

# Gas Marketing and Commercialization

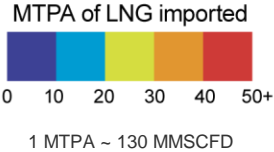
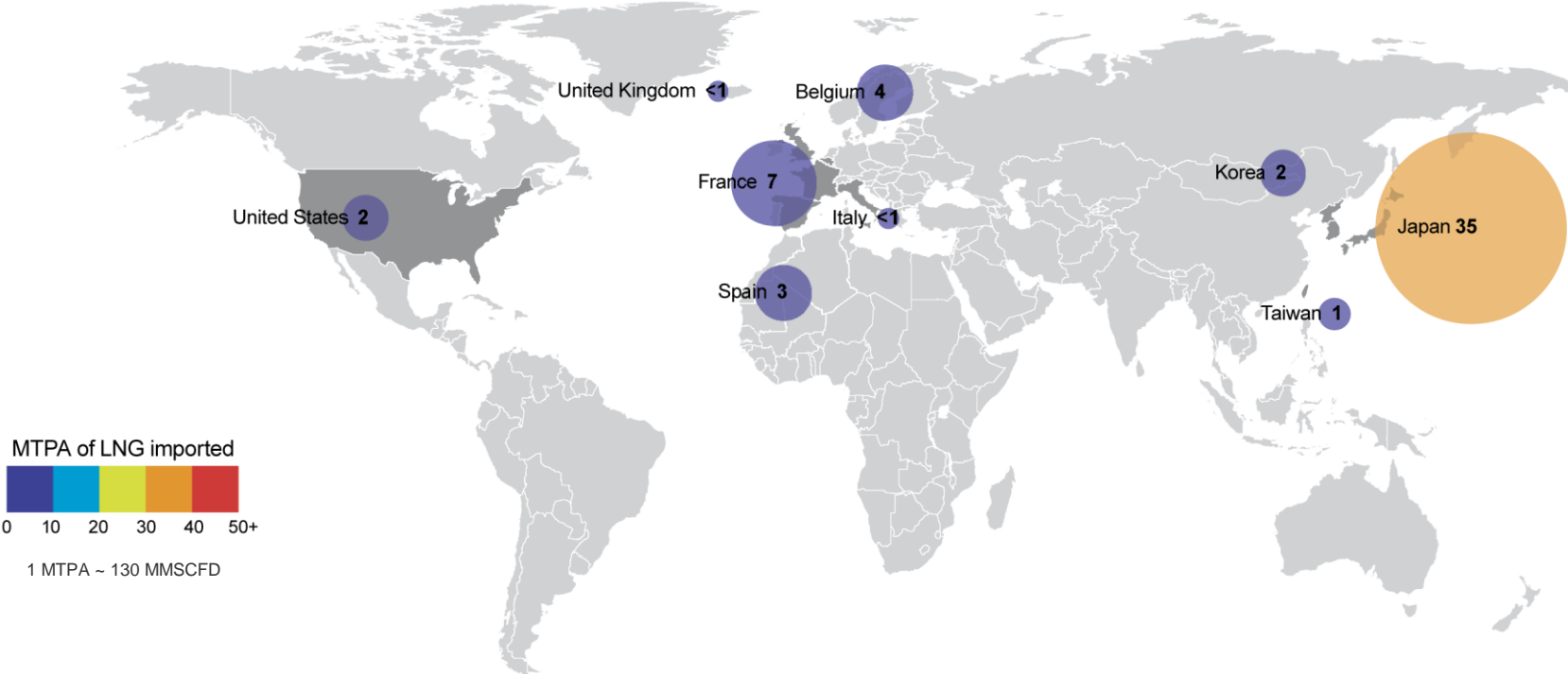


**Neil Theobald, General Manager**

Gas Marketing & Commercialization  
September 27, 2012

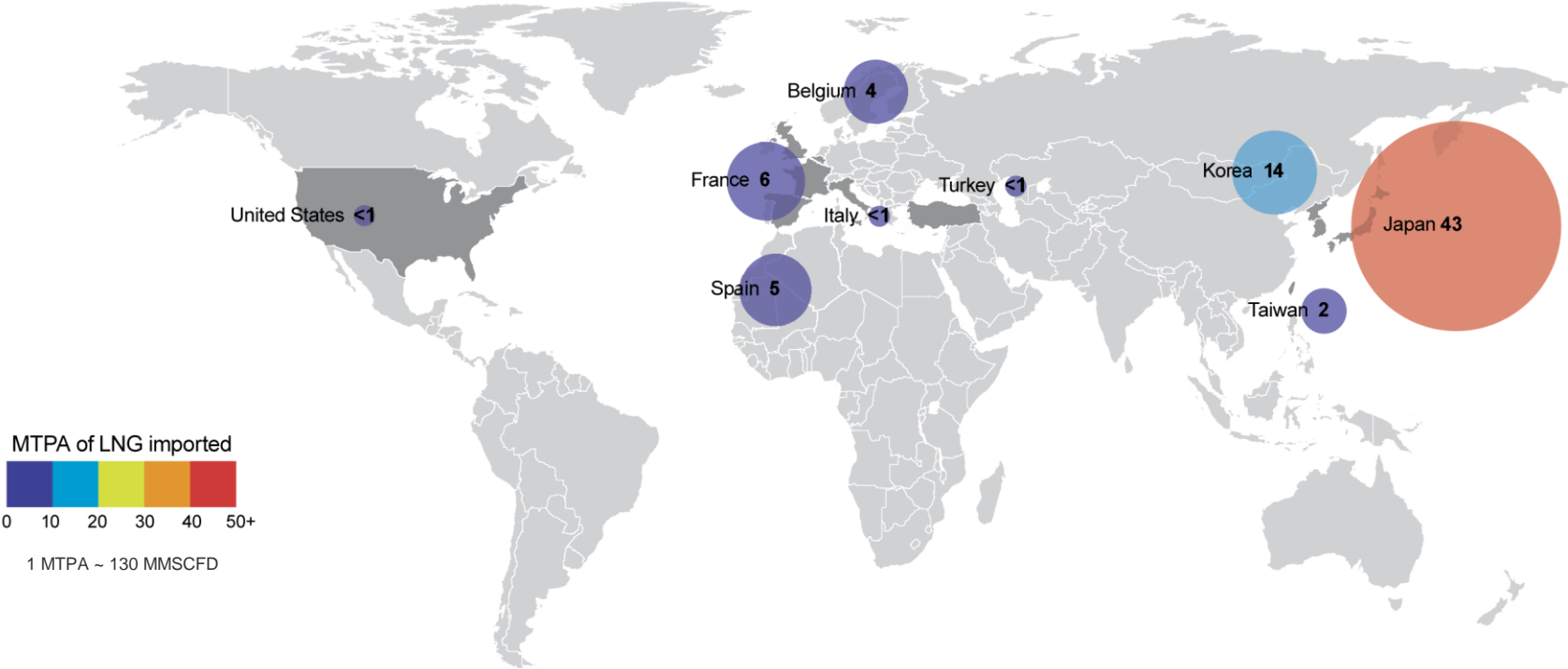


# 1990 Global LNG Demand million tonnes per annum (MTPA)



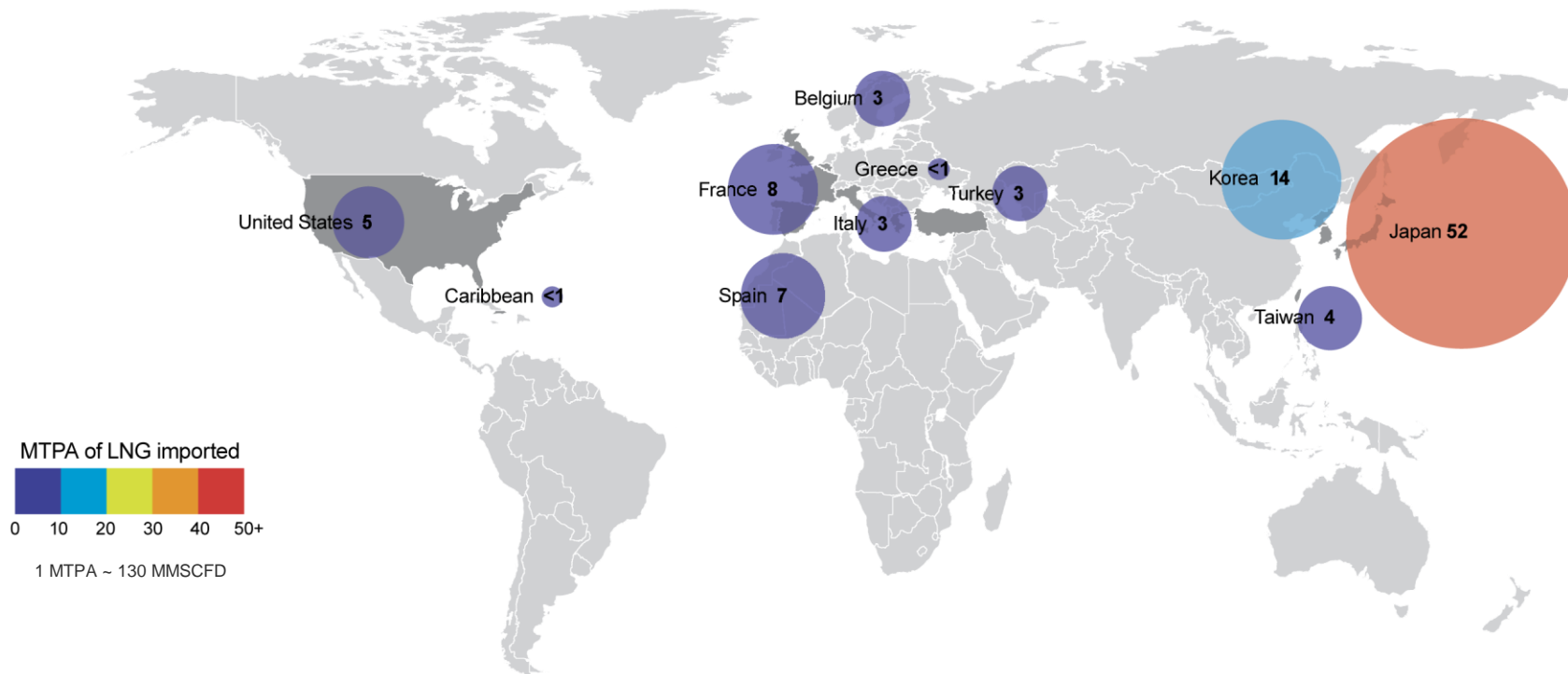
Global LNG Demand **53 MTPA**

# 1995 Global LNG Demand million tonnes per annum (MTPA)



Global LNG Demand **53 MTPA** **68 MTPA**

# 2000 Global LNG Demand million tonnes per annum (MTPA)



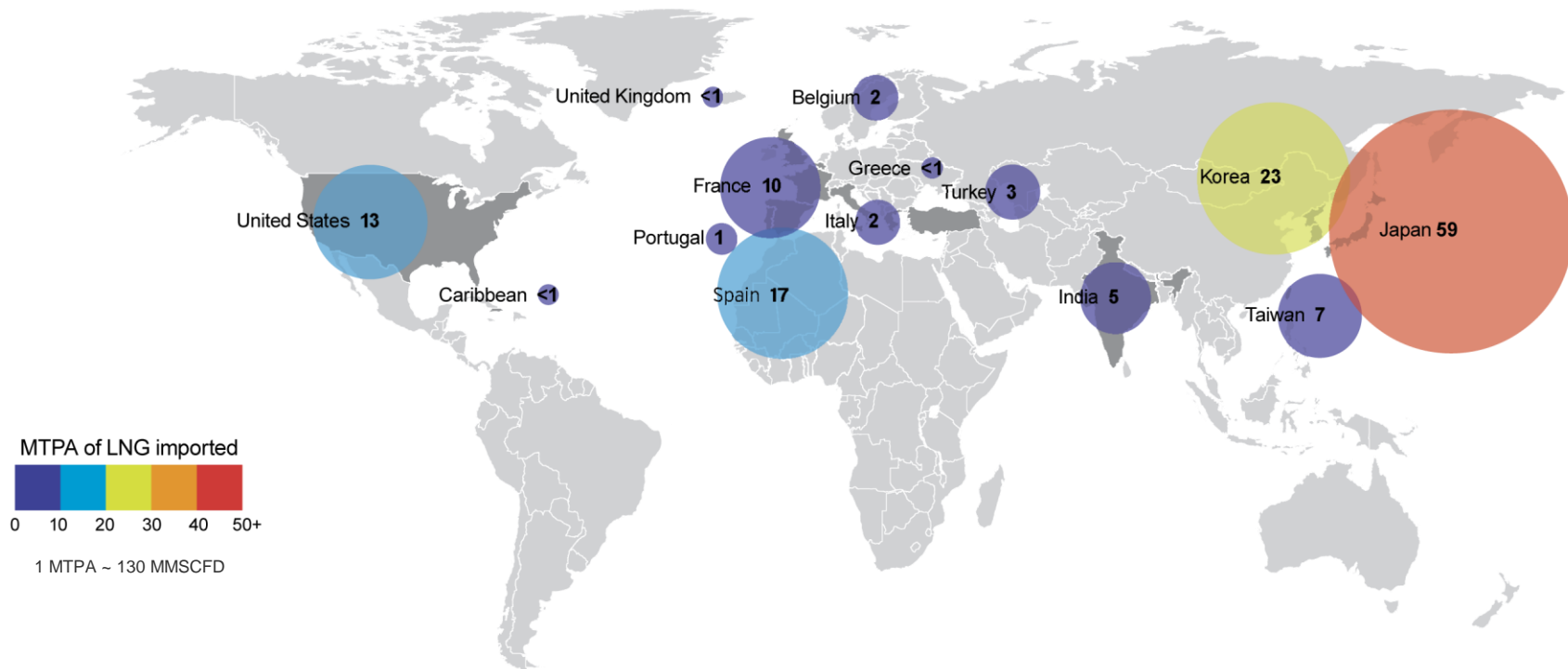
Global LNG Demand

53 MTPA

68 MTPA

100 MTPA

# 2005 Global LNG Demand million tonnes per annum (MTPA)



Global LNG Demand

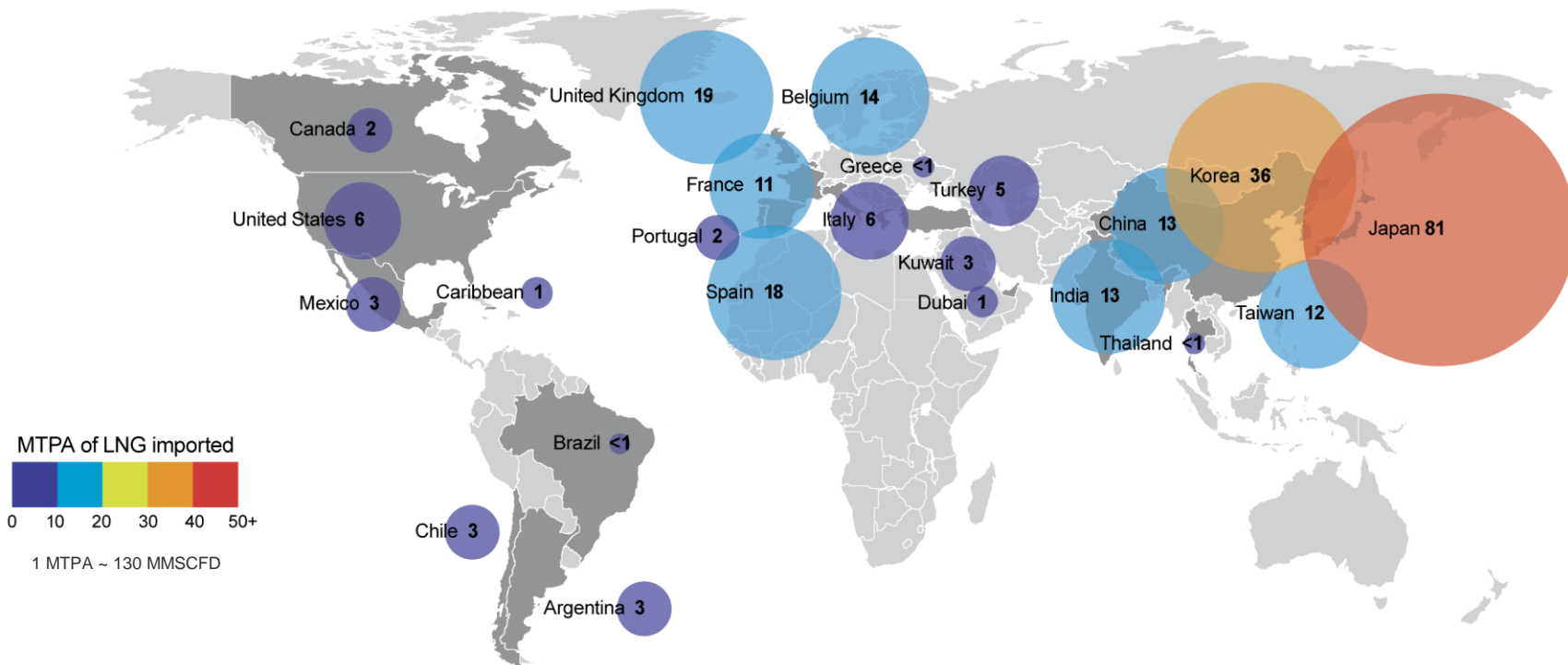
53 MTPA

68 MTPA

100 MTPA

144 MTPA

# 2011 Global LNG Demand million tonnes per annum (MTPA)



Global LNG Demand

53 MTPA

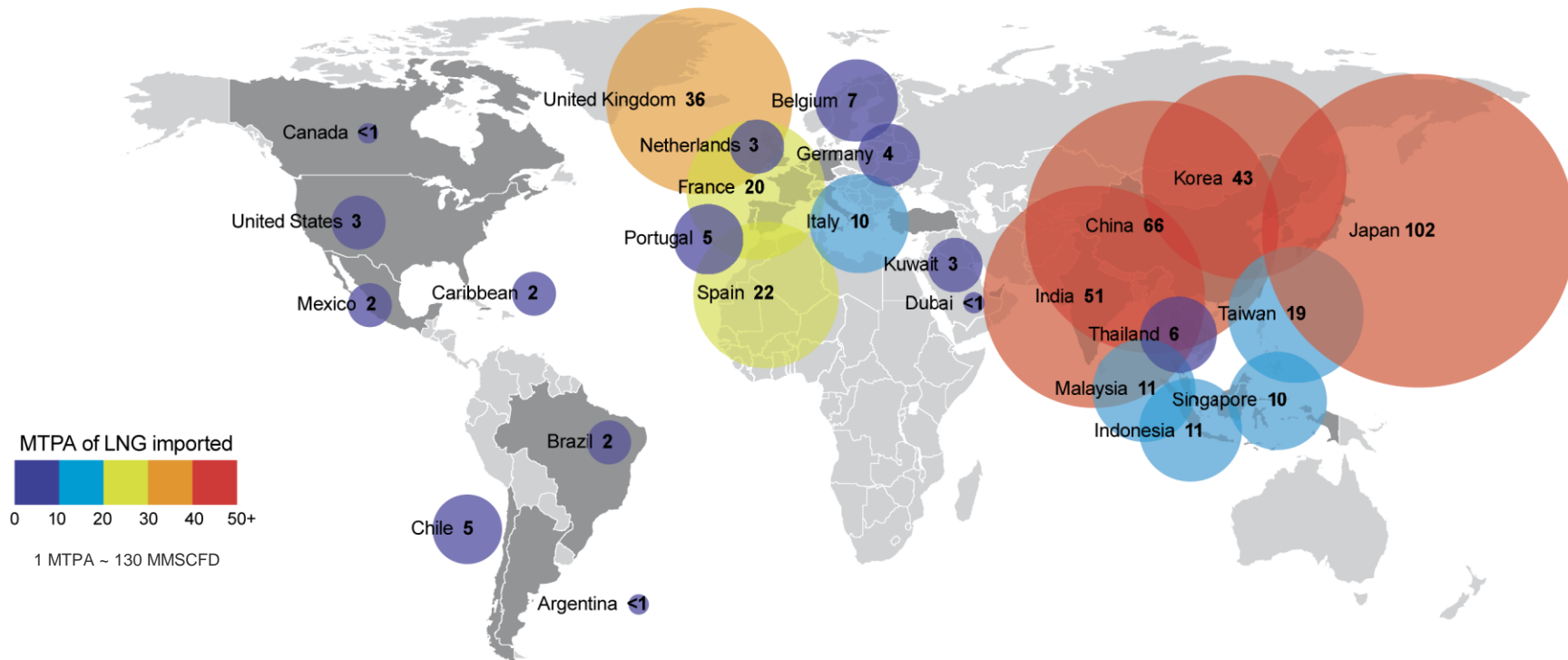
68 MTPA

100 MTPA

144 MTPA

246 MTPA

# 2025 Global LNG Demand million tonnes per annum (MTPA)



Global LNG Demand

53 MTPA

68 MTPA

100 MTPA

144 MTPA

246 MTPA

458 MTPA

# Global LNG Outlook

## Demand Growth Mainly in Asia

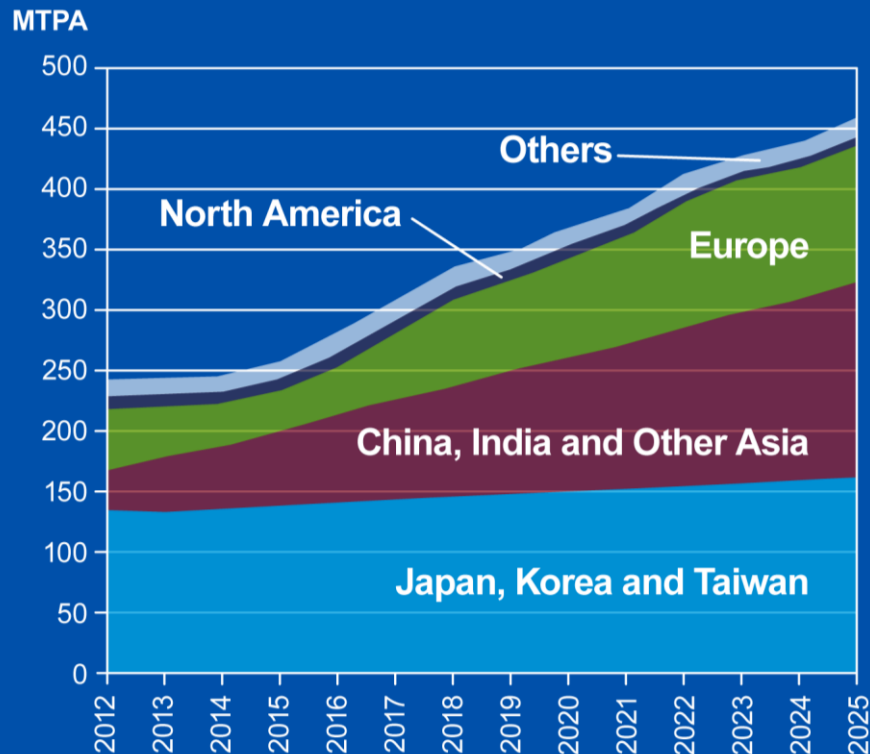


### Japan, Korea and Taiwan

- High quality, experienced buyers
- Limited indigenous or non-LNG gas supplies
- Security of supply is paramount
- Impact of Fukushima
- Chevron sales mainly replacing expiring contracts

### China and India

- Economic expansion will drive demand growth
- Newer buyers with less LNG experience and infrastructure
- Indigenous or non-LNG gas supplies could compete





# Global LNG Outlook

## Potential Supply Growth - Unrisked



### Pacific Basin

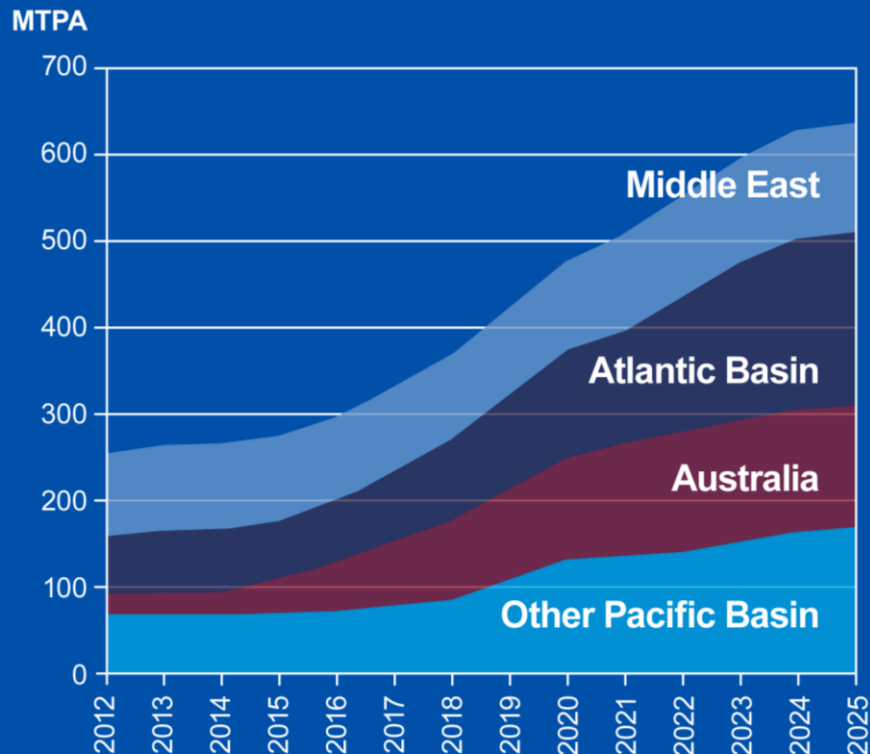
- Malaysia and Indonesia gas supply is mature and domestic demand growing rapidly
- Australian resource base is large and growing with most projects under construction
- Possible Canadian export projects likely require Asian pricing to be viable
- East Africa emerging as new supply source

### Middle East

- Further growth limited by resource/political challenges and growing domestic demand

### Atlantic Basin

- Potential US exports have added uncertainty to the market in the same way US imports did 10 years ago



# LNG Sales Contracts

## In Asia, LNG is Still a Long Term, Relationship-Driven Business



### Contract Terms and Volume

- Up to 25 year term & up to 0.5 bcf/d

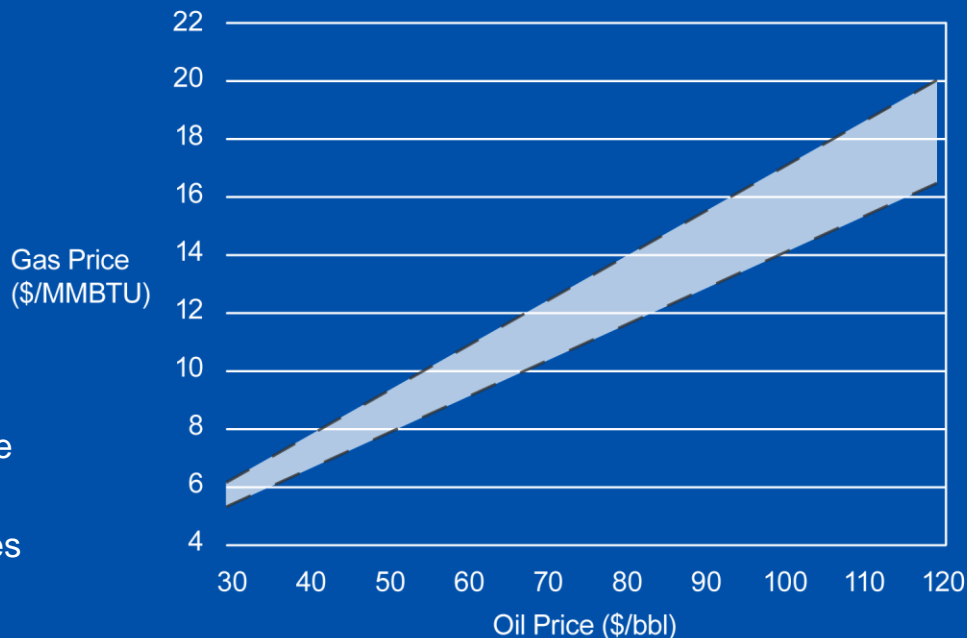
### Long Term Oil-Indexed Pricing

- Limited pipeline gas in Japan/Korea/Taiwan
- No regional gas price index
- Buyer mistrust of index from another region, however interest in some Henry Hub link by larger players as part of portfolio

### Pricing Outlook

- Price renegotiated ~ every 5 years, with objective of staying with market over long term
- Interregional trade will increase but discontinuities are expected to persist due to infrastructure constraints

### Asia LNG Price Formulas (ex-ship) Recent Industry Deals:



# LNG Sales to Strong Existing Markets and Experienced Buyers



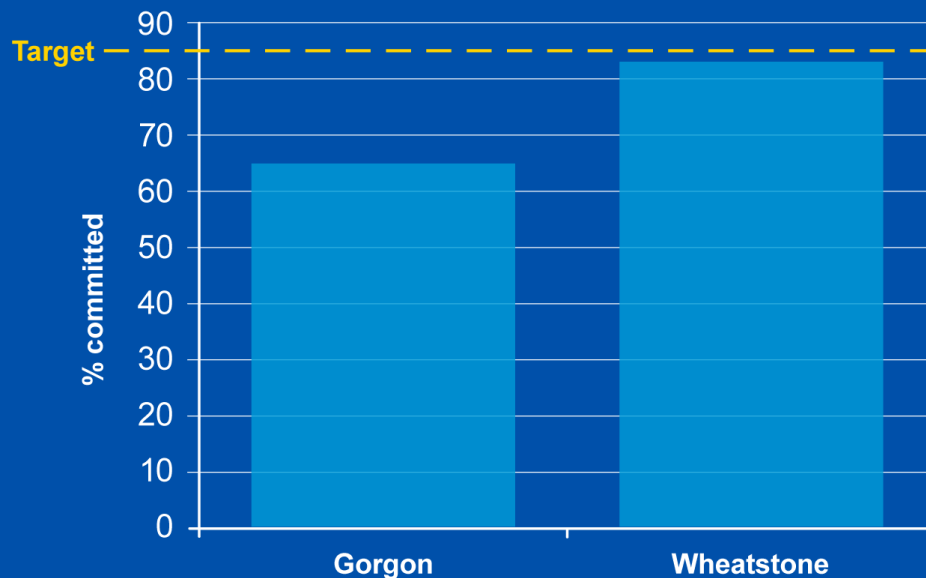
## Gorgon

- ~65% committed long term & aiming for ~85% before first gas
- 2.67% equity sold to buyers
- Buyers: Osaka Gas, Chubu Electric, Tokyo Gas, Kyushu Electric, JX Energy, GS Caltex
- Also in discussions about Gorgon expansion

## Wheatstone

- >80% covered under long term contracts
- 11.83% equity sold to Tokyo Electric & Kyushu Electric
- Buyers: Tokyo Electric, Kyushu Electric, Chubu Electric, Tohoku Electric

## Long term commitment



# LNG Shipping

## Providing Cost Effective and Flexible Transportation



- Industry LNG tanker fleet is small, but has tripled in last decade
- Industry moving away from project linked ships
- Chevron Shipping is managing our global fleet of LNG ships
- Gorgon and Wheatstone combined are expected to load approximately one ship per day



# Pipeline Gas

## Increasing our Share of WA Pipeline Gas Supply



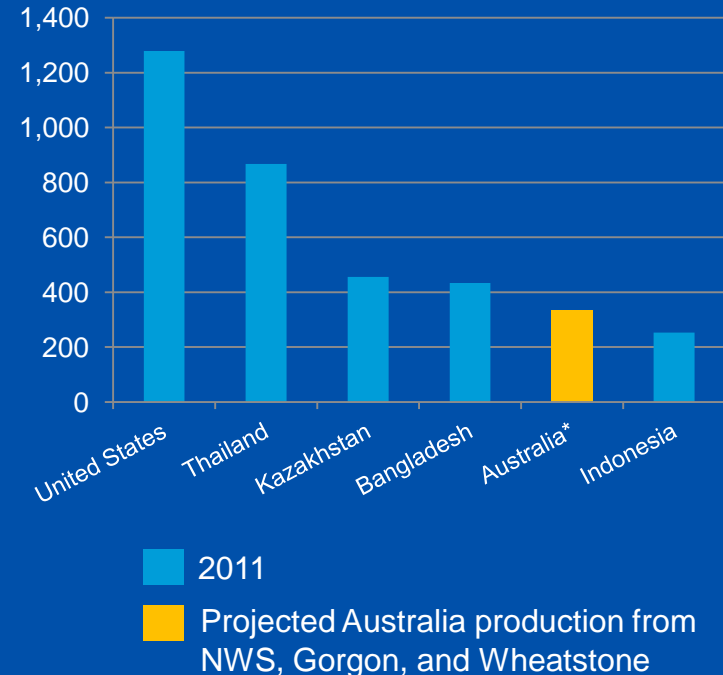
### Western Australian (WA) market ~1 bcf/d

- Five customers make up 80% of market
- Two producer groups currently provide ~90% of supply
- Current production is mature and contracts are expiring over the next 3-5 years

### Chevron has a key position in WA pipeline gas

- ~330 mmscf/d net capacity in existing and projects under-construction
- Gorgon and Wheatstone ~245 mmscf/d, initial volume of ~65 mmscf/d sold to high quality long term buyers
- Foundation gas sales continue from existing NWS contracts
- Future opportunities for expansion

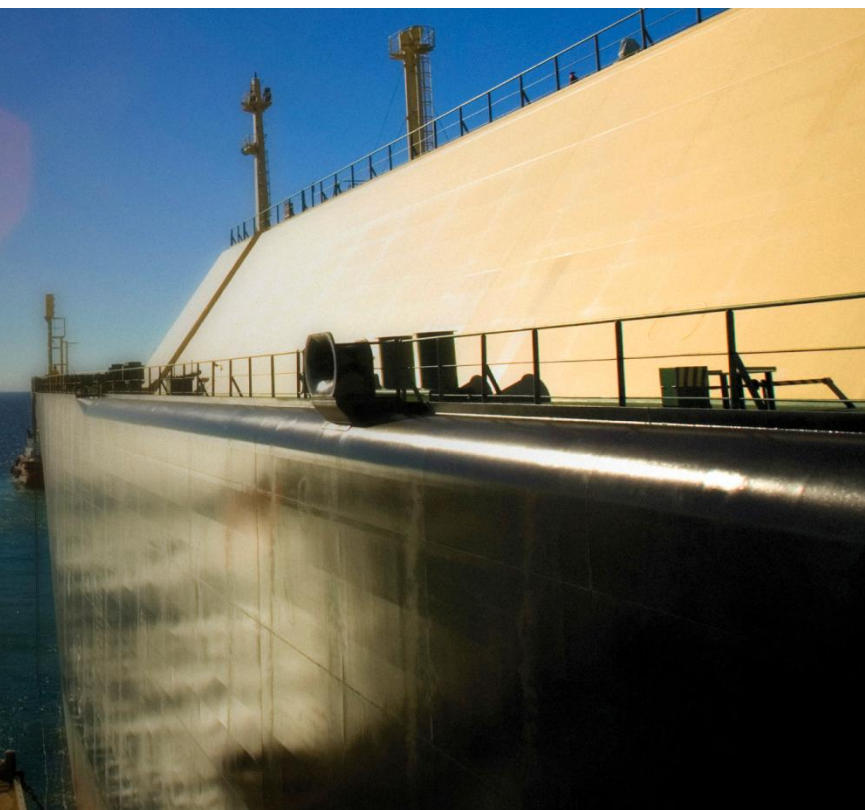
Pipeline Gas Chevron Net Production mmscf/d



# Conclusions



- Asia-Pacific will continue as the largest LNG demand center
- Our foundation customers are in the right markets for greenfield LNG
- Emerging markets will provide diversity
- Supplier quality will remain critical to buyers
- Australian pipeline gas will become a significant business for Chevron



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