Original research article

Reframing decommissioning as energy infrastructural investment: A comparative analysis of motivational frames in Scotland and Germany

Darren McCauley[1]

Room 008, GSD Observatory, Buchanan Gardens, University of St. Andrews, KY16 9LU, United Kingdom

A B S T R A C T

Decommissioning is often understood to mark the end of an energy infrastructure, associated supply network or even an entire industry. The long-term nature of this process for large scale infrastructure offers, however, a strategic opportunity for businesses. The paper argues that pro-industry Scottish business interests have proactively reframed decommissioning oil and gas infrastructure as an investment opportunity, whereas their German counterparts in the nuclear industry have struggled to mobilize a positive reframing of the phase-out. A detailed analysis of eighteen interviews reveals critical insight into how each industry approaches mobilising support for their interests through motivational framing in the decommissioning context. Four key differences between the case studies (materiality, industry trajectories, rise of small business and national political identity) are then identified and reflected upon.

1. Introduction: decommissioning and energy investment

National projects of development are closely associated with calls for investments in energy infrastructure based upon the urgent need to promote economic growth, secure energy service provision and meet the demands of transitioning to a low carbon economy. The assumptions inherent in this connection is that investment equates to the development of new infrastructure [1–3]. As the world moves away from undesirable energy sources, urgent investment is needed to decommission long-standing associated infrastructures. This paper investigates the different ways in which the oil and gas industry in Scotland and the nuclear industry in Germany have sought to cope with the detrimental impacts on their industry from decommissioning processes. The results of this study reveal that former has resisted through reframing decommissioning as an opportunity to revitalise the industry, whilst the latter frames decommissioning as a direct threat to its industry and affected communities.

The world is set to invest around $300 trillion in renewable, fossil fuels and nuclear energy to meet this demand [4,5]. Over three quarters of this total is estimated to be renewable [6]. Oil will continue to be the world's leading energy source with increase in the use of gas likely to endure [7,8]. This investment will involve fuelling current energy systems, but above all, the creation of new supply chains, technologies and multiple impacts [9–11]. An additional substantial cost that is often overlooked is the unforeseen size of investments needed for the large-scale decommissioning of fossil fuel and other undesirable energy infrastructures. The modern global energy system built after World War II has little experience[2] of how to deal with international divestments from entire energy systems and how their associated infrastructures can be dismantled. The transition towards clean energy will involve new systems of provision but also of rejection.

The paper seeks to contribute to our understanding of how political power and forms of rule are contested and how questions of energy infrastructure are made meaningful for different publics [12]. Whilst the politicisation of investments in new infrastructure is well-established [13–15], this paper adds to our existing knowledge by shedding light on similar processes in relation to investing in decommissioning. It investigates the ways in which Scottish and German business interests strategically frame, and reframe, decommissioning of the oil and gas and nuclear industries respectively.

The oil and gas industry is a major source of tax revenues, providing over £300 billion since the late 1960s. This amounts to a direct UK wide tax take of 1% in GDP, with much larger impacts on other sectors of the economy. It is strategically important for Scotland. It is estimated to be worth £17 billion to the Scottish economy, almost double of the Scottish low carbon (including nuclear) and renewable sector [16].

Decommissioning activity in Scotland is valued at around £10 billion over the next 10 years, potentially reaching £40 billion by 2040 [17]. As a slight higher national GDP (to the UK), German nuclear energy is less strategically important, nor is it tied to nationalism in the same way as in Scotland. Fossil fuels continue to dominate German national energy consumption. The tactical importance of nuclear is in relation to low carbon politics and its transitionary role in supporting (or hindering) the growth of renewable energy sources [18].

The paper focuses on how each industry frames the decommissioning of their national infrastructure within these contexts. Framing studies are most closely associated with social movements and resistance [19–22]. There is also a key set of framing literature on media and political communication [23]. This study contributes rather to framing studies from the perspective of elites or elite organisations such as political parties, government, supranational authorities [24–28]. It investigates the framing processes of business interests in resisting threats to their industry. Framing perspectives can offer insight into how elite organisations strategically manoeuvre [29]. Three strategic processes are identifiable as diagnosis (framing the problem), prognosis (the solution) and motivational (the incentive) framing [19]. The focus here is on motivational framing [30–32] from the perspective of elite business organisations.

The next section outlines the contribution to literature through elaborating on motivational framing and energy companies. The third section details the research process undertaken and the context in which it took place. The results of eighteen research interviews with Scottish and German business interests are outlined. It then discusses the implications of these results for understanding elite framing processes, as well more specifically why the two industries framed differently in each case. Some final remarks conclude on the implications for exploring decommissioning in future research.

2. Literature review: motivational framing and energy companies

Framing is an implicit strategic action for business organisations. It is more than the identification of key problems. The business engages in active manoeuvring to ensure that these problems are framed in a way that benefits its members or stakeholders. It explicitly implies agency – as we see below there is a lack of agency on show from the German nuclear industry than the Scottish oil and gas industry. The process is inherently strategic. It differs in both form and process from lobbying where a direct influence of one actor over another is sought [33,34]. In such processes, scholars often explore direct causalities in assessing policy or decision outcomes. Framing is more closely associated with discursive strategies. In this way, business organisations not only seek to influence markets or political interests. They actively engage in their constitution [35]. Research on framing processes [36,37] is, however, less (albeit still) concerned with extrapolating power dynamics to the same extent as we find in studies on corporate discourse [38–40]. The primary aim of strategic framing is to "mobilize potential adherents and constituents, to garner bystander support, and to demobilize antagonists" [19]. Framing, often referred to as collective action framing[3] [20,21], is therefore most associated with social movement studies, rather than the assessment of corporate behaviour.

This paper seeks to adapt collective action framing [19] mostly associated with social movement literature [41,42] and media and political communication studies [23] to enrich our understanding of elite framing processes to gain a more comprehensive understanding of the ways in which businesses garner support for their strategic benefit. Collective action frames are understood to be the properties of organisations or groups of individuals within the context of social

movements such as policy-makers, NGOs, interest groups or pressure groups. Social movement scholarship has sought to expand upon how social movement organisations use spatial tactics in their framing strategies to resist policy change. Many scholars have demonstrated that policy actors employ spatial tactics (although not explicitly engaging with the collective action framework) in various beneficial ways within the context of multiple interactions taking place at different scales [25,26,43–45]. Kurtz [44], Harrison [43] and Sze et al. [42] use the notion of scale frames to encapsulate the discursive practices that construct links between the scale at which a social problem is experienced and the scale(s) at which it could be solved. As set out in Section 5.1 below, I argue that a focus on the collective action framework, especially motivational framing, allows for deeper understanding of strategic framing.

Benford and Snow [19] refer to three key components that are present in collective action framing processes. Diagnosis framing identifies what the problem is, while prognostic framing involves the articulation of a proposed solution [41]. Motivational framing – the focus in this paper – refers, thirdly, to the construction of motive [46]. Beckwith [47] comments further, "collective action frames, in organizing and making sense of lived experience and perceptions, serve to focus and to summarize grievances, to organize action, and to posit opposition and solutions". Such collective action frames can belong to activist [19–22] or elite organisations [24–28] who aim to strategically frame common purpose to achieve an agreed outcome.

The collective action framework is used to understand the *motivational* framing processes of businesses. This work is situated within some existing research on corporate strategies towards motivating frames that seek to mobilize support or demobilize antagonists For this reason, Gamson and Wolsfeld [48] refer to motivational framing as the "agency component of collective action frames". Maijanen [30] reveals, for example, how the Finnish broadcasting company was unable to successfully motivate a shift away from pro oil and gas frames in covering energy issues in the broadcasting sector over a 40-year period. Markowitz [31] demonstrates how socially responsible mutual fund companies have assumed the same techniques as social movement organisations through seeking to create a "SR" (socially responsible) identity among investors. After assessing 34 mutual fund companies, she found that businesses actively sought value alignment to attract investors. In contrast, Kreps and Monin [32] find in similar research that such instances of value alignment was in fact rare.

Research in this area is less prevalent within the context of large energy companies, or more broadly understood as elite corporate organisations. Motivational framing has tended to be more associated with non-traditional businesses such as mutual fund companies [49] or fair-trading organisations [50] as explored above. The focus has been placed on mobilising support for ethical or moral value-based outcomes [35]. This paper uses motivational framing on conventional large energy companies. In an assessment of industrial organisations, Schlichting [51] argues that the majority pursued motivational framing of scientific uncertainty in the mid-1990s with the purpose of demobilize and support for the Kyoto negotiations in 1997. Utz et al. [52] shows how BP (British Petroleum) attempted to disassociate itself from being responsible for the Deepwater Horizon crisis through framing attributional blame on governmental actors.

3. Methodology

This section outlines the primary methodological considerations for conducting research on the framing processes used by energy companies to mobilize support or demobilize antagonists through motivational framing decommissioning processes in Germany and Scotland. It also covers the details of the research context with regards to the scale of investment in decommissioning practices in the oil and gas and nuclear sectors.

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[3] Collective action frames are the products of a group of agents in society who actively engaged in the "production and maintenance of meaning for constituents, antagonists, and bystanders or observers" (Benford and Snow [19]: 614). They are traditionally viewed within the context of social movements, rather than business.