



## Practices of Legitimation and Accountability Crises in a Range of Energy Transitions

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**Abstract** This chapter draws together five wide-ranging cases related to energy transitions. It articulates how practices of legitimation along four registers (discursive, bureaucratic, technocratic and financial) are present in each case to extents that differ based on how each author's choice of sector and focus modulates their relevance. This chapter summarises the ways in which these practices uphold and challenge accountability crises in each energy transition case. Such juxtaposition and consolidation allow discernment of cross-cutting dimensions along which practices of legitimation play out. These dimensions include spatiality, temporality, opportunism, prefiguration, performativity, power-play and normalisation or routinisation. The specification of practices of legitimation across cases sets up a concluding synthesis which links legitimation and energy transitions with broader environmental governance scholarship on accountability.

**Keywords** Legitimation • Energy transitions • Discursive • Bureaucratic • Technocratic • Financial

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## 9.1 THE CROSS-CUTTING DIMENSIONS WHERE LEGITIMATION IS PRACTISED IN EACH CASE

What can be learned from summarising and consolidating the practices of legitimisation encountered in the unpacking of five diverse energy transition cases? This chapter employs an abductive reasoning approach. The practices of legitimisation that constitute the empirically informed point of departure in Chap. 2 are treated as an example of deductive reasoning here: it is possible to categorise practices along four registers (discursive, bureaucratic, technocratic and financial) that are overlapping (not mutually exclusive) and comprehensive (all practices of legitimisation fit within their remit). These practices move from the general to the specific. The five cases that make up Chaps. 4, 5, 6, 7 and 8 hold examples of inductive reasoning. In each chapter, the author chooses a point of entry to offer a fine-grained analysis of accountability relations within their case of energy transition, moving from the specific to the general by means of analytical abstraction. Part III acknowledges that these analyses are limited by degrees of uncertainty—their knowledge base is necessarily incomplete. It seeks a pragmatic approach to characterise and inform decision-making despite uncertainty, and therefore applies abductive reasoning to settle upon the likeliest possible explanation in any given case.

In short, this concluding part works towards ways to characterise energy transitions as accountable to concerns of sustainability or not in disaggregated, case-specific instances of decision-making that affect decarbonisation and social equity enhancement outcomes. Accountability relations are rarely fully legible since they comprise both formal and informal practices of legitimisation that require empirical study with varying data access, hence any approach that analyses accountability must address uncertainty within its design. An abductive approach to accountability analysis opens up for empirical investigation, accommodates uncertainty, and retains focus on practical applicability and real-world relevance.

Part III proceeds step-wise. This chapter articulates how practices of legitimisation along four registers (discursive, bureaucratic, technocratic and financial) are present in each case to extents that differ based on how each author's choice of sector and focus modulates their relevance. It summarises the wide range of ways in which these practices uphold and challenge accountability crises in each energy transition case. Such juxtaposition and consolidation allow discernment of cross-cutting dimensions along which practices of legitimisation play out. Proceeding sequentially

through the five cases, it draws out seven dimensions: spatiality, temporality, opportunism, prefiguration, performativity, power-play, political economy, and normalisation or routinisation. This sets up the concluding Chap. 10, which links the four registers of practices of legitimation and the structuring set of cross-cutting dimensions with broader environmental governance scholarship on accountability.

While each case treatment can be read in multiple lights, certain dimensions stand out in each: spatiality and temporality in Timothy Moss' historical analysis of Berlin's energy transitions over the past century; opportunism in Christian Lund's study of attempts at the scalar reconstitution of authority during land conflicts in Indonesia; prefiguration and performativity in Håvard Haarstad's account of the role of target-setting in urban climate change mitigation efforts; power-play in the form of automobile incumbency, regime persistence and path dependence in Benjamin Sovacool's unpacking of electric mobility in the Nordic countries; and political economy and normalisation or routinisation in Steven Wolf's problematisation of the construction of a habitat exchange for biodiversity offsetting by energy extractive industries. The latter part of this chapter, Sect. 9.2, draws out these aspects case by case. It offers reflections in relation to which practices of legitimation play out within these dimensions and in what way.

## 9.2 THE REGISTERS ALONG WHICH LEGITIMATION IS PRACTISED IN EACH CASE

### 9.2.1 *For Timothy Moss*

The case is three contrasting energy transitions at different historical moments in Berlin, each driven by the situated urges of a specific politics that evolves over time. Moss points out that there are different crises of accountability at each historical point, as the urban fabric of Berlin itself cannot be understood as the same space over the past century. In the 1920s, this concerned who should supply energy to Berlin; during post-war division, it concerned self-sufficiency for West Berlin's energy provision within city borders; and today it concerns ownership and control of the urban energy infrastructure. Each of these accountability crises features corresponding practices of legitimation, and this historical contextualisation (cf. Lockwood et al. 2017) serves to caution against any easy

assumption of interventions that can render energy transitions accountable towards sustainable outcomes. Moss reminds us that sustainability itself is a relatively new concern in its current form, which came about during the 1970s. Drawing on earlier histories, he argues, requires acknowledgement of this limitation, but can generate a deeper appreciation of where sustainability thinking comes from, what echoes can be detected in the past, and how energy infrastructure legacies can frame current visions and enactments of sustainability. He points out the danger of committing to a certain configuration of accountability that over the course of evolving politics and institutional structures might come to constitute what Kramarz and Park (2017) call an accountability trap.

This case features a host of examples of discursive legitimization, for instance the local Communist Party's criticism of the regressive effects of tariff increases in the early 1930s, the protest camp against the planned power plant in the Spandau Forest in 1976 (Fig. 4.2), the campaign poster of the Berlin Energy Roundtable for a referendum in 2013 (Fig. 4.3), and energy security arguments used during the Cold War. It also draws out legitimization practices along the bureaucratic register, for instance through the municipal imposition of city-wide unitary utility tariffs and uniform service standards in the 1920s, and the Allies' insistence on high security standards for West Berlin's urban energy system, including three months' worth of primary energy reserves. Technocratic practices of legitimization are also in evidence in the large incumbent utility Vattenfall's contemporary emphasis on technical expertise and track record for managing the electricity and gas networks, and in cascading generating capacity requirements mandated during the security-oriented strategy during the Cold War. Finally, financial legitimization is visible in the pursuit of fair wages for employees at the city's utilities and improvements to service quality used to justify massive urban infrastructure investment (partly based on foreign debt finance) in the 1920s. It is, however, notable that the need for financial legitimization at the urban scale is absent during the Cold War years of high-cost energy security and West German government subsidies to Berlin.

Moss' historical analysis with its *spatial and temporal* purchase, then, offers rich insights into practices of legitimization along all four registers. Yet what is its import for interventions today in support of sustainable outcomes under transition? His analysis points to the articulation of demands for accountable remunicipalisation of energy infrastructure by contemporary social movements campaigning to prioritise decarbonisation

and reduction in energy use over traditional criteria for urban energy management. This deconstruction and historical contextualisation of current trends that have brought about shifts in urban policy (in favour of a municipal utility and decarbonisation) is a demonstrably constructive outcome of accountability analysis, in that it provides an evidenced basis to inform in situ decision-making as well as to discuss and debate Berlin's energy transition at the present moment.

### 9.2.2 *For Christian Lund*

The case is changes in land use and in who has authority over land. This concern inevitably accompanies debates about energy transitions, as all energy sources have a land footprint, and most land use (in this case forestry or agriculture) has direct or indirect implications for greenhouse gas emissions or carbon sequestration. The questions of accountability that Lund unpacks, however, are chiefly concerned with power and social equity, and competition over the legitimization of power by institutions at different scales and with various degrees of formality. The accountability crises at play in Indonesia's hinterland are interrelated. On the one hand, there is the crisis of villagers who are being dispossessed of their land being hard put to hold a top-down state to account. The form of this state varies, as in 1978 when formal authority over large parts of land in West Java that was *de facto* used by agrarian villages shifted from the Provincial Forestry Service to the State Forest Corporation with uniformed parastatal police as part of an authoritarian regime. On the other hand, there is the crisis of what constitutes the state itself, with tussles over the scale at which authority is held. This surfaces in the villagers' recognition of the Sundanese Peasant's Movement in 2006, and more recently of the Village Office as the official local territorial administrative institution with authority over land, in order to counter the efforts of national institutions that sought to take over the land for forestry. Lund points out that the power to define subjecthood for oneself or to impose subjecthood on others is an integral part of accountability, and that this power is bidirectional (Fox 2018). Not only subjecthood, but also authority, can thus be re-purposed; making them visible in a given configuration here becomes the relational work of politics over land.

This case features instances of discursive legitimization such as the State Forest Corporation's announcement of a planting ceremony of 1,000 mahogany seedlings in rows named after government institutions (which the villagers promptly uprooted overnight), and its invocation of military

terms such as ‘illegal loggers’ and ‘subversive’ to draw equivalence between the villagers’ land occupation and organised crime. It also brings out specific bureaucratic legitimisation practices, most notably the villagers’ request (which was granted) for new ID cards from the Village Office as the official local territorial administration, which rendered their settlements official sub-villages within the territorial area claimed by the State Forest Corporation. Technocratic legitimisation is also in evidence in the 1978 transfer of nearly one million hectares of official forestland in West Java to the State Forest Corporation—centralising authority away from the province—and in the latter’s formal use of the language and protocols associated with national security to evict villagers as ‘forest security disturbances’. Finally, practices of financial legitimisation surface in the provisory system of payment (10,000 Rupiah per month) by villagers to the Sundanese Peasant’s Movement instead of paying a third of their rice production as rent illegally demanded by the State Forest Corporation. They are also visible in the annual contributions of a million Rupiah by each sub-village to the Village Office, in essence a tax which established the villagers’ claim as landholders.

Lund’s fine-grained study of conflicts over land in remote tracts not only offers striking instances of practices of legitimisation along all four registers, but also points to clear arenas that require attention for sustainable energy transitions. These arenas include the relations between people and institutions at multiple scales, and the necessity to allow for the desire for change to express itself in democratic politics. In his case, both the top-down use of force and popular resistance are *opportunistic*. Each seeks to recognise and establish specific relations between people and institutions in order to cement land claims in their favour. This reading of the shaping of accountability relations casts new light on the social contract and on authority and subjecthood.

### 9.2.3 *For Håvard Haarstad*

The case is how Norwegian cities set climate mitigation targets construed as reductions in carbon emissions at the urban scale. While these targets are seemingly ambitious and commendable, they encounter challenges of commensurability across cities, and often lack concrete strategies for operationalisation. Haarstad identifies an accountability crisis that the very presence of decarbonisation targets can serve to justify prolonged delay on actual climate mitigation, as targets allow cities to channel the discursive

power of the promise of laudable action at the expense of diffusing political pressure over the urgency of substantive action to achieve these goals which remains both slow and insufficient. Yet he flips this to point out that target-setting itself is not only performative but can also be regarded as a form of prefigurative politics, whereby the apparent failure to meet targets that increasingly come to be seen as desirable can spark another accountability crisis, one that can drive necessary climate mitigation at the urban scale. The Zero Growth Objective for urban transport in Norway, argues Haarstad, has resulted in concrete agreements signed by its largest cities in 2016 and 2017 that have not only committed to limit traffic but also delivered results by way of a reduction in private car traffic during 2018. Contra the techno-managerial apparatus of the post-political condition (Swyngedouw 2010) that simply supports the status quo, the carrying power of numbers may motivate action by working targets into routinised repertoires.

This case offers a slew of examples of discursive legitimization, starting with the White Paper on Norwegian Climate Policy from 2006 which articulated the need for a shift to public and non-motorised transport, the White Paper on Norwegian Climate Policy from 2012 which formulated this as a 'goal' or target, and the very statement of the Zero Growth Objective. This posits that all growth in personal traffic in Norway's largest cities must be covered by public or non-motorised transport. Bureaucratic legitimization is also at play given that these and other government policies (such as the Climate Accord of 2008 in the Norwegian parliament) consistently reference a 2 °C target to limit global warming and have worked this into a broad range of national policy documents and strategies, including for urban transport in this specific case. The use of technocratic practices of legitimization is evident in the National Transport Plan Working Group's reasoning that 'zero' is a very easy target to measure and thus useful in holding cities to account, and the subsequent agreements signed by the country's largest cities with specific indicators to measure performance on urban car traffic. Crucially, financial legitimization accompanies the Zero Growth Objective through these Urban Environment Agreements, which tie the amount of central funding allocated to cities for local transport infrastructure with their prowess in meeting the target.

Haarstad thus constructs the use of metrics as more than simply a bureaucratic apparatus of governance that perpetuates accountability crises in the shiny guise of new mitigation targets. He argues that targets

perform work that helps enable sustainable energy transitions by working their way into specific policies and indicators within sectors such as transport. They drive future priorities by linking them to concrete objectives that can be measured (zero growth) and punished or rewarded (through urban transport infrastructure budget allocation). This relational analysis of policy-making and the operationalisation of targets highlights the value of *prefigurative* politics. Accountability analysis of this case contributes a valuable reconsideration of the role of targets in legitimating gradual but incremental climate mitigation action. Rather than challenging the existing sectoral configuration outright, targets work *performatively* to reorient its workings through the very routine, normalised structures and processes that shape sectoral futures.

#### 9.2.4 *For Benjamin Sovacool*

The case is the advent of electric mobility in the five Nordic countries. As power from the electric grid is based on renewable energy to large extents in these contexts, this shift from fossil fuel powered vehicles to grid charged ones constitutes a *prima facie* energy transition. But Sovacool's analysis of electric vehicle roll-out problematises this assumption, and flags four crises of accountability. The first concerns inequitable access to electric vehicles, which so far largely remain the preserve of privileged people even in these relatively wealthy countries. The second points out that exclusion is reflected in national planning around electric mobility, which risks making people dependent on distant infrastructures (like electric charging stations) on terms beyond their democratic control. The third crisis is on multiple spatial scales and pertains to the creation of externalities at remote sites of material extraction to build electric vehicles, as well as the risk of relocating pollution from cities to regional sites of electric power production. The fourth crisis features the burden on some sectoral stakeholders such as fuelling stations that might have to invest in costly charging station infrastructure or risk job loss and vehicle dealerships that might have to invest more time and effort into electric vehicle sales. Sovacool argues that these crises, while perhaps inevitable components of shifting sectoral regimes, stem from the uneven effects of transition dynamics on different actors, and from inequities that are deeply embedded within existing systems of mobility.

This case draws out a host of instances of discursive legitimization, most notably from people challenging the roll-out of electric vehicles in terms



of its sustainability effects. These interviewees critique subsidies accorded to Teslas as luxury electric vehicles; equate this to 30,000 public transport tickets per beneficiary; are sceptical of hybrid vehicles as allowing owners to cash in on incentives without affording any means to monitor their actual usage of electricity rather than internal combustion engines; and are critical of political tokenism in public discourse around electric vehicles. Bureaucratic legitimation is evident to varying extents across Nordic countries, from Norway's all-inclusive packages to incentivise electric vehicles (which are so far mainly cars) to Denmark's reluctant extension of lower duties (40% instead of 150%) on electric cars, but by comparison comes far less into play in relation to the electrification of public transport. Practices of technocratic legitimation are presented generically to promote sustainable mobility through charging at off-peak times, mandating battery recycling to reduce externalities, emphasising the decarbonisation of electric grids and coordinating roll-out with planning that prioritises non-motorised transport forms and intermodal electric transport. Finally, financial legitimation is notable in the enormous support provided for private electric cars which has been used by relatively rich people, and in the absence of similarly strong support to rapidly build out public electric transport infrastructure or cushion vulnerable groups against regressive effects of national fiscal policies on electric mobility (for instance through free public transport).

Sovacool thus illustrates practices of legitimation along all four registers, drawing on a large body of empirical material to characterise the multi-sited, multi-scalar and polycentric nature of accountability relations in mobility systems under transition. His case surfaces instructive principles (Tables 7.2 and 7.3) across comparative country contexts (Table 7.1) for how to work towards sustainable energy transitions in electrifying mobility systems. Treatment underscores the importance of unpacking *power-play* to fathom automobile incumbency, regime persistence and path dependence. By studying the practices of legitimation that accompany shifts to electric mobility, accountability analysis brings several crises to the fore. It provides a means to point out specific measures that can be undertaken in each context to overcome these crises.

### 9.2.5 For Steven Wolf

The case is the construction of a habitat exchange market that could enable habitat replacement for biodiversity conservation of the sage-grouse

(an endangered ground nesting bird that depends on sage brush steppe habitat) in Colorado while permitting the expansion of energy extractive industries. On the one hand, this can be regarded as a complete non-starter, as Wolf points out that over the course of seven years, the habitat exchange failed to record a single transaction—an apparent accountability crisis in that it fails to address sage-grouse population decline. He attributes this to the lack of appetite of the oil and gas companies to stump up the expenses for the amount of scientifically requisite land to compensate for the loss of biodiversity habitat, and inadequate political will to force their hand. On the other hand, as the process unfolds, it does construct the numerical model informed by cross-sectoral concerns (land costs and requirements for the fossil fuel majors and sage-grouse habitats respectively). Wolf argues that this is a step in the direction of accountable socio-ecological regulation, as it has brought into being an accountability test. Given a different future political economic context, the very existence of this data infrastructure (the Habitat Quantification Tool) and market infrastructure (the Colorado Habitat Exchange) increases its likelihood of eventual insertion into pertinent bureaucratic routines, and normalisation into decision-making around land allocation and habitat exchange.

This case draws out numerous instances of discursive legitimization, including the United States federal administration's explicit linkage of 'energy independence' with its ending of mandatory compensatory mitigation under the Endangered Species Act in 2018, and the continued representation of the habitat exchange as relevant and vibrant despite its never having executed a single transaction. Ironically, the habitat exchange was instrumental in arguments against protecting sage-grouse populations under the Endangered Species Act. Practices of bureaucratic legitimization are visible in the non-governmental organisation Environmental Defense's efforts to set up the Colorado Habitat Exchange and orchestrate participation in its creation and governance by various relevant actors (including a cattlemen association, state agencies and energy extractive industries), layering this effort on experience with habitat offsetting under the Clean Air Act and the Kyoto Protocol's Clean Development Mechanism. Technocratic legitimization in this case pertains to the strategy of championing a market mechanism to avoid critique of coercive bureaucracy and to benefit from efficiencies such as low transaction costs, and to associated innovations such as the Habitat Quantification Tool to calculate compensation amounts for replacement of sage-grouse habitats. Financial legitimization, while present in the very logic of a market mechanism for carbon

offsetting of habitat loss, remained absent in practice. As the subject of controversy when the oil and gas industry protested the debits assigned to them based on the modelled cost calculations, as also when it resigned from the exchange's governance board, questions of finance were used to delegitimize the whole exercise.

Wolf articulates accountability relations as a hollow performance in his case, where practices of legitimation along the four registers serve to perpetuate a crisis of accountability. He emphasises that what remains missing is sanction, an imposition of requirements that would drive demand for offsets, even when the calculation and market infrastructure are put in place. These latter developments represent the innovation of mechanisms that can be used to *routinise* and normalise accountability if society manifests the *political economic* will to demand a sustainable energy transition that must necessarily support sage-grouse as well. Thus, accountability analysis enables a clear account of what remains lacking to render this energy transition case sustainable.

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