



Profitable pathways to sustainable electrical systems. –Regulative and political conditions in four countries



Associate Professor Thor Øivind Jensen(1)

Associate Professor Jan Froestad

Department of Administration and Organization Theory
University of Bergen, Norway

Professor Clifford Shearing

HUMA, Center for Global Risk Regulation (leader) University of Cape Town

Associate Professor Tom Skauge

Department of Business Administration
Faculty of Engineering and Economy

Bergen University College and University of Oslo

¹ Tel: +4790847064, e-mail: Thor.O.Jensen@uib.no Address: University of Bergen
Department of Administration and Organization Theory, Box 7800. 5020 Bergen, Norway

Abstract

What are the obstacles and driving forces, at the system level, for a transition to a renewable-based electricity system? In our project we have studied this question for the southern BRICS countries. This paper is an early attempt on systematic analysis. We have done qualitative interviews and literature studies in four countries (and Hong Kong) and will contrast the developments and factors in Brazil, China and South Africa, with some references to the special conditions in Norway. The general theoretical basis is the Awareness-Motivation-Pathways (AMP) model that helps explain the gap between technological possibility and a new regime. The awareness of the challenge, the needs for a shift seem to be well established. The motivation seem to be linked to how this shift goes together with more visible and short-term factors, like local pollution (China), electrical supply system breakdown danger (South Africa) and profit/production possibilities (China and Norway as positive and negative examples). This paper will try to compare the development of the third factor, the “pathways” that is a result of financial, regulative and political conditions that together opens a wave of change, a wave that is broader than projects and state supported niches, driven by guided marked forces like consumers, investments and profit possibilities. We will discuss the positive factors of state regulation and planning in China and Brazil, the role of small enterprises and investment opportunities in South Africa, Brazil and China, the role of tenders (Brazil and South Africa) and the challenges of a non-adaptive or blocking regulative setup (South Africa) and lacking willing investment capital (Norway). Finally the paper discusses some structural factors that help in a more modular, decentralized and prosumer-oriented electricity system.

References

Verbong, Geert and Derek Loorbach (2012) *Governing the Energy Transition* Routledge, New York & London

Shearing, C. 2015. Criminology and the Anthropocene. *Criminology and Criminal Justice*, 15(3): 255-269

Mathews , John A (2014) *Greening of Capitalism. How Asia Is Driving the Next Great Transformation*. Stanford University Press.

Jensen, TØ, C Shearing, A Nesse and Tom Skauge (2015) *Energy civilizations: industrial modernity and beyond*. Proceedings from 8th International Scientific Conference: Energy and Climate Change. Contributing to deep decarbonization. Energy Policy and Development Centre (KEPA) Univ. of Athens,

Petersen, S., Shearing, C and Nel, D. 2015. Sustainability Transitions: An Investigation of the Conditions under Which Corporations are Likely To Reshape Their Practices to Reverse Environmental Degradation. *Environmental Management and Sustainable Development*, 4(1): 85-105.