German-Japanese Energy Dialogue
Energy efficiency first and renewable energies
How energy transition can be made a success?

A Unique Cooperation for Energy Policy Studies

Hisashi Hoshi

The Institute of Energy Economics, Japan

15th of November, 2016

GJETC Study Topics

1. Energy transition scenarios
2. Strategic framework and socio-cultural aspects of energy transition
3. Dynamic change of actors
4. Energy efficiency and ESCO business
5. Roles of new technologies

Process of Studies

1. Long list of institutes (10 each)
2. Formation of 3 pairs of bidders from German-Japanese institutes for each topic
3. tender and awards
4. Study on own countries
5. Comments on partner's report each other

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Japan's Energy Transition since 1970s

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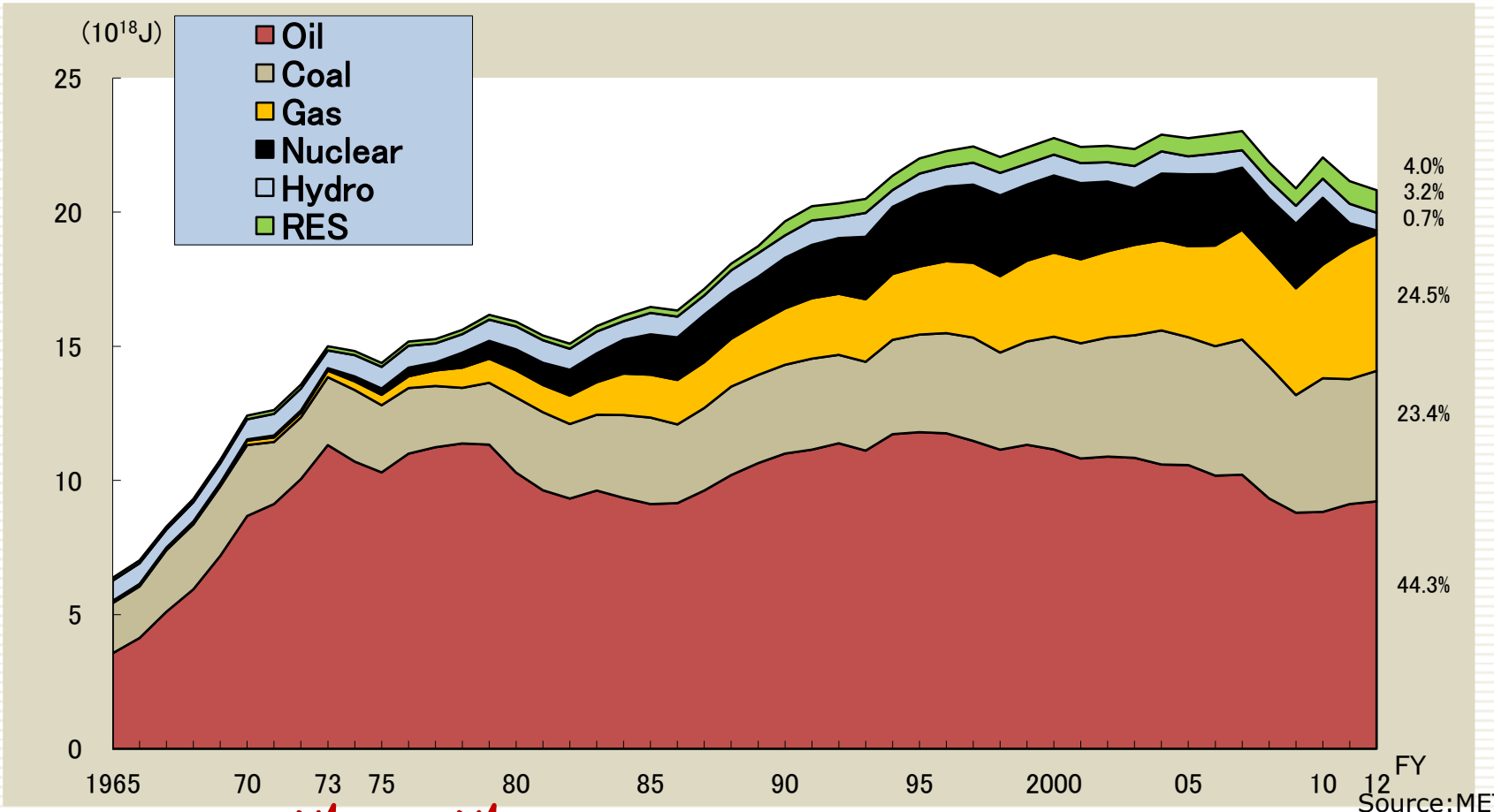
Outline

1. Japan's "Energy Transition" since 1970s
   - Supply security as policy driver
     - Diversification
     - Improved Energy Independence
2. Decades of effort wiped out overnight
   - Fukushima Disaster (March 2011)
3. "Energy Mix 2030" (July 2015)
   - 3 Goals :25%/-5%/-26%
   - 3 Measures :22-24%/20-22%/-13%

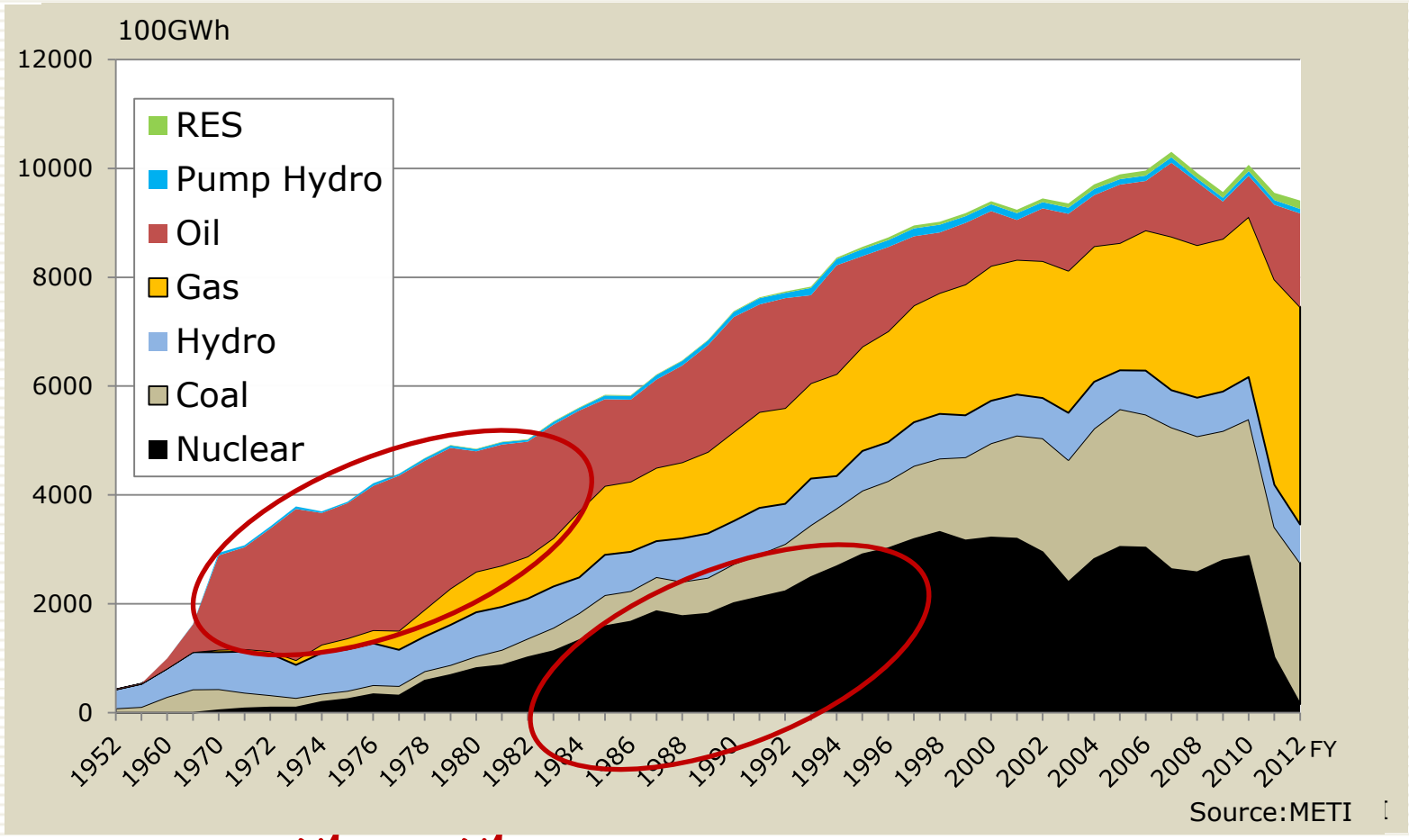
Japan's Energy Supply Development



Source：METI

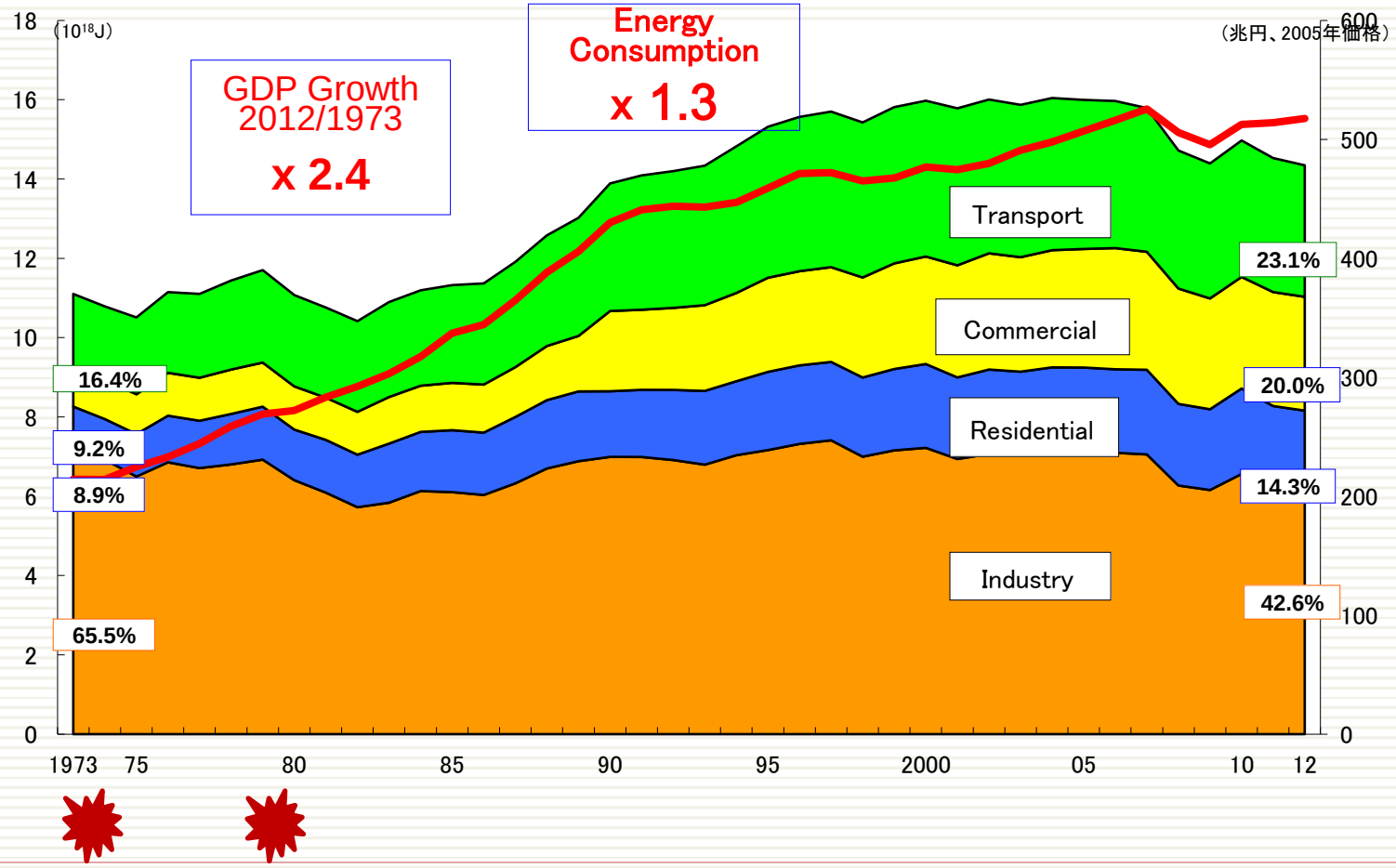
Oil Crises

Diversified Portfolio (Power Sector)

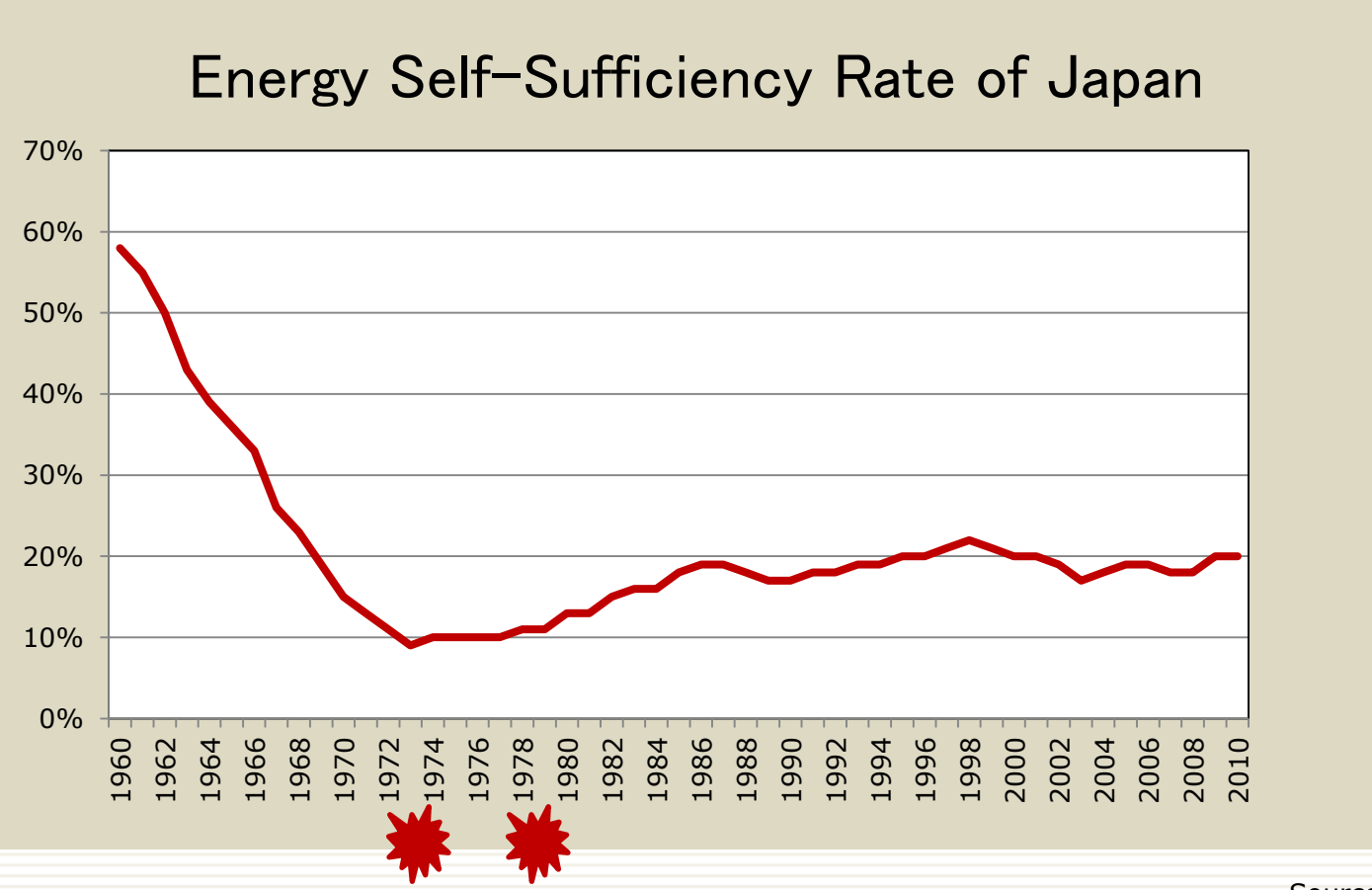


Oil Crises

Energy Saving

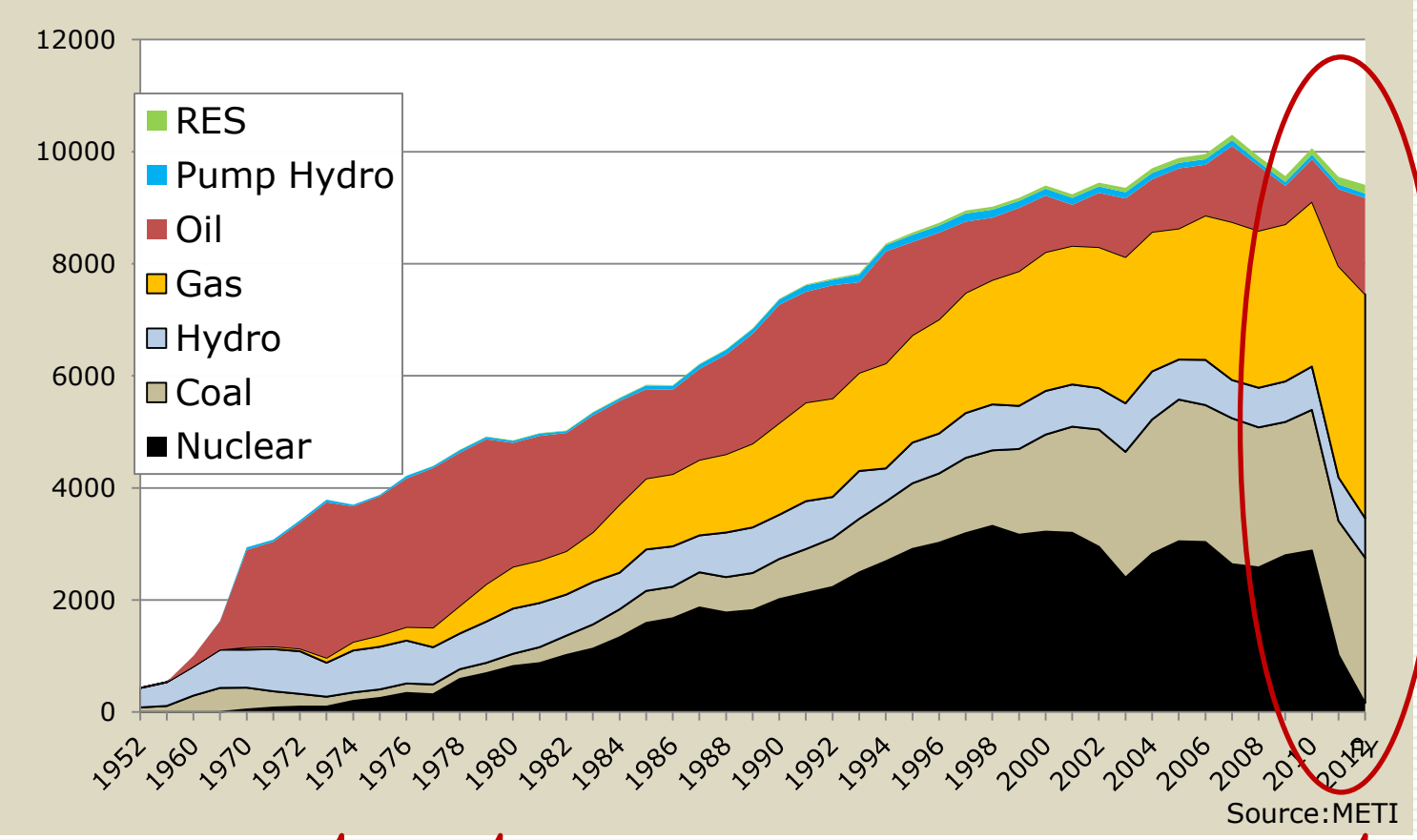


The way we have struggled

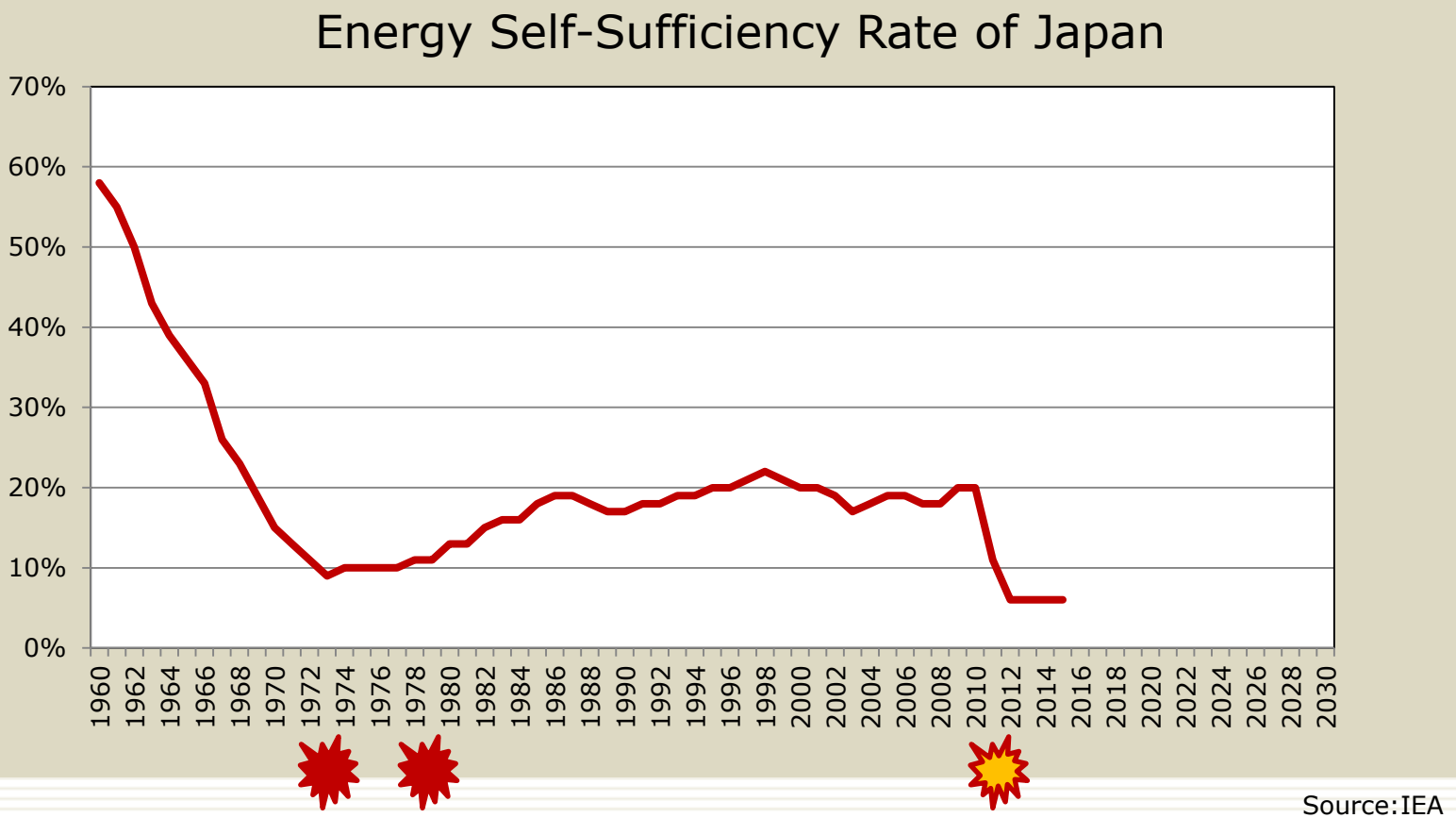


Source:IEA

Decades of effort wiped out overnight (Power Sector)

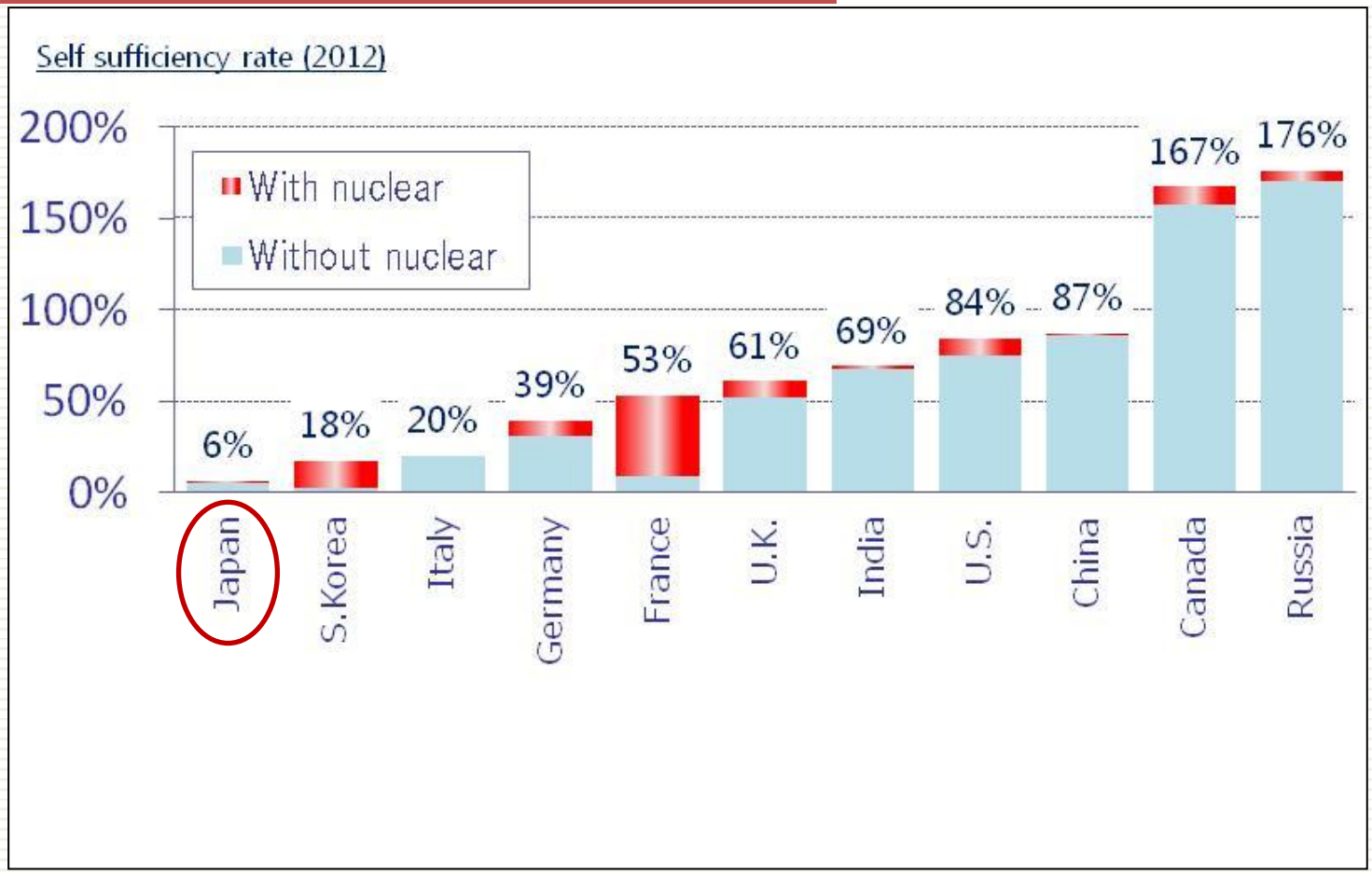


Decades of effort wiped out overnight



Source:IEA

Self-sufficiency rates of world



"Energy Mix 2030" (July 2015)
3 Goals through 3 Measures

Goals

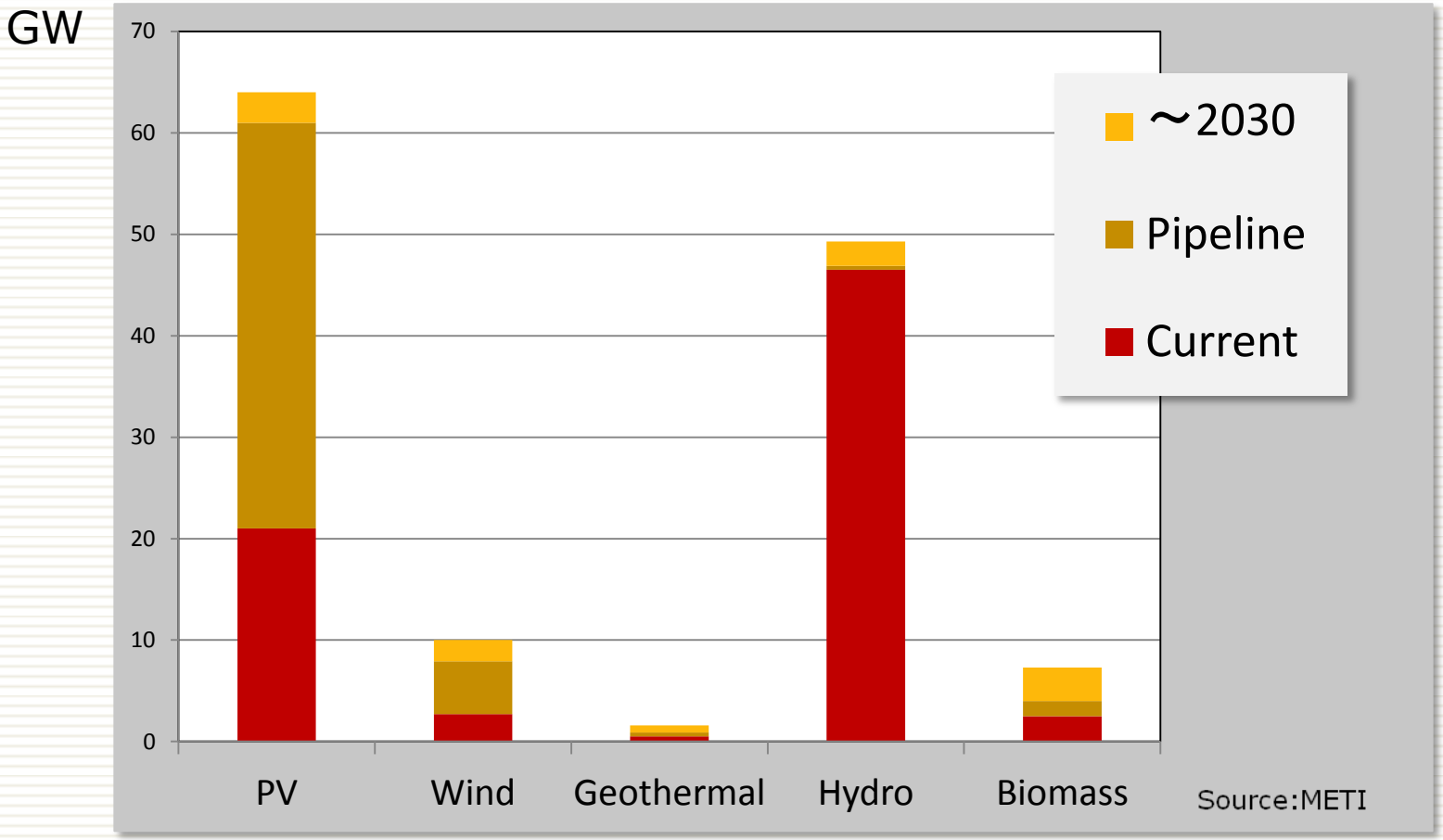
- Self-suffciency 25%(←6%)
- Lower Power Cost -5% (on 2013)
- GHG cut 26% (on 2013)

INDC Commitment

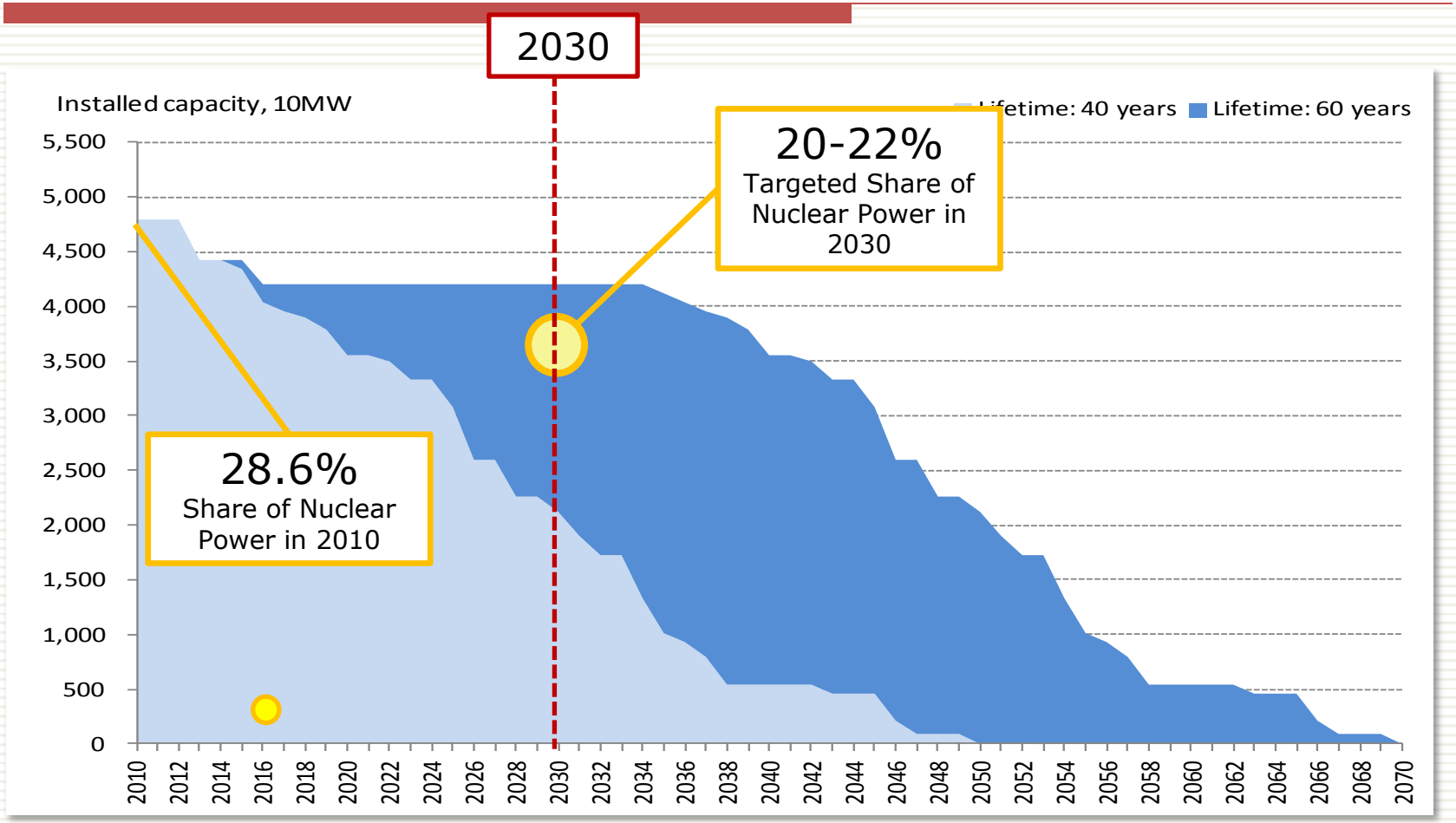
Measures

- RES Deployment 22/24%(←12%)
- NPP Re-start 20/22%(←0%/29%)
- Energy Saving -13%

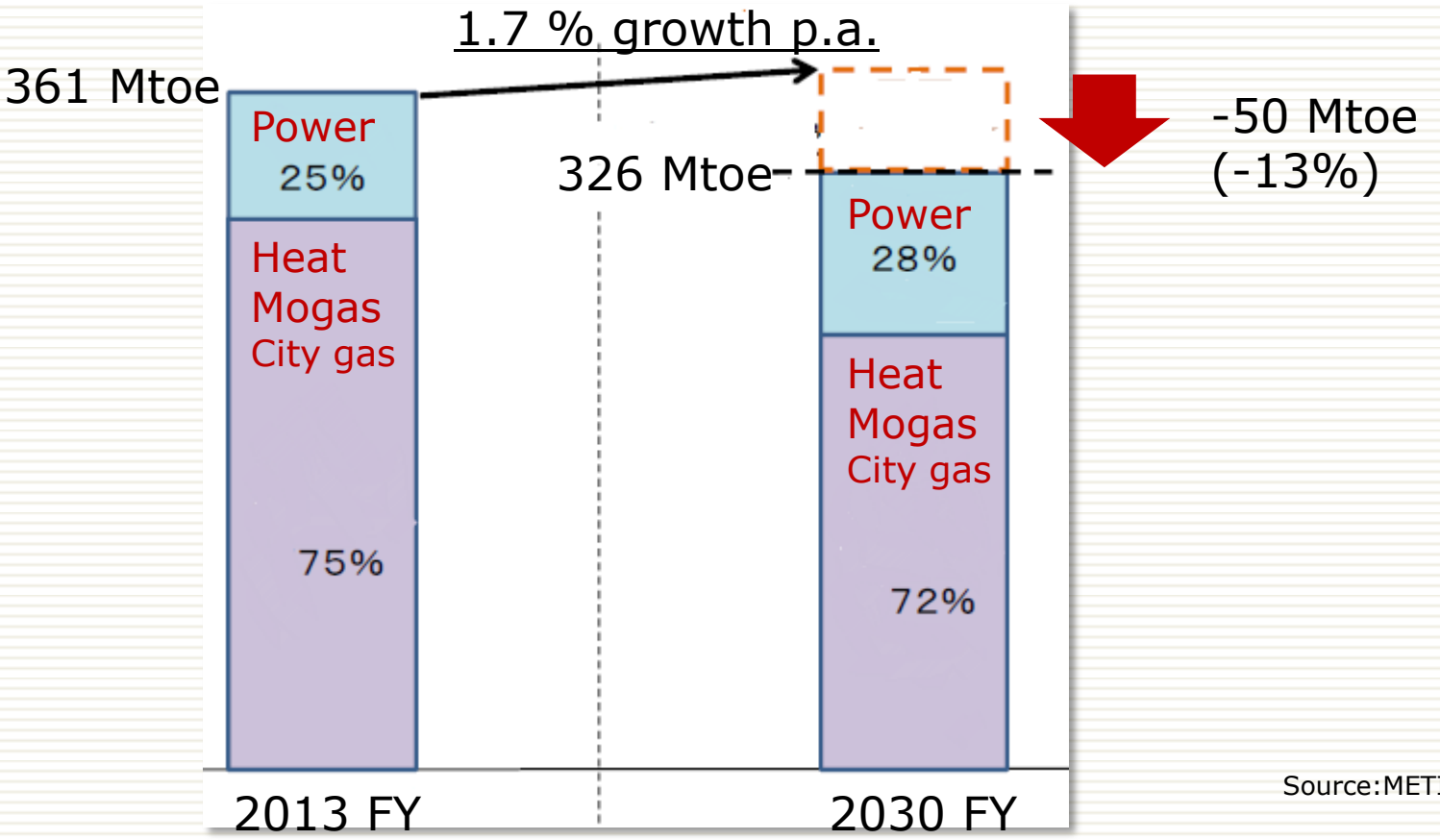
Measure 1：Renewables(22-24%)



Measure 2：Nuclear Power(20-22%)

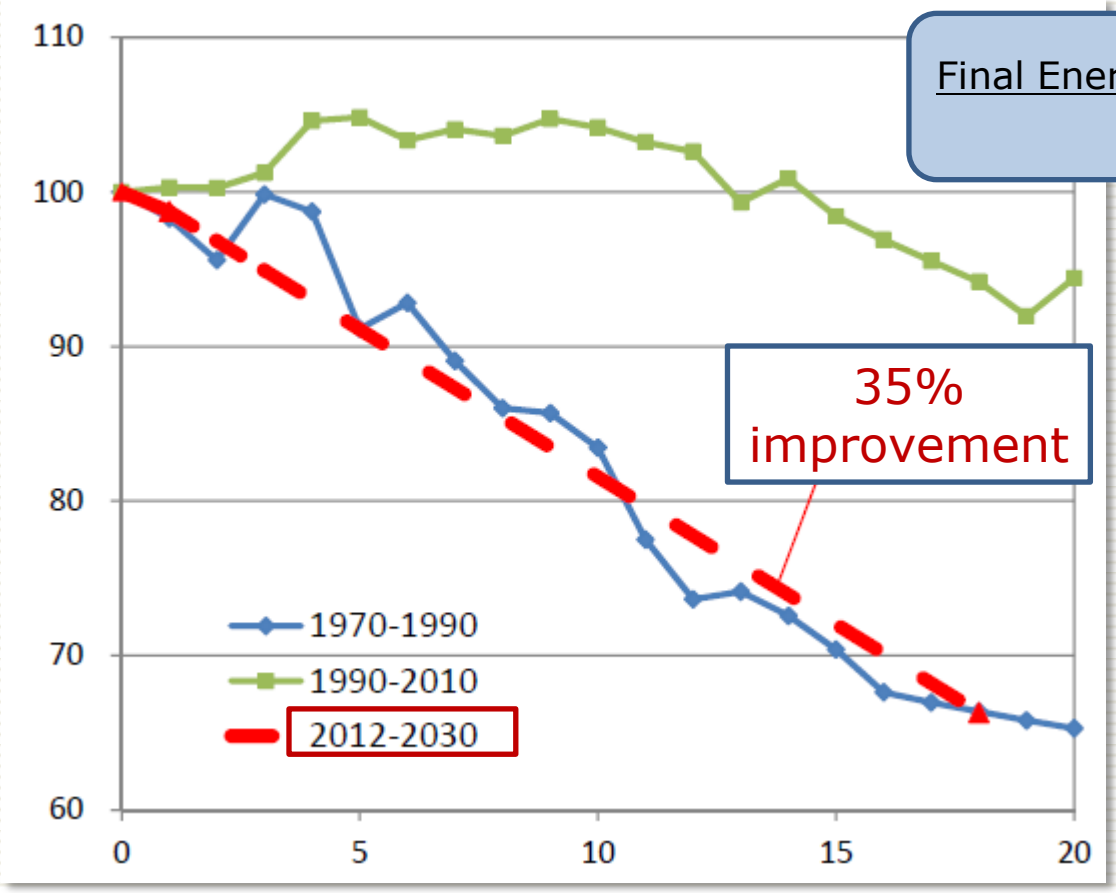


Measure 3：Energy Saving(-13%)



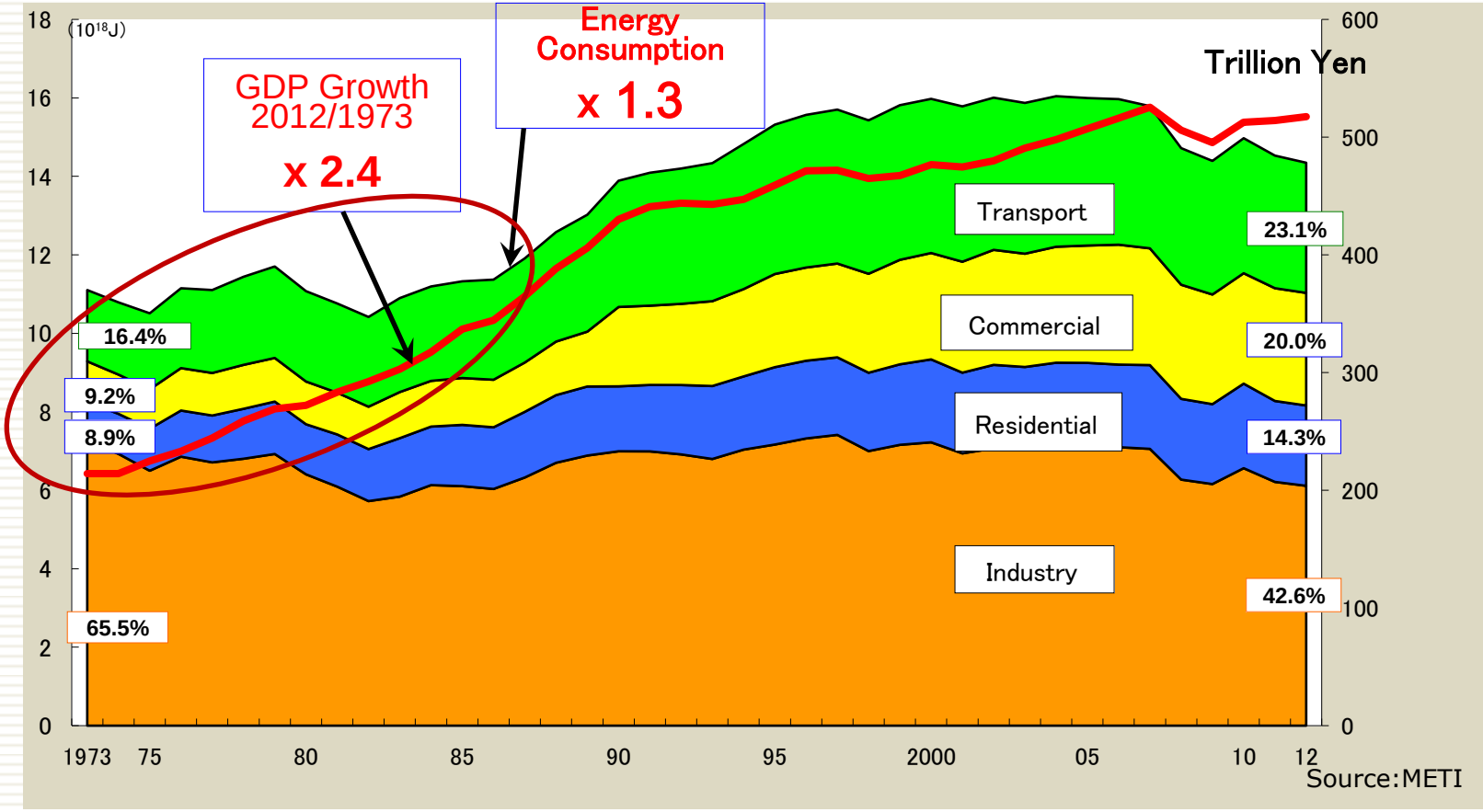
Source:METI

Improvement of Energy Efficiency

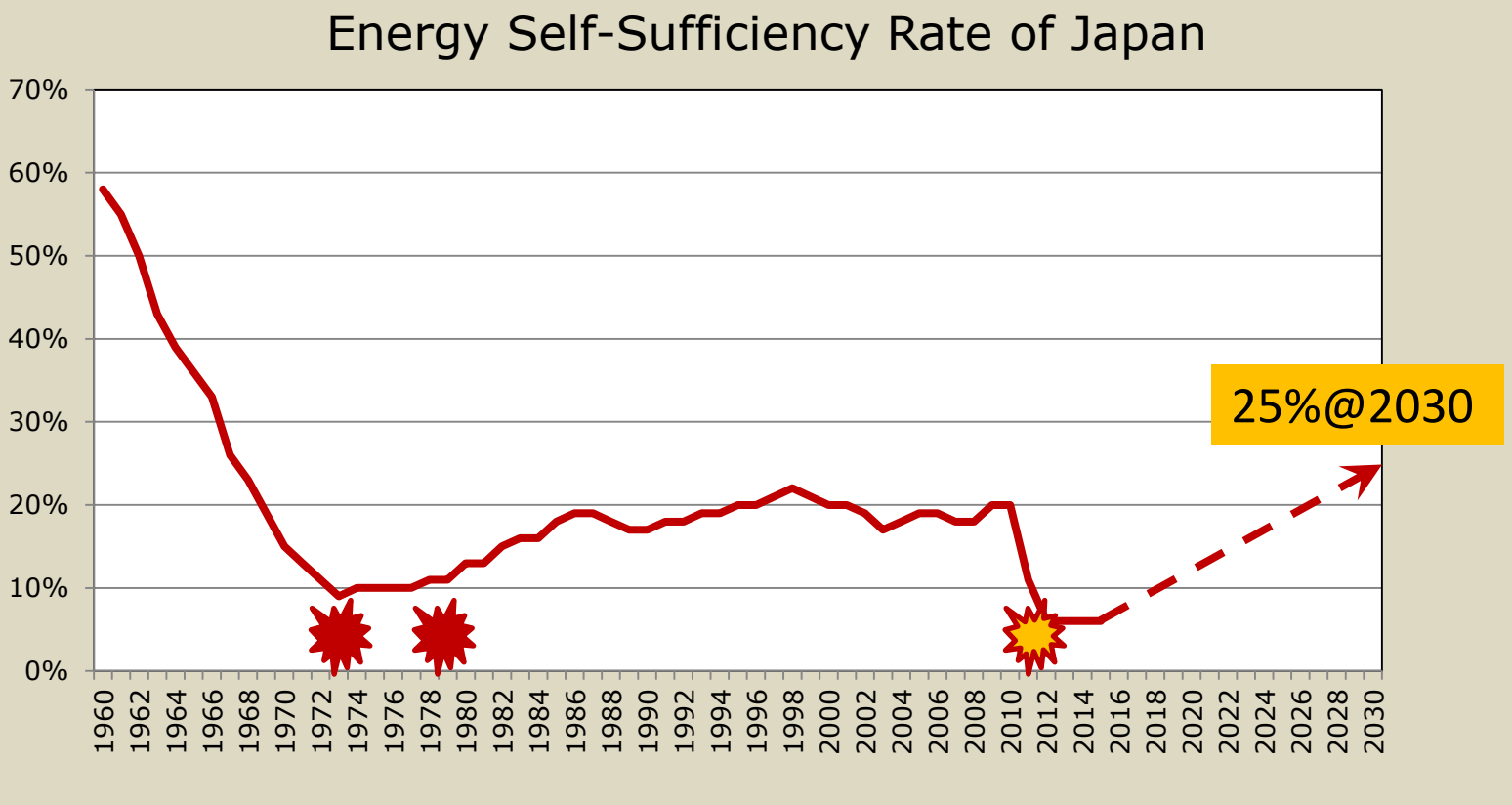


Source：METI

Energy Saving

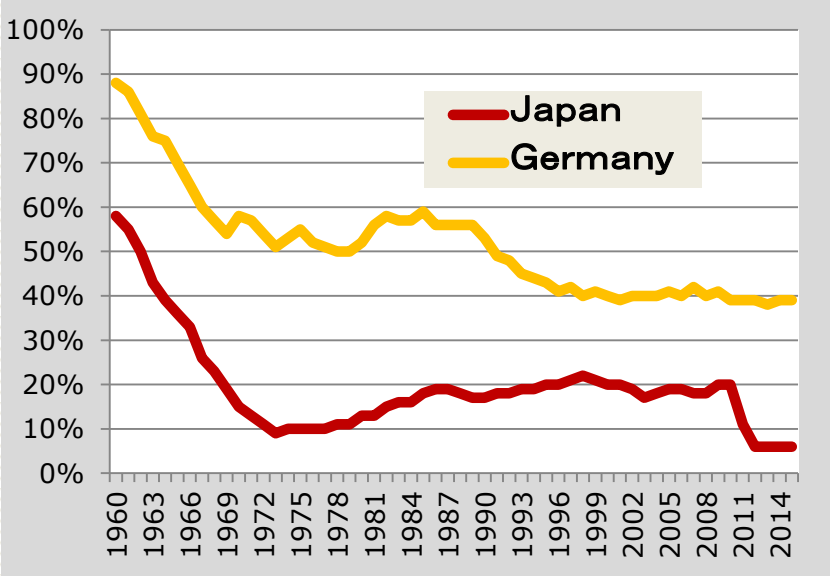


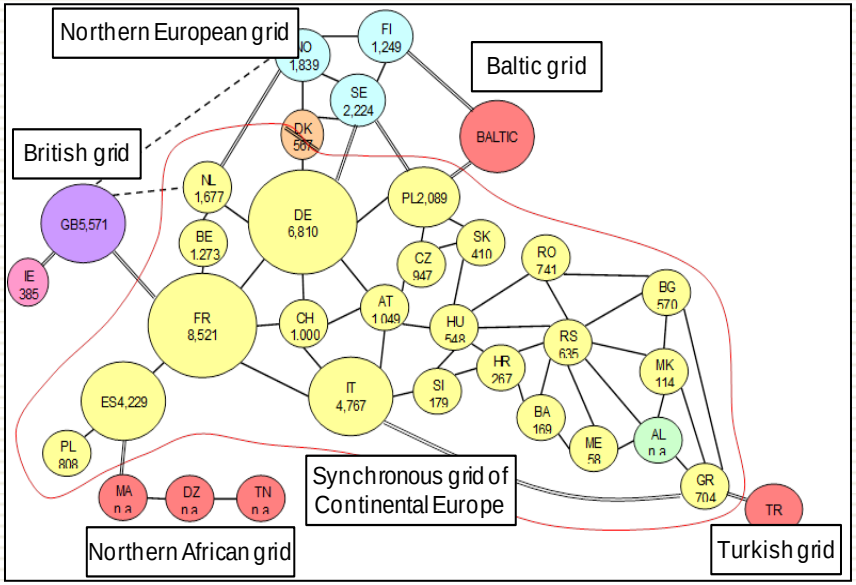
The way we are going to struggle



Source:IEA

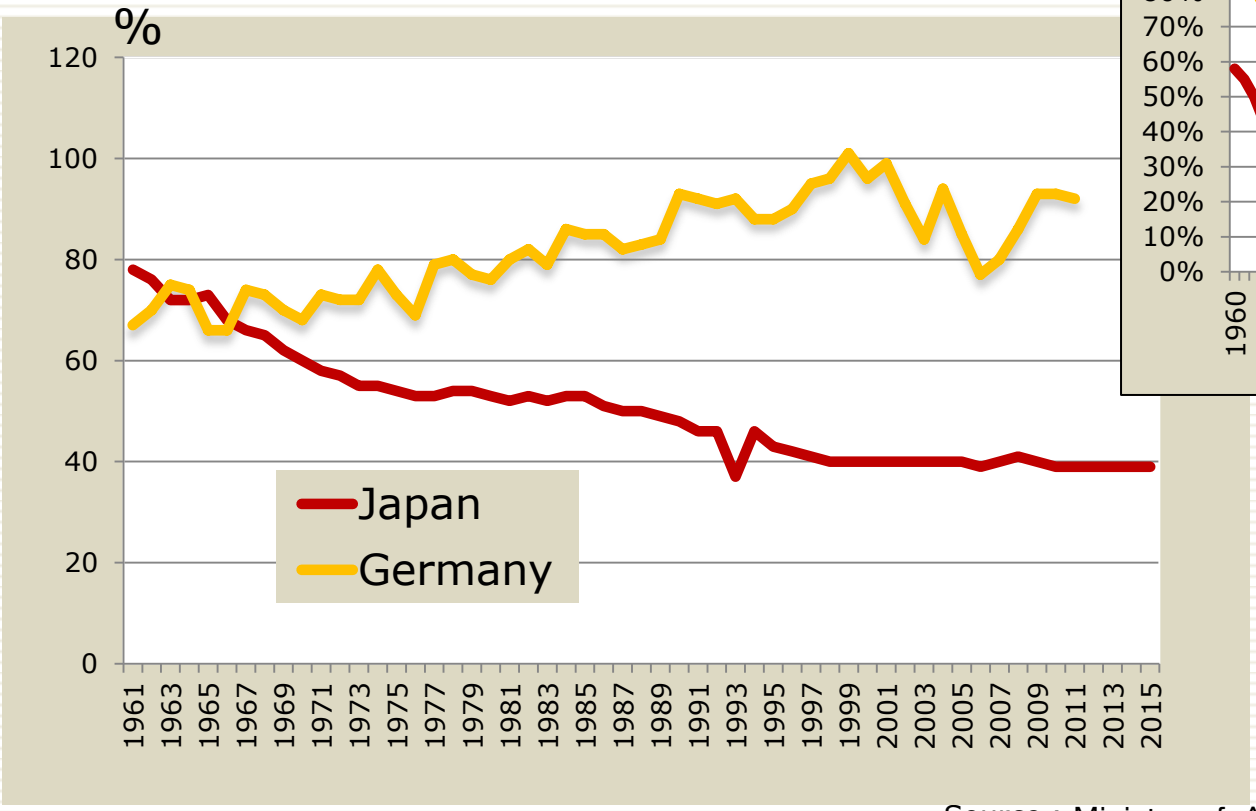
Comparisons

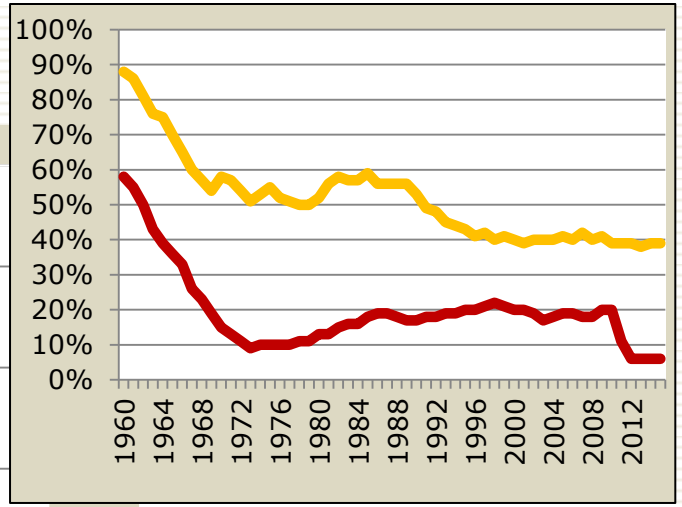




	Self-sufficiency	Elec. Market size
Japan	6%	1,038 TWh
Germany	39%	3,230 TWh (as EU28)

Food Self-sufficiency Rate





Source : Ministry of Agriculture, Forestry and Fisheries

Thank you!

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