

## Energy Humanities

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The Energy Humanities names an emerging field of scholarship that attends to the ways energy resources, systems, and use patterns shape the material, social, and cultural conditions of modern life. Its foundational insight is that energy—defined technically as capacity for work, and colloquially as fuels that “make us go”—is not a physical thing but a social relation (Kinder 2016, Diamanti and Szeman 2020). Regimes of energy extraction, circulation, use, and waste exert definable pressures on social and cultural organization for the simple reason that the social relations of energy—from cooking to traveling to communicating—are central to the reproduction of bodies, subjectivities, relationships, and ways of life. Fossil fuels have dominated the global energy mix from the mid-nineteenth century to the present (sometimes referred to as “petromodernity”), and modern economies, states, cultures, and subjects register the demands and affordances of fossil energy in profound ways. The modern world, with all its excesses and exclusions, is unthinkable without fossil fuels. Understanding what it means to live in such a world—at a moment when planetary warming compels a transition away from fossil energy—is a chief task of the Energy Humanities.

The Energy Humanities aims to be interdisciplinary and intersectional. Scholars and artists from a range of disciplines (Literature, Film and Media Studies, Anthropology, Environmental Studies, Philosophy, Critical Indigenous Studies, History, Art History, etc.) have contributed work to the Energy Humanities over the last decade. The field’s dominant methodologies have a decidedly Marxian bent, and its critical allegiances lie with critiques of capitalism, settler colonialism, imperialism, and hetero-patriarchy—interlocking systems of accumulation and disposal which not only harness and deepen material investments in fossil fuels, but also define “modernity” as such (Wolfe 2006, Mignolo 2011, Yusoff 2018, Estes 2019). Much Energy Humanities scholarship originates in and concerns itself with settler nations in the Global North, especially Canada and the United States. Yet scholars increasingly produce work from and about the Global South (especially the Caribbean Basin, Arabian Peninsula, and Niger Delta), and emphasize Indigenous lands and cultures in their research, noting that sites of fossil fuel extraction, processing, distribution, and waste often occupy spaces belonging to Indigenous groups (Tinker Salas 2009, Riddle 2018, Macdonald 2017, Wenzel 2006, Estes 2019). Such scholarship highlights the disproportionate harm fossil fuel systems inflict on Indigenous communities, Global Southerners, people of color, women, queer people, and the global working classes—as well as the alternative energy histories and energy futures that come into view when such groups have the authority to speak for themselves.

Given oil’s dominance, and its necessary retirement, the Energy Humanities places special emphasis on “petrocultures:” the way regimes of oil extraction, circulation, and use condition habits, habitats, values, affects, cultural attachments, subjectivities, and political possibilities in the modern world. Oil saturates modern life. Gasoline fuels the economy; plastics pervade the built environment; carbon dioxide, a byproduct of hydrocarbon combustion, thickens the atmosphere and warms the planet. As Imre Szeman and Dominic Boyer write in their introduction to *The Energy Humanities Anthology*, “Without the forms of energy to which we’ve had access and which we’ve come to take for granted, we would never have been modern. We are citizens and subjects of fossil fuels through and through, whether we know it or not”

(Szeman and Boyer 2017, 1). To accept this insight is to accept that shifting away from fossil fuels, especially oil, requires more than policy changes and technological advances; it demands a deep understanding of how fossil fuels have made us who we are, so that we might begin to make ourselves and our societies otherwise.

Nick Estes writes in *Our History is The Future: Standing Rock versus the Dakota Access Pipeline, and the Long Tradition of Indigenous Resistance* that “There is no separation between past and present, meaning that an alternative future is also determined by our understanding of our past” (Estes 2019, 14). If the past is slicked with oil, what will the future hold? Like many critical fields, the Energy Humanities concerns itself with praxis, with imagining and constructing alternative futures. It addresses its work to ecological crisis, especially climate change, and orients its research towards an intentional and just “energy transition” (Szeman and Petrocultures Research Group 2016). Against the view that energy transition simply means plugging wind turbines and solar panels into existing infrastructures, petrocultures scholars argue that transition demands sweeping processes of social and cultural revision. “The task is nothing less than to reimagine modernity, and in the process to figure ourselves as different kinds of beings than the ones who have built a civilization on the promises, intensities, and fantasies of a particularly dirty, destructive form of energy,” Szeman and Boyer write (Szeman and Boyer 2017, 3). This is a properly humanistic project—one that has implications for the survival of the human species and, more immediately, the wellbeing of groups systematically denied the privileges of “humanness.”

### **Energy Histories**

Fossil fuels like coal, oil, and methane gas store the accumulated energy of ancient organic matter, compressed and fossilized over millions of years in energy-dense materials. Burning fossil fuels therefore implicates the deep history of the planet, even as hydrocarbon combustion enables acceleration (of production, reproduction, circulation, communication, accumulation, planetary warming) at more-than-human rates. The disjunctive temporalities of fossil energy have been the subject of much discussion among Energy Humanists (Pinkus 2008, Malm 2016, Wenzel 2019). Yet the latter generally agree that the modern history of fossil fuels begins with the rise of industrial capitalism in Britain in the mid-nineteenth century, a moment of energy-intensive capitalist growth which relied on coal at home and slavery and colonial plunder abroad (Malm 2016, Sealey-Huggins 2018, Estes and Dunbar-Ortiz 2020). Since the mid-nineteenth century, fossil fuels have displaced wind, water, animal, and human work power to become the world’s primary source of productive energy, accounting for 80 percent of global energy demand in 2019 (International Energy Agency 2020). While coal and oil producers have seen their dominance challenged as hydrofracked natural gas claims a larger share of U.S. fossil energy production (and as global demand for oil craters amid the COVID-19 pandemic), it remains hard to imagine today’s digitized, hyper-flexible, and ever-accelerating global economy without fossil fuels.

“Energy histories” feature centrally in Energy Humanities research. Andreas Malm has offered perhaps the most influential history of energy in the *longue durée* in *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (2016). Documenting the development of British textile manufacturing in the early nineteenth century, Malm argues that industrial capitalism developed co-extensively with the intensification of coal use for steam power. British textile manufacturers traded water for coal (steam) as their primary energy source not because coal was cheaper (it was not), but because the work regimes that coal made available

(centralized, nonstop production) afforded capitalists greater control over labor. Coal, unlike hydropower, can easily be moved and stored, meaning British manufacturers could release its energy where and when they wanted. More, by adopting a prime mover that stood “outside the landscape” and “outside of time,” British industrialists constructed spaces and temporalities that were wildly out of sync with terrestrial rhythms, enabling capital to accumulate surplus value without regard to natural constraints (Malm 2016, 193). Fossil capitalist arrhythmia has today reached a kind of feverish maximum, as lightning-fast digital communications, data processing, precarious app-based work, and algorithmic trading drive the circulation of global capital.

Further research by Malm (2018), Matthew T. Huber (2013), Jeff Diamanti (2016), and others suggests that capital owners have systematically used fossil fuels to maximize control over labor, replace labor in the production process via automation and offshoring, and increase capital and labor flexibility—often as a way to defer periodic crises of accumulation. Capital’s tendency to deepen fossil energy use has corresponded to shifts in culture. For instance, Huber argues that the post-WWII oil boom in the U.S. underwrote exclusionary geographies of suburbanization, patriarchal regimes of work and domesticity, and imperialist warfare in Vietnam, helping to cement enduring cultural investments in privacy, self-sufficiency, and American exceptionalism. “It was during the postwar period that petroleum became the critical material and energetic basis of everyday life centered on single-family homeownership, automobility, and the nuclear family,” Huber writes (Huber 2012). Promising “an individuated command over space,” fossil-fueled social forms accelerated the fragmentation of common spaces, practices, and ways of being, refiguring the U.S. public as a collection of private subjects and paving the way for the transition to neoliberalism in the late 1970s (Huber 2013). This transition was itself fossil-fueled. Facing overlapping crises of profitability, hegemony, and energy resourcing (dramatized by the 1973 OPEC oil embargo), U.S. capital and its state allies pursued a set of spatial and temporal “fixes”—neo-colonial resource grabs, financialization, offshoring, labor casualization, deregulation—that not only deepened capital’s dependence on fossil fuels, but also made workers more reliant on fossil energy as they sought to maintain themselves in a rapidly privatizing society (Ravenscroft and Williams 2020).

For historians of fossil capital, then, spiking concentrations of atmospheric carbon dioxide are not an incidental but a constitutive feature of “an economy of self-sustaining growth predicated on the consumption of fossil fuels” (Malm 2018, 21). As a feature of fossil capitalist accumulation, climate change extends modernity’s regimes of dispossession and waste, even as it contradicts the justificatory stories told on modernity’s behalf. Moishe Postone (whose work on Karl Marx’s *Grundrisse* predates the Energy Humanities, but nonetheless anticipates some of its central concerns) writes in *Time, Labor, and Social Domination* that “the dream implied by the capital form is one of utter boundlessness, a fantasy of freedom as the complete liberation from matter, from nature” and from labor—a fantasy likewise implied by fossil fuels, as Diamanti, Jennifer Wenzel, Brent Ryan Bellamy, and others have shown (Postone 1993, Diamanti 2016, Wenzel 2017, Bellamy and Diamanti 2018). Specifically, petrocultures scholars have theorized “energy deepening” as the “aesthetic and economic effacement of labor,” while Wenzel has written of a “petro-magic” that “promises wealth without work, progress without the passage of time” (Szeman and Petrocultures Research Group 2016, Diamanti 2016, Wenzel 2017). Yet as Postone observes, “This ‘dream of capital’ is becoming the nightmare of that from which it strives to free itself—the planet and its inhabitants” (Postone 1993, 383). The more capital replaces human labor with fossil energy—and the more the effacement of human labor comes to appear as a guarantor of freedom—the deeper our collective dependence on fuels whose

combustion makes the planet increasingly hostile to life. Fossil capitalism's death drive reveals a contradiction at the heart of petromodernity: while fossil fuels promise unprecedented power to traverse, exploit, and reshape the Earth, such fuels also entail unprecedented hardships, unfreedoms, and foreshortened futures, not least for the workers who dig them up.

Fossil energy systems are notoriously labor-intensive. Workers extract hydrocarbons from the Earth, often suffering dangerous conditions in mines and on offshore wells. Workers then process fossil material into transport fuels, electricity, synthetic fertilizers, plastics, steam for heat, celluloid film, and other taken-for-granted fixtures of modern life, risking exposure to toxins, chemical explosions, and other hazards (Huber 2012). Because energy workers risk their lives to make modern life possible, energy production has been a key site of struggle over the exercise of popular sovereignty since the early days of fossil capitalism. Timothy Mitchell observes in *Carbon Democracy: Political Power in the Age of Oil* (2011) that the dominance of British coal in the late nineteenth and early twentieth centuries corresponded to waves of labor militancy and social democratic reforms, largely because coal infrastructures permitted workers to make effective use of the strike. The global shift from coal to oil, beginning in the early twentieth century, diminished workers' traditional sources of power, while making other forms of struggle possible (consider Water Protectors' efforts to stop the construction of the Dakota Access Pipeline, or the *Gilets Jaunes* movement's mass protests). Yet critical energy scholars, as well as a nascent "ecosocialist" movement in North America, have argued that labor militancy at the "point of production" remains a key tactic in efforts to replace fossil capitalism with social relations that decommodify survival and submit production to democratic control (Huber 2020). Meanwhile, petroleum's dominance continues to expose the limits of Liberal Democracy, as governments in the Global North use neo-imperialist warfare and state violence to protect energy resources (Parrish and Levin 2018), and as rising global temperatures belie petromodernity's promise to deliver a progressively better future.

In reshaping the contours of modern life, work, power, and futurity, fossil energy has remade modern subjects. Emphasizing the pressures fossil fuels exert on gender and sexuality, for instance, Sheena Wilson and Emily Roehl have observed that petroleum regimes tend to enforce hetero-patriarchal forms of family, domesticity, and community (Wilson 2018, Roehl 2019). In advertisements and industry publications, petroleum corporations wed a domesticated image of femininity to the promised pleasures of fossil-fueled domesticity—often to "soften" the image of oil extraction and to normalize high-carbon consumer lifestyles. Such images narrowly construe women as housewives, mothers, and feminized consumers, while erasing women's leadership in anti-fossil fuel struggles (Wilson 2018). Against such erasure, Wilson has highlighted women's anti-pipeline activism, as well as efforts to "reinvigorate feminist knowledge" of energy stewardship (2018). Similarly, Alyssa Battistoni has argued that a just transition to a post-fossil society must be led by women, especially women of color, many of whom work "pink collar" jobs as teachers, service workers, and care workers (Battistoni 2017). Not only do climatic shifts disproportionately affect these workers, but "nurses and teachers, care workers and service workers... are already doing the work that will be foundational to a low-carbon society oriented toward the flourishing of all," Battistoni writes (2017).

Critical accounts of racial and patriarchal capitalism, settler colonialism, and imperialism have provided crucial insights into relationships between energy, subjectivity, social reproduction, and political transformation. In addition to demonstrating that waged and unwaged regimes of accumulation have been equally determinative in making and remaking relationships, mediated by energy, between people and their environments, such accounts show that fossil-

fueled warming is not an apocalyptic break from the smooth development of a progressive modernity, but is rather an extension of petromodernity's regimes of dispossession, expropriation, and waste (Moore 2015, Malm 2016, Yusoff 2018, Estes 2019). Fossil energy regimes bring Black and Indigenous people, in particular, into a "forced intimacy with the inhuman," Kathryn Yusoff writes, as racialized people become stores of energy seen as absolutely essential and yet utterly exhaustible (2018). Because fossil energy is bound up with colonial and imperialist projects—and because struggles against colonization and imperialism are also struggles against fossil energy regimes—the Energy Humanities maintains close ties with critical Indigenous studies, including the work of Louis Bird, Warren Cariou, Winona Laduke, Nick Estes, and Kyle Whyte. Work at the intersection of Energy and critical Indigenous studies highlights ways Indigenous groups are both disproportionately harmed by fossil energy regimes and "often at the vanguard of resistance movements that aim to disrupt or stop the fuel regimes of modernity" (Cariou 2017, 17). Such movements (e.g., #NODAPL, Bayou Bridge protests, climate strikes) not only oppose colonial and capitalist extractivism, but also forward proposals for just, sustainable regimes of energy governance in line with the broader aims of climate justice. For instance, The Red Nation has proposed a "Red Deal," which supplements Green New Deal proposals with plans for decolonization and decapitalization, and Cariou has written about the importance an "*Indigenized philosophy of energy*," rooted in an ethics of "kinship, respect, and responsibility" (The Red Nation 2019, Cariou 2017, 18-19). Such proposals respond to the climate crisis with plans for non-extractive, non-proprietary, and non-commodified energy relations, grounded in efforts to cultivate closer relationships with the energies that sustain life.

Extending critical theoretical projects aimed at challenging modernity's self-narration, "energy histories" scholarship clarifies the ways that fossil fuels organize modern conceptions of freedom and sociality around promises of mobility, expansion, and linear progress, even as the work of extracting, using, and disposing of fossil fuels dispossesses specific classes of people, restricts their freedoms, and obliterates their futures. Yet one should not conclude that fossil fuels necessitate injustice, nor that swapping fossil fuels for renewable energies guarantees more equitable energy regimes. For instance, Claire Ravenscroft has argued that Venezuelan socialism has proved so tenacious—and so successful at reducing poverty and promoting anti-imperialist solidarity across Latin America—in part because the state uses its fossil resources to maintain energy, and therefore political, sovereignty (Ravenscroft 2019). Yet even in nominally socialist states, "resource nationalism" can conflict with grassroots demands for non-extractivist forms of governance, as Thea Riofrancos shows in her study of Ecuadorian resource politics (Riofrancos 2020). Meanwhile, growing demand for low-carbon energy provides transnational corporations opportunities to profit from renewable energy generation through updated forms of colonial extractivism in the Global South. Examples include lithium extraction in Bolivia (opened up to foreign companies by a right-wing coup), solar power production in Western Sahara (a contested colony of Morocco), and wind farm development in Oaxaca, Mexico (Scientists of the Palestinian Youth Movement et al 2019, Cantoni and Rignall 2019, and Howe and Boyer 2015). These and other examples suggest that, for energy transition to advance the aims of global climate justice, it must not only achieve rapid decarbonization, but also "redress ongoing violences of colonialism, and build an economy designed to reproduce life rather than produce profit" (Ravenscroft 2019). Some scholars call this project "decarbonization, decolonialism, and decapitalization;" others simply call it "energy justice" (Diamanti and Szeman 2020).

The Energy Humanities' early theorists—Jennifer Wenzel, Imre Szeman, Patricia Yaeger, Graeme Macdonald, Peter Hitchcock, Ross Barrett, Daniel Worden, to name a few—root their work in literature and film studies. Literary analysis attends to energy as *theme*, examining how texts render energy systems on the page, as well as to energy's influence on *literary form*. Notable inquiries include those undertaken by “petrofiction” theorists, like Amitav Ghosh and Graeme Macdonald, who consider how thematic and formal elements of the modern novel “give voice” to the “oil encounter”—the conflict between petromodernity and pre- and perhaps post-oil ways of life (Ghosh 1992, Macdonald 2012). In a different vein, Patricia Yaeger has proposed the term “energy unconscious” to describe “the pressure that energy exerts on culture, even and especially when energy is not-said,” as a way of encouraging scholars to attend to the structuring absence of energy in literary production (Yaeger 2011, Wenzel 2017). For Yaeger, dwelling with energy's constitutive absence means asking what happens when scholars periodize cultural production “according to the energy sources that made them possible” (Yaeger 2011). What might it mean to suggest that Victorian literature is coal-fired? Or that postwar U.S. novels are literary expressions of an era of cheap oil? Looking to the future, what might solar fictions look like?

To ask such questions is to dwell with the petrocultural attachments that circulate in contemporary cultures, cementing “structures of feeling” that enforce the material and social hegemony of fossil fuels. Even in its most relentlessly literary engagements, the Energy Humanities tends to emphasize the question of “hegemony”—the production of “lived common sense,” enforced by “a whole body of practices and expectations,” as Raymond Williams put it—which its practitioners seek to challenge by considering how dominant cultural forms entrench high-carbon modes of social organization (Williams 2006). Energy Humanities scholars aim not simply to inventory the blocks thrown up by petrocultural attachments, but rather view energy dialectically—as something that influences and is influenced by cultural forms—to consider how cultural production and analysis might move past the constitutive impasse of the oil-soaked present. This project involves taking a distinctly Marxian view of culture, one that investigates the relationship between aesthetic form and material organization—between “text and work” (Wenzel 2017). To this end, Wenzel and others join Yaeger in calling for a “reflexive materialism” that considers energy not only thematically, nor even just formally, but also in terms of the material processes that make cultural production possible in the first place (Wenzel 2017).

Wenzel has also encouraged scholars to attend to energy's aesthetics, especially “the resource aesthetics of petroculture,” which “mediate all other resource aesthetics conceivable in contemporary life” (Wenzel 2017, Bellamy, O'Driscoll, and Simpson 2016). “Resource aesthetics” are crucial, Wenzel argues, because they “normalize” the “resource logics” that drive extraction (Wenzel 2017). In the early modern period, a resource aesthetic defined by “the improving eye”—a perspective that figures not-yet-enclosed territory as wasteland in need of “improvement” via enclosure—helped to justify colonial plunder in the Americas. Today, the dominant resource aesthetic is an extractivist gaze that figures anything that cannot be extracted as “overburden,” an aesthetic judgment that provides an alibi for destructive resource removal. Wenzel argues that the logic/aesthetic of overburden and removal can be generalized to the political logic of neoliberalism as a whole, which has largely abandoned “improvement” as a social project in favor of what others have called a “biopolitics of disposability” (Giroux 2008). Sheena Wilson, Amy Riddle, Rachel Webb Jekanowski, and others have demonstrated how

photography, novels, non-fiction films, and other media both circulate and contest extractivist resource aesthetics in popular culture (Wilson 2014, Riddle 2018, Jekanowski 2019).

Stephanie LeMenager's *Living Oil: Petroleum Culture in the American Century* offers another way to think about fossil aesthetics in literary and film studies. "If one single, material presence... signifies the mucking up of human and natural histories, our deep travels together in the long twentieth century, that substance is oil," LeMenager writes (LeMenager 2014, 182). Oil not only provides the material basis for modern media (ink, celluloid film stock, digital processing, etc.), but also configures U.S. culture as a "petrol screen" defined by constant novelty without change (akin to Fredric Jameson's "continuous present"). Specifically, petroleum organizes American culture around fantasies of material abundance, which LeMenager calls "petrotopia," expressed in collective desires for speed, acceleration, and perpetual motion. Such desires circulate in "the mystified ecological unconscious of modern car culture, which allows for a persistent association of driving with being alive," LeMenager writes (LeMenager 2014, 80). Classic postwar U.S. novels like *On the Road*, *Lolita*, and *The Crying of Lot 49* elaborate an American "road-pleasure" complex, which films like *Mad Max: Fury Road* extend into the present (2015). The latter text narrates contemporary anxieties about oil scarcity through the petrotopian association of oil and pleasure (exemplified by the rough hedonism of the "gas guzzlers"), even as it highlights the dehumanization that follows the concentration of dwindling oil reserves into the hands of a few. The film thus offers a way to think about another keyword LeMenager contributes to the Energy Humanities: the concept of "petromelancholia," which describes "the grieving of conventional oil resources and the pleasures they sustained," even while trying to move beyond them (LeMenager 2014, 102).

LeMenager's key concepts—petrotopia and petromelancholia—highlight the way fossil resources coordinate the concerns of U.S. literary and film culture, while pointing to the ambivalence of petrocultural attachments, especially as they relate to work. In Helena María Viramontes's 1995 novel *Under the Feet of Jesus*, for instance, Alejo and Estrella, two young migrant farmworkers, describe a complicated relationship to oil: "If we don't have oil, then we don't have gasoline," Alejo observes. "Good. We'd stay put then," Estrella retorts. "Stuck, more like it, stuck," Alejo responds. "Aren't we now?" Estrella asks (Viramontes 1995, 86). Viewed through the lens of migrant farm work, oil's contradictory status as necessity and constraint not only highlights the enduring threat of *immobility* which fossil fuels both necessitate and conceal, but also suggests that, even when it *makes things go*, oil gets people *stuck*. For Estrella, who breaks the law and social conventions to acquire money for gas, getting unstuck means refusing to play by fossil capitalism's rules. The hope that sustains the Energy Humanities is that such efforts to get unstuck might be aided by careful analyses of energy's affordances and constraints.

Yet because fossil fuels touch everything, they often go unnoticed, hiding in plain sight. "Fossil fuels in particular have been surprisingly hard to figure—narratively, visually, conceptually—as a central element of the modern," Szeman and Boyer write (2017, 6). For this reason, the Energy Humanities has devoted considerable attention to the problematic of energy's visibility, even as practitioners observe that making energy visible is not simply a matter of pointing out the existence of coal mines, power plants, or automobiles. It is precisely because energy is both visible and invisible—because it assumes both concrete and abstract forms—that it poses an aesthetic problem. This aesthetic problem is, on the one hand, a problem of *representability* (defining an image) and, on the other hand, a problem of *intelligibility* (making sense of that image). Such a distinction, drawn from Marxist aesthetic theory, is crucial, since certain representations of fossil fuels render their social significance unintelligible: "The dark

black, inky liquid that we sometimes encounter as oil is in fact a ruse: it gives away this obvious sign of itself, dead and harmless, so that it might all the more powerfully inhabit and shape the modern” (Szeman and Boyer 2017, 7). In making available a “dead” image of itself, oil obscures what it really is: a structuring force in the totality of modern social relations.

Retooling Marx’s account of “commodity fetishism,” Huber likewise dismisses excessive attention to fossil energy’s visible features as a “fetishism of oil”—a naive, undialectical picture of oil that turns the object into an image detached from its history, production, and relations of use (Huber 2013, 2). In a similar vein, Diamanti observes that the paradigm of fossil capitalism so defines contemporary society that simply identifying its content—smokestacks, pipelines, cars, etc.—is not sufficient to grasp its structure as a whole (Diamanti 2016). Following Amanda Boetzkes and Andrew Pendakis, Diamanti names this paradigm “plasticity,” and argues that a formal logic of plasticity characterizes not only the material operations of fossil capitalism (e.g., floating exchange rates or cargo ships that receive headings en route, allowing capital to deform and reform the circuits of commodity distribution in real time), but also its cultural forms, especially “neoliberal fantasies about the capacity of individuals to endlessly make and re-make themselves” (Diamanti 2016, Boetzkes and Pendakis 2013). Because fossil fuels are not just ubiquitous but *paradigmatic*, a naive hermeneutics of visibility—i.e., simply pointing out that oil is everywhere—does not automatically advance the aims of energy transition, as Huber and Wenzel have argued (Huber 2012, Wenzel 2016). It can in some cases do the opposite, since the petroleum industry, too, has an interest in highlighting the indispensability of oil, usually to suggest that a world without fossil fuels is not just unlikely but unthinkable. To aid transition, making energy visible must also involve making its social relations intelligible.

### **Impasse, Transition, and Energy Futures**

Getting unstuck. This is, in some sense, the ultimate aim of all work in the Energy Humanities. Climate change, as well as local harms caused by fossil extraction and combustion, demands an intentional, rapid, and just transition away from fossil fuels, especially oil. While the need for such transition is widely understood, its scale and scope—encompassing not only material infrastructures, but also dominant social and cultural forms—is unprecedented in human history. Oil exerts such incredible force on contemporary social relations that imagining, much less building, a world “after oil” can seem impossible. Energy transition therefore runs up against “energy impasse:” the material, social, cultural, and affective barriers (wants, desires, expectations, norms, values, etc.) that install a gap between knowing what must be done and actually doing it (Boyer and Szeman 2014). Overcoming impasse requires thinking historically about how oil has shaped social relations, and thinking speculatively about the kinds of worlds we might inhabit under a different energy regime.

Amanda Boetzkes, Sheena Wilson, Brent Ryan Bellamy, Joseph Ren, Rhys Williams and others have written about the possibilities and constraints that might attach to alternative energy regimes. While they caution against “energy determinism,” their speculations invite a set of provocative questions: How might the world function if human societies derived most of their energy from wind turbines or solar panels, rather than coal seams and oil fields? What new habits, values, desires, and forms of life and art might obtain in an era “after oil”? How can scholars, organizers, and artists ensure that a post-fossil world does not simply reproduce, with “cleaner” energy inputs, the oppressions and exclusions of the modern era, but instead advances the aims of climate justice? Scholars have also put the question another way: What futures has petromodernity smothered in the cradle? To ask the latter question is to rethink the issue of

“sacrifice” often associated with energy transition. Fossil fuels unleash powers and pleasures that many will despair to lose, but these same fuels, and the social structures they power, have also blocked alternative social arrangements from coming into being. What “lost futures” lay among the pipelines and parked cars, that swirl among particulates and carbon molecules? How might an energy transition rediscover and reanimate them? What forms of collective abundance might replace the hollow privatism of the fossil era?

Such questions already gesture beyond impasse. One might think of impasse not as a hard limit, but rather as a condition of possibility—“a situation of radical indeterminacy where existing assumptions and material relations can no longer hold or sustain us,” as the Petrocultures Research Group puts it in *After Oil* (2016, 16). Impasse cracks the inevitability of the status quo, and opens the possibility for new, more humane configurations. As it throws into doubt modernity’s endurance, energy impasse creates opportunities to intentionally and reflexively posit new ends and strategies of social organization. Such a perspective conceives transition not in terms of quantitative metrics (1.5 degrees of acceptable warming, for instance), but rather as a fundamental reorganization of material and social systems. While such a project demands material intervention—in the form of pipeline blockades, sabotage, strikes, and riots—it also requires chipping away at the prevailing sense of “the given” (Diamanti and Szeman 2020). If politics is, as Mark Fisher writes, about transforming “the taken-for-granted into the up-for-grabs,” the Energy Humanities’ political potential lies in its ability to unsettle the material, social, and cultural infrastructures which cement the paradoxical belief that there is no alternative to fossil capitalism in the face of a climate crisis that demands just such an alternative.

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