



The evolving role of finance in South Africa's renewable energy sector



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ABSTRACT

In the last four years, carbon-intensive, coal-dependent South Africa has become one of the leading global destinations for renewable energy investment. This investment can be attributed to the unprecedented take off of the country's Renewable Energy Independent Power Producers' Programme (RE IPPPP), a bidding process for the procurement of privately generated, utility scale renewable energy, launched in August 2011. Asserting that energy must be studied within the broader economic, political and social forces in which it is embedded, I explore the fundamental role that different modes of finance have played in shaping South Africa's emerging renewable energy sector within the context of the country's unique system of accumulation characterised by its minerals-energy complex (MEC) (Fine and Rustomjee, 1996). I focus on finance and financialisation as growing features within the MEC. I further examine the tension or incompatibility between commercial demands for 'bankability', short-term shareholder value and impatient finance and RE IPPPP's unique requirements for community ownership of projects and the realisation of economic development criteria. I find that a reconfiguration of long-standing MEC actors, particularly in the realms of finance is taking place as they merge with new sources of foreign capital.

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1. Introduction

In the last four years, carbon-intensive, coal-dependent South Africa has become one of the leading global destinations for renewable energy investment. Investment went from a few hundred million dollars in 2011 to \$5.7 billion in 2012 and \$4.8 billion in 2013 (UNEP/BNEF, 2014:27). This investment can largely be attributed to the unprecedented take off of the country's Renewable Energy Independent Power Producers' Programme (RE IPPPP), a bidding process for the procurement of privately generated, utility scale renewable energy, launched in August 2011.

In this paper I explore how this renewable energy sector has emerged, the fundamental role that different modes of finance have played in shaping it and how the relationship between finance and renewable energy in South Africa has evolved thus far. I examine how the global dynamics of renewable energy development, finance and investment are embedding themselves within South Africa's unique social, political, economic and technological context and the complex interactions between national, international, public and private institutions that have emerged. This context is characterised by South Africa's evolving system of accumulation, the minerals-energy complex (MEC) (Fine and Rustomjee, 1996) of which finance is a significant feature and

has become more so in the post-apartheid era. I consider the ownership structures of the industry that South Africa's RE IPPPP has facilitated to date and the influence and control that finance and investment has had within this. This includes a consideration of key tensions between RE IPPPP's potentially transformative requirements for economic development and community ownership in a country with gross socio-economic inequality along racial divisions; and commercial priorities for 'bankability', risk minimisation and short term profit maximisation. Whether these tensions can in fact be managed over the long term is crucial to the success of the industry and the extent to which it will result in long-term and sustainable social, economic and environmental benefits beyond the generation of renewable electricity. In essence while government is providing long-term support in the form of RE IPPPP, what is the longevity and quality of the finance and investment that this support facilitates? To what extent is this finance 'long-term, patient and committed' (Mazzucato, 2013) or merely on a trajectory towards speculation? While in this case such questions are aimed at the specific case of South Africa's renewable energy industry they also have general resonance for infrastructure and energy finance elsewhere.

Given the recent emergence of South Africa's utility-scale renewable energy sector, political economy analyses of it within the context of the country's MEC are limited, though recent studies include Baker (2014) and Sharife and Bond (2012). Renewable

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energy generated by independent power producers (IPPs) is a new feature in the country's MEC in which electricity generation, transmission and 60% of distribution has to date been largely controlled by the monopoly utility Eskom. I consider potential modes through which renewable energy in South Africa may become financialised in time, drawing on the growing literature on financialisation in the MEC (Ashman et al., 2011; Ashman and Fine, 2013).

I challenge the notion of energy, of which electricity is a subset, as a neutral, technical and physical entity. Rather I conceptualise energy in the context of its inseparable, mutually co-constitutive relationship with the finance that shapes and supports it. As I demonstrate in the case of South Africa's emerging renewable energy sector, energy is embedded within broader social, economic and political forces. Energy is integral to political processes, trajectories and “mobile constellations of shifting forces and vectors” (Lohmann and Hildyard, 2014:102) and “a particular historical phenomenon inextricably tied up with unequal exchange” (Lohmann and Hildyard, 2014, p. 103). Such an approach borrows from Marxist concepts of energy which as Huber (2009) discusses place an analytical focus on energy as a social relation, “enmeshed in dense networks of power and socioecological change” (Huber, 2009, p. 106). While previous studies have focussed on fossil fuel energy as a “necessary aspect of capitalist production and circulation” (Ibid p105), to date limited analysis has been extended to the growing arena of renewable energy.

Given the multi-faceted nature of energy that spans the realms of natural resources, technologies, networked infrastructure, basic services and financial assets, this paper draws from and contributes to existing literature within geography, development studies and political economy that explores trends of financialisation within this nexus. This includes studies on water (Bayliss, 2014); food (Clapp, 2013); infrastructure (Bracking, 2012), oil (Huber, 2009) and carbon markets (Lohmann, 2011). Also relevant is Labban's research on the relationship between accumulation, investment and production in the context of oil scarcity, particularly for highlighting the ‘space-time parallax’ between oil's representation as a physical commodity and a financial asset (Labban, 2010).

While there have been a number of analyses of the privatisation and commodification of nature e.g. Heynen et al. (2007) and Castree (2008) in the human geography literature, the expansion of finance into nature based industries, including renewable energy is under studied, as Loftus and March (2015) argue. This paper therefore contributes to this research gap. While there is a growing body of theoretical and empirical research on the financialisation of energy, this has tended to focus on developed country contexts notably the UK and US (Chester and Newman, 2014:13) and has rarely been applied to renewable energy as a relatively new physical and financial asset. Despite significant empirical work on energy ownership and investment in various parts of the world (Hall et al., 2014a,b), critical studies on the financialisation of energy have been limited with exceptions including Hildyard et al. (2012) and Lohmann and Hildyard (2014).

This paper is drawn from in depth and on-going research in which I have been engaged since 2009 as part of a longer-term analysis of the political economy of energy in South Africa. My research has included project site visits, attendance at conferences of the energy industry and finance, and over 80 semi-structured qualitative interviews, including with members of government departments, the national utility Eskom, project developers, banks, lawyers, union members, civil society and community liaison officers. Some of these interviews are directly cited here but due to the politically and commercially sensitive nature of the subject matter, all interviewees have been anonymised. The research has also included extensive content analysis of sources such as policy and legal documents, minutes of public meetings, media articles,

speeches by government and other energy stakeholders and parliamentary transcripts. The paper also presents data relating to project ownership which is drawn from my own extensive compilation of publicly available sources including newspaper articles, industry specific publications and company reports.

The structure of this paper is as follows: Firstly I explore concepts of financialisation as an evolving process situated within specific sectoral, geographical and historical contexts. The nature of financialisation within South Africa's MEC is then examined. I subsequently contextualise South Africa's electricity sector as a state-owned monopoly utility within the MEC. Section 4 as the paper's main empirical discussion unpacks the different features of South Africa's RE IPPPP. This includes an explanation of how utility-scale renewable energy, being generated by independent power producers (IPP) has been introduced in the country. This is followed by a discussion on how project ownership is structured and financed and an examination of some of the players involved. Section 5 discusses the role of black economic empowerment (BEE) as specific to South Africa and some of the dynamics surrounding how national requirements for economic development and community ownership are being integrated into renewable energy project finance. Section 6 discusses how the on-selling of debt and equity may develop and considers how this may affect project responsibilities in the long term. In conclusion I raise questions over the extent to which the finance and investment involved in RE IPPPP will become speculative, and the subsequent implications for the sustainability of the industry in the long-term.

2. Defining financialisation

Financialisation, a term and concept whose origins are grounded in heterodox economics, has been interpreted in various different ways and is subject to multiple understandings. Recent literature on financialisation is wide-ranging and often contested (cf. Fine, 2013). At its most simple it can be described as the expansion and proliferation of financial markets in general (Fine, 2013, p. 56) in light of the increasing role that finance has played in the global and national economy since 1970. This invokes the oft-cited definition of financialisation as “the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies” (Epstein, 2005:3). Acknowledging financialisation as a multi-dimensional and complex concept (Chester and Newman, 2014; Fine, 2013), I use it here to refer to the growing financial activities of non-financial firms as compared to their productive activities, and the increasing share of national income from the financial sector (Chester and Newman, 2014:5). This includes “the extension of interest bearing¹ capital to new areas of economic and social life in hybrid forms with other types of capital” (Fine, 2013:47).

As finance becomes integrated within realms of social, economic, cultural and environmental activity under trends of financialisation, its impacts are inevitably felt at numerous sites and scales including global, national, industry, market, commodity, firm, household and individual (Chester and Newman, 2014:13). Modes of financialisation are therefore heterogeneous and will interact differently within different sectors and countries depending on levels of development and the relations of production and institutional contexts. Following such an approach financialisation is a dynamic and constantly evolving process (Fine, 2013) and therefore, its features “differ and change according to historical,

¹ Interest bearing capital refers to money borrowed to expand accumulation, or the use of a “loan as capital to make more money” as distinct from money borrowed for other purposes or for general purchases (Fine, 2013:50).

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