Chapter 2

Energy Politics in the Public Sphere: Frames, Values, and Symbolic Power

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Abstract The study examines the relationship between energy policy and values that appears in social movement mobilizations with respect to energy in the United States. As the social movement mobilizations include persons and groups located in disadvantaged or subordinate positions of the social structure, the analysis of social movements and values can bring out the linkages between structural inequality and values. Three policy fields are discussed: net metering, smart meters, and green economic development. Both challengers and incumbents link their strategic frames to broader cultural values to gain credibility in the public sphere. Both types of coalitions generally reference a similar group of widely shared values that are associated with institutional logics, but they engage in different strategies to make credible the linkages between their positions and the general values and to question the linkages posed by the frames of opponents. The study maps out the broad value categories that appear in the framing contests, develops a typology of counterframing strategies, and explores cross-cultural applicability and limitations.

2.1 Introduction

Energy systems, like other large technological systems, may first appear to be designed based on technical criteria such as functionality and efficiency, but the systems also involve design choices that can cause technical criteria to become interwoven with intense political conflicts. As the opponents in the conflicts attempt to change or maintain the configuration of energy systems, they bring their debates into the public sphere. By linking the frames they use to support their positions with widely held cultural values, actors can show how their positions are aligned with the broader public interest and do not merely represent the self-interested views of a “special interest” group. Thus, the referencing of broad cultural values, both implicitly and explicitly, is part of the struggle for symbolic power in the political field

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(Bourdieu 1991). As various actors attempt to show how their positions best align with the public interest, they attempt to gain credibility to influence public opinion, policy outcomes, and the design of the technological systems.

This study is a contribution to the analysis of values in energy politics based on a comparative analysis of cases of energy politics in the United States. In the study of values and energy politics, two main approaches can be distinguished: evaluative and explanatory. The evaluative approach articulates a set of value-based principles that can be used to analyze energy policies and programs. For example, this approach might develop a set of guidelines based on cosmopolitan concepts of distributive and procedural justice that enable an analyst to define basic features of a just energy system. Having articulated this set of principles, the analyst can then evaluate the energy policies and programs in different times and places to show how well they stack up against the yardstick principles, and the analyst can make suggestions about how the policies or programs could be improved to make them “better.”

The evaluative approach can be found in philosophy-informed research and sometimes in the policy-oriented disciplines (Fischer 1995). Although the evaluative approach provides a clear basis for suggesting improvements to existing energy systems, it faces the challenge of justifying the principles upon which the evaluation is based—that is, the grounds for the ethical principles used as the yardstick and why anyone should agree with one set of principles over another. One solution is to begin with the values accepted in the local policy context and evaluate policies against those values, but local values are often contested. Another solution is to use a philosophically derived set of values based on cosmopolitan principles such as democracy and justice, but understandings of these principles may vary cross-culturally, and other values may also appear as more salient or important.

The alternative “explanatory” approach, and the one used in this chapter, is based on a long tradition of research in the social sciences, dating back at least to Weber (1978) and Durkheim (1965), that defines a different type of analytical enterprise from that of evaluating policies and programs. Rather, the goal is to view values as “social facts” that can be described by social scientists using specified methods. In this sense, values are patterns found in orientations to action that exist in the minds of social actors and that are shared to some degree in collective entities. Values are “models for” action that can be described through qualitative research, and they can be used to help explain the action of individuals and collective entities.

As with the evaluative approach, the explanatory approach has disadvantages and advantages. The disadvantage is that the approach brackets the often important question of evaluation of which energy choices are better or worse. Because the approach is restricted to “is” rather than “ought” questions, at best the approach can offer scenarios of the implications of different policy choices. The advantage is that because the researcher is not engaged in the evaluation of local practices (or the research at least cordons off this exercise as a separate endeavor), the problem of whether opposing sides in a policy conflict agree with the analysis is also avoided. The researcher justifies the choice of values in the context of a research community where alternative explanations are vetted, including explanations that reference other values and explanations that focus on structural conditions or other factors rather than values.

In summary, the term “values” may create cross-disciplinary misunderstandings in the context of interdisciplinary research on energy, ethics, values, and justice. An evaluative approach to energy politics that is based on philosophical principles will have a very different idea of what “values” are in comparison with an explanatory approach that is based on social theory and social science. This study will adopt the latter approach to develop an analysis of frames, values, and energy politics, but it will also explore the problem of cross-cultural limitations of explanatory approaches and the implications of explanation for evaluation.

2.2 Theoretical Background

Within the explanatory approach, one can distinguish two main traditions. The nomothetic approach (common in sociology, political science, economics, and social psychology) attempts to build general explanatory theories about causal mechanisms that can be applied across a range of social contexts, such as a theory of political revolutions or a theory of marital preferences. These explanations are generally delimited institutionally (for the state or other institutional sector), temporally (for a specified time period), spatially (for urban systems or international systems), and culturally (for Western democracies, for authoritarian capitalism, for Latin America, etc.). In contrast, cultural anthropology and history tend to adopt an idiographic mode of explanation that focuses on the multiple causes of specific events or practices, such as the French revolution or changes in marital preferences in rural Algeria. Idiographic approaches can be brought together in comparative research that can then generate higher-level nomothetic theories. In most cases, these theories are of the middle range and do not aspire to be applicable across all human societies.

Values are one of the many resources available for explanations of either type. Researchers influenced by the meaning-oriented tradition of Weber (1978) and cultural anthropology (Geertz 1973) view values as part of symbolic or cultural systems that provide models of and for social action. In other words, cultural systems include both cognitive maps that describe the social and natural world and normative maps of how best to handle situations in the world. The normative side is usually parsed into two subcategories: values, or general principles for action (“we value human lives”), and norms, or articulations of values that serve as guidelines for action (“our laws punish murder heavily” and “our laws include strong safety regulations”). Norms are usually backed by a system of rewards and sanctions that can be formally coded in the legal system. Cognitive and normative categories may be understood consciously by the people who use them, or they may be hidden from view, implicit, or even unconscious and thus only evident when analyzed by a social scientist. For example, the normative categories may be implicitly utilized in everyday practices, rarely acknowledged, and only made explicit when they are breached, but they can also become codified as laws, regulations, standards, political or occupational ideologies, theologies, or ethical systems. In this sense, they structure

action in a way similar to that of a grammar for speech. In this context, the concept of ethics is understood as a formal codification of a network of norms and values, usually applied to a specific domain of social life. For example, many professional societies have ethical codes.

Both the cognitive and normative categories can be analyzed with some precision using the methods of semiotics and structural linguistics (e.g., Lévi-Strauss 1974). The semiotic approach focuses on the role of the codes as instruments of communication and, when shared across a community, of social integration. In addition to this method, a second perspective embeds the semiotic analysis of symbolic codes in social relations to show how they also serve as instruments of symbolic power (Bourdieu 1991; Wacquant and Akçaoğlu 2017). Understood as a world-making capacity to generate, maintain, and change codes, symbolic power is exercised by actors in a wide range of social sectors, including advertising, artistic creation, scientific knowledge, technological innovation, educational instruction, and religious cosmology and ethics. The diversity of sources of symbolic power generates multiple codes, and the state serves as the evaluator and arbiter of differences. For example, as Bourdieu (1991) argued in his analysis of the making of the French language, the state intervened to produce a standardized national language that in some regions displaced the local dialects, and in other regions it imposed a linguistic hierarchy on bilingualism. More generally, the development of standards, laws, and ethical codes, either through the state or through private governance mechanisms, involves the exercise of symbolic power through the hierarchical ordering of codes and practices.

To resolve conflicts among codes, the state can utilize deliberative processes that enable the vetting of differing viewpoints. But alongside deliberation in the various sites afforded by the state (parliaments, regulatory hearings, judicial processes, and so on), deliberation also takes place in the broader public sphere, which is understood here as a social field of public debate, both cognitive and normative, about social issues, problems, and solutions where the stakes are favorable public opinion for a position. Although the debate and deliberation that contributes to the shaping of public opinion can be unmediated and face-to-face, as in dinner conversations and small meetings about appropriate energy policies, to attain broad political influence over public opinion it must be disseminated through the media. Thus, contestation in the public sphere is, for the most part, a mediated struggle for legitimate definitions of problems and their solutions.

To gain legitimacy and support in the public sphere, it is important not to present one's position as merely defending a narrow personal, organizational, or even sectional interest. Instead, actors in the public sphere attempt to gain legitimacy by representing their positions as aligned with a broad public interest. In doing so, they make references to widely shared values as part of their framing strategy. In turn, opponents may attempt to unmask their opponents by revealing their positions to be hiding self-interest or at least covertly aligned with it. But if an actor or coalition of actors is successful in making a position appear to be coherently aligned with shared values and beliefs, it can achieve broad credibility and have influence on public opinion and public policy. Thus, the alignment of positions in the public sphere with

general values involves the paradoxical interest in disinterest, that is, the interest in producing a position that is aligned with a general public interest rather than a private or sectional interest (Bourdieu 1991). One way of achieving this appearance of disinterest is to frame one's position in reference to widely held values and generally accepted knowledge.

2.3 Values, Frames, and the Politics of Energy

There are various approaches to the categorization of values. In idiographic explanations, researchers who adopt cultural methods tend to begin with emic categorizations, that is, the values articulated in discourse or implied in practices. With nomothetic explanations, comparative work generally tends to subsume local categorizations in etic categories of value types, that is, general categories developed by social scientists. For example, Weber (1978) and Parsons (1977) were concerned with the problem of modernity and tended to draw attention to the changes in institutions that involved a shift from particularistic values (those based on loyalties to social groups) to universalistic values (those based on general principles that are applied to all citizens; see also Dumont 1970, 1977). In energy studies, most discussions of justice are based on a universalistic conceptualization of justice (equal justice for all) rather than a particularistic one (different standards for more and less privileged social groups). Social scientists can then show how institutions involve mixtures of universalistic and particularistic practices, such as racial prejudice in the criminal justice system. By showing how social practices are aligned with particularistic values, social scientists can explain and document causal pathways (e.g., the effects of differential criminal justice treatment on incarceration rates) and point to the evaluative question of how to improve a social institution.

For the present purposes of studying the relationship between values and energy politics within a modern, Western society, the broad categorizations of values associated with the study of modern and traditional societies are not as helpful as an approach that is drawn from the institutional logics literature (e.g., Thornton et al. 2011). This approach characterizes cultural logics and associated value orientations for different institutional sectors in modern societies. For the empirical material that will be analyzed here, the most relevant institutional sectors are the state, the household (or family), the economy, and political civil society because these sectors include actors who become mobilized into coalitions that involve different viewpoints on energy politics. The main values associated with the “institutional logics” of these different sectors for the empirical project described below—energy politics in the contemporary United States—are described in Table 2.1. This table adopts an approach that treats frames as explicit ways of categorizing policies (emic categories) that can be located in discourse and values as groupings of frames based on categories developed by the social scientist (etic categories). Frames sometimes map to more than one value group, and examples will be discussed below.

The issue of how applicable this set of values is to other cases in the study of energy, values, and politics is an empirical question. The categories are likely to

Table 2.1 Institutional sectors with an associated orienting value and associated frames

Institutional sector	Orienting value	Associated frames for energy politics identified in the case studies
The state	Good government	Democratic decision-making for policies, local control over electricity, proper government spending, protection of property rights
The economy	Sound economy	Job creation (green jobs), job loss (threat to jobs), marketplace competition, economic development
The family or household	Consumer protection	Energy affordability, energy reliability, fairness in pricing, privacy, security
Political civil society	Environmental sustainability	Pollution reduction, greenhouse-gas emissions reductions, environmental risk and safety

have some general applicability across different regions of the world and different policy fields because they are linked to broad institutional logics that are found in many modern societies. However, other institutional logics may be more prevalent in other countries, such as a religious logic in countries where religion is an important part of public sphere debate for the policy issue in question. Moreover, even similar institutional logics (such as logic based on the value of good government) will likely take on specific meanings in local frames, and the same institutional sector (e.g., the state, the family) may highlight very different institutional logics and associated values. These issues must be addressed through comparative research with an empirical problem in mind and are beyond the scope of the present analysis. The discussion section will provide some indications of what kinds of insights comparative research might provide.

Values are articulated, either explicitly or implicitly, in the framing contests of coalitions of opponents as they defend different visions of energy policy in the public sphere. The competing coalitions are networks of actors with unequal power in society. Two sets of terms are used to describe these different positions of power: incumbents and challengers in a social field, and dominant and subordinate positions in the social structure. In the energy sector, industrial incumbents are generally large organizations such as utilities that form alliances with government officials in the economic ministries and on the political right. In contrast, challengers advocate for new technologies and new organizational forms such as distributed renewable energy and community-controlled electricity, often in coalitions with environmentalists and government officials connected with environmental ministries and the political left. The second distinction is between positions in the social structure, that is, the pervasive system of inequality by race, class, gender, and other social differences. To avoid delegitimation as representing a sectional interest of the elites (e.g., wealthy owners of utilities or middle-class environmentalists), both incumbents and challengers will articulate frames that appeal to people and groups in subordinate positions. These frames can include energy affordability, fair pricing, good jobs, and air quality. More generally, in order to attract supporters to a policy position, coalitions will use frames that are designed to resonate with the beliefs and values of potential supporters.

The term “frames” was originally developed by Bateson (1955), an anthropologist who described a meta level of communication that indicates to actors what kind of game they are in (such as cooperation or conflict) and that provides a lens through which actors can interpret the actions of others. Goffman (1974: 21) developed the analysis of frames as “schemata of interpretation,” and Benford and Snow (2000: 614) introduced the more specific category of “collective action frames,” which are “action-oriented sets of beliefs and meanings that inspire and legitimate the activities and campaigns of a social movement organization (SMO).” Snow et al. (1986) drew attention to the processes of framing and frame alignment, which include specifiable processes such as bridging ideologically congruent frames, amplifying values and beliefs, extending the boundaries of the primary frame to accommodate new adherents, and transforming the frame through redefinition in terms of another frame.

The analysis of framing processes has indicated the importance of values as elements of frames and framing processes. For example, Snow et al. (1986) noted that when activists and advocates amplify frames, they may select values and beliefs that are consistent with those of potential adherents. Likewise, the extension of frames may involve introducing new values into a frame, and the transformation of a frame may involve jettisoning all or some of the values of an existing frame. More generally, activists also draw on the values and beliefs articulated in the cultural codes around them. They may perceive and articulate the general values through the lenses of the relatively durable, stable systems of ideology, which can provide toolkits for constructing frames (Snow and Benford 2000), but ideology is not the only source of inspiration for values. For example, advocates may also draw on deeply and widely understood cultural repertoires of action (Hess 2007).

Although the analysis that follows focuses mainly on values, it assumes that frames also include a cognitive aspect such as the mobilization of widely held beliefs and the linking of beliefs to credible and independent sources of belief such as scientific research or religious doctrine. However, the articulations with widely held cultural beliefs are only discussed tangentially in the analysis that follows, partly because the most widely held beliefs tend to be bundled with widely held values, and partly because the focus of this study is on values and energy.

Values are valuable to frames not only because they serve as general principles behind the “models for action” but also because they can legitimate the frame in the eyes of actual and potential supporters and against detractors. But values are not unstructured like a bag of marbles or the jumble of tools in the back of the truck of a jack-of-all-trades. Rather, when actors make reference to widely held beliefs and values, they are engaging the “discursive opportunity structure” (McCammon 2013). In the field of the public sphere, some values and beliefs are more widely accepted than others. In the credibility battles for public opinion and policy influence, actors must attend to the shifting contours of the valuation of values or, as Ferree (2003) describes it, to the gradient of discursive opportunities. For example, in the cases described below, the polarization of American politics on climate change has made it more difficult for energy-transition advocates to reference the value of environmental sustainability and arguably easier to reference the value of

consumer protection. Thus, the gradient of discursive opportunities, and changes in the gradient over time and across social space, limit the resonance of a frame, including its credibility for the defense of a particular configuration of values that become aligned with a frame. But the decision to pursue resonance or congruence with the discursive opportunity structure remains a choice.

In addition to congruence with the discursive opportunity structure or general cultural repertoires, the selection of frames and associated values is also shaped by the dialogical process of countering and responding to other frames, a point that is developed in some of the studies in the counterframing literature (Esacove 2004; Gallo-Cruz 2012; Steinberg 1999). Thus, the cases that follow do not focus just on the collective action frames of energy-transition coalitions or on a single process of developing and modifying a frame; rather, the cases also examine the framing action of mobilized networks of both challengers and incumbents. The analysis is processual so that one can see how the values are mobilized and interpreted in a series of moves and countermoves. The processual approach shows how the construction of a frame is a relational activity, especially with reference to the counterframes of opponents and the frames of allies or potential allies. In the research described below, five basic selection processes are identified:

- **Refusal.** In response to an opponent's frames and values, an actor may refuse to engage or otherwise ignore the opponent, usually by reasserting or introducing other frames and values.
- **Introduction.** In response to an opponent's frame and value, an actor may introduce a completely new value and associated frame or frames.
- **Substitution.** In response to an opponent's frame, an actor may accept the broader value associated with the frame but deploy a different frame to show how the actor's position also is consistent with the general value.
- **Reassertion.** In responses to an opponent's frame, an actor may rearticulate or double down on the actor's existing frame.
- **Refraction.** In response to an opponent's frames, an actor may accept the value and framing configuration of the opponent but show how the actor's position better meets the framing than does that of the opponent.

One might liken the relational approach to framing and values to a game in which two composers, or two coalitions of composers, compete in a public venue to gain an audience for their music. The frames are the specific compositions of music that they perform, but the compositions in turn reference broader genres of music (akin to the values) that may resonate more or less with different audiences and that are also in response to the compositions and genres selected by the opponents.

2.4 Case Studies

Three cases—net metering, smart meters, and green economic development—are examined based on research projects conducted by the author and his students in the United States. All three cases involve conflicts between incumbent and challenger

coalitions with different framings of their policy positions. The analysis summarizes frames that appear in defense of the opposing policy positions, the values associated with the frames, and the play of the processes of counterframing (refusal, introduction, substitution, reassertion, and refraction). The values are indicated in *italics*, and the counterframing processes are in **boldface**.

2.4.1 *Net Metering*

Net metering is a policy in which the utility pays the owner of distributed energy resources for the production of small-scale photovoltaic or wind energy by funding the net value of the price of the energy provided to the grid minus the price of the energy provided from the grid. The payment structure can vary but frequently is at a rate equivalent to the retail price of electricity. Similar to a feed-in tariff, net metering establishes a stable revenue stream for solar or other renewable-energy installations that enables the calculation of time-to-payback and a predictable return on investment. The policy can also be combined with tax credits and other government incentives.

The first net metering and renewable portfolio standards laws were enacted in the early 1980s, and both diffused over the following decades to other states. By 2018, nearly all of the states had adopted net metering, and more than half had a mandatory renewable portfolio standard, some of which included a “carve out” provision that designated solar energy as a mandatory part of the renewable requirement. Although the first net metering law was enacted in Minnesota, credit for the first net metering installation in the United States has gone to Steven Strong, a solar-oriented architect in the northeastern state of Massachusetts who designed two buildings with solar panels in 1979 (Johnstone 2010). The meters on the building ran backward when the building fed electricity into the grid. President Jimmy Carter accepted an invitation to attend the launch of the project, but at the last minute he sent Denis Hayes of the Solar Energy Research Institute. Local political leaders also attended the launch and praised the project.

At the time the utility industry was based on a technological regime of baseload power produced in centralized facilities such as fossil-fuel power plants, hydroelectric generation facilities, and nuclear reactors. The utilities **introduced** the value of *consumer protection* with the frames of affordability and electricity reliability, which they used to defend the regime of baseload power with centralized fossil-fuel generation. In contrast, advocates like Strong and Hayes, who organized the first Earth Day event, supported net metering as part of a long-term energy-transition goal to renewable energy. For example, Hayes’s 1977 book, *Rays of Hope: The Transition to a Post-Petroleum World*, described the need for “energy transition” to renewable forms of energy. The book **refracted** the frame of reliability by pointing to the risks posed by the 1973 oil embargo and the rise of petroleum prices, therefore suggesting that renewable energy was a better long-term pathway to energy reliability. At the time electricity generation also included petroleum, thus placing

both electricity and transportation at risk from global disruptions that followed from the 1973 oil crisis. President Carter, who supported the development of renewable energy, also linked the future energy transition to long-term reliability that could be achieved with energy independence. But Hayes's book also largely **refused** to engage the affordability framing, partly because renewable energy at that time was quite expensive relative to fossil fuels. Instead, Hayes and other solar advocates **introduced** the new values of *environmental sustainability* and *good government* with the frames of democratic local governance of and control over renewable energy (Laird 2001; Reece 1979). These values could also appeal to elements of their coalition that included environmentalists and progressives who were building local democratic institutions.

In the case of the inauguration ceremony for the two buildings in Massachusetts, the local utility welcomed the development of distributed solar energy, partly because of the support that the inaugural event was receiving from the state and national government and partly because the event helped to counteract bad publicity that the utility had been receiving regarding a nuclear energy power plant, which had become associated with cost overruns and potential environmental risk (Johnstone 2010). Thus, the utility was battling negative framings of lack of affordability and safety that cast them in a bad light with respect to the values of *consumer protection* and *environmental sustainability*. However, in general utilities were skeptical of the electricity from the small-scale sites, which they labelled "dirty electricity" and argued would result in a threat to reliability (ibid.). By using the reliability frame (their ability to provide reliable electricity to consumers) rather than the affordability frame, the utilities **reasserted** their alignment with the value of *consumer protection*. They also **refracted** the reliability counterframing of the renewable-energy advocates (the lack of reliability due to the reliance on foreign oil) by pointing to the potential threat to the grid's reliability from the "dirty electricity" associated with distributed solar energy. Yet, the scale of solarization remained small, and the threat to grid reliability could not be raised credibly. Moreover, with solar in a small and contained niche, and with the centralized, base-load power configuration of the electricity regime in place, the utilities could **refuse** to engage the alternative values of *environmental sustainability* and *good government* associated with the frames of the need for an energy transition and the benefits of local control and ownership.

From the 1980s to the 2010s, the diffusion of net metering and interconnection laws across the state governments, as well as related policy innovations such as renewable portfolio standards with solar carve-outs, created a favorable policy environment for the gradual growth of rooftop photovoltaics. By the 2010s, the development of distributed-generation solar had reached a point that utilities had become concerned with the potential threat that it posed to the electricity regime—that is, a threat much broader than the original concern with dirty electricity. Some documents even suggested that the utility industry saw the development of distributive energy resources as an existential threat akin to the development of wireless communication and the demise of landlines in the telecommunications industry (Hess 2016). Growth had occurred because of a confluence of developments, including the

gradual development of the solar installation industry and the steady decline in the price of solar energy and of on-site energy storage. Moreover, the development of third-party ownership and other financing arrangements provided support for small-scale, rooftop solar based on investment by the financial and technology sectors, which represented countervailing industrial power to the utility industry.

In some areas of the country, notably Hawaii, distributed solar energy generation grew so rapidly that the utility forcefully **reasserted** the value of *consumer protection* and the frame of reliability by implementing a unilateral moratorium on new solar installations. Across the country, the utilities began a campaign to wind down or end supportive solar energy policies, including net metering (Hess 2016). They tested multiple strategies, among which the most pervasive were the establishment of high interconnection fees for distributed solar customers, attempts to end or control the third-party solar market, and the renegotiation of the retail payment structure with a value-of-solar tariff arrangement. Thus, the utilities argued that reliability was threatened by changing circumstances. The growth of solar posed significant challenges to a grid that was not designed for two-way traffic of electricity with high levels of distributed generation. In some cases, the energy flowing into the grid from neighborhoods was greater than the electricity being consumed. Substations were not equipped to handle the load, and there were risks to the equipment and to workers. More generally, the growth of solar had presented substantial challenges of load management such as the “duck curve” of recovery from high levels of solar generation during the afternoon.

Because the time to payback for rooftop solar had declined significantly since the first conflicts of the 1970s, the utilities were less able to make reference to the affordability frame. Instead, they **substituted** a new frame, fairness in pricing, in alignment with the value of *consumer protection*. The utilities argued that when solar customers enjoyed the grid services at a low rate because of the subsidy that net metering represented, the cost burden of serving distributed solar energy customers was being shifted to non-solar customers, who in effect were paying a transfer tax to the solar customers. Thus, there was a lack of fairness for non-solar customers, who tended to reside disproportionately in apartment buildings or condominiums that did not offer solarization or otherwise did not have the resources to purchase solar. Here, the utilities were able to shift the framing of the *consumer protection* value to point to distributive justice concerns that potentially facilitated support from low- and middle-income (LMI) households, which in the United States tend to be disproportionately associated with racial and ethnic minority groups in subordinate positions in the social structure.

Solar advocates responded partially by **substituting** a new frame. Maintaining their alignment with the same *consumer protection* value, they emphasized the frame of reliability rather than fair pricing. Solar advocates argued that the centralized baseload model was antiquated and that new features of electricity production—among them distributed energy, microgrids, and two-way transactions through the smart grid—could enhance reliability. With respect to the fair pricing frame, solar advocates **refracted** the frame by providing technical analyses of the full value of solar to the grid that occurs because utilities can avoid new construction

of power plants, power lines, and other grid services. Solar advocates argued that the utilities did not include such considerations in their analyses of cost burdens and transfers from solar to non-solar customers. Solar advocates also argued that solar energy presented a net gain to the utilities rather than a loss and thus did not constitute an excessive cost burden or a transfer from LMI customers to middle-class solar customers. The new calculations of the value of solar to the grid became the basis for new arrangements and compromises with utilities that replaced net metering with a more complicated basis for calculating payments.

Solar advocates also called for rights to solar for everyone through innovations such as support programs for LMI solarization and, for people who could not have solar on their rooftops, the rights of access to community-based solar shares programs. Thus, they **reasserted** the frames of local control and ownership that had been part of solar advocacy since the 1970s. In the more progressive states such as New York, solar advocates also built alliances with political progressives, labor unions, anti-fracking organizations, and LMI groups to link solar development to alliances that came together under the frame of “energy democracy” (Hess 2018). Some political leaders, notably in New York, responded with a call for grid modernization and support for community solar (*ibid.*).

In the more conservative states, solar advocates tended to respond to the fair pricing argument of the utilities by **substituting** the new frame of “solar choice” as a new approach to the value of *good government*. This approach linked solarization to the value of property rights and the lack of fairness to property owners, who were being denied the right to put solar panels on their rooftops. This approach was particularly important in areas where the value of *environmental sustainability* had lost legitimacy in public opinion due to the rise of conservative populism and also where support for LMI solarization might be rejected as a welfare-state handout. Solar advocates attracted political leaders such as Barry Goldwater, Jr., a former Congressman and the son of the famous conservative presidential candidate. Goldwater, Jr., invoked a property rights frame and a conservative understanding of the value of *good government* by arguing that the right to put solar on one’s roof should be protected (Hess and Brown 2017). Likewise, in the state of Georgia solar advocates found support from the local Tea Party in their efforts to gain support for third-party ownership for the state, again depicted as a right to have access to solar (*ibid.*).

In summary, this analysis shows how the value conflicts over *consumer protection* were central as various frames were contested between advocates of distributed solar energy and the utilities. Advocates introduced additional frames associated with the values of *good government* (local democracy, rights of property owners) and *environmental sustainability* (greenhouse-gas emissions and pollution reductions), but the utilities largely refused to engage these values and associated frames. However, they did develop a new frame of fairness in pricing, which brought a distributive justice consideration into the group of *consumer protection* frames, which solar advocates met with a group of frames that were adapted to more progressive and more conservative local political cultures (e.g., energy democracy and property rights).

2.4.2 *Smart Meters*

By the 2010s state governments in the United States, like governments in other countries, were initiating policies to support the development of the smart grid, which involved a technological transition to greater reliance on digital technologies, two-way interactions, and energy transactions. Although utilities resisted the integration of distributed energy such as rooftop solar, the transition to smart-grid technologies provided other advantages. Among the benefits to utilities were the potential to implement time-of-day pricing and demand management, savings in labor costs from remote meter reading, and an improved capacity to integrate distributed energy resources where required by government mandates. Technology companies also welcomed these developments because they could help to enable the “Internet of things,” where appliances inside a home or workspace could become connected with the Internet.

In the public relations campaigns funded by governments, utilities, and in some cases smart-grid companies, the introduction of the smart grid was associated with diverse framings. With respect to the value of *consumer protection*, the promise was that the new technology would result in lower prices due to higher efficiencies, greater reliability in the event of power losses, and fairness in pricing because consumers who used the most expensive energy (at periods of peak load) would be charged more. Likewise, with respect to the value of *environmental sustainability*, the new technology promised increases in energy efficiency and the capacity to utilize distributed renewable energy, both of which would reduce greenhouse-gas emissions as well as local fossil-fuel pollution.

The consumer interface of the smart grid is the smart meter, which the utilities presented as a minor technological change that occurs when they swap out an old analog meter for a digital meter. The process could take only a few minutes, and in many cases homeowners were not aware that the switch had taken place. However, in several countries anti-smart meter mobilizations occurred. In the United States and Canada, there were mobilizations to place a moratorium on smart meter installations until public concerns could be addressed, and when these mobilizations failed, groups sought the right to opt out to retain their analog meters. In the United States, there were grassroots mobilizations of groups that sought resolutions from local governments to end smart meters and that also participated in hearings before state governments. The opposition groups obtained some support from public health scientists, privacy organizations, and EMF risk and remediation organizations that had emerged in response to health risks associated with other types of electrosmog issues (Hess and Sudibjo 2020). Although the wireless industry rejected scientific research on the health risks of microwave technology, there has been mounting literature on the health risks associated with wireless transmissions of a similar frequency to that of smart meters, such as wireless routers and mobile phones (BioInitiative Working Group et al. 2012).

Research on anti-smart meter mobilizations indicates that the frames vary geographically and by technology (Hess 2014; Hess and Coley 2014). For example, in

the UK and Australia, affordable pricing frames were salient (Hess 2014; Sovacool et al. 2017, 2018), whereas in the Netherlands privacy was a central concern during the early roll-out of smart meters (Cuijpers and Koops 2012). In the United States, privacy was generally the second most frequent framing of opposition (after health risks) because people were concerned with how each appliance's electronic signature could allow the utility to know when people are home and what they are doing in the home (Hess 2014; Hess and Coley 2014). Privacy concerns were sometimes linked to security, which involved the potential for hackers and thieves to know when people were at home. In the United States, there was also some concern with fairness in pricing because time-of-day pricing may be less available to LMI households that do not have programmable appliances or that have work schedules that do not allow them to take advantage of discounted times. Thus, these frames maintained the value of *consumer protection* also seen in the utility and smart-grid company public relations campaigns, but they **refracted** the frame of affordability by arguing that smart meters may not provide the promised affordability and fairness in pricing, and they **substituted** the frames of privacy and security as new types of consumer concerns.

In addition to articulating the value of *consumer protection*, the anti-smart meter groups also supported the value of *environmental sustainability*, and again they **refracted** the framing of the utilities and the smart-grid companies, which had focused on energy efficiency frames. In the United States, the health risk frame was often the most frequently articulated frame, and public testimony indicated widespread concern with the potential health effects of constant, non-thermal microwave radiation exposure (Hess and Coley 2014). The risks were also potentially distributed unevenly, with higher risks for people in apartment buildings whose living quarters were directly next to a meter bank and for people who used pacemakers. Thus, without rejecting the frames of energy efficiency and reduced greenhouse-gas emissions, opponents pointed to an alternative framing of the value of environmental sustainability where the smart meter roll-out was posing a potential environmental health risk.

These controversies slowed the implementation of smart meters in some areas of the country, and in North America several states and provinces adopted opt-out rules that allowed the most vociferous critics to have a non-wireless or analog meter for an additional fee. For those concerned with health risks, the option was not very helpful unless neighbors also opted out. In general, the utilities **refused** to engage the public concerns on a number of issues: lack of meter accuracy and exorbitant pricing, social fairness associated with time-of-day pricing, and privacy concerns (Hess and Sudibjo 2020).

In this set of policy conflicts, *consumer protection* and *environmental sustainability* values were most evident, but there were new frames that articulated these values, among them privacy, security, and electrosmog health risks. In some cases the value of *good government* appeared when opponents expressed disappointment with the failure of state governments to respond to calls for a moratorium on smart meter installations, but in our analysis of statements by opponents of smart meters these frames were not as salient as health, privacy, security, and affordability.

2.4.3 *Green Economic Development*

Whereas the first two cases involve conflicts within an industry (electricity) over the politics of transitions (solarization and grid modernization), the third case involves a broader conflict between a coalition of conservative political leaders aligned with the fossil-fuel sector and a coalition of progressive leaders aligned with environmentalists, the clean-energy sector, and LMI groups. In the United States, the latter coalition tended to develop the international frame of “sustainable development” with its links to the values of *environmental sustainability* and *sound economy*. In other words, economic development, including job creation, can be made compatible with environmental progress, provided that there is sufficient government direction of the economy.

In contrast, in the U.S. political conservatives have frequently questioned the convergence of the values and argued instead that environmental regulation poses a threat to job creation. This “threat to jobs” frame points to potential for job loss in the fossil-fuel sector and harm to the general economy as a result of higher regulatory costs and lack of economic growth and global competitiveness. This framing is accompanied by the attempt to break down the alliance between labor and political progressives by bringing some portions of the labor unions over to the side of industry, that is, to put aside class divisions in favor of the broader goal of protecting jobs.

In the United States, a version of the sustainable development frame is “green jobs,” which originally was pioneered by the Sierra Club and the United Steelworkers and then grew to include other organizations that joined the Blue Green Alliance. In 2008 then Senator Barack Obama embraced the green jobs frame by promising to create five million green jobs as part of his political platform for the presidency. This frame **substituted** the “threat to jobs” frame by promising to create millions of new jobs, a strategically important choice in light of the deep recession that the country faced. The “green jobs” frame helped to mobilize unions, environmentalists, and progressives to Obama’s ultimately successful presidential campaign. Significantly, the “green jobs” frame also included plans for jobs specifically oriented toward LMI households through weatherization programs, and it thus linked to the frame of energy affordability for LMI households (Hess 2012). The frame of green jobs also helped to expand the electoral coalition to include both progressive environmentalists and voters from LMI households of all races and ethnicities who were attracted to the combined frames of green jobs, more affordable energy (through weatherization), and greenhouse-gas emissions reduction.

After the election, President Obama implemented policies consistent with the campaign promise in the first major legislation of his presidency: the American Recovery and Reinvestment Act of 2009. The act provided funding for green jobs training programs, LMI weatherization, and steel-based energy transition projects such as high-speed rail that the unions welcomed. The Democrat-controlled Congress introduced and in some cases passed a series of laws designed to support energy transition and job development. Among the new programs of the Obama administration was the Advanced Research Projects Agency—Energy (ARPA-E)

and various programs in the U.S. Department of Energy designed to support renewable energy and grid modernization.

The fossil-fuel sector and allies in the opposing Republican Party responded by **refusing** to engage the value of *environmental sustainability* associated with the frame of greenhouse-gas emissions and by **reasserting** the “job threat” frame. The incumbent coalition proposed that the new policies posed an existential risk to the millions of jobs in fossil-fuel extraction, refining, transportation, and retail. Passengers riding the Metro in Washington, D.C., saw advertisements about the millions of jobs at risk (and the threat that angry voters posed to elected officials). Conservatives also attacked the Obama administration’s funding of solar companies and other programs associated with green industrial policy. Here they **introduced** the value of *good government* by framing the program as a waste of taxpayer funds and as an improper incursion of the government into the market. When one of the funded companies went bankrupt, Republicans in the U.S. House of Representatives passed the “No More Solyndras” bill in 2012 (HR 6213). They argued that the government had stepped into the field of picking winners and losers in the marketplace and that this was not an appropriate role for government. Thus, they elevated the Solyndra case into a lesson about why governments should not engage in industrial development policies, and they suggested that the policy was a threat to the value of a *sound economy* because the government was interfering in processes of marketplace competition. Accusing the Obama administration of misguided dirigisme and industrial policy, they combined frames that suggested that the policies violated the values of both *good government* and a *sound economy*.

By the 2012 re-election campaign season, President Obama had backed away from the green jobs frame, partly because the purging of Republican moderates in primary elections in 2010 was associated with the rise of climate denialism in Congress and in the public sphere. The change made any kind of “sustainable development” or “green jobs” frame toxic for a bid to gain support from independent and moderate voters. But the “green jobs” frame did not disappear in the more progressive states, such as California, Hawaii, Massachusetts, and New York, where state government leaders extended the frame from green jobs to local economic development. These frames **reasserted** the linked values of *environmental sustainability* and *sound economy*. For example, they highlighted the job creation benefits to the regional economy from having a vibrant cleantech sector and from engaging in the import substitution of locally produced renewable energy instead of out-of-state fossil fuels. This focus meant more local job creation and a healthier regional economy. Media coverage of green jobs at the local level—which tended to emphasize the positive news of local job creation and local business development—was indeed more positive than at the national level (Hess et al. 2018).

In this case, the primary value conflict involved framing and counterframing with respect to the broad value of defending a *sound economy*, with much of the focus on job creation and job loss. LMI families could potentially benefit from the creation of green jobs and the reduced energy costs associated with weatherization, but other LMI families could suffer from job loss associated with an energy transition away from the fossil-fuel sectors. The secondary value conflict involved *good government*

and the differing views of the proper role of government regulation and industrial policy in a market economy. Although *environmental sustainability* (greenhouse-gas emissions reductions) and *consumer protection* (energy affordability for LMI households) values appeared in the Obama administration's green jobs framing, the conservatives **refused** to engage these values.

2.5 Discussion

A primary implication of this analysis is to demonstrate the feasibility of a method for studying values in the context of processes of framing and counterframing among competing coalitions in energy politics. The study also has identified five processes in the relationship of framing and counterframing: introduction of new frames and values, reassertion of the same frames, refusal to engage the opponent's frames and values, substitution of a new frame with the same value shared by an opponent, and refraction of the same frame and value but with different meaning.

The comparative analysis of three cases of energy policy conflicts in the United States suggests that frames and values play an important role in energy conflicts because coalitions use them in the public sphere to legitimate their policy positions and to delegitimize the positions of their opponents. By selecting frames that are aligned with broad cultural values such as consumer protection, environmental sustainability, a sound economy, and good government, coalitions can attract supporters from across different institutional sectors. They can also portray their policy positions as consistent with widely held values and the public interest rather than with the sectional interests of specific interest groups. By referencing widely held values, actors transform their proposals for political and technological change or stasis from a self-interested perspective into one aligned with the general public interest. Doing so can enable their proposals to gain legitimacy in the public sphere and also to gain support in the political field. Thus, the referencing and articulation of general values is central to the symbolic power that coalitions of actors attempt to exercise in the public sphere because it aligns their position with general public benefit rather than sectional interest.

Some limitations should be recognized for this type of explanatory analysis. First, the causal explanatory power for policy outcomes is a separate problem. The selection of frames does not determine policy outcomes, but it is part of the process of building and maintaining coalitions that can acquire the public support and political weight that is needed to achieve a policy victory. A complete causal analysis of policy outcomes would include structural conditions and the full range of tactics that actors employ to gain support for their positions. Second, the portability of the method is unknown, but it is unlikely that the bundle of frames and the value groups can be applied to culturally distant cases of energy politics without some changes. Indeed, the comparison of the three cases suggests that the frames and values will vary from case to case even in a close group of cases in the same time period in the same country. In the net metering case, the primary value conflict involved con-

sumer protection, and the frames included affordability, reliability, and fairness in pricing. In the smart meter case, the primary conflict involved the values of consumer protection and environmental sustainability, with opposing sides having different interpretations of the same frames but also differences in the selection of frames. In the conflict over green jobs, the primary value conflict involved achieving a sound economy that can generate good jobs and economic development, but there were also differences regarding the proper role of government and the effects of government intervention in the economy.

With substantial variation even within a highly limited and small set of comparison cases, one should not expect to find that the set of values or frames identified here can be applied across a wide range of countries and policy conflicts. However, the method itself is portable even if the content of the frames and values may require some changes in other cultural contexts. This limitation is likely even if the analysis is restricted to contemporary energy policies in industrialized and industrializing countries with relatively democratic institutions. The portability of the categories of frames and values used in this analysis is an empirical question to be resolved through additional research, which eventually could build up a more complete set of frames and values that appear in a wider comparative context.

Comparative work that explores the portability of the method would need to include research on framing conflicts in culturally and economically different countries. To date the research on this topic for energy politics is limited, but there are some good studies in the anti-dam literature. For example, in a comparative study of two successful mobilizations against hydropower projects in Myanmar and Thailand, Kirchherr (2018) noted that in the case of the repressive government of Myanmar that had nominally shifted to civilian rule, the challenger coalition framed the region as part of the country's cultural heritage and used prayer ceremonies in support of saving the river because overt protest was considered too risky. Thus, an institutional logic associated more with *protecting cultural identity* was more prominent. In Thailand, as the movement grew and attempted to attract support from urban constituents, the framing shifted from the human rights of communities that would be displaced to the value of the river as an environmental resource worth preserving. Thus, frames associated with the value of *environmental sustainability* become more prominent.

In Brazil, some of the anti-dam movement research has also examined the question of framing and found a similar pattern of changes in frames that coincides with the development of coalitions. In the case of opposition to the Ribeira de Iguape River in Paraná, Thorkildsen (2018) noted that the original framing focused on human rights, which in this case were linked to the land and to the property rights of descendants of quilombos (communities formed by former African slaves). Thus, the value of *good government* and the frame of property rights were the starting reference points, but again an institutional logic that one might classify as based on a *protecting cultural identity* (quilombo descendants) was also salient. However, as the movement expanded to a national coalition that included urban partners, the framing shifted to "socio-environmentalism," which involved the frames of land preservation (*environmental sustainability*) and of the need to make government

licensing and decision-making processes more democratically accountable (a different emphasis on what constitutes *good government*). A similar trajectory occurred in the development of framing in the Uruguay River basin (Rothman and Oliver 1999). These frames based on the values of *environmental sustainability* and *good government* as democratic process frequently countered those of the pro-dam coalition, which focused on the *consumer protection* value of affordable and reliable electricity and the *sound economy* benefits of economic development for the country.

This brief discussion of the possibilities of a comparative project on the patterns of framing, counterframing, and values suggests how the conceptual framework would be modified with additional comparative work: values associated with other institutional logics (such as protecting cultural identity), different salience for institutional logics (the higher salience of political or good government logics), and different framings or articulations of the normative ideal for the same institutional sector (e.g., human rights rather local control or proper government spending). The general framework can be applied to track the play of frames, counterframes, and values, but the content will need to be adjusting to different cultural conditions.

2.6 Conclusion

One of the implications of this study in the context of interdisciplinary energy research is to suggest the need for clarity about whether their intellectual project is evaluative or explanatory, or at least where one approach begins and the other ends. If the intellectual project is explanatory, then the categorization of values can emerge from the mixture of empirical analysis of framing action and the general background comparative work on categories of values (such as the literature on institutional logics that was used here). However, if the goal of the researchers is evaluative, then they should be careful to explore and describe the limits of the first principles that they are articulating. For example, one might begin with a study of energy and ethics by developing a typology of principles associated with justice, and this approach can provide a useful yardstick for evaluating how well energy politics and programs throughout the world measure up against the principles. However, the explanatory approach of this study suggests that when one develops an approach to values based on the empirical analysis of frames and counterframes that are deployed in cases of energy conflicts, the concept of justice as the primary way of defining the normative dimensions of energy politics and policy may be limited. The same would apply to other broad normative categories of Western political thought, such as democracy.

In the empirical research presented here, concerns with two of the most prominent approaches to justice—procedural and distributive—appear only in some of the frames. For example, procedural justice appears in frames associated with democratic local control, and concerns with distributive justice appear especially in the frames associated with fairness in pricing and job creation (or job loss). It would be

difficult to subsume the wide range of frames described in this study (summarized in Table 2.1) and the associated values under a predetermined set of principles subsumed under a similar concept of justice. Even in this highly limited analysis, justice appears as a subset of the normative discourse, and using it to guide explanatory analysis of all normative discourse would likely lead to missing important dimensions of that discourse. This limitation would apply both to Western societies, such as the cases discussed here, and to more culturally distant societies or regions of the world, where other institutional logics (e.g., the protection of religious or cultural identity in the Myanmar and Brazilian cases) may be more salient in the framing and counterframing. Of course, one might proliferate definitions of justice (e.g., recognition) to cover more types of frames, but at some point the concept of justice then would become coterminous with the concept of values.

This study also develops a framework that can be adapted to comparative research in the study of values, ethics, and energy politics. It creates a flexible framework based on broad categories of values associated with different institutional sectors (the state, the household/family, the economy, political civil society, and in some cases religious and cultural institutions) and with the wide range of frames that appear in debates between opposing coalitions in the public sphere. The discussion indicates how the framework could be expanded for comparative work, where different institutional logics and frames may be more salient. But it is also possible to build up, through comparative research, a set of etic categories of values and frames that can be used as an analytic framework to help to explain how energy coalitions form and are maintained. In turn, this mode of analysis can feed into broader frameworks that utilize structural factors and other aspects of the political process to explain the outcomes of energy-related policy conflicts.

Moreover, the focus on framing and counterframing in this study suggests how the social scientific study of energy and values can go beyond the “*langue*” level (the symbolic system level) of the analysis of frames as merely rhetorical or persuasive devices to understand how they are embedded in strategic action that is oriented toward building and maintaining support for a political position. In this way, referencing of broadly shared values, either explicitly or implicitly, is not a trivial dimension of energy politics; rather, it is central to the quest for credibility and symbolic power in the public sphere and the formation of coalitions in the political field. Understanding how these processes work can be a powerful foundation for coalitions that seek to have more effective strategies of building more environmentally sustainable, politically accountable, economically viable, consumer-friendly, and culturally sensitive energy systems.

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