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Analysis

Australia's sustainable energy transition: The disjointed politics of decarbonisation

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ABSTRACT

This paper considers Australia's climate and energy policies over the period 1988–2013 and assesses the degree to which these two policy domains have co-evolved to define Australia's low carbon energy trajectory. It finds that climate policy and energy policy have largely been dissociated from one another. This failure of policy coordination and integration has been caused in part by attempts to reconcile clashing and competing neoliberal and weak ecological modernization discourses, and is reflected in the diverging goals and paths of each policy domain. The inability of Australian governments to define and articulate a coherent narrative around a low-carbon energy future has consequently constrained Australia's sustainable energy transition and led to contradictory and disjointed outcomes.

1. Introduction

The existing national energy regimes of most developed countries are unviable if dangerous climate change is to be avoided. For a 66% chance of keeping global warming below 2 °C, countries must reduce their aggregate carbon dioxide emissions by at least 12 gigatonnes (Gt) beyond their current 'Intended Nationally Determined Contribution' (INDC) commitments by 2030 (UNEP, 2015). In response, many countries are beginning, or claim to be undergoing, a transition toward low-carbon energy systems, here termed a sustainable energy transition (SET). To contribute to such a transition, national energy policies will have to shift their focus from a reliance on fossil fuels to renewable energy sources. An 'integrated' approach to both the design and implementation of climate and energy policies, such that they positively reinforce one another, is an essential element in achieving SET success.

Here we consider the evolution of climate and energy policy in Australia, at both the national and sub-national level, over a 25-year period—from 1988 to 2013. We examine the interaction between these two policy domains and how the relationship between them shapes Australia's SET trajectory, specifically in relation to the electricity regime. Australia's fossil fuel-dominated electricity regime has been characterized by increasing policy uncertainty and conflict since the late 1980s, when climate change emerged on its political agenda. Nevertheless it has demonstrated a remarkable resilience in the face of environmental pressures. Correspondingly, between 1990 and 2013, greenhouse gas emissions from the Australian

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stationary energy sector grew by 42.7% (Department of the Environment, 2014). This resilience presents an intriguing puzzle for those seeking to determine the influence of climate policies on electricity regime transformation. By focussing on the policy process and the responses of government, this paper aims to improve our understanding of the political challenges of transforming energy systems towards sustainability.

The paper proceeds as follows. Section two introduces the SET narrative. Focusing on the concept of coevolution, we draw on insights from the environmental policy integration (EPI) literature and from political science to help inform our analysis. After establishing the relevant analytical features, we then outline our methodological approach in section three. Section four provides a brief review of Australian climate and energy policy history over the last 25 years and the context for our analysis. In section five, we assess the degree to which these two policy domains – climate and energy – have converged on the political agenda, before considering the different factors that have shaped Australia's SET in section six. The paper concludes by considering the implications of these findings and its potential for future research.

2. Theoretical background: climate and energy policy integration and sustainability transitions

A common starting point for sustainability transition researchers is that crises such as climate change are considered as symptomatic of deeper-lying crises, 'rooted in the disbalance between unsustainable consumption and production patterns' (Grin et al., 2010: 1). Consequently, it is not possible to solve the climate crisis solely through technological innovation; it is as much a social problem as a technological one. While the micro-dynamics of technological change are still considered important, the 'causal emphasis (for transitions) is more on the broader societal selection environment than on the internal drivers of niche innovations' (Geels and Schot, 2010: 27).

The Multi Level Perspective (MLP) emerged as a way to strike a balance between micro- and macro-dynamics and remains highly influential in socio–technical transitions research. The MLP describes the dynamics of transitions through interactions between three analytical 'levels': macro, meso, and micro. These respectively refer to *landscape* (the context provided by larger and longer term exogenous trends), *regime* (the more immediate structure framing policy and action), and *niche* (the interstices within regimes that provide room for innovative practices). According to the MLP, transitions occur only when developments on all three 'levels' link up and positively reinforce one another.

Implicit in the MLP approach is the concept of co-evolution. The MLP rejects linear causality and instead frames socio–technical transitions as a process whereby different elements involving policy, institutions, culture, knowledge, markets and technology repeatedly influence each other reciprocally (Rotmans, 2015). This is important because it draws attention to different aspects of transitions and their inter-linkages. As Geels and Schot (2010: 96) summarize:

> The global, overall explanation provided by the MLP is about alignments and linkages between different processes. Within levels this explanation follows a socio–technical logic, investigating interactions between heterogeneous elements and actors (weaving a seamless web). The focus is on co-evolutionary interactions between ongoing trajectories: developments in one trajectory (e.g., regulations) may hinder or stimulate developments in another trajectory (e.g., technology or markets).

Co-evolution, in its broadest sense, refers to the interplay between technology and society, which involves multiple dimensions and complex interrelationships. We do not pretend in this paper to be able to capture all of the co-evolutionary processes that shape SETs. Rather, we focus on one specific inter-linkage in relation to SETs: the integration and co-evolution between climate policy and energy policy.

For Lafferty and Hovden (2003: 9), EPI involves 'the incorporation of environmental objectives into all stages of policy making . . . and a commitment to minimize contradictions between environmental and sectoral policies by giving priority to the former over the latter'. Analytically, much of the EPI literature centres around three 'dimensions' of policy: process, outputs, and outcomes (see for example, Hertin and Berkhout, 2003; Nilsson et al., 2012; Nilsson and Persson, 2003). From a policy process perspective, analysis typically focuses on the procedural components of policy making such as the coordination and communication between different actors and agencies as well as the decision making rules in place. These may include for example formalized consultation processes or issue-specific working groups, which can take place on horizontal (i.e., inter-departmental) or vertical levels (i.e., national/sub-national forums). A focus on policy outputs involves the examination of mission statements, agendas and objectives and the degree to which they adhere to the principals of EPI. Outputs also include the policy instruments and implementation methods used in pursuing particular policy goals. The last dimension, policy outcomes, assesses EPI in terms of whether or not better environmental outcomes are actually achieved. Putting aside what constitutes a 'good' environmental outcome (i.e., for whom/what?), this dimension is particularly difficult to measure since there are many factors, not just EPI, that influence policy outcomes (Jordan and Lenschow, 2010). Given Australia's poor performance in terms of aggregate emissions reductions, we are more concerned with the process and output dimensions of EPI in relation to its SET progress.

While on one level EPI appears a logical step in realizing transition goals, in practice, the integration of environmental concerns into non-environmental policy areas has been and remains an ongoing challenge. Müller (2002), for example, found that while Germany has been a 'front runner' in terms of environmental policy making, its actual performance in EPI has been relatively poor. Jordan (2002) noted similar outcomes in the UK despite it having 'one of the strongest and most effective systems for coordinating departmental policies of any Member State in the EU' (p.35). And in Sweden, which has