Low-Carbon Energy Supply Policies for APEC
China

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Outline

1. The present situation of China's energy
2. Challenges faced by China in accelerating the development of low-carbon energy supply
3. The roles of low-carbon energy in China's energy supply
4. The constraints faced by China in promoting low-carbon energy supply
5. The policies and measures to promote low-carbon energy development

1. China's energy in 2009

	Unit	production		Consumption		
		Ammount	Growth rate	Ammount	Growth rate	Elasticity in tern of GDP
Total	Gtce	2.80	5.8	3.10	6.3	0.724
Coal	Gt	3.05	8.8	3.02	9.2	1.057
Oil	Mt	189.00	-3.1	380.00	7.1	0.816
Natural gas	Gcm	85.17	6.1	88.70	9.1	1.046
Electricity	TWh	3714.65	6.3	3697.30	6.2	0.713
Which of: thermal	TWh	2982.78	10.2			
Hydro	TWh	615.64	-3.3			
Nuclear	TWh	70.13	2.5			

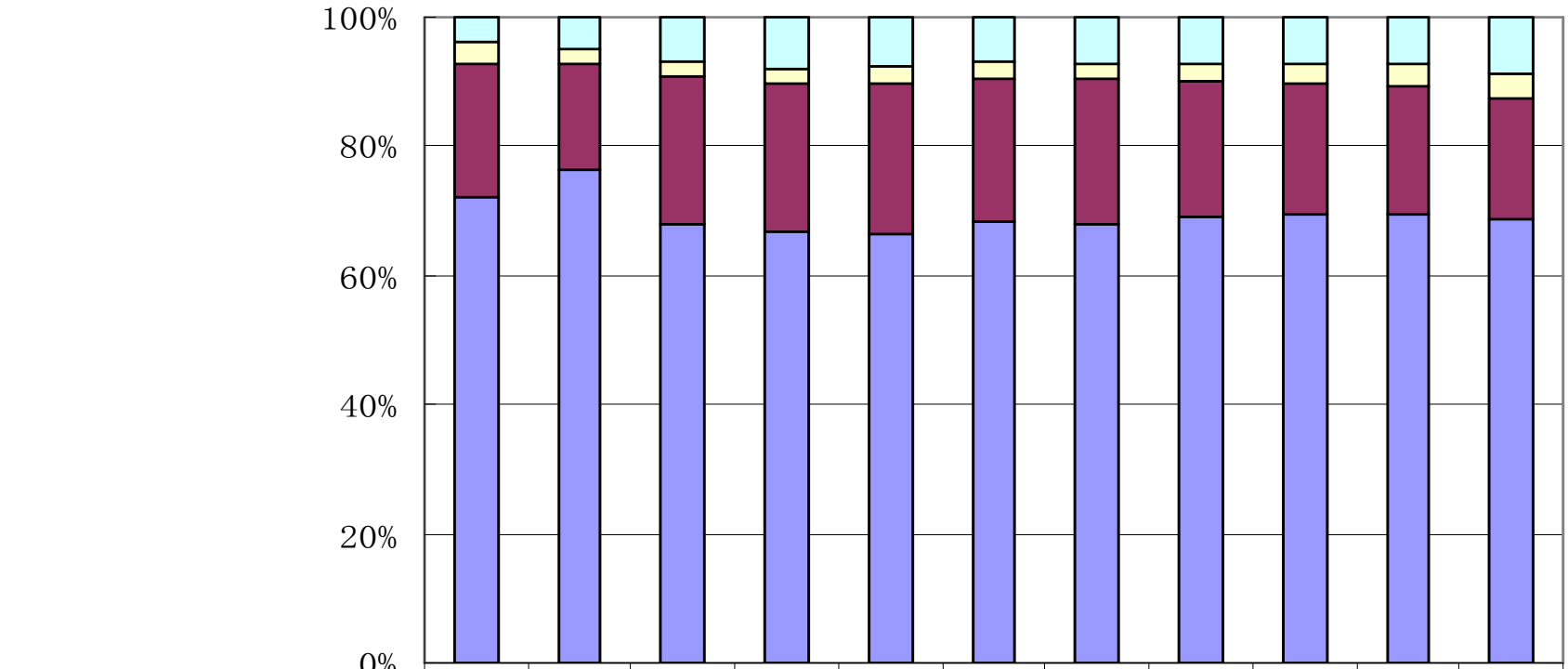
The energy intensity in terms of GDP decreased 2.2%.

1. China's low-carbon energy in 2008

		Unit	energy, TWh	energy, ktce/a.
1. power generation	GWh	186.87	395	210740
Hydro	GWh	171.52	563.3	202780
Wind	GWh	12.17	14.8	5330
PV	GWh	0.15	0.22	80
Biomass	GWh	3	7.5	2550
2. bio-gas			14	9995
household	k wells	30		
project in large scale		1600		
3. heating	M m^2			28303
salar heater	M	125		25000
salar cooker		0.45		103
geothermal	M m^2	40		3200
4. bio-fule	Mt	1.65		1550
total				250590

The energy intensity in terms of GDP decreased 2.2%.

1. China's energy consumption breakdown by source



	1980	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Primary electricity	4.0	5.1	6.7	7.9	7.7	6.8	7.1	7.1	7.2	7.3	8.9
Natural Gas	3.1	2.1	2.4	2.6	2.6	2.6	2.6	2.8	3.0	3.5	3.8
Crude Oil	20.7	16.6	23.2	22.9	23.4	22.2	22.3	21.0	20.4	19.7	18.7
Coal	72.2	76.2	67.8	66.7	66.3	68.4	68.0	69.1	69.4	69.5	68.7

Primary electricity: Hydro-power, Nuclear,Power and Wind Power

2. Challenges faced by China in accelerating the development of low-carbon energy supply

- Insufficient evaluation on renewable energy resources: solar energy, wind, biomass.
- Backward R& D of technologies, poor capacity of innovation, and weak industrial system of domestic technologies.
- imperfect market system.
- Inharmonious of policies and institutions.

3. The roles of low-carbon energy in China's energy supply

- To guarantee China's energy security
- To improve energy efficiency
- To protect energy environment
- To remove poverty and develop economy

4. The constraints faced by China in promoting low-carbon energy supply

- High cost of low-carbon energy development and utilization;
- Long distance of energy delivery, hydro power from west to east;
- Insufficient prophase jobs : resources survey and research, pre-feasibility study
- Scattered policies to encourage development
- Immature technology and market system

5. 1 The policies and measures to promote low-carbon energy development

Legal and institutional guarantee

•"Law on Renewable Energy" was become effective on Jan. 1st, 2006, Five fields accelerates the development of wind power, they are: overall targets, connect grid compulsively, classified tariff, cost share and special development fund.

•Medium and Long term development plan for renewable energy in China, it was issued in Sep., 2007.

•A series regulations on renewable energy development on licensees, prices, etc.

•Department of renewable energy: it was established in August of 2008.

5. 2 The policies and measures to promote low-carbon energy development

Reasonable targets by 2020:

- 15% of non-hydrocarbon energy;
- Original targets. Wind power - 30 GW; biomass 24GW; PV - 1.8 GW; bio-fuel: 10 Mt; nuclear power: 40 GW; hydro power: 300 GW
- Potential update targets. Wind power: 120-150 GW; Nuclear power: 65-70 GW

5. 3 The policies and measures to promote low-carbon energy development

Governmental Support for the basal jobs:

- Resource survey
- Prophase technical development: R & D, equipment;
- Finance and taxation

International cooperation:

- Technological transfer
- CDM

Thank you for your attention!