

March 6, 2012



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# Renewables in Japan:

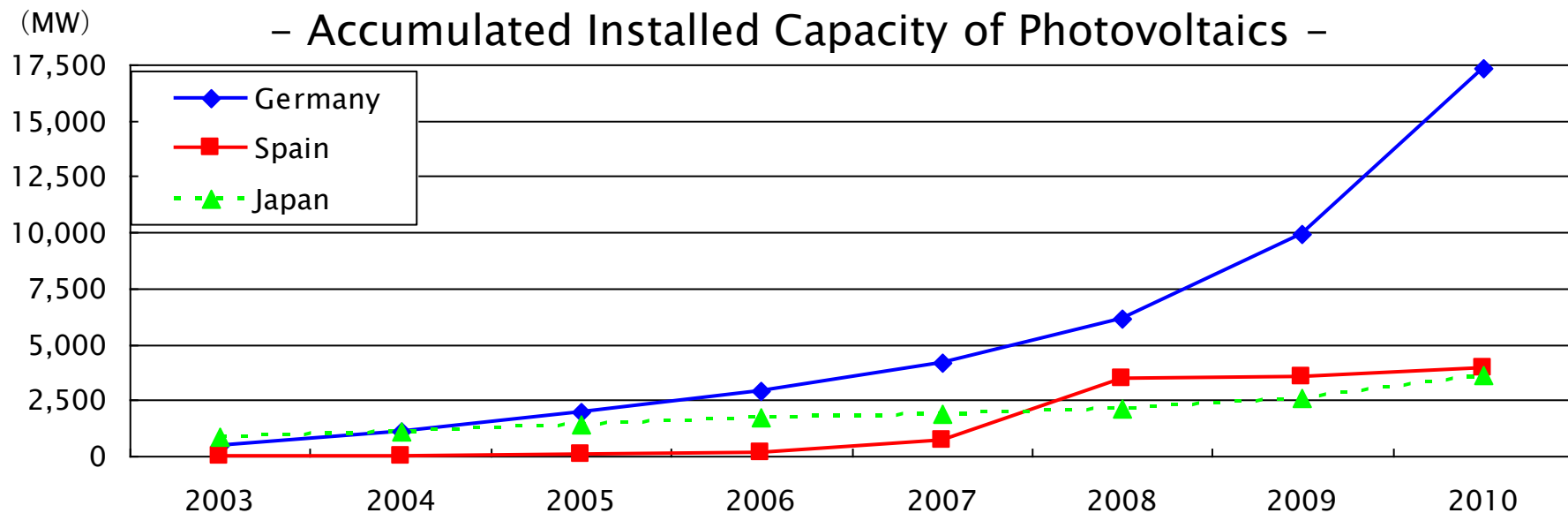
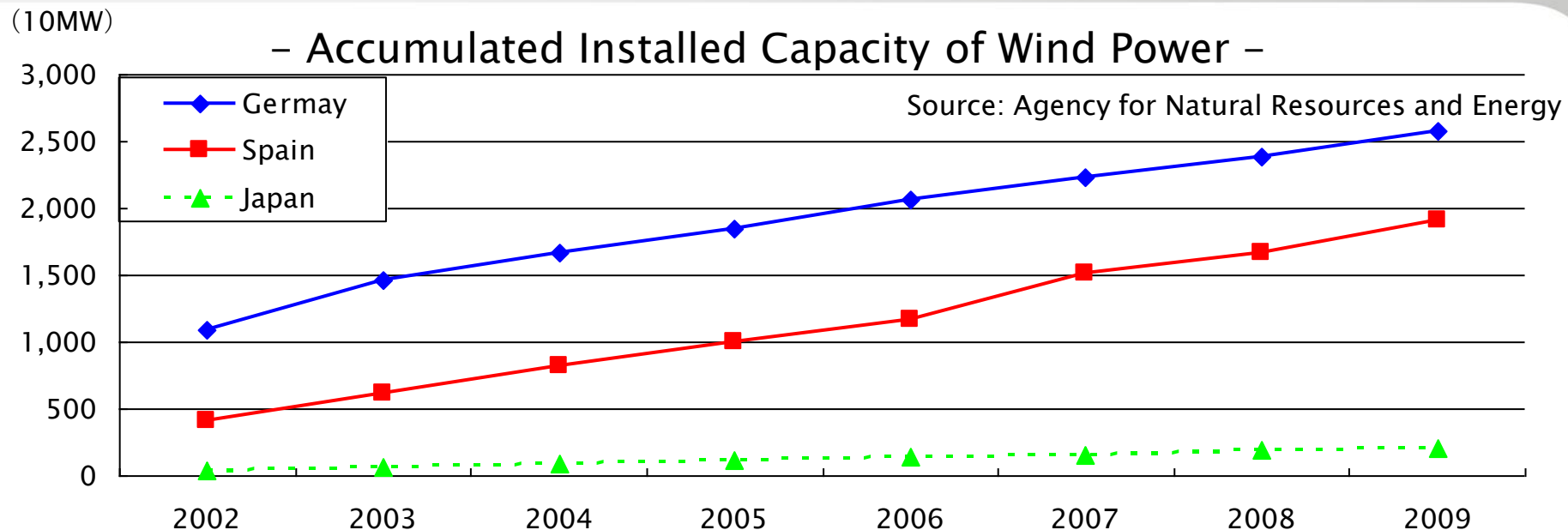
## *Why hardly Diffused?*

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# Renewables in Japan



# Renewables: Obstacles to Diffuse

## Reactions by Other Countries

## Japan

1. High Cost of Generation

- Feed-in Tariff
- Subsidies

△  
(2012)  
△

2. Regulation/Local Opposition on Location

- Regulatory Reform
- Simpler Transaction
- Government's Intermediation

×  
×  
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3. Discretionary Refusal of Grid Connection

- Grid Unbundling
- Priority Access of RE (FIT)

×  
△  
(2012)

4. Grid Instability due to Intermittent Generation

- Wide-area Grid Operation
- Pumped Storage Hydro
- Smart Grid/Demand Response
- Battery/EV

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△  
(Only for Nukes)  
△

**Regional Monopoly**

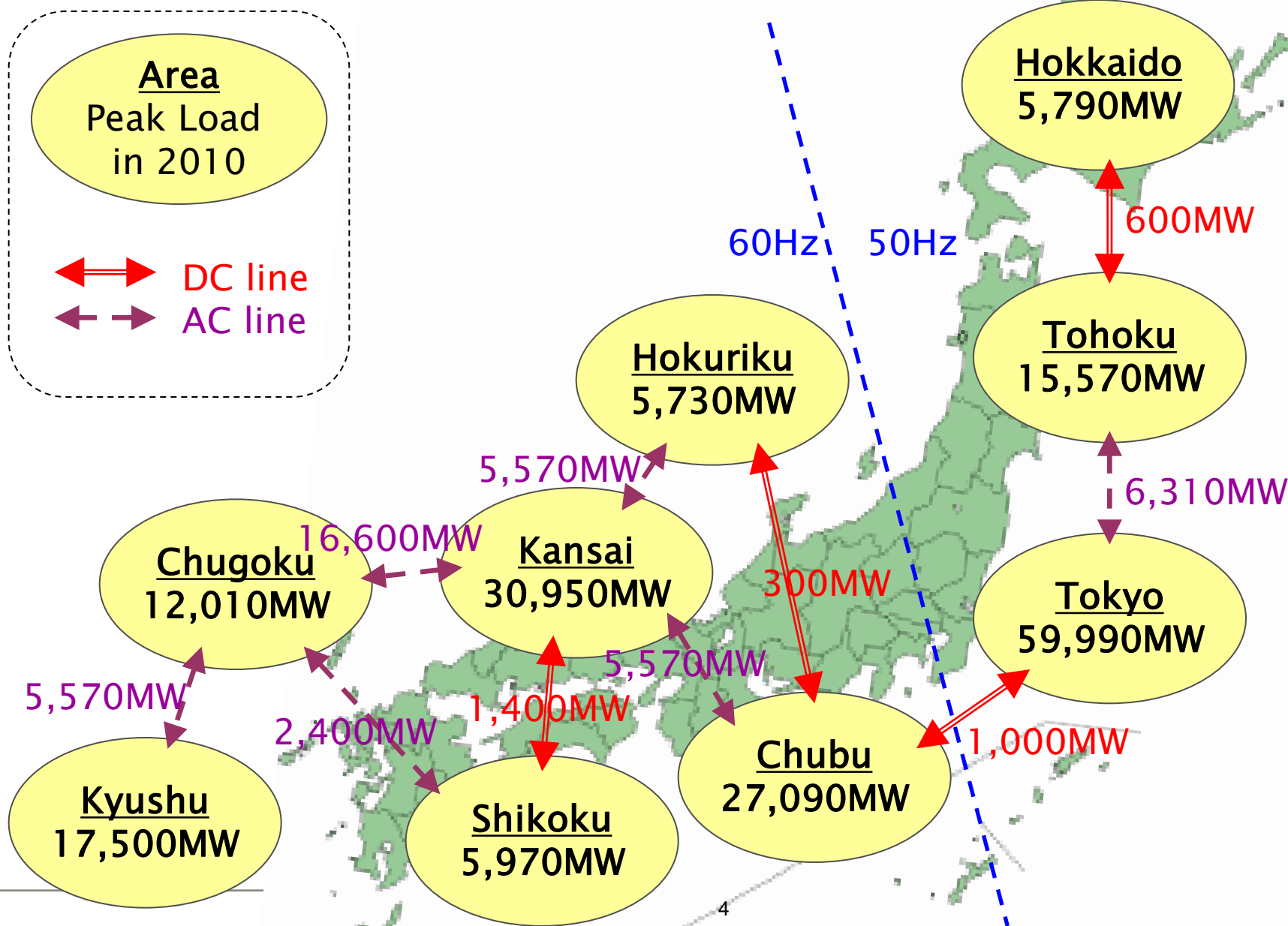
**Vertical Integration**

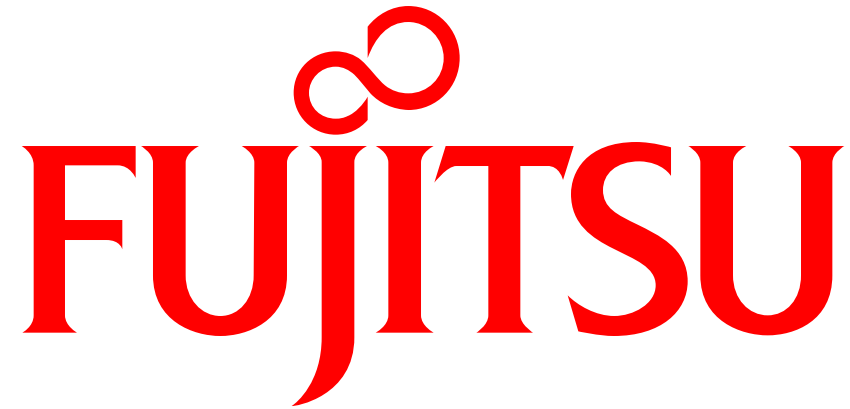
# Grid Access by “Lottery”

## – Capacity of Grid Access for Wind Power allowed by Utilities –

	Access Capacity (October, 2010)	Ratio among Total Generation Capacity
Hokkaido Electric	360MW	6.36%
Tohoku Electric	1180MW	7.76%
Hokuriku Electric	250MW	4.39%
Chugoku Electric	620MW	5.04%
Shikoku Electric	250MW	4.17%
Kyusyu Electric	1000MW	5.65%

# Limited Inter-regional Grid

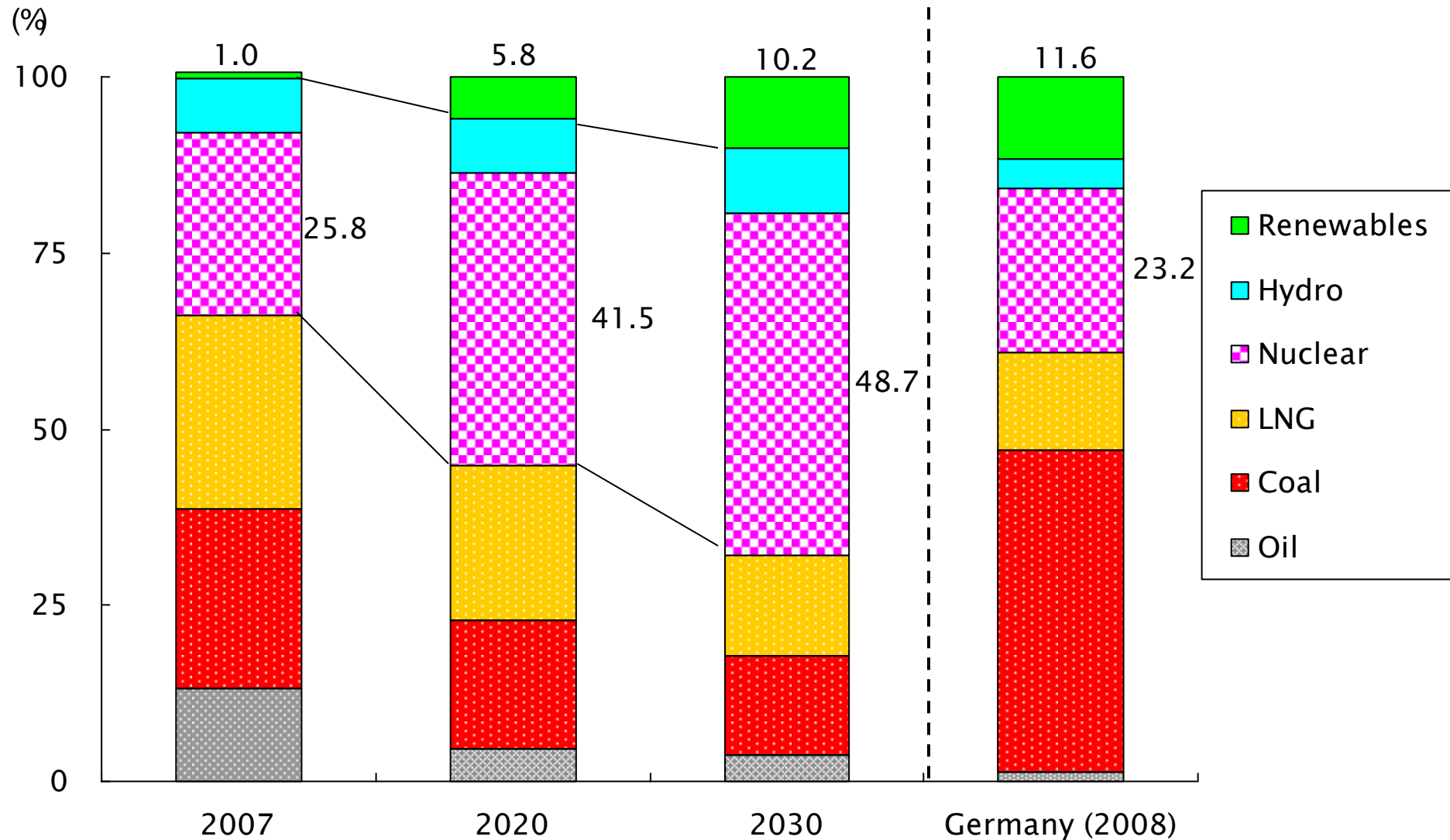




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# Increasing Dependence on Nuclear

## – Japan's Power Source Mix –



# Japan's Closed Power Market

