



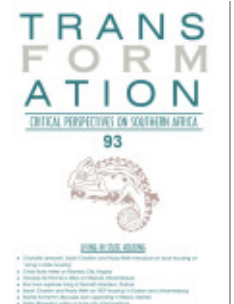
PROJECT MUSE®

Eskom: electricity and technopolitics in South Africa by
Syvly Jaglin, Alain Dubresson (review)

Lumkile Mondi

Transformation: Critical Perspectives on Southern Africa, Volume 93, 2017,
pp. 176-185 (Review)

Published by Transformation



➔ For additional information about this article

<https://muse.jhu.edu/article/661166>

Review

Syvly Jaglin and Alain Dubresson (2016) *Eskom: electricity and technopolitics in South Africa*. Cape Town: UCT Press

Lumkile Mondli

lumkile.mondi@wits.ac.za

The timing of this publication could not have been better. I am in the midst of writing a Doctoral thesis in Economics on the ‘The Foundations of the Financialisation of the South African Economy: a firm level study of Eskom’. It must be said upfront that the book is not ‘new’ to the French speaking market since it was published in Paris in 2015 and has been recently translated into English by the authors. Readers keen to understand the evolution of Eskom and the resignation of Brian Molefe will appreciate the richness of the arguments and supporting evidence presented by Jaglin and Dubresson in a book about an institution closer to the state and the ANC, but somewhat distant from the engineers that built it. Jaglin and Dubresson’s thinking is based on research conducted in South Africa under the French academic programme, the ANR Termos (Energy Trajectories in Metropolitan Regions of South Africa) during which the Eskom question and the question of national energy governance features as a constant refrain.

The authors utilised evidence collected from field surveys conducted in Cape Town between 2010 and 2013 and draw also from information, data, technical reports and political controversies that can be accessed remotely from many websites focusing on South Africa’s national energy policy. Their sources also include Eskom, the South African government, the Departments of Energy and Public Enterprises, private companies, political parties, centres of academic expertise such as the University of Cape Town’s Energy Research Centre, national and international energy

consultancy agencies, organisations working on renewable energy (such as Sustainable Energy Africa, Greenpeace, or the Electricity Governance Initiative), the business press, in particular, *Engineering News*, *Business Day* and *Business Report*, as well as personal websites and blogs run by experts with an long-standing involvement in discussion and debate around the evolution and future of the South African energy sector (eg Anton Eberhard 2007, and Chris Yelland 2016).

The Jaglin and Dubresson book proceeds by reminding readers that South Africa was once a leader with the cheapest steam generated electricity supplies in the world. Eskom Holding SOC Ltd is ranked eleventh in the world for installed capacity and the sixth largest African company across all sectors. It is vertically integrated, supplying about 95 per cent of the electricity consumed in South Africa and is wholly owned by the state.

There are various historiographies on Eskom (see Eberhard 2007, Steyn 2006, Conradie and Messerschmidt 2000, Clarke 1987, 1994, Christie 1984, 1978). For example Christie (1984) locates the foundation of the competitiveness of South Africa's power generation on the material conditions, the social structure and its method of accumulation. Christie (1984) also argues that the shallow faultless thickness of seams, the compound, pass-laws and reserves that guaranteed cheap labour for the coalmines and electricity generation, and the state provision of cheap electricity for transport, mining and manufacturing embodied the competitiveness of power generating under apartheid. With all these strengths how did the mighty Eskom find itself under severe pressure in 2008 during peak periods reduced in managing uncertainty? Jaglin and Dubresson attempt to understand *how* and *why* one of the most iconic pillars of the South African state capitalism, winner in 2001 of the Global Power Company of the Year prize, is now in distress and close to foundering. What follows is a review of the translated book (2016) and a brief critique of the chapters.

In their introduction Jaglin and Dubresson locate an interpretation of Eskom in the following domains: the history and sociology of technology (Hughes 1998, 1993, Hecht 1998), institutions and their role in economic performance (North 1990, 1981), the interpenetration and entanglement between public and private interests, as well as the lack of differentiation between economic and political resources in the context of competing norms simply referred to as neopatrimonialism (Medard 1996). Jaglin and Dubresson engage their perspectives by considering the construction

and stabilisation of, and changes in, large sociotechnical systems based on Hughes' work (1983, 1998) on the history of electrification in western societies. Hughes (1998) argues that large systems such as those located in Eskom contain components that are inanimate and animate – technical and organisational. By borrowing from Hecht (1998), Jaglin and Dubresson suggest that Eskom's sociotechnical system, (Christie 1984) – its conception, expansion and its present crisis, represent historical outcomes of strategic policy choices in energy technologies and systems by institutions and social actors seeking to resolve problems while defending particular interests.

Jaglin and Dubresson differentiate between Hecht's (1998) technopolitics and technopolitical regimes. For Hecht technopolitics are defined as 'strategic practices of designing or using technology to constitute, embody, or enact political goals' (1998:15). Technopolitical regimes for Hecht (1998:16) have particular characteristics:

These regimes, grounded here in institutions, consist of linked sets of people, engineering and industrial practices, technological artifacts, political programs and institutional ideologies, which act together to govern technological development and pursue technopolitics.

Jaglin and Dubresson combine these three concepts from Hughes (1998, 1993), Hecht (1998), North (1990, 1981) and Medard (1996) to propose a political economy of Eskom's technopolitical regime. By combining these three eclectic concepts Jaglin and Dubresson present a new interpretation of the history and evolution of Eskom and how the democratic government since 1994 has managed the inheritance of a 'well functioning' institution to the ground. They also present Eskom's twin crises, one preceding its corporatisation in 1987 and another in 2008 and its re-emerging in 2014. Jaglin and Dubresson argue that these crises were institutional in nature and emanated from the nature of the relationship between Eskom and the state.

Chapter one presents the metamorphosis of Eskom since 1923. The authors maintain that through its founding father Hendrik van der Bijl, Eskom was able to embody a perfect symbiosis between state body and private company. Van der Bijl managed to protect Eskom against not only the pressures from parliament (Conradie and Messerschmidt 2000), but also those emanating from government, by emphasising the legitimacy of the technical know how, as well as the vision and action of the commission's engineers (Jaglin and Dubresson 2016:16). They argue that such autonomy

did not necessarily mean that there was a separation of technology from politics. Instead it was characterised by the engineers' practice of controlled technopolitics, the deliberate use of knowledge and technical choices to promote a sociopolitical vision aligned with that of government, an approach that led to the establishment of a genuine organisational model (Jaglin and Dubresson 2016:16).

The authors also observe that the inherited technopolitical regime has been affected by the disruption of the radical transformation of the economy of the ANC such as the departure of technical and professional competence of executives, the loss of skills and difficulty in filling positions. Thus the former technopolitical competence was marked by distinct competence which has now been lost. The collapse of the management structure and shared leadership role of executives and that of the Department of Public Enterprises, as well as Luthuli House (the headquarters of the ANC) through cadre deployment, has considerably reduced the strategic capacity and technopolitical influence of the engineers. Ironically, as Jaglin and Dubresson motivate, the state has not demonstrated its own capacity to promote efficient technopolitics in the electricity sector. Therefore the state through its actions is neopatrimonial.

In chapter 2, the focus turns to the reform of the electricity sector where the authors argue that the state was inspired by orthodox models of reform, such as privatisation, liberalisation and regionalisation. They indicate that the indecisiveness in signalling the policy direction paralysed Eskom. It is only in 2010 through the Integrated Resource Plan that the state shows its hand, albeit after a decade of vacillation and misunderstanding.

Chapter 3 traces the transformation of Eskom and its expansion into underserved areas, including the townships and rural areas. This expansion is also matched by new technologies of collecting payments through prepaid meters. The use of medium-voltage transmission infrastructure in rural areas with low population densities and the lack of financial resources from the state lays down a foundation of financial distress for Eskom. For example, the Universal Access Plan (UAP) adopted in 2007 required a budget of R5 billion a year but the state subsidy in 2007/2008 was only R1.4 billion. Moreover, 3.6 per cent of households were accessing electricity illegally (Jaglin and Dubresson 2016:61). This was a recipe for power outages and heavily contributed to the destruction of trust between Eskom and its customers.

Chapter 4 directs attention to the restoration of generation capacity and the role of NERSA (National Energy Regulator of South Africa) in Eskom's new capacity building programme. Chapter 5 focuses on Eskom and Africa and it is misplaced as the reader has already been set up in a wonderful chronology of history and taken backwards in this chapter to the past. This chapter would have been very usefully placed as an earlier chapter and it reads as if it were an afterthought in an additive way.

Chapter six discusses the argument for neopatrimonialism and state capitalism. It is in this chapter where the issue of Broad Based Black Economic Empowerment (BBBEE) is presented and the argument for patrimony is explained. It is in this area where I had to take umbrage as a reader with the focus of this book since many publications in the media focus on specific transactions, such as Chancellor House who won a tender in partnership with Hitachi of Japan in the Medupi and Kusile Power Station project. The reallocation of contracts away from the major coal owners such as BHP Billiton is also highlighted in this chapter. By borrowing from Nattrass and Seekings (2010), the chapter argues that the state moved away (unlike with the apartheid government) from production to redistribution of revenue to individuals who were not white to contribute to social change. Based on this argument the authors indicate that there is tolerance towards all forms of political overlap and all forms of capital conversion, forming the basis for neopatrimonialism.

In the concluding chapter, a synthesis of the evidence and data is provided to support the electricity and technopolity in South Africa. Although scholarly in intention, the book is written for popular appeal. It is accessible, gripping in some senses, and appropriately captures what has changed in South Africa through the lens of Eskom. However, in Eskom's Integrated Report of 2016 an interesting picture about Eskom is detected. There is no contestation by the authors of the dominance of the state and ANC in state-owned-companies through its deployment of senior executives and the allocation of contracts to politically connected individuals, including those who have close links to leaders in the government such as Tergeta and Chancellor House.

It is clear that in the 2016 Integrated Report, Eskom has made huge strides in radically transforming the South African economy. For example, in sourcing coal as part of the transformation of the economy within the National Development Plan (NDP), Eskom has established the Junior Mining Strategy with the Department of Mineral Resources and Department

of Public Enterprises. This strategy was designed to assist new black-owned mines with mine development. Increased national electricity demand necessitated additional coal supply that existing major miners could not supply and hence the economy needed to expand the coal supply base. In 2000, Eskom procured 98 per cent of coal from long-term contracts with the major mining companies. Through these black-owned firms, Eskom has widened its supply base and now procures nearly 40 per cent of its coal from junior miners. Eskom will continue to incubate and support these junior miners through long-term contracts.

Going forward Eskom maintains that its objective is to create market tension through an open and competitive enquiry process to source coal from any suitable supplier. To enable this, Eskom has invested in rail infrastructure in and around its power plants. This should facilitate equitable access to its power plants for any supplier who can supply coal at the right price, with appropriate quality and volume. Eskom is aware of the urgent need to work on implementing these strategies as its current cost base is untenable and urgent targeted actions are required. This has resulted in shocks in the industry but this is critical for the industry to survive in the new business paradigm.

Of interest is Eskom's Key Performance Indicators as presented in Table 1 below. The table shows the economic impact and affirmative action implementation plan in Eskom. In many areas, as prescribed by the South African Constitution, Eskom is playing its role.

Table 1–Eskom: Key Performance Indicators (source: Eskom SOC Ltd, 2016)

Key Performance Indicator	Target 2016	Actual 2016	Reasons for actual performance below target by more than 5% threshold
Economic Impact			
Local content contracted (Eskom-wide)	65	75.22	The positive performance is because of management's focus on procurement from local suppliers and improved reporting
Local content contracted (new build)	65.00	84.04	The positive performance is because of management's focus on procurement from local suppliers and improved reporting
Procurement spend with black owned suppliers	12.00	17.22	The improvement is due to the new codes effective during the year which recognises spend with suppliers that are 30% owned by black women.
Procurement spend with black-owned suppliers	40.00	30.98	Some large black-owned suppliers delayed the renewing of their BBBEE certificates, resulting in less spend. Processes need to be enhanced to ensure that the BBBEE administration is up to date. Eskom will focus on opportunities to increase the coal tonnage with black-owned entities.
Procurement spend with black youth-owned suppliers	2.00	0.82	The majority of these vendors have low-value contracts. The procurement spend from these suppliers is therefore small relative to Eskom's total spend. Strategies need to be established to assist these entities to meet the technical and SHEQ requirements. Processes need to be enhanced to ensure that BBBEE administration is up to date.
Procurement with suppliers owned by black people with disabilities	1.00	0.01	
Procurement spend with qualifying small enterprises	15.00	4.03	
Procurement spend with exempted enterprises	15.00	4.81	
Human capital			
	Target 2016	Actual 2016	
Training spend as a % of gross employee benefit costs	5	4.45	
Learner throughput or qualifying	1200	1108	
Gender equity in senior %management (female employees)	32.00	28.07	
Gender equity in professionals and middle management (female employees)	38.00	36.01	

In sum Jaglin and Dubresson's *Eskom: electricity and technopolitics in South Africa* presents a critical review of the evolution of Eskom, as an institution (North 1981, 1990; Acemoglu and Robinson 2012), as an alternative perspective when compared to other views (see Clark 1994, Christie 1978, Eberhard 2007, Steyn 2006), but also as a political economy located in writings by Hughes (1993, 1998) and Hecht (1998) that narrate the evolution of electricity in western societies. The Jaglin and Dubresson approach is interesting and illuminating; however, the emergence of a National Systems of Innovation approach (Lundvall 1992, 2007, Malerba 1999, Malerba and Nelson 2010, Dosi et al 2006, Dosi et al 1990, Castaldi et al 2004) presents another perspective on Eskom as part of a broader system including its customers, suppliers, universities, research institutions, the state and competitors. All these approaches are a step in the right direction to help us better understand the complexities of development in deeply divided societies such as South Africa. The Jaglin and Dubresson book contributes immensely in this regard to our understanding of this history.

References

- Acemoglu, D and AJ Robinson (2012) *Why Nations Fail: the origins of power, prosperity and poverty*. London: Profile Books.
- Castaldi, C, M Cimoli, N Correa and G Dosi (2004) 'Technological learning, policy regimes and growth in a globalised economy: general patterns and the Latin American experience. LME Working Paper 2004/1, Sant' Anna School of Advanced Studies.
- Christie, R (1978) 'Slim Jannie and the forces of production: South African industrialisation 1915–1925'. Collected Seminar Papers, Institute of Commonwealth Studies 22. <http://sas-space.sas.ac.uk>
- _____ (1984) *Electricity, Industry and Class in South Africa*. Oxford, Macmillan: in association with St Antony's College.
- Clark, NL (1987) 'South African state corporations: the death knell of economic colonialism', *Journal of Southern African Studies* 14.
- _____ (1994) *Manufacturing Apartheid: state corporations in South Africa*. New Haven: Yale University Press.
- Conradie, S and L Messerschmidt (2000) *A Symphony of Power: the Eskom story*. Johannesburg: Chris van Rensburg Publications.

- Dosi, G, N Cimoli, R Nelson and J Stiglitz (2006) *Institutions and Policies Shaping Industrial Development: an introductory note*. New York: Columbia University, Initiative for Policy Dialogue.
- Dosi, G, K Pavitt and L Soete (1990) *The Economics of Technical Change and International Trade*. London: Harvester Wheatsheaf.
- Eberhard, A (2007) 'The political economy of power sector reform in South Africa', in GD Victor, CT Heller and TE Countries (eds), *The Political Economy of Power Sector Reform*. Cambridge: Cambridge University Press.
- Edquist, C (1997) *Systems of Innovation: technologies, institutions and organisations*. London: Printer Publishers.
- Eskom SOC Ltd (2016) *Integrated Report*. Johannesburg: Eskom SOC Ltd.
- Hecht, G (1998) *The Radiance of France: nuclear power and national identity after world war II*. Cambridge, MA: MIT Press.
- Hirsch, A (2005) *Season of Hope: economic reform under Mandela and Mbeki*. Pietermaritzburg: KwaZulu-Natal University Press and International Development Resource Centre.
- Hughes, TP (1993) *Networks of Power: electrification in Western societies*. Baltimore, Maryland, USA: John Hopkins University Press.
- _____ (1998) *American Genesis: a century of invention and technological enthusiasm 1870-1970*. Chicago: Chicago University Press.
- Jaglin, S and A Dubresson (2016) *ESKOM: electricity and technopolitics in South Africa*. (Karthala-Paris 2015 ed). S Jaglin and A Dubresson (trans). Cape Town: UCT Press.
- Karl, A (2007) 'Industrial policy: a dying breed or a re-emerging phoenix', *Journal of Industry, Competition and Trade* 7(3-4).
- Khoza, RJ and M Adam (2005) *The Power of Governance: enhancing the performance of state-owned enterprises*. Johannesburg: Pan Macmillan.
- Lundvall, B (1992) *National Systems of Innovation: towards a theory of innovation and interactive learning*. London: Pinter.
- _____ (2007) *Innovation Systems, Research and Policy*. Aalborg University. Aalborg: Department of Business and Management.
- Lundvall, B and S Borrás (1999) *Targeted Socio-Economic Research. The Globalising, Learning Economy: implications for innovation policy*. Luxembourg: Office for Official Publications of the European Communities.
- Malerba, F (1999) 'Sectoral systems of innovation and production'. DRUID Conference on: National Innovation Systems, Industrial Dynamics and Innovation Policy. Rebuild: CESPRI- Bocconi University.

- Malerba, F and R Nelson (2010) 'Catching up in different sectoral systems: evidence from six industries'. Conference Paper presented at the Hearth Institute in New York and to the DIME workshop in Milan and Maastricht.
- Medard, J-F (1996) 'Patrimonialism, neo-patrimonialism and the study of the post-colonial state in sub-Saharan Africa'. International Development Studies Occasional Paper 17 edited by H Marcussen, *Improved Natural Resources Management: the role of formal organisations and informal networks and institutions*. Roskilde, Denmark. (Publications from the PhD programme on 'Political and Cultural Institutions in Development')
- Metcalfe, JS (2007) 'Instituted economic processes, increasing returns and endogenous growth', in MG Hodgson (ed) *The Evolution of Economic Systems: a critical reader*. Cheltenham: Edward Elgar.
- National Planning Commission (2011) *National Development Plan: Vision 2030*. Pretoria.
- Natrass, N and J Seekings (2010) *State, Business and Growth in Post-Apartheid South Africa*. IPPG. Manchester: IPPG Programme Office.
- North, DC (1981) *Structure and Change in Economic History*. New York: Norton.
- _____ (1990) *Institutions, Institutional Change and Economic Performance*. New York: Cambridge University Press.
- Steyn, G (2003) *Administered Prices Electricity: Report for National Treasury*.
- _____ (2006) 'Investment and uncertainty: historical experience with power sector investment in South Africa and its implications for current challenges'. Working paper prepared for the Management Programme in Infrastructure Reform and Regulation (MIR), Graduate School of Business, University of Cape Town.
- Yelland C (2016) *Understanding the cost of electricity from Medupi, Kusile and the IPPs*. Johannesburg: Biznews.com. Online at: <http://www.biznews.com/sustainable-business/2016/07/25/chris-yelland-understanding-cost-electricity-medupi-kusile-ipp/>