

CHAPTER 12

We Must Abolish Capitalism

What gets us into trouble is not what we don't know, but what we know for sure that just ain't so.

Mark Twain

A FEW YEARS AGO, THE EDITOR OF THE LITERARY REVIEW OF Canada, Bronwyn Drainie, asked me to review Naomi Klein's book *This Changes Everything: Capitalism vs The Climate*.¹ I immediately declined.

My reason for declining had nothing to do with the author or the book. As is often the case, I was overcommitted in my academic duties, which include reviewing research papers submitted to academic journals. Reviewing a non-academic book on energy and climate was of interest, as I am increasingly concerned about how to reach a wider audience with the urgency of climate-energy action – the very purpose of this book. But I knew that thoroughly reviewing Klein's work would require considerable time, and I had none to spare.

However, like many review editors, Bronwyn is tenacious. Soon after I declined, an advanced copy of Klein's book arrived with a note that said, "I know you can't do the review. But please read a few pages and suggest an alternate reviewer with sustainable energy expertise." I should have described Bronwyn as tenacious – *and* clever.

Klein is an engaging writer. She makes it easy for readers to zip through the pages as she mixes personal anecdotes, evidence, and logical argument with cameo appearances by interesting characters. Pretty soon, as I'm sure Bronwyn predicted, I was committed to the book, folding

page corners, attaching yellow stickies, taking copious notes. It took only a couple of days to read the book, but much longer to write the review. As is often the case with reviews, I had far more to say than allowed by the 2,500-word limit.

Klein's thesis looks simple. On pages 21–22, she says, “our economic system and our planetary system [are] now at war,” and “climate change [is] a battle between capitalism and the planet.” This presents humanity with “a stark choice: allow climate disruption to change everything about our world, or change pretty much everything about our economy to avoid that fate.”

But these simple statements beg some complicated questions. Why is Klein sure that our only way to prevent climate disruption is to change everything about our economy? And what does it mean to change everything? If we are getting rid of our capitalist economy, what will be its non-capitalist replacement? And how will this change occur?

To address these questions, I devote much of this chapter to recapping my review of Klein's book. I do this because the thesis she presents in her book provides a perfect example of the important point I made at the end of Chapter 6 – that humanity's failure thus far with the climate-energy threat has provided an opportunity for people to attach their agendas to the solution, and in the process render it more complicated and difficult than necessary.

Klein isn't the only person to do this, not by a long shot. And I discuss some of these other agendas at the end of this chapter. But the argument that climate success requires the abolition of capitalism is seductive to some of the same people who accept the climate science and the need for quick action. The fossil fuel industry benefits most when those who recognize the threat fail to coalesce around the most effective and efficient strategy for success.

And while anyone can issue dramatic statements that we must change everything about capitalism, and many people do, it's not so simple to explain what changing *everything* actually means, nor how that would happen in democratic countries where most voters keep demonstrating a strong preference for capitalism relative to its alternatives. After poring carefully over the book, here is my best effort to summarize what Klein wants to see happen, why she claims that abolishing capitalism is our *only*

choice, and why I think that pursuing her prescription increases our likelihood of continued failure with the climate-energy challenge.

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Klein argues that because the powerful elites in capitalist countries benefit greatly from our economic system, they are biased to downplay its severe environmental disruptions and its concentration of harm on poor and oppressed people. We are reaching a crisis level because the rampant economic growth under global capitalism intensifies these disruptions, with climate change now the most threatening of all. Yet preventing climate change is impossible under capitalism because this economic system concentrates economic and political power in the hands of the very people who get the benefits but don't pay the costs of its destructive growth. Deep decarbonization must happen quickly, but these people cannot allow this because their power is inextricably tied to the fossil fuel energy system.

The only way for humanity to diverge from this suicidal path is for people concerned for social justice and environmental sustainability to join forces with oppressed and marginalized people in mass activism that uses legal and political means, as well as civil disobedience where necessary, to block construction of new fossil fuel projects – what she calls 'blockadia.' At the same time, cooperatives, aboriginal bands, local governments, farmers, homeowners, and family businesses should develop small-scale renewable energy to replace fossil fuels.

Although Klein repeatedly says we must change everything about the capitalist system, she never actually names the system that would replace it. My best-guess candidate is 'energy-autarkic communalism.' By 'energy-autarkic,' I mean that Klein believes most energy consumed in a given location should be produced near that location, thus freeing communities and regions from dependence on global energy trade dominated by large corporations. Energy autarky is possible because renewable energy in some form is found everywhere on the planet. Some regions might have more sunlight, others more wind, others more capability to sustainably produce bioenergy, and others greater hydropower or geothermal potential. Decentralized, smaller-scale energy production is empowering for local communities and previously oppressed peoples

because it enables them to attain greater control over their energy system and its local impacts.

By ‘communalism,’ I mean that Klein believes most of the renewable energy in a given location should not be produced by global-scale or even national-scale private corporations. Instead, it should be produced by smaller entities that are not driven by the profit motive. Examples include consumer cooperatives, municipally owned utilities, non-profit companies, corporations owned and controlled collectively by aboriginal peoples, community-controlled trusts, and some larger state-owned companies if control is shared between local and higher levels of government. The key benefit of communalism is that critical energy-producing assets would not be owned and managed by powerful, profit-driven corporations, but instead by locally responsive entities focused on serving community interests.

From the energy-autarkic communalism perspective, deep decarbonization strategies that do not entail changing everything about capitalism are doomed to failure. Thus, Klein argues that environmental groups, like the Environmental Defense Fund, are wrong to collaborate with the fossil fuel industry and other corporations in lobbying for market-based climate policies like carbon taxes and cap-and-trade. Likewise, people are fools to believe that Richard Branson, Bill Gates, Elon Musk, and other billionaires can solve the problem by funding technological innovations, like ‘biofuel for jet airplanes’ and ‘safe nuclear power,’ or by voluntarily ‘greening’ their corporations. And we should not expect salvation from geoengineering technologies, like shooting sulfur into the atmosphere to block sunlight, as these are too dangerous.

In essence, any policies that attempt to reduce GHG emissions, like carbon pricing or regulations on technologies and fuels, will not succeed if they do not also change everything about capitalism such that it is no longer capitalism. These policies will not succeed because capitalist elites, the fossil fuel industry, and our current political decision-makers are inseparable.

I can agree with Klein that the fossil fuel industry has far too much influence in our imperfect political processes. But how does Klein convince me and others that her abolish capitalism prescription is essential?

How do we know that abolishing capitalism is not simply her personal preference rather than, as she claims, our *only* choice for succeeding with the climate challenge?

To make her argument, Klein reports on her observations of climate science deniers in the US. After infiltrating some of their meetings, she notes that these people are motivated to deny climate science because they see that reducing GHG emissions will destroy capitalism. They don't want that because they ideologically prefer capitalism, so they deny the GHG threat.

For Klein's purposes, these people have a convenient cognitive duality. On one hand, they are delusional and not at all evidence-based when it comes to climate science. On the other, they are prescient and evidence-based when it comes to their conclusion that deep decarbonization means the end of global capitalism. As you may have suspected, this is where Klein's logic goes awry. She wants readers to believe that these people are delusional when they disagree with her on climate science, but not delusional when they agree with her that deep decarbonization spells the end of capitalism. Klein knows, however, she is on thin ice, so on page 58 she admits, "I am well aware that all of this raises the question of whether I am doing the same thing as the deniers – rejecting possible solutions because they threaten my ideological worldview."

Yes, that is indeed the question it raises. And her response on the next page? "But there are a few important differences to note. First, I am not asking anyone to take my word on the science; I think that all of us should take the word of 97% of climate scientists and their countless peer-reviewed articles . . ."

Agreed. But the question she posed was not whether we should trust her on climate science. It was whether we should trust that her ideological worldview has not biased her reading of evidence when it comes to her conclusion that we *must* abolish capitalism to prevent climate change. Thus, I was expecting something like, "Second, just as I rely on the IPCC's Volume I for the climate science, I rely on its Volume III, with its summary of evidence on the technological, economic and policy dimensions of GHG reduction, for supporting my capitalism-versus-the-climate thesis. Unlike those self-deluding climate science deniers, I don't ignore

the evidence from leading researchers on the effectiveness of various policies and approaches to reducing GHG emissions.”

But Klein doesn't say that. Instead of explaining the “important differences” which would demonstrate that she is not rejecting other solutions because they are inconvenient to her worldview, she says on page 59, “What I am saying is that the climate science forces us to *choose* how we want to respond.”

Wait a minute. It forces us to choose how we want to respond? Earlier in the book (page 22), she said that the *only* choice was between climate chaos and abolishing capitalism – meaning that the *only* path to climate success is to “change everything” about capitalism. Now, however, she tells us (page 59) that we must *choose* how we respond. And her choice is to change everything about the economy so that it is no longer capitalist. But we knew that was her choice before opening the book, because an ideological agenda to abolish capitalism motivates every one of Klein's books.

This is why I titled my book review “*I Wish This Changed Everything.*”² To me, this is a more honest title for a book devoted to Klein's wish that humanity respond to the climate-energy challenge, and any other major challenge for that matter, by replacing global capitalism with an autarkic, communalistic economic system.

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Even though Klein has hitched her abolish capitalism agenda to the climate-energy challenge, is that reason enough to dismiss her evidence and arguments? While she admits that abolishing capitalism is her *preferred* choice rather than what she initially called the *only* choice, maybe abolishing capitalism, even if extremely difficult in just three decades, is nonetheless the least-difficult path. Since we have failed for several decades under global capitalism, we cannot dismiss *a priori* Klein's agenda.

But quickly abolishing capitalism is a tall order. While many people like me are deeply disturbed by the environmental harms and social inequities of our modern capitalist economies, we can't ignore evidence that such economies have had considerable success in reducing other energy-related pollutants, including emissions of acid gases, ozone-

depleting chemicals, lead, and particulates. Globally, effective action on GHG reduction has been slow, but that doesn't prove it can't happen under capitalism. And we don't want to encumber an already difficult task with what seems to be a dramatically more challenging agenda, unless it's essential for success.

To fairly consider this possibility, I read carefully through the rest of the book. As I mentioned earlier, Klein accepts the work of climate scientists as reported in Volume I of the IPCC reports. But she does not seem interested in Volume III. Having served as an IPCC lead author in Volume III, which I am involved in yet again, I know this report reflects the consensus or near-consensus positions of leading engineering and economic researchers and a wide array of social scientists, all focused on reducing GHG emissions.³

In fairness to Klein, the IPCC's focus is too politically constrained for its members to consider abolishing capitalism as one option for GHG reduction. But the Volume III reports for each of the major IPCC assessments are full of real-world cases of jurisdictions and policies that reduced GHG emissions for a variety of reasons in various sectors, a few cases of which I summarized in Chapter 11. Working through Klein's book, I was surprised she would ignore this evidence. Why, if she were truly interested in finding the fastest feasible way to reduce global GHG emissions, would she not carefully examine instances where jurisdictions have succeeded in significantly reducing GHG emissions and other energy-related pollutants? After reviewing that evidence, she could then more credibly explain why abolishing capitalism is essential, and explain how to quickly convince a majority of voters in all democracies around the world to agree almost immediately to abolish capitalism in their countries and thus globally.

Since, like me, Klein lives on the west coast of Canada, I was surprised she never mentioned the climate-energy policies and GHG reductions of our neighbor, California. As I noted in earlier chapters, and return to in Chapter 13, California committed in 2006 to decarbonize its economy and its progress has been substantial, especially compared to the high-emission path it was on. As I showed with Figure 6.3 in Chapter 6, it has achieved its reductions mostly with flexible regulations on electricity, transport, and other sectors, backed by an economy-wide cap-and-trade

policy. It has done this while remaining among the largest capitalist economies in the world. Over a decade after Arnold Schwarzenegger launched this ambitious energy system transformation, voters in California are still committed to world leadership in deep decarbonization. Yet they've shown no interest in electing politicians who promise to abolish capitalism.

I explained in Chapter 6 that cap-and-trade can be politically challenging relative to regulations because opponents propagate misinformation that the policy is a form of carbon tax and that carbon taxes are harmful to the economy. But in her discussion of cap-and-trade (her Chapter 6), Klein misrepresents this policy. She complains that its adoption in individual jurisdictions may be associated with government freely allocating some or all emission permits to trade-exposed industries. She sees this as an equity problem within a given jurisdiction, but never addresses the equity challenge if these industries move to other jurisdictions that lack policies of comparable stringency. The application of different stringencies of GHG policies in different jurisdictions is a problem that will not disappear if we abolish capitalism. As I explained in Chapter 4, GHG reduction is a global collective action problem, which it remains whether the global economic system is capitalist, anarcho-syndicalist, communist, fascist, or autarkic communalist.

Klein also confuses cap-and-trade with carbon offsets. In Chapter 9, I explained why climate-energy policy experts agree that carbon offsets achieve less than is often claimed. Thus, I concur with Klein's distrust of offsets. But Klein dismisses cap-and-trade as an ineffective policy simply because it includes some offsets. In this regard, she refers to the Waxman-Markey cap-and-trade bill that failed to pass in the US Senate in 2010 as "a narrowly dodged bullet" since it included a provision for offsets. She fails to mention the critical fact that the bill allowed only a small percentage of GHG reductions from offsets, which is why policy experts like me could support the bill and yet oppose carbon offsets. Depending on the jurisdiction, cap-and-trade policy has been successful in reducing acid emissions, smog-causing nitrous oxide emissions, water pollution, and GHG emissions. Klein never mentions these successful applications of a market-consistent policy that is inconvenient to her anti-capitalist narrative.

Klein seems misinformed about technologies, yet each error conveniently works in favor of her agenda. For example, if humanity gets serious about GHG reduction, some fossil fuel-rich regions, like Norway and the Canadian provinces of Alberta and Saskatchewan, may pursue carbon capture and storage, which they already do. IPCC reports estimate a significant potential to store captured CO₂ in deep salty aquifers.⁴ For decades, though, CO₂ has also been pumped into aging oil reservoirs to increase oil extraction rates, Texas being an example. This is not a GHG-reduction strategy because the extracted oil gets burned and releases CO₂. Yet Klein mistakenly assumes (her Chapter 7) that enhanced oil recovery is what people mean by carbon storage, so she summarily rejects a technology that has made inroads in meshing the profit-seeking interests of the fossil fuel industry with the goal of deep decarbonization.

Klein likes small-scale development of renewable energy as this fits her energy autarky ideal. Thus, she links the increase in solar and wind generation in Germany with that country's partial allowance of local participation in electricity planning and ownership. She overlooks the fact that mass investment in renewable electricity in jurisdictions like Germany is possible because of centrally controlled and owned, integrated grids, in concert with large generating plants and long-distance electricity trade. In Germany's electricity system, major corporations work together with multiple small suppliers and municipal distribution companies. This kind of relationship has existed in different capitalist economies, including the US, throughout the history of the electricity industry. Klein portrays it as a radical economic departure from capitalism. It is not.

Klein argues (her Chapter 2) that a transition to renewables will take a long time since it involves "building vast new electricity grids and transportation systems, often from the ground up." This is not true. One of the advantages of renewable electricity and low-emission vehicles is their ability to develop with existing electricity grids and road networks, these being gradually reinforced in step with the switch to renewable electricity and electric vehicles.

On the flip side, Klein argues that we can "quickly" reduce energy use via "policies and programs that make low-carbon choices easy and convenient for everyone, . . . public transit, . . . energy-efficient housing, . . .

cities planned for high density living, ... land management that discourages sprawl, ... urban design that clusters essential services like schools and health care along transit routes.” But this is simply a portrait of modern Scandinavia, with its capitalist economy. Energy experts know that this transformation of urban form, certainly a valid pursuit, took decades – much longer than it takes to transition to renewable electricity and low-emission vehicles, as my real-world examples in Chapter 11 showed.

Using the Canadian province of Ontario as an example, Klein claims (her Chapter 2) that the free trade rules of global capitalism block GHG-reducing policies. This is incorrect. Trade rules did prevent Ontario from requiring manufacturers of solar panels to locate their plants there in order to have the right to sell equipment. But, as I showed in Chapter 11, they did not prevent Ontario from closing all its coal-fired power plants and replacing these with low-GHG alternatives, reducing GHG emissions 85% in just a decade. And although Klein lives in British Columbia, she avoids mentioning the world-leading, clean electricity policy this Canadian province implemented in 2007 – a policy I helped design – to force the cancellation of coal and natural gas projects and cause a flourishing of renewables in a near-zero-emission electricity system. Again, international trade rules could not block deep decarbonization successes like these.

In other chapters, Klein provides a biased sample of evidence for her caricature of fossil fuels as bad while renewable energy is good. She slams fossil fuels for harming people and nature, citing the BP oil spill, the smog in Chinese cities, and unhealthy conditions for people living near Nigerian oil wells and Albertan oil sands projects. Had she read with an open mind the IPCC reports and the Global Energy Assessment, she would have acknowledged that one of the greatest benefits to human health has been the ‘energy transition,’ the shift from indoor combustion of wood, brush, and crop residues to the use of fossil fuel-derived kerosene, butane, and propane. Today, indoor air pollution still kills over two million people a year, mostly the world’s poorest women and children in Asia and Africa who have not yet attained the energy transition. Klein never mentions huge health benefits like these that help explain the historical allure of fossil fuels for humanity.



Figure 12.1 Cartoon by Scott Willis

Nor does she explain why the former planned economies of the Soviet Union and its East Bloc allies, as well as communist China from 1950 to 1990, relied on state-owned companies rather than profit-seeking corporations to develop fossil fuels for domestic consumption. And while blaming capitalism for the harms from fossil fuels, Klein fails to explain why most assets of conventional oil today belong to state-owned companies that were nationalized long ago.

With her anti-capitalism agenda, Klein ignores the main reasons why humanity is having so much trouble with the climate-energy challenge, reasons that exist irrespective of the type of economic system. While I have discussed these throughout this book, four warrant highlighting because they severely undermine Klein's thesis.

First, fossil fuels present a Faustian dilemma for humanity. As I highlighted in my book *Sustainable Fossil Fuels*, they have brought fantastic benefits for over 200 years, and still offer the lowest cost energy option in most places on the planet, which is especially important to the poorest billion people who have little access to the modern forms of

energy that are healthier to use.⁵ Yet, we now know that with these benefits comes a day of reckoning because of the GHGs emitted when we burn them. Indigenous people living in the Canadian Arctic provide an example of this dilemma between fossil fuel benefits and costs. Their per capita fossil fuel consumption is high because of cold winters and isolated communities that require substantial energy for livelihood (hunting and fishing) and for transporting goods and people within the region and in exchange with southern regions. With temperatures rising fastest at the poles, they are already experiencing significant effects of climate change. But they have the highest comparative benefits from using fossil fuels produced in distant lands since low-emission alternatives like bioenergy, wind, solar, and hydropower are extremely costly and sometimes technically unviable in the arctic. Arctic energy autarky is prohibitively expensive. Dilemmas like this result from the high energy quality and low cost of fossil fuels, not capitalism.

Second, unlike some environmental threats, such as smog, GHG emissions are invisible, and their effect is distant in time and space (albeit becoming more immediate every year!). They cause increases in temperatures, sea levels, and the probability of extreme weather and catastrophic events like wildfires, hurricanes, and floods. But since these phenomena are variable on a daily, seasonal, or annual basis, the change is difficult to personally detect. Psychologists note that our ability to recognize threats is related to personal physical experiences. This helps explain why humans can quickly focus on a terrorist attack, a disease outbreak, or an economic crisis, yet have difficulty focusing on climate change.⁶ This threat perception bias is not caused by capitalism.

Third, as a global-scale threat, GHG emissions present a global governance challenge for which humanity is ill equipped. As I explained in Chapter 4, a *voluntary* international agreement that includes mandatory compliance mechanisms is unattainable because of the diversity of national interests. Poorer countries want wealthier countries to bear significant costs to help them reject the Faustian pact with fossil fuels. Wealthier countries agree they need to provide significant help. But each side has dramatically different views of what 'significant help' means. These irreconcilable differences are not the fault of global capitalism, just as the inability of the communist Soviet Union and the capitalist US

and UK to act pre-emptively against Hitler was not the fault of global capitalism. Success with a global effort on the climate threat requires that countries, individually or in climate clubs, enact carbon tariffs to change the incentives for some countries to free-ride on the efforts of others. Changing everything about capitalism won't change the tendency for citizens and their national governments to have self-interest biases. Success with the climate-energy challenge requires that we recognize this.

Fourth, as I explain throughout this book, humans are good at self-deception when evidence is inconvenient to their lifestyle and income, or contradicts their worldview. Klein accurately observes this with right-wing climate deniers, yet claims they are only delusional when denying the science, not when agreeing with her that deep decarbonization inevitably spells the end of capitalism. Klein's biased selection of the available evidence on GHG-reducing technologies and policies suggests that she too is guilty of motivated reasoning based on her political preferences, in effect using the climate threat to advance her agenda. Paul Krugman of the *New York Times* summed up the counterproductive influence of such biased views when noting, "If we ever get past the special interests and ideology that have blocked action to save the planet, we'll find that it's cheaper and easier than almost anyone imagines."⁷

"Changing everything" in the global economy in just a few decades requires convincing a majority of people in a majority of countries to dismantle global capitalism and replace it with something that Klein never clearly explains or even names. Fortunately, this profound revolution is unnecessary for deep decarbonization, as individual jurisdictions are already showing. But vested interests within key countries and radically divergent views on international fairness make the task ahead daunting. We need to push past a tipping point for both the energy system within countries, and the international system for GHG governance. This is difficult. Attaching adventurist agendas like Klein's only makes it more so.

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As I noted earlier, Naomi Klein is not alone in hitching her agenda to the climate-energy challenge. It's a common occurrence. Indeed, the longer

humanity procrastinates on deep decarbonization, the greater the cacophony of solutions. While Klein argues that success requires abolishing capitalism, others argue it requires zero economic growth or zero population growth or global income equity or universal vegetarianism or banning air travel or banning cars from cities or saving all rainforests or gender equity.

When strung together, these solutions suggest that only a global utopia, with universally accepted values and behavior, can solve the climate-energy challenge. Yet, if considered individually on their merits, one can understand, and in some cases sympathize with, the proponents of these agendas.

Each would likely reduce emissions. We know that plane travel, car use, and eating meat in a fossil fuel-dominated energy system increase GHG emissions. Likewise, economic and population growth in a fossil fuel-dominated energy system increases GHG emissions. More equitable incomes and opportunities, between and within countries, are desirable goals in themselves, but one wonders how essential each of these actions is for deep decarbonization and, more importantly, how politically and diplomatically difficult each is relative to the essential energy system transformation.

In this book, I explain why we must focus our efforts on phasing out coal to generate electricity and gasoline to move people and goods. Fortunately, we already have the necessary zero-emission options and we know that this energy transformation will result in electricity and transportation costs not much higher than today. Cost increases will be especially modest if our policies are dominated by economically efficient carbon pricing or flexible regulations.

Slower rates of population and economic growth, along with conservation actions like reduced energy use, less meat consumption, and less air travel, would no doubt make the transition easier. A global energy system that is smaller because of these actions will require less investment in zero-emission energy to achieve the deep decarbonization transition. As long as the energy efficiency and energy conservation actions are not too difficult or expensive, this would result in a lower cost for transforming the system.

I am not arguing that advocates should abandon these various pursuits. Hopefully, however, they can recognize that these pursuits, if not

combined with simultaneous pressure on politicians to enact the essential pricing or regulatory policies in electricity, transportation, and other key sectors, inadvertently help those who want to maintain the fossil fuel status quo. And when we succeed in decarbonizing electricity, transportation, and other sectors, as we must, then some of these solutions diminish in importance for success with the climate-energy challenge.

A politically difficult to implement city-wide ban on vehicles will not reduce GHGs when virtually all vehicles are zero-emission. A ban on air travel will not reduce GHGs when most aviation fuel is biologically derived. A behavioral shift away from meat consumption may have health and societal benefits, but will be less important for GHG reduction once the farming and food industries use zero-emission energy and organic fertilizer.

It is neither likely nor desirable that people hold identical views when it comes to our personal choices for activities like travel and diet, or the balance between collective and private ownership of the means of production in our economic system. While there is nothing wrong with trying to convince others of the benefits of one's particular preferences, we should not let the pursuit of these hinder or distract us from our essential task of quickly decarbonizing critical sectors of the energy system, where we have the capability to do so at a reasonable cost, regardless of the economic system. Many jurisdictions have already demonstrated how to do that – without abolishing capitalism.

While I see nothing wrong with Naomi Klein and fellow travelers trying to convince most of humanity to vote to abolish capitalism over the next decade, I resist when they propagate the myth that their low-likelihood agenda is *essential* for success with the climate-energy challenge. We cannot afford to make it more difficult than it already is.