

# The Future Structure of Global Gas Markets: Flexibility



- **Flexibility**

- » Liquefaction

- Equity partners will be marketing gas by company rather than by train.
- Upstream and downstream partners move towards vertical integration in opposite directions.
  - Producers are moving into the power business
  - Consumers/marketers are moving into LNG and gas production.

- » Transport

- Tanker capacity is growing by at least 50% over the next 3 years
  - Larger tankers, greater distances, and more non-traditional routes.
    - » U.S. moves beyond Trinidad capacity in Q1.
    - » BG/Malaysia, Nigeria/Taiwan trades.

- » Regasification

- Move from tolling function, to part of integration chain.
- Room for both; Cheniere's/Fall River's vs. majors.
  - "Use it or lose it" creates hybrid in Europe.

# The Future Structure of Global Gas Markets: Hedgability and Availability

PIRA

- **Hedgability**

- » The rise of Brent as a global index marker. Zeebrugge? Henry Hub?
- » Trains will be built with less pre-sold volume.
- » “Arun Dilemma.” Clients can be serviced with alternative sources.
  - Room for the middleman, particularly in Europe.
- » Transport shift toward fob sales brings forward price curve into play.

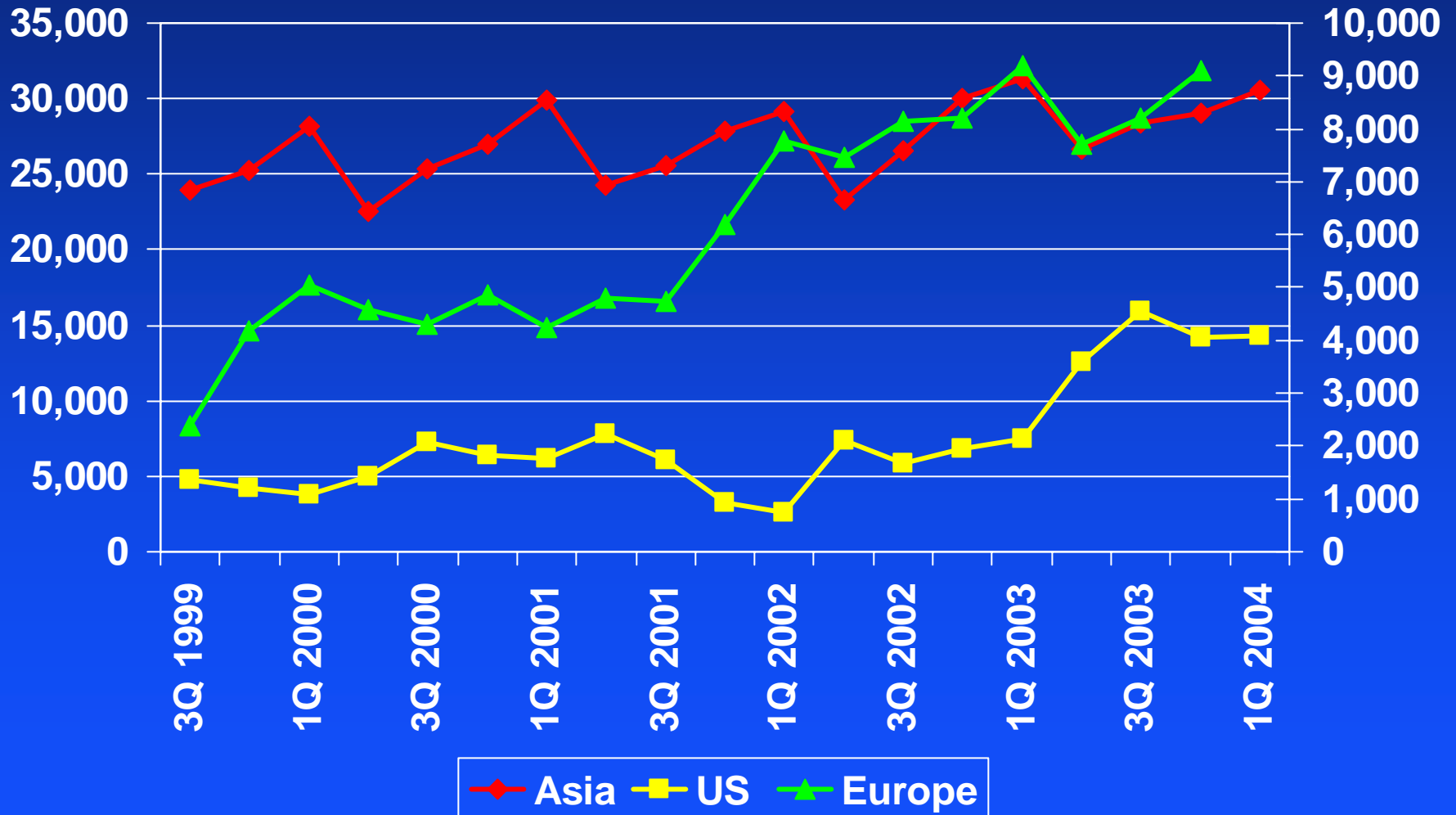
- **Availability**

- » Increased use of gas for power sector shortens ramp up phase in certain countries.
- » Potentially creates less spot availability when new trains emerge if pre-sale volume is high.
- » Traditional form of spot availability will shift from project-related timing to commercial issues

# Global Gas Demand by Region

MMCM in Asia

MMCM in U.S./Europe

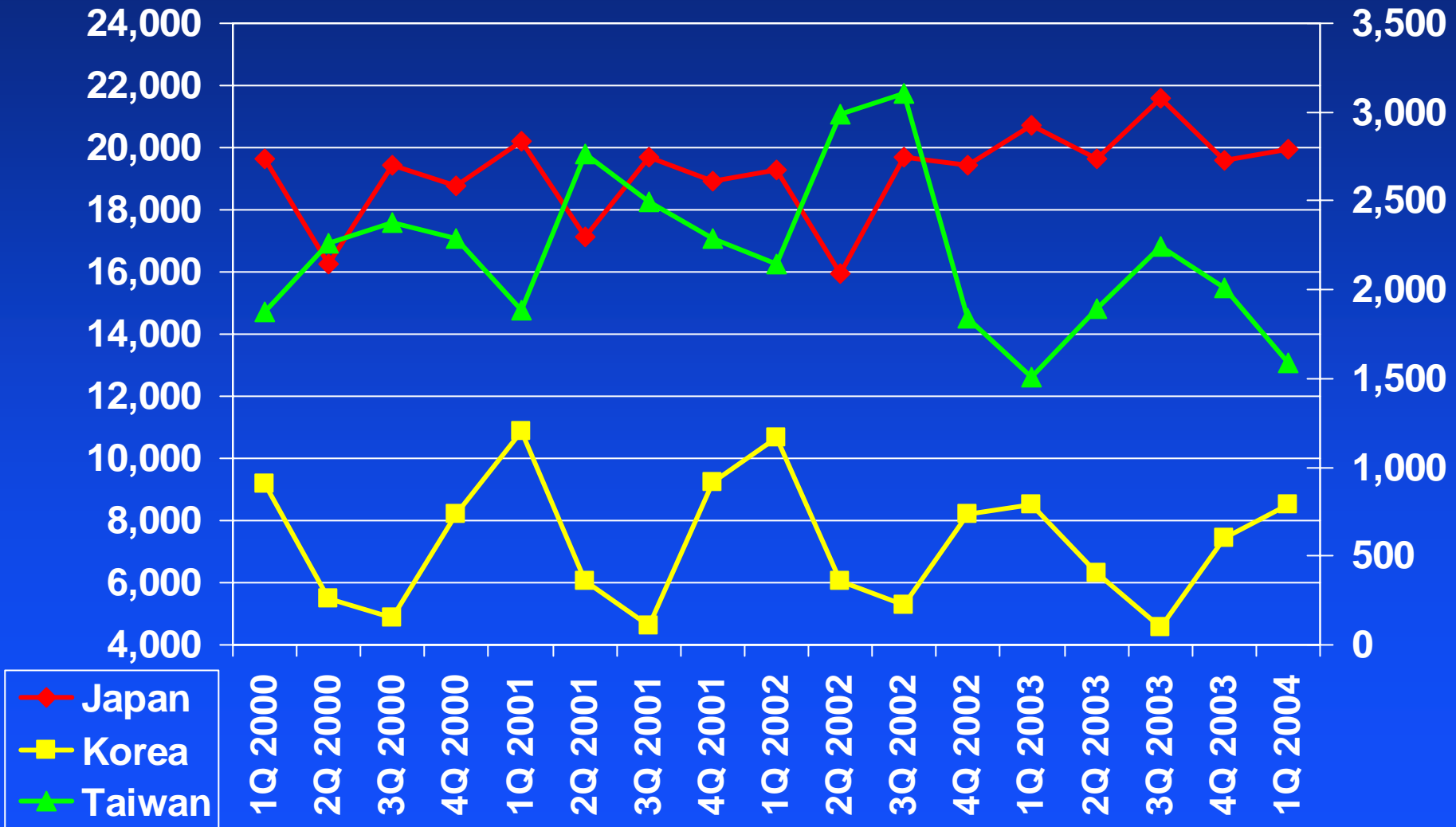


# The Seasonality of Asian Imports



## MMCM in Japan and Korea

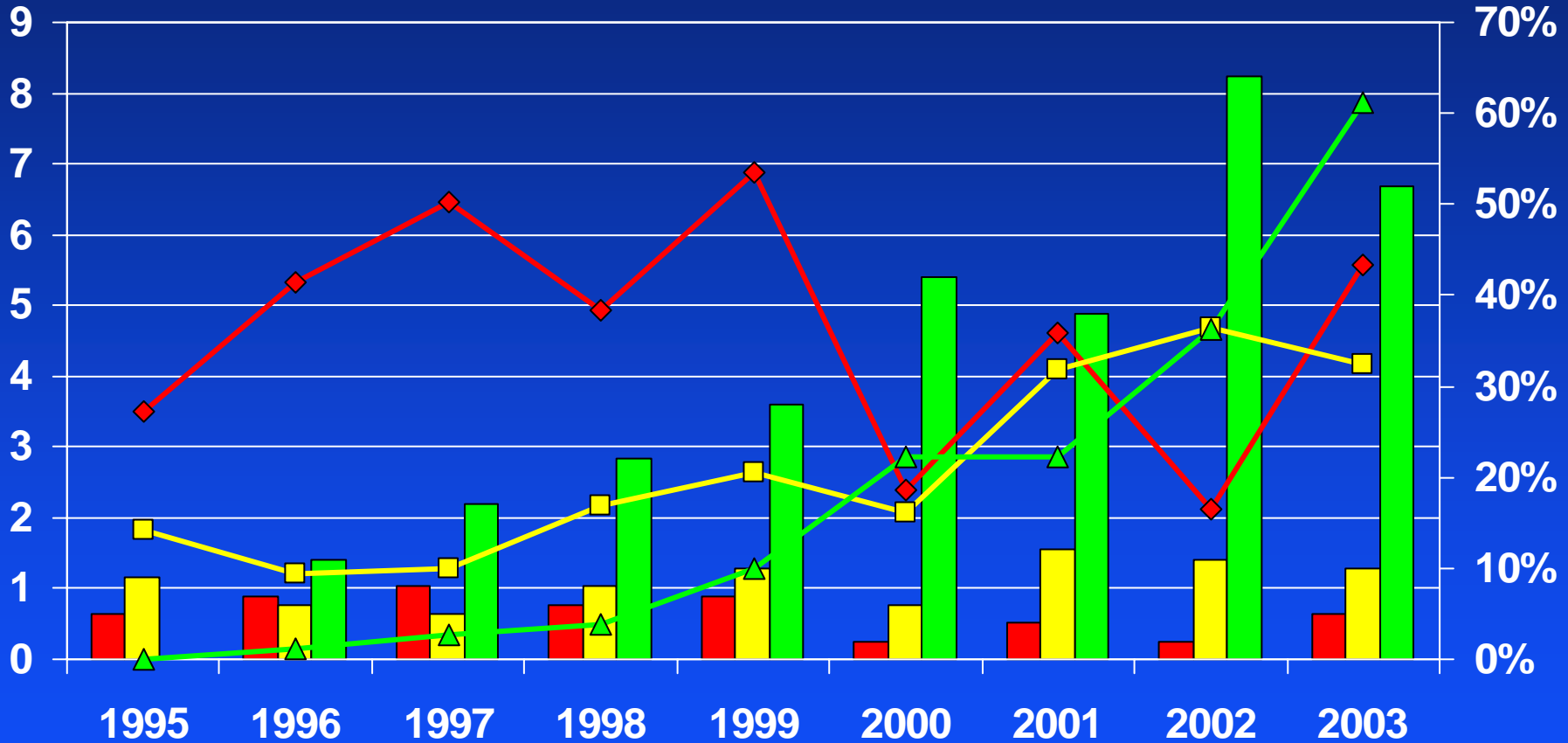
## MMCM in Taiwan



# Spot Imports by Region

BCM

Spot as % of total imports

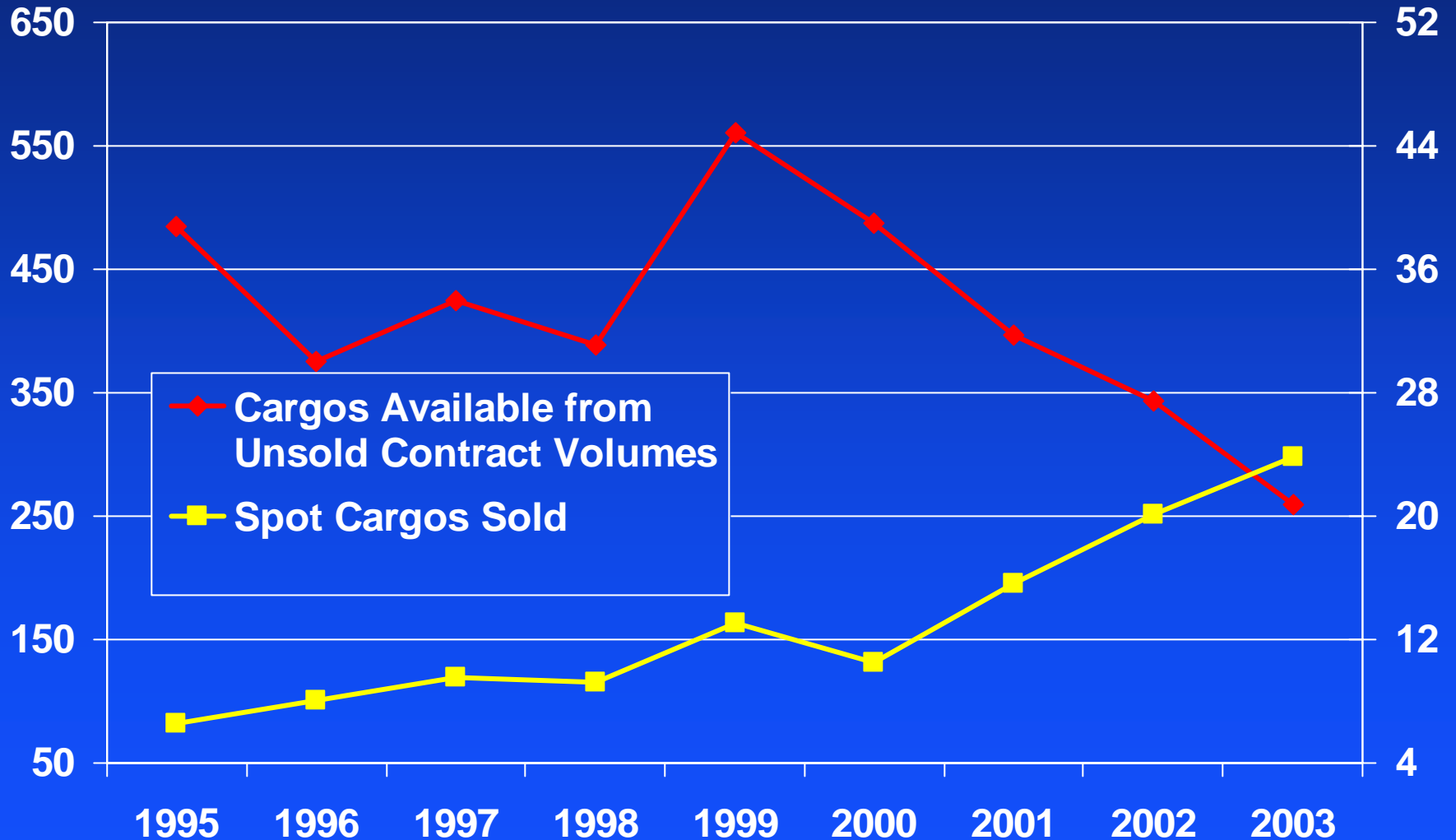


# Number of Spot Cargos Sold and Liquefaction Unsold



(Number of Cargos)

BCM



# The Future Structure of Global Gas Markets

## The Big Picture



- **Seasonality and storage create different global demand profiles.**
- **The shift in industrial gas demand away from traditional markets creates more demand on power and residential and commercial sectors for growth.**
- **Spot markets will growth in different regions for different purposes.**
  - » Europe will be a swing demand region due to pipeline options.
  - » Asian/U.S. are necessity buyers, not choice buyers.
- **Greater risks of demand disruption than supply disruption.**
  - » Changing laws in the U.S./Europe/Japan.
  - » Changing pricing terms in India and China.