



Actual situation of LNG use at Chubu Electric Power Co., Inc.

21 March 2010

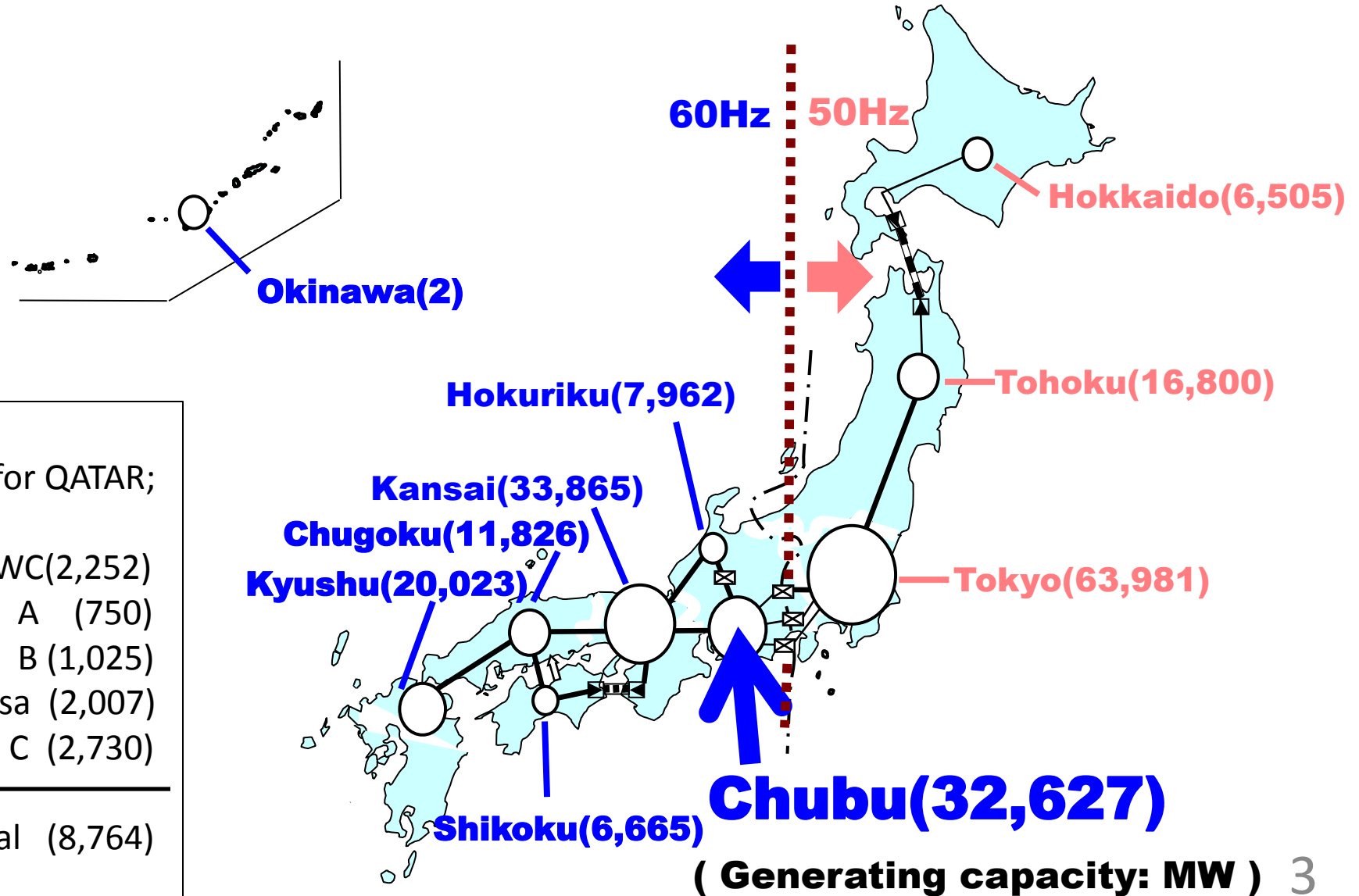
Chubu Electric Power Co., Inc. Doha Office

Keiichi YONEYAMA

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- 1 Outline of Japanese power companies
- 2 Outline of Chubu Electric Power Co.,Inc.
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Electric Power Companies in Japan



As for QATAR;

QEWC(2,252)

Ras A (750)

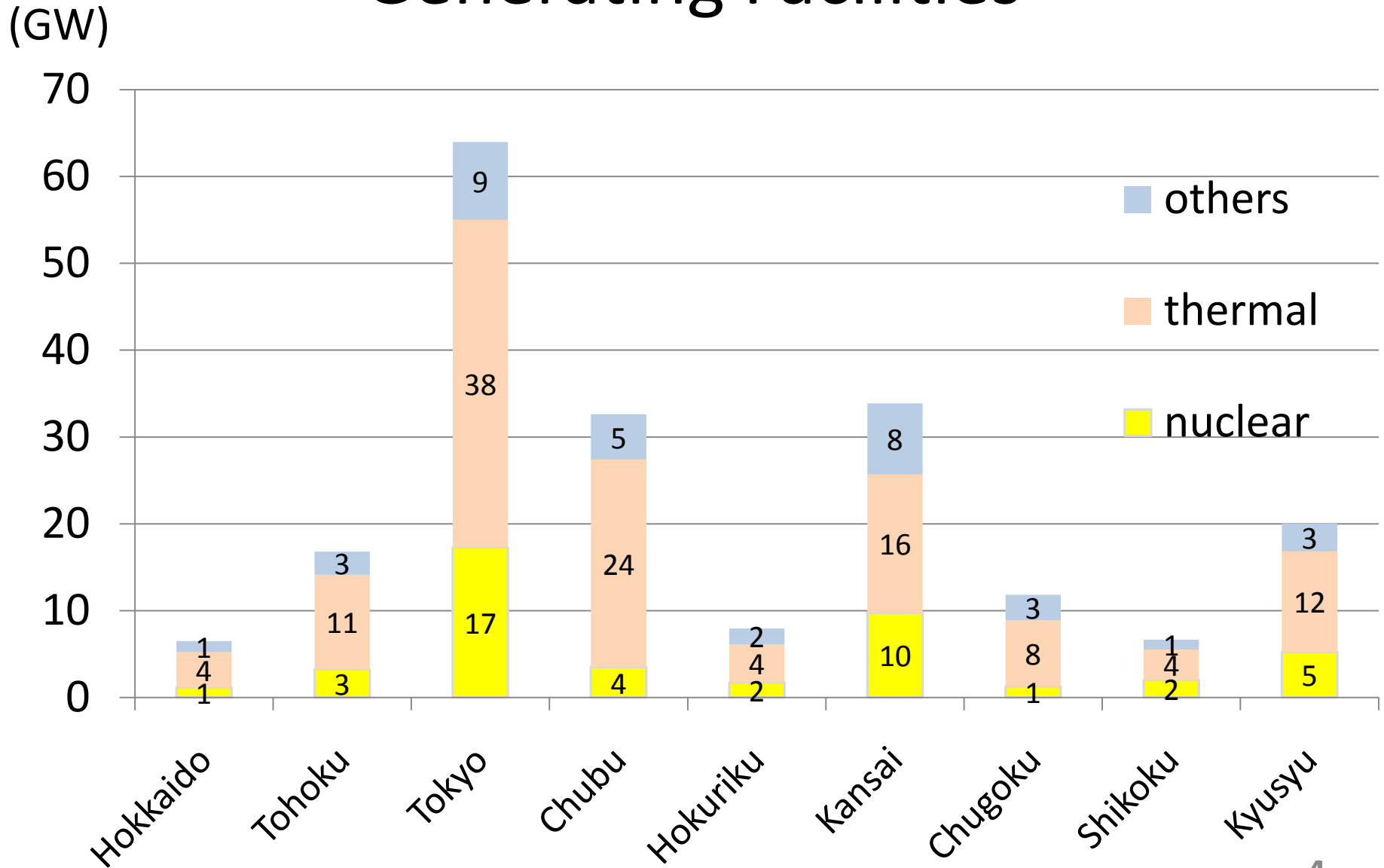
Ras B (1,025)

Mesa (2,007)

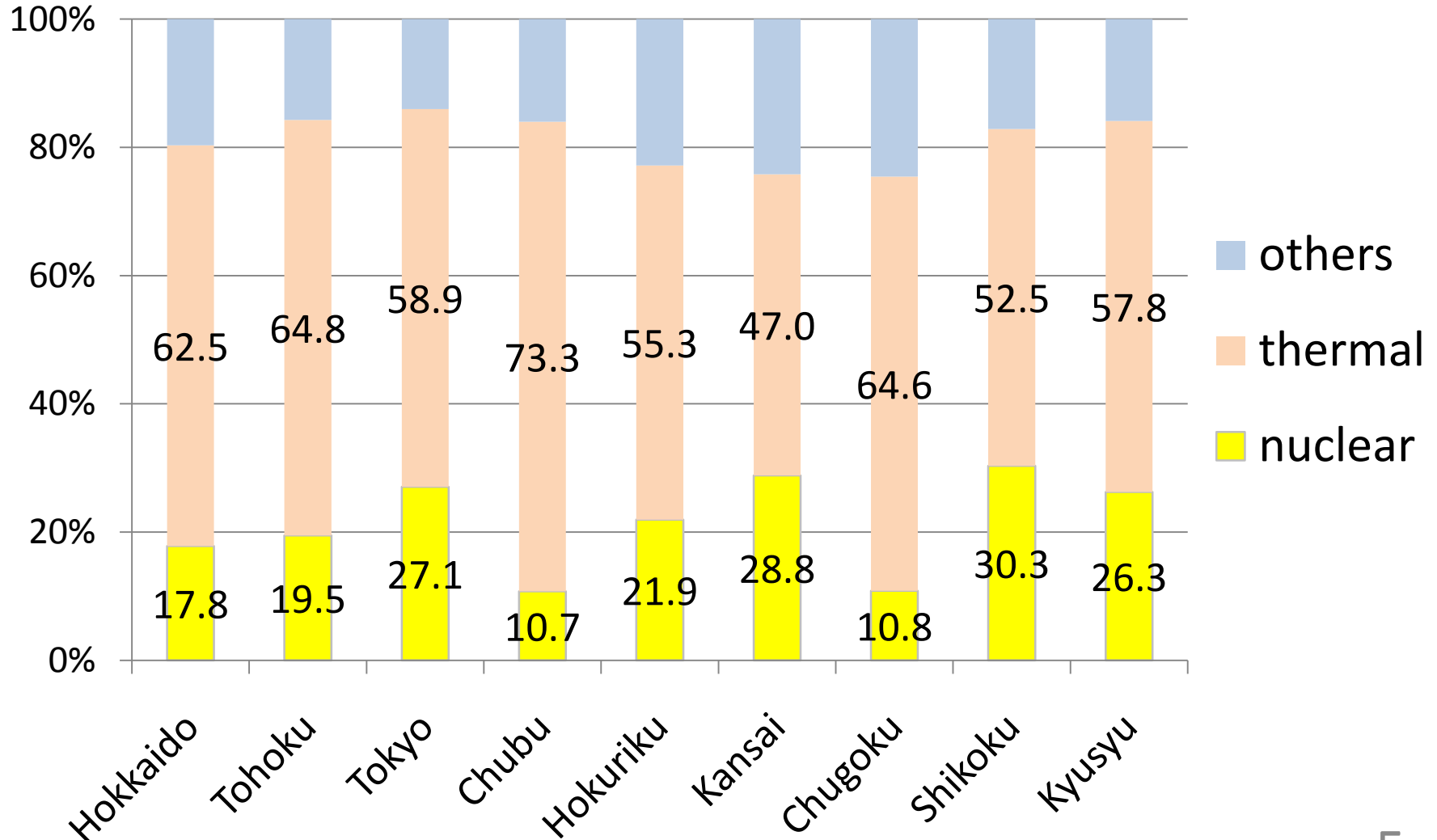
Ras C (2,730)

Total (8,764)

Generating Facilities



Proportion of Generating Facilities

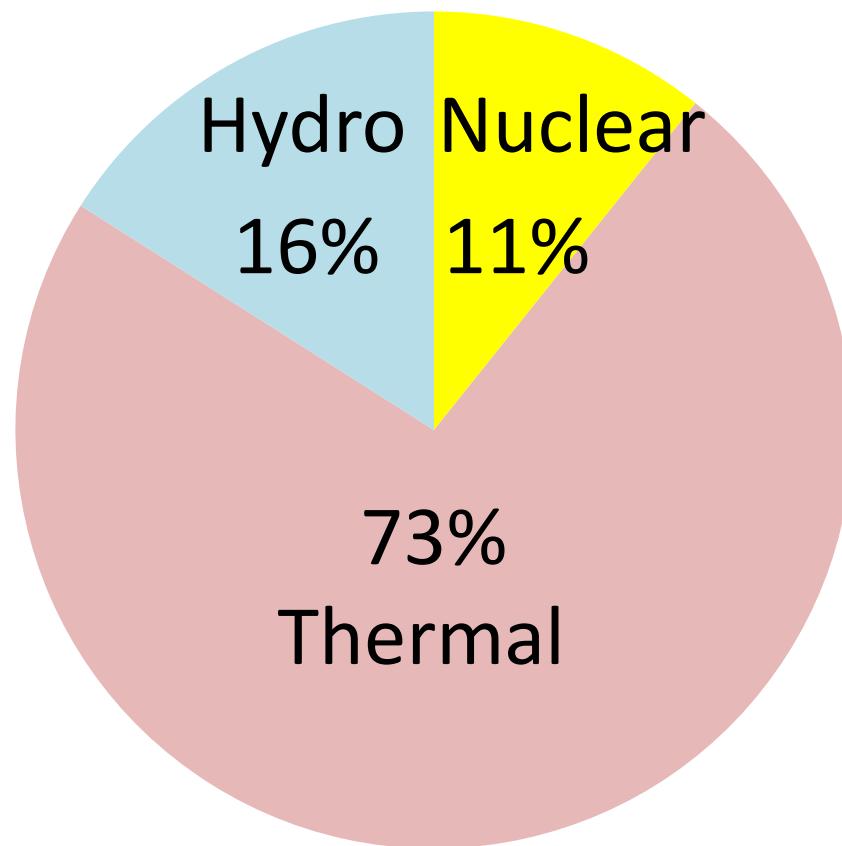


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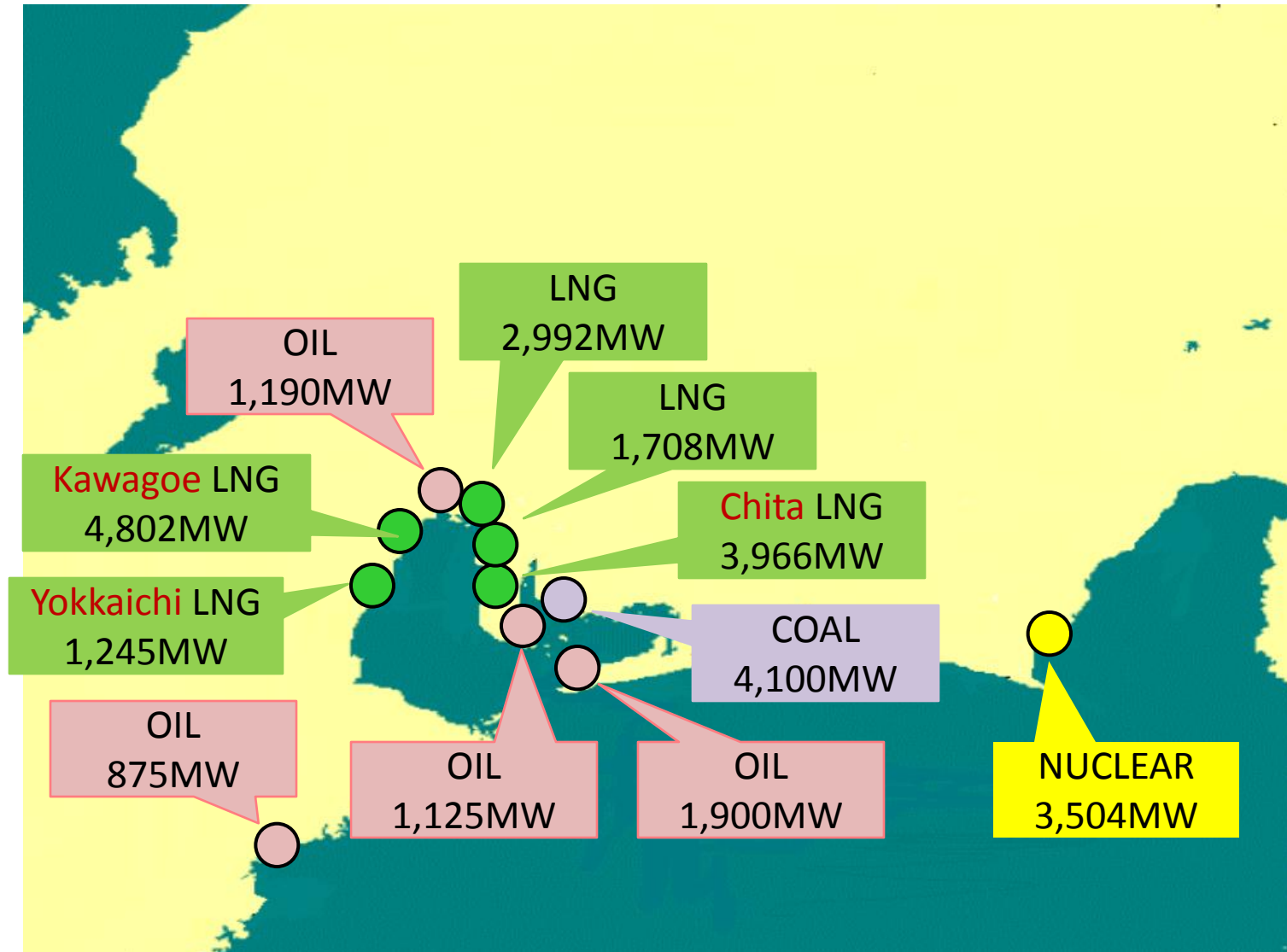
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Chubu's Generating Facilities

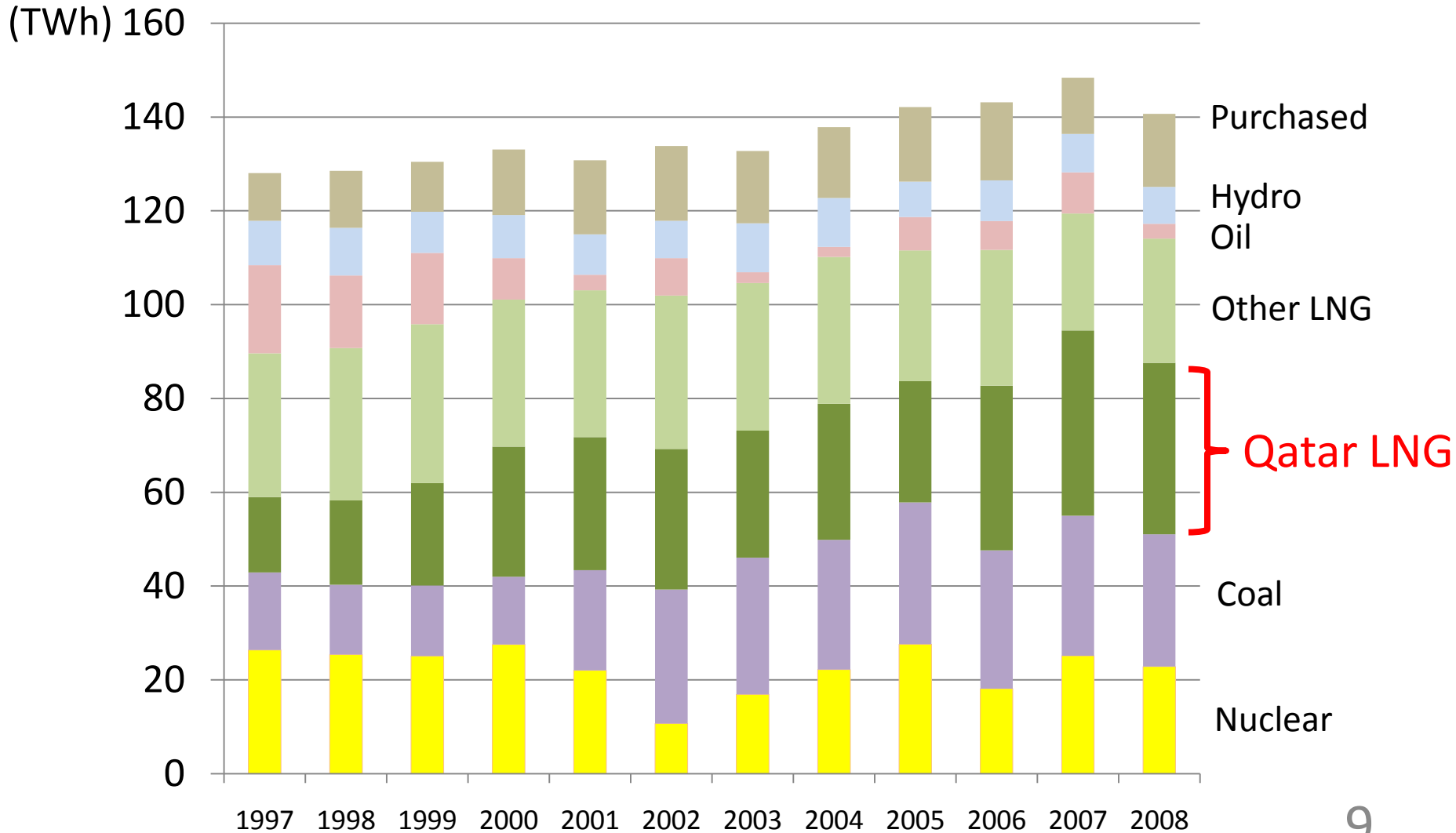
	No.	Output (MW)
Nuclear	1	3,504
Thermal	11	23,904
Hydro	182	5,219
Total	194	32,626



Chubu's Major Generating Facilities

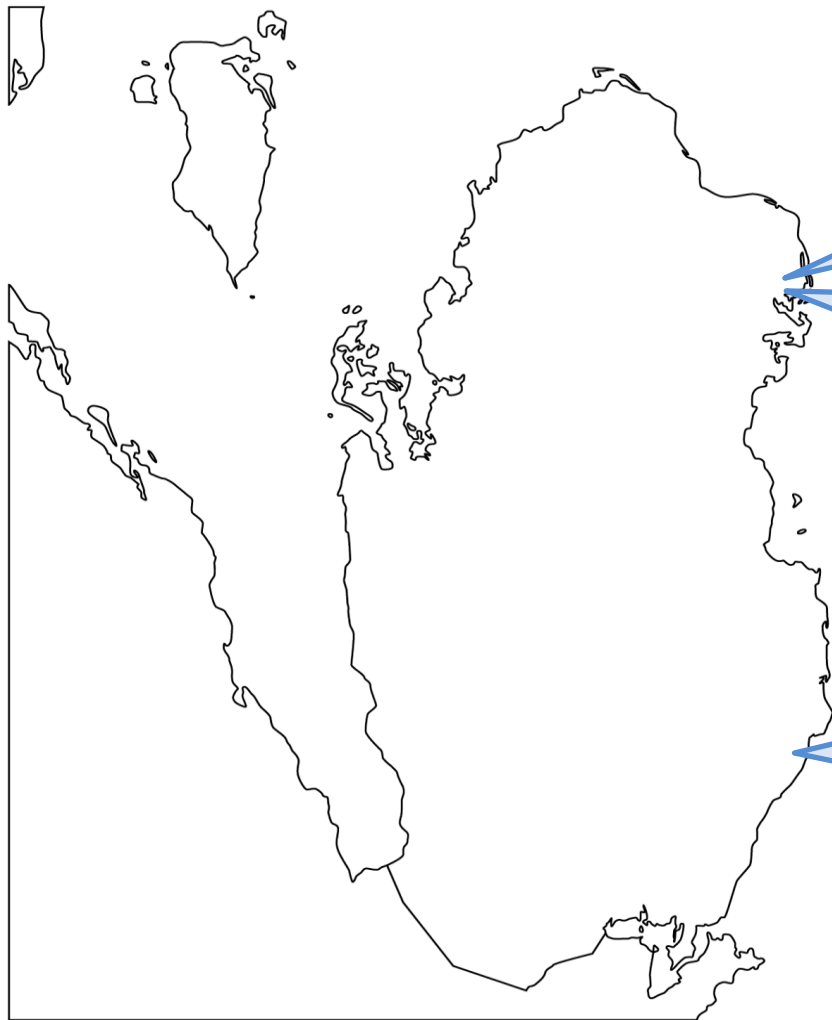


Source of supplied electricity of Chubu



Chubu's investment in IPP or IWPP in Qatar

IEEJ: April 2010



Ras Girtas (IWPP)
2,730MW/63MIGD
Start Operation 2011
Chubu's portion :5%

Q-Power (IWPP)
1,025MW/60MIGD
Operation since 2008
Chubu's portion : 5%

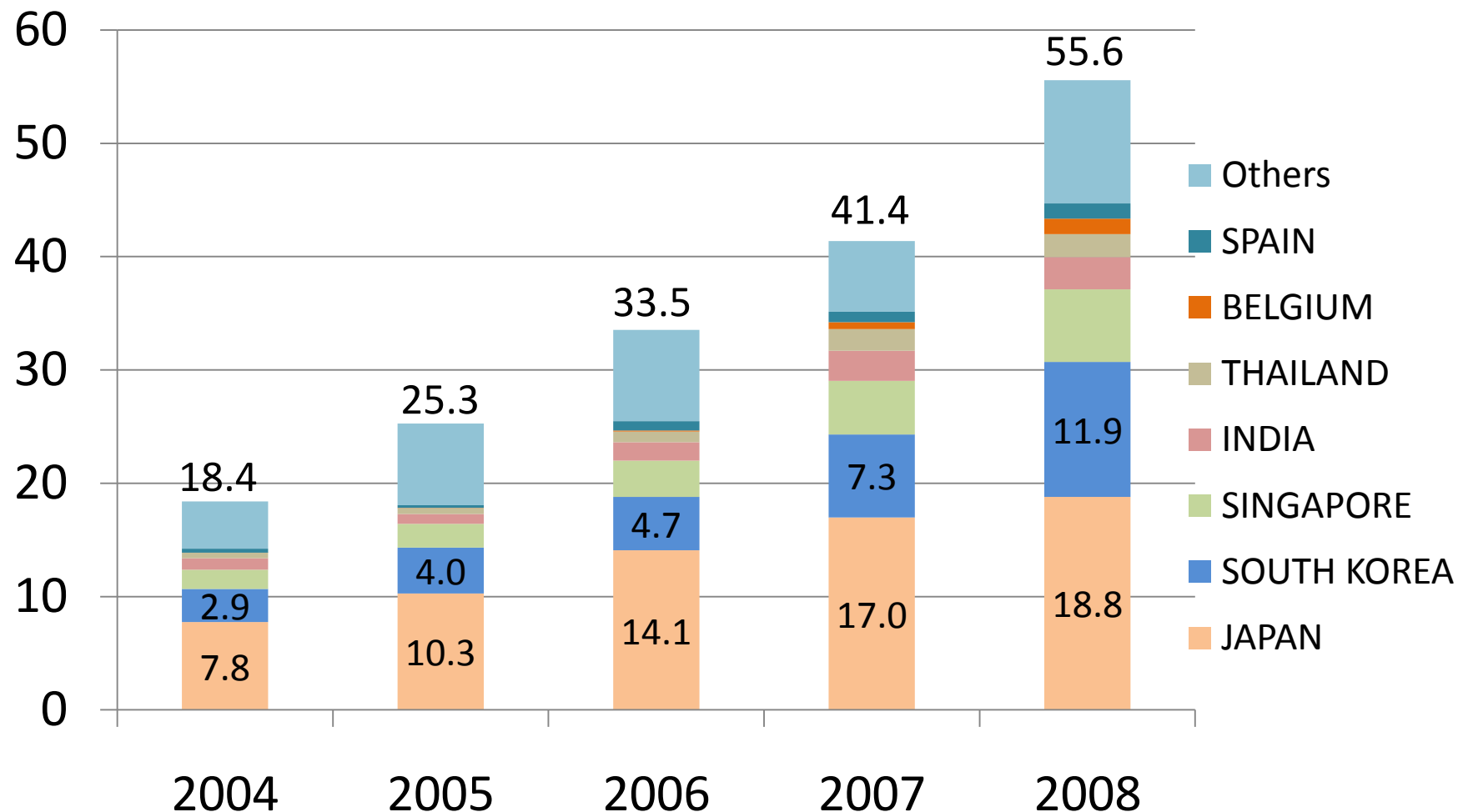
M-Power (IPP)
2,007MW
Start Operation 2010
Chubu's portion : 10%

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The amount of total export of Qatar

(Billion US\$)

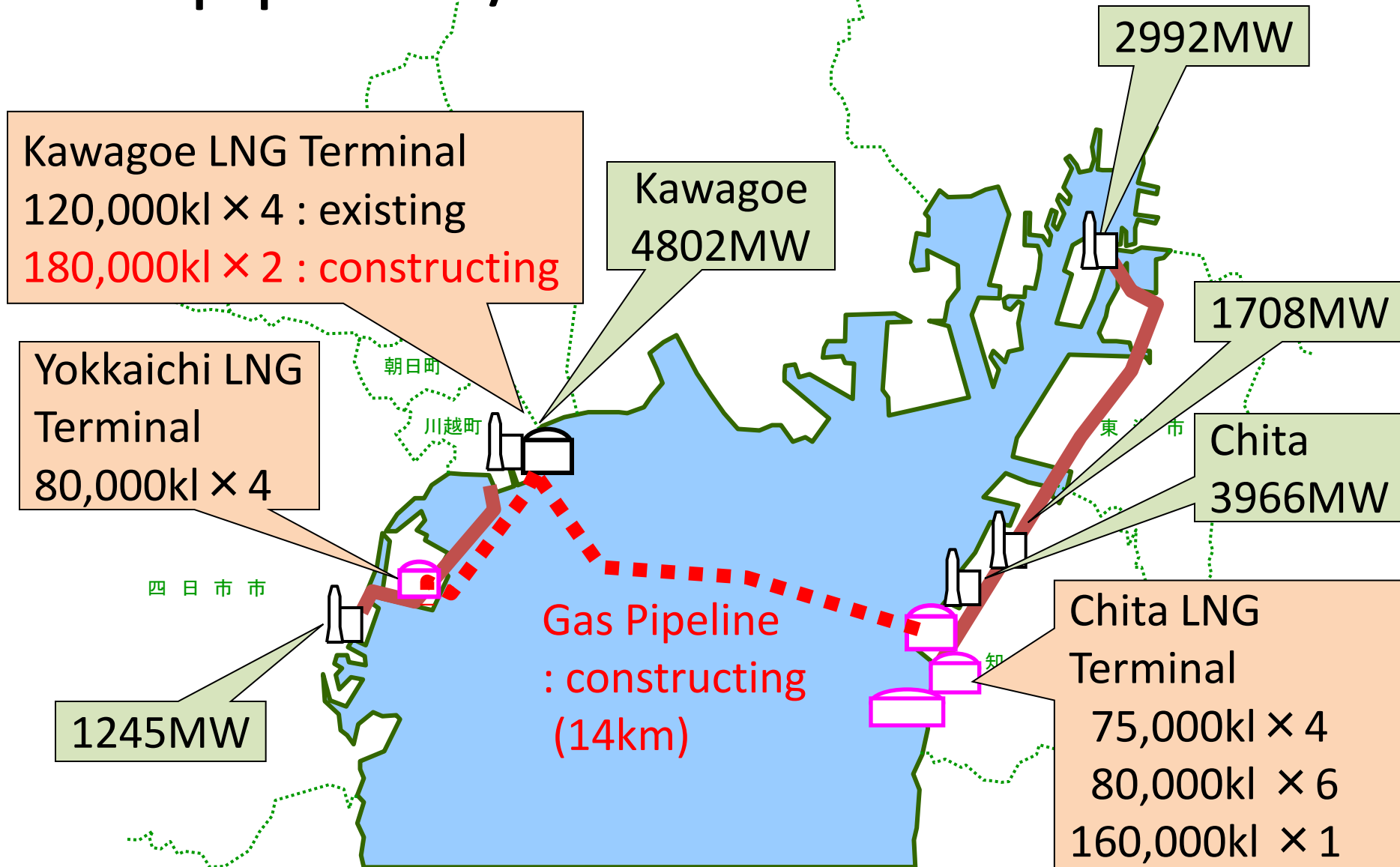


(Source : Qatar Statistic Authority)

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Gas pipeline / LNG tanks



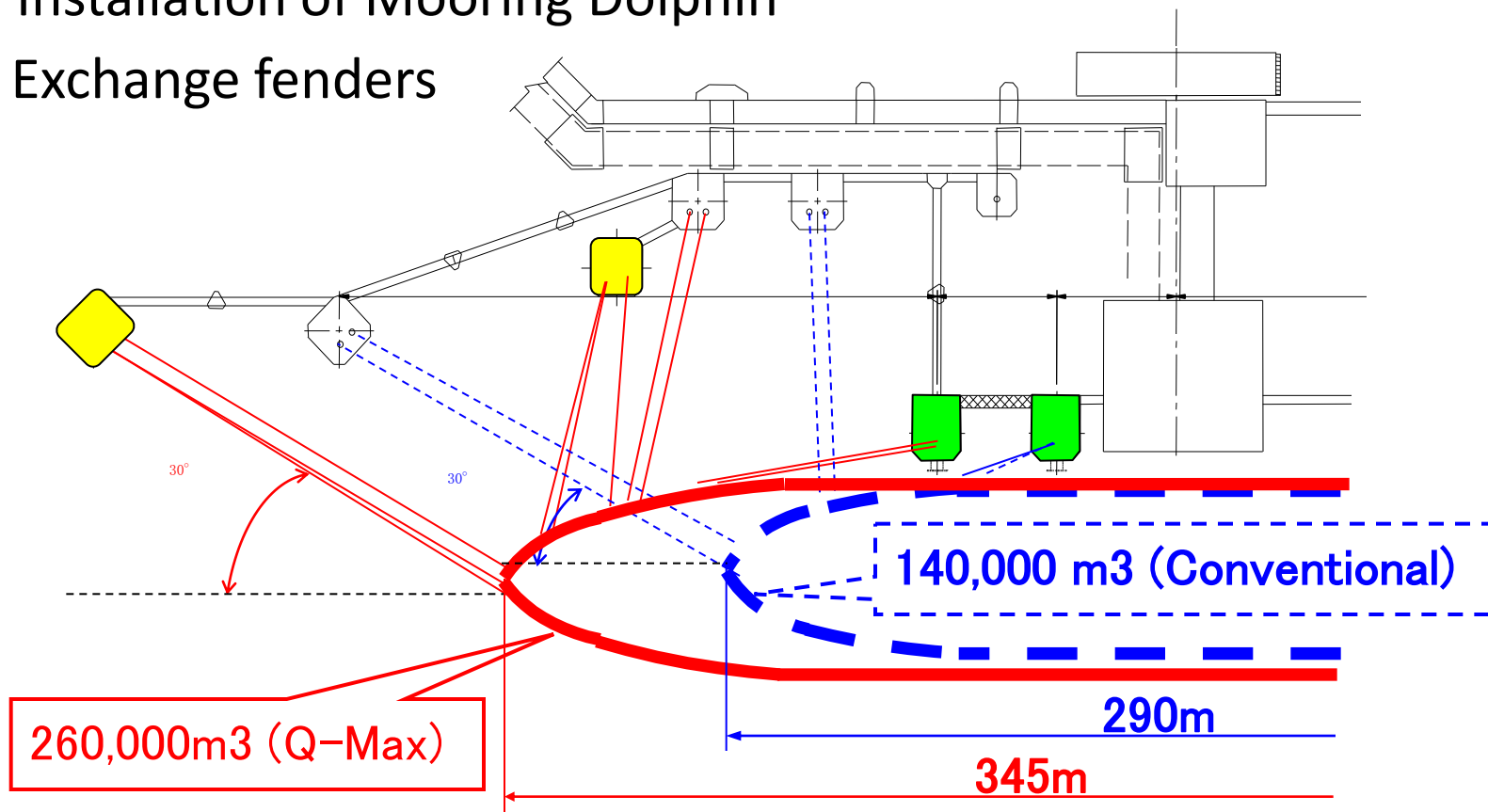
Expanding berth for Q-Max, Q-Flex IEU April 2010



Installation of Mooring Dolphin



Exchange fenders



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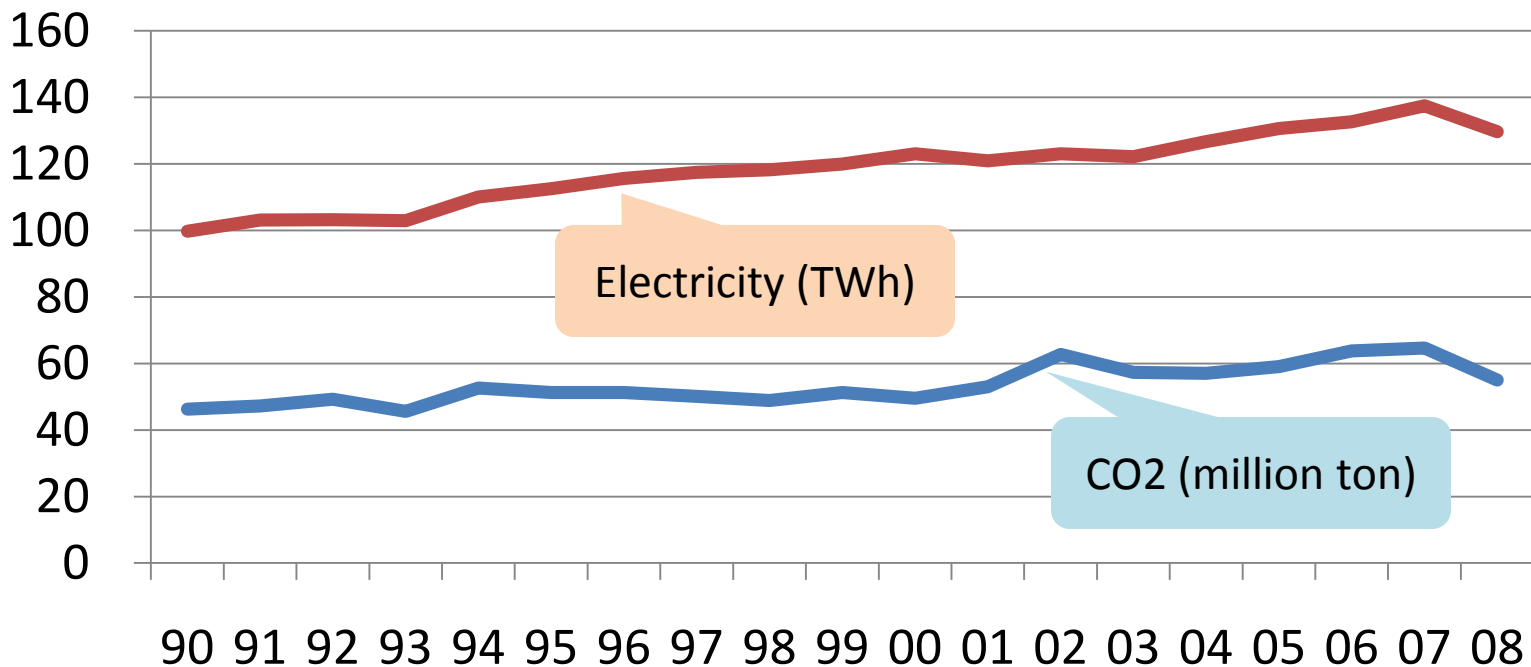
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Electricity consumption / CO2 emission

【FY2006】

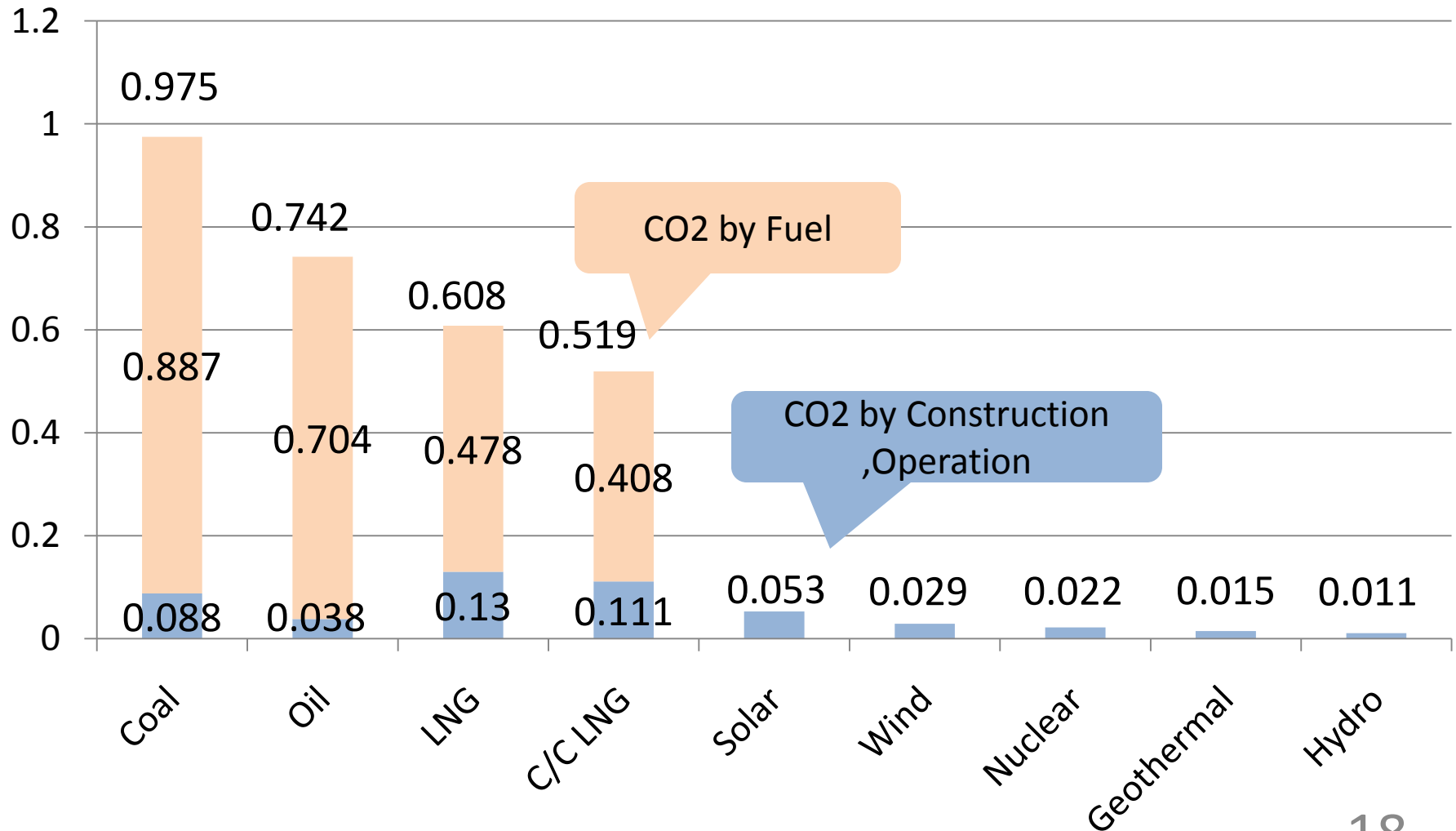
Total CO2 of Japan 1,341 million ton
Chubu's CO2 64 million ton (4.8%)

(TWh , million ton)

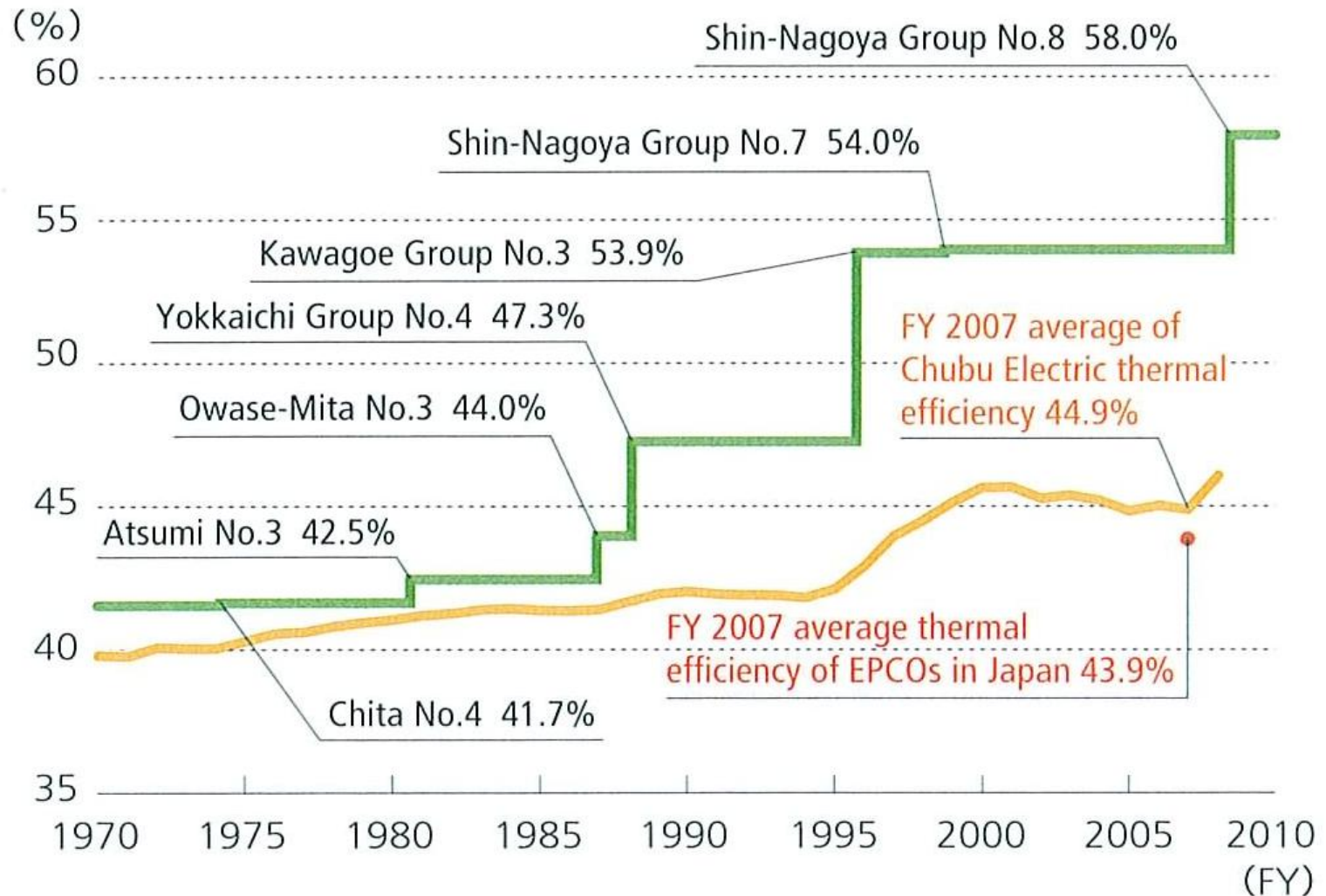


CO2 emission by Generating System

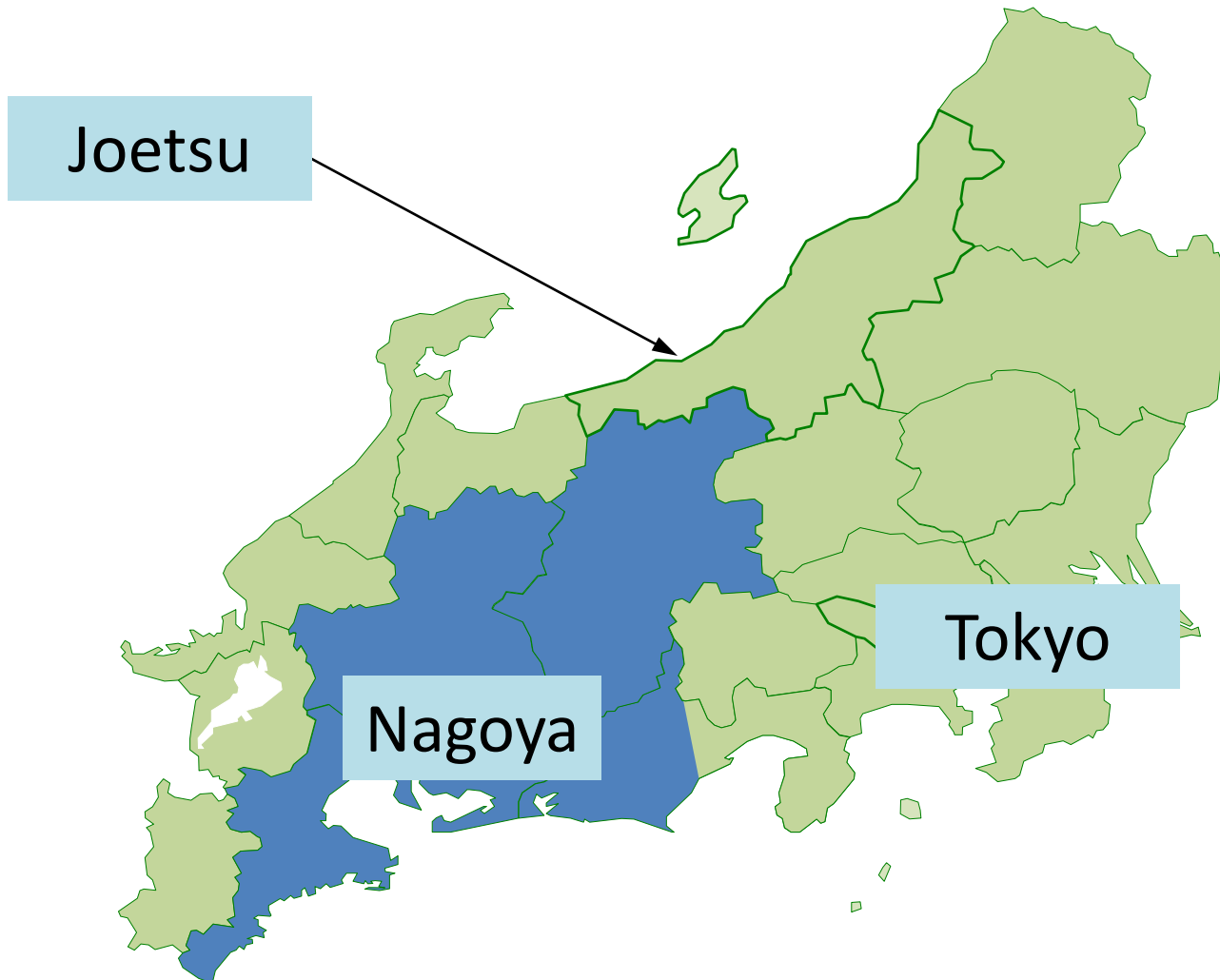
(Kg-CO2/kWh)



Thermal Efficiency of Chubu



Location of Joetsu Power Plant



Main Spec. of Joetsu Power Plant

Plant	No.1	No.2
Output	1,190 (MW)	1,190 (MW)
Start Operation	July 2012	July 2013
Plant Configuration	Combined Cycle Plant	
Fuel	LNG	
Thermal Efficiency	58% (LHV base)	
Operation Factor	70%	
Generating Electricity	15(TWh)	
Fuel Consumption	2 (million ton/year)	

Large Solar Power Plant: Taketoyo (under construction)



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Summary

- 25% of supplied electricity by Chubu is generated by Qatari LNG. 30% of exports of Qatar is to Japan and 7% of exports of Qatar is to Chubu. Relationship between Qatar and Japan(Chubu) is very important.
- Chubu is now expanding the capacity of LNG reservoir and connecting 3 LNG terminals by gas pipeline for the flexible operation of LNG Terminals and Power Plants.
- New LNG Combined Cycle Plant (Joetsu 2,380MW) starts operation in 2 years. New large Solar Power Plant starts operation next year.