

*Governing transformation? Climate
Finance in South Africa's electricity
sector*

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Presentation summary

Employs the **Multi-Level Perspective** (Geels 2002, 2007) to evaluate the role of **climate finance** in promoting a **low-carbon transition** in South Africa's electricity sector, using the **Eskom Investment Support Project** as a case study

Analytical framework

This research fuses a political economy approach with a socio-technical transitions perspective in order to gain insights into governance and policy-making in South Africa's electricity sector

Knowledge gap 1

Inadequate analysis of politics and political economy in socio-technical/ low-carbon transitions literature

(Meadowcroft 2011,
Goldthau and Sovacool 2011:238)

Knowledge gap 2

Socio-technical transitions literature has focussed mainly on OECD countries.

Consideration of low and middle income countries is limited, in particular sub-Saharan Africa (Lawhon and Murphy 2011)

Political economy perspective

- Crucial for analysis of relationships between political power and economic development, and role of vested interests (Söderbaum and Taylor 2003, 2004; Büscher 2009).
- Includes the dynamics of global economic expansion, role of transnational corporations and multilateral institutions in policy process (Newell 2008).
- Political economy approach to socio-technical transitions allows for a consideration of power (Ham and Hill 1993), discourse (Hajer 1995), lobbying and control of the policy process by vested interests (Moe 2010)

Minerals-energy complex

- South Africa's electricity sector is embedded within its minerals-energy complex
- Fine and Rustomjee (1996) "core site of accumulation in the South African economy"
- historical dependence on cheap coal + cheap labour = cheap electricity for minerals export-oriented industry
- SA's major international mining and energy conglomerates e.g BHP Billiton, Anglo-American, Xtrata (links to financialisation)

Minerals-energy complex

- “uniquely dependent on electricity and uniquely electricity-intensive” (Fine and Rustomjee 1996)
- Embedded nature of the electricity sector within the MEC and a diverse and constantly evolving multiplicity of networks, alliances and coalitions among mining and manufacturing industries, the utility, government and international interests who hold a stake in or benefit from the sector in some way

Defining the Multi-Level Perspective

- Regime (coal): Monopoly-run electricity sector supplied by powerful privately-owned coal-mines, of benefit to energy intensive users
- Niche (renewable): emerging renewable energy initiatives including privately generated renewable energy and two Eskom run projects
- Landscape: Climate finance mechanisms; trends in multi-lateral and development lending; trends and costs in RE technology development; carbon trading mechanisms e.g CDM

Climate finance: a 'landscape institution'

- Climate finance an issue of major international policy debate (e.g international architecture; programmatic v project funding; public v private sources)
- Key theme in political economy of socio-technical transitions in South Africa's electricity sector
- Bi-lateral and multi-lateral aid and private finance
- Plethora of funds emerging, Clean Technology Fund since 2008/9

Case study: Eskom Investment Support Project, World Bank loan, April 2010

- \$3.75 billion in total. Three components:
- \$3.04 billion for 4.8 GW Medupi coal-fired power plant
- **\$260 million for 100 MW Sere Wind Farm and 100 MW Upington CSP plant (loan conditions); and**
- \$440 million for “low carbon energy efficiency components” including the Majuba Rail Project (financed by IBRD alone)

Medupi: 'clean coal'



April, 2009



July, 2009

Source: www.eskom.co.za

- 4.8 GW (Drax 4GW). In top 10 largest in world
- 'clean coal': super-critical, FGD, 'ccs-ready'
- world's largest dry-cooled coal-fired power plant
- Will emit 30 million tonnes of CO₂ p.a

Justifications for the loan

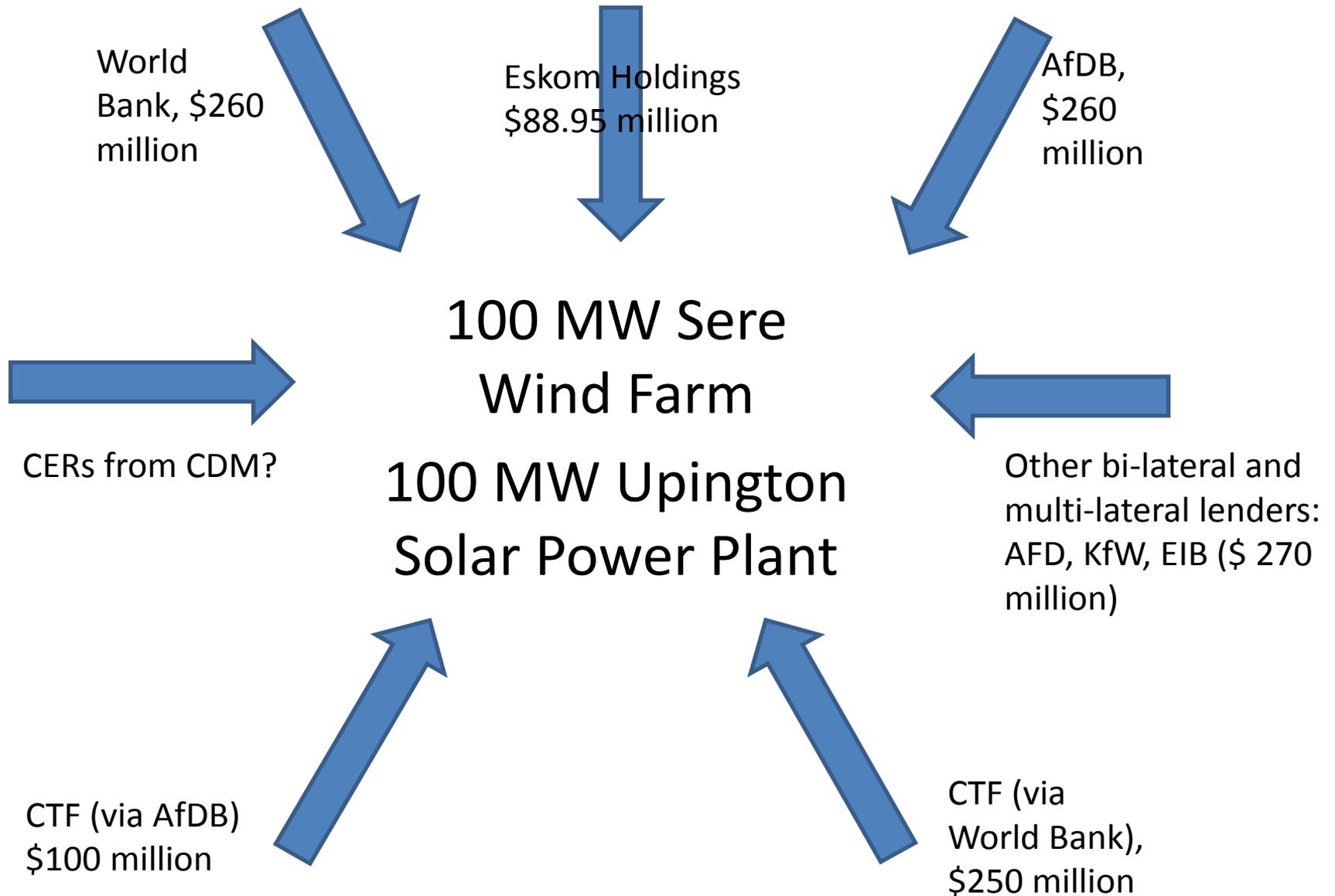
- World Bank stated outcomes: *“increased reliable power generation; increased renewable energy supply; and reduction in carbon intensity”* (World Bank 2010a:28).
- World Bank stated that the loan in line with its 2010 ‘Development and Climate Change, A Strategic Framework for the World Bank Group’
- Without Medupi, “South Africa would not be able to embark on the aggressive implementation of its low carbon initiatives such as investments in renewable energy, energy efficiency and shift in transport modes” (World Bank 2010:22).

Justifications for the loan

Eskom's finance director said, that World Bank loan finance is...

“Catalytic for South Africa's commitment to renewable energy and lower carbon technologies such as large-scale solar thermal and wind power”

Climate Finance for Sere and Upington



Conclusions

- ‘Niche-level’ initiatives benefitting from climate finance have been used to justify development aid for a major coal-fired power plant
- Dominant regime is benefitting from the niche rather than being challenged by it
- Climate finance contributing to ‘incremental innovations’ (Scrase and Smith 2009:710) rather than systematic transformation to equitable low-carbon energy pathway
- Support from World Bank and AfDB as landscape level actors is far greater for regime than niche

Conclusions

- Implications for the landscape level...
- Leach et al (2010:29) “if transitions are to be successful then these higher level structures and processes must also be addressed”
- Without the support of sufficient landscape pressures “niche-innovations in an embryonic state do not pose a threat to the regime” (Geels and Schot 2007:406).

Source:
IBRD 2010:10

