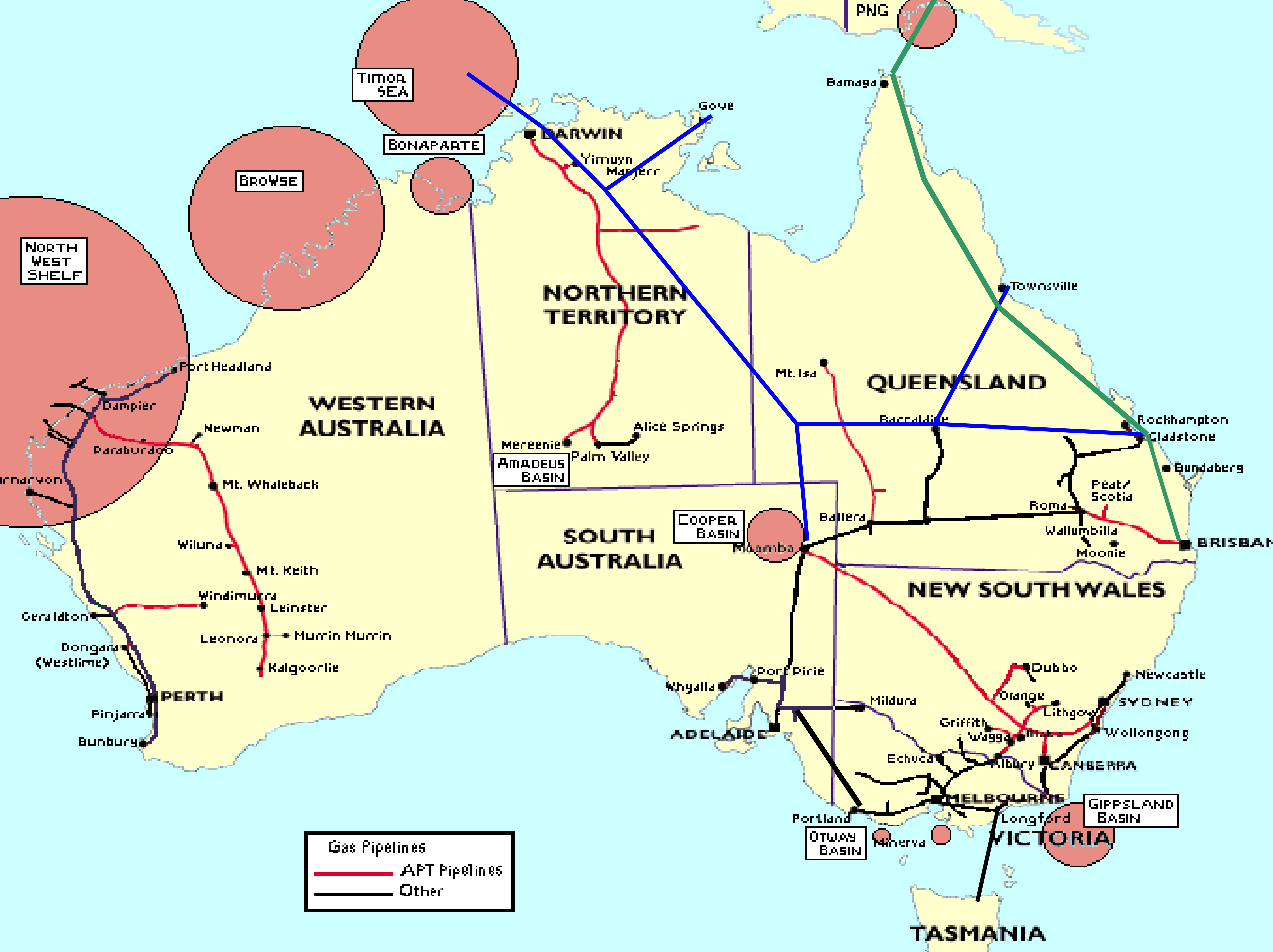
Australian
Pipeline Trust

Natural Gas National Market

- 2015: natural gas = 28% primary energy
- Competitive reform still “work in progress”
- Supply shortfall for S.E Australian markets
- Disincentives must be removed
- National gas policy essential

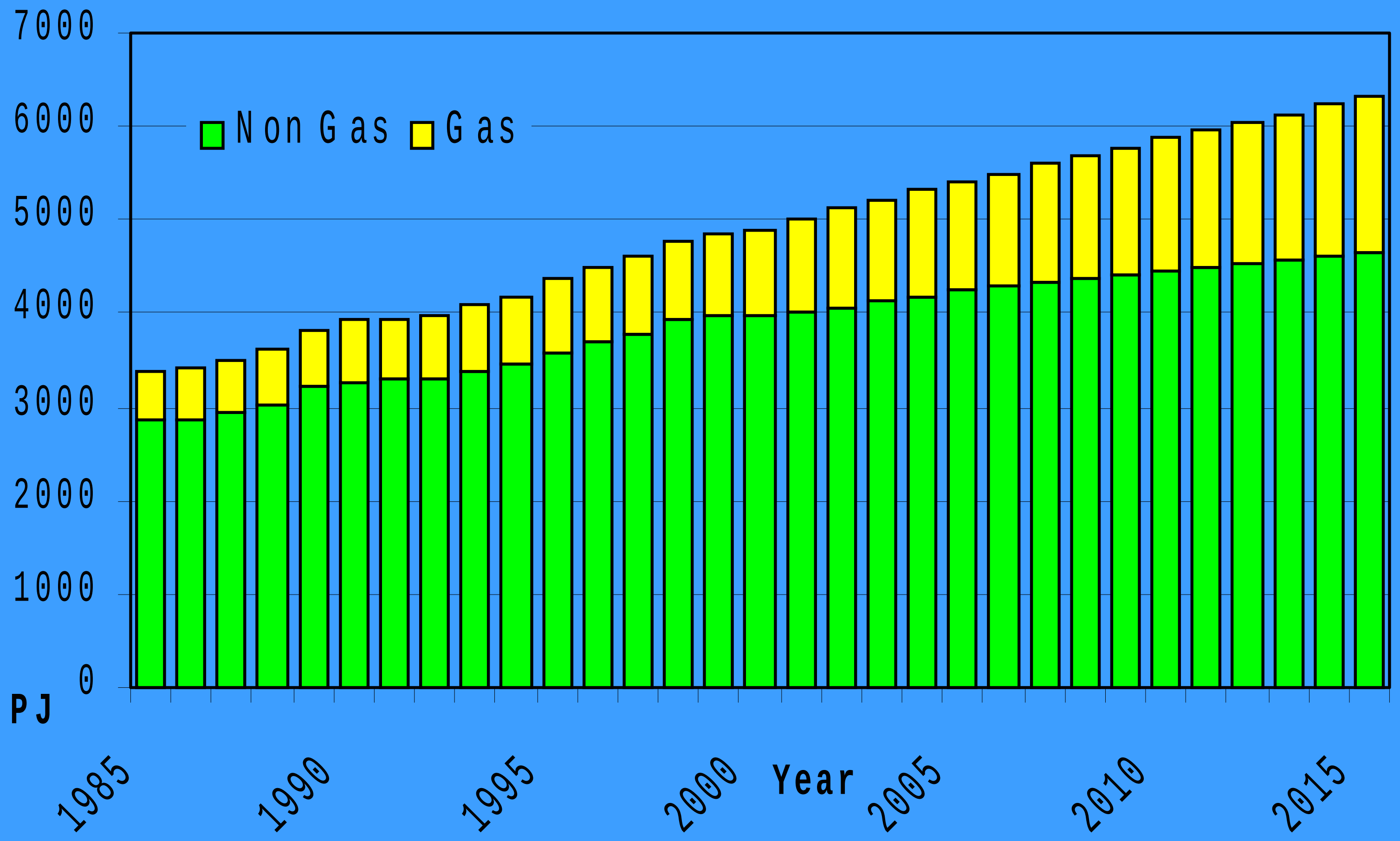
Natural Gas Supply Chain





PNG
TIMOR SEA
Bamaga
Gove
DARWIN
BONAPARTE
Yimuyn
BROWSE
NORTH WEST SHELF
NORTHERN TERRITORY
Townsville
QUEENSLAND
Mt. Isa
Port Headland
Dampier
WESTERN AUSTRALIA
Newman
Paraburdoo
Mereenie
Alice Springs
Palm Valley
AMADEUS BASIN
Rockhampton
Gladstone
Bundaberg
rnarvon
Mt. Whaleback
Peat/ Scotia
Roma
Ballera
COOPER BASIN
Wallumbilla
SOUTH AUSTRALIA
BRISBAN
Moonie
Wiluna
Mt. Keith
NEW SOUTH WALES
Windimurra
Leinster
Geraldton
Leonora
Murrin Murrin
Dongara (Westlime)
Kalgoorlie
Dubbo
Newcastle
Port Pirie
Whyalla
Mildura
Orange
SYDNEY
PERTH
Lithgow
Griffith
Wagga
Wollongong
Pinjarra
Bunbury
ADELAIDE
Echuca
Albury
CANBERRA
GIPPSLAND BASIN
Portland
Longford
OTWAY BASIN
Minerva
VICTORIA
TASMANIA
Gas Pipelines
APT Pipelines
Other

Energy Growth - 2015



Source: AGA / NIEIR

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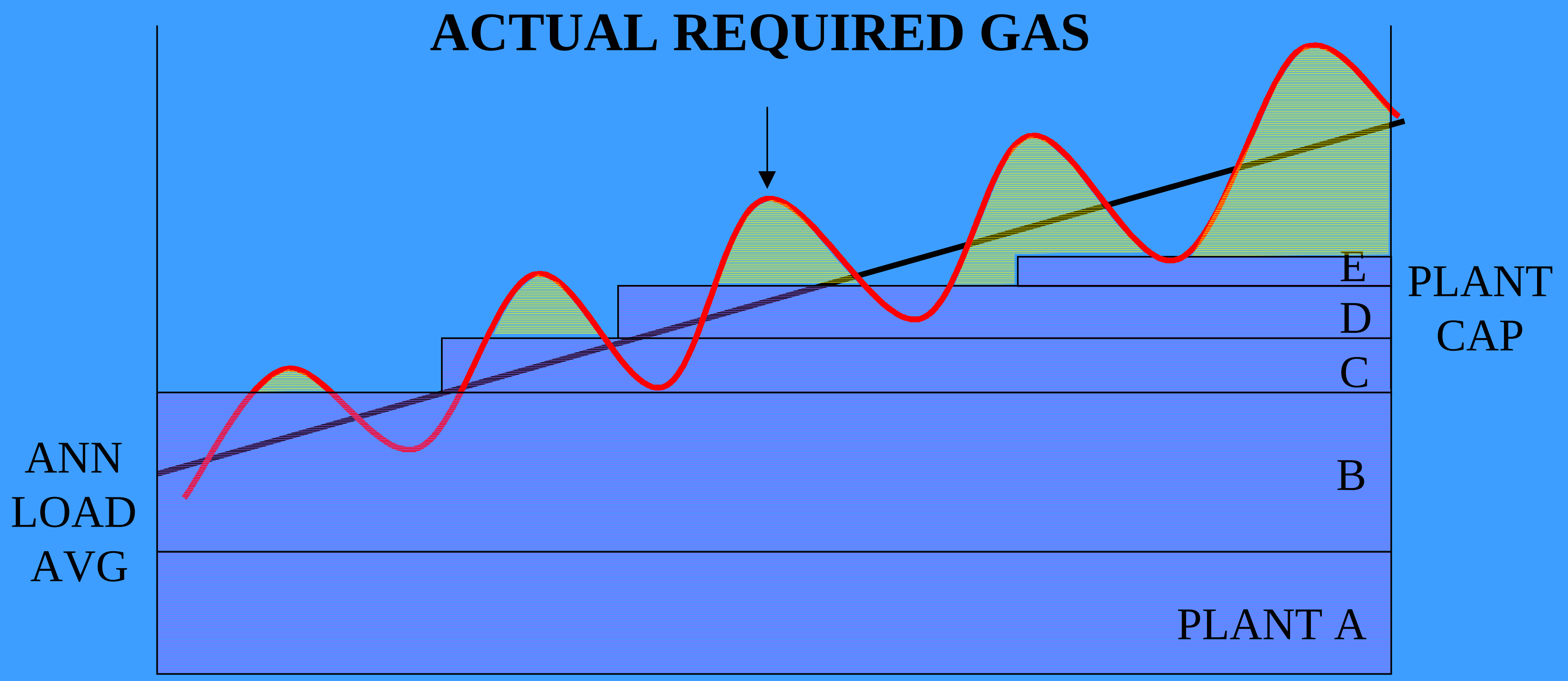
Challenges for Domestic Gas

- Supply shortfall in S.E. Australia
- Substantial investment necessary
- Large industrials locate at gas source
- Innovative gas applications needed

Challenges for Domestic Gas

- Gas fired power a must
- Gas is clean but coal is cheap
- Gas price an issue

Plant Capacity vs Load Factor



Issues for Pipelines

- Focus must shift to:
  - Efficient use of capital
  - Encouragement of system expansion
  - Encouragement of new pipelines
  - Research to lower capital cost
  - Reliability and integrity of system

Queensland

- Most important growth market
- Direct use industrial processes
- Commitment to gas fired power
- Value add minerals process plans

Queensland

- Strong industrial / population growth
- Needs additional gas supplies - 2004
- Needs northern gas by mid decade

Victoria

- Largest average residential loads
- Largest commercial consumption
- New gas Otway, Yolla, Patricia Baleen
- Gas fired power:
  - back on stream Jeeralang, Newport
  - planned Bairnsdale, Somerton, Maryvale

Victoria

- Self sufficient in gas supply
- No immediate need for northern gas

New South Wales / ACT

- Some opportunity for gas fired power:
  - Sithe Smithfield on stream
  - ACT planning gas power
  - Duke planning mixed fuel at Wollongong
- Energy policy is black coal based
- By 2015 gas < 20% total energy

New South Wales / ACT

- Supply contracts expire - 2006
- Connected to all gas supplies
- Needs northern gas by mid decade

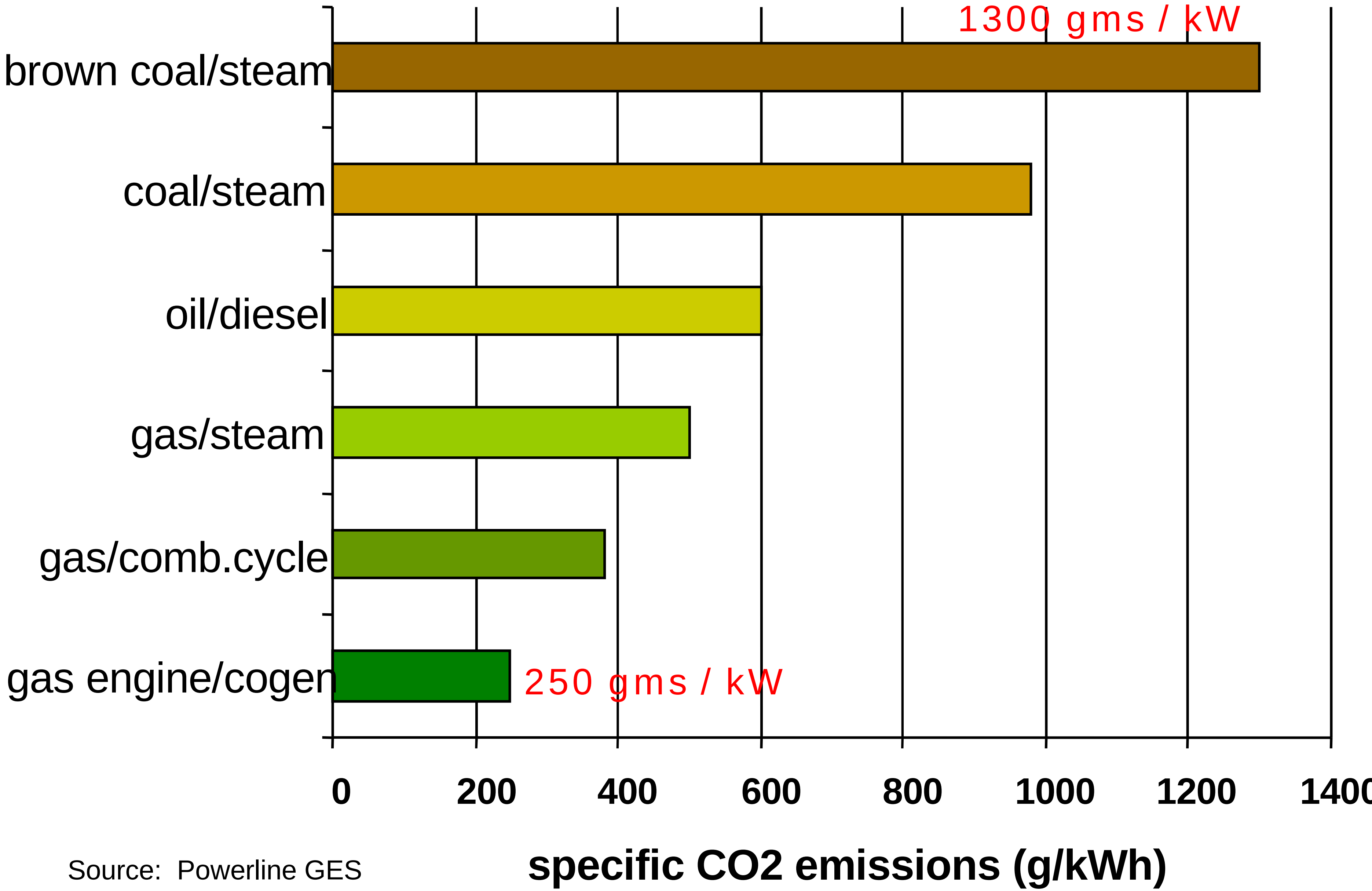
South Australia

- Uses gas for > 40% of power
- Needs more power
- New pipeline from Otway
- Needs northern gas by mid decade

Tasmania

- Pipeline completed mid 2002
- Will generate some power with gas
- Will be supplied from Victoria
- No immediate need for northern gas

CO2 Emission by Electricity Production



Source: Powerline GES

Power Generation Dilemma

- Gas cannot match coal fuel price
- Fuel switching requires encouragement
- If no power generation, no northern gas?

Power Generation Dilemma

- If no northern gas, rising wellhead prices?
- Rising wellhead prices, coal wins?
- Window of opportunity is open

LNG Export Dilemma

- Australia - world class supplier of LNG
- Vast reserves and economies of scale
- LNG export revenue > $AUS2B p.a
- World LNG trade increase 6.7% p.a.

LNG Export Dilemma

- PNG gas and some Timor gas imported
- Pressure to export all northern gas?
- Should we reserve gas for domestic use?

Regulation and Gas Policy

- Present regime unsatisfactory
- Future projects seriously at risk
- Investors nervous
- Role of the Regulator
- Planned review welcome and timely

Balanced Intervention

- ACCC: Regulator and community advocate - conflict of interest
- Industry concerns validated: EPIC injunction, EGP coverage decision
- Theory vs. reality: rate of return models

Balanced Intervention

- **Government makes policy and the Regulator monitors compliance**

Energy Regulation Review

- Productivity Commission PartIIIA review
- Review of Application of Gas Code
- CoAG initiative: Council on Energy
  - Independent review of energy directions
  - Development of national energy strategy
- Fiscal regime for long term projects

A Constructive Regulatory Environment:

- Distribution vs transmission;

  Mature systems vs greenfields projects

- Encouragement to expand infrastructure
- Removal of structures inhibiting market

A Constructive Regulatory Environment:

- Streamlined approval processes
- Appropriate fiscal regimes
- Cleaner energy programs

A Point in History…

- National grid can be realised
- Markets can be linked
- New supplies can be available
- New gas applications possible

A Point in History…

- Foundation vs short term/spot contracts
- Market “hubs”appearing

COMPETITION CAN BE ENHANCED

- Governments are listening

BUT…………

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