

## **Contesting Power: The new landscape of power sector governance in the developing world**

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China has emerged as a transformative actor in the politics of international finance for power plants, with major implications for climate change governance. I examine China's engagement with the power sector globally, and the effects China's emergence has had on rule-making authority and the existing institutions in the power sector.

I begin by examining the "old landscape". The Bretton Woods institutions and OECD countries dominated the international regime for power sector finance for decades. A focus on social and environmental safeguards evolved through external pressure and coordinated and incremental reform. In the emerging "new" institutional landscape, China has become an investor in infrastructure and carbon-intensive power – including, potentially, through the Asian Infrastructure Investment Bank – at a time when the "old" regime is trending away from these sectors. In this new landscape – my theory predicts – recipient governments are newly empowered to play competitors off one another, and inexpensive finance in the absence of globally coordinated rules enables a boom in coal power development with big climate implications. The research looks at this challenging situation in international politics from three angles:

- 1) OECD rules: How has China's position outside the OECD's export finance arrangement affected adherence to these guidelines by OECD members, and cooperation on energy finance issues within the OECD?
- 2) World Bank and hydropower: Was China's emergence as a technological and financial partner in hydropower globally a factor in the World Bank's post-2003 re-embrace of hydropower?
- 3) Indian power sector case study: How has China's dominance as a supplier and financier of coal power in India affected Indian industrial strategy and Government of India's alignments with other international actors (including Japan and the

U.S.)? China supplies about 60% of the private boiler-turbine-generator system market in the Indian coal sector. Competition has driven slow improvements in efficiency among domestic manufacturers, and provided cheap capital for rapid development of the sector, but also creates push back from affected industrial and diplomatic actors. I examine the extent to which China's growing relationship in India's power has affected - at a diplomatic level - the U.S. impetus to be involved in several of India's keystone ultra-mega power projects.

Over a total of about four months, enabled by support from Sylff Research Abroad, I was a Research Scholar at one of India's premier research institutions, the Centre for Policy Research (CPR) in Delhi. I spoke with about 50 senior officials in India, up to the Secretary-level, in the Ministries of Power, Planning Commission, Foreign Affairs, as well as from Indian state banks, consulting groups, private power sector developers (Reliance Power, Tata, Adani), and some of the U.S. and multilateral development institutions working in India.

I was delighted that my work was of interest to a larger group of academics and professionals in India's power sector, presenting my work at CPR, and at the Prayas Energy Group in Pune. Upon returning to Princeton, my research has been of interest to a diverse group. I was commissioned to write a short semi-academic piece on China's involvement in India's energy sector for "India in Transition", a publication through UPenn's Center for the Advanced Study of India (CASI). I also presented my research to Princeton's Contemporary China Colloquium group, as a poster at the Princeton-BP Carbon Mitigation Initiative meeting, and for the Environmental Defense Fund's "Applied Environmental Economics Seminar" in New York City.

This ongoing research is critical for understanding how the international community can structure incentives for recipients and donor institutions to collectively pursue low-carbon and sustainable development.

**Publications resulting from SRA support:**

Hannam, P., Liao, Z, Davis, S. & Oppenheimer, M. Developing country finance in a post-2020 global climate agreement. *Nature Climate Change*, forthcoming.

Hannam, P. Will China's Coal Boom Continue In India? *Centre for the Advance Study of India* (University of Pennsylvania, Philadelphia, 1 June 2015).