



# Social Movements and Energy Democracy: Types and Processes of Mobilization

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An important but sometimes overlooked dimension of the study of energy, democracy, and governance is the role of social movements. Industrial transition movements (ITMs) emerge when there is resistance from incumbent organizations, such as large utility companies in the electricity industry, to grassroots efforts to change the industry. A classification of ITM goals is developed based on two types of sociotechnical transition goals (developing alternative technologies and ending existing technologies) and two types of societal change goals (the democratization of industrial organizations and political processes and the equitable access to jobs and industrial products). The study of processes and outcomes of ITMs also has implications for social movement theory, which are outlined. This approach enables a comprehensive analysis of the relations among the state, industry, civil society, and social movements that can identify causal mechanisms in the effects of social movements on industrial transitions and energy democracy.

## OPEN ACCESS

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### Specialty section:

This article was submitted to  
Energy Systems and Policy,  
a section of the journal  
Frontiers in Energy Research

**Received:** 06 June 2018

**Accepted:** 23 November 2018

**Published:** 04 December 2018

### Citation:

Hess DJ (2018) Social Movements  
and Energy Democracy: Types and  
Processes of Mobilization.  
*Front. Energy Res.* 6:135.  
doi: 10.3389/fenrg.2018.00135

**Keywords:** energy, social movements, transitions, civil society, electricity

## INTRODUCTION

Of the many ways to conceptualize the study of energy and democracy, research that focuses on social movements should be central because they frequently raise questions of democratic control and process. Energy-related social movements can include opposition to specific forms of energy (e.g., nuclear, fossil fuels) and support for alternative forms of energy (e.g., energy efficiency, renewable energy), but they also can seek reforms in the governance, ownership, access, and affordability of energy. To some degree calls for reform of energy systems and their governance can be accommodated through existing institutionalized channels of governance, such as legislatures and elected officials, but often incumbent organizations in the industry (e.g., utilities) block reform efforts through institutionalized channels. In this circumstance, social movements tend to contest not only specific policies but also processes associated with energy-related governance, political power, and democracy.

Social movements are mobilizations by challengers who have the goal of generating systemic changes in a social field (e.g., a policy arena, an industry) and who meet with resistance from the incumbent actors who occupy the dominant positions in a field. Civil society organizations (CSOs) are actors that are part of neither the state nor the private sector, and they often form the organizational core of social movements. However, actors from the state and industry can also play an important role in movement coalitions, and only a subset of CSOs is mobilized into social movements. In many countries, the energy sector is dominated by a few large companies in each industry and sometimes by a single government-controlled company. These incumbents tend to resist both emerging technologies that may be viewed as threatening to the existing technological

regime (such as distributed renewable energy) and proposals from CSOs and social movements for substantial changes in the governance and organization of energy. The relationships between challengers and incumbents in an industrial sector play a central role in the long-term processes of industrial transitions, such as the transition of the energy sector to more renewable and efficient energy (Köhler et al., 2017).

The study of energy and social movements can be conceptualized as part of research on “industrial transition movements” (ITMs). This type of social movement has the goal of bringing about substantial changes in an industry, and it appears in various industrial sectors such as food (sustainable food, community gardening), transportation (bicycling, public transit), waste management (recycling), the built environment (new urbanism), and finance (community finance). Comparative analysis of ITMs has made it possible to identify an underlying set of goals that characterize these movements in general (Hess, 2016b). This essay will outline a framework that characterizes four main goals of ITMs, with examples for the energy sector, then it will discuss some basic approaches to the analysis of the conditions that affect the capacity of movements to achieve their goals. This study builds on and extends previous work on ITMs (e.g., Hess, 2016b, 2018).

## ENERGY AND ITMs

As an analytical category, an ITM has the goal of bringing about a substantial change in an industry or broader industrial sector. A historical case of an ITM may also have other goals, such as broader societal change and political goals, but the focus here is on the industrial transition goal. There are two main types of goal: bringing about a change in the sociotechnical system of an industry, such as a transition of the electricity system to have greater use of sustainable energy resources, and bringing about a change in the social relations of an industry to contribute to broader societal change goals of democracy and human rights.

These two main types of goals may be subdivided, and ITMs can be classified according to these categories. Thus, one can think of ITMs as comprised of a set of “ideal types” based on different types of primary goals. Empirical cases of ITMs often share multiple goals and may be considered an amalgam of the ideal types, but some ITMs also focus mostly on a single type of goal and therefore approximate the ideal type. With respect to the first goal (a transition of the sociotechnical system), ITMs can be classified as follows:

- the alternative industry type, which has the primary goal of supporting a transition of the industry by advocating for the more rapid scaling up of niches such as renewable energy; and
- the industrial opposition type, which has the primary goal of ending aspects of the current regime (sunsetting), such as the reduction of reliance on fossil fuels or nuclear energy.

The second goal, industry-related societal change, can be subdivided along lines that are broadly consistent with the distinction between procedural and distributive justice:

- the industry and governance restructuring type, which has the primary goal of supporting changes in the ownership of the industry (e.g., increased community, cooperative, local, or public ownership) and/or in the decision-making processes of government and industry (e.g., increased public participation and transparency for rule-making in the electricity industry); and
- the industry access or equity type, which has the primary goal of achieving a minimal level of access of low-income consumers to an industrial good and to a minimal quality of employment and working conditions.

The remainder of this section will characterize the four types with respect to the energy sector.

In the energy sector, the alternative industry type of ITM has the primary goal of developing and supporting new technologies and organizations that have met with resistance from industrial incumbents such as the utilities or the fossil-fuel industry. For example, in the U.S. (but also in other countries) the utilities have resisted a rapid transition to distributed energy resources and energy efficiency because of concern with the effects on profits and grid stability. Environmental and consumer organizations have helped the renewable-energy industries to build coalitions to gain policy support for energy transitions, and they have also helped to resist attempts by incumbent coalitions to weaken or turn back energy-transition policies (Hess, 2016a). Social movements have also helped bring about policies that can lead to industrial innovation (Vasi, 2011). Civil society organizations with a goal of serving local communities and of assisting low-income communities can also develop “grassroots innovations” where new technologies are piloted (Smith et al., 2016).

The industrial opposition type of ITM has the primary goal of ending some kind of industrial process or technology, which in the electricity sector can include extraction, generation, transmission, and/or distribution. Frequently, the coalitions occur at a local level as NIMBY (not-in-my-backyard) or environmental justice struggles that have a localized goal of blocking a siting or of remediating pollution (Holifield et al., 2018). Prominent energy ITMs for extraction include opposition to uranium mining, hydraulic fracturing technologies, and mountaintop removal for coal. The industrial opposition type can also include NIMBY struggles against proposed wind and solar farm sites (Wolsink, 2007), thus putting these movements on a collision course with actors whose goal is developing alternative or niche technologies. ITMs concerned with electricity generation include opposition to risks associated with specific power plants as well as broader movements to sunset a technology, such as the anti-nuclear energy movement in North America and Europe (Giugni, 2004). ITMs also emerged with the goal of opposition to high-voltage power lines, and for electricity distribution there are the attempts to gain recognition for and remediation of cancer clusters associated with power lines and transformer stations and opposition to wireless smart meter deployments (Hess, 2014).

In the energy sector, the industry and governance restructuring type of ITM often has the primary goal of support for more democratic control over energy. Locally

oriented mobilizations can involve support of community wind and solar projects, the municipalization of electricity, or cooperative ownership of energy distribution or local renewable energy generation (Berlo et al., 2016). At a broader geographical scale, this type of ITM can involve efforts to nationalize portions of the energy sector to retain profits for public use and to protect public organizations from privatization. The ITMs can also call for the restructuring of governmental policymaking processes to make them more participatory, transparent, and democratically accountable. For example, in the State of New York a coalition launched the “Make R.E.V. REAL” campaign to modify the state’s “Reforming the Energy Vision” (R.E.V.) program in order to make decision-making more open to public participation (Hess, 2018).

The access or equity type of ITM involves the primary goal of support for low-income customers and working-class employees in the energy industries. It can include opposition to energy price increases, tax or fee increases, and transfer of costs to consumers (such as payment by consumers of stranded assets of utilities). It can also involve calls for relief for low-income customers, support for government-funded low-income energy programs, and cooperation with civil rights organizations to end shut-offs of energy for customers who cannot keep up with payments (Hess, 2018). These movements can also work to provide access to jobs in the energy sector, such as the green jobs campaign of the Blue-Green Alliance (labor-environmental) in the U.S. (Hess, 2012).

## PROCESSES AND CONDITIONS

The categorization of ITMs based on four types of primary goals can serve as a guide to social science research that identifies general patterns and causal sequences. This section will focus on one important type of causal sequence: the factors that affect successful outcomes for the ITMs. General social movement theory draws attention to two main factors that involve the social theory balance of structural conditions and the agency of actors (Della Porta and Diani, 2015). Although this background theory is important and essential, the study of ITMs also provides opportunities for an expansion of social movement theory.

The structural approach in social movement theory draws attention to general conditions (such as energy resources) and to meso-level conditions such as the political opportunity structure and the industry opportunity structure (Soule, 2009). Theorization and definitions of these terms are inconsistent, but in general the concept of an “opportunity structure” includes three elements: the long-term structures of a state or industry that change relatively slowly, such as the constitutional division of powers in the state or the degree of concentration of an industry; the more ephemeral configuration of parties in power or of dominant firms in an industry; and the state of public opinion or, for industry, consumer preferences. These conditions can affect the outcomes of social movement mobilizations, but they can also change to varying degrees in response to mobilizations.

The other main resource for explaining outcomes draws attention to processes involving agency and strategy. Social

movement researchers have studied a wide range of strategies, among them selecting repertoires of action and appropriate frames that can attract public support and strengthen coalitions (Della Porta and Diani, 2015). Actors may select repertoires of action that remain within existing institutional structures (e.g., litigation, media campaigns, lobbying) or that go beyond existing institutions (e.g., street demonstrations and boycotts), and these choices can provoke divisions in a movement and different responses from incumbents in government and industry. Strategy depends significantly on building robust and broad coalitions, and doing so requires adjusting frames and goals as coalitions expand.

The study of ITMs builds on these basic theoretical resources but draws attention to new topics such as the role of scientific expertise and of countervailing industrial power. For example, ITMs can identify a pattern of undone science, or the systematic non-production of knowledge, which occurs when industrial incumbents attempt to block research on new topics associated with the goals of the ITMs (Hess, 2016b). One example involves the alternative industrial movements and their support of the scaling up of niche technologies such as renewable energy. To a large extent the barriers of cost and technological readiness can be overcome with supportive research and market-development policies, and the ITM coalitions can help to develop the political will for policy change to support more research and related policies. Another example involves the industrial opposition movements that need research to support claims of health and environmental risk but often are faced with an absence of funded research and with discrediting campaigns by incumbent organizations (Hess, 2014). Again, the ITMs can help to develop the political will for more funding of independent research. Moreover, if the government does not step in to address the ITMs’ goals of more research funding, civil society organizations, and even citizen-science coalitions can provide some support (Hess, 2009). In general, scientific research is important both for the alternative industrial movements and the industrial opposition movements because it underlies contestations over appropriate regulatory stances and industrial development policies, and it plays a role in the development of standards that guide future product and technology development.

The second additional causal condition in the study of ITMs is the role of cross-industry alignments. Although incumbents in an industry tend to be organized via trade associations that allow the competing firms to join in common cause in order to protect the industry’s broad interest, these within-industry alignments can be challenged by the entrance of incumbents from other industries. Even where there are powerful alignments across related industries (e.g., electricity, fossil-fuel extraction and delivery, and transportation), industry incumbents from other sectors may provide countervailing industrial power to the challengers. One example is the conflict between the solar industry and utilities in the U.S. over distributed solar energy, where the utilities have mobilized to restrict or end net-metering laws and have limited their financial support for rooftop solar financing (Hess, 2016a). The development of third-party ownership models resulted in a flood of investment from incumbent organizations in the financial and technology

industries that saw new opportunities. Likewise, within the utility industry there are break-away companies (such as Green Mountain Power) that have embraced the new models of ownership and energy generation. Whether from incumbent organizations in neighboring industries (countervailing power) or in the same industry (broken ranks), the capacity for an incumbent coalition to maintain support from other industrial incumbents is a causal condition that affects the outcomes of ITMs.

## CONCLUSION

The study of energy, democracy, and governance has much to gain from research that includes the role of social movements. Although interdisciplinary research in this area can benefit from inquiry into ideal governance process and the state-centered analysis of political institutions, this commentary suggests the benefits of also viewing energy systems as embedded in broader societal conflicts. ITMs can be narrowly focused on the goal of change of sociotechnical systems, such as bringing about a decarbonization transition in an energy sector, but they can also include goals of improved democratic decision-making; community control; equitable access to affordable energy; and the creation of good, green jobs.

A typology based on goals of ITMs has the advantage of enabling a comprehensive analysis of the relationship

between civil society and energy governance and democracy in a specific region. In other words, this approach creates a set of categories that researchers can use to determine if their analysis of the topic is comprehensive. The typology can also make it possible to examine from an organizational perspective how much the different goals become divided up into silos of relatively distinct organizational networks and how much the goals are shared across a broad range of advocacy and activist organizations in a region. This approach can also help to identify how the ITMs can be at cross-purposes with each other and how incumbent organizations can form alliances with one type of ITM (e.g., labor unions associated with the utilities) in order to undermine another type of ITM (e.g., environmentalists in coalition with renewable energy companies). Moreover, attention to the unique processes and outcomes of ITMs, such as the role of scientific knowledge and industry alignments, can build on and contribute to social movement theory to provide a framework for explanation of the factors that enable ITMs to be more or less successful at achieving their goals.

## AUTHOR CONTRIBUTIONS

The author confirms being the sole contributor of this work and has approved it for publication.

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