New Perspectives on Institutional Change: The Case of Changing Energy Management Practices in Australia

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Certificate of Original Authorship

I certify that the work in this thesis has not previously been submitted for a degree, nor has it been submitted as part of the requirements for a degree, except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

The research presented in this thesis was approved by the University of Technology, Sydney Human Research Ethics Committee, Approval Number: 2013000126.

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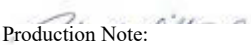

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List of Acronyms and Abbreviations

AUD	Australian Dollar
Btu	British Thermal Units
CCS	Carbon Capture and Storage
CDP	Carbon Disclosure Project
CO_2	Carbon dioxide
CPRS	Carbon Pollution Reduction Scheme
Department of RET	Australian Government Department of Resources, Energy and Tourism *
Department of Industry	Australian Government Department of Industry *
Department of ITR	Australian Government Department of Industry, Tourism and Resources *
EEBP program	Energy Efficiency Best Practice program
EEO legislation	*Energy Efficiency Opportunities Act 2006* (Cth) Energy Efficiency Opportunities Regulations 2006 (Cth)
ENGO	Environmental non-governmental organisation
EPA	U.S. Environmental Protection Authority
ESCO	Energy service company
ESG	Environmental, social and corporate governance
ETS	Emissions Trading Scheme
$GtCO_2$	Gigatonnes of CO_2
GBCA	Green Building Council of Australia
G8	Group of Eight (of the largest global economies)
IAC	Industrial Assessment Center
IEA	International Energy Agency
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IPMVPC	International Performance Measurement & Verification Protocol Committee
ISO	International Organization for Standardization
KPI	Key Performance Indicator

NABERS	National Australian Built Environment Rating System
NGER Act	*National Greenhouse and Energy Reporting Act 2007* (Cth)
NGER Scheme	National Greenhouse and Energy Reporting Scheme
NGO	Non-governmental organisation
OECD	Organisation for Economic Co-operation and Development
PJ	Petajoule
Q&A	Question and answer
SCOTS	Social construction of technological systems
SMEs	Small and medium enterprises
USD	United States Dollar
U.S. DOE	United States Department of Energy
White Paper	Australian Government White Paper – *Securing Australia's Energy Future*

*Refer to the glossary for an explanation of the historical name changes associated with these Australian government departments

Abstract

This thesis provides new perspectives on the dynamics of institutional change by examining the case of changing energy management practices in large energy consuming organisations in Australia between 2006–2012. Effective energy management practices can deliver cost savings, greenhouse gas reductions and a range of benefits to organisations and society more widely through energy efficiency improvements. However, there is evidence to suggest that there is a gap between the availability of profitable energy efficiency projects in organisations and the extent to which such projects are implemented. Researchers refer to this phenomenon as 'the energy efficiency gap'.

The thesis builds on contemporary developments in the institutional entrepreneurship literature by developing a multi-level model to conduct the research. Due to the complexity of interrelated issues and events, case study method is applied to analyse and report on the dynamics of changing energy management practices over the study period. The primary research question is: *How* and *why* do energy management practices change?

The research finds that energy management practices evolved over the study period through a process of 'collaborative co-creation'; that is, multiple organisations were involved in experimentation, negotiation and consensus-building processes. These disrupted previously established energy management practices and informed the development and maintenance of new and more effective practices. The thesis contributes to the institutional theory literature by offering original and empirically tested insights into the conditions that support institutional change as a dynamic process involving interactions between multiple organisations. These conditions are that stakeholders with varying degrees of attachment to established management practices are engaged in the change process, roles emerge for institutional entrepreneurs and collaboration is facilitated through the enactment of constructive social skills. Change is further reinforced through shifts in the underlying beliefs about the energy management practices that are considered to be legitimate within a

community of corporate energy practitioners.

Based on the findings, it is concluded that energy efficiency policymakers can encourage the adoption of more effective energy management practices in organisations by developing and refining policies based on three key principles. First, energy efficiency policies should encourage a wide range of organisational stakeholders to engage in the process of energy efficiency improvement. Second, policies should be enduring in order to support learning and institutional change across business cycles. Third, policies should be flexible in order to align with the capability, needs and readiness of organisations in order to accelerate energy efficiency improvement.