



自然エネルギー財団

JAPAN RENEWABLE ENERGY FOUNDATION

Opening Remarks

September 6, 2012

Masayoshi Son

Founder and Chairperson

Japan Renewable Energy Foundation



Safety for future generations



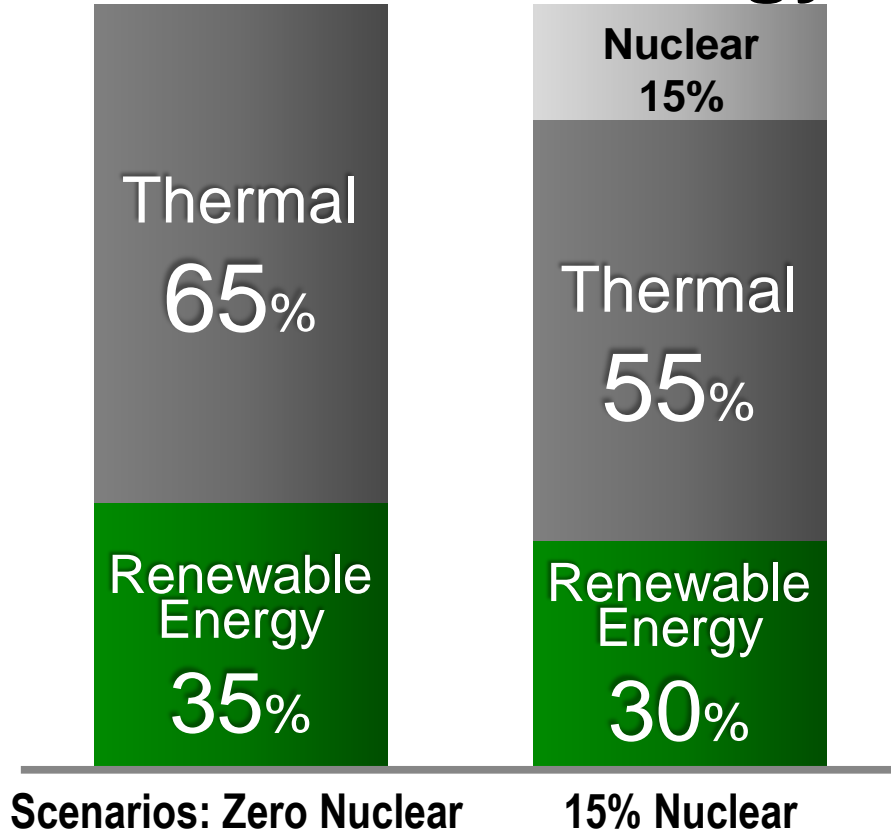
3 Scenarios for Energy Strategy in Japan

0%

15%

20%
~25%

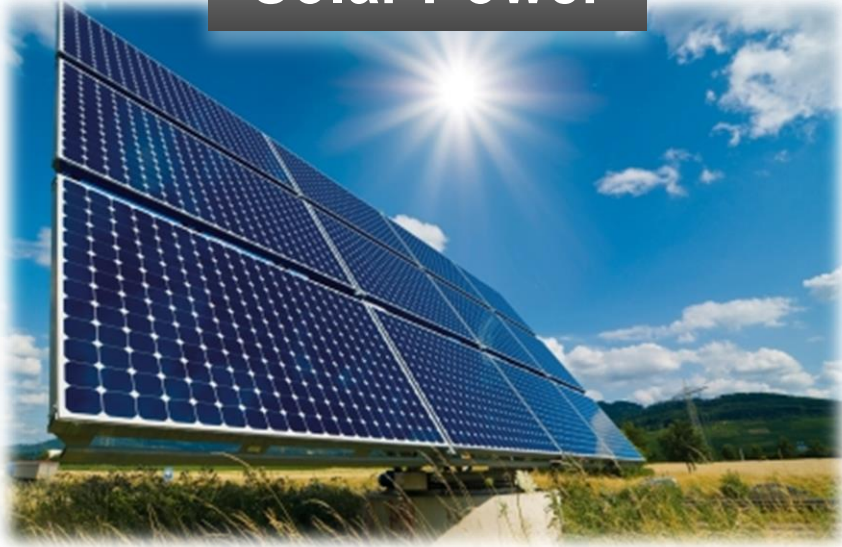
Target for introducing Renewable Energy



Renewable Energy
More than 30%
mandatory
target

Renewable Energy Deployment in 2012 (forecast)

Solar Power



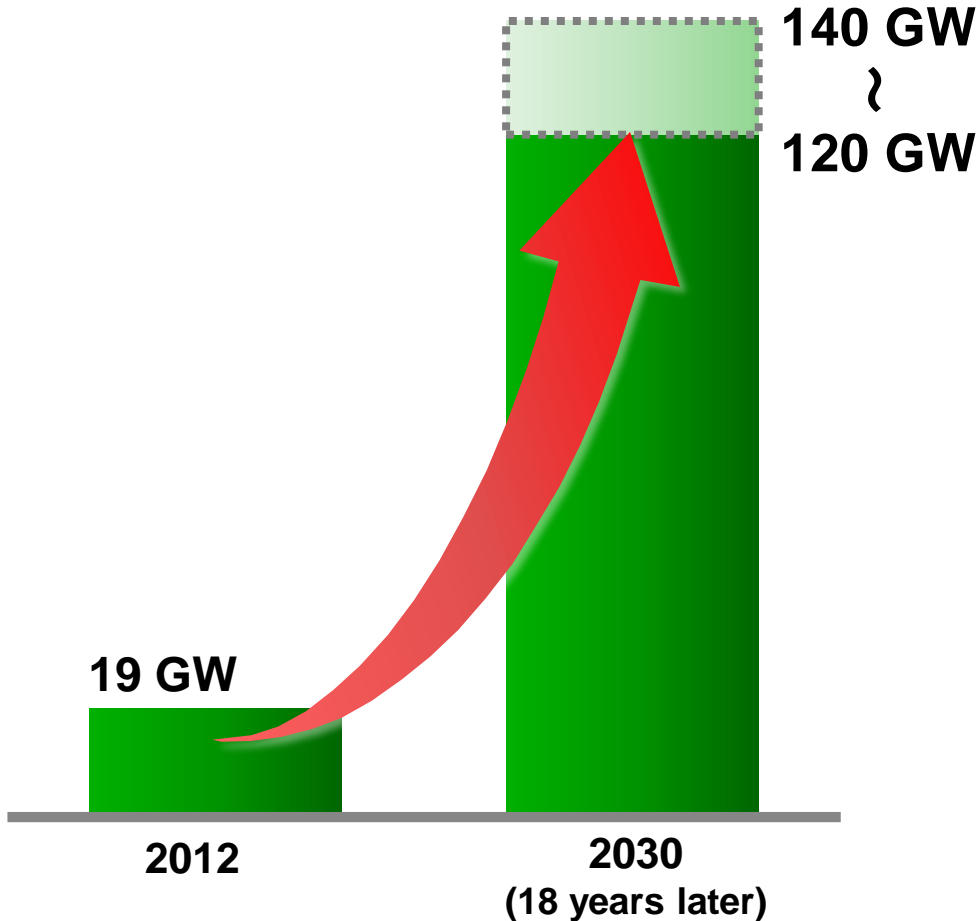
+ 2 million kW

Wind Power



+ 380,000 kW

Renewable Energy to be deployed by 2030

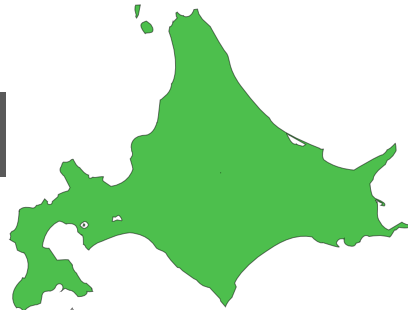


**Need to
increase
more than
6 times
(within 18 years)**

*Estimate by JREF based on data by National Policy Unit

Wind Energy Potential (Hokkaido)

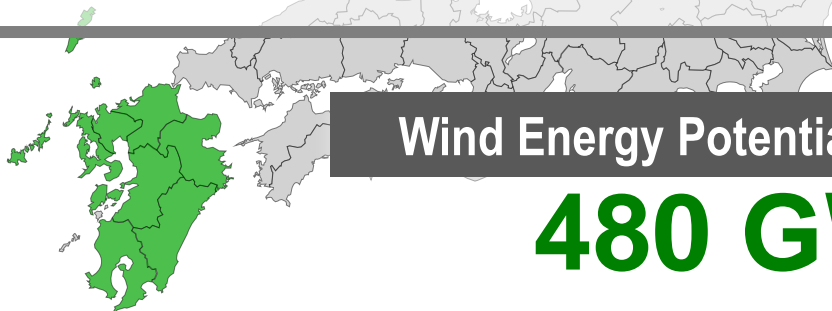
540 GW

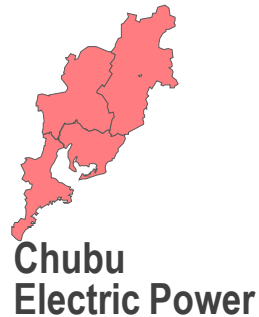
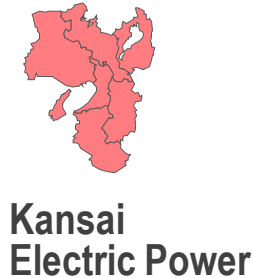
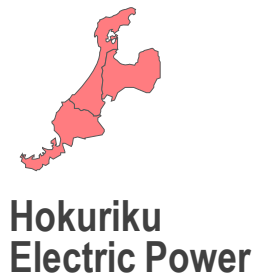
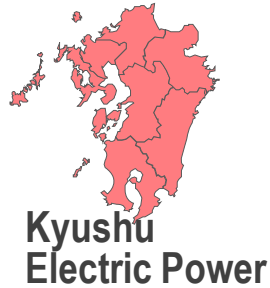
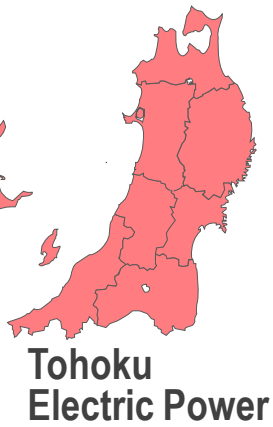
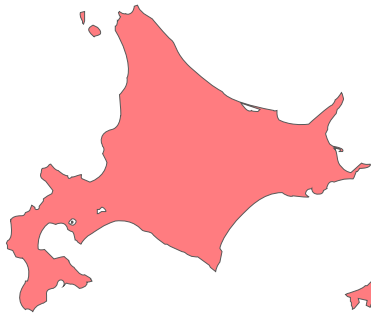
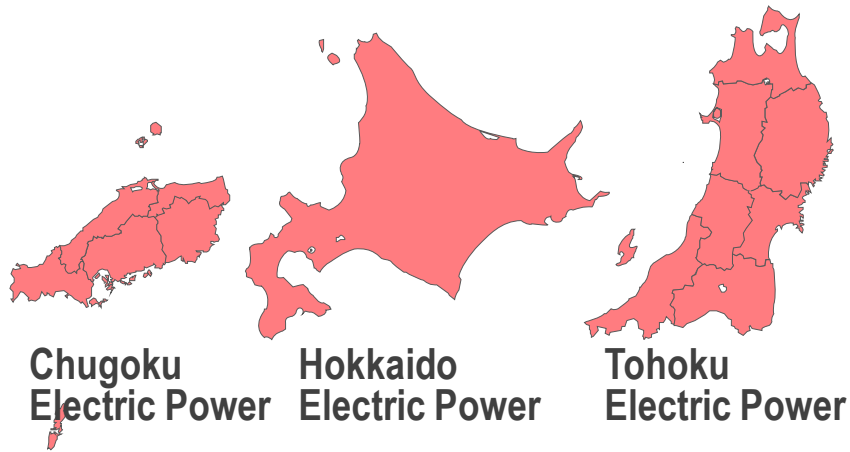


Renewable Energy potential does exist

Wind Energy Potential (Kyushu)

480 GW





**Grid operation
optimized for
separate regions**



**Renewable
Energy does not
reach consumers**

Independent grid operators

Hokkaido EP

Tohoku EP

TEPCO

Hokuriku EP

Chubu EP

Kansai EP

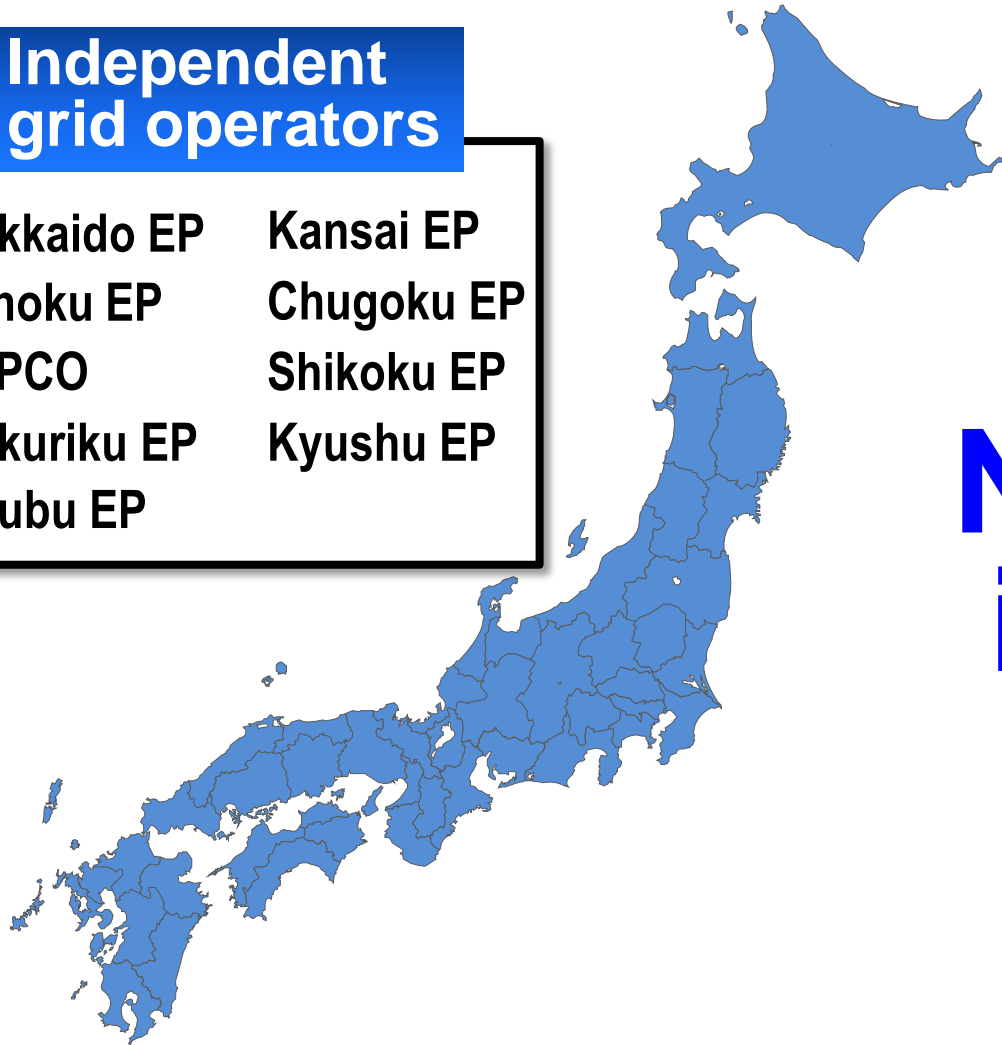
Chugoku EP

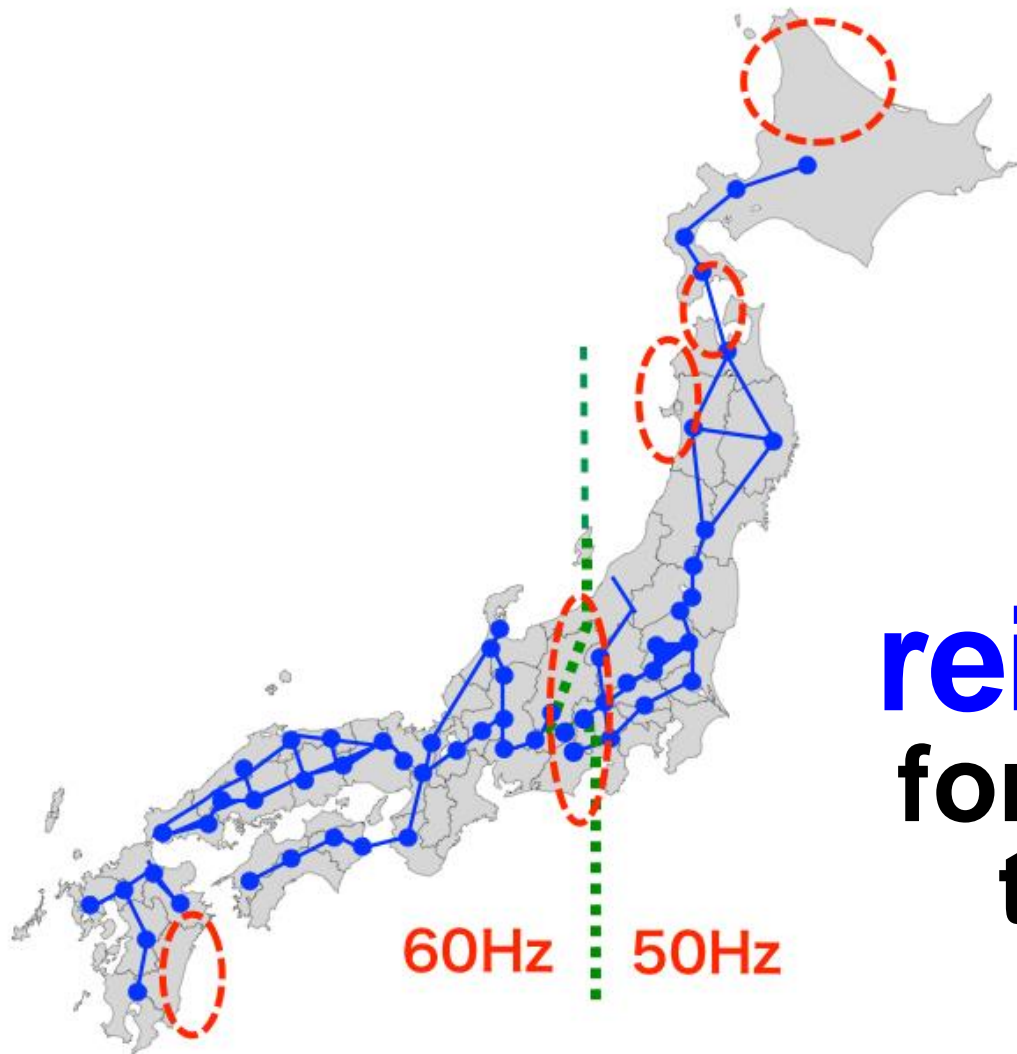
Shikoku EP

Kyushu EP

Solution 1

**Nationwide
integrated
operation
of grids**





Solution 2

Grid reinforcement for long-distance transmission



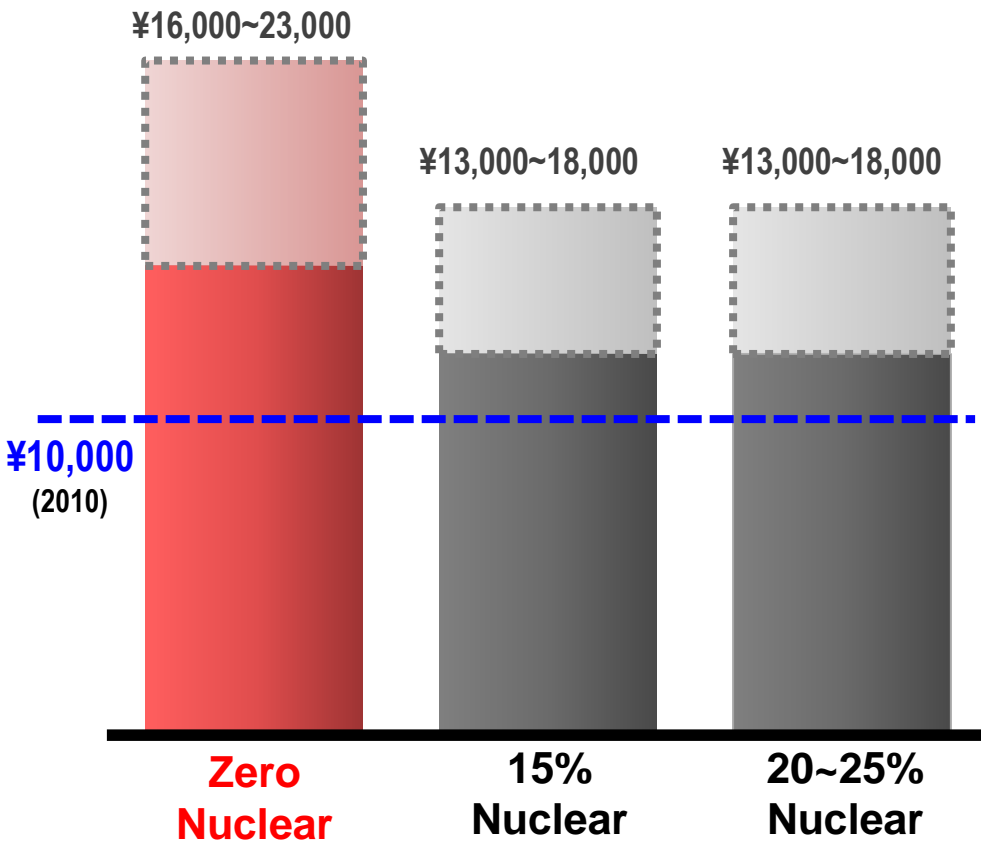
2030
**Abundant
Renewable Energy
for Japan**

The remaining issue

Price rise

(Households/corporations)

Electricity cost by scenario (Government estimates)



**Will Zero Nuclear
raise the cost?**

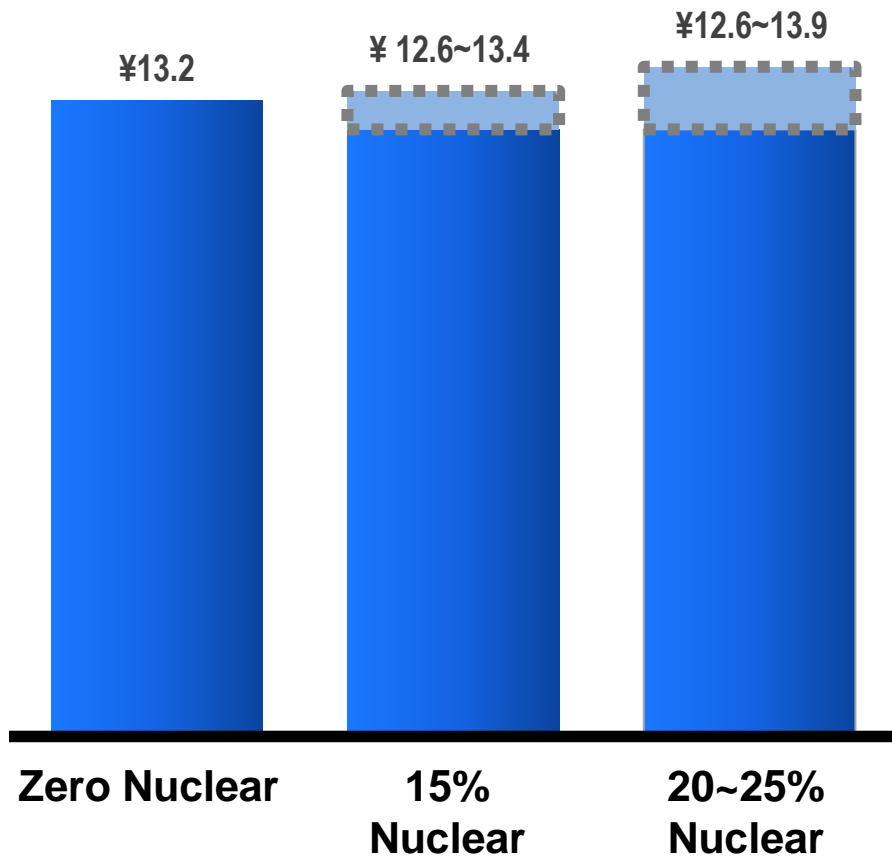
Want to keep the cost as low as possible



**One major
misunderstanding**

Power generation cost (reviewed)

(per kWh)

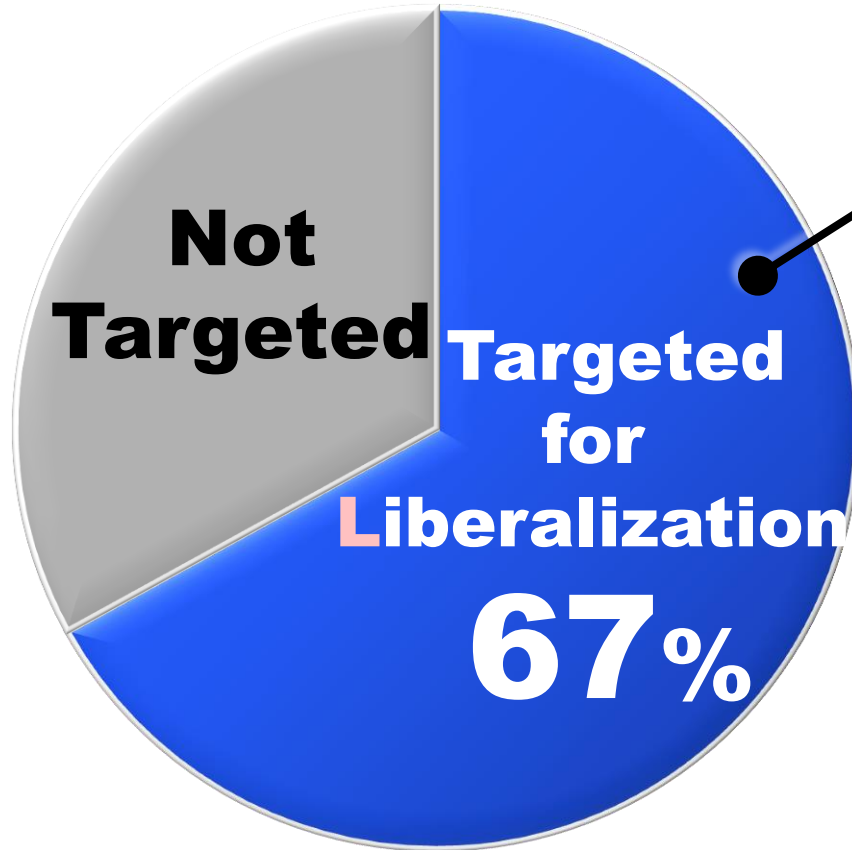


**No major
difference in
electricity cost**

*Estimate by JREF

**In order to keep
the cost down,
we need an environment
for sound competition**

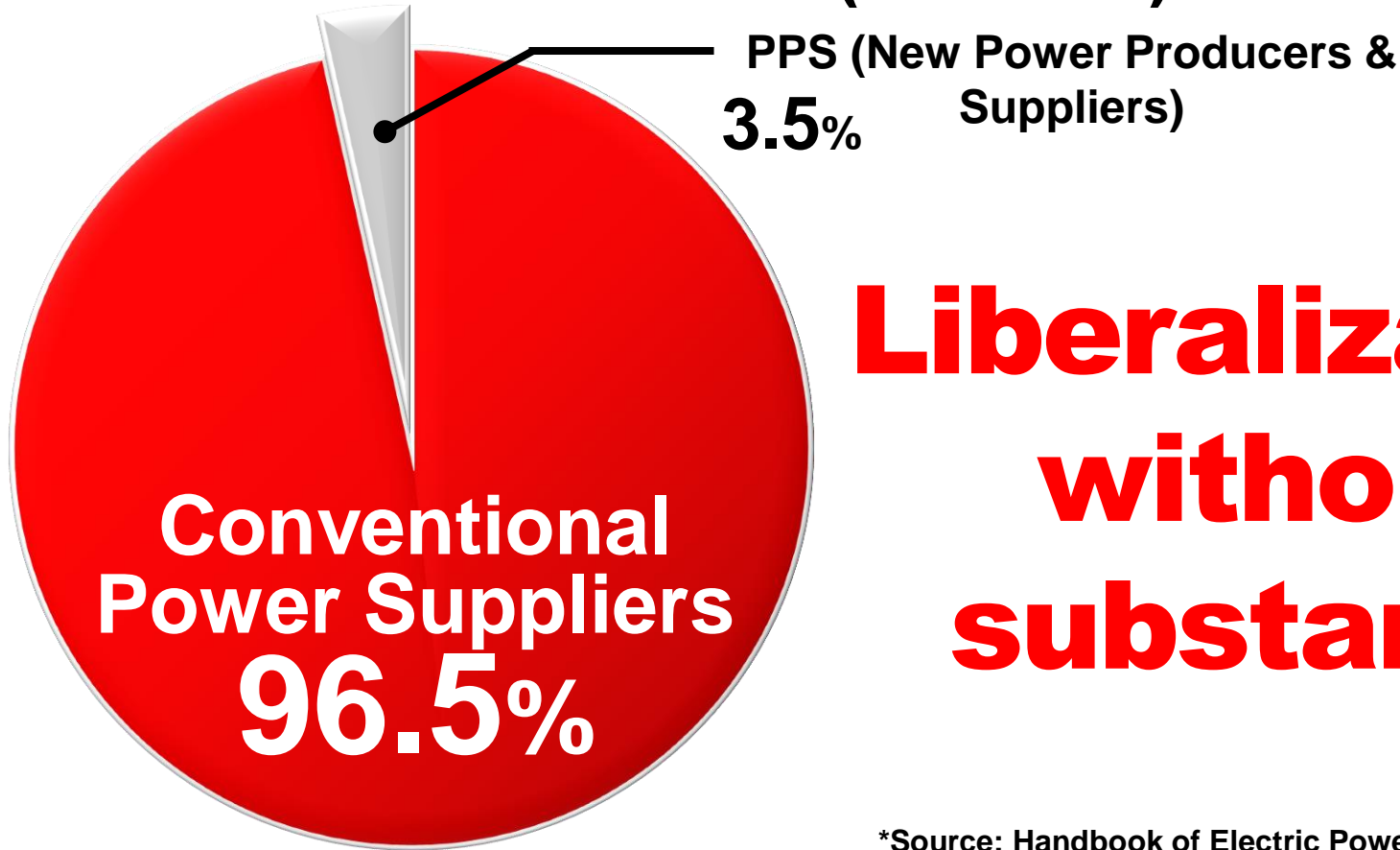
(Total power demand: 1000 TWh)



- 2000 Liberalization of EHV (Extra High Voltage)
- 2004 Partial liberalization of HV
- 2005 Complete liberalization of HV

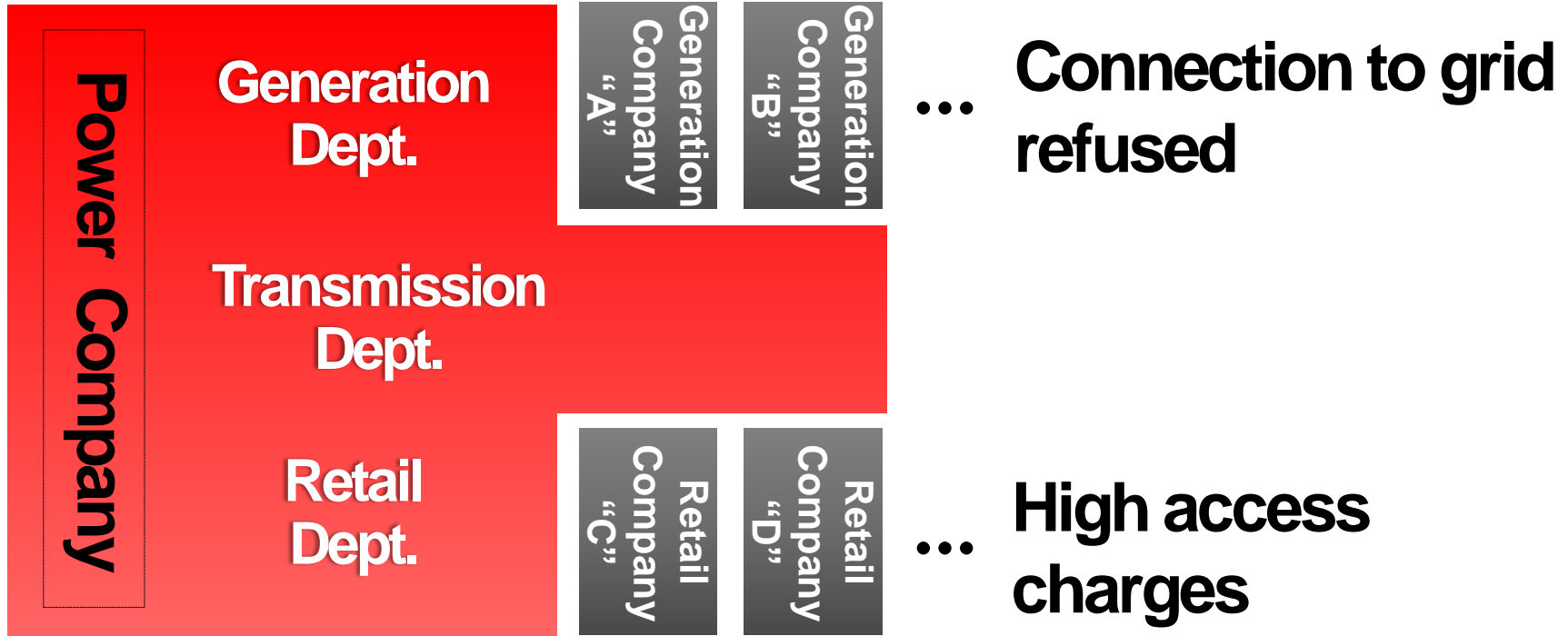
**Formally,
two-thirds are
liberalized**

Present share of the liberalized market (Feb. 2012)



**Liberalization
without
substance**

Adverse effect of the conventional system (Accounting separation)



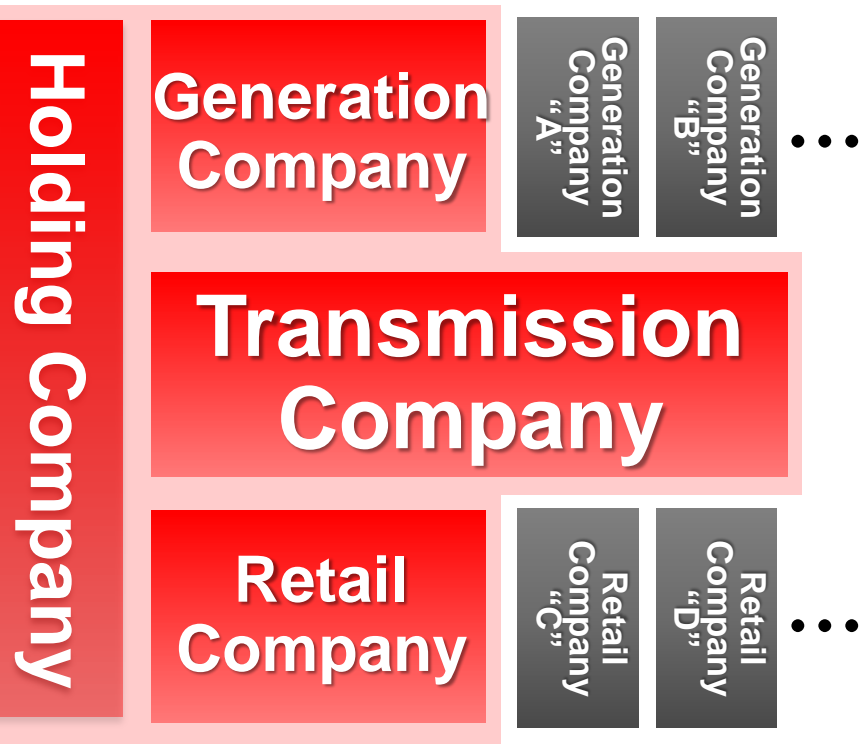
Unfair competition

Solution

Separation of power generation and transmission

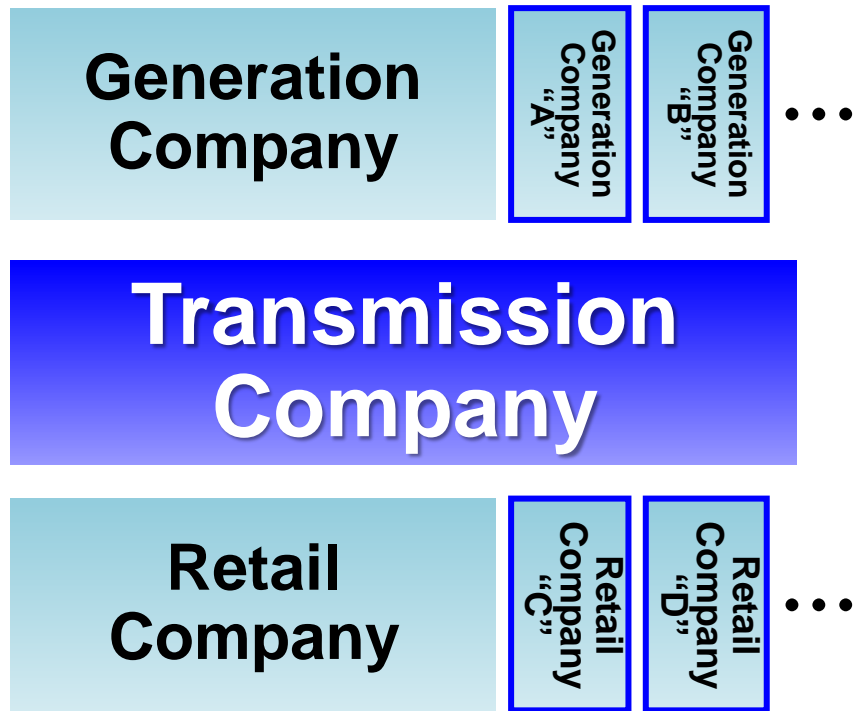
(Separation of ownership)

Legal separation



Ineffective

Ownership separation



Fair competition

Ownership separation

(Competitive area)
Deregulation

Generation
Company

Generation
Company
"A"

Generation
Company
"B"

(Neutral area)
Strengthened regulation

Transmission
Company

(Competitive area)
Deregulation

Retail
Company

Retail
Company
"C"

Retail
Company
"D"

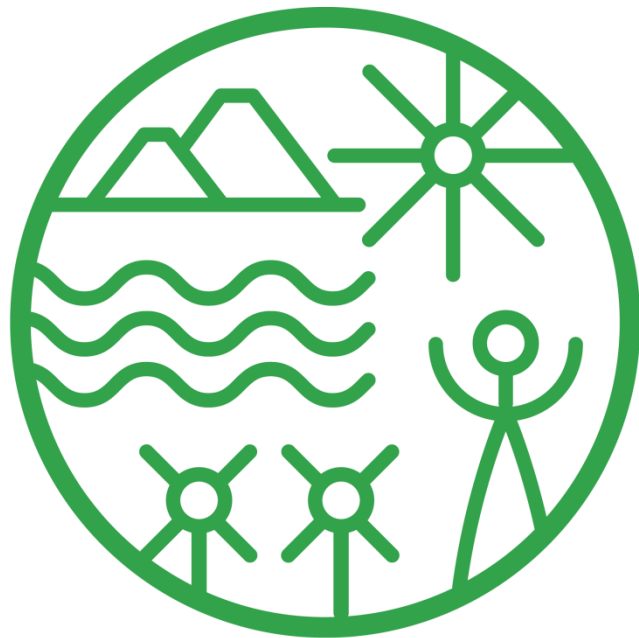
Fair competition

Keeping energy prices low



**Separation form of
power generation
and transmission
will greatly change
Japan's energy cost**

Towards YR2030 and Beyond



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Appendix

Evaluation of generation/transmission separation forms

	Legal separation		Ownership separation	
PPS (New Players)	?	Possible interference	✓	No interference
Grid connection	✗	Possible biased prioritization	✓	Neutral operation
Costs for monitoring competitive environment	✗	Incurred	✓	No cost
Connection charges	✗	Constantly high	✓	Optimized for market environment

Legal separation cannot create an environment for fair competition