

Going Green?

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Really, Mr Nakagawa?

"Japan leads the world in energy efficiency and, through its hard work, has achieved the world's premier level of environmental quality."

Liberal Democratic Party (LDP) Diet member
Nakagawa Shoichi
(former METI/Finance Minister)

June 2008 *Voice*



#1 in Energy Conservation?

- Japan's energy consumption rose considerably between 1997 and 2007 (from 506.6 million tonnes of oil equivalent to 517.5 tonnes).
- Cf Germany (337.8 tonnes to 311), Denmark (21.7 to 18.2), UK (220.4 to 215.9), Sweden (50.4 to 50.2)

BP, Statistical Review of World Energy 2008

"Primary energy consumption trends" p 40

Are you sure, Professor Takenaka?

Japan is "the only country in the world that can solve the global environmental problem."

Japan is so energy efficient that, in order to produce a given unit of GDP (whether measured in dollars or yen), Japan emits "half the level of the Western countries."

Takenaka Heizo,
July 2008 *Ushio*



Energy Intensity (2005), Consumption, CO2 Emissions
Indicators (2004)

	Japan	US	UK	Germany	France	Italy
Energy Intensity	6539	9113	6048	7243	7201	5788
Ton Oil Equiv/Capita	4.18	7.91	3.91	4.22	4.43	3.17
TPES/GDP (PPP)	0.16	0.22	0.14	0.16	0.19	0.17
Ton CO2/TPES	2.28	2.49	2.30	2.44	1.42	2.51
Ton CO2/Capita	9.52	19.73	8.98	10.29	6.22	7.95
CO2/GDP (PPP)	0.35	0.54	0.32	0.39	0.23	0.31

Sources: International Energy Agency (IEA Statistics), EIA
Statistics Note: Energy Intensity=BTU/US\$2000 (PPP)
PPP=Purchasing Power Parity, TPES=Total Primary Energy Supply

Dependence on Oil, Imported Oil, and Imports from the Middle East, 2003

	Japan	US	UK	Germany	France	Italy
Oil Dependence	50	40	35	36	34	48
Imported Oil Dependence	100	62	-36	97	98	93
Dependence on ME	89	24	6	10	25	32

Source: METI, 2006 Energy White Paper, Section 5

Japan certainly has pecuniary incentives

■わが国の原油輸入量、原油輸入金額の推移

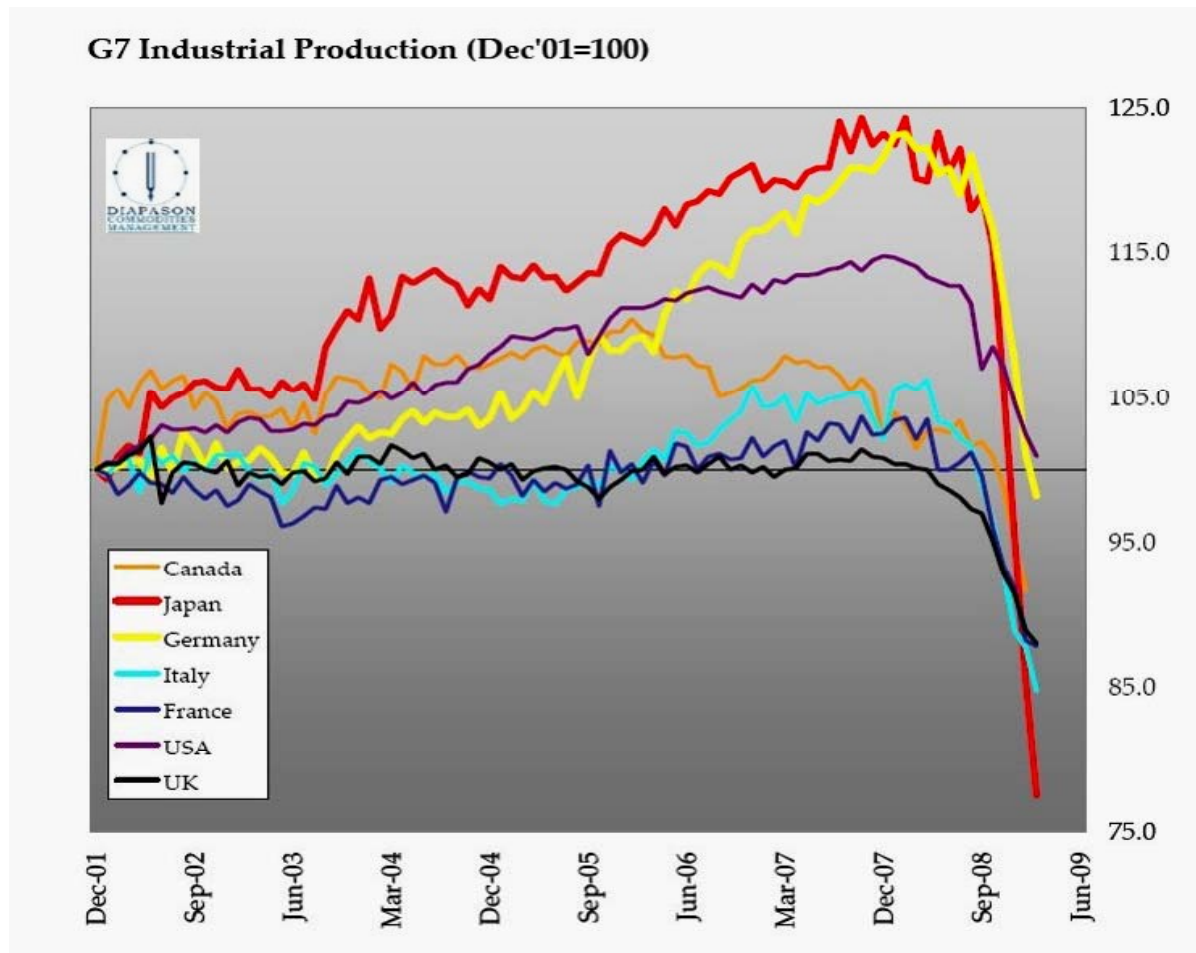
単位：千kl、億ドル



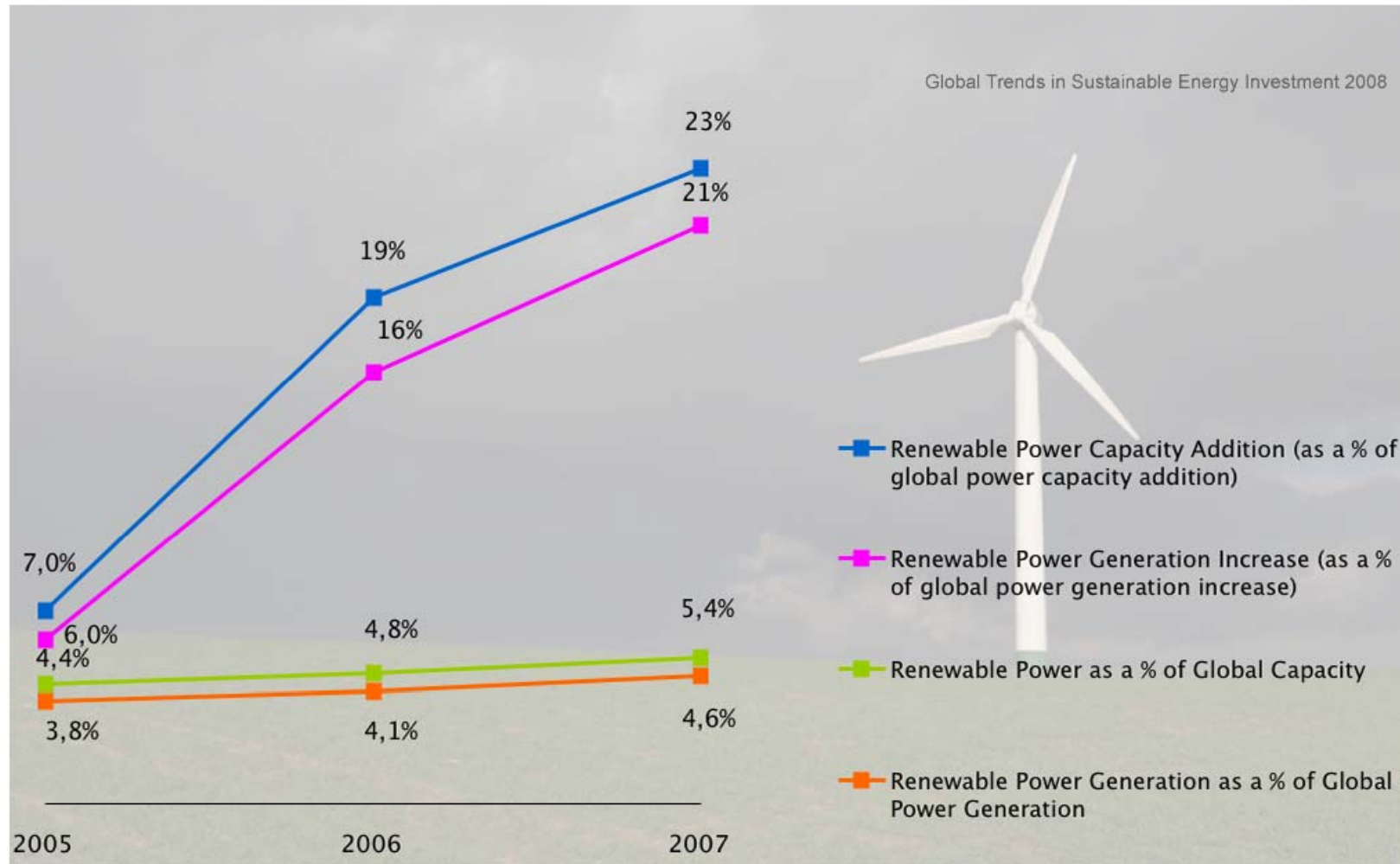
項目		年度	1973	1975	1980	1985	1990	1995	2000	2005	2006
原油CIF価格	ドル／バレル		4.75	12.05	34.62	27.30	23.34	18.27	28.37	55.81	63.46
	円／kl		8,329	22,654	47,508	38,282	20,296	11,057	19,617	39,735	46,638
為替レート	(円／ドル)		278.57	298.91	218.23	222.90	138.23	96.23	109.95	113.19	116.83
平均硫黄分	(wt%)		1.35	1.36	1.43	1.25	1.20	1.33	1.49	1.44	1.45
A P I 度			33.67	33.89	34.41	35.06	35.51	35.10	35.09	35.66	35.69

出所：財務省「貿易統計」ほか

More Incentives?



Renewable Energy Capacity as a proportion of Global Power Generation Capacity, 2005 - 2007 (GW)



Source: SEFI, New Energy Finance

Jeffrey Immelt, CEO General Electric

"I believe we are going through more than a cycle. The global economy, and capitalism, will be "reset" in several important ways. In a reset economy, the government will be a **regulator**; and also an **industry policy champion**, a **financier**, and a **key partner**"



Irony: Japan was a pioneer in sustainable energy policies

- 1974 Sunshine Project (esp solar)
- 1978 Moonlight Project (esp energy conservation)
- 1980 NEDO (subsidies, targets, and other supports)
- 1993 New Sunshine Project

But:

- 1990s porkbarrel vs strategic investment (latter lost)
- 2000s turn to “structural reform” ideology
- 2009 - back to the pork?

Smart Public Policies

A few examples:

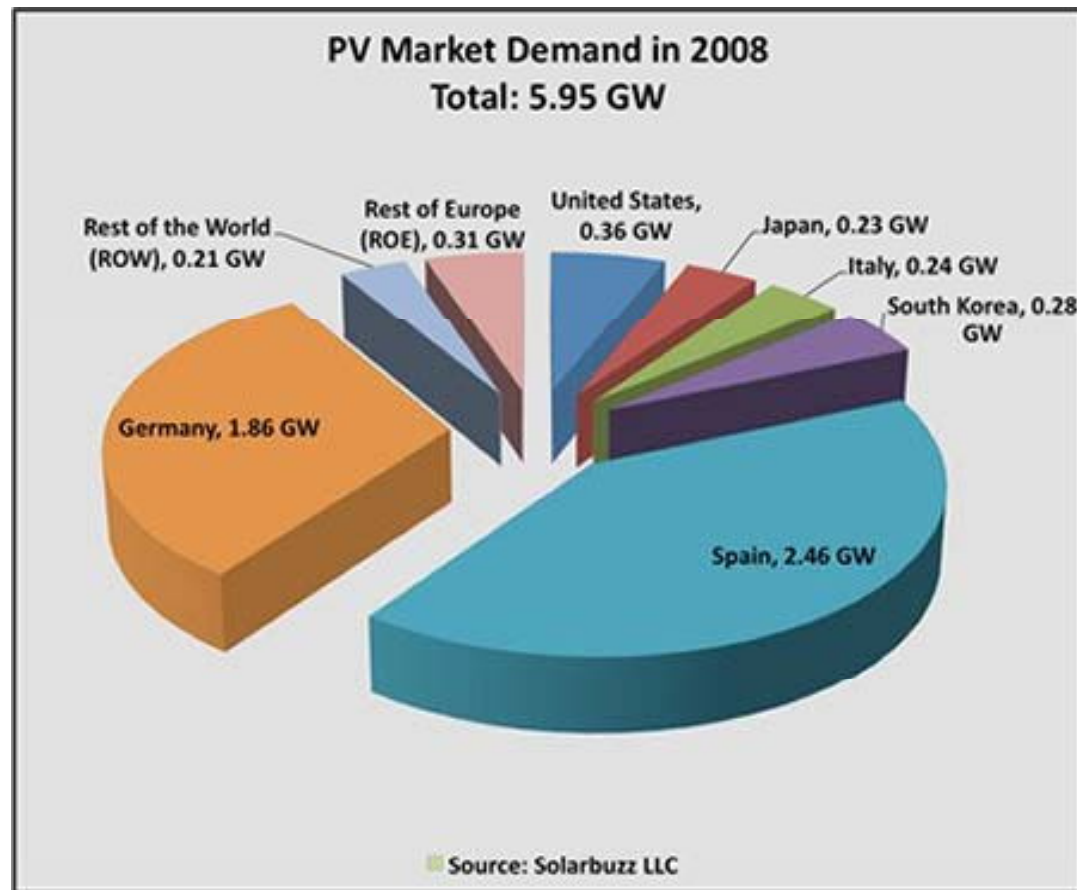
Feed-in tariff

Renewable Portfolio Standards

Cap and Trade (or better yet, carbon tax)

ie, subsidize good, tax bad. This is not rocket science.

In 2008, Solar
Market Doubled to
6 Gigawatts



Wind Energy

2008: 120 GW

Avg growth past 10
years: 28%

Main markets: China,
EU, US

US: 42% of new
generating capacity



Foster An Energy Revolution

Mandated levels of Electricity Produced via Renewables

California	20% by 2017 (33% by 2020)
Germany	45% by 2030 (feed-in tariff)
China	16% by 2020 (% total energy)
Japan	1.35% by 2010 (1.63% by 2014)

Power is 27% of global CO₂ emissions, transport 17%

Investor Sentiment

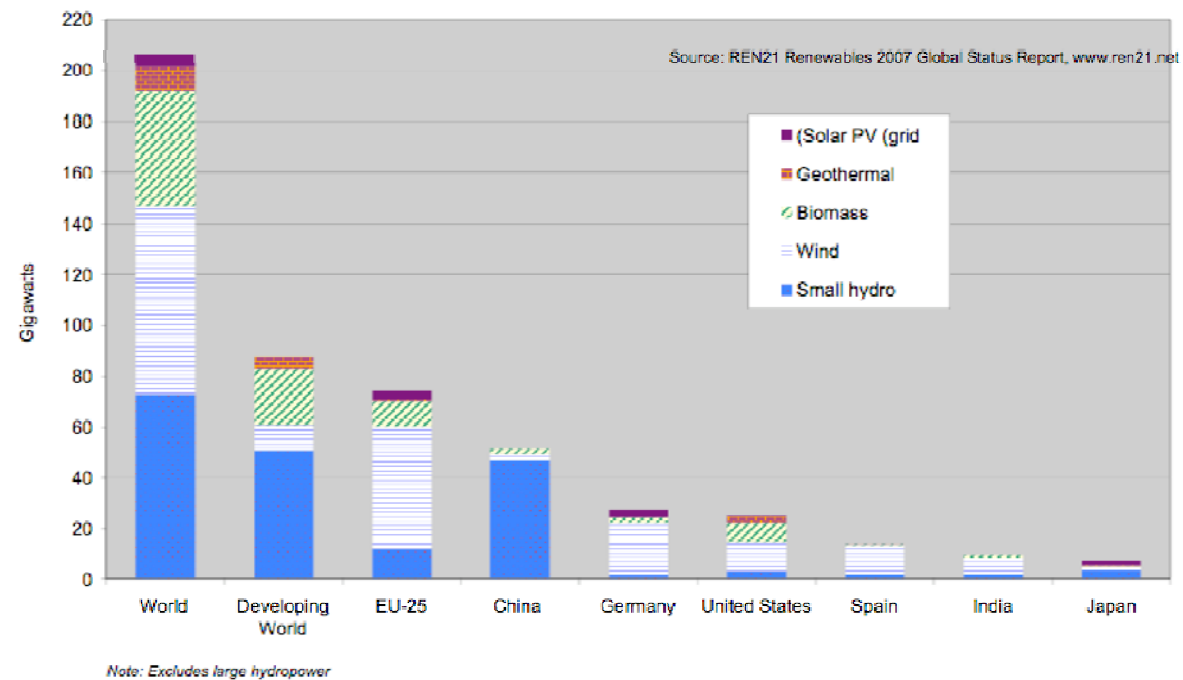
Attractiveness for renewables investment:
US is #1, followed by Germany, China, India
and Spain.

Japan is ranked 20th.

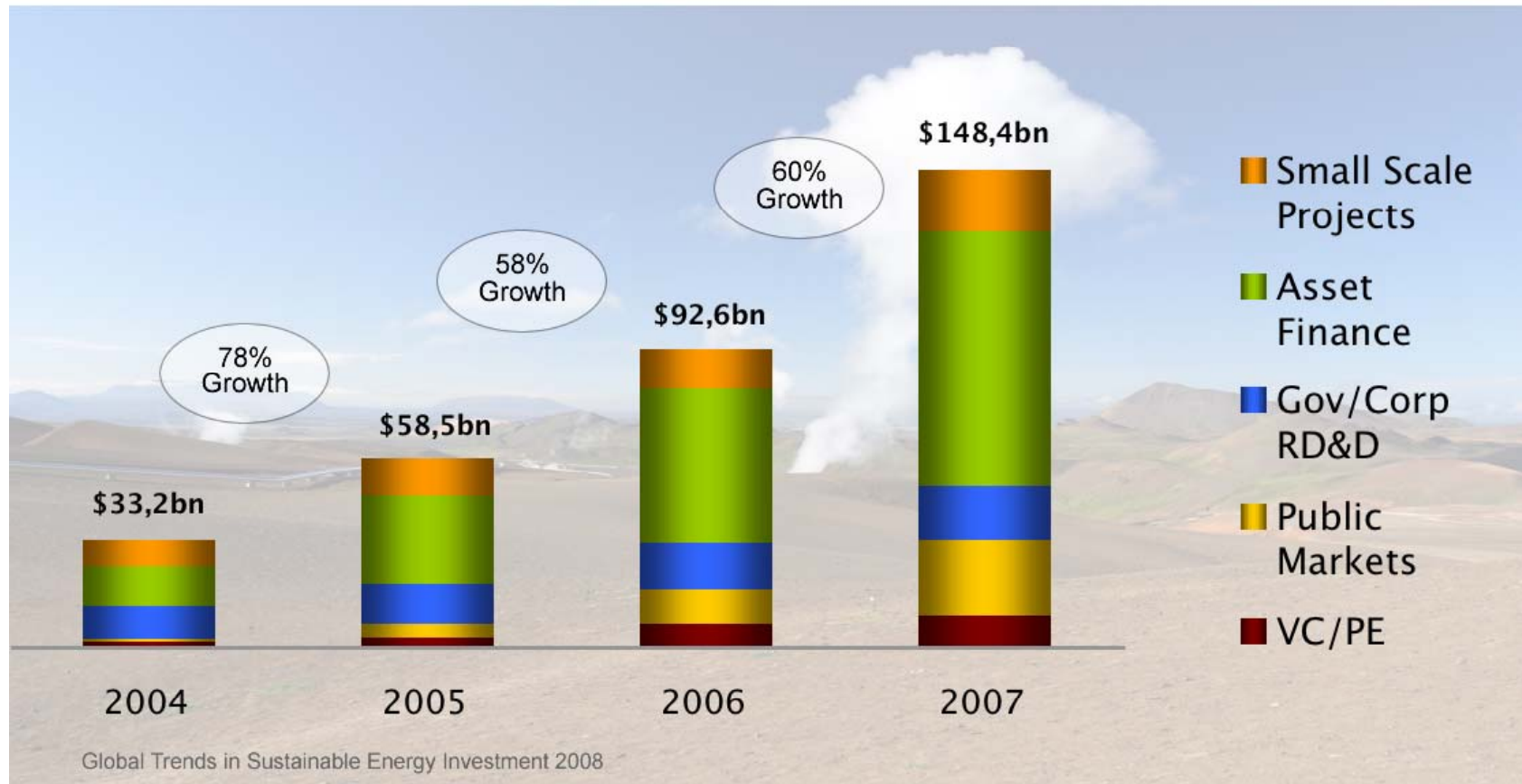
Ernst and Young "All renewables index at
Q3 2008," in *Renewable energy country
attractiveness indices, Quarter 3 2008*

Japan: Back of the pack

Figure 7. Renewable Power Capacities, Developing World, EU, and Top Six Countries, 2006

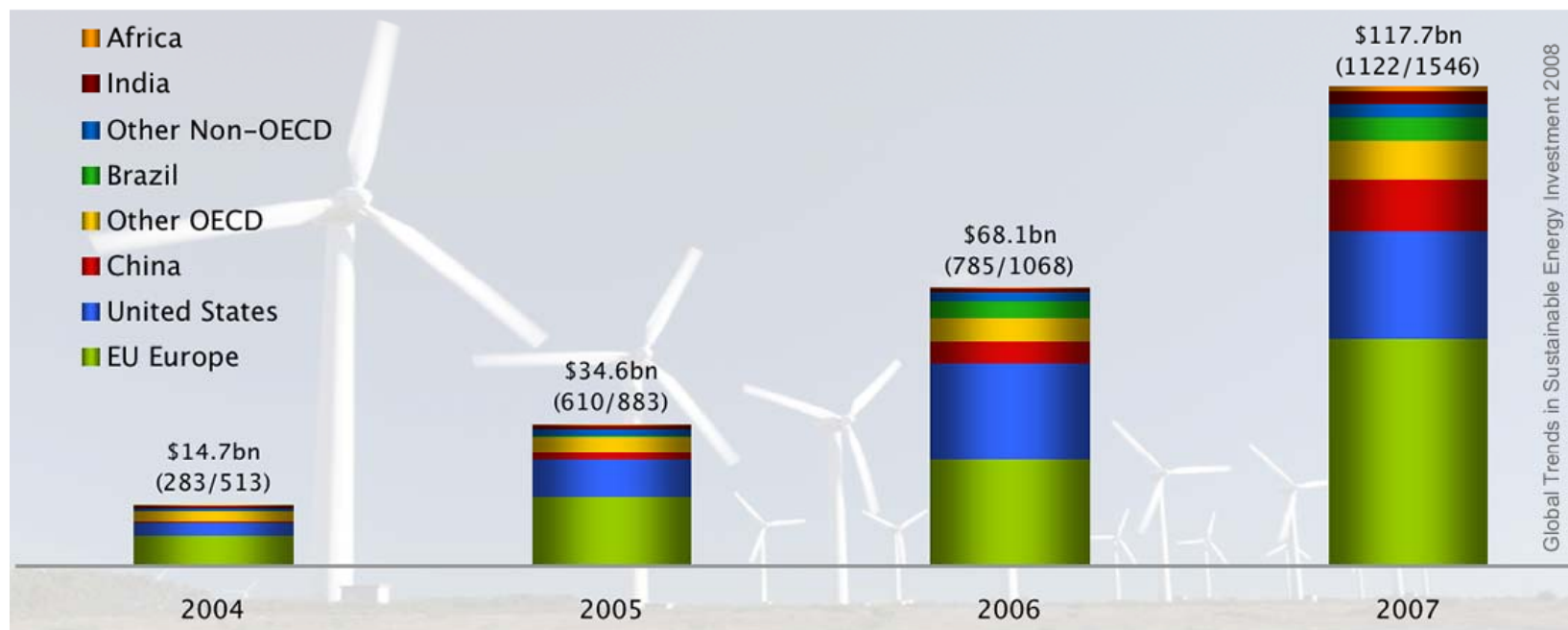


New Investment in Sustainable Energy 2004–2007



Source: New Energy Finance

New Investment by Region (VC/PE, Public Markets and Asset Finance), 2004 - 2007



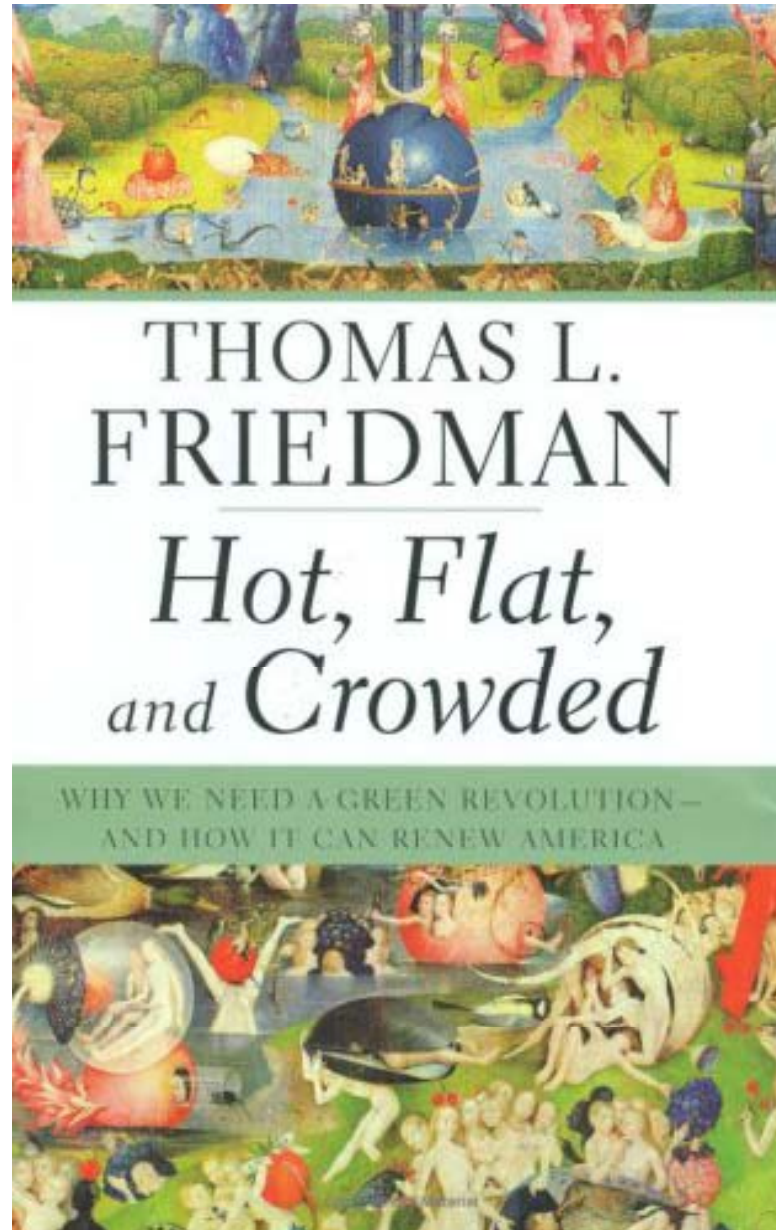
Source: SEFI, New Energy Finance

Welcome to the
“Energy-Climate Era”

ET= “energy technology”

“ET is the new IT”

The renewable-energy
revolution has become so
obvious that, last year,
Thomas Friedman
published a book on it.



Paradigm Shift

"The return of the state:
How government is back
at the heart of
economic life"

Financial Times, August 21 2008



iTulip.com

Taking Stock

- Japan is not the Top-Runner on energy and environmental policy
- Climate and energy risks are outpacing projections
- Negative externalities have ended the market fundamentalist era, except in Japan (ie, no targets)
- The Renewable Energy Revolution is already underway, but Japan risks becoming, at best, a subcontractor

Recommendation:

Understand this is a fight between incumbent and emergent Industries

Forgo the greenwash and use the state properly