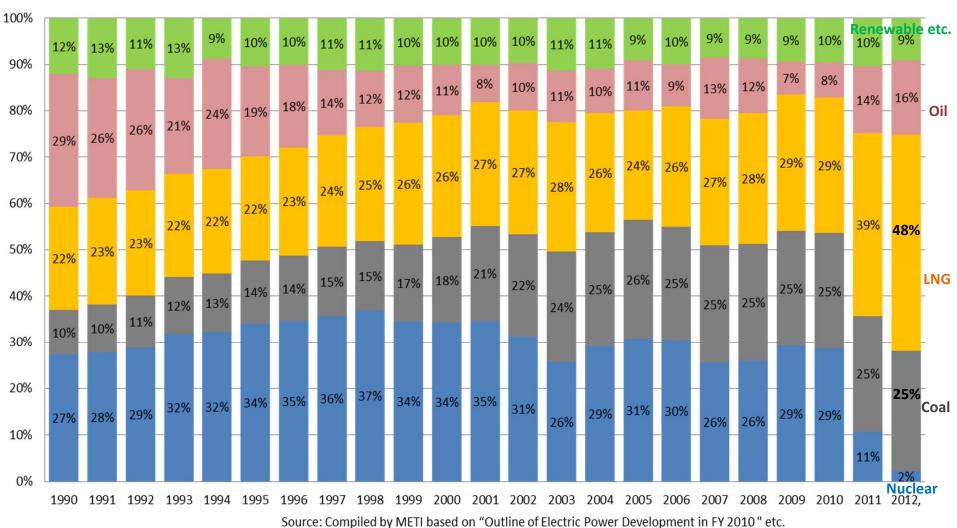
# Energy Mix in Japan – before and after Fukushima

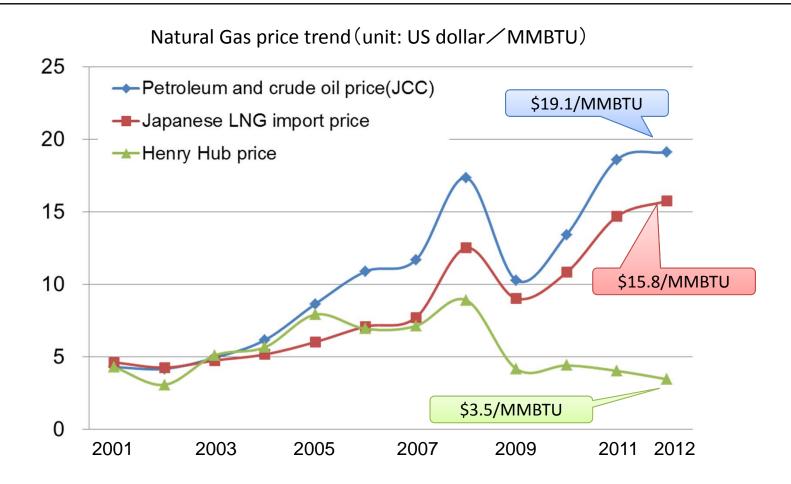
#### LNG mainly compensate for the decline of nuclear power.

#### **Electricity Generation by Fuel**



# Japanese LNG cost nearly doubled after Fukushima

- OAfter the Great East Japan Earthquake, Japan's LNG demand has increased by 30% due to the shut down of nuclear power plants. (2010fy 70million tons → 2012fy 90million tons)
- OIn addition, Japan's LNG import price, linked to crude oil import price, has soared.
- OAs a result, the overall cost of LNG imports to Japan has increased from 3.5 trillion yen a year to around 6 trillion yen. 3.5 trillion 1 trillion yen = \$10.7 billion



#### Developments in Japan/World to addressing Asian premium

### ■ New area / Business/Technology

- ➤US, Russia, Mozambique
- ➤ Japanese companies in the upstream (Australia)
- ➤ Methane Hydrate

#### Utilities changing

- ➤ Stringent assessment on raising electricity tariff, focusing on fuel cost cut
- ➤ Electricity market reform: direction and roadmap released in February
- ➤ Nuclear re-start: new safety standard by NRA in July 2013
- Taking into consideration of the best use of coal-fire power generation, including new construction

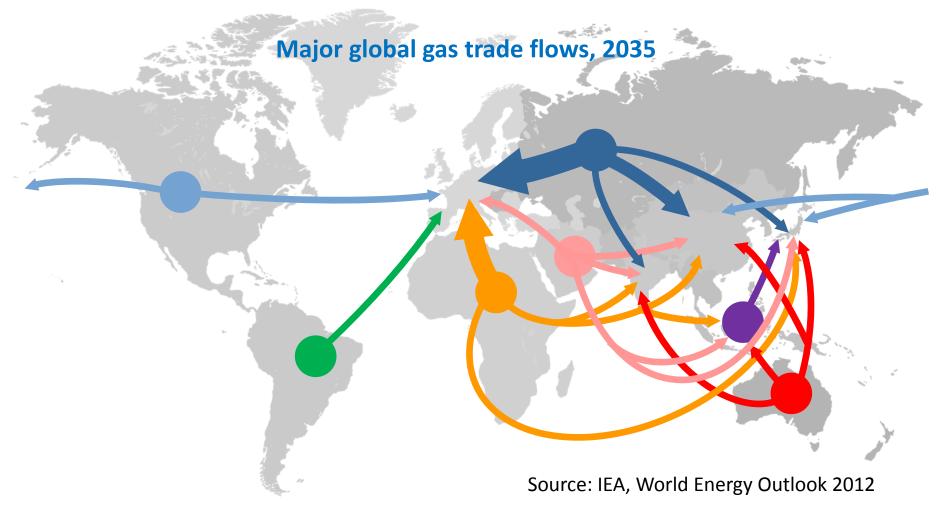
#### Supporting policies and International cooperation

- ➤1 trillion yen loan guarantee program for cheaper LNG projects
- ➤ 2<sup>nd</sup> LNG Producer / Consumer Conference @Tokyo, fall 2013
- ➤ Cooperation with consumer country

  (Korea) Japan and Korea Gas Dialogue

  (India) Joint study on "Pricing of LNG in the Asia pacific market"

# The shifting balance of supply & demand points to a more globalised market



Rising supplies of unconventional gas & LNG help to diversify trade flows, putting pressure on conventional gas suppliers & oil-linked pricing mechanisms