

コペンハーゲンに向けて: 低炭素で持続可能なアジア太平洋を実現する新たな道筋

環境エネルギー政策の新しいパラダイムに向けて  
Toward New Paradigm of Energy & Environmental Policy

モード1からモード3へ  
From Mode 1 to Mode 3

June 26, 2009

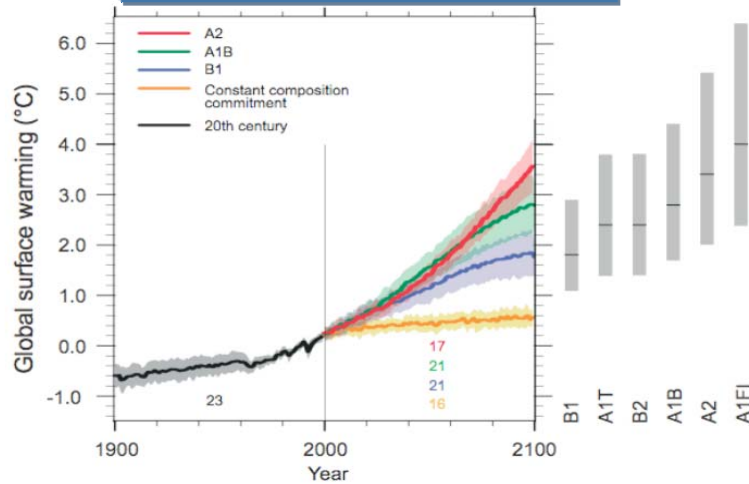
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# Needs for rapid and global scale of energy change

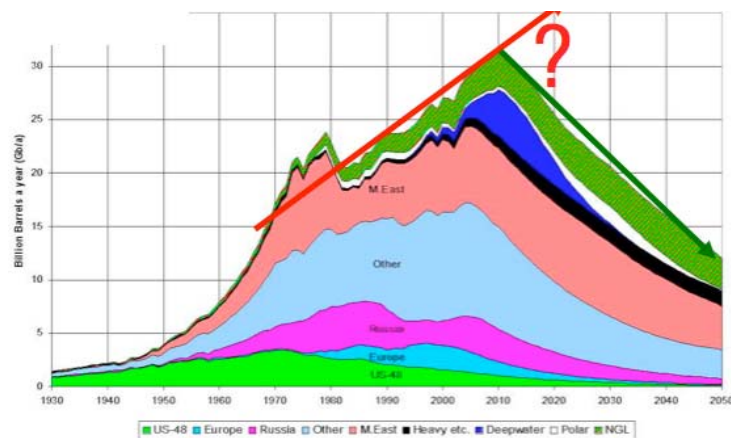
## Climate change



## Energy & poverty



## Energy security

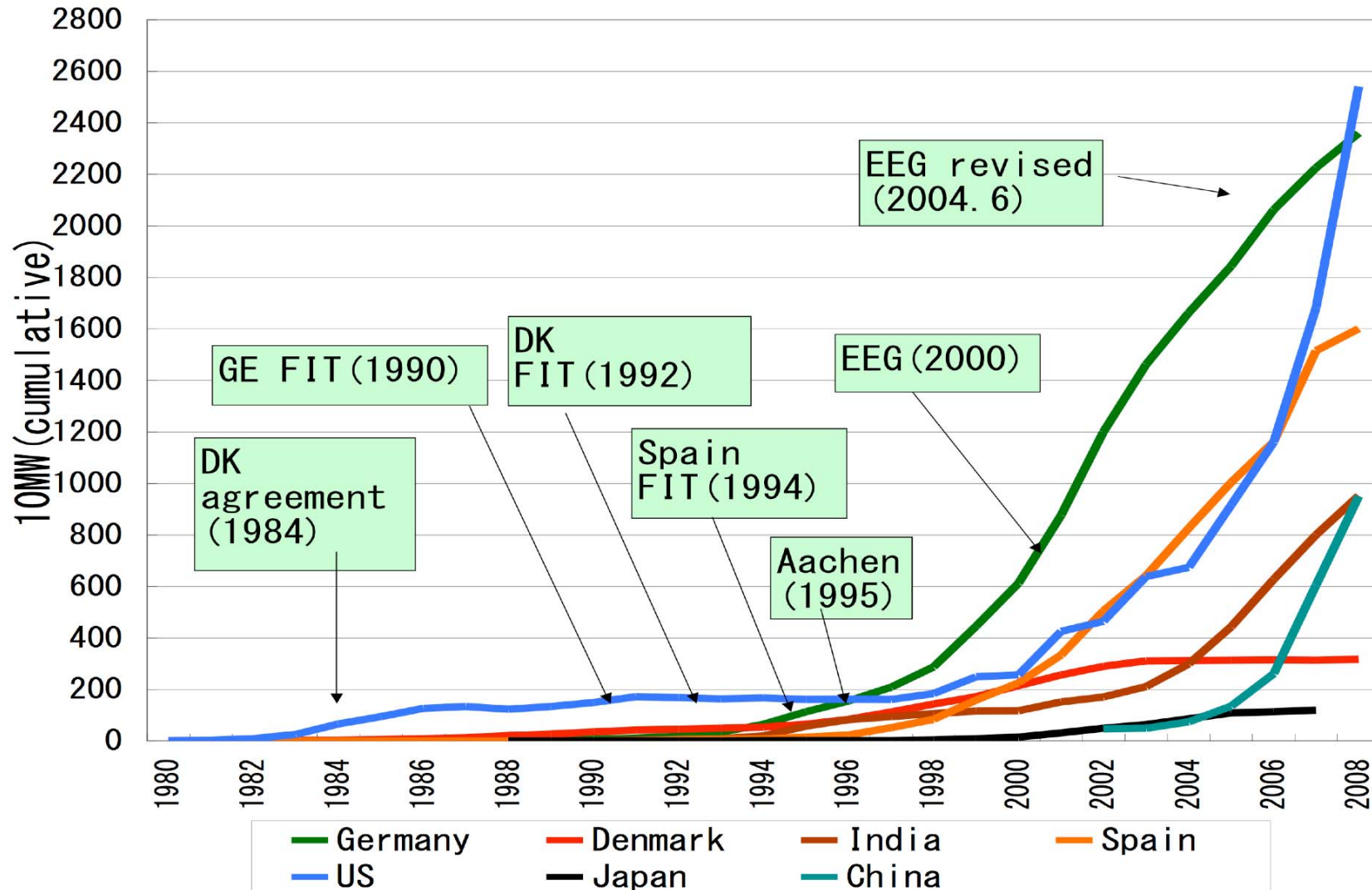


## War for oil

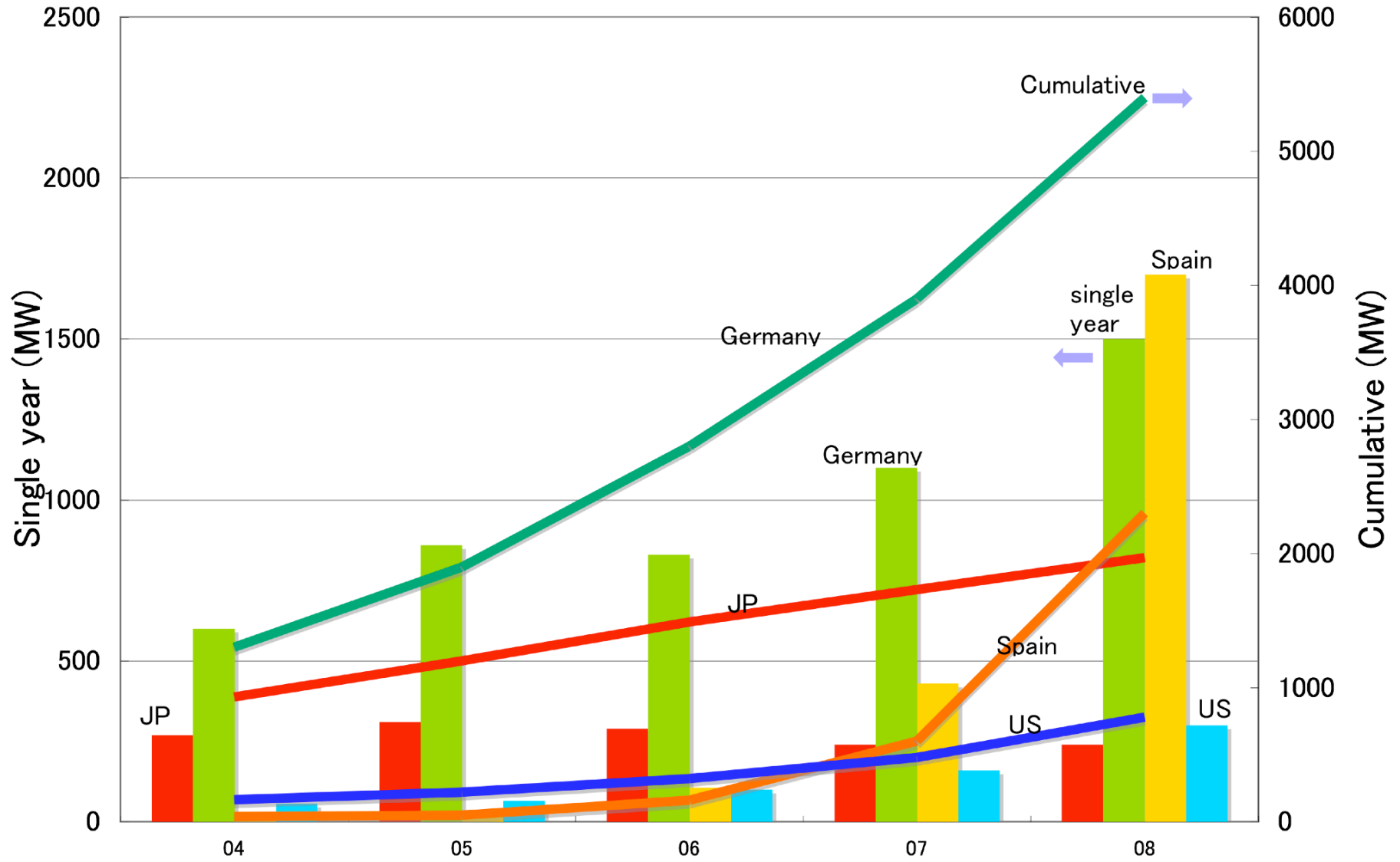


## Renewable energy into mainstream – wind power lead

- Renewable will play a role in 21th century same as the car in 20th century

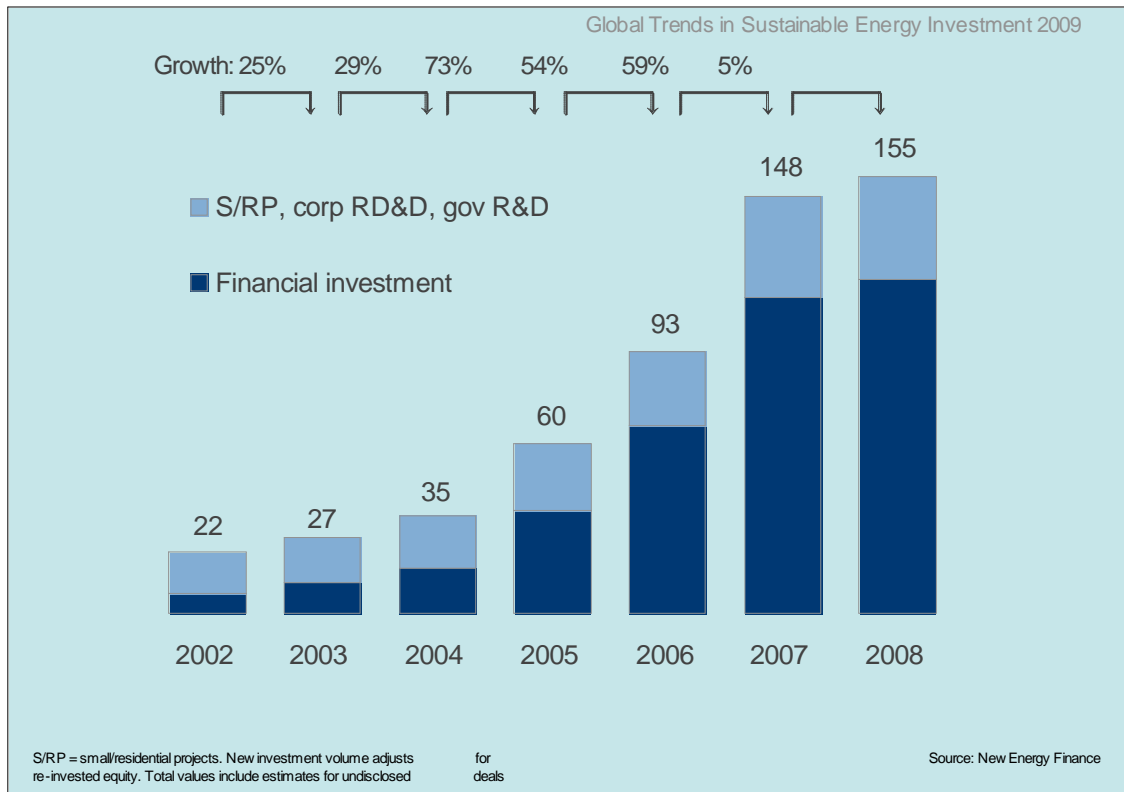


# Global PV market change



Source : REN21

# Explosive renewable energy market expansion



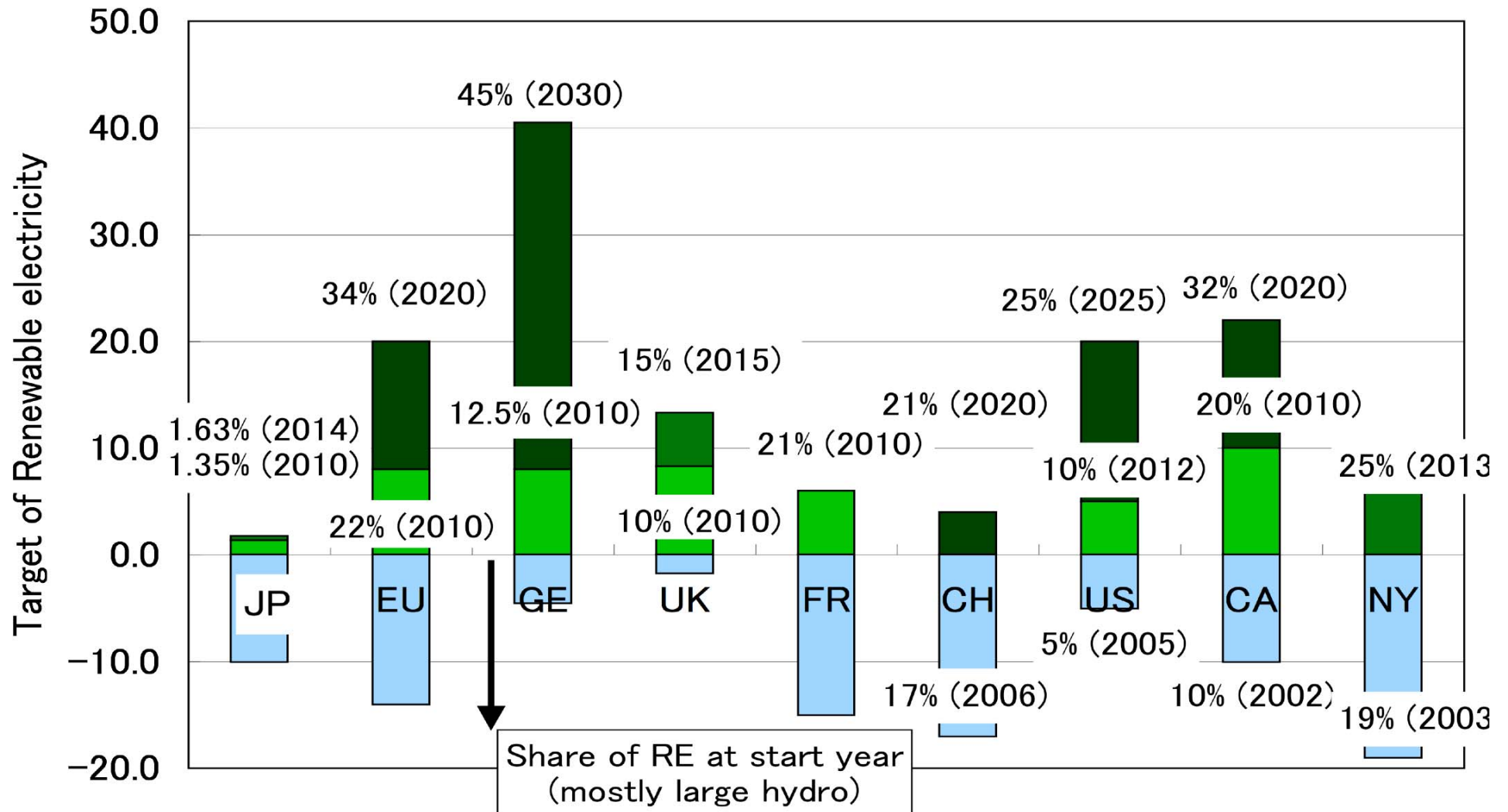
source : New Energy Finance

## Renewable industries (b\$, Stock value as of July 2008)

1	TOYOTA	16,378
7	HONDA	6,550
8	CANON	6,548
16	New Nippon Steel	4,043
17	TEPCO	3,774
18	NISSAN	3,675
	Iberdrola Renovables(Spain)	2,971
27	SHINETSU	2,774
	Vestas(DK)	2,524
	First Solar(US)	2,361
34	TOSHIBA	2,328
45	KYOCERA	1,758
49	SHARP	1,661
50	MHI	1,653
	Renewable Energy Corp.(Norway)	1,534
62	SUZUKI	1,300
	Gamesa (Spain)	1,293
75	Tokyo GAS	1,110
	Q-cells (Germany)	1,076
	EDP Renovaveis(Portugal)	1,041
88	New Japan Oil	975

Source : ISEP

# Trand in setting higher political target of renewable energy



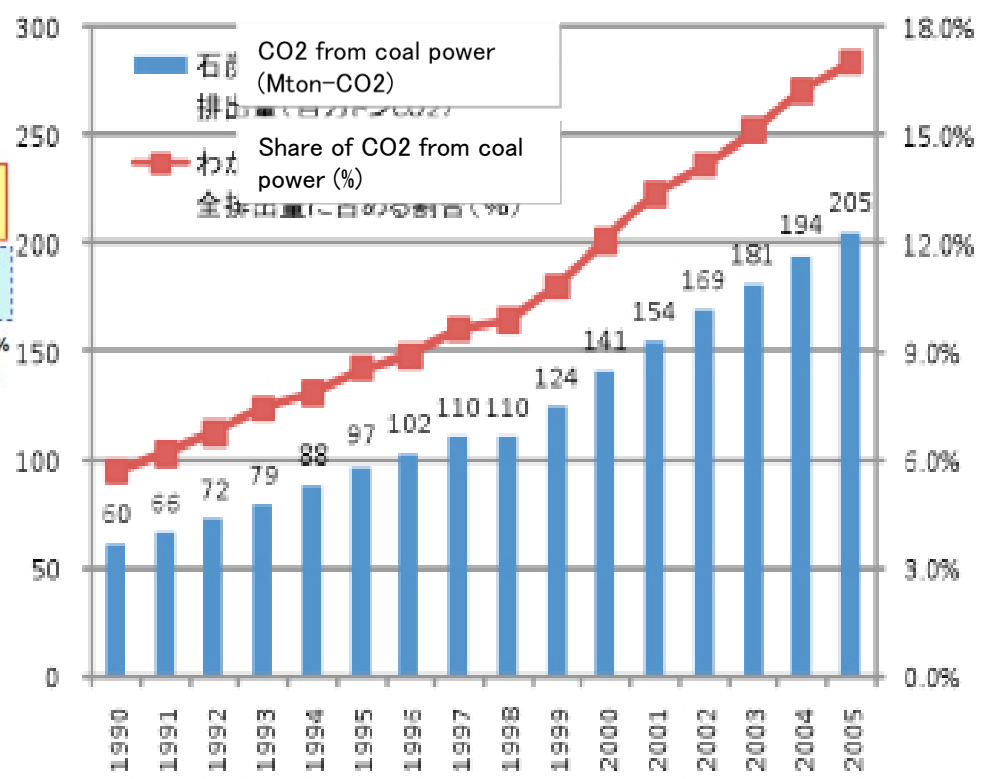
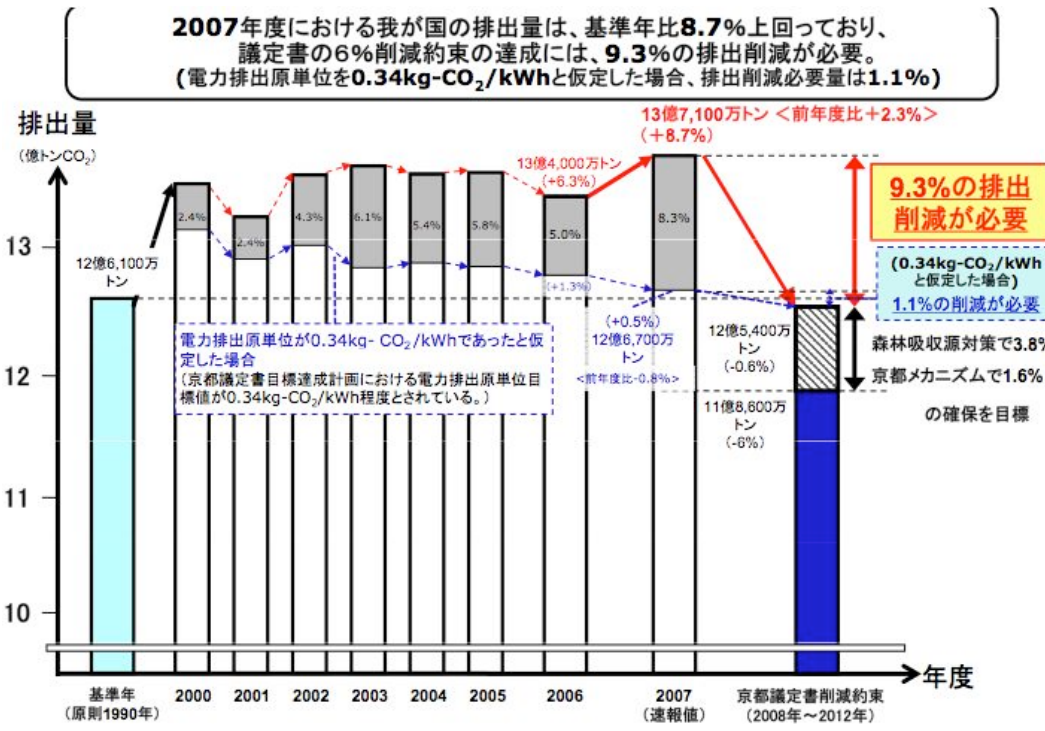


# Continuing “carbonization” of Japan’s electricity supply

Japan’s failure of Kyoto target mostly due to failure of electricity policy

+9.2% (2009) from 1990

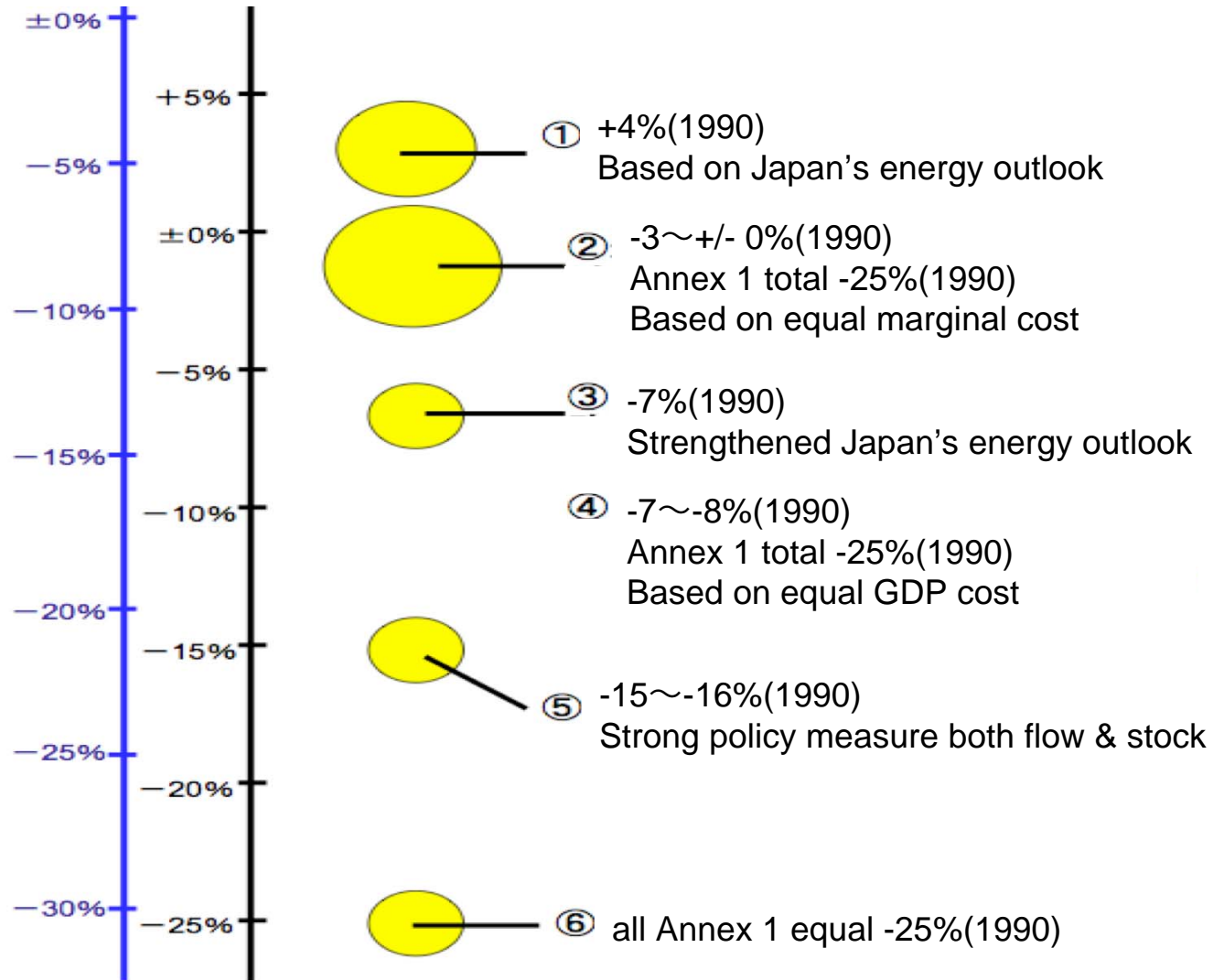
Continuous growth of coal power



# Various options for Japan's mid-term target

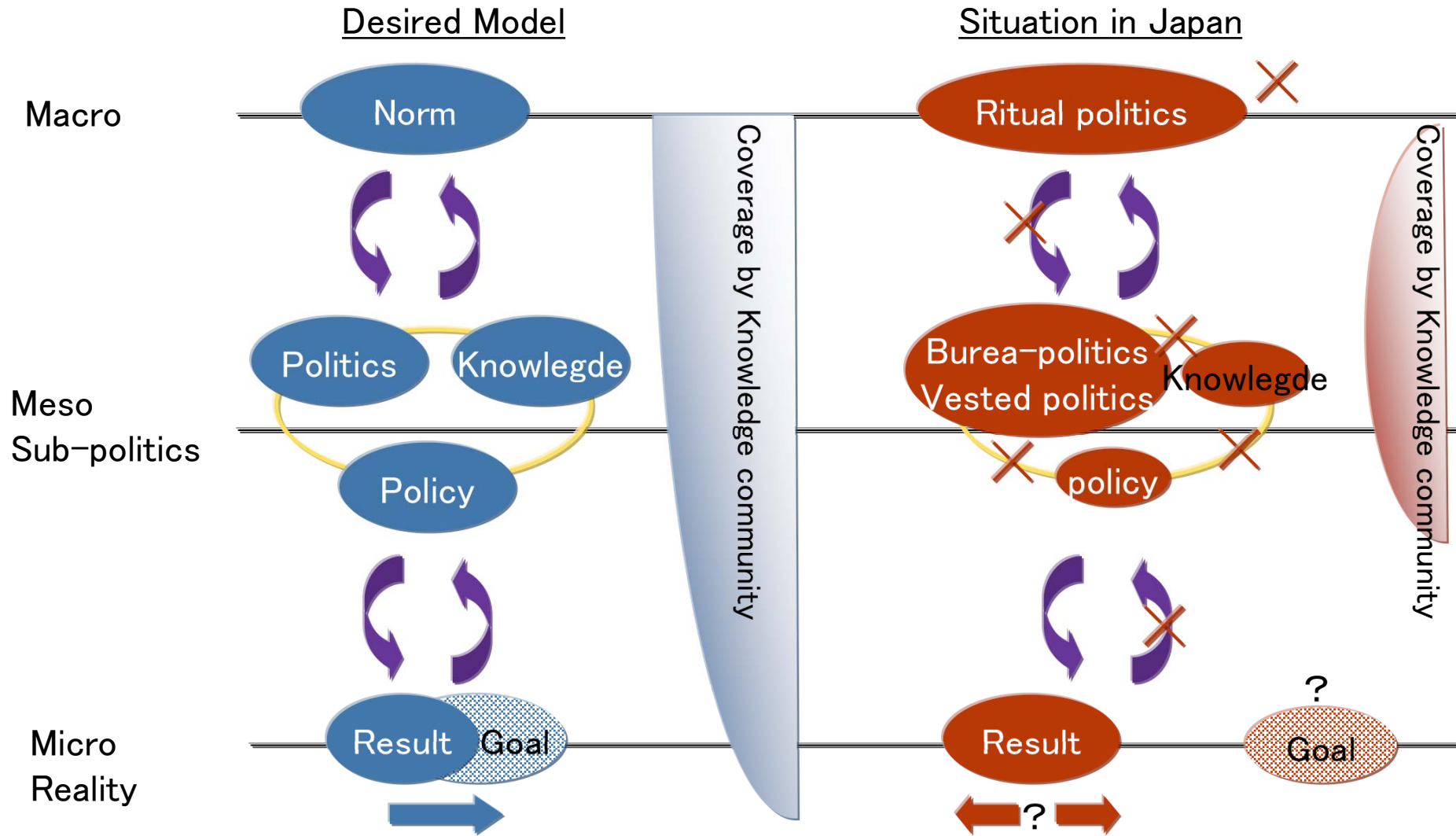
Reduction/increase (%GHG/GHG)

from 2005    from 1990





# Political structure of energy & climate issue



## Needs for updating knowledge community toward “Mode 3”

	Science	Environmental Policy	Style atmosphere
Mode 1	Gov. science (pre War~today)	opposition Command & control (1970~)	Resistance paternal
Mode 2	Ind. science Busi. science (post War~today)	Professionalization expertisation (1980~)	Value neutral M a r k e t orientation
Mode 3	Open source Innovation (1990~)	Network and innovation by “agent” (1990~)	Commitment, creativity, constructive