



CLIMATE CHANGE AND ENERGY SYMPOSIUM

“Impacts of Coal power in Vietnam and Japan’s involvement”

Japan, 20 May 2016

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Green Innovation and Development Centre (GreenID)



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- Status of Power Development in Vietnam
- Power Development Plan VII Revised (PDP VII Revised)
- JBIC-funded coal power projects in Vietnam
- Messages



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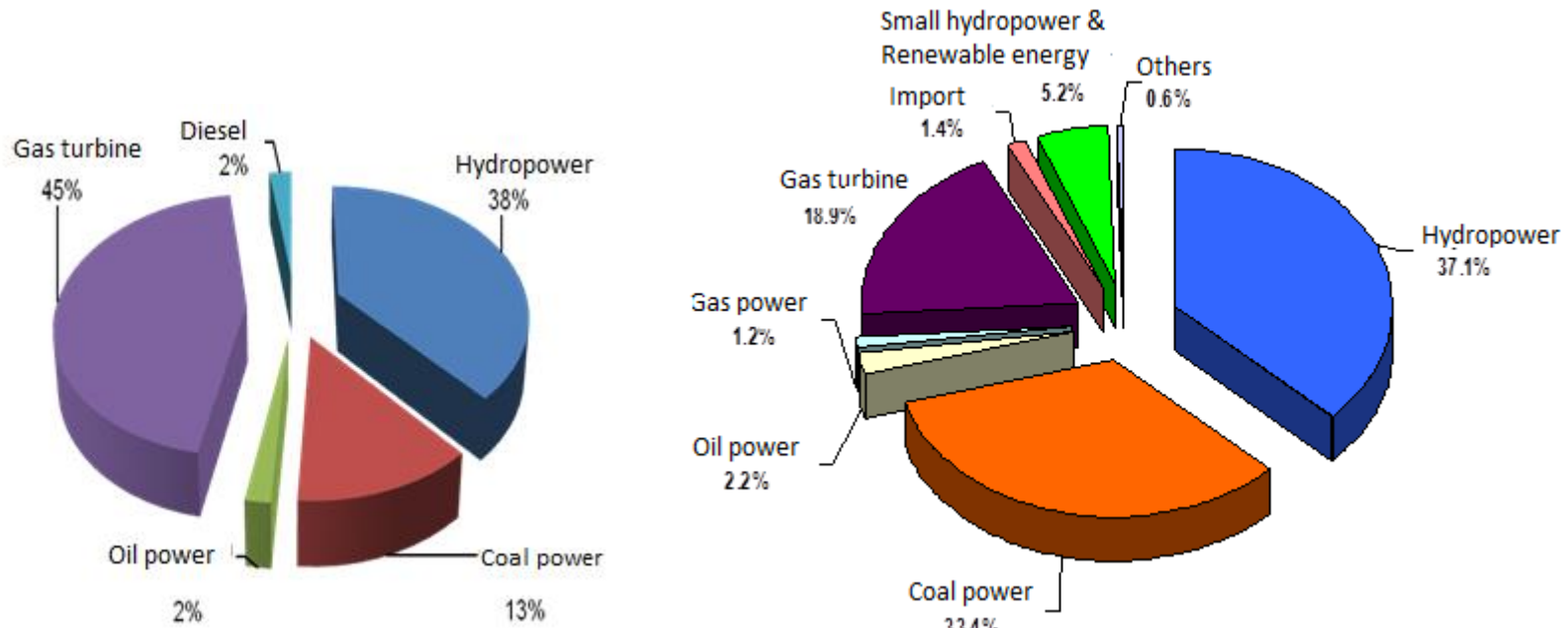
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Status of Power Development in Vietnam

Installed capacity by power sources in 2005 and 2015



Source: Nguyen Anh Tuan (2016) *Presentation on PDP VII Revised*, Hanoi.



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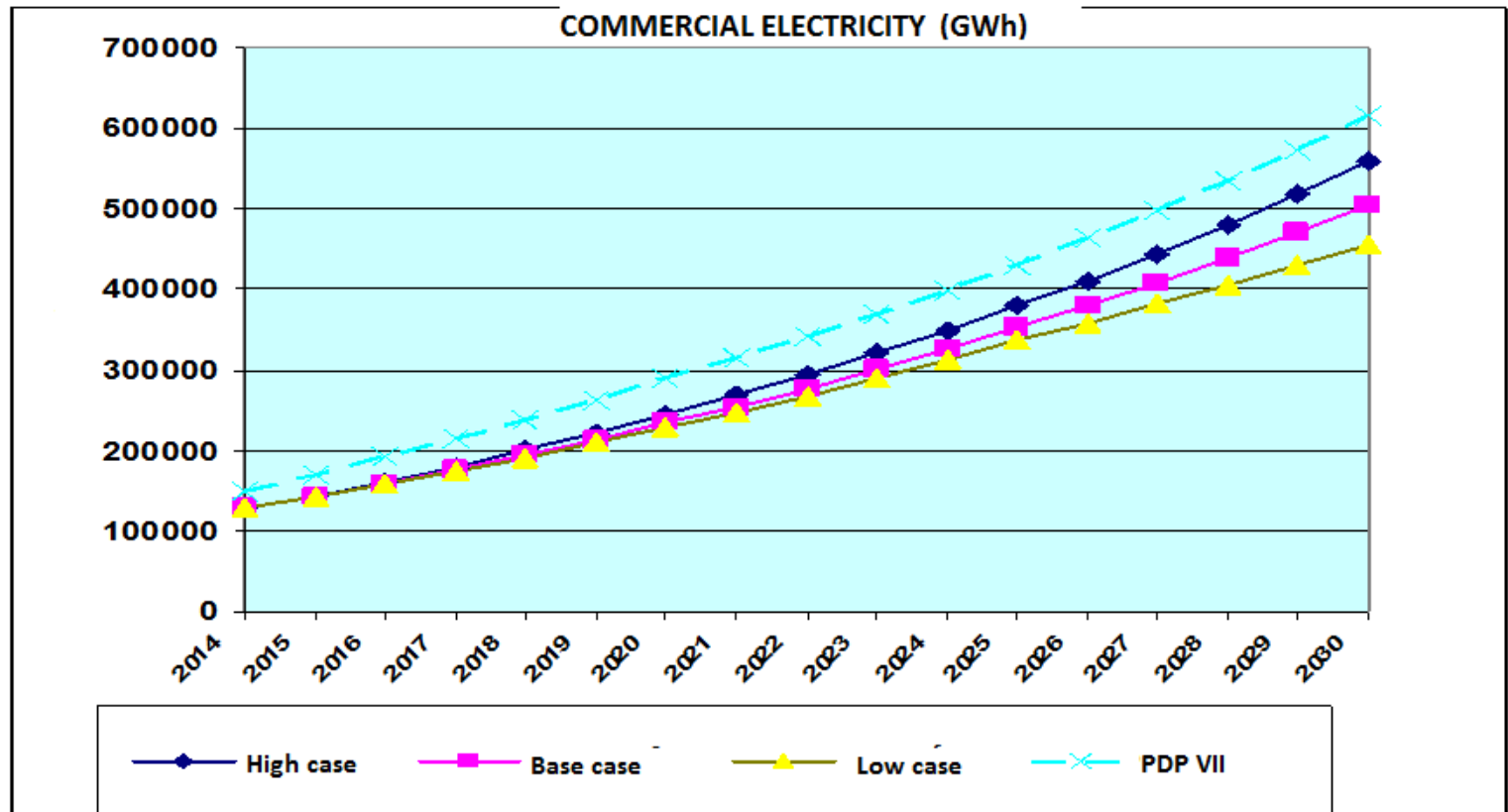


- Key information about PDP VII Revised
- Vietnam's latest power plan, approved on 18th March, 2016 under Decision No. 428/QĐ-TTg



- Key information

Power Demand Forecast 2016-2030



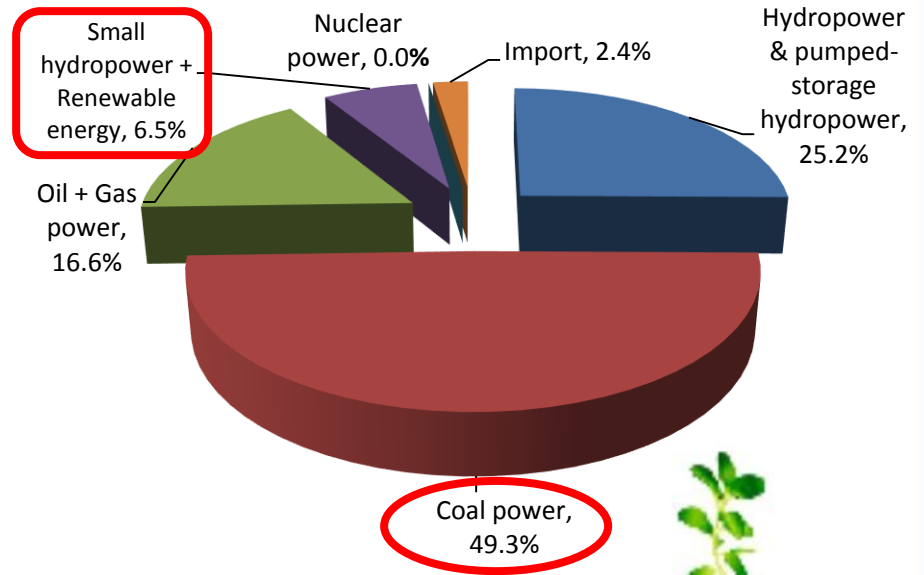
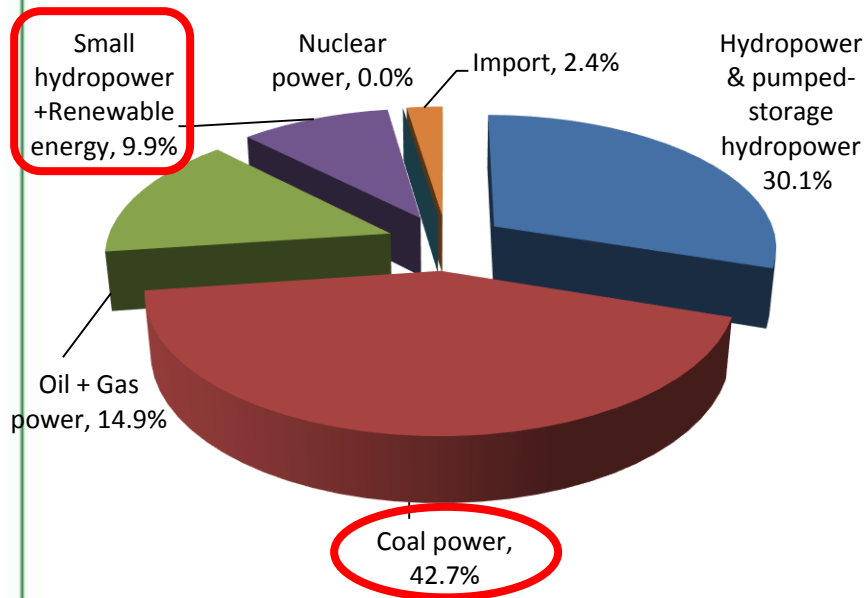
Source: Nguyen Anh Tuan (2016) *Presentation on PDP VII Revised*, Hanoi.

- Key information

Installed capacity by fuel

2020

Projected power production by fuel



Source: PDP VII Revised

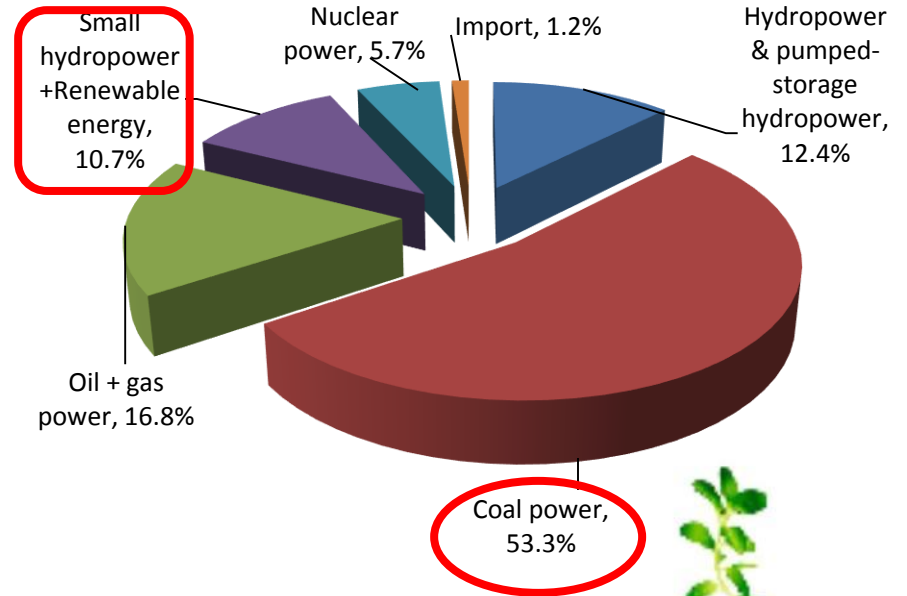
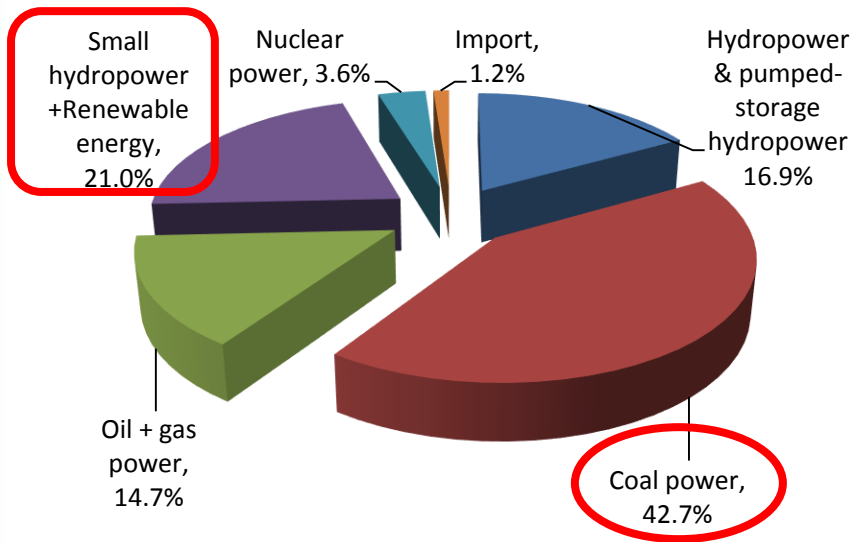


- Key information

Installed capacity by fuel

2030

Projected power production by fuel



Source: PDP VII Revised



- Key information

Coal power development in Vietnam

Year	Number of coal-fired power plants	Coal power capacity	Share of total installed capacity	Total energy generated from coal power	Share in total energy production	Domestic coal	Imported coal
		MW	%	TWh	%	Tons (in million)	Tons (in million)
2015	19	13157	33.4	56.400	34.3	33.3	0
2020	31	25787	42.7	130.932	49.3	39.021	24.495
2025	47	45152	47.3	220.165	55.0	38.905	56.257
2030	52	55252	42.7	304.478	53.3	44.433	85.243
		Increase 3 times	Increase 4 times	Increase 5 times		Increase 4 times	

Source: Nguyen Anh Tuan (2016) *Presentation on PDP VII Revised*, Hanoi.

- GreenID's evaluations

About coal power:

- Coal is still expected to account for over 50% of total generated power
- Volume of imported coal in 2030: over 85 million tons
- Concern and opposition from public and international community
- Largest source of greenhouse gas emission
- Concern about air and water pollution affecting human health
- Price is low because external costs have not been taken into account



- GreenID's evaluations

About RE:

-Share of RE increased but insignificantly (5.2% in 2005 to 9.9% in 2020 and 21% in 2030).

-Solar and wind power still only make up a modest share

-Current renewable energy development in the world:

- Renewable energy investment is two times higher than investment into fossil fuels in 2015 (*UNEP report*)
- Technology is advancing
- Price of technology reduces -> able to compete with fossil fuel energy



Energy Efficiency:

- Lack elaboration on this in PDP VII Revised

Power demand forecast:

- was reduced 18% in PDP VII Revised. In fact, according to GreenID's research, the reduction power demand can reach to 33.8%

- ❖ In January 2011, Prime Minister's statement on coal power: *"review development plans of all new coal plants and halt any new coal power development"*



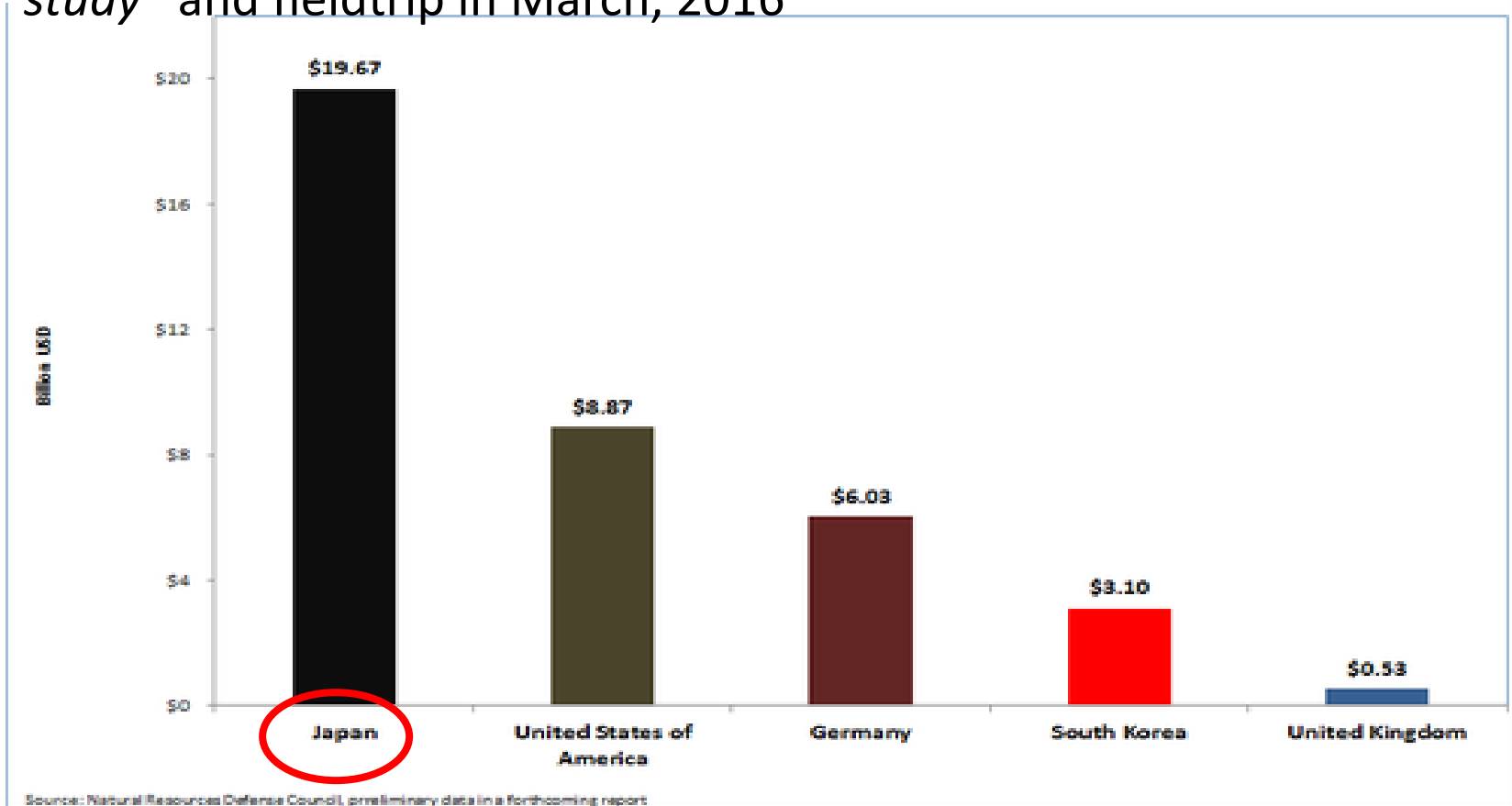
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Japan Funding for Coal

GreenID's report in 2015 "*Environmental and social impacts of coal fired power plants in vietnam: Hai Phong coal-fired power plant case study*" and fieldtrip in March, 2016





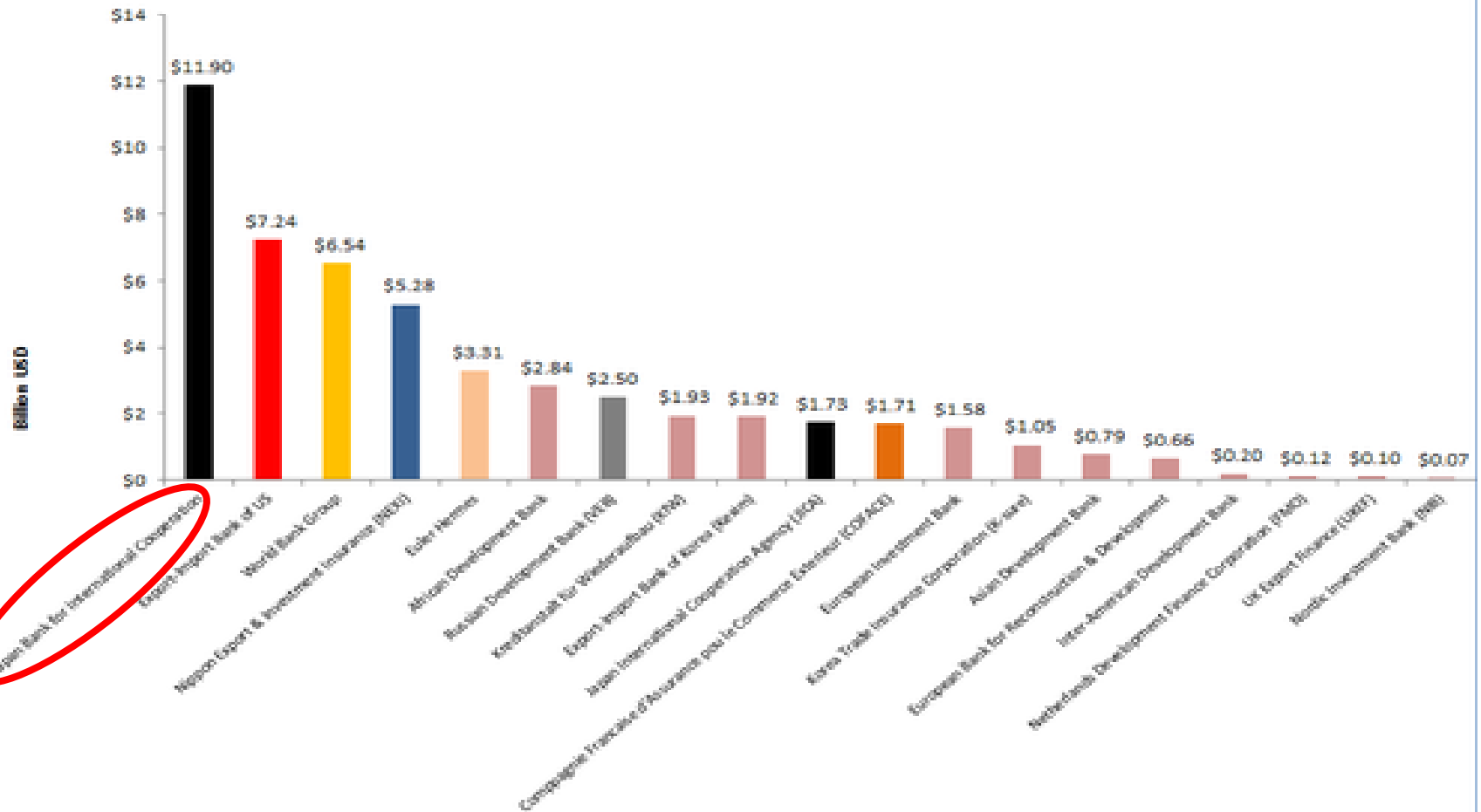
JBIC Funding for Coal

- The Japan Bank for International Cooperation (JBIC): totally funded by the Japanese government
- The largest single provider of funding to new coal-fired power stations in developing countries.



JBIC Funding for Coal

Coal Financing at the International Financial Institutions: 2007-Present



Source: Natural Resources Defense Council, preliminary data in a forthcoming report.





JBIC Funding for Coal in Vietnam

JBIC – funded coal-fired power plants in Vietnam:

- Hai Phong I (2 x 300 MW) & Hai Phong II (2 x 300 MW)
- Vung Ang I (2 x 600 MW)
- Thai Binh II (2 x 600 MW)
- Vinh Tan IV (2 x 600 MW)
- Duyen Hai III extension (1 x 600 MW)



Case study: Hai Phong coal-fired power plants

Project information:

- 1,200 MW(4x300MW)
- Tam Hung commune,
Thuy Nguyen district,
Hai Phong province
- Operated in 2011 (Hai
Phong I), 2013 (Hai
Phong II)



Case study: Hai Phong coal-fired power plants

Time	Events
July 2010	A gas explosion occurs in Hai Phong 1, leading to 2 deaths and 2 injuries
August 2010	A chemical explosion occurs in Hai Phong 1, leading to 2 deaths and 5 injuries
July 2013	2 women died of burns when cleaning the funnel of the boiler in Unit 2



Case study: Hai Phong coal-fired power plants

- Local people's access to information:
 - Limited community's participation in decision making
 - Not informed about potential negative impacts
- "This is a top-down project with little participation of local people and authority in decision making"* – opinion of local authority from provincial to commune level.
- Impacts:
 - Environmental impacts
 - Social impacts



Case study: Hai Phong coal-fired power plants

- ❖ Environmental impacts: air and water pollution
- Air pollution:
 - Dust and smoke, unpleasant smell, suffocation, limited visibility
 - Source of pollutants: Stack (emit black smoke at night, ESP is turned off when running boiler), conveyor, coal ash dump



Impacts of Coal power

Air pollution



“We haven’t seen any benefits of the project. What we only saw is harms” – A villager in Tam Hung commune.



Coal dust flies into
Tam Hung kindergarten



Impacts of Coal power



Air pollution

Coal ash dump of the plant:
close to farms and living area



Impacts of Coal power

Air pollution

"We don't dare to drink rain water any longer"
– Villagers in Tam Hung and Phuc Le commune



Rain water come to household tank



Coal dust on roof top of local people

"It's too old-fashioned to develop coal power nowadays. It's time for solar"
– A villager in Phuc Le commune



Impacts of Coal power

Water pollution

“In the past we use the water from the river for bathing, but now we can only use it for irrigation” – Villagers in Phuc Le commune



Waste water discharged to coal ash dump (60 ha) which is close to community's river. In 2014, wastewater from the ash pond overflowed and penetrated into the community's river



Community's river



- ❖ Social impacts: Impacts on health and livelihoods
- Health impacts:
 - Increase incidence of stroke, ischemic heart disease, chronic respiratory diseases, lung and throat cancer
 - In one alley of the commune close to the plant: 6 people have died because of throat cancer. Most of them died at the age of 50 - 60.



- Impacts on livelihoods:
 - Crop productivity reduced due to coal dust covered the plants
 - Fish and shrimp yields reduced due to cooling water of the plant
 - People in resettlement area become unemployed.
 - Compensation for resettlement was unfair: low price of land, unfair way of categorizing land.
 - People who want to work in the plants have to bribe a great amount of money.



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Messages

- Coal power plant financed by JBIC has negative impacts on local people's livelihoods, environment and health.
- Financiers for coal development in Vietnam are also involved in creating troubles and risk for our people and barriers for Paris agreement implementation
- Japan should immediately shift its finance support for renewable and energy efficiency solutions in Vietnam instead of coal



Thank you for your attention!

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Questions, comments?

