

International Symposium
“Climate Change and Coal”

Do JBIC funded coal plants really have highly
efficient, clean technology?

May 29th, 2015

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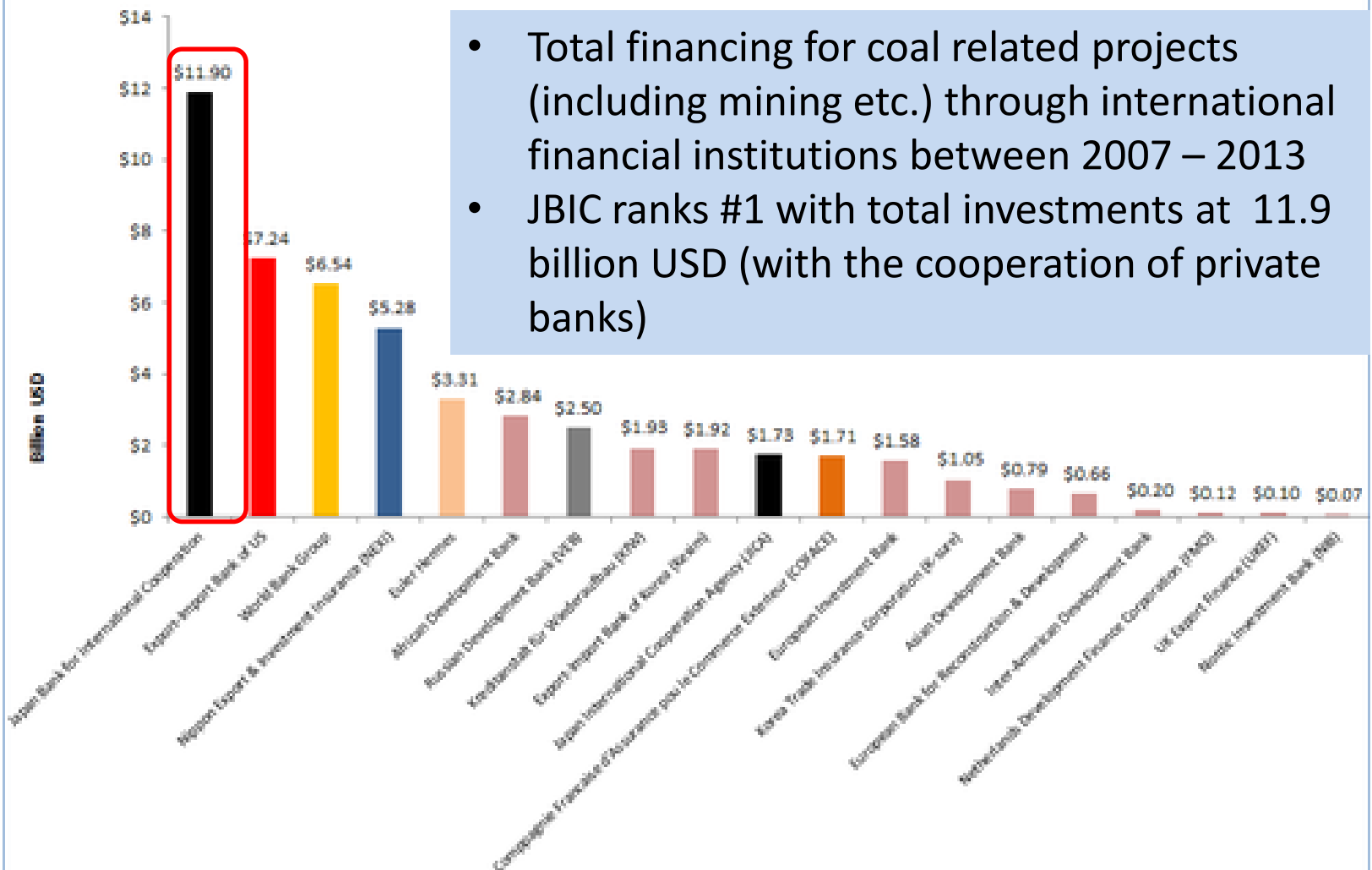


“Dirty Coal: Breaking the Myth About Japanese-Funded Coal Plants”

- April 24th: Report jointly released by 6 environmental NGOs from Japan and the US (link: <http://sekitan.jp/jbic/>)
 - Kiko Network, JACSES, FoE Japan, Coal Swarm, FoE US, Sierra Club)
- From 2003-2015, JBIC has financially supported 23 coal-fired power plant projects, with a total capacity of 24GW at a total price of 8.5 billion USD
- Projects include 6 in Vietnam, 5 in India and 4 in Indonesia
- Boiler types: Subcritical (42%), Supercritical (52%), Ultra-supercritical (6%)
- Sources: JBIC Press Releases, Platts WEEP, internal OECD Reports, etc.

JBIC – The biggest public financier of coal

Coal Financing at the International Financial Institutions: 2007-Present



- Total financing for coal related projects (including mining etc.) through international financial institutions between 2007 – 2013
- JBIC ranks #1 with total investments at 11.9 billion USD (with the cooperation of private banks)

Jake Schmidt, Natural Resources Defense Council, 2013

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

Japan & Coal Financing: #1 among OECD countries, #2 in the World

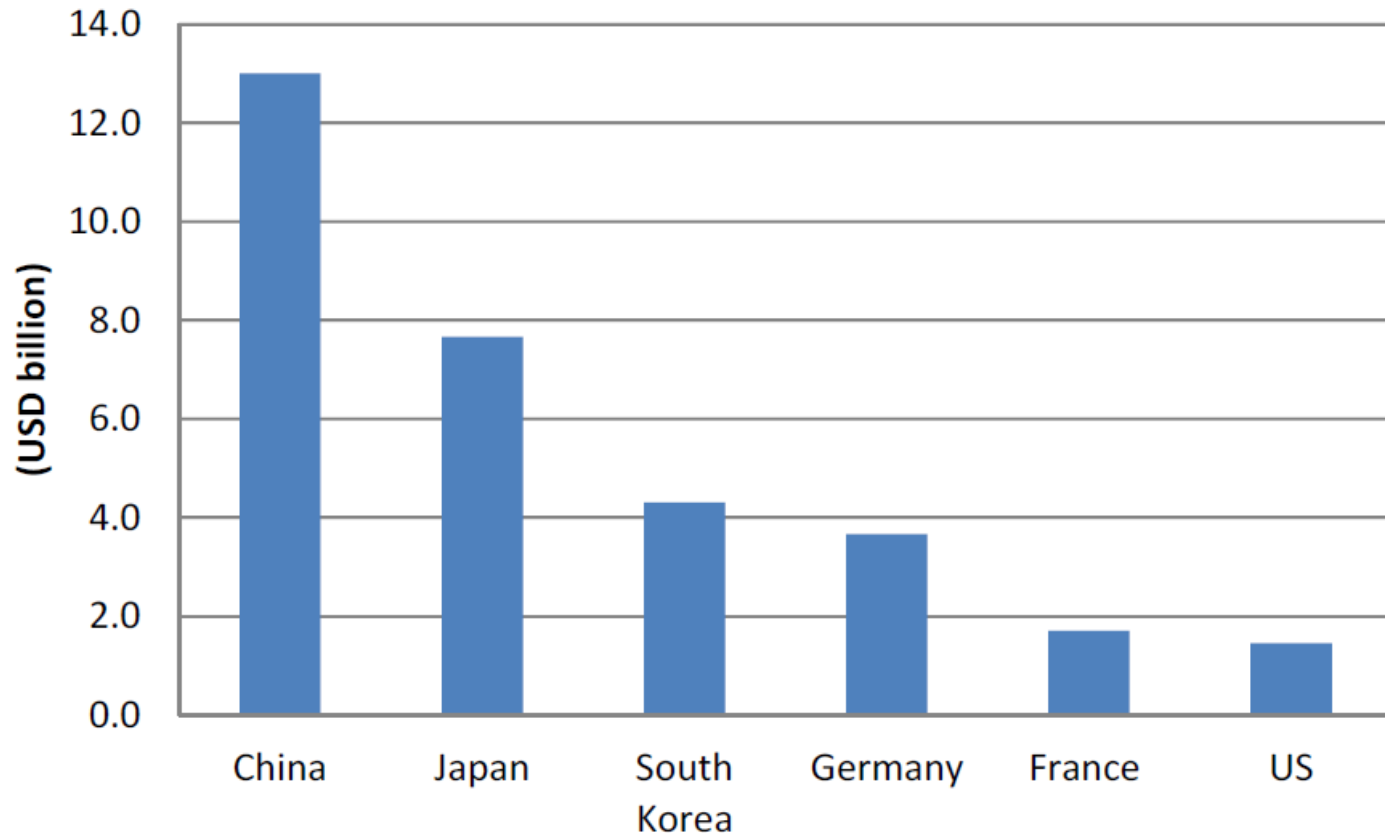


Figure 2: Comparison of public financing for foreign coal power plants between 2007 and 2013 among countries

Source: Study by the Graduate School of Public Policy, University of Tokyo (GraSPP), “Quantifying Chinese Public Financing for Foreign Coal Power Plants” (November, 2014)

Current JBIC/national policies relating to overseas coal financing

- Japan Revitalization Strategy 2014 (Established June, 2014):
 - New push for highly efficient thermal power generation (coal/LNG)
 - Reduce global CO2 emissions through international development & high technology standards
 - Promote high-technology to emerging Asian/Eastern European nations through public financial aid /diplomatic ties
- Ministry of Finance-NGO Regular Meeting (October, 2013):
 - On JBIC's coal financing: If the introduction of coal-fired thermal energy is necessary, the government plans to continue on the path of low-emission, high tech coal facilities.

JBIC funded projects vs. global average (for projects completed between 2010-2018)

	JBIC funded	Global Average
Subcritical	31%	29%
Supercritical	62%	36%
Ultra-supercritical	7%	29%
Other/Unknown	0%	6%

Source : Platts WEPP, January, 2015

Efficiency of exported coal technology Japan vs. China

	China	Japan
Proportion of ultra-supercritical technology exported to Asia (excluding China, S. Korea, Japan)	35.17%	62%

Source: Study by the Graduate School of Public Policy, University of Tokyo (GraSPP), “Quantifying Chinese Public Financing for Foreign Coal Power Plants”, November 2014



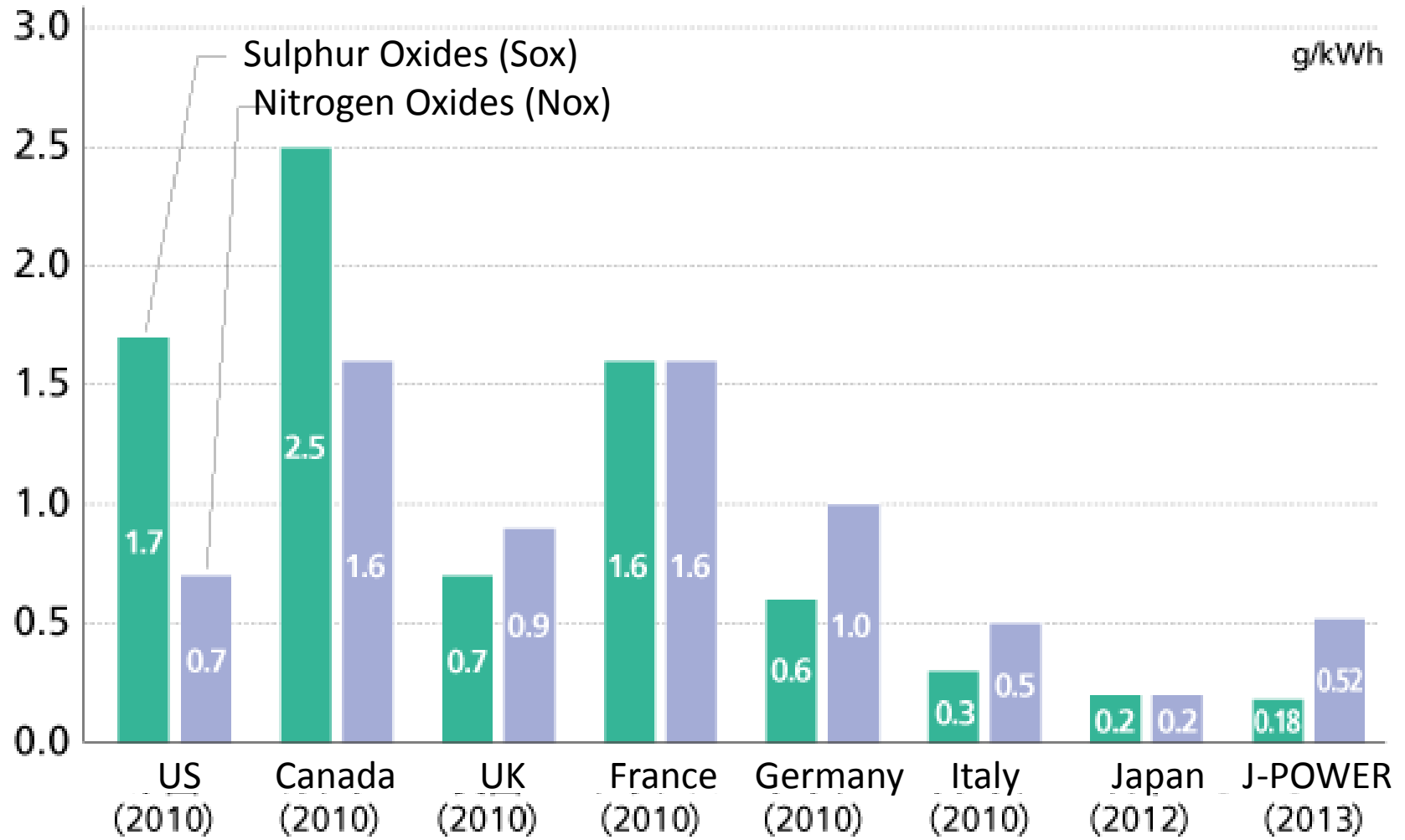
Commercial operations on post-2007 projects or construction on projects that started in 2012 begin

Estimated proportion of coal-fired thermal energy exported by China

Year of Completion	Subcritical	Supercritical
2008	100%	0%
2009	100%	0%
2010	69%	31%
2011	77%	23%
2012	66%	34%
2013	61%	39%
2014	24%	76%
2015	53%	47%
2016	15%	85%
2017	15%	85%

Source : Platts WEPP, January, 2015

Comparison of SO_x, NO_x emissions from coal-fired power plants



Source: J-Power Homepage

JBIC funded projects' SO2 removal technology

Technology	Proportion
Seawater Desulfurization	20%
Circulating Fluidized Bed Semi-Dry FGD	2%
Fluidized Bed	7%
Wet Limestone FGD	22%
Wet Lime FGD	1%
<u>Usage of low-sulphur coal</u> <u>(no desulfurization equipment)</u>	<u>36%</u>
<u>No desulfurization equipment</u>	<u>11%</u>

Source : Platts WEEP, January 2015

Of all JBIC funded coal-fired power plant facilities, approximately half lack desulfurization equipment.

JBIC funded projects' PM removal technology

Technology	Proportion
Filtration device (to collect fibre)	3%
Low-temperature electrostatic precipitator	12%
<u>Unspecified electrical precipitator</u>	<u>79%</u>
<u>No PM removal equipment</u>	<u>6%</u>

Source : Platts WEEP, January, 2015

Of all JBIC funded coal-fired power plant facilities, only about 15% have taken adequate measures to eliminate PM

Conclusion & Proposals

- Do JBIC's projects contribute to high-efficient technology?
 - In Fact, JBIC funded projects are less efficient compared with the global average (even compared with China)
 - Do JBIC's projects use clean technology?
 - Approximately half of JBIC's coal plants do not have desulfurization technology.
 - About 80% have inadequate PM removal technology.
- Even if coal-fired power plants have “highly efficient” ultra-supercritical technology, there will be little reduction in CO₂ emissions and will goes against international consensus of a maximum rise of 2° C in global temperatures
 - Japan (and other OECD countries) should agree to end public financing for new coal-fired power plants abroad