

The 3rd Workshop of Japan-UK Joint Research Project
on Low-Carbon Societies (LCS)
“Roadmap to a Low-Carbon World”

Renewable energy policy and politics in Japan

February 13, 2008

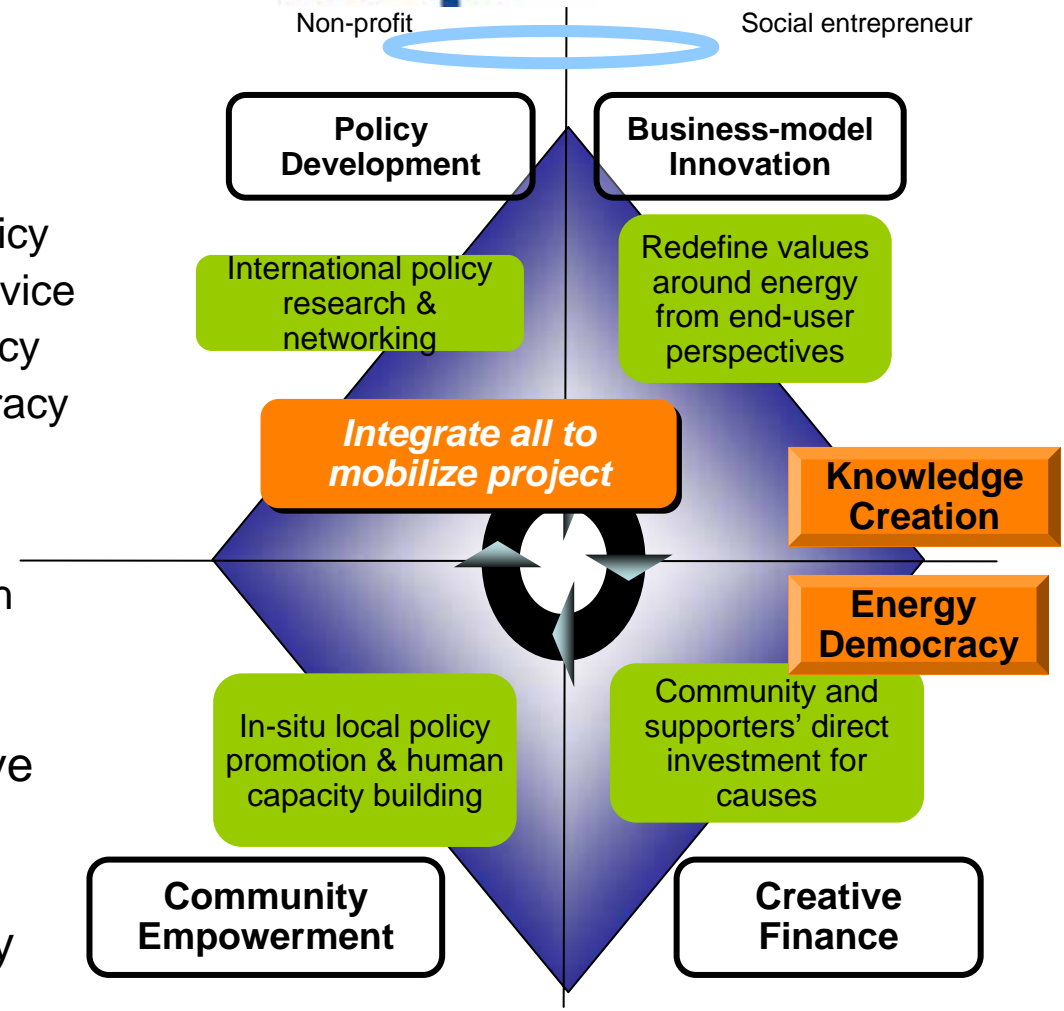
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ISEP history and activities

- Founded 2000
- Policy and its realization
 - Integrating 4 domains activities
 - Sustainable energy policy
 - Sustainable energy service
 - Energy politic democracy
 - Energy finance democracy
- The result so far
 - RE policy innovation
 - Close collaboration with Tokyo
 - Green power scheme
 - Wind cooperative initiative
 - Renewable energy community
 - SEFI (sustainable energy finance initiative) Japan



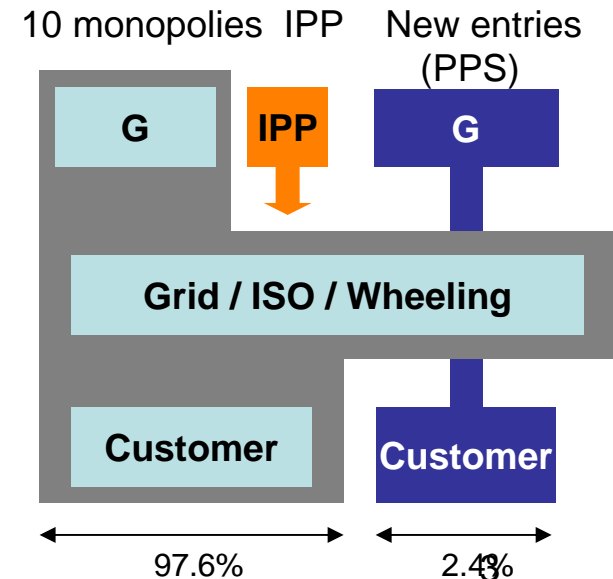
Snapshot of energy and climate change policy in Japan

- Energy security and the National Energy Strategy (May 2006)
 - Because of the failure of all energy policy areas below, even energy security seems to be vulnerable
- Climate change : national target (-6%)
 - Although GHG increase by 8% ('90 =>'05) and CO2 increase by 14% ('90 =>'05), effective policy measures such as carbon tax and cap & trade are far away from political agreement
- Renewable energy : national target (1.3% by 2010, 1.63% by 2014)
 - Political will and initiative is very much poor , even negative, for renewable energy although win-win consequences could be expected
- Nuclear energy : more than 30-40% share, reprocessing and Pu use
 - Nuclear energy is politically too much expected although there are various risks both in safety and economical aspect, such as earthquake proof etc.
- Energy market restructuring
 - Energy market restructuring in Japan started late 1990s. The conclusion so far was to keep de-facto regional and functional monopoly for electricity supply market

Japan's electricity market structure and political landscape

Snapshot
EL market
Market development
RES policy history
Grid issue
RPS policy
RPS history
Concluding remark

- **Regional & de-facto functional monopoly**
 - 10 major electricity suppliers cover 10 regions separately
 - Market monopoly; 97.6%
 - Grid monopoly and ruling by themselves
 - Political monopoly;
 - All electricity suppliers are the most “giant” companies in each region, consequently, the most influential political actors both national and local governments
- **Political structure**
 - Bureaucratic democracy
 - METI (the Ministry of Economy Trade & Industry) control whole process of energy policy
 - Relying its political power on 10 major electricity suppliers through regulation
 - Parliamentary political structure
 - LDP (ruling party) is closely harmonized with by 10 major electricity suppliers directly and indirectly
 - Democrats (largest opposition party) is critically influenced by industry labor union



Snapshot

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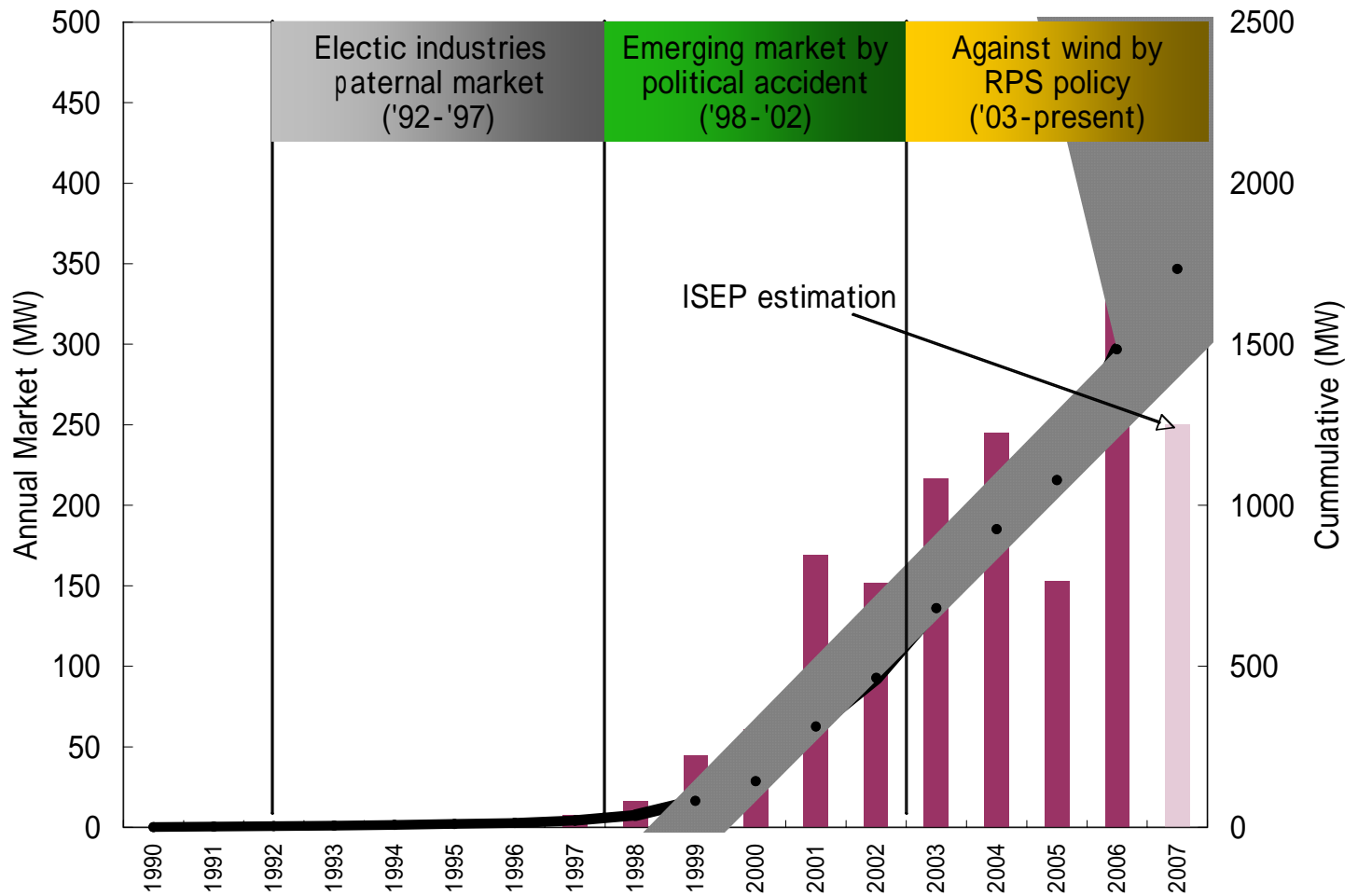
Grid issue

RPS policy

RPS history

Concluding remark

Wind power development in Japan



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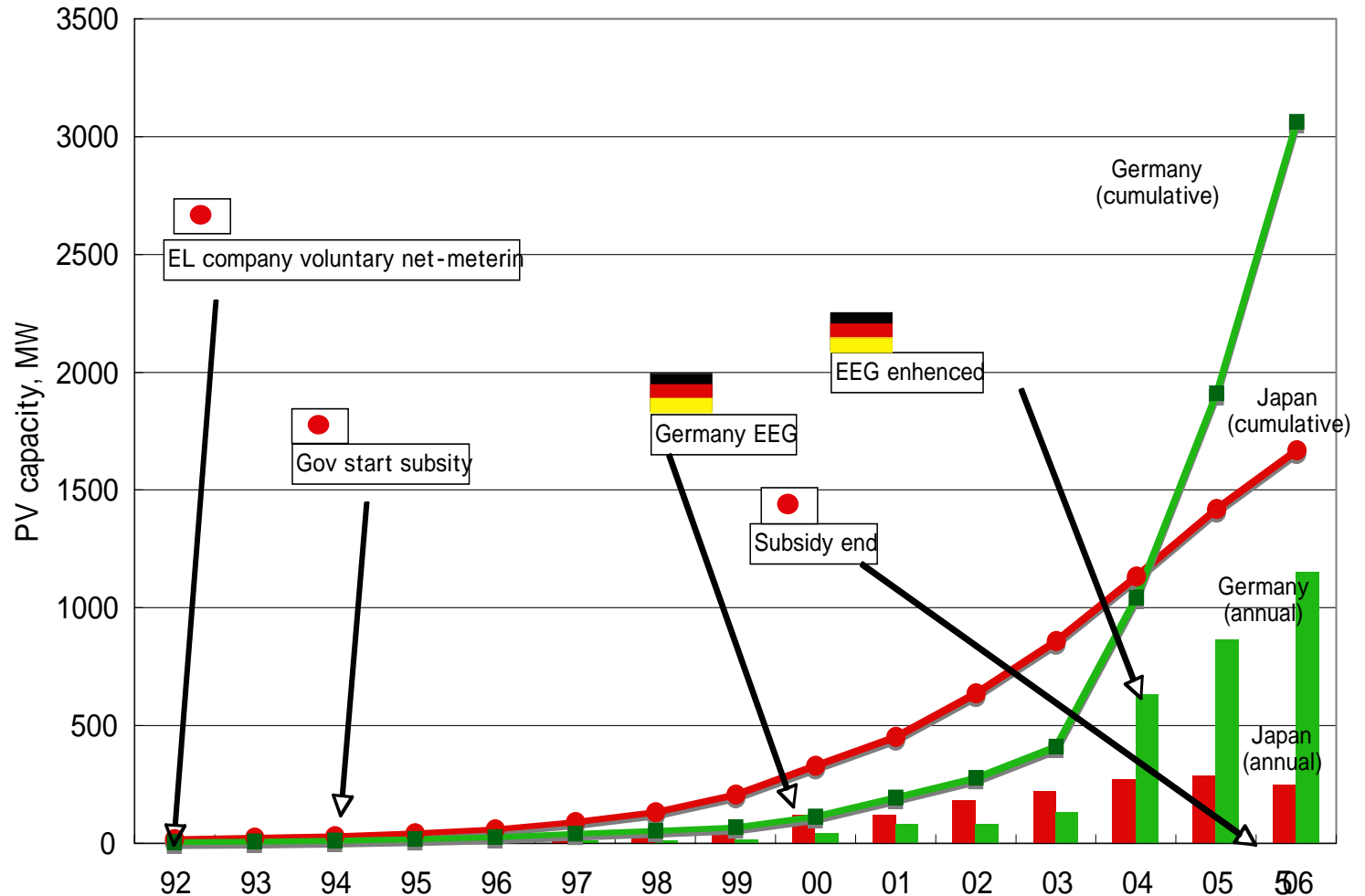
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PV market development with comparing German PV market

- PV market in Japan had taken off because of “political accident”, and falling down because of “policy failure”



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History of RES policy and wind power development in Japan

- 1992 - 98 : Wind power market taking-off under electricity suppliers' paternalism or green washing
 - 10 monopolies start “voluntary net-metering program” only for solar PV and wind power in 1992, as their green washing for climate change
 - Some local gov. start to introduce wind power as “a symbol project”, and rapidly spreading over Japan
- 1998 - 03 : Un-intended market boosting and emerging “grid issue”
 - On April 1998, 10 monopolies announced to introduce “15 years fixed price program for wind” instead fading out “voluntary net-metering program” in order to lower the purchasing price
 - This new program boosted “wind bubble”, not as intended by the monopolies, since the largest project risk was mitigated rather than price,
 - More than 500 MW wind projects in total were inquired in Hokkaido Electric Power Co. alone in 1998, when there were 22MW wind in Japan and 5MW in Hokkaido.
 - “Grid issue” was first raised by Hokkaido Electric Power Co. as their excuse to set limitation to introduce wind power into their grid such as “stability of electricity supply”
- 2003 - present : Cold wind days with grid issue and RPS
 - Grid issue become “national common issue” from “monopolies' excuse”, and METI set barriers for wind rather than solutions, such as battery and seasonal wind cutting off
 - Small target and slow progress set by Japanese RPS allow the el-monopolies to set the ceiling for new renewable and bidding

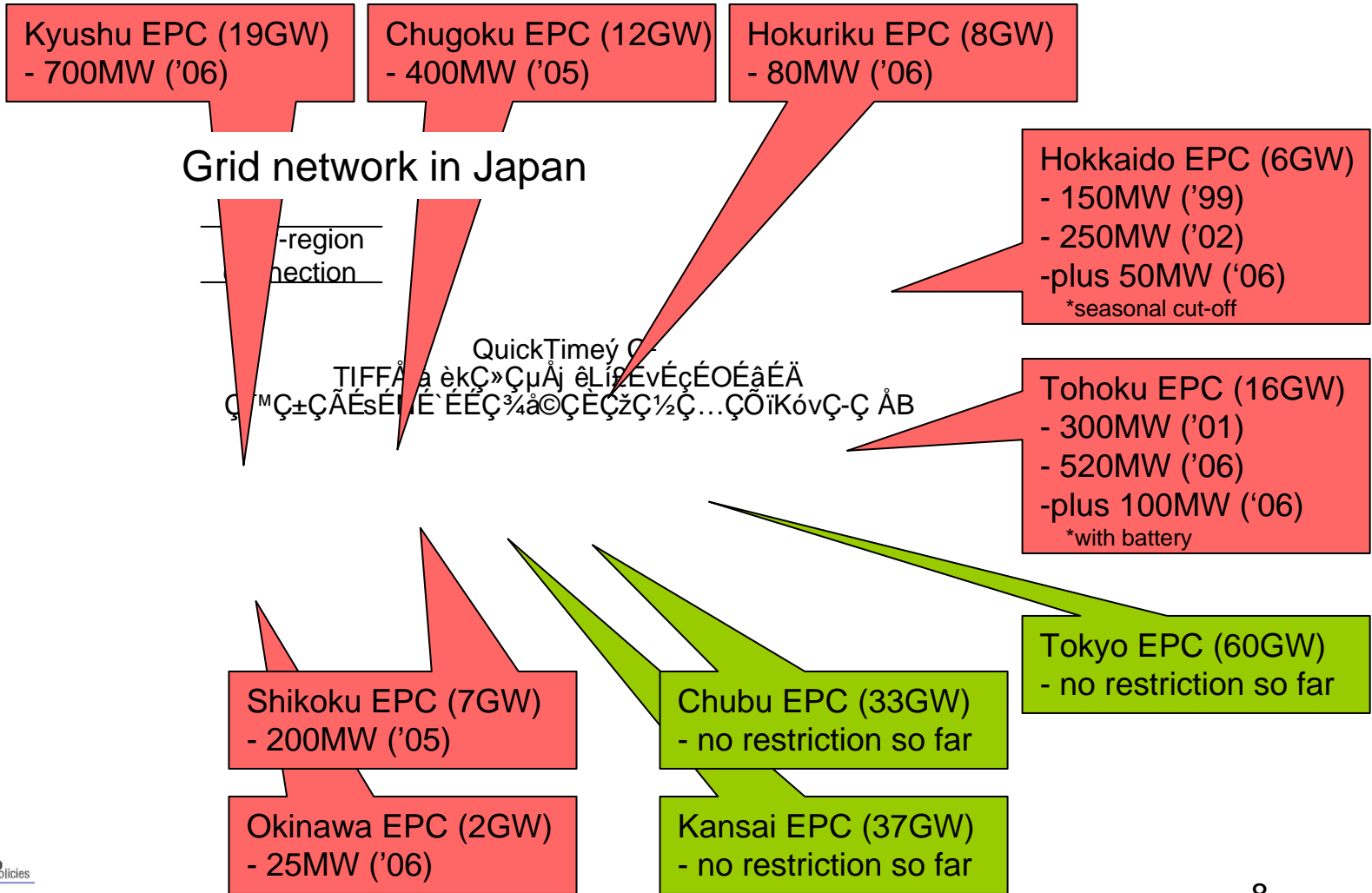
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History of RES policy and PV development in Japan

- 1992 - : PV market taking-off under electricity suppliers' paternalism or green washing
 - 10 monopolies start “voluntary net-metering program” only for solar PV and wind power in 1992, as their green washing for climate change
 - Grid connecting rules anyhow prepared
- 1994 - : Governmental bold subsidy started
 - The Gov. started PV subsidy for residential “half a cost” ~ 300 mYen/applicant, the most charitable manner ever.
 - This charitable subsidy only for PV scheduled to decline every year, and ended up in 2005
- 2005 - present : RPS, and sunshade on PV market
 - Market has grown enough 10 monopolies feel it as “burden”
 - RPS bring contradiction 10 monopolies against their “voluntary net-metering program”
 - Still no effective policy measure has been introduced nor even discussed, except for Tokyo Metropolitan Government (TMG)

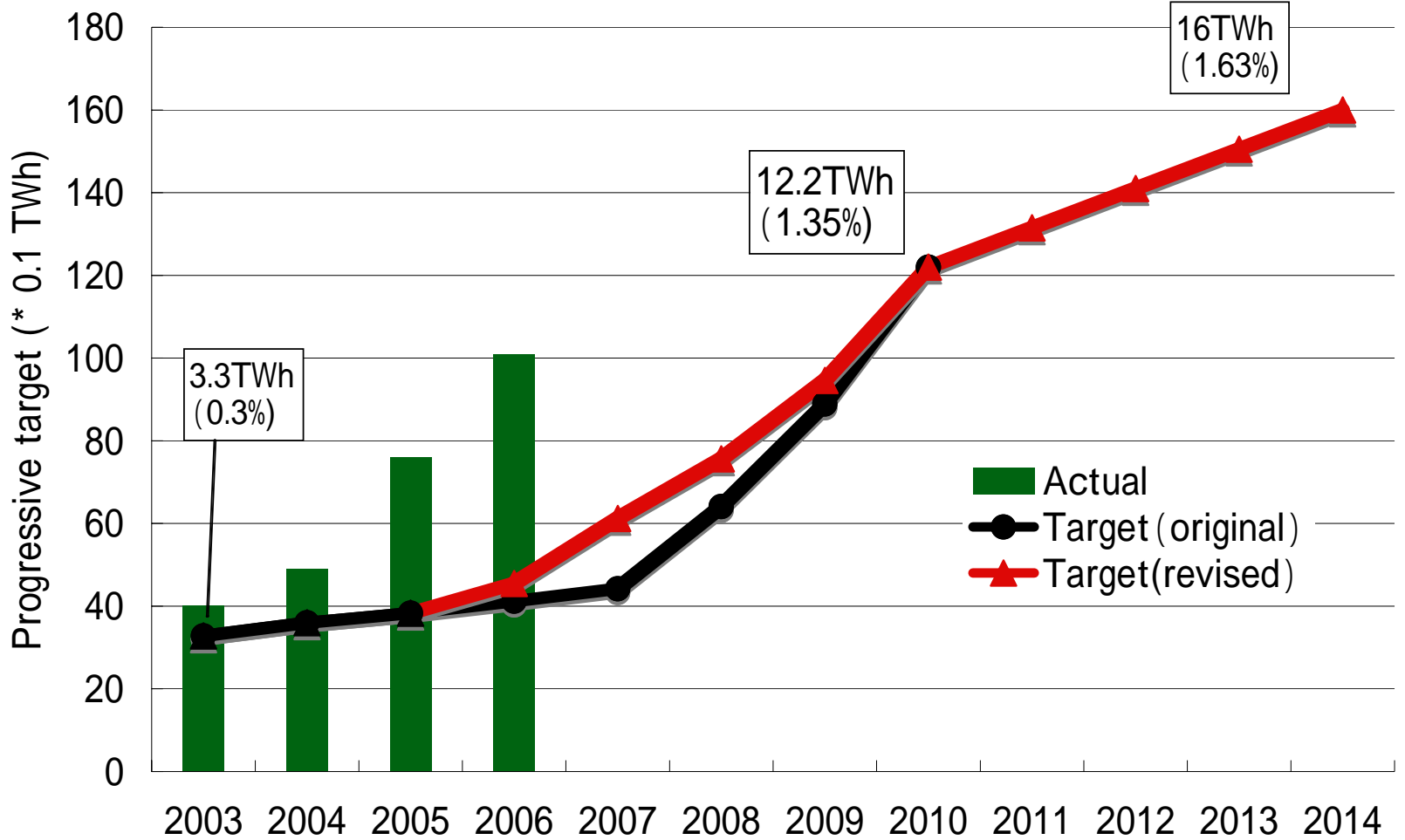
Grid connection in Japan and wind power "restriction"

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Japanese RPS (RES quota) regulation - too small target

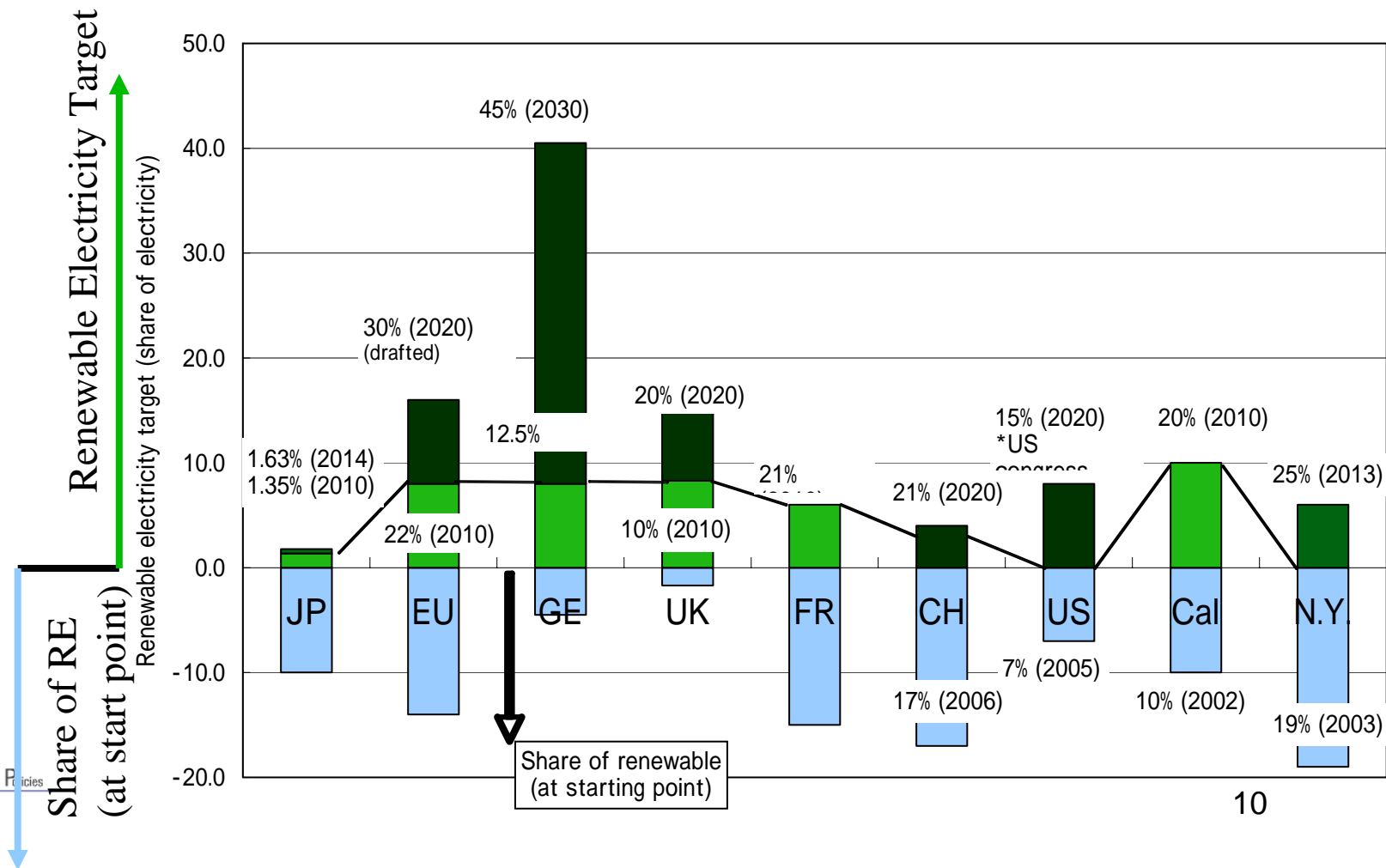
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Highly political renewable target

- 43 countries and 21 states (US, Canada) has political renewable target



Japanese RPS (Quota system) introduced after political conflict

- NGOs/Parliament collaboration has once opened the policy window
 - In Nov 1999, supra-partisan coalition for renewable energy has launched in the Parliament under the strong collaboration with NPO alliance, that had proposed a draft legislation based on FIT.
 - In May 2000, the Parliament Coalition proposed the draft law based on FIT, however finally METI has taken back their political power, and succeeded legislation of new RPS in 2002
- Electricity industries (10 regional monopolies) : strong opposition against both FIT and RPS (quota obligation) in order to avoid any regulations and enjoy monopoly
 - Owing to their voluntary net-metering program since 1992 and their voluntary long term contract program for wind power since 1998, wind power has started rapid growth, then, they reverse their attitude
- Government (METI bureaucrats) : keeping their political power on energy policy
 - Historically they have relied on the political power of electricity industry through their command & control regulation, RPS (quota obligation) fit their political culture and attitude
- Energy Politics in the Parliament: still controlled by “energy conservatism”, stick to nuclear “myth” and pork-barreling culture
 - LDP (ruling party) is controlled by the electricity monopolies, while Democrats (opposition party) is controlled by the trade union of the monopolies

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Concluding remark - “cold wind & sunshade days in Japan”

- Political risk of negative feedback from the electricity monopolies
 - Early success, such as German case, have created negative feed-back to large, hostile energy industries in Japan, who have market power as well as political power for energy policies in Japan,
 - Then RE policies easily turn to be “policy risk” rather than “support” since it’s often developed by those hostile actors,
- Policy risk from political RPS (renewable quota regulation)
 - RPS does not effectively address the issue of external costs of conventional energy, nor does it provide cradle markets bringing new technologies to competitiveness
 - Moreover, RPS works not as “a promoter” but as “a cap” because of its nature of political risk
- Cold wind & sunshade days in Japan
 - Wind power market has been falling into “political risk trap” in Japan, and might keep some years so far.
 - PV market has been falling into “absence of support policy” except for “voluntary net-metering program” by 10 monopolies
- Japanese lessons tell us the need for combination of strong political commitment and innovative integration for RE promotion
 - Renewable heat “absence of policy framework”
 - Renewable fuel falling into similar “political risk trap” with wind