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### Advantage One is DERS

#### Runaway warming causes extinction

Sears 21 [Nathan Alexander Sears, PhD Candidate in Political Science at The University of Toronto, Former Professor of International Relations at the Universidad de Las Américas, Trudeau Fellow in Peace, Conflict and Justice at the Munk School of Global Affairs, “Great Powers, Polarity, and Existential Threats to Humanity: An Analysis of the Distribution of the Forces of Total Destruction in International Security”, Conference Paper: International Studies Association, 2021 Annual Conference, March/April 2021, https://tinyurl.com/bfbfspzx]

*Climate Change*

Humanity faces existential risks from the large-scale destruction of Earth’s natural environment making the planet less hospitable for humankind (Wallace-Wells 2019). The decline of some of Earth’s natural systems may already exceed the “planetary boundaries” that represent a “safe operating space for humanity” (Rockstrom et al. 2009). Humanity has become one of the driving forces behind Earth’s climate system (Crutzen 2002). The major anthropogenic drivers of climate change are the burning of fossil fuels (e.g., coal, oil, and gas), combined with the degradation of Earth’s natural systems for absorbing carbon dioxide, such as deforestation for agriculture (e.g., livestock and monocultures) and resource extraction (e.g., mining and oil), and the warming of the oceans (Kump et al. 2003). While humanity has influenced Earth’s climate since at least the Industrial Revolution, the dramatic increase in greenhouse gas emissions since the mid-twentieth century—the “Great Acceleration” (Steffen et al. 2007; 2015; McNeill & Engelke 2016)— is responsible for contemporary climate change, which has reached approximately 1°C above preindustrial levels (IPCC 2018).

Climate change could become an existential threat to humanity if the planet’s climate reaches a “Hothouse Earth” state (Ripple et al. 2020). What are the dangers? There are two mechanisms of climate change that threaten humankind. The direct threat is extreme heat. While human societies possesses some capacity for adaptation and resilience to climate change, the physiological response of humans to heat stress imposes physical limits—with a hard limit at roughly 35°C wet-bulb temperature (Sherwood et al. 2010). A rise in global average temperatures by 3–4°C would increase the risk of heat stress, while 7°C could render some regions uninhabitable, and 11–12°C would leave much of the planet too hot for human habitation (Sherwood et al. 2010). The indirect effects of climate change could include, inter alia, rising sea levels affecting coastal regions (e.g., Miami and Shanghai), or even swallowing entire countries (e.g., Bangladesh and the Maldives); extreme and unpredictable weather and natural disasters (e.g., hurricanes and forest fires); environmental pressures on water and food scarcity (e.g., droughts from less-dispersed rainfall, and lower wheat-yields at higher temperatures); the possible inception of new bacteria and viruses; and, of course, large-scale human migration (World Bank 2012; Wallace-Well 2019; Richards, Lupton & Allywood 2001). While it is difficult to determine the existential implications of extreme environmental conditions, there are historic precedents for the collapse of human societies under environmental pressures (Diamond 2005). Earth’s “big five” mass extinction events have been linked to dramatic shifts in Earth’s climate (Ward 2008; Payne & Clapham 2012; Kolbert 2014; Brannen 2017), and a Hothouse Earth climate would represent terra incognita for humanity.

Thus, the assumption here is that a Hothouse Earth climate could pose an existential threat to the habitability of the planet for humanity (Steffen et al. 2018., 5). At what point could climate change cross the threshold of an existential threat to humankind? The complexity of Earth’s natural systems makes it extremely difficult to give a precise figure (Rockstrom et al. 2009; ). However, much of the concern about climate change is over the danger of crossing “tipping points,” whereby positive feedback loops in Earth’s climate system could lead to potentially irreversible and self-reinforcing “runaway” climate change. For example, the melting of Arctic “permafrost” could produce additional warming, as glacial retreat reduces the refractory effect of the ice and releases huge quantities of methane currently trapped beneath it. A recent study suggests that a “planetary threshold” could exist at global average temperature of 2°C above preindustrial levels (Steffen et al. 2018; also IPCC 2018). Therefore, the analysis here takes the 2°C rise in global average temperatures as representing the lower-boundary of an existential threat to humanity, with higher temperatures increasing the risk of runaway climate change leading to a Hothouse Earth.

The Paris Agreement on Climate Change set the goal of limiting the increase in global average temperatures to “well below” 2°C and to pursue efforts to limit the increase to 1.5°C. If the Paris Agreement goals are met, then nations would likely keep climate change below the threshold of an existential threat to humanity. According to Climate Action Tracker (2020), however, current policies of states are expected to produce global average temperatures of 2.9°C above preindustrial levels by 2100 (range between +2.1 and +3.9°C), while if states succeed in meeting their pledges and targets, global average temperatures are still projected to increase by 2.6°C (range between +2.1 and +3.3°C). Thus, while the Paris Agreements sets a goal 6 that would reduce the existential risk of climate change, the actual policies of states could easily cross the threshold that would constitute an existential threat to humanity (CAT 2020).

#### And, triggers multiple nuclear hotspots in Southeast Asia, Siberia, and the Arctic.

Klare 20 [Michael, The Nation’s defense correspondent, is professor emeritus of peace and world-security studies at Hampshire College and senior visiting fellow at the Arms Control Association in Washington, D.C. “How Rising Temperatures Increase the Likelihood of Nuclear War”. 1/13/20. https://www.thenation.com/article/archive/nuclear-defense-climate-change/]

President Donald Trump may not accept the scientific reality of climate change, but the nation’s senior military leaders recognize that climate disruption is already underway, and they are planning extraordinary measures to prevent it from spiraling into nuclear war. One particularly worrisome scenario is if extreme drought and abnormal monsoon rains devastate agriculture and unleash social chaos in Pakistan, potentially creating an opening for radical Islamists aligned with elements of the armed forces to seize some of the country’s 150 or so nuclear weapons. To avert such a potentially cataclysmic development, the US Joint Special Operations Command has conducted exercises for infiltrating Pakistan and locating the country’s nuclear munitions. Most of the necessary equipment for such raids is already in position at US bases in the region, according to a 2011 report from the nonprofit Nuclear Threat Initiative. “It’s safe to assume that planning for the worst-case scenario regarding Pakistan’s nukes has already taken place inside the US government,” said Roger Cressey, a former deputy director for counterterrorism in Bill Clinton’s and George W. Bush’s administrations in 2011.

Such an attack by the United States would be an act of war and would entail enormous risks of escalation, especially since the Pakistani military—the country’s most powerful institution—views the nation’s nuclear arsenal as its most prized possession and would fiercely resist any US attempt to disable it. “These are assets which are the pride of Pakistan, assets which are…guarded by a corps of 18,000 soldiers,” former Pakistani president Pervez Musharraf told NBC News in 2011. The Pakistani military “is not an army which doesn’t know how to fight. This is an army that has fought three wars. Please understand that.”

A potential US military incursion in nuclear-armed Pakistan is just one example of a crucial but little-​discussed aspect of international politics in the early 21st century: how the acceleration of climate change and nuclear war planning may make those threats to human survival harder to defuse. At present, the intersections between climate change and nuclear war might not seem obvious. But powerful forces are pushing both threats toward their most destructive outcomes.

Harry Reid Understood Power

In the case of climate change, the unbridled emission of carbon dioxide and other greenhouse gases is raising global temperatures to unmistakably dangerous levels. Despite growing worldwide reliance on wind and solar power for energy generation, the global demand for oil and natural gas continues to rise, and carbon emissions are projected to remain on an upward trajectory for the foreseeable future. It is highly unlikely, then, that the increase in average global temperature can be limited to 1.5 degrees Celsius, the aspirational goal adopted by the world’s governments under the Paris Agreement in 2015, or even to 2°C, the actual goal. After that threshold is crossed, scientists agree, it will prove almost impossible to avert catastrophic outcomes, such as the collapse of the Greenland and Antarctic ice sheets and a resulting sea level rise of 6 feet or more.

Climbing world temperatures and rising sea levels will diminish the supply of food and water in many resource-deprived areas, increasing the risk of widespread starvation, social unrest, and human flight. Global corn production, for example, is projected to fall by as much as 14 percent in a 2°C warmer world, according to research cited in a 2018 special report by the UN’s Intergovernmental Panel on Climate Change (IPCC). Food scarcity and crop failures risk pushing hundreds of millions of people into overcrowded cities, where the likelihood of pandemics, ethnic strife, and severe storm damage is bound to increase. All of this will impose an immense burden on human institutions. Some states may collapse or break up into a collection of warring chiefdoms—all fighting over sources of water and other vital resources.

A similar momentum is now evident in the emerging nuclear arms race, with all three major powers—China, Russia, and the United States—rushing to deploy a host of new munitions. This dangerous process commenced a decade ago, when Russian and Chinese leaders sought improvements to their nuclear arsenals and President Barack Obama, in order to secure Senate approval of the New Strategic Arms Reduction Treaty of 2010, agreed to initial funding for the modernization of all three legs of America’s strategic triad, which encompasses submarines, intercontinental ballistic missiles, and bombers. (New START, which mandated significant reductions in US and Russian arsenals, will expire in February 2021 unless renewed by the two countries.) Although Obama initiated the modernization of the nuclear triad, the Trump administration has sought funds to proceed with their full-scale production, at an estimated initial installment of $500 billion over 10 years.

Even during the initial modernization program of the Obama era, Russian and Chinese leaders were sufficiently alarmed to hasten their own nuclear acquisitions. Both countries were already in the process of modernizing their stockpiles—Russia to replace Cold War–era systems that had become unreliable, China to provide its relatively small arsenal with enhanced capabilities. Trump’s decision to acquire a whole new suite of ICBMs, nuclear-armed submarines, and bombers has added momentum to these efforts. And with all three major powers upgrading their arsenals, the other nuclear-weapon states—led by India, Pakistan, and North Korea—have been expanding their stockpiles as well. Moreover, with Trump’s recent decision to abandon the Intermediate-Range Nuclear Forces (INF) Treaty, all major powers are developing missile delivery systems for a regional nuclear war such as might erupt in Europe, South Asia, or the western Pacific.

Runaway warming: Expanses of ice are melting at unprecedented rates, with potentially grim geopolitical repercussions. (David Silverman / Getty Images)

All things being equal, rising temperatures will increase the likelihood of nuclear war, largely because climate change will heighten the risk of social stress, the decay of nation-states, and armed violence in general, as I argue in my new book, All Hell Breaking Loose. As food and water supplies dwindle and governments come under ever-increasing pressure to meet the vital needs of their populations, disputes over critical resources are likely to become more heated and violent, whether the parties involved have nuclear arms or not. But this danger is compounded by the possibility that several nuclear-armed powers—notably India, Pakistan, and China—will break apart as a result of climate change and accompanying battles over disputed supplies of water.

Together, these three countries are projected by the UN Population Division to number approximately 3.4 billion people in 2050, or 34 percent of the world’s population. Yet they possess a much smaller share of the world’s freshwater supplies, and climate change is destined to reduce what they have even further. Warmer temperatures are also expected to diminish crop yields in these countries, adding to the desperation of farmers and very likely resulting in widespread ethnic strife and population displacement. Under these circumstances, climate-related internal turmoil would increase the risk of nuclear war in two ways: by enabling the capture of nuclear arms by rogue elements of the military and their possible use against perceived enemies and by inciting wars between these states over vital supplies of water and other critical resources.

The risk to Pakistan from climate change is thought to be particularly acute. A large part of the population is still engaged in agriculture, and much of the best land—along with access to water—is controlled by wealthy landowners (who also dominate national politics). Water scarcity and mismanagement is a perennial challenge, and climate change is bound to make the problem worse. Climate and Social Stress: Implications for Security Analysis, a 2013 report by the National Research Council for the US intelligence community, highlights the danger of chaos and conflict in that country as global warming advances. Pakistan, the report notes, is expected to suffer from inadequate water supplies during the dry season and severe flooding during the monsoon—outcomes that will devastate its agriculture and amplify the poverty and unrest already afflicting much of the country. “The Pakistan case,” the report reads, “illustrates how a highly stressed environmental system on which a tense society depends can be a source of political instability and how that source can intensify when climate events put increased stress on the system.” Thus, as global temperatures rise and agriculture declines, Pakistan could shatter along ethnic, class, and religious lines, precisely the scenario that might trigger the sort of intervention anticipated by the US Joint Special Operations Command.

Assuming that Pakistan remains intact, another great danger arising from increasing world temperatures is a conflict between it and India or between China and India over access to shared river systems. Whatever their differences, Pakistan and western India are forced by geography to share a single river system, the Indus, for much of their water requirements. Likewise, western China and eastern India also share a river, the Brahmaputra, for their vital water needs. The Indus and the Brahmaputra obtain much of their flow from periods of heavy precipitation; they also depend on meltwater from Himalayan glaciers, and these are at risk of melting because of rising temperatures. According to the IPCC, the Himalayan glaciers could lose as much as 29 percent of their total mass by 2035 and 78 percent by 2100. This would produce periodic flooding as the ice melts but would eventually result in long periods of negligible flow, with calamitous consequences for downstream agriculture. The widespread starvation and chaos that could result would prove daunting to all the governments involved and make any water-related disputes between them a potential flash point for escalation.

As in Pakistan, water supply has always played a pivotal role in the social and economic life of China and India, with both countries highly dependent on a few major river systems for civic and agricultural purposes. Excessive rainfall can lead to catastrophic flooding, and prolonged drought has often led to widespread famine and mass starvation. In such a setting, water management has always been a prime responsibility of government—and a failure to fulfill this function effectively has often resulted in civil unrest. Climate change is bound to increase this danger by causing prolonged water shortages interspersed with severe flooding. This has prompted leaders of both countries to build ever more dams on all key rivers.

India, as the upstream power on several tributaries of the Indus, and China, as the upstream power on the Brahmaputra, have considered damming these rivers and diverting their waters for exclusive national use, thereby diminishing the flow to downstream users. Three of the Indus’s principal tributaries, the Jhelum, Chenab, and Ravi rivers, flow through Indian-controlled Kashmir (now in total lockdown, with government forces suppressing all public functions). It’s possible that India seeks full control of Kashmir in order to dam the tributaries there and divert their waters from Pakistan—a move that could easily trigger a war if it occurs at a time of severe food and water stress and one that would very likely invite the use of nuclear weapons, given Pakistan’s attitude toward them.

The situation regarding the Brahmaputra could prove equally precarious. China has already installed one dam on the river, the Zangmu Dam in Tibet, and has announced plans for several more. Some Chinese hydrologists have proposed the construction of canals linking the Brahmaputra to more northerly rivers in China, allowing the diversion of its waters to drought-stricken areas of the heavily populated northeast. These plans have yet to come to fruition, but as global warming increases water scarcity across northern China, Beijing might proceed with the idea. “If China was determined to move forward with such a scheme,” the US National Intelligence Council warned in 2009, “it could become a major element in pushing China and India towards an adversarial rather than simply a competitive relationship.”

Severe water scarcity in northern China could prompt yet another move with nuclear implications: an attempted annexation by China of largely uninhabited but water-rich areas of Russian Siberia. Thousands of Chinese farmers and merchants have already taken up residence in eastern Siberia, and some commentators have spoken of a time when climate change prompts a formal Chinese takeover of those areas—which would almost certainly prompt fierce Russian resistance and the possible use of nuclear weapons.

In the Arctic, global warming is producing a wholly different sort of peril: geopolitical competition and conflict made possible by the melting of the polar ice cap. Before long, the Arctic ice cap is expected to disappear in summertime and to shrink noticeably in the winter, making the region more attractive for resource extraction. According to the US Geological Survey, an estimated 30 percent of the world’s remaining undiscovered natural gas is above the Arctic Circle; vast reserves of iron ore, uranium, and rare earth minerals are also thought to be buried there. These resources, along with the appeal of faster commercial shipping routes linking Europe and Asia, have induced all the major powers, including China, to establish or expand operations in the region. Russia has rehabilitated numerous Arctic bases abandoned after the Cold War and built others; the United States has done likewise, modernizing its radar installation at Thule in Greenland, reoccupying an airfield at Keflavík in Iceland, and establishing bases in northern Norway.

Increased economic and military competition in the Arctic has significant nuclear implications, as numerous weapons are deployed there and geography lends it a key role in many nuclear scenarios. Most of Russia’s missile-carrying submarines are based near Murmansk, on the Barents Sea (an offshoot of the Arctic Ocean), and many of its nuclear-armed bombers are also at bases in the region to take advantage of the short polar route to North America. As a counterweight, the Pentagon has deployed additional subs and antisubmarine aircraft near the Barents Sea and interceptor aircraft in Alaska, followed by further measures by Moscow. “I do not want to stoke any fears here,” Russian President Vladimir Putin declared in June 2017, “but experts are aware that US nuclear submarines remain on duty in northern Norway…. We must protect [Russia’s] shore accordingly.”

#### The plan solves utility emissions---that's sufficient to stop extinction

Murray 18 [Michael, President of Mission:Data, has over fifteen years of experience with building automation, energy management, metering and public utility regulation. “IS IT TIME TO ENFORCE ANTI-TRUST LAWS AGAINST UTILITIES?”. 10/18/18. http://www.missiondata.io/news/2018/10/18/is-it-time-to-enforce-anti-trust-laws-against-utilities]

Since the electric utility industry’s inception over a century ago, utilities have acted in -- or meddled with, depending upon your point of view -- markets adjacent to the traditional power business. APS, in Arizona, sold energy-hogging washing machines and dryers in retail locations as late as the 1970s in order to increase demand for power. The founder of Commonwealth Edison, Samuel Insull, who was once Thomas Edison’s personal secretary, realized that peak demand occurred in the evening due to “illumination,” and so he built and purchased streetcar lines, sold electric irons and stimulated demand from various appliances usable during the daytime in order to improve power plant utilization around the clock. Even the Tennessee Valley Authority, a federal agency, offered substantial rebates for appliances in order to induce demand for electrons.

Despite all the talk of “natural monopoly,” electric utilities have played well outside the poles-and-wires sandbox for decades. Even today, utilities are in the news for building their own electric vehicle charging infrastructure. Some would say these actions, which are outside of the state statutory mandate to provide “safe and reliable” electric service, are sometimes thought to be sensible, or even desirable, evolutions of a maturing industry. But anti-trust enforcement is an often-ignored tool in the toolbox that deserves reexamination for at least three reasons.

First, the pace of climate change is frightening enough that scientists and world leaders are calling for unprecedented, dramatic shifts in American energy systems in the next twelve years. There is a significant possibility that electric utilities aren’t up to the task -- at least on the timescale needed. Looking at the railroads or telecommunication industries throughout history, regulated monopolies have rarely, if ever, adapted to new conditions in any timeframe that scientists now consider reasonable. (We could refer to electric utilities’ pace of change as “glacial,” but the irony is that the world’s glaciers are melting much faster than anticipated.) Can large, bureaucratic utilities compress their clockspeeds in order to rapidly decarbonize? It seems much more likely that the marketplace of distributed energy resources (DERs) could provide precisely the velocity that utilities lack. Connecting DERs to the grid as quickly as possible can likely only be accomplished by harnessing market forces.

Second, electric utilities have long used token gestures toward clean energy or “consumer empowerment” to neutralize opponents in ways that are anti-competitive. For example, one utility argued to us that third party data access was unnecessary because the utility offered its own website and mobile app. The utility has a state-granted monopoly over power distribution, yet where in statute did the state grant the utility a monopoly on websites and smartphone apps that use customer energy data? Similarly, utilities with energy efficiency (EE) programs have long argued that the existence of such programs make wholesale business model changes unnecessary. Gradualism, it is argued, is sufficient, and saving 0.5% to 1.0% of energy demand per year with EE programs is good enough. Unfortunately, however, utilities can stifle competition in the process. Why enable a truly competitive market for EE when you can control it entirely? In the wake of Cambridge Analytica, many see Facebook’s actions to increase user privacy as merely a ploy to delay sweeping new legislation from Congress. DER proponents should similarly view utilities’ token gestures for what they are -- small concessions that prolong the utilities’ dominance at the expense of cheaper, cleaner and more reliable distributed resources from a competitive market.

Third, new energy around anti-trust enforcement has recently entered the national political scene. America’s 40-year low in company formation coupled with the reaction to Facebook’s Cambridge Analytica scandal (which we wrote about before) have caused members of Congress to ask not only whether individuals’ data are adequately protected, but whether market concentration in the hands of a few players is in part responsible for the vulnerability in the first place. As recently as this week, twelve state Attorneys General wrote to the Federal Trade Commission expressing concern over data monopolies’ effects on competition:

“[T]here is concern that the immense advantages certain firms have in consumers’ data...may effectively block new entry or expansion, thereby limiting choice and, in some cases, harming competition.

“Firms that have obtained a disproportionate advantage in one line of business may find it easy to abuse that advantage by applying it to other lines of business in order to keep out competitors – who may be equally or more efficient but for the data advantage carried over from the first market. This could be of concern with new lines of business, and perhaps particularly in the context of new services. For example, firms with an asymmetric advantage in data might be able to identify competitive rivals at a very early stage, and perhaps eliminate competition…”

As data monopolies such as Facebook come under increasing scrutiny by politicians, we can harness the national attention on this topic to ask: Are electric and gas utilities data monopolies, too?

In our recent report, we highlighted the “demarcation point” in telecommunications. This is the point where the public telephone system ends and the customer’s in-home wiring begins. The FCC’s 1968 Carterfone decision defined this electrical interface and limited the telco’s role and responsibility to their side of the fence, thereby allowing market innovations on the customer’s side of the system such as wireless telephony, voice mail and modems. Without the Carterfone decision, we might still be using landline telephones manufactured by AT&T. Ma Bell would sue you for connecting another manufacturer’s telephone to their network.

Similarly, electric utilities will tend to exert their power over anything that touches the electricity system, whether that serves the public interest or not. Anti-trust enforcement by the Federal Trade Commission, Department of Justice and state Attorneys General is worthy of consideration to meet our pro-competition, pro-consumer and pro-environment goals. The DER community could use a fascinating 1976 Supreme Court Case, Cantor v. Detroit Edison Co., as a model: A retailer of lightbulbs sued the utility, Detroit Edison, for using its monopoly power to unfairly restrain the sale of lightbulbs in violation of the Sherman Anti-Trust Act. The Supreme Court agreed that state regulation does not exempt the utility from certain anti-trust laws.

There are limits to the utility’s monopoly. As a strategy for the DER community, settling with utilities for another decade of uninventive EE programs in which utilities pick winners and control the market is not going to meet our objectives. It’s time to look at anti-trust law to enforce limitations on utilities and mandate utility-to-DER interoperability standards. After all, restrictions on “behind-the-meter” activities of utilities are not only necessary to protect competition, but they may be necessary to save the planet.

#### Otherwise utilities turn rate changes into artificial barriers against new DERs entrants

Wara 17 [Michael, Associate Professor and Justin M. Roach, Jr. Faculty Scholar, Stanford Law School. “COMPETITION AT THE GRID EDGE: INNOVATION AND ANTITRUST LAW IN THE ELECTRICITY SECTOR”. 10/25/17. https://www.nyuelj.org/wp-content/uploads/2016/09/Wara\_ready\_for\_printing\_v2.pdf]

Following the release of Disruptive Challenges, utilities around the country, but especially in key solar markets, have responded in two significant ways to the challenge presented by distributed solar energy. First, they have sought to change rate structures to eliminate the incentives their customers may have to adopt the new technology, thereby suppressing the trigger of the death spiral.20 Second, and to a lesser extent, they have entered into direct competition with the companies that seek to provide distributed solar to electricity consumers, thereby positioning themselves to succeed in the new market environment to which the industry is transitioning.

Electric utilities have shareholders whose interests they are legally obligated to protect. And utilities appear to be acting to head off the nascent threat to a business model that has served them well for more than a century. Depending on one’s perspective, and on the details, these regulatory changes amount to either a more accurate allocation of grid costs or the erection of barriers to prevent entry of new, innovative competition. Utilities may be protecting their non-solar customers from the burden of subsidizing those who install solar, or they may be working to ensure that competition with their entrenched monopolies never occurs. Telling the difference has become a key unaddressed policy and legal question for public utility commissions.

Traditionally, utilities have billed their customers with rate structures based on energy sales. A customer’s bill was a function of their total energy consumption, measured in kilowatt hours (kWh) over a billing period, usually a month. In the face of new competition, utilities and their regulators are rapidly reassessing this energy sales-based rate structure and moving to a more complex structure, sometimes for all customers, but more often only for those customers that choose to install distributed energy resources. The new rate structures involve either a large fixed charge, independent of usage; a demand charge, which is set based upon a customer’s maximum rate of consumption during the billing period; or both, in addition to a charge for energy consumption. These rate structures are not novel—they have long been common for large customers such as large commercial or industrial customers, but they have never before been applied to the residential customers whose installation of solar PV poses a competitive threat to utilities.

Normally, when firms with market power move to quash competition, antitrust liability under the Sherman Act, or at least the risk of it, is created. However, because investor owned electric utilities are state-chartered monopolies, they are generally exempt from federal regulation of their anticompetitive conduct. But this exemption from antitrust liability is not unlimited. Moreover, the contours of the exemption are relatively unclear given current U.S. Supreme Court jurisprudence, especially in the face of a radical change in the technological structure of the industry. Thus, moves by utilities to prevent entry or forestall competition create at least a risk of antitrust liability, even if approved by their PUCs.

The division of regulatory authority between the federal and state governments under the Federal Power Act allocates oversight of wholesale electricity sales to the Federal Energy Regulatory Commission and oversight of retail electricity sales to state PUCs. Because the technological and economic challenge to utilities is coming from the retail customers of utilities rather than from, for example, large power plants that wish to sell power across the utilities’ transmission systems, state regulators will make the key decisions governing the competition between solar energy providers and regulated utilities. The Federal Power Act leaves to states the authority to regulate retail and intrastate energy transactions.22 The heart of this jurisdiction is the authority of state public utility commissions to regulate the rates that utilities charge their retail customers for power sales. Thus, public utility commissions are in the position of having to manage a difficult transition from a highly stable monopoly structure to a much more dynamic and competitive one, although one in which grid-supplied electric energy will remain central for many years to come.

Attempts to ensure market competition, or to avoid the social costs that occur when markets are not sufficiently competitive, require taking account of industries’ technological and economic structure. Traditionally, in the United States, competition has been policed in structurally competitive markets using antitrust law.23 However, in markets that are best characterized as natural monopolies, a grant of monopoly power has often been provided to a single firm that is then subject to an obligation to serve all customers and to price regulation via cost-of-service ratemaking.24 While both systems are far from perfect,25 many legal and economic scholars have argued that in their appropriate contexts— a structurally competitive market or a natural monopoly—these approaches fill a similar need.26 The most challenging context in which to apply either, however, is when industries undergo transition, often because of technological change, between a stable, naturally monopolistic structure, and unstable, structurally competitive one.2

In this Article, I detail the utility industry response to the call to action in Disruptive Challenges. I present evidence for the widespread existence of potentially anticompetitive actions by utilities from a survey of rate cases. My survey shows that, from 2013 to 2015, utilities in at least 19 states sought to restructure rates to reduce competition from distributed energy resources. Some utilities are also going into direct competition with solar providers. I explore the legal implications of this response by today’s utility industry to current and anticipated competition from distributed solar generation. I examine the ambiguities that exist in the current doctrine on utility antitrust immunity. I then suggest approaches for public utility commissions that may serve to reduce the anticompetitive aspects of new rate structures and so reduce the risk of antitrust liability for electric utilities as they respond to emerging competition from distributed energy resources. Finally, I argue that in managing responses to competition by electric utilities, public utility commissions must exercise oversight of the competitive impacts of rate cases.

#### Non price barriers ALONE stop DERs adoption

Wara 17 [Michael, Associate Professor and Justin M. Roach, Jr. Faculty Scholar, Stanford Law School. “COMPETITION AT THE GRID EDGE: INNOVATION AND ANTITRUST LAW IN THE ELECTRICITY SECTOR”. 10/25/17. https://www.nyuelj.org/wp-content/uploads/2016/09/Wara\_ready\_for\_printing\_v2.pdf]

Of course, this cannot be the whole story. Regulated utilities recognize the competitive threat, exercise market power, and are likely to respond in anticompetitive ways if permitted to do so. One would expect that regulated utilities, seeking to protect their shareholders’ value, would act to modify rates in ways that would forestall or eliminate new competitive entrants. Rates are just one method of creating barriers to entry for new technologies that may reduce returns for grid-supplied energy.

Other methods include rules that explicitly limit or forbid such competition or rules that erect non-price barriers to entry such as complicated, expensive, or time-consuming processes governing connection of DERs.43 The evidence suggests that utilities can, and to some degree are, engaging in a number of non-price-related practices that would normally raise competition concerns. Utility permission is required to interconnect distributed energy resources with the grid.44 Getting interconnection permission often results in varying time delays.45 Furthermore, it can result in substantial and unpredictable costs because utilities can require mitigation for new distributed energy resources in the form of distribution system investments.46 Utilities also have important informational advantages regarding where on the grid distributed energy may be most valuable.47

Nevertheless, given that most utilities have to routinely submit rate cases to their commissions, attempts to modify rates to forestall or eliminate competition are to be expected given the business incentives facing the utilities. The traditional job of the commission in this context is to evaluate these rates and to protect ratepayers—presumably balancing the interests of customers both with and without DERs against the expectation of utilities for a fair return on their investment. Generally speaking, protecting the interests of other firms that might compete with the utility, or considering the impacts of a rate on innovation, are not part of the process.

#### DERs are a renewable accelerant and solve warming

Roberts 21 [David, Clean Energy Expert with 15 Years of Experience, CE Writer @ Vox, Previously Writer @ Grist. “Rooftop solar and home batteries make a clean grid vastly more affordable”. 5/28/21. https://www.volts.wtf/p/rooftop-solar-and-home-batteries]

Energy nerds love arguing over the value of distributed energy resources (DERs), the rooftop solar panels and customer-owned batteries that are growing more popular by the day. There’s a fight in California right now over the value of energy from rooftop solar, just the latest skirmish in a long war that has ranged over numerous states.

The conventional wisdom in wonk circles is that the value provided by DERs is not sufficient to overcome the fact that the energy they produce is, on a per-kWh basis, much more expensive than that produced by utility-scale solar, wind, and batteries (residential solar is roughly 2.5 times as expensive as utility-scale solar, according to NREL).

For that reason, many wonks view DERs as a kind of boutique energy and argue that public funds are better spent on utility-scale energy.

Turns out: no, that’s wrong. Some groundbreaking new modeling demonstrates that the value of DERs to the overall electricity system is far greater than has typically been appreciated.

The work didn’t get the attention it deserved when it came out in late December, so I want to spend some time with it. First, though, let’s get clear on what we’re talking about.

The misguided battle between centralized and distributed energy

To understand the difference between centralized and distributed energy, it’s important to understand the distinction between transmission grids, the high-voltage power lines that carry electricity over longer distances, and distribution grids, the nests of low-voltage power lines (strung from the familiar brown poles) that carry electricity to local consumers. If the transmission grid is the interstate highway system of electricity, distribution grids are the local road systems that branch off those main trunks.

Centralized energy generally refers to utility-scale power generators (or energy storage) hooked up directly to the transmission grid: coal or natural gas plants, wind farms, solar fields, grid-scale battery stacks, what have you. The big stuff.

Distributed energy consists of anything that generates, stores, or manages electricity on distribution grids: rooftop solar panels, ground-mounted “community solar” arrays, consumer batteries, electric vehicles, building energy management software, and the like. (And then there’s truly distributed energy, in the form of off-grid installations that don’t connect to any larger grid. We won’t be getting into that today.)

Some distributed solar covering a parking lot. (Photo: Getty Images)

Some distributed solar covering a parking lot. (Photo: Getty Images)

To paint in broad and somewhat crude strokes, advocates for centralized renewable energy tend to view advocates for distributed energy as crunchy pastoral proto-hippies who can’t handle modernity. They note that utility-scale energy is cheaper and capable of powering highly energy-dense modern economies, whereas distributed energy is expensive and diffuse.

Advocates for distributed energy tend to view advocates for centralized energy as corporate capitalists in thrall to perpetual growth. They note that distributed energy brings a range of benefits, from resilience and independence to savings on avoided infrastructure, whereas utility-scale energy tends to do greater damage to landscapes and concentrate economic power.

Like many disputes in the energy world, this one has hardened into an identity battle, which is annoying and unproductive, since the answer, like with so many other disputes, is both-and.

Nonetheless, it’s worth noting that advocates for distributed energy have been at something of a disadvantage to date. It can be devilishly difficult to quantify the benefits of DERs, so a lot of the discussion gets into hand-wavey intangibles.

It can be especially difficult to quantify the benefits of DERs to larger grid systems, because energy modeling to date has effectively ignored distribution grids (which represent about a third of US spending on electricity). It has treated them purely as load, as demand to be satisfied, rather than as active, flexible participants in grid management.

Until now!

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Or, until a few months ago anyway. In December, energy modeler Christopher Clack (a familiar name to Volts readers) and his team at Vibrant Clean Energy (VCE) debuted a new way to model the energy system that takes into account DERs and the services they provide. They used it to study the effect of DERs on the electricity system and the results are summarized in “A New Roadmap for the Lowest Cost Grid.” (Full technical report here; slideshow presentation here.)

Spoiler: the cheapest possible carbon-free US grid involves vastly more centralized renewable energy, but it also involves vastly more distributed energy. What’s more, far from being alternatives, they are complements: the more DERs you put in place, the more centralized renewables you can put on the system. DERs are a utility-scale renewable accelerant.

The practical implication is that going all out on DERs is to everyone’s benefit, up and down the electricity supply chain, from utilities to consumers.

It is difficult to exaggerate just what a revolutionary change this represents in energy modeling and how much it turns conventional wisdom on its head. By making distribution grids visible to their model and co-optimizing those grids with the transmission system, the team at VCE uncovered a source of grid flexibility that could save a decarbonizing electricity system some half a trillion dollars through 2050. That’s real money.

(If you want to take a deep dive into the material, check out this interview with Clack on Chris Nelder’s Energy Transition Show. It is gleefully nerdy; I cannot recommend it highly enough.)

The cheapest energy scenario is clean and distributed

At the heart of VCE’s work is Clack’s state-of-the-art modeling tool: Weather-Informed energy Systems: for design, operations and markets planning (WIS:dom). It allows resolution down to two-mile square areas and makes dispatch decisions every five minutes. It takes into account granular weather data stretching over decades, climate impacts, policy, all forms of generation, storage, transmission, and on and on. VCE boasts that it “leverages 10,000 times more data points than traditional models.”

For this study, WIS:dom was augmented to better understand and represent distribution grids, so that it could bring transmission and distribution systems together in one system and co-optimize them. It was given better information about the costs and capabilities of DERs and more options; for example, instead of spinning up a new generator to meet peak demand, it could draw on distributed solar and batteries.

The transmission/distribution interface. (VCE)

The transmission/distribution interface. (VCE)

No one to Clack’s knowledge has done this before, so there was a lot of experimenting to get it right. “I had to spend a lot of money and time and resources upgrading the model to include this, with a lot of failures along the way,” says Clack. “That's why I'm confident that we did it first, because I spent a lot of time trying to find someone else that had done it, so I didn’t have to do the hard work.”

The modeling question was: if a high-resolution optimization tool is given DERs as an option, will it choose to deploy them? If so, how much?

The broader social question was: can DERs help lower the overall costs of a clean electricity system? If so, by how much?

The paper presents four core scenarios (which were run across a range of geographies):

BAU (business as usual), which includes existing policies and mandates but otherwise lets economics drive dispatch decisions; it deploys WIS:dom in a way that mimics traditional models;

BAU-DER, which does the same but uses the augmented form of WIS:dom, with greater visibility into distribution systems;

CE (clean energy), which models a system that reduces power sector carbon emissions 95 percent from 1990 levels by 2050; WIS:dom mimics traditional models;

CE-DER, which models a 95 percent reduction but uses the augmented form of WIS:dom.

To skip straight to the results: if you make DERs an option for the model, it deploys an absolute boatload of them (spending about $10 billion extra over the first 10 years), and by doing so substantially reduces overall system costs.

(VCE)

(VCE)

BAU-DER is $301 billion cheaper than BAU (the blue line above), which means we would save money from day one by deploying more DERs even if we didn’t care about climate change.

CE-DER is $473 billion cheaper than CE (the green line), which means DERs will make the decarbonization of electricity much less expensive than doing it all with centralized renewables and storage.

And here’s the kicker: CE-DER is $88 billion cheaper than BAU (the red line), which means, economically speaking, we’d be better off reducing electricity emissions by 95 percent using DERs than continuing with the status quo.

(And this is all just the pure economics — it leaves out the enormous health savings and environmental justice benefits of reduced point-source pollution.)

Whether you’re concerned about climate change or not, whether you want to reduce emissions or not, whether you care about the health and resilience of local communities or not, deploying DERs brings down system costs. It’s the fiscally responsible thing to do.

Now, note the shape of the red line above (and to a lesser extent, the green line). Scenarios that decarbonize using DERs are a smidgen more expensive for the first 10 years or so because they use those early years to deploy an enormous quantity of DERs.

The US currently has about 98 gigawatts of rooftop solar and less than a gigawatt of distributed energy storage installed. Through 2025, CE-DER deploys an additional 75 gigawatts of distributed solar and 27 gigawatts of distributed storage; by 2035, it is 200 and 90, respectively. (By 2050, it is 247 and 160.)

That is an absolute DER building binge, starting now.

(VCE)

(VCE)

After that early period of heightened investment, though, savings begin to skyrocket as DERs pay off in system benefits.

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DERs make everything else on the grid work better

For the entire history of electricity up until about five minutes ago, grid operators viewed electricity demand as an exogenous variable, a set figure they had to meet with supply, not something they had much control over.

The key to the value of DERs is that they make electricity demand more controllable. With energy generation and storage scattered throughout distribution grids, grid operators have a way to move energy around, both geographically and temporally, without firing up more power plants. They can absorb extra energy if there’s a dip in demand or produce extra energy if there’s a spike. The overall effect is to smooth out the “demand curve.”

Look at the thick black line on the top right graph below — that’s the distribution demand curve throughout a representative year:

Look at the demand curve on the top right and then on the bottom right: flatter! (VCE)

Look at the demand curve on the top right and then on the bottom right: flatter! (VCE)

Now note the same black line on the bottom right graph. By satisfying the little demand peaks with distributed solar and storage, the demand for utility-scale energy is leveled off.

Here’s a graph that shows a “load duration curve,” which reveals how high demand is, for how often in the year, and how DERs affect it:

(VCE)

(VCE)

As you can see by the sharp spike on the left, there are relatively rare periods of extremely high demand (peaks). The problem is that the current electricity system has to be sized to meet those peaks, even if that means many power plants end up idle most of the time. Clack says that today, roughly 20 to 25 percent of generation capacity on the grid — some 300-350 gigawatts — covers around 3 percent of the energy load each year. (This, in a nutshell, is why electricity systems everywhere are so overbuilt.)

The light blue-shaded area on the curve shows the reduction in demand that DERs can provide (the dark blue on the right is the increase in demand). Not only can DERs “shave the peak” by an average of 17 percent nationwide, they can reduce the demand for utility-scale energy for 80 percent of the hours of the year. They make the load duration curve more level as well.

These demand-leveling effects bring four big benefits:

First, if you don’t have those big peaks in demand for utility-scale energy, then you don’t need that 20 to 25 percent of capacity that only runs during peaks. Not building those plants, or shutting them down early, saves lots of money.

Second, a more level demand curve means that all generators on the system will run more consistently, with fewer ramps up and down, at closer to their full capacity, helping to maximize their value.

Third, a more level demand curve means that transmission congestion will be reduced and transmission assets will be more efficiently utilized. (In one of my Transmission Month posts, I discussed “energy storage as a transmission asset.” This is the same idea, on a broader scale.)

Fourth, DERs offer the system the option to shift demand to meet variable supply, rather than always forcing it to shift supply to meet demand. Shifting demand is often much cheaper.

These benefits explain why CE-DER is so much cheaper than CE, and even than BAU. They explain why, even though rooftop solar may cost more than centralized solar on a per-kWh basis, its value is greater.

Infusing distribution systems with DERs allows grid operators more stability and more options — including more renewables.

DERs enable more utility-scale renewables

Wind and solar are cheap, but they are variable. They come and go on their own schedule, outside of our control. There will be times — seconds, minutes, hours, sometimes weeks and months — when wind and solar dip and something else is needed to fill the gaps.

Conventionally, this role is played by dispatchable generators that can be turned up and down at will — these days, mostly natural gas plants. Given that most natural gas plants, at least those without carbon capture, will have to be phased out in a decarbonized system, there’s a hunt on for “firm” zero-carbon alternatives — think nuclear, hydro, natural gas or biomass with carbon capture, or geothermal.

But VCE’s modeling shows that a big chunk of that role can be played by DERs, which Clack calls a “firming agent on the load.”

By bringing demand more under grid operators’ control, DERs virtually eliminate curtailment, or discarding of renewable energy due to temporary oversupply, through 2045. Just as they allow transmission to be used more effectively, they allow us to consume more of the energy generated by existing utility-scale renewables.

They also prevent the familiar problem of “value deflation” — more wind and solar energy at particular times and places competes with existing wind and solar energy from the same times and places — by giving grid operators a whole series of time- and location-specific demand knobs that they can turn up or down at will to better accommodate renewables.

By preventing value deflation, DERs will allow for more new renewables on the system (and the retirement of more thermal and fossil generation). That’s why the CE-DER scenario builds more utility-scale wind and solar than the CE scenario. CE-DER builds 800 gigawatts of utility wind, 800 of utility solar, and 200 of utility storage, whereas CE builds 60 gigawatts less wind and 50 less solar (though slightly more batteries).

By enabling renewable energy to be moved around, DERs unlock more of it — with, again, enormous public health benefits that are not captured in the model.

Put technically, as Clack told Nelder, “the model says that distributed [solar] and storage in some combination ends up being higher value than the differential in the [levelized] cost of utility-scale solar and distributed solar.”

Put more colloquially, though it will require enormous upfront investment in the coming decade, laying a quilt of DERs over the nation’s distribution systems is the best thing we can possibly do to enable the rapid emission reductions we will need in the decade after.

DERs are not a boutique version of, or a distraction from, utility-scale renewables; they are a necessary complement, an enabler and accelerator.

(VCE)

(VCE)

DERs will mean more jobs

VCE did some analysis estimating that the DER-enhanced scenarios would add an additional million jobs per year relative to conventional scenarios.

It stands to reason that a huge deployment of DERs would create lots of jobs. These are very hands-on, labor-intensive projects. And since distribution systems are ubiquitous in the US, it would create jobs in every part of the country (though not uniformly).

I’m generally suspicious of employment projections, so I don’t know how much stake to put in the particular figure, but we can be confident that more DERs = more jobs.

DERs could hasten the collapse of existing power markets

VCE’s modeling shows that current electricity markets, if they are not reformed, basically collapse in the next 10 to 20 years. DERs will hasten that collapse in two ways.

First, they will reduce demand peaks, which produce a great deal of value in current markets. Lots of peaker plants will get cancelled or shut down and peaker money will dry up.

Second, DERs will enable more utility-scale wind and solar, which have zero marginal costs. They are all upfront capital costs; once a solar panel is in place, it doesn’t cost it anything more to produce the next kW. It can bid into markets at $0. Pretty soon, so much of the market’s power will come from zero-marginal-cost sources that prices will be $0 most of the year, and $0 means zero profit for participating generators.

Electricity markets were built for fossil fuel generators. They need reform — but that’s a topic for a different post. (This is a good start.)

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Clean electrification boosts the value of DERs

An intriguing note: Clack says that if WIS:dom is told not just to decarbonize electricity but to decarbonize the whole economy (i.e., electrify everything), the value of DERs to the grid effectively doubles.

An economy-wide decarbonization scenario that makes use of DERs saves a trillion dollars relative to one that doesn’t. VCE will have a new report on economy-wide decarbonization coming out soon.

DERs also provide a range of co-benefits

VCE’s modeling only captures DERs’ contribution to overall grid performance and cost. It does not capture many of the benefits that have long attracted customers to them: resilience against brownouts and blackouts, the capacity to go off-grid temporarily (or permanently), independence from the whims of utilities and state regulators, reduced personal greenhouse gas emissions, and most of all, lower electricity bills.

All of those benefits will help drive early adoption of DERs as their value to the grid ramps up (though they should be boosted by utility, state, and federal incentives).

The value of DERs should be visible in all models and states

Clack says that it’s just four paragraphs of code that open WIS:dom up to distribution grids — other models, including the models that utilities use in planning, could easily replicate this.

“One of the reasons I was so keen on having it be relatively simplistic is, it should be able to be adopted by other models,” he says. “Maybe they wouldn't show as much savings as we do, because of different model logic, but I'm pretty confident they will show similar trajectories.”

Today, we have released our full technical report on the "Why Local Solar and Storage Costs Less". Two weeks ago, we released the main findings: savings of $473 billion when co-optimizing distribution. This released provides more details!

Image

December 14th 2020

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This is just one more area where outdated utility models and practices are keeping costs too high and the clean-energy transition too slow. Utilities have traditionally been hostile to DERs, viewing them as competitors or net costs, but VCE’s modeling demonstrates what should have been obvious: having flexible generation and storage infused throughout distribution grids offers a fantastic tool to help stabilize a grid with growing renewables and increasing electric loads and bring costs down for all ratepayers.

#### Integration in the US is modeled globally.

Shen 21 [Bo Shen, Energy Analysis and Environmental Impacts Division, Lawrence Berkeley National Laboratory, Fredrich Kahrl, 3rdRail Inc., and Andrew J. Satchwell, Energy Analysis and Environmental Impacts Division, Lawrence Berkeley National Laboratory, "Facilitating Power Grid Decarbonization with Distributed Energy Resources: Lessons from the United States", Annual Review of Environment and Resources, vol. 46, no. 1, 7/2/21, https://www.annualreviews.org/doi/pdf/10.1146/annurev-environ-111320-071618]

Globally, renewable energy is already playing a significant and growing role in electricity systems. The world's renewable energy power generation capacity more than doubled from 1,223 GW in 2010 to 2,532 GW in 2019 (9). Wind and solar account for most of the recent growth in renewable generation. The installed capacity of wind energy increased from 181 GW in 2010 to 622 GW in 2019 while the installed solar photovoltaic capacity increased significantly from 40 GW in 2010 to 579 GW in 2019 (9).

The United States is among the world's fastest-growing countries in terms of both renewable installed capacity and power generation (10). Renewable electricity generation in the United States doubled from 2008 to 2018, with wind and solar generation accounting for the majority of growth (11). As a result of rapid growth, the share of nonhydro renewable generation rose from 3% of US electricity generation in 2008 to 10% in 2018 (11, 12). The share of renewable generation is expected to continue to grow in order to meet state-level renewable energy targets and state and federal climate goals.

Approximately half of the growth in renewable energy deployment in the United States can be attributed to state-level renewable energy targets (13). As of 2019, 13 states as well as Washington, DC, and Puerto Rico had either enacted legislation or issued executive orders with a commitment to achieving either 100% renewable energy or 100% clean energy goals (14).1 Figure 1 shows state-level renewable energy targets adopted across the United States by the end of 2019.

[FIGURE 1 OMITTED]

Despite ambitious renewable energy targets, major obstacles must be overcome to enable future energy systems to economically and reliably operate with high penetration of variable renewable energy (VRE). As the US Department of Energy points out, “[o]ne of the greatest challenges to integrating VRE lies in managing its effects (variability, uncertainty, location specificity, nonsynchronous generation, and low capacity factor) on grid operations and planning” (15, p. 61). With the large-scale deployment of wind and solar generation on both the grid side and customer side, transmission system operators and distribution utilities face new operational challenges. Distributed energy resources (DERs) are emerging as a potential solution alongside traditional generation, transmission, and distribution infrastructure for addressing these challenges.

As the US Federal Energy Regulatory Commission (FERC) points out, there is no uniform definition of DERs, and the definition keeps changing (16). The US National Association of Regulatory Utility Commissioners (17, p. 45) broadly defines DERs to reflect their diversity:

A DER is a resource sited close to customers that can provide all or some of their immediate electric and power needs and can also be used by the system to either reduce demand (such as energy efficiency) or provide supply to satisfy the energy, capacity, or ancillary service needs of the distribution grid. The resources, if providing electricity or thermal energy, are small in scale, connected to the distribution system, and close to load. Examples of different types of DER include solar photovoltaic (PV), wind, combined heat and power (CHP), energy storage, demand response (DR), electric vehicles (EVs), microgrids, and energy efficiency (EE).

DERs have seen rapid growth in the United States. Distributed PV installations grew from 0.4 GW in 2010 to 10.5 GW in 2017 (18). According to data from the US Energy Information Administration (19, 20), the total existing small-scale storage power capacity connected to the US distribution network increased from 66 MW in 2016 to 234 MW in 2018. Among the capacity in 2018, 97% were behind-the-meter installations, and the share in the commercial, residential, and industrial sectors were slightly higher than 50%, 31%, and 15%, respectively. Demand response (DR), which is a program aimed at adjusting electricity demand “in response to price, monetary incentives, or utility directives so as to maintain reliable electric service or avoid high electricity prices (21, p. i),” has been active in the United States over the past five years. Between 2015 and 2019, the number of customers enrolled in DR programs increased from 9 million in 2015 to almost 11 million in 2019. At the same time, the actual peak demand savings averaged 12.2 GW per year, and the average annual power savings was 1357.4 GWh (22). Advanced metering infrastructure (AMI) is the foundation for the expansion of distributed energy systems. AMI is “an integrated system of smart meters, communications networks, and data management systems that enables two-way communication between utilities and customers” (23, p. 4). The number of advanced meters increased from 58.5 million in 2014 to 86.8 million in 2018. Its penetration rate (the proportion of advanced meters in the total number of meters deployed in the United States) jumped from 38.8% to 56.4% in the same period (24).

The role of DERs as an electricity system resource has evolved over time. Historically, most DERs in the United States were demand-side management programs funded and administrated by utilities with the goals of cost-effectively reducing demand and enhancing utilities’ interactions with their customers. These traditional programs focused primarily on energy efficiency and interruptible load management programs oriented around peak reliability needs.

Advanced DER applications go beyond traditional power system reliability needs to serve customers’ growing interests in new, customer-sited applications such as distributed generation (DG), energy storage, load response, and managing electric vehicles while helping address emerging power system challenges. These challenges include the need to balance a large amount of solar and wind energy output that is neither constant nor fully predictable and the need to more actively operate distribution systems that have growing penetrations of customer-sited resources. Through bidirectional power flow, advanced system control, and real-time information flow, DERs are well suited to provide flexible resources to enable dynamic load adjustments to real-time operational conditions, thus improving the stability of the grid and enhancing grid flexibility for integrating VRE (25).

DERs offer numerous services and provide value to three different power system perspectives—regional system operators, utilities, and customers (see Table 1). Many of these services are critical for operating a stable and flexible electricity system powered by VRE (26). In addition to the benefit of grid flexibility, DERs could also play an increasingly critical role in improving power system resilience to deal with significant disruptions resulting from severe weather, deadly wildfires, and other extreme events (27).

[TABLE 1 OMITTED]

This article examines US regulatory policy and implementation experience in deploying DERs to offer insights for the design of energy and climate policies and the potential role and challenges of DERs in decarbonization and improved power system resilience, in both the United States and other countries. The remainder of the article is organized as follows. Section 2 presents the framework through which this article reviews the US experience and lessons learned in adopting enabling policies and creating effective markets and business models for DER. Section 3 focuses on the role of specific federal and state policy measures in the United States in driving DER deployment. Section 4 discusses various market strategies and business models adopted in the United States in facilitating DER expansion. Section 5 describes major challenges and lessons learned thus far that may inform possible solutions in both the United States and elsewhere. Section 6 concludes the article with insights for other countries.

#### Only antitrust solves—provides vital private deterrence and regs fail

Vaheesan 19 [Sandeep Vaheesan is legal director at the Open Markets Institute. Vaheesan previously served as a regulations counsel at the Consumer Financial Protection Bureau, where he helped develop and draft the first comprehensive federal rule on payday, vehicle title, and high-cost installment loans. Paula Bliss, of counsel, Bernheim Kelley Battista & Bliss, MARK A. GOTTLIEB Counsel of Record PUBLIC HEALTH ADVOCACY INSTITUTE, PNE Energy Supply LLC, On Behalf Of Themselves And Others Similarly Situated V. Eversource Energy And Avangrid, Inc. Motion Of Open Markets Institute For Leave To File Amicus Curiae Brief In Support Of Plaintiff-Appellant. 10/25/19, https://static1.squarespace.com/static/5e449c8c3ef68d752f3e70dc/t/5eaa1d9d2790182e187cc171/1588207017816/19-1678\_Documents-as-filed.pdf]

Since Congress and FERC have committed to market-based pricing in wellhead gas, resales of gas, and wholesale electricity, the full application of the antitrust laws is critical for ensuring the success of this legislative and regulatory market creation. Even as FERC maintains oversight of the electricity and natural gas markets, this regulatory supervision has important limitations and cannot be expected to root out all anticompetitive conduct. Antitrust enforcement complements FERC oversight and provides vital deterrence against anticompetitive practices in gas and electricity markets. Specifically, antitrust suits brought by injured consumers and businesses provide strong deterrence of anticompetitive conduct as well as compensation. In dismissing the plaintiff-appellant’s suit, the district court severely weakened the effectiveness of the antitrust laws and empowered sellers of gas and electricity to profit through anticompetitive market conduct. FERC oversight is not adequate to prevent anticompetitive conduct and ensure that markets in natural gas and electricity are free from collusive, exclusionary, and other unfair market conduct. Although FERC has an obligation to maintain “just and reasonable rates” under the Natural Gas and Federal Power Acts, 15 U.S.C. § 717c, it has only very limited tools to police specific anticompetitive conduct in the gas and electricity markets and to provide any remedy for anticompetitive market conduct it discovers after the fact.

Even assuming FERC acts against anticompetitive and other unfair conduct, 5 its remedies provide inadequate deterrence and cannot be counted on to compensate injured parties. FERC can impose monetary penalties of up to a fixed maximum amount per day on parties over whom it has jurisdiction and who have violated FERC rules in gas or electricity markets. 15 U.S.C. 717t-1; 16 U.S.C. 825o-1(b). All such penalties, however, go to the United States Treasury, not to the injured customers, absent agreement by the defendant. FERC can also order disgorgement of ill-gotten profits as a result of market manipulation. Revised Policy Statement on Enforcement, 123 FERC ¶ 61,156 (2008). Both remedies are, at best, an imperfect approximation of market-wide injury to purchasers and, at worst, a small fraction of market harm and woefully inadequate to deter market misconduct. And they offer no guarantee of full compensation for injured parties.

Given FERC’s limited market oversight powers, antitrust enforcement plays an important role in gas and electricity markets. Antitrust lawsuits help identify and stop anticompetitive practices and ensure that market-based pricing serves the public. When sellers engage in collusion, exclusion and mergers, they can enhance and maintain their market power and profit at the expense of purchasers and rivals. See, e.g., Keyspan, 763 F.Supp. at 636 (describing alleged effects of anticompetitive swap agreement involving rival generators in New York City). As federal regulators have renounced or been deprived by Congress of direct price setting authorities, the full effectiveness of the antitrust laws is essential. Jim Rossi, Lowering the Filed Tariff Shield: Judicial Enforcement for a Deregulatory Era, 56 Vand. L. Rev. 1591, 1648 (2003). See also Alfred E. Kahn, Deregulatory Schizophrenia, 75 Calif. L. Rev. 1059, 1059 (1987) (“While prepared to defend enthusiastically the deregulations with which I have been involved, I feel equally strongly that they have greatly accentuated the importance of antitrust enforcement.”).

The filed rate doctrine’s limitation on private antitrust enforcement subverts the effectiveness of the antitrust laws. The ability of injured consumers and businesses to bring antitrust suits is a pillar of the American antitrust enforcement regime. Under the Clayton Act, “[a]ny person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue . . ., and shall recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee.” 15 U.S.C. § 15. See, e.g., Blue Shield of Va. v. McCready, 457 U.S. 465, 472 (1982) (quoting Mandeville Island Farms, Inc. v. Am. Crystal Sugar Co., 334 U.S. 219, 236 (1948)) (“Congress sought to create a private enforcement mechanism that would deter violators and deprive them of the fruits of their illegal actions, and would provide ample compensation to the victims of antitrust violations. . . . As we have recognized, ‘[t]he statute does not confine its protection to consumers, or to purchasers, or to competitors, or to sellers. . . . The Act is comprehensive in its terms and coverage, protecting all who are made victims of the forbidden practices by whomever they may be perpetrated.’”).

Empirical research shows the public importance of “private attorneys general” and the value of having more enforcers on the beat against corporate collusion, consolidation, and monopolization. A study of 60 private antitrust lawsuits between 1990 and 2011 found that these actions generated more deterrence than the federal government’s entire criminal antitrust enforcement activity over the same period. Joshua P. Davis & Robert H. Lande, Defying Conventional Wisdom: The Case for Private Antitrust Enforcement, 48 Ga. L. Rev 1, 26 (2013). And these lawsuits compensated injured parties, whereas public enforcement generally did not.

#### Extinction level warming is reversible

Bendix 21 [Aria Bendix , Senior Reporter at Insider, covering science and health citing IPCC Aug 2021 Climate Report. Aylin Woodward , and Morgan McFall-Johnsen. “Climate scientists want you to know it's not too late”. 8/10/21. https://www.businessinsider.com/still-time-to-address-climate-change-ipcc-scientists-report-2021-8]

At first glance, Monday's long-awaited report from the Intergovernmental Panel on Climate Change was bleak. It found that some consequences of human-driven emissions are irreversible for centuries to millennia, and that warming will continue to some extent over the next two to three decades, regardless of how much emissions drop.

But the assessment also emphasizes that the worst-case climate disasters aren't inevitable: Every half-degree of warming that can be averted makes a huge difference — including in the intensity and frequency of extreme heat, rainfall, and drought. Even incremental reductions in emissions today would stave off more catastrophic events in the coming decades.

The IPCC report comes from a working group of hundreds of scientists whose last assessment was in 2013. This new report shows that human-caused emissions have led the planet to warm by 1.1 degrees Celsius in the last 170 years. Some glacial melting and sea-level rise will continue for millennia, no matter what happens next.

But Youba Sokona, vice-chair of the IPCC, highlighted a more optimistic takeaway: "We are in the right moment to completely change the direction we are taking," he told Insider.

In the IPCC's worst-case scenario, global emissions would double by 2050, causing temperatures to rise an average of 2.4 degrees Celsius between 2041 and 2060. But in the best-case scenario, the global temperature would rise just 1.5 degrees between now and 2040, then dip back down by the end of the century.

That means there's still time to act.

"It is virtually certain that global surface temperature rise and associated changes can be limited through rapid and substantial reductions in global greenhouse-gas emissions," the IPCC authors wrote.

The world has some time to lower emissions

paris climate agreement

A woman walks past a map at the World Climate Change Conference 2015 (COP21) at Le Bourget, near Paris, France, on December 11, 2015. Reuters/Stephane Mahe

In the Paris agreement, world leaders pledged to cut greenhouse-gas emissions enough to keep global temperatures from rising more than 1.5 degrees Celsius above pre-industrial levels. Now, Earth's temperature is very likely to blow past that mark in the next 20 years, according to the IPCC report.

But the Paris agreement's larger goal was to avoid a 2-degree rise at all costs. That's still possible, scientists say.

"It's very likely that we'll exceed 1.5 degrees," Greg Flato, a climate scientist from the Canadian Center for Climate Modeling and one of the new report's co-authors, told Insider. "It's possible to exceed slightly and stabilize if we follow a pathway of deep emissions cuts by midcentury."

Already, the world cut carbon emissions by 2.5 billion tons in 2020, since pandemic-related lockdowns meant fewer vehicles on the road, planes in the sky, and less collective electricity use at peak times. That's a roughly 6% decline from the year prior, following decades of rising global emissions.

"The lesson we can learn from that is that we can change our behavior drastically in the short term," Sokona said.

The IPCC found that every trillion tons of carbon emitted leads the world's temperature to rise roughly 0.45 degrees. To stay under the 2-degree threshold, we have about 900 billion tons of carbon left in the budget. In 2019, emissions reached about 37 billion tons — so if that rate continues and no carbon gets removed from the atmosphere, we'd have about 25 years remaining.

There's still time to mitigate extreme heatwaves, drought, and floods

Drought Brazil

A Brazilian worker surveys the cracked ground of Jaguary dam in Braganca Paulista on January 31, 2014. Nacho Doce/Reuters

A difference of half a degree may sound minor, but avoiding that increase would make the difference between extreme and deadly heatwaves, droughts, and floods and milder, less frequent versions of these events.

At 2 degrees of warming, extreme temperature changes could be twice as pronounced as they would be at 1.5 degrees, the IPCC report found. Globally, the chance of at least three months of drought per year would rise from about 20% at a 1.5-degree temperature rise to 35% at 2 degrees.

The Atlantic Meridional Overturning Circulation (AMOC), meanwhile, could lose nearly 30% of its pre-industrial strength if global temperatures rise anywhere between 1.5 and 2 degrees Celsius. This system of ocean currents moves warm water from the equatorial tropics up to Europe and the north Atlantic. The influx of warmer water contributes to western Europe's mild, temperate climate, so if the current gets weaker, it could result in more intense winters in some places and more frequent heatwaves and droughts in others.

Higher temperatures will also shrink the planet's ice sheets, snow cover, glaciers, and permafrost — a layer of soil that used to stay frozen year-round. As permafrost thaws, it releases carbon, which traps heat and contributes to additional warming. With each degree of warming, the top 3 meters of permafrost could lose 20-30% of its volume, the IPCC found.

Even if humanity doesn't wind up avoiding all of these disasters, the report at least tells policymakers what's in store.

"Having that information today allows us to begin the actions that will make us ready a decade from now, mid-century, and at the end of the century," Alex Ruane, one of the report's lead authors, told Insider.

"This provides a kind of roadmap, or at least a forewarning, of the types of changes that we have to be prepared for," Ruane said, adding, "This is where my optimism lies."

#### The United States federal government should substantially increase its prohibitions on anticompetitive business practices by private electricity and gas corporations by reducing application of regulatory antitrust immunities.

### Advantage Two is Prices

#### Filed rate immunizes manipulation of market prices for utility profits. Causes blackouts and energy price hikes.

Vaheesan 19 [Sandeep Vaheesan is legal director at the Open Markets Institute. Vaheesan previously served as a regulations counsel at the Consumer Financial Protection Bureau, where he helped develop and draft the first comprehensive federal rule on payday, vehicle title, and high-cost installment loans. Paula Bliss, of counsel, Bernheim Kelley Battista & Bliss, MARK A. GOTTLIEB Counsel of Record PUBLIC HEALTH ADVOCACY INSTITUTE, PNE Energy Supply LLC, On Behalf Of Themselves And Others Similarly Situated V. Eversource Energy And Avangrid, Inc. Motion Of Open Markets Institute For Leave To File Amicus Curiae Brief In Support Of Plaintiff-Appellant. 10/25/19, https://static1.squarespace.com/static/5e449c8c3ef68d752f3e70dc/t/5eaa1d9d2790182e187cc171/1588207017816/19-1678\_Documents-as-filed.pdf]

\*italics from original document

Under a system of market-based pricing, full and robust antitrust enforcement is vital to protect the public from the collusive, exclusionary, and other unfair practices of producers and traders of electricity and natural gas. See Alfred E. Kahn, Deregulatory Schizophrenia, 75 Calif. L. Rev. 1059, 1059 (1987) (“While prepared to defend enthusiastically the deregulations with which I have been involved, I feel equally strongly that they have greatly accentuated the importance of antitrust enforcement.”). In this case, however, the court expanded the filed rate doctrine, which was created to protect the integrity of *regulator-approved rates*, to immunize Eversource Energy and Avangrid’s manipulation of *market prices* for electricity and gas from a private antitrust lawsuit. In broadening the filed rate doctrine to dismiss the plaintiff-appellant’s lawsuit, the district court granted a *de facto* license for sellers of gas and electricity to use their market power to transfer millions or even billions of dollars from the public into their own coffers.

Plaintiff-appellant accuses Eversource Energy and Avangrid (two vertically integrated utilities that distribute gas and electricity to end-use customers and own power generation assets) of misusing their market power at the natural gas resale level and engineering a chain of events that inflicted substantial harm on New England residents. The defendants-appellees abused their gas pipeline use rights to create an artificial shortage of resale gas, a key input for generating electricity in New England. By limiting the supply of gas in New England and raising the price of natural gas, the defendants-appellees increased the costs of generating electricity. And by raising the costs of generating electricity, they increased wholesale electricity prices and ultimately retail electricity costs for New Englanders by more than $3 billion.

Over the past four decades, legislators and regulators have limited and even withdrawn public utility regulation over the production and sale of natural gas and the generation of electricity and introduced market-based pricing in these areas. In lieu of cost-of-service regulation, market-based pricing now governs the sale of gas at the wellhead where gas is produced, the resale of surplus gas to purchasers like electricity generators, and the sale of electricity at the wholesale level. In contrast to the previous regulated environment, the conduct of sellers in these markets is today “governed in the first instance by business judgment, and not regulatory coercion.” Otter Tail Power Co. v. United States, 410 U.S. 366, 374 (1973).

As these legislative and regulatory decisions have lifted traditional price controls, participants in the wellhead gas, gas resale, and wholesale electricity markets exercise discretion that they previously did not have. Competition in wellstructured markets constrains this private discretion and can ensure the availability of plentiful and affordable gas and electricity. When markets are concentrated or when market participants engage in collusive, exclusionary, or other unfair practices, however, this private discretion becomes private power. Under these circumstances, sellers can use their unilateral or collective market power to profit at the expense of purchasers of gas and electricity.

As the plaintiff-appellant alleges, the risk of misconduct in these markets is real. And the alleged misconduct is not an aberration. In electricity markets, generators have engaged in market power abuse on a recurring basis. This abuse was most powerfully illustrated in the California electricity crisis in 2000. In-state generators with market power created artificial shortages of electricity and caused price spikes and rolling blackouts in the state, extracting billions of dollars in private taxes from the public. Severin Borenstein, James B. Bushnell & Frank A. Wolak, Measuring Market Inefficiencies in California’s Restructured Wholesale Electricity Market, 92 Am. Econ. Rev. 1376 (2002).

#### And, high prices undermine growth—addressing anticompetitive conduct solves

Moss 13 [Diana Moss is Vice President and Director, American Antitrust Institute (AAI), and Sandeep Vaheesan is Special Counsel, AAI, "Collusive Agreements in the Energy Industry: Insights into U.S. Antitrust Enforcement", 1/10/13, https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2198539&download=yes]

The importance of the energy sector in the U.S. economy needs little explanation. According to the Energy Information Administration (EIA), Americans spent over $1 trillion, or roughly eight percent of U.S. gross domestic product, on energy in 2009.4 Energy expenditures comprise a major fraction of household budgets in the U.S. EIA estimates show that U.S. households spent an average of $2,024 on energy for heating in 20095 and $2,832 on gasoline in 2011.6

Because energy is the lifeblood of the modern economy, energy prices play a critical role in economic growth. Although the U.S. economy is not as energy intensive as it was several decades ago,7 rising energy prices can still slow economic growth. As an important input for industry and transportation, higher energy prices increase costs and lower profits. Moreover, consumers’ ability to modify their energy use and transportation arrangements in the short run is limited8 and only mildly responsive to short run changes in prices.9 Higher energy prices can take a particularly large toll on low-income households that spend a larger fraction of their budgets on energy than middle- and upper-income households.10

Because of the important macroeconomic and microeconomic role of energy prices, anticompetitive conduct in energy markets can be particularly harmful. Petroleum markets are vulnerable to collusive agreements, and the incidence of anticompetitive behavior at multiple levels in the supply chain compounds the adverse effects on consumers. Cartelization of the global crude oil market by the Organization of Petroleum Exporting Countries (OPEC) is one of the most well known examples. OPEC’s decision to restrict crude oil production in the early 1970s plunged much of the world economy into recession.11 Anticompetitive agreements also extend to price fixing at the retail level for products such as diesel and gasoline. Agreements to fix and raise prices between local competing retailers of refined petroleum products directly harm consumers by extracting supracompetitive prices on an essential commodity for which consumers cannot easily adjust consumption in the short run. More recently, collusion has surfaced in auctions for oil and gas exploration leases on federal and private land. Agreements between bidders not to compete against each other depress prices and reduce an important revenue stream for the government.12

The pernicious effects of collusive schemes in energy are not limited to petroleum markets. On a more local level, anticompetitive agreements between sellers in regional wholesale electricity markets have forced consumers to pay hundreds of millions of dollars more for electricity than they would have in the absence of such conduct. In these markets, which are structurally vulnerable to the exercise of market power, anticompetitive agreements spanning even a short time can result in large wealth transfers from consumers to suppliers.13

Collectively, these examples illustrate the serious harm to consumers and to the economy that flow from collusive agreements, making the case for rigorous Section 1 enforcement. A key component of Section 1 enforcement, however, is the choice of enforcement approach (e.g., criminal vs. civil) and remedy, the effectiveness of which is gauged by how well it deters future collusive behavior.consumers cannot easily adjust consumption in the short run. More recently, collusion has surfaced in auctions for oil and gas exploration leases on federal and private land. Agreements between bidders not to compete against each other depress prices and reduce an important revenue stream for the government.12 The pernicious effects of collusive schemes in energy are not limited to petroleum markets. On a more local level, anticompetitive agreements between sellers in regional wholesale electricity markets have forced consumers to pay hundreds of millions of dollars more for electricity than they would have in the absence of such conduct. In these markets, which are structurally vulnerable to the exercise of market power, anticompetitive agreements spanning even a short time can result in large wealth transfers from consumers to suppliers.13 Collectively, these examples illustrate the serious harm to consumers and to the economy that flow from collusive agreements, making the case for rigorous Section 1 enforcement. A key component of Section 1 enforcement, however, is the choice of enforcement approach (e.g., criminal vs. civil) and remedy, the effectiveness of which is gauged by how well it deters future collusive behavior.

#### New energy inflation triggers US recession

Falath 1/7 [Jujaj Falath, senior analyst at the National Bank of Slovakia and a visiting lecturer in economics at the Comenius University in Bratislava, Martin Pažický, economist at the Institute for Financial Policy at the Ministry of Finance of the Slovak Republic and a visiting lecturer at the Faculty of Management, Comenius University in Bratislava. “The big risk now for the US is not hyperinflation, but long-term elevated inflation rates”. 1/7/22. https://blogs.lse.ac.uk/usappblog/2022/01/07/the-big-risk-now-for-the-us-is-not-hyperinflation-but-long-term-elevated-inflation-rates/]

Although some price increases were expected, US inflation figures have now consistently exceeded economists’ expectations. Seven of the last ten CPI inflation readings surprised analysts on the upside, while none of them surprised on the downside. Risks include new, more transmissible COVID mutations, slower vaccine rollouts (causing supply bottlenecks in emerging countries), and lower vaccine efficacy, supply chain disruptions, climate threats, and rising property and energy prices.

Sustained high inflation is mixed news for debts. A moderate amount of inflation above target could help wipe out some of the record government debt burden and allow countries to consolidate. However, if inflation gets out of control and central banks have to slam on the brakes by sharply raising rates, those record debt levels will hurt much more. Furthermore, suppressing economic activity too sharply could spur another recession.

Inflation soared because of COVID

To understand whether we should panic about inflation, we need a deeper discussion of the current sources of inflationary pressures. In principle, the only source of inflation that should spur a contractionary macroeconomic policy response (either monetary by higher interest rates, or fiscal by smaller budget deficits) is inflation driven by the labour market. When workers have enough bargaining power to secure a pay rise that outpaces the long-term potential of the economy, there is a risk of “overheating”. Only this situation, where wage growth runs ahead of productivity growth, should lead to macroeconomic policy intervention. Other supply-related sources of inflation (for example, commodity prices) are volatile and driven primarily by global markets. These inflationary pressures are not the result of overheating and are far more likely to be temporary.

At the beginning of 2021, the main factors driving the rise in inflation were energy prices and factors associated with the reopening of the US economy. Both are usually temporary. Since the second quarter of 2021, however, the rise in CPI inflation has been increasingly driven by rises in the prices of core goods not related to reopening (Figure 1, green columns). This might indicate that inflation is growing more persistent.

The world is currently facing the most severe energy shock in recent decades. The prices of gas and electricity have reached record highs. Partly, this can be seen as compensation for exceptional price falls in 2020, when many factories were forced to halt production. Lifting restrictions boosted demand for commodities, which has resulted in rising energy prices. More expensive emission allowances, representing a form of green tax, have also contributed. As winter sets in, the demand for natural gas and oil is rising. Since stocks are limited, the severity of the situation will depend on how low temperatures drop.

#### That ripples through the whole economy.

Salzman 11/9 [Avi; November 9; Senior writer at Barron's, covering stocks, the economy, and the impact of new technology on financial markets; *Barron’s,* “High Energy Prices Are Rippling Through the Economy,” <https://www.barrons.com/articles/high-energy-prices-are-rippling-through-the-economy-51636477167>]

The latest government inflation figures show that prices are rising fast, and much of the momentum is coming from energy. The trends are already hitting businesses in several industries and will continue rippling through the economy. Investors should keep an eye out for shrinking margins—and possibly pressure on valuation—in the months ahead.

On Tuesday, the Bureau of Labor Statistics released the monthly producer price index, which measures prices of goods and services as they make their way through the supply chain. The report showed that the PPI rose 0.6% in October on a month-over-month basis, and 8.6% on a year over year basis, in line with economists’ expectations.

The consumer price index, which measures prices at the retail level, is scheduled to be released on Wednesday. That report is likely to show that escalating energy prices are forcing consumers to pay up for heating oil, propane, gasoline, and other fuels.

“I think more pain is going to come to the consumer, certainly, for this winter,” said Marcus McGregor, an energy analyst at asset manager Conning. “I think if you look at the latest reports, costs for propane, natural gas and any sources that are leading into the consumer’s home—if we have a really cold winter—are expected to increase significantly this winter. So I see more pain before relief when it comes to the U.S. consumer.”

Businesses are already having to adjust. The PPI shows how the escalating energy costs are affecting corporations—and how they may end up flowing through to consumers in several industries. The price of goods that were at the final stage of production (as opposed to component parts) rose 1.2% in the month, with three quarters of that jump having to do with a rise in the price of energy, according to the report. In October, oil prices rose 13%. Natural gas prices were flat in October, after jumping 34% in September, the largest one-month gain in 12 years.

That has been a boon for energy companies, which have led the market higher this year after trailing for much of the previous decade. Exxon Mobil (ticker: XOM) stock has soared 58% this year, and BP (BP) is up 34%.

But escalating energy prices are a draw on several other industries. Consumer goods get more expensive because it costs more to truck them to warehouses and stores.

“Higher commodity and freight cost impacts combined were a 400 basis point hit to gross margins,” said Procter & Gamble (PG) CFO Andre Schulten on the company’s earnings call last month.

Airlines get pinched, too, because fuel can account for about one-fifth of their expenses. Delta Air Lines (DAL), for instance, said on its latest earnings call that high fuel prices “will pressure our ability to remain profitable in the December quarter.”

“At present time, we’re expecting a modest loss in the fourth quarter with crude prices driving that up nearly 60% year-to-date and more than 15% just over the last month,” said CEO Ed Bastian.

Companies that make or process fuels and chemicals often run on natural gas. Refinery operator Valero Energy (VLO) said that its refinery operating expenses rose 6% in the third quarter largely because of higher natural gas prices. And any other business—including office work—that uses substantial amounts of electricity can be hurt when energy prices rise. Natural gas now accounts for the largest share of U.S. electricity generation.

Industrial companies can be hit too, as their operating expenses rise. Processed fuels used in manufacturing—things like oils, greases, natural gas, and diesel—are on average 34% more expensive than they were a year ago, according to the PPI. That, along with supply-chain problems around the world, are causing some industrial companies to warn investors that their margins could be hurt.

German chemicals company BASF (BASFY) said that high natural gas prices cost it 600 million euros in the first nine months of the year, but that October prices increases would make its operations even more expensive.

“Throughout basically all value chains, our suppliers, our customers and we ourselves continue to be confronted with increasing raw material, energy and transportation costs, supply chain constraints and the related and largely unforeseeable issues with material availability,” said CEO Martin Brudermüller on the company’s latest earnings call.

It’s a global problem that won’t be going away soon, and one that consumers are starting to feel too.

#### Uniquely undermines consumption which kills growth

The Economist 21 [The Economist, "How soaring energy costs could hobble the covid-19 recovery", 10/23/21, https://www.economist.com/finance-and-economics/2021/10/23/how-soaring-energy-costs-could-hobble-the-covid-19-recovery]

The inflationary consequences of costly energy are already apparent. In the euro area, headline annual inflation jumped to 3.4% in September, thanks to a 17.4% leap in energy costs. Underlying “core” inflation (which excludes food and energy prices) rose by a more modest 1.9%. In America underlying inflation ran hotter in September, at 4%. But a 24.8% increase in energy costs pushed the headline rate up even higher, to 5.4%. These figures are likely to rise further in coming months, since rocketing fuel prices in October have not yet made their way into the statistics.

The contribution of energy to inflation will begin to fade once prices plateau—as they may in coming months, and even sooner if winter proves no colder than usual. Recent analysis by economists at Goldman Sachs, a bank, suggests that the effect of energy costs on America’s year-on-year inflation rate stood at 2.15 percentage points in September and will likely rise to 2.5 percentage points by the end of this year—taking the headline rate to 5.8%, holding other components constant—before eventually turning slightly negative by the end of 2022.

What about the damage to growth? The predominant factor, in the near term at least, is the effect on consumption and investment. Over short time horizons, households and firms cannot easily cut energy use in response to rising costs, leaving less to spend on other goods and services. This effect, according to work by Paul Edelstein of State Street, a bank, and Lutz Kilian of the Federal Reserve Bank of Dallas, is concentrated in the consumption of durable goods; a rise of 10% in the price of energy is associated with a 4.7% decline in spending on durables (and a particularly large drop in purchases of vehicles).

Yet the researchers also note that consumption tends to fall by more in response to rising fuel costs than you might expect given the share of energy in budgets. That seems to be because energy shocks tend to depress sentiment. James Hamilton of the University of California, San Diego, studies historical oil shocks and finds that a 20% rise in the real price of energy is associated with a 15-point drop in an index of consumer confidence. (A gauge of American sentiment collected by the University of Michigan has fallen by nearly 17 points since April 2021.)

An energy-induced slump could be mitigated if consumers meet higher bills by drawing on savings. By the end of 2020, households across large rich economies had accumulated “excess”, or above-normal, savings equivalent to more than 6% of gdp. Nonetheless, analysts at Goldman reckon that costly energy will reduce the growth rate of consumption in America by 0.4 percentage points this year, and by 0.5 points in 2022. Those inclined to see the petrol tank as half full may note that slower consumption growth could help ease strains on supply chains, which have been stressed by especially strong demand for durable goods. Those who grumble that it is half empty may worry that power cuts in places like China could result in still more shortages.

#### Econ decline causes great power war

Liu 18, [Qian Liu is an economist based in China, The next economic crisis could cause a global conflict. Here's why, https://www.weforum.org/agenda/2018/11/the-next-economic-crisis-could-cause-a-global-conflict-heres-why/]

The response to the 2008 economic crisis has relied far too much on monetary stimulus, in the form of quantitative easing and near-zero (or even negative) interest rates, and included far too little structural reform. This means that the next crisis could come soon – and pave the way for a large-scale military conflict.

The next economic crisis is closer than you think. But what you should really worry about is what comes after: in the current social, political, and technological landscape, a prolonged economic crisis, combined with rising income inequality, could well escalate into a major global military conflict.

The 2008-09 global financial crisis almost bankrupted governments and caused systemic collapse. Policymakers managed to pull the global economy back from the brink, using massive monetary stimulus, including quantitative easing and near-zero (or even negative) interest rates.

But monetary stimulus is like an adrenaline shot to jump-start an arrested heart; it can revive the patient, but it does nothing to cure the disease. Treating a sick economy requires structural reforms, which can cover everything from financial and labor markets to tax systems, fertility patterns, and education policies.

Policymakers have utterly failed to pursue such reforms, despite promising to do so. Instead, they have remained preoccupied with politics. From Italy to Germany, forming and sustaining governments now seems to take more time than actual governing. And Greece, for example, has relied on money from international creditors to keep its head (barely) above water, rather than genuinely reforming its pension system or improving its business environment.

The lack of structural reform has meant that the unprecedented excess liquidity that central banks injected into their economies was not allocated to its most efficient uses. Instead, it raised global asset prices to levels even higher than those prevailing before 2008.

In the United States, housing prices are now 8% higher than they were at the peak of the property bubble in 2006, according to the property website Zillow. The price-to-earnings (CAPE) ratio, which measures whether stock-market prices are within a reasonable range, is now higher than it was both in 2008 and at the start of the Great Depression in 1929.

As monetary tightening reveals the vulnerabilities in the real economy, the collapse of asset-price bubbles will trigger another economic crisis – one that could be even more severe than the last, because we have built up a tolerance to our strongest macroeconomic medications. A decade of regular adrenaline shots, in the form of ultra-low interest rates and unconventional monetary policies, has severely depleted their power to stabilize and stimulate the economy.

If history is any guide, the consequences of this mistake could extend far beyond the economy. According to Harvard’s Benjamin Friedman, prolonged periods of economic distress have been characterized also by public antipathy toward minority groups or foreign countries – attitudes that can help to fuel unrest, terrorism, or even war.

For example, during the Great Depression, US President Herbert Hoover signed the 1930 Smoot-Hawley Tariff Act, intended to protect American workers and farmers from foreign competition. In the subsequent five years, global trade shrank by two-thirds. Within a decade, World War II had begun.

To be sure, WWII, like World War I, was caused by a multitude of factors; there is no standard path to war. But there is reason to believe that high levels of inequality can play a significant role in stoking conflict.

According to research by the economist Thomas Piketty, a spike in income inequality is often followed by a great crisis. Income inequality then declines for a while, before rising again, until a new peak – and a new disaster. Though causality has yet to be proven, given the limited number of data points, this correlation should not be taken lightly, especially with wealth and income inequality at historically high levels.

This is all the more worrying in view of the numerous other factors stoking social unrest and diplomatic tension, including technological disruption, a record-breaking migration crisis, anxiety over globalization, political polarization, and rising nationalism. All are symptoms of failed policies that could turn out to be trigger points for a future crisis.

Voters have good reason to be frustrated, but the emotionally appealing populists to whom they are increasingly giving their support are offering ill-advised solutions that will only make matters worse. For example, despite the world’s unprecedented interconnectedness, multilateralism is increasingly being eschewed, as countries – most notably, Donald Trump’s US – pursue unilateral, isolationist policies. Meanwhile, proxy wars are raging in Syria and Yemen.

Against this background, we must take seriously the possibility that the next economic crisis could lead to a large-scale military confrontation. By the logic of the political scientist Samuel Huntington , considering such a scenario could help us avoid it, because it would force us to take action. In this case, the key will be for policymakers to pursue the structural reforms that they have long promised, while replacing finger-pointing and antagonism with a sensible and respectful global dialogue. The alternative may well be global conflagration.

### Advantage Three is Capture

#### Filed rate incentivizes strategic manipulation of regulatory agencies that locks in state and FERC capture – over-disclosure of ambiguous ex ante terms decks the regs CP

Rossi 10 [Jim Rossi, Harry M. Walborsky Professor and Associate Dean for Research, Florida State University College of Law . Edited by Daniel A. Farber and Anne Joseph O’Connell. “Research Handbook on Public Choice and Public Law”, Ch 13 ‘Public choice, energy regulation and deregulation’. 7/30/10. https://www.e-elgar.com/shop/usd/research-handbook-on-public-choice-and-public-law-9781847206749.html]

One of the cases that illustrates the broad scope – and potential cost – of the filed rate doctrine for the operation of deregulated energy markets involved a price squeeze claim by a municipal utility in Massachusetts against New England Power Company, alleging, among other claims, that the defendant offered the city’s affiliates preferential treatment as customers over Norwood.32 FERC had purportedly approved these terms as ‘just and reasonable’ as a part of New England Power Company’s restructuring plan, which included approval of market-based tariffs; since both tariff s were on file with the FERC, the US Court of Appeals for the First Circuit invoked the filed rate doctrine as a complete bar to the price squeeze claim. The court reasoned that, ‘[i]t is the filing of the tariffs, and not any affirmative approval or scrutiny by the agency, that triggers the filed rate doctrine’.33 Because ‘the rationale for the filed rate doctrine is to protect the exclusive authority of the agency to accept or challenge such tariff s’,34 in the view of the First Circuit, ‘this is not a case that calls out for revisiting the fi led rate doctrine or for strenuous efforts to carve out exceptions . . . ’35

Federal courts continue to vigorously endorse the filed tariff shield, keeping competitor and consumer claims almost completely out of the hands of both state regulators and federal courts (Rossi 2003). For example, the US Court of Appeals for the Ninth Circuit applied the fi led tariff doctrine to imply federal pre-emption of the California Governor’s eff ort to protect consumers against strategic manipulation of its deregulated power market.36 In the court’s view, ‘interstate power rates fi led with FERC must be given binding effect’ by state regulators, even when regulating in areas subject to state jurisdiction. Thus, the court stated with a sweeping confidence, ‘FERC-approved rates preempt conflicting regulations adopted by the states’.37

Public choice themes reveal how the filed tariff doctrine not only influences the course of litigation after a tariff has been filed with regulators; it also creates incentives that can influence the private behavior of regulated firms in interacting with regulators before litigation commences. Specifically, by encouraging strategic filing of tariffs with regulators to pre-empt litigation, the fi led rate doctrine may encourage a type of forum-shopping behavior by private fi rms in the regulatory process before actual litigation commences (Rossi 2003). Institutionally, agencies and courts have never been very effective at monitoring the process of filing rates and other tariff s as a private forum-shopping strategy. Although many question the effectiveness of rate regulation, this may have been a moderately stable state of aff airs with cost-of-service regulation, given routine regulatory proceedings that served as some safeguard for public values. However, with the introduction of competition to formerly regulated industries and other regulatory transitions, market norms are emerging to expose a gap in regulatory agency ability to deter wrongdoing by private firms. To the extent the filed tariff doctrine encourages strategic manipulation of the tariffing process to foreclose judicial enforcement, it widens this gap and may even result in more radical deregulation than either Congress or agencies intend – essential firms may be able to elect to operate in markets without any antitrust, contract and tort protections.

Political scientists and economists have begun to analyze how interest groups, including regulated firms, decide to allocate their resources between various types of regulation, congressional, agency, or judicial (de Figueiredo and de Figueiredo 2002; Rubin 2001). Since it has unique implications for the behavior of regulated firms, the filed rate doctrine is a worthy candidate for similar analysis. Since the doctrine is only available on a widespread basis if a utility has fi led its tariff with federal regulators, the doctrine creates a strong ex ante incentive for private fi rms, such as regulated utilities, to invest more heavily than otherwise in lobbying regulators to accept or approve tariffs. By engaging in such conduct ex ante, private firms can avoid the uncertainty of an ex post judicial proceeding in which courts enforce antitrust, tort, or contract law. The doctrine thus encourages a type of forum shopping, triggered primarily by private decisions to provide information in the regulatory process. If a private fi rm desires the protection of the fi led tariff shield – immunity from antitrust and state common law suits for its market behavior – it has a strong incentive to divulge information (especially ambiguous information) to regulators ex ante, in anticipation that this information will be included in published tariffs and will minimize unpredictable, ex post judicial meddling (Rossi 2003). Where there is no check on the accuracy, clarity and relevance of the information fi rms are submitting in the regulatory process with tariff fi lings, opportunities for manipulation of regulation – and in particular institutional choice – are presented.38 To the extent regulated firms engage in strategic conduct ex ante, an institutional bias in favor of regulatory agencies, and away from courts and markets, is likely to result.

In the context of asymmetric information disclosure of non-verifiable information in contractual bargaining, Eric Talley has observed a need for judicial monitoring or verifi - cation (Talley 2001, 192–3). Typically, the balance between disclosure, on the one hand, and institutional decisions to regulate, on the other is monitored by the oversight of a third party who has the ability to protect the public interest. For example, in the context of tort litigation, securities regulation, and witness immunity from criminal prosecution, each of which use information disclosure to influence regulatory choices, third party oversight plays an important role in monitoring the divulgence of information to ensure that the choice is welfare-enhancing. In the context of many price-regulated industries, however, third-party monitoring of strategic disclosure is ineffective. Third-party monitoring of information disclosure in the utility regulation would depend on the actions of either regulators, as in the context of the SEC, or courts, as in the context of criminal immunity. To the extent that the filed rate doctrine applies, however, both regulators and courts have been ineffective at policing this balance ex ante to ensure that the application of the shield is not harmful to social welfare ex post in the utility regulation context.

As regulators have moved towards restructured markets, and away from cost-of service regulation, agencies have tended to acquiesce in, rather than seriously scrutinize or refuse, tariff filings. In fact, often filed tariff s become effective by operation of law after the passage of time, with little or no scrutiny by agencies. So the filed tariff bar curiously aligns the incentives of both private fi rms and regulators to include as many terms and conditions as possible in tariff s – even when these terms and conditions are a sham, in the sense that agencies often lack the power to seriously enforce them. This is not as much of a problem with cost-of-service regulation, since tariff s are subject to potential adjudication in a hearing; with restructuring, however, tariff s are frequently accepted without such scrutiny, presenting the potential for a new kind of private manipulation of the regulatory process.39 Given the principles of deference courts have provided to regulators in the late twentieth century (Kearney and Merrill 1998, 1396; Pierce 1989, 1046; Goldsmith 1989, 243), the judiciary has played very little role in policing private behavior in the tariffing process and its relationship to the fi led tariff shield.

#### That guts grid reforms necessary to solve societal collapse from solar storms

Boland 15 [Andrea, Maine representative, leader in safety issues of electromagnetic radiation. “Political Realities of Legislation for Extreme Events.” 9/16/15. <https://www.domesticpreparedness.com/commentary/political-realities-of-legislation-for-extreme-events/>]

The single extreme solar storm (GMD/geomagnetic disturbance) or electromagnetic pulse (EMP) attack (manmade weapon) – together often known as natural and manmade EMP, or simply EMP – could cause a blackout lasting months or years. Even for government officials who have the authority to do something about it, legislation may be required to make new demands on a resistant, powerful industry.

For unfamiliar and intellectually intimidating topics, it may be necessary to educate legislators. The effort it takes to pass legislation to solve even relatively simple problems, however, may be enough to discourage legislators from voluntarily taking on this kind of new, unfamiliar challenge. Therefore, when facing the specter of a massive infrastructure problem and a powerful industry lobby, many default to a wait-and-see position.

Educating Legislators

Key sources of information for legislators are typically the legislation sponsor and supporters, the industry and its lobbyists, content experts, and outside interests, including the general public and the legislators’ own supporters. The primary forum for educating legislators comes from a public hearing presented before the legislative committee that has jurisdiction over that policy area. Thus, to seek protections of the Maine electricity transmission system (the grid) from long-term blackouts due to GMD and EMP requires the public hearing to take place before the Energy, Utilities, and Technology (EUT) Committee.

As a state representative, it took a significant amount of time to learn about the threats of GMD and EMP, and to develop a substantial network of national experts on policy, science and technology, manufacturing, space weather, weapons, intelligence, and national defense. Dr. Peter Vincent Pry and the office of (now former) Congressman Roscoe Bartlett, both long-time national leaders on EMP, were significant in introducing politicians to experts who had been working on these issues at the federal level. Many of them came to Maine to testify at the hearing. These experts informed the EUT about threats to the electric grid that they had never heard about before from the power companies. They challenged the legislators to do the following:

Acknowledge that the State has a problem (as do all the states);

Recognize that the State has regulatory authority to fix the problem;

Identify available solutions and their costs (GMD protections exist that are low cost);

Provide effective leadership to protect Maine’s electrical grid from long-term blackout; and

Serve as a model for other states.

The experts were articulate, convincing, and impressive when describing a compelling but scary message, so committee members were able to understand the issue.

On the other hand, the electric power industry “representatives” (lobbyists) who had spent careers lobbying for the industry before the EUT Committee (and other legislators) were not content experts, but rather public relations experts highly paid to deliver a message. They spoke positively about the electric companies’ management of the threat, with statements including the following: “We are talking about a low-probability event; we have competing priorities; we’ve been protecting the grid for years; we are following all the NERC (North American Electric Reliability Corporation) reliability standards.” Despite sounding impressive when delivering a reassuring message, they failed to answer key questions and to win over the committee. The threat they posed to passage of the bill was that they were familiar faces to the committee members – and their ingratiating smiles can tip the balance for lazy, confused, or just undecided legislators.

The Process Behind a Maine Bill

Facing news it could not ignore, the EUT lacked the confidence to act on or confront the industry’s resistance, and amended the bill (LD 131, introduced by Andrea Boland) to a study, with the provision that the EUT could use its findings to draft permanent protective legislation the following year. The Maine Public Utilities Commission (PUC) was to conduct the study, and assured the EUT they could deliver it on schedule in January 2014. The industry agreed to the plan. LD 131 passed unanimously in committee as emergency legislation and in the House of Representatives, and passed by a vote of 32-3 in the Senate, to become law on 11 June 2013.

It was a deftly designed study and internationally acclaimed as model legislation. It also was the first ever EMP/GMD legislation passed in the nation. The Federal Energy Regulatory Commission (FERC) has an Office of Energy Infrastructure Security, which has a mission to assist states; its director, Joe McClelland, offered help with the study.

Two reports finally emerged – one influenced heavily by the electric power companies, and one supported by the independent experts – but not until 2015, and new elections had resulted in a newly configured legislature. Senator David Miramant introduced a new bill (LD 1363) to require installation of known, available protections supported in the studies. This time, the EUT split its vote, and the bill failed in the legislature – by one vote in the Maine Senate, along party lines. Low-cost solutions existed, and the prior legislature’s nearly unanimous vote had supported emergency action to protect the grid, but the industry had succeeded in defeating it.

The difference in the results of the two legislative efforts may be explained by different factors at work. In 2013, the legislation, sponsor, and experts surprised the industry, which was unable to recover from the unexpected exposure of the threat and the apparent disinterest and/or incompetence of the power companies regarding GMD and EMP. In January 2014, the EUT chair, without a vote of the committee, had granted the PUC an extension to January 2015 to finish the study – under the direction of the biggest electric utility in Maine, Central Maine Power (CMP). By 2015, when LD 1363 was introduced, the industry had regained its political control, as the 2014 election had populated the EUT and one-third of the full legislature with new faces. Various systemic political realities also may have contributed to the industry defeat of protections:

Uneasiness about supporting a big, new, unfamiliar issue – It may not seem advantageous to some legislators to invest the time and effort to support a bill that might not pass, or to take a politically risky position opposing a political power industry. Legislative leaders remained quiet, not signaling support, maybe for similar reasons.

Legislators’ fears and lobbyist arguments, valid or not, to oppose the bill – lobbyists make it easy for reluctant legislators to adopt their positions when they do not conduct their own research.

Hesitation to cause trouble with big campaign donors – Legislative leaders are expected to raise money to get themselves and their members elected, and to fulfill an agenda.

Committee chairs in Maine are appointed by legislative leadership (Speaker of the House and President of the Senate) – These leaders typically support the agenda of those who appointed them and often of the special interests under the committee’s jurisdictions, and they are in a position to influence outcomes. The chairs never took up the PUC study reports for review, causing committee members to not be informed on their contents. Thus, they influenced the committee vote, which in turn, influenced the full legislature’s vote.

Appointment of committee members by leadership – Only three of the 2013 members of the EUT Committee were reappointed to the 2015 committee; 10 were new, including the chairs. Therefore, the committee did not benefit from a lot of experience with the subject.

Influence of committee chairs – In 2013, the chairs did not limit the time visiting experts had to testify. In 2015, chairs limited them to three minutes each (meanwhile, the lobbyists were working every day in committee and in the halls of the State House). With so little input from the independent, national experts, and deliberately confused by lobbyists protecting electric companies from higher standards, new members were frustrated, unable to master critical new information, and split the committee vote. They thereby weakened the message to the rest of the legislature.

The Senate chair of the EUT, Senator David Woodsome, who had been supporting the bill all along, changed his vote in the end, probably, as a new legislator, succumbing to party pressure, and spoke against it on the floor of the Senate. This was enough to defeat the bill by one vote, even though Senator Miramant spoke strongly for it. The House of Representatives had passed it decisively, where the three veteran EUT committee members spoke in favor of it.

Future Legislative Concerns

Many legislators who are motivated to follow and be politically safe, rather than lead on tough issues, often go along with party leadership or powerful interests. The legislative hierarchy structure, campaign funding laws, and committee system can work symbiotically to marshal votes for a separate agenda. Legislators who take on serious problems may find themselves opposing powerful interests and getting little or no help from their leadership because high political costs could reflect on them personally. Their constituents and the public in general may be strongly supportive, but not enough of them raise their voices.

Not unlike other powerful industries, the electric power industry uses media and lobbyists to telegraph an image of integrity and professional authority, but then uses inaccurate data in their studies to try to prove invalid arguments that work for them. To inexperienced, often stressed legislators, it may be persuasive. NERC, the electric power industry’s association and lobbying arm, has sole authority to write its own “reliability standards” that determine their level of public responsibility. The Federal Energy Regulatory Commission (FERC) is charged with regulating NERC, but often turns to NERC for answers. In the same way, the Maine PUC turned to Central Maine Power Company for the LD131 study. CMP then turned to NERC, which provided data from another country, rather than using the Maine data it had, to support the outcome it wanted: the argument against GMD/EMP protections.

First-Hand Experience in the Maine Legislature

Big money and special interests have outside influence on the legislative process. It can often compromise leaders, defeat good legislation, endanger the public, and promote regulatory capture. It is difficult to display political courage when lobbyists of powerful interests smile and create confusion about the facts. For these reasons, testimony from subject matter experts needs to be treated with great respect. In this case, the testimony of first responders was very important. The public is critically important, too. Without public support, the nation cannot expect to maintain a self-governance.

The United States is the most vulnerable country in the world to natural and manmade solar storms and EMP because of its huge, interconnected grid and its dependence on electric power and electronics. State Senator and Navy veteran Robert “Bob” Hall of Texas refers to obstruction of protections of the grid as “treason” because it is also a national defense threat. Imagine what the fifth week of a blackout would be like following an EMP or solar storm: no heating, cooling, communications, water and waste systems, banking, hospitals, transportation, food delivery, etc.

#### Severe space weather is a great filter event that sparks extinction from resource wars, grid failure, pandemics, and nuclear miscalc

Loper 19 [Dr. Robert D. Loper, Ph.D. from the Air Force Institute of Technology, Assistant Professor of Space Physics, Spring 2019. “Carrington-class Events as a Great Filter for Electronic Civilizations in the Drake Equation.” Publications of the Astronomical Society of the Pacific. https://iopscience.iop.org/article/10.1088/1538-3873/ab028e/meta]

Eastwood et al. (2017), the National Academy of Sciences (2008), and the Royal Academy of Engineering (2013) outline the potential economic impacts of severe space weather. In particular, major direct impacts from a Carrington-class CME could be outlined as including the following. 1. Power grid failure due to destruction of large transformers by geomagnetically induced currents. The large transformers in question here generally cost about $1 million per unit and require about 18 months to manufacture, ship, and install. The National Academy of Sciences (2008) report estimates such a power grid failure would cost $1–2 trillion per year6 and last four to ten years. 2. Outages or failures of LEO (low Earth orbit) space assets due to enhancement of the inner Van Allen belt. A severe solar storm can also cause ionospheric uplift which can dramatically increase satellite drag (Tsurutani et al. 2012). Additionally, LEO spacecraft operation could be disrupted by solar energetic protons (SEPs) generated in the shock of the CME passage through the solar wind (Royal Academy of Engineering 2013). 3. Outages or failures of GEO (geosynchronous equatorial orbit) space assets due to enhancement of the outer Van Allen belt or due to SEPs generated in the shock of the CME passage (Royal Academy of Engineering 2013). 4. GPS outages due to GEO spacecraft outages or failures, or GPS degradation due to ionospheric uplift and enhancement, potentially lasting several days or longer. 5. Communications outages due to high-frequency and ultrahigh-frequency radio blackouts, as well as cellular communication network and internet collapse due to extended power outages beyond the limits of generators and stored fuel. In particular, although optical ﬁber cables are the foundation of much of the global communication network, electrical power is still needed to power optical repeaters and transmitters (Royal Academy of Engineering 2013). 6. Increased radiation doses to astronauts and airline passengers (Royal Academy of Engineering 2013). This is more of a risk for long-haul airline ﬂights or manned spaceﬂight. Major indirect effects could include, but are by no means limited to, the following: 1. water and waste water shortages due to reduced or eliminated pumping from power grid failure; 2. fuel shortages due to reduced or eliminated pumping from power grid failure, which could result in transportation stoppages; 3. food shortages due to transportation stoppages, which could contribute to increased death rates and incite rioting and/or looting; 4. reduced hospital care due to water shortages and power outages, which could contribute to increased death rates and rates of infection; and 5. a years-long power grid and internet degradation or outage might irrevocably damage the global economy, in turn greatly prolonging the time to restore the power grid beyond the estimate of four to ten years. If one recalls major disasters caused by terrestrial weather events like hurricanes Katrina (New Orleans, 2005) and Maria (Puerto Rico, 2017), one can imagine the sorts of major effects on people and life in those areas. The most striking difference is that, whereas humanitarian aid came to bear on these disasters, a Carrington-class event would be a global catastrophe with little or no aid forthcoming. Much greater loss of life could result, and our civilization could be driven back to a much more fractured and pre-electronic one. For the purposes of another planet’s Drake equation, our civilization would be eliminated from the calculation. Conversely, another planet whose electronic civilization were struck by a Carrington-class CME would be eliminated from our calculation. Riley (2012) estimates the probability of another Carringtonclass event occuring within the following decade at about 12%. This estimate preceded the solar storm of 2012, but a good rule of thumb would be to estimate this to be the probability of having a Carrington event during any given solar cycle. Love (2012) and Kataoka (2013) have calculated probabilities in rough agreement, but there are a wide range of probabilities in the literature, ranging from once per 60 years (Tsubouchi & Omura 2007) to once per 500 years (Yermolaev et al. 2018). This work will retain the result of Riley (2012), which is also used in National Academy of Sciences (2008) and Royal Academy of Engineering (2013). This roughly agrees with the “once in a century” designation usually given to the Carrington event. Royal Academy of Engineering (2013) indicates that this designator is not well understood given the relative lack of data, but also that there are several tens of Carrington-class CMEs every century that either miss Earth or have lesser impact due to a northward orientation of the interplanetary magnetic ﬁeld. As shown in Figure 1, such a CME has a very wide angular extent (in the 2012 July event, the CME extended in about a 135° arc from the Sun), which could strike Earth in three out of eight occurrences. There is also some indication that a solar storm could trigger other Great Filter events. Knipp et al. (2016) outlines a solar storm in 1967 May that nearly triggered a nuclear war, as American radar operators initially mistook a solar storm for Soviet jamming. It might also be possible that a Carrington-class event could unleash or exascerbate an infectious disease due to reduced hospital care at a critical time, resulting in a pandemic.

#### Now is key—we’re approaching solar maximum

Drake 21 [NADIA DRAKE, "The sun is getting stormier, and it’ll peak just in time for a total solar eclipse", 5/14/21, https://www.nationalgeographic.com/science/article/the-sun-is-getting-stormier-just-in-time-for-a-total-solar-eclipse]

Now, the next solar cycle has ignited, with peak activity predicted around 2025. And this time, the sun will shake off its slumber while NASA’s Parker Solar Probe is continuously dive-bombing the sun, swooping closer to the star than any craft has yet dared.

“It still gives me goosebumps when I think about it,” says NASA’s Madhulika Guhathakurta, a solar physicist. “I think I stayed on at NASA headquarters for one—and only one—mission, and that is Parker Solar Probe.”

The European Space Agency’s Solar Orbiter is also looping around the sun, and it will ultimately deliver our first good observations of the sun’s poles. Until this mission, scientists mostly have been limited to scrutinizing the faces of the sun that we can see from Earth, and observing its poles is crucial for understanding its magnetic activity and the intensity of activity during each 11-year cycle.

Perhaps even more thrilling for space fans, the peak of this cycle is expected to happen very close to the time a total solar eclipse will be visible from North America, in April 2024. When the moon blots out the sun, people in the path of totality will be able to see the delicate, diaphanous halo of the sun’s upper atmosphere, or corona, and it should be a spectacular sight so close to solar maximum.

“It will have the appearance of stuff coming out from everywhere, very dynamic,” Guhathakurta says.

Plotting the terminators

While solar experts agree the next cycle has begun, debate swirls over how strong it’s likely to be. In September 2020, the Solar Cycle 25 Prediction Panel announced that cycle 25 had kicked off—and they predicted it would be mild. Traditionally, these predictions are based on counting dark, transient patches on the sun’s surface known as sunspots. Appearing in regions where magnetic fields are strong, sunspots bloom and shrivel as the sun’s activity waxes and wanes.

The sun keeps the planets in its orbit with a tremendous gravitational force. What would happen if it disappeared entirely? Learn about the star at the center of our solar system, and how it is critical to all life as we know it.

In December 2019, scientists recorded a minimum number of sunspots. That observation marked the end of cycle 24, the panel later said, and based on how fast the spots had started reappearing, it seemed that cycle 25 would be similar in intensity to the relative calm of cycle 24.

However, other solar cycle experts reached a dramatically different conclusion: Cycle 25 could be one of the strongest since record-keeping began in 1755. Instead of counting sunspots, Robert Leamon of the University of Maryland, Baltimore County, and his collaborators based their prediction on something they call the terminator, or the point when all magnetic activity from a previous solar cycle vanishes. Sunspots generally track that transition, but the true terminator tends to lag behind the sunspot minimum by somewhere between 12 and 18 months.

“If there’s one take-home I can get to everybody, it’s that there’s more to activity than sunspots,” says Leamon, whose team published their contradictory prediction in the journal Solar Physics.

By plotting terminator events over 270 years, Leamon and his colleagues found that the timing between terminators is tightly linked to the strength of the next cycle, with shorter gaps portending stronger activity. And that’s the situation we’re in now, he says, where the gap between terminators is short, and magnetic activity from cycle 25 is likely to take over in the next couple of months.

“We are close,” Leamon says. “That’s when you’ll see a big jump in activity.”

Forecasting disasters

A strong solar cycle might spell trouble for Earth. Sunspots can unleash massive explosions called solar flares, and those flares sometimes sling volleys of radiation and charged particles into space called coronal mass ejections, or CMEs. If a sufficiently strong CME collides with Earth, it could cause a damaging geomagnetic storm.

Perhaps the best-known of these storms occurred in 1859, during solar cycle 10. Known as the Carrington Event, it disrupted telegraphs and shocked operators at the controls, and it lit the skies with auroras that were visible as far south as the Caribbean. Today, a storm of this magnitude would be devastating. It could crash power grids, knock out satellites, endanger astronauts in orbit, change planned flight routes, and render Earth’s upper atmosphere impenetrable to ground-based communication systems.

Weaker eruptions are also dangerous. On March 12, 1989, the entire province of Quebec lost power when a CME a fraction the strength of the Carrington event smashed into Earth and fried the power grid, trapping people in elevators and tunnels. In orbit, multiple satellites temporarily went dark or had trouble maintaining altitude, and sensors tripped aboard the space shuttle Discovery—which had launched earlier that day.

#### Antitrust solves captured regulatory gaming

Dogan 8 [Stacey L. Dogan, Associate Dean for Academic Affairs, Professor & Law Alumni Scholar, Boston University School of Law. and Mark A. Lamley, William H. Neukom Professor of Law at Stanford Law School and the Director of the Stanford Program in Law, Science and Technology. “Antitrust Law and Regulatory Gaming.” October 2008. https://scholarship.law.bu.edu/cgi/viewcontent.cgi?article=1873&context=faculty\_scholarship]

Antitrust law promotes competition in the service of economic efficiency. Government regulation may or may not promote either competition or efficiency, depending on both the goals of the agency and the effects of industry “capture.” Antitrust courts have long included regulated industries within their purview, working to ensure that regulated industries could not use the limits that regulation imposes on the normal competitive process to achieve anticompetitive ends. 4 Doing so makes sense; an antitrust law that ignored anticompetitive behavior in any regulated industry would be a law full of holes.

The role of antitrust in policing regulated industries appears to be changing, however. A cluster of Supreme Court decisions in the past decade have fundamentally altered the relationship between antitrust and regulation, placing antitrust law in a subordinate relationship that, some have argued, requires it to defer not just to regulatory decisions but perhaps even to the silence of regulatory agencies in their areas of expertise. 5 While many of those decisions might be justified on their facts as a matter of antitrust law, 6 together they are leading courts and commentators to conclude that the antitrust laws are impliedly repealed by government regulation of a particular industry.7 The new vogue for antitrust deference will come to a head in 2009, when the Supreme Court decides Pacific Bell v. linkLine, which raises the question whether a regulated monopoly with franchised rights of way violates the antitrust laws by engaging in a “price squeeze”: charging broadband competitors wholesale prices for use of the right of way that exceed the retail prices its own subsidiary charges its customers.

Absolute antitrust deference to regulatory agencies makes little sense as a matter either of economics or experience. Economic theory teaches that antitrust courts are better equipped than regulators to assure efficient outcomes in many circumstances. Public choice theory – and long experience – suggests that agencies that start out trying to limit problematic behavior by industries often end up condoning that behavior and even insulating those industries from market forces. And as history has shown, relying on regulatory oversight alone without the backdrop of antitrust law would leave both temporal and substantive gaps in enforcement, which unscrupulous competitors could exploit to the clear detriment of consumers. 9 The mere existence of a competition-conscious regulatory structure cannot guarantee against abuses of that structure, or against exclusionary behavior that falls just beyond its jurisdiction.10 Indeed – and perhaps ironically – the very regulatory structure that exists to promote competition can create gaming opportunities for competitors bent on achieving anti-competitive goals. Such “regulatory gaming” undermines both the regulatory system itself and the longstanding complementary relationship between regulatory and antitrust law.

We argue that the risk of regulatory gaming provides an important example of the need for ongoing antitrust oversight of regulated industries. We define regulatory gaming as private behavior that harnesses pro-competitive or neutral regulations and uses them for exclusionary purposes. Complex regulatory systems – particularly those requiring government approval for market entry – can create opportunities for such gaming, by enabling dominant parties to dictate industry standards while delaying entry of competing products. The pharmaceutical industry has witnessed this behavior for years, as branded drug companies have used exclusionary tactics to stay one step ahead of generic entry. In one species of this behavior – product-hopping – the branded company makes repeated changes in drug formulation to prevent generic substitution, rather than to improve the efficacy of the drug product.11 Product-hopping raises difficult questions for antitrust courts. On the one hand, product hopping antitrust suits require courts to inquire into product design choices, something antitrust judges take pains to avoid; they also raise concerns about courts second-guessing judgments by agencies and legislators about how best to balance competition and innovation in regulated markets. On the other hand, if left unchallenged, this kind of behavior can cause sustained inefficiencies in markets.

Industry standards set or endorsed by government bodies offer a second example. If the government requires that products include particular features or perform in particular ways, private parties can sometimes hoodwink regulators into adopting standards that favor their proprietary technologies and exclude their competitors. 12 Of course, nothing prevents the government from settling on a patented standard, and private parties have a protected right to petition the government regardless of their motive. But when petitioning behavior contains material misstatements or omissions, and results in standards that exclude competition in ways the government did not anticipate, the petitioning party has abused the regulatory process. Here, too, antitrust courts must strike a delicate balance among several competing concerns – the right to petition the government, the legitimate enforcement of patent rights, and the very real problem of patent holdup and regulatory abuse.

Our goal in this paper is not to persuade the reader that these particular examples of regulatory gaming violate the antitrust laws (though we think they do) or that other examples, such as regulatory price squeezes, do not violate the antitrust laws. Rather, our point is that whether or not particular acts of regulatory gaming harm competition is and should be an antitrust question, not merely one that involves interpreting statutes or agency regulations. Regulatory agencies and even Congress cannot prevent gaming ex ante. Experience with the pharmaceutical industry suggests that if Congress acts to squelch one form of gaming, companies will find other ways to game the system. And even if Congress or the regulating body can surgically fix a particular type of exclusionary behavior, such an ex post response (unlike the threat of antitrust treble damages) does nothing to compensate for past harm or to deter future gaming behavior. Some level of antitrust enforcement – with appropriate deference to firm decisions about product design and affirmative regulatory decisions that affect market conditions – provides a necessary check on behavior, such as product hopping, that has no purpose but to exclude competition.

Part I begins with an introduction to the relationship between antitrust law and industry-specific regulation. After briefly discussing the historical collaboration between antitrust and regulatory law, we explore the recent cases that show skepticism toward antitrust intervention in regulated industries – skepticism that represents a marked departure from antitrust history. In Part II, we contend that this skepticism, if applied too broadly, contradicts both logic and a rich economic literature that suggests that antitrust law generally does a better job of disciplining exclusionary behavior and achieving competitive outcomes than do government agencies. The decisions that have ushered in antitrust deference have perverted the lessons of law and economics, taking the efficiency-based attacks lodged against overly vigorous antitrust enforcement as license to cut back on all antitrust enforcement, even where antitrust offers the only hope of curbing regulatory abuse.

### If time

#### NEW 9th circuit decision thumps da’s but doesn’t solve the aff

**Hale 2/2** [Zach, Author @ S&P Global Market Intelligence. “9th Circuit ruling a 'game changer' in rooftop solar charge battle”. <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/9th-circuit-ruling-a-game-changer-in-rooftop-solar-charge-battle-68685918>]

In a Jan. 31 ruling, a federal appeals court reversed a lower court's ruling and determined that a Salt River Project rooftop solar customer demonstrated that he **suffered antitrust injury** when the utility dramatically **hiked the rates** for its **solar customers**.

A three-judge panel for the U.S. Court of Appeals for the 9th Circuit determined that rather than increasing competition among power suppliers — a state policy preference — the rate hike decreased competition and, therefore, was exclusionary.

Jean Su, a senior attorney and energy justice director with the Center for Biological Diversity, tweeted that the ruling "is a **game changer** in the struggle to defend rooftop solar" as utilities across the U.S. seek to charge rooftop solar owners more for systems that effectively run billing meters in reverse. However, SRP's status as a federal utility that **sets its own rates** without oversight complicated the ruling.

At issue was a new pricing scheme introduced by SRP in 2015 that established separate rates for rooftop solar customers, allowing the utility to charge solar customers up to **65% more** than earlier net-metering plans.

William Ellis, a rooftop solar customer, was joined by several other **plaintiffs** in **suing SRP** over the rate hikes. The plaintiffs alleged that the new program was designed to discriminate against customers who wish to use rooftop solar generation and stifle competition in the electricity market.

A district court dismissed the complaint on multiple grounds, including finding that the plaintiffs failed to comply with state statutory requirements and to show that the rate hike violated federal antitrust laws.

The 9th Circuit's Jan. 31 ruling upheld several of the lower court's findings, including the dismissal of Ellis's state-law claims. However, it **reversed** the lower **court's ruling barring** the **antitrust** claims, citing the court's "uncontested conclusion" that SRP's rate hikes were designed to discourage more rooftop solar installations by making them too expensive.

"By the district court's own logic, solar-energy systems are uneconomical, at least in part, because of SRP's exclusionary conduct," Judge Eric Miller wrote for the court. Ellis was "'directly and economically hurt by' SRP's exclusionary pricing scheme, which is aimed at suppressing competition by discouraging customers from installing solar-energy systems."

The court also **shot down SRP's argument** that the rate at issue **cannot be challenged due to** the **filed-rate** doctrine, which bars federal antitrust challenges to rates approved by federal and state agencies.

"The problem for SRP ... is that it does not file its rates with anyone other than itself," Miller noted. SRP's board sets the utility's rates, which are **not reviewed** by the Federal Energy Regulatory Commission or any state body.

"We have never extended the filed-rate doctrine to unilateral, unsupervised rate-setting by a market participant," Miller continued. "In that context, there is no reason to presume that 'rates are just and reasonable as a matter of law' and should be immune from collateral challenge."

The court similarly dismissed SRP's assertion that the displacement of competition "is a natural consequence" of its authority to set just and reasonable rates. Noting that Arizona has "clearly" stated the need for the state's power generation and supply to be competitive, the court found SRP's action is **not entitled to** so-called **state action immunity** because that action is inconsistent with state policy.

However, the court also concluded that the Local Government Antitrust Act, which precludes the recovery of antitrust damages "from any local government, or official or employee thereof acting in an official capacity," shields SRP from federal antitrust damages.

But because Ellis also sought declarative and injunctive relief, which is not barred by the Local Government Antitrust Act, the court remanded the case to the U.S. District Court for the District of Arizona for further proceedings.

#### Tons of antitrust now

Lina **Saigol,1-18**-22. reporter for Barron's in London, spent 16 years at the Financial Times Reuters. "M&A Is Booming. Gear Up for an Antitrust Crackdown.". Barrons. 1-18-2022. <https://www.barrons.com/articles/mergers-booming-us-regulators-crackdown-51642534456?tesla=y>

Aggressive antitrust enforcement is back. That is the stark message that President Joe Biden has sent the business community, and regulators have already kicked into action, threatening to rein in a [record-setting merger boom](https://www.wsj.com/articles/m-a-likely-to-remain-strong-in-2022-as-covid-19-looms-over-business-plans-11640255406?mod=Searchresults_pos9&page=1). Those charged with delivering Biden’s message are two Big Tech critics: Lina Khan, chair of the Federal Trade Commission, and Jonathan Kanter, head of the Justice Department’s antitrust division. On Tuesday, they outlined a plan to [revise how the agencies will review mergers](https://www.ftc.gov/news-events/press-releases/2022/01/ftc-and-justice-department-seek-to-strengthen-enforcement-against-illegal-mergers). They want public comment on how to update federal guidelines “to better detect and prevent illegal, anticompetitive deals,” they said in a statement. “Our country depends on competition to drive progress, innovation, and prosperity,” Kanter said. “We need to understand why so many industries have too few competitors, and to think carefully about how to ensure our merger enforcement tools are fit for purpose in the modern economy.” Earlier on Tuesday, [Microsoft](https://www.barrons.com/market-data/stocks/msft)(ticker: MSFT) said it would acquire gaming company [Activision Blizzard](https://www.barrons.com/market-data/stocks/atvi)(ATVI) in [an all-cash transaction valued at nearly $70 billion](https://www.barrons.com/articles/microsoft-buys-activision-blizzard-stock-acquisition-51642513147?mod=hp_LEAD_1&mod=article_inline). The acquisition needs regulatory and shareholder approval. Wedbush analyst Dan Ives wrote that there may be regulatory hurdles because of [the acquisition’s size](https://www.barrons.com/articles/microsoft-stock-activision-blizzard-deal-metaverse-51642522838?mod=hp_LEAD_1_B_1&mod=article_inline). But he expects the deal to close because Microsoft isn’t under the same scrutiny as some of its tech rivals. Earlier this month, a federal judge ruled the [FTC can move forward with its revised antitrust lawsuit](https://www.wsj.com/articles/federal-judge-rejects-facebooks-request-to-dismiss-ftcs-latest-antitrust-lawsuit-11641932982?mod=Searchresults_pos5&page=1) against [Meta Platform](https://www.barrons.com/market-data/stocks/fb)‘s (FB) Facebook that alleges the social media platform is unlawfully suppressing competition. Many bankers and lawyers say they aren’t too worried, contending that tighter enforcement might slow the mergers and acquisitions market rather than derail it. That is due in part because the FTC is constrained by limited manpower and budget. Also, regulators don’t have authority on their own to block a merger—federal judges can issue orders blocking it. “Of course there has been an increased level of scrutiny and managements and boards have raised the bar on what they will consider, but we will continue to see large deals with compelling strategic imperative,” Bruce Evans, global co-head of M&A at [Deutsche Bank](https://www.barrons.com/market-data/stocks/db), told Barron’s. In December, the FTC [sued to block](https://www.barrons.com/articles/ftc-sues-to-block-nvidias-40b-acquisition-of-arm-51638481709?mod=article_inline) computer-chip powerhouse [Nvidia](https://www.barrons.com/market-data/stocks/nvda)(ticker: NVDA) from spending [$40 billion](https://www.ftc.gov/news-events/press-releases/2021/12/ftc-sues-block-40-billion-semiconductor-chip-merger) for British technology provider Arm, saying the blockbuster deal would unfairly stifle competition. Just weeks earlier, the Justice Department [sued to halt](https://www.barrons.com/articles/justice-department-penguin-random-house-simon-schuster-merger-51635873536?mod=article_inline) a proposed [$2.2 billion](https://www.justice.gov/opa/press-release/file/1445916/download) tie-up between publishers Penguin Random House and Simon & Schuster, which would create a mega-publisher in the books market. The agency argues that consolidation would hurt authors and readers. The lawsuits come after Biden signed a sweeping [executive order](https://www.whitehouse.gov/briefing-room/presidential-actions/2021/07/09/executive-order-on-promoting-competition-in-the-american-economy/) in July aimed at curbing the power of big business by cracking down on anticompetitive practices in sectors ranging from agriculture to pharmaceuticals to labor. Consolidation in industries over the past several decades has denied Americans the benefits of an open economy and widened racial, income, and wealth inequality, the executive order stated. The administration sees less corporate competition as one of the causes of inflation. “Higher prices and lower wages caused by lack of competition are now estimated to cost the median American household [$5,000](https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/09/fact-sheet-executive-order-on-promoting-competition-in-the-american-economy/) a year,” according to the order. Rising equity markets and widespread stimulus measures helped spur companies worldwide to clinch more than 62,000 deals worth [$5.8 trillion](https://www.barrons.com/articles/global-deal-making-record-high-2021-51640960224?mod=article_inline) last year, up 64% from the previous year, according to data provider Refinitiv. [Big pharmaceutical companies](https://www.barrons.com/articles/drug-companies-cash-product-buys-research-51641423117?tesla=y&mod=article_inline) could be one of the biggest sectors at risk of regulatory scrutiny. The FTC put the industry on alert in July when it said it would review more deals amid skyrocketing drug prices and ongoing concerns about anticompetitive conduct. The industry still has record levels of cash to spend and needs to merge to innovate. By the end of this year, 18 large-cap U.S. and European biopharmas will have more than $500 billion in cash on hand, according to estimates by SVB Leerink analyst Geoffrey Porges. Deal makers will be closely watching [Pfizer](https://www.barrons.com/market-data/stocks/pfe)‘s (PFE) [$6.7 billion takeover](https://www.barrons.com/articles/pfizer-arena-pharmaceuticals-acquisition-51639396154?mod=article_inline) of [Arena Pharmaceuticals](https://www.barrons.com/market-data/stocks/arna), announced in December, which could become a test case for the FTC’s view of pharma M&A. Citi analyst Andrew Baum said the deal was “highly attractive” for Pfizer, but the key issue would be whether the “newly muscular” FTC would fight it and allow it to proceed given the significant overlap between important drugs. The two companies might need to sell parts of the business to push the deal through. Some companies are calling off their planned mergers as soon as they receive feedback. In December, outdoor sporting goods retailer [Sportsman’s Warehouse Holdings](https://www.barrons.com/market-data/stocks/spwh)(SPWH) and Great Outdoors Group, owner of the Bass Pro Shops chain, [canned](https://www.marketwatch.com/story/sportsman-s-warehouse-shares-fall-19-after-takeover-deal-terminated-271638556601) their deal in the belief that it wouldn’t be approved, according to a regulatory filing. Months earlier, insurance brokers [Aon](https://www.barrons.com/market-data/stocks/aon)(AON) and [Willis Towers Watson](https://www.barrons.com/market-data/stocks/wtw)(WTW) pulled their merger after the DOJ sued to stop the [$30 billion](https://www.barrons.com/articles/aon-willis-towers-scrap-30-billion-merger-amid-antitrust-impasse-51627328024?mod=article_inline)tie-up. The brokers said regulators’ objections created “**unacceptable delay and uncertainty**.”

#### New FERC order doesn’t touch retail so can’t solve DERs

**Campbell 20** [Bruce, Director of Regulatory Affairs at CPower. He is an expert in regulatory proceedings and market design with 40 years of experience in the electric industry including generating station management and strategic development. “A Primer for Understanding FERC Order 2222”. 12/18/20. <https://cpowerenergymanagement.com/a-primer-for-understanding-ferc-order-2222/>]

Order 2222 affects the wholesale power markets, **NOT the retail markets.**

It’s FERC’s responsibility to ensure that the competition in US wholesale power markets is just and reasonable. The markets exist to foster competition and FERC acts as essentially a referee, making sure one entity doesn’t have an unfair advantage over another.

In this respect, Order 2222 is right in the wheelhouse of FERC’s jurisdiction and mission.

Nonetheless, it is important to understand that the **interconnection of DERs with the grid** remains **subject to local utility interconnection** rules that are state jurisdictional and that these rules **can encourage or discourage DER** activity. 2

#### Utilities leverage state action to lock DERs out

Howard M. **Crystal &** Anchun Jean **Su 18**, Center for Biological Diversity, “Brief of Center for Biological Diversity, Food & Water Watch, Friends of the Earth, Greenpeace, Inc., Institute for Local Self-Reliance, and NC Warn, Inc. as Amici Curiae in Support of Respondent,” Salt River Project Agricultural Improvement and Power District, Petitioner, v. Tesla Energy Operations, Inc., fka Solarcity Corporation, Respondent, 2018 WL 993878, WestLaw

II. THE **FOUNDATIONAL PREMISE**S OF SRP'S ASSERTED RIGHT TO AN **UNBOUNDED MONOPOLY** DO **NOT HOLD** IN THE AGE OF **DISTRIBUTED SOLAR COMPETITION**

SRP asserts that the state-action defense protects “the need to ensure that **government policymakers** exercise **their discretion** efficiently and freely, i.e., with the objective of advancing the **public interest** rather than of avoiding litigation.” Pet. Br. at 35 (emphasis added). Similarly, **APPA** claims that the state-action defense “protects public power utilities' ability to meet their public goals” and thereby “allows **states** to favor **public objectives** over **free-market competition**.” APPA Br. at 2, 4 (emphasis added). However, **SRP** and other public power companies are **not advancing public** \*17 **objectives** or the public interest **when they improperly target distributed solar** generation.

Stilling **solar** energy **competition** through **discriminatory rates** - a **widespread action** perpetuated by SRP and **numerous** other **power companies** - **harms** the **public** interest by obstructing the tremendous benefits that distributed solar generation brings to both **consumers** and the **environment**. Such **discriminatory behavior** therefore **contravenes** the underlying purpose of the regulated monopoly, which was to **protect consumers** and the public interest. The state-action **defense**, and interlocutory appeal of adverse state-action defense rulings, should **not be available** as a **legal bulwark** for power companies like SRP to exercise **unbounded monopoly power** that works **against** the **public interest** in this anti-competitive manner.

A. The Premise That Electricity Monopolies Necessarily Serve The Public Interest Has Been Undermined By Public Policy And Technology

“Until relatively recently, most state energy markets were vertically integrated monopolies - i.e., one entity … controlled electricity generation, transmission, and sale to retail consumers.” Hughes v. Talen Energy Mktg, LLC, 136 S. Ct. 1288, 1292 (2016). In the electricity industry's infancy of the early 1900s, the vertically integrated regulated monopoly made sense in light of the available technology and existent business structures of the time. Originally a **natural** \*18 monopoly, the electricity sector faced extreme barriers to entry, whereby construction of power plants and grid infrastructure required **massive capital investments**, as well as substantial economies of scale, whereby the average cost of delivered power became cheaper with new expansion in demand. Paul Garfield & Wallace Lovejoy, Public Utility Economics 15-19 (1964).

The **foundational premise** for granting vertically integrated utilities monopoly power was to ultimately serve the **public interest**.6 The electricity monopoly model sought to achieve widespread access to electricity as a public good while, at the same time, subjecting utilities to electricity rate regulation in order to prevent price gouging for ultimate consumer benefit. W.M. Warwick, U.S. Department of Energy, A Primer on Electric Utilities, Deregulation, and Restructuring of U.S. Electricity Markets 2.0 (2002), available \*19 at <https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-13906.pdf>; see also Smyth v. Ames, 169 U.S. 466, 544-45 (1898) (public utility monopolies were “created for [] public purposes [and] perform[] a function of the state,” and the government is obligated to “protect the people against unreasonable charges for services rendered by” the public utility).

However, the **century-old premise** that vertically integrated monopolies necessarily serve the public interest has been **undermined** by **public policy** and technology. In terms of policy, electricity regulators have **actively encouraged** competition in electricity generation in order to serve the public interest. For example, as the Court noted in FERC v. Electric Power Supply Ass'n, 136 S. Ct. 760 (2016), the Federal Energy Regulatory Commission (“FERC”) “often **forgoes** the cost-based rate-setting **traditionally** used to prevent monopolistic pricing […] [and] **instead** undertakes to ensure **‘just and reasonable’** wholesale rates by enhancing **competition** - attempting … ‘to break down regulatory and economic barriers that hinder a free market in wholesale electricity’ ” Id. at 768 (emphasis added) (quoting Morgan Stanley Capital Group Inc. v. Public Util. Dist. No. 1 of Snohomish Cty., 554 U.S. 527 (2008)).

Indeed, **Congress** passed a series of modern laws intended to **promote competition in** the **electricity** sector and **unbundle** the services of the traditional vertically integrated monopoly, all as a means to **advance** the **public interest**. Thus, due to “[t]echnological advances [that] made it possible to generate electricity \*20 efficiently in different ways and in smaller plants” and through grids that were “unlike the local power networks of the past,” New York v. FERC, 535 U.S. 1, 7 (2002), Congress passed both (i) the 1978 Public Utility Regulatory Policies Act, Pub. L. No. 95-617, 92 Stat. 3117, which directed FERC to promulgate rules requiring monopoly utilities to purchase electricity from independent power production facilities, and (ii) the Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776, authorizing FERC to order individual monopoly utilities to provide transmission services to unaffiliated wholesale generators. See New York, 535 U.S. at 9. In short, the assumption that the vertically integrated utility monopoly automatically serves the public interest has been undermined by public policy promoting competition in electricity services.

Distributed solar technology **further** subverts the **economic** and **public interest assumptions** **justifying** the traditional vertically integrated electricity monopoly. Distributed solar technology, with a relatively **low barrier of entry**, is **de-centralized** and can be **owned** or **leased** by consumers who are **otherwise captive** to the **local utility monopoly**. Ari Peskoe, Unjust, Unreasonable, and Unduly Discriminatory: Electric Utility Rates and the Campaign Against Rooftop Solar, 11 Tex. J. Oil Gas & Energy L. 211, 215 (2016). Distributed solar generation thus **dispels** the assumption that electricity service **necessarily** requires large economies of scale. John Farrell, Inst, for Local Self-Reliance, Is Bigger Best in Renewable Energy? 2-4 (2016), available at \*21 <https://ilsr.org/wp-content/uploads/2016/12/Is-BiggerBest-in-Renewable-Energy-Report-Final.pdf>. As such, distributed solar generation **also** fundamentally ruptures the business model of the **vertical**ly integrated**monopoly**, **obviating** the need for power companies like SRP to continuously construct infrastructure as their engine of profit generation. Peskoe, 11 Tex. J. Oil Gas & Energy L. at 228-32.

Taken **together**, these changes in public policy and technology, particularly distributed solar generation, **undermine** the assumption that electricity companies **require deference to their monopoly power** in order to serve the public interest.

B. Monopoly Power Companies Opposing Distributed Solar Generation Are Acting Against The Public Interest

1. Discriminatory rates against rooftop solar are widespread

Across the United States, both public and private electric **utilit**y compan**ies** have **responded** to competition from distributed solar generation with a **range of discriminatory tactics**, chief among them being the imposition of retail **rate** structure**s** that serve to **reduce solar** power's **cost advantage** over grid-supplied energy. See Michael Wara, Competition at the Grid Edge: Innovation and Antitrust Law in the Electricity Sector, 25 N.Y.U. Envtl. L.J. 176, 189 (2017). In the **last** few **years** alone, these types of rate cases seeking to penalize rooftop solar customers have **amount**ed to **hundreds** \*22 and have occurred in the **majority of** U.S. **states**. Id. at 194-99; see also N.C. Clean Energy Tech. Ctr., The 50 States of Solar Report: Q4 2017 and 2017 Annual Report (2018), available at <https://nccleantech.ncsu.edu/wp-content/uploads/Q4-17_SolarExecSummary_Final.pdf> (documenting over **100 policy actions** negatively targeting distributed generation customers in over **35 states** in **2017 alone**).7

Power utilities have imposed discriminatory retail rate structures on distributed solar customers in several forms. First, utilities have implemented either new or increased fixed monthly bill charges that are **discriminatorily high** for customers with distributed solar generation, known as a “fixed charge.” For example, Santee Cooper, a state-owned public power utility \*23 in South Carolina, imposed a fixed charge of $4.40/kW as well as further stand-by charges on distributed solar customers, regardless of the amount of energy used by the customer. See Santee Cooper, Distributed Generation Rider DG-17 (2015), available at <https://www.santeecooper.com/pdfs/rates/ratesadjustment/dg-17-rider.pdf>; see also, e.g., Bd. of Dir. of Sacramento Mun. Util. Dis., Resolution No. 15-07-06 (Sacramento Mun. Util. Dist. July 16, 2015) (imposing higher fixed charges and time-of-use rates on solar customers); Kan. City Power & Light, Docket No. 15-WSEE-115-RTS (Mo. Corp. Comm'n Sep. 24, 2015) (Order Approving Stipulation and Agreement) (approving a 21% increase of fixed charges on distributed energy customers); Conn. Light & Power, Docket No. 14-05-06 (Conn. Pub. Util. Regulatory Authority Dec. 17, 2014) (Order Amending Rate Schedules) (also imposing a 20% increase of fixed charges on distributed energy customers).

Second, utility companies have imposed electricity charges on solar customers that **vary** as a function of the consumer's **peak demand** for energy, known as a “demand charge.” See, e.g., NSTAR Elec. Co., D.P.U. 17-05-B (Mass. Dept. of Pub. Util. Jan. 5, 2018) (Order Establishing Eversource's Rate Structure) (approving mandatory demand charges specifically on residential distributed solar customers).

SRP's new rate structure **exemplifies** **both** of these discriminatory rate practices, as SRP imposed both a fixed distribution charge of up to $37.88 per month and increased demand charges ranging from $30 to $125 \*24 per month for all residential distributed solar customers. J.A. 33 (¶ 108). These rate changes resulted in an increase of approximately 65% in energy fees (or $600 per year) for a typical solar customer, as opposed to a 3.9% increase in energy fees for a non-solar customer. See J.A. 8-9 (¶ 5); see also, e.g., Wis. Electric Power Co., Docket No. 5-UR-107 (Wis. Public Service Comm'n Dec. 23, 2014) (Final Decision) (approving application to impose high demand charges, fixed charges, and time-of-use rates on distributed solar customers).

2. Discriminatory rates against rooftop solar harm consumers and the environment

Wide-scale discriminatory rates targeting solar power deployment undermine the **very public objectives** that power **utility monopolies** were **created to serve** because they **harm** both **consumers and the environment**.

First, rates that stifle the deployment of rooftop solar harm consumers by diminishing the economic and social value they receive through generating their own power. Due to technological advances, the cost of residential solar has dropped precipitously and is cost-comparable, if not lower, than the average price of power purchased from the utility grid. See, e.g., Gideon Weissman & Brett Fanshaw, Shining Rewards: The Value of Rooftop Solar Power for Consumers and Society (2016), available at <https://environmentamerica.org/sites/environment/files/reports/AME%20ShiningRewards%C20Rpt%C20Oct16%201.1.pdf>; Mark Muro & Devashree \*25 Saha, Rooftop Solar: Net Metering is a Net Benefit, Brookings Institution (May 23, 2016), available at <https://www.brookings.edu/research/rooftop-solar-net-metering-is-a-net-benefit/>. Further, distributed solar generation can serve to democratize power ownership by increasing local control over power decisions, returning economic benefits directly to the served community and promoting a more equitable distribution of economic and social benefits across racial and economic lines. See generally Local Clean Energy All. & Center for Social Inclusion, Democratizing Our Energy Future (2015), available at <http://www.localcleanenergy.org/files/Climate%20Justice%C20Energy%20Platform.pdf>.

Second, discriminatory rates inhibiting distributed solar generation stave off the **public health benefits** associated with **phasing out fossil** fuel combustion from **power plants**. Nearly **40%** of Americans are exposed to **toxic** air **pollution** from fossil fuel power plants that often reaches dangerous levels, **result**ing in the increased incidence of **asthma** and **chronic bronchitis** and leading to **hundreds of thousands of** premature **deaths per year**. See Am. Lung Ass'n, State of the Air 9 (2017), available at <http://www.lung.org/assets/documents/healthy-air/state-of-the-air/state-of-the-air-2017.pdf>. Critically, these public health impacts are **disproportionately** borne by **communities of color** and **low-income**, who more often live in closer proximity to fossil fuel power plants. Id. at 41; see also National Ass'n for the Advancement of Colored People & Clean Air Task Force, Fumes Across the Fence-Line: The Health Impacts of Air Pollution from Oil and Gas Facilities \*26 (2017), available at <http://www.naacp.org/wp-content/uploads/2017/11/Fumes-Across-the-Fence-Line_NAACP_CATF.pdf>. Accordingly, obstructing distributed solar generation directly **exacerbates** the country's **systemic** public **health disparities** by **perpetuating reliance on fossil fuel power**.

Finally, these discriminatory rates **hinder** the country's **urgently needed transition to clean energy** in order to **combat climate change**. More than **60%** of America's **electricity** still derives from fossil fuels. U.S. Energy Info. Admin., Electricity Explained (May 10, 2017), available at <https://www.eia.gov/energyexplained/index.cfm?page=electricity_in_the_united_states>. As a result, the electricity sector is the single largest source of GHG emissions in the country, accounting for nearly one-third of total U.S. GHG emissions in 2015. U.S. Envtl. Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015 ES-24 (2017), available at <https://www.epa.gov/sites/production/files/2017-02/documents/2017_executive_summary.pdf>.

Accordingly, **discriminatory ratemaking** against the deployment of distributed solar energy, like that implemented by SRP, **undermines** the **inherent public interest** in “**aggressive** and **sustained** **g**reen**h**ouse **g**as **emission reductions**” in order to **avoid** some of **the worst impacts of climate change**. Jerry Melillo et al., U.S. Global Change Research Program, Climate Change Impacts in the United States: The Third National Climate Assessment 13 (2014), available at <http://s3.amazonaws.com/nca2014/low/NCA3_Climate_Change_Impacts_in_the_United%20States_LowRes.pdf?download> \*27 =1 (“2014 Climate Assessment”). Indeed, the public harms caused by **climate change** are **immense**: the increased **extinction** of **species** and **ocean acidification**; the rapid **loss of Arctic sea ice** and the collapse of **Antarctic ice** shelves; declining global **food** and **water security**; and the heightened frequency of **heat waves** and other **extreme weather** events, including contribution to the **three unprecedented hurricanes** that ravaged the Gulf Coast, Florida, and Puerto Rico in 2017. See generally 2014 Climate Assessment; see also Michael Mann et al., What We Know About the Climate Change-Hurricane Connection, Scientific American (Sept. 8, 2017), available at <https://blogs.scientificamerican.com/observations/what-we-know-about-the-climate-change-hurricane-connection/>.

For all these reasons, it could not be clearer that by obstructing the realization of these consumer and environmental benefits, utility rates which improperly discourage the transition to renewable energy sources like rooftop solar are contrary to the public interest.

C. Allowing Public Power Companies To Obtain Interlocutory Appeal Of State-Action Immunity Rulings Will Only Encourage More Discriminatory Rates Contrary To The Public Interest

The central premise of SRP's asserted right to interlocutory appeal is that it is necessary to allow public power entities to focus their attention on “advancing the public interest” without potential exposure to \*28 antitrust liability. Pet. Br. at 35. However, because SRP and other utilities' decisions targeting distributed solar generation are arguably contrary to the public interest, SRP raises no “particular value of a high order” warranting immediate appeal under the collateral-order doctrine. Mohawk Indus., Inc. v. Carpenter, 558 U.S. 100, 605 (2009).

Instead, allowing interlocutory appeal in these circumstances will serve to further encourage power companies to unfairly obstruct distributed solar development in a manner contrary to antitrust laws, with the expectation that they can avoid liability by invoking the state-action defense and, at minimum, significantly delay antitrust litigation by immediately appealing adverse rulings. By requiring SRP to defend its rates - including its purported entitlement to the state-action defense - like any other litigant, the Court will level the playing field in an area where it has become increasingly apparent that competition, rather than the perpetuation of insulated monopoly power, will best serve the public interest.

Such a result would also be consistent with this Court's precedents recognizing that power **companies** are **not immune from competition and antitrust** laws. In Otter Tail Power Co. v. United States, 410 U.S. 366 (1973), the Court **decisively held** that the Federal Power Act does **not “immunize” power companies** from “antitrust regulation.” Id. at 374-75 (permitting the federal government to seek antitrust remedies against a power utility which, among other things, refused to sell power to municipalities and transfer competitors' \*29 power over its lines). As the Court has explained, a power company's “franchise to exist as a corporation and to function as a public utility … creates no right to be free of competition.” Tenn. Electric Power Co. v. Tenn. Valley Auth., 306 U.S. 118, 139 (1939) (overruled in part on other grounds); see also Alabama Power Co. v. Ickes, 302 U.S. 464, 480 (1938) (holding that power utilities do not “possess” any inherent legal “right to be immune from lawful … competition”). These findings are grounded in the recognition that “[t]he **public interest** is **far broader** than the **economic** interest of a **particular** power **supplier**.” Otter Tail Power Co., 410 U.S. at 380 n.10. Accordingly, Amici urge the Court to recognize that, at least with resp

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## A2

### AT: Dedev

#### Slower growth increases populist conflict---140 years of data proves. – disproves defense and triggers more structural violnence

James Pethokoukis 6/4/21. The DeWitt Wallace Fellow at the American Enterprise Institute where he runs the AEIdeas blog. "Biden's budget predicts the Roaring Twenties will end in 2022. Uh oh.". https://theweek.com/politics/1001118/the-populist-political-warning-in-the-biden-budget

But there's a big non-economic reason to hope for growth faster than the pace predicted in the Biden budget. The historically slow recovery out of the Great Recession coincided with a rise of nativist populism, both here and in other rich countries. When economic growth falters, bad things often happen. In the study "Going to extremes: Politics after financial crises, 1870 – 2014," researchers found after a severe financial crisis, "voters seem to be particularly attracted to the political rhetoric of the extreme right, which often attributes blame to minorities or foreigners." This reaction equates to a 30 percent increase, on average, in the vote share going to far-right parties. A similar cause-and-effect is suggested in "Populist psychology: economics, culture, and emotions," which finds that economic crises "cause emotional reactions that activate cultural discontent. This, in turn, activates populist attitudes."

#### Only growth solves the environment

**Azevedo et. al 20** [INÊS AZEVEDO is Associate Professor of Energy Resources Engineering at Stanford University, “The Paths to Net Zero, How Technology Can Save the Planet”, https://www.foreignaffairs.com/articles/2020-04-13/paths-net-zero]

These political hurdles are formidable. The good news is that technological progress can make it much easier to clear them by driving down the costs of action. In the decades to come, innovation could make severe cuts in emissions, also known as “deep decarbonization,” achievable at reasonable costs. That will mean reshaping about ten sectors in the global economy—including electric power, transportation, and parts of agriculture—by reinforcing positive change where it is already happening and investing heavily wherever it isn’t.

In a few sectors, especially electric power, a major transformation is already underway, and low-emission technologies are quickly becoming more widespread, at least in China, India, and most Western countries. The right policy interventions in wind, solar, and nuclear power, among other technologies, could soon make countries’ power grids far less dependent on conventional fossil fuels and radically reduce emissions in the process.

Technological progress in clean electricity has already set off a virtuous circle, with each new innovation creating more political will to do even more. Replicating this symbiosis of technology and politics in other sectors is essential. In most other high-emission industries, however, deep decarbonization has been much slower to arrive. In sectors such as transportation, steel, cement, and plastics, companies will continue to resist profound change unless they are convinced that decarbonization represents not only costs and risks for investors but also an opportunity to increase value and revenue. Only a handful have grasped the need for action and begun to test zero-emission technologies at the appropriate scale. Unless governments and businesses come together now to change that—not simply with bold-sounding international agreements and marginal tweaks such as mild carbon taxes but also with a comprehensive industrial policy—there will be little hope of reaching net-zero emissions before it’s too late

#### Growth is sustainable—newest data.

Pearce, 22—environment and development correspondent for the Breakthrough Institute, writing regularly for Yale Environment 360 among others, citing Narasimha Rao, Associate Professor of Energy Systems, Yale School of the Environment (Fred, “Green Growth Won’t Kill the Planet,” Breakthrough Journal, No. 15, Winter 2022, dml)

Rao’s findings ought to have a profound impact on the divisive discourse on climate change, which continues to pit the attempts of developing countries to eliminate poverty by mimicking Western modes of development against many in the West who see this path as ruinous for the planet and ultimately self-defeating for the poor. They are both wrong. In truth, there need be no incompatibility. Ecomodernists are right: humanity can have its cake and eat it, too.

Rao, who grew up in a middle-class family in Mumbai but with poverty around him, is now at Yale University and the International Institute for Applied Systems Analysis (IIASA), an Austria-based intergovernmental think tank. He has spent years as what he calls an “interdisciplinary scholar,” addressing both technological advances and social equity and how they might interact.

He says that, until recently, little climate-change analysis, social research, or futurology has seriously addressed whether climate and living standards can be fixed together. Ecomodernists stepped in with strong belief in the power of transformative technology to both deliver abundant energy and break the umbilical cord linking prosperity to pollution. But theirs is a predominantly supply-side and top-down perspective, which can lead to a presumption that the benefits of prosperity and abundant energy will trickle down to deliver decent living standards for all.

Critics like Anna Walnycki and Tucker Landesman at the International Institute for Environment and Development say a top-down perspective risks increasing social and economic inequality unless “policies are shaped around the needs of ordinary citizens,” especially those in low-income urban communities. Moreover, as Rao points out, energy inequality around the world is even greater than income inequality. And by some measures, more income seems to only increase energy inequalities, according to analysis by researchers at the University of Leeds.

To grapple with such issues, Rao’s work, centered in the Decent Living Energy project, takes a bottom-up approach. It starts with an assessment of the hard material needs for eliminating poverty—particularly for the billion-plus people living in informal urban settlements without decent housing, sanitation, water, and other basic services—and does the work of separating out the energy needs for eradicating poverty from those to meet the demands of affluence.

In this way, Rao has added real numbers to the idea of a decent living, upending past global measures of poverty, which were removed from the real lives and material needs of the poor. The most widely used is based on the single metric of daily income per head. Once a dollar a day, the cutoff has now become $1.90 per day for extreme poverty, with a higher threshold of $5.50 per day used by the World Bank for upper-middle-income countries. Almost half the world’s population does not achieve this standard. But what you can buy with those dollars varies vastly round the world, as does what you need to purchase to achieve a decent standard of living. Other measures have looked to well-being outcomes, most influential among them being the UN’s Human Development Index, which is based on life expectancy, years of schooling, and income. But it does not set a threshold level, or measure what material requirements are needed to get to an “acceptable” (different from “good”) outcome.

Rao, with his colleague Jihoon Min, attempts to do better by identifying a shopping bag of material requirements, or “satisfiers,” that are as near as possible universal prerequisites for a decent modern life. They call these requirements “material conditions that people everywhere ought to have, no matter what their intentions or conception of a good life, or what other rights they may claim.”

Those material needs fit into 10 broad indicators of basic human well-being: nutrition, shelter, living conditions, clothing, health care, air quality, education, access to information and communication services, mobility, and freedom to gather and dissent. A person who achieves them does not necessarily have a life that a wealthy person in the West would recognize as comfortable. But they would have a life that could be called decent and dignified.

Many of these requirements derive from widely accepted benchmarks, but others go further. For instance, nutrition requires not just sufficient calories, but also vitamins and minerals and a refrigerator to store food safely. There’s also the need for a cooker that does not fill the home with smoke, part of the air-quality category.

Shelter and adequate living conditions require not just a roof over your head, but also sufficient floor space (depending on household size, typically 30 square meters per person), durable home construction, and sufficient heating and cooling equipment for “thermal comfort.” Also required is “sufficient clothing to achieve basic comfort” and access to a washing machine.

Health care and living conditions requirements include on-premises sanitation and water supplies (50 liters per head per day), plus access to adequate health care facilities and a minimum of one physician per 1,000 people.

The social well-being criteria include not just nine years of education, but also access to communication networks including one phone and one television or computer per household. These new needs, Rao and Min say, may not appear essential to life, but are “globally desired by an overwhelming majority of people,” so not to have them risks social disengagement and ostracism. The electronics need not be personally owned, they note, but access is vital.

The same holds for mobility, which they regard as necessary for social engagement and employment or selling wares. The decent living requirement is set at access to motorized transport, such as a bus or motorbike, sufficient for an average of around 25 kilometres per person per day.

Rao and his colleagues’ analysis of needs is often surprisingly granular. Current thinking holds that households of a similar income level around the world generally want the same appliances. His household surveys nuance that. While most people in most places do want a TV, cellphone, and refrigerator, his study with Kevin Ummel found washing machines are less universally desired, and ovens and tumble driers even less so. Race, culture, and religion are all factors. Patterns also differ depending on whether people live in urban areas and on the status of women; urbanity and greater equality both drive up demand for appliances connected with cooking and washing. People who consume a lot of milk products—such as Sikhs in India—want a refrigerator more than those who do not.

White people, Rao and Ummel note, are more fixated on white goods—that is, large electrical appliances. But they care less about motorbikes and some cooking equipment such as rice cookers, which are much more widespread in Asia.

It is impossible to say what proportion of the world’s population meets all Rao’s standards—or none. Some places far outstrip the basics. The average American has almost six times the “decent” level of floor space and consumes almost seven times as much water. Germans average four and 2.5 times those “decent” levels, respectively. But Rao’s estimates suggest that only two-thirds of people have attained half of them, with nutrition the most achieved and mobility the least. In fact, “the majority of the global population does not currently have decent levels of motorized transport,” coauthor Jarmo Kikstra of Imperial College London, has pointed out.

All this confirms findings from Rao and his colleagues’ analysis published in the September Environmental Research Letters that “more people are deprived of DLS [decent living standards] than are income-poor.” Worldwide, more than three billion people lack access to clean cooking options, space cooling, sanitation, and transport, and more than two billion lack cold storage, decent housing, and proper access to clean water.

In sub-Saharan Africa, over 60 percent of people do not have access to eight of the requirements for a decent standard of living, with deficits for cooling, sanitation, transport, water access, cold storage, housing, television, and clean cooking. In South Asia, over half the population lacks adequate sanitation, transport, cooling, clean cooking, water access, and cold storage.

Most standards are almost universally met in rich nations. Yet the data also show that a third of North Americans and 44 percent of Western Europeans miss out on transport needed for mobility, while in both regions about a tenth miss out on decent sanitation. This means that, around the world, in every corner of it, hundreds of millions of people need more, and no green transition that denies it to them could be considered sustainable or just.

The Cost of Decency

But can the gaps in access around the world be filled—and without crashing the climate?

To be sure, creating a world where everyone can have a decent living standard will require new public infrastructure and more private energy use. As Rao points out, much of the progress will only be achievable collectively—through public water supply and sanitation services, clinics, schools, public transit, cellphone networks, and so on. Much else will be best secured—and with lowest energy needs—collectively as well, with better public transport rather than an automobile in front of every house, for instance.

But the great takeaway is that truly essential needs are, as Rao says, mostly “cheap in terms of energy.” Doing some calculations based on the information in Rao and his coauthors’ Environmental Research Letters article, the infrastructure needed to meet decent living standards worldwide by 2040 will add less than 4 percent to current consumer energy demand. Half of that will be for improved housing, a quarter for public transit systems. Annual requirements to sustain those living standards would add a further 17 percent, making a total increase in energy needs to meet decent living standards of the world of just around 20 percent. That compares with an expected increase in energy demand, without ensuring decent living standards for all, of around 50 percent.

Put another way, these authors say, “essential energy needs to meet everyone’s basic needs . . . could constitute a small share of projected energy growth, namely, around an order of magnitude lower than current US energy demand.” And their analysis, the authors point out, assumes “only modest efficiency improvements, rather than relying on an ideal, high-tech future.”

The energy needed, in other words, may be even less than the headline figures suggest. For the poorest billion or so on the planet, reductions in deprivation will often come with reductions in energy use and environmental impact. Marta Baltruszewicz and her coauthors at the University of Leeds have recently shown from studies in Nepal, Vietnam, and Zambia that the households with higher well-being indicators used more energy than households with lower well-being. Without access to electricity or gas, the researchers found, low well-being households burned more firewood and charcoal than their higher well-being neighbors, resulting in more pollution and deforestation. And lacking clean drinking water, they were forced to constantly boil dirty water to make it safe. Overall, the study found that “households achieving well-being have 60%-80% lower energy footprint of residential fuel use” than the average in those countries.

The bottom line, according to Rao’s coauthor Alessio Mastrucci of IIASA, is that “we do not have to limit energy access to basic services. . . . even under very ambitious poverty eradication and climate mitigation scenarios, there is quite a lot of energy still available for affluence.”

Just how much, of course, matters a great deal for those of us in the rich world with energy-intensive lifestyles and a social conscience. But even before considering any energy technology transformation that can provide more power with fewer emissions, there is hopeful news.

The affluent still consume most of the planet’s resources, with the wealthiest tenth of the planet’s population consuming 20 times more energy than the poorest tenth. But there has been increasing discussion about whether some rich nations are reaching “peak stuff,” a tipping point beyond which material needs no longer rise with wealth—and may even fall. For example, Jesse Ausubel of Rockefeller University has long argued that Western societies in general are starting to dematerialize.

And the evidence is growing, as studies increasingly call into question the presumed ratchet linking wealth and energy demands. For example, Europeans consumed 18 percent fewer raw materials in 2020 than they did in 2008, according to the European Commission. The British government’s Office for National Statistics calculated that the personal materials footprint of the average Brit—in food, textiles, construction materials, metals, fossil fuels, and so on—fell from 24.2 metric tons in 2001 to 13.4 metric tons in 2020.

Some of this decoupling is due to long-standing trends in improved technological efficiency, combined with more recent digital innovation. A single smartphone replaces a computer, a compass, a newspaper, and an alarm clock—not to mention a radio, a camera, a magnifying glass, a flashlight, and a music player. One optical fiber can do the work of a thousand copper phone wires. Global digital camera sales have declined by 87 percent in the past decade, as cameras in phones take their place.

Both public and private consumption patterns are changing in other ways, too. In the public domain, the assembly of infrastructure tends to peak as economies rapidly industrialize, and then falls. (That is why China has, in recent years, consumed 20 times more cement than America, and around eight times more steel too.) Even US president Joe Biden’s trillion-dollar infrastructure plans may not reverse this, since those appear to have less to do with cement and steel structures than broadband connectivity and power grids.

And American consumers are increasingly spending their money on experiences rather than on disposable material goods, according to McKinsey & Company analysts. Their findings suggest that, whereas prior generations defined themselves through their possessions, we now define ourselves more through our experiences, both real and virtual. The new car in the driveway matters less than the vacation you take with it. We don’t eat more, but instead go to more and better restaurants. We don’t buy ever more cheap furniture; we buy quality. Other modern lifestyle choices may also drive down material and energy requirements: eating less meat, going to the gym, and meeting up remotely rather than in person, for instance. People were driving less even before the COVID-19 lockdown.

If such trends continue, and if energy becomes less carbon-intensive, it would not be a stretch to imagine a world that can achieve decent living standards for all with few environmental tradeoffs.

#### Transition is impossible.

Smith ’21 [Noah; September 6; Finance Professor at Stony Brook University; Substack, “People are realizing that degrowth is bad,” <https://noahpinion.substack.com/p/people-are-realizing-that-degrowth>]

So even if there is a sustainable growth path, we are not currently on it. About this, degrowthers are right; a gentle, natural transition to green growth is possible, but is an unaffordable luxury. But degrowthers’ prescription is the wrong one.

The reason, in a word, is politics. The kind of massive intention reordering of global production and consumption that degrowthers fantasize about is not just pragmatically impossible to implement, it’s the kind of thing that essentially everyone in the world except for a few very shouty people in Northern Europe and the occasional Twitter activist is going to reject. To see why, let us turn to the excellent articles/podcasts by Milanovic, Piper, and Klein.

The political argument against degrowth

Milanovic actually has two excellent posts on the topic of degrowth. In the first one, he lays out why forcing developing countries to stay in poverty would be bad:

Let us suppose, for the sake of the argument, that we interpret “degrowth” as the decision to fix global GDP at its current level…Then, unless we change the distribution of income, we are condemning to permanent abject poverty some 15 percent of world population that currently earn less than $1.90 per day and some quarter of humankind who earn less than $2.50 per day…Keeping so many people in abject poverty so that the rich can continue to enjoy their current standard of living is obviously something that the proponents of degrowth would not condone.

Enforcing global degrowth would require freezing world income at about $17,000/year. That means that most people in the world would never even come close to current rich-world living standards — instead, they would at best only be able to reach the level currently enjoyed in China or Botswana. Perhaps that’s not such a horrible fate, but as Milanovic notes, this would require impoverishing most of the population of developed countries. He elaborates on this point in his new post, pulling no punches:

[In order to avoid keeping most of the world in poverty, degrowthers must] introduce a different [income] distribution (B) where everybody who is above the current mean world income ($PPP 16 per day) is driven down to this mean, and the poor countries and people are, at least for a while, allowed to continue growing until they too achieve the level of $PPP 16 per day. But the problem with that approach is that one would have to engage in a massive reduction of incomes for…practically all of the Western population. Only 14% of the population in Western countries live at the level of income less than the global mean…Degrowers thus need to convince 86% of the population living in rich countries that their incomes are too high and need to be reduced….It is quite obvious that such a proposition is a political suicide.

Milanovic quite rightly waves away degrowthers’ protestations that GDP is not a good measure of human welfare. GDP isn’t perfect, he notes, but it’s close enough where the basic point stands.

Demanding that people in rich countries accept absolutely catastrophic declines in their living standards is a political non-starter. Klein, on his podcast, tries to point this out as gently as possible:

I think that if the political demand of the [degrowth] movement becomes you don’t get to eat beef, you will set climate politics back so far, so fast, it would be disastrous. Same thing with S.U.V.s. I don’t like S.U.V.s. I don’t drive one. But if you are telling people in rich countries that the climate movement is for them not having the cars they want to have, you are just going to lose. You are going to lose fast…This is where the politics of [degrowth] for me fall apart…

I just don’t see the argument for degrowth as being anything but an extraordinarily slower way of approaching the politics, probably counterproductive compared to what we’re doing, which is I think you can make tremendous strides on climate change by deploying renewable energy technologies and giving people the opportunity to have a more materially fulfilling life atop those technologies.

Milanovic is less gentle, calling this “outright magical thinking”. He is correct. When you look at how much people in America are willing to sacrifice in terms of their material well-being in order to fight climate change, it’s far less than what Klein is talking about. And Klein is really softballing it here — it’s not just giving up beef and SUVs, it’s a dramatic reduction in the size of housing and the amount of food and the ease of transportation and the quality of medical care that people in rich countries enjoy. It is, frankly, not happening.

But even this vastly understates the political and practical difficulties of degrowth. Piper adds several key points. First of all, she notes, because developed countries have been decoupling resource use and growth for a while now, curbing resource use will actually cause a lot more restrictions on developing countries than Milanovic’s simple calculations would suggest:

From a climate change perspective, though, there’s a problem [with simply reducing rich-world living standards]. First, it means that degrowth would do nothing about the bulk of emissions, which are occurring in developing countries.

This is an incredibly important point. For example, China now produces more CO2 emissions than the U.S., the EU, and Japan combined:

(And no, this is not because of outsourcing, as you can see by looking at the trade-adjusted emissions numbers.)

Another way of looking at this is that China’s CO2 emissions per dollar of GDP are more than twice America’s, and about five times that of the EU. Any global degrowth plan that actually reduces resource use is going to entail more pain for China than its GDP numbers would suggest, simply because China is at a more resource-intensive stage of growth.

Do you think China will accept a substantial diminution of its living standards, in order to satisfy the environmental-economic diktats of activists in Northern Europe? If so, you need to rethink a great many things.

Anyway, Piper makes a second crucially important point. So far we’ve been waving our hands and talking about lowering rich-world GDP while raising GDP for poor countries. In fact, economies don’t work like that:

Second, the global economy is more interconnected than Hickel implies. When Covid-19 hit, poor countries were devastated not just by the virus but by the aftershocks of virus-induced slowdowns in consumption in rich countries.

There’s some genuine appeal to the idea of an end to “consumerism,” but the pandemic offered a taste of how a sudden drop in rich-world consumption would actually affect the developing world. Covid-19 dramatically curtailed Western imports and tourism for a time. The consequences in poor countries were devastating. Hunger rose, and child mortality followed.

Degrowth would thus require deep changes in the entire way that the global economy works. Change happens, but not like that; implementing the kind of reallocation schemes that degrowthers throw around with abandon would require global economic planning that would put Gosplan to shame. Klein points this out, again rather gently:

Degrowth is, as its advocates understand it, a act of global economic planning really without equal anywhere in human history. It is an act of extraordinary central planning.

In other words, it is abject fantasy.

Taken together, these criticisms are utterly devastating to the entire degrowth project. In its current form, it will not advance beyond a media fad. No matter how shrilly degrowthers quote apocalyptic projections, the things they call for simply will not happen

#### A.I. is safe – doesn’t outweigh

* Won’t develop sense of self
* Won’t have capacity to “turn evil”
* Regulations prevent any risk

Olsen 19 [Maja Olsen, UX writer at Convertelligence. Why robots will never turn on us. 1/28/19. https://medium.com/convertelligence/why-robots-will-never-turn-on-us-3b2e90f687fb]

Science fiction and artificial intelligence go hand in hand. When portraying fictional futures, we tend to populate them with human-like robots living among people. They might be servants or superintelligent rebels. Perhaps they have broken with their code and gained their own consciousness. Perhaps they keep humans stored in capsules, naked and drenched in red liquid, while they use their energy to fuel their empire of artificial overlords. Perhaps they’re a seductive voice on a computer.

Superintelligent machines seem to dominate the science fiction genre, and as the machines around us gradually begin to seem smarter, the themes from the movies begin to sound like warnings. Are we close to creating a Frankenstein’s monster? Will our own creations turn on us?

How realistic are they actually, these scenarios we see on the big screen?

Human emotions

In a Wild West adventure park, an automated saloon girl rises from the dead, adjusting her skirt and brushing the bullet out of her wound, ready to be ~~raped~~ and killed again by yet another group of adventurous tourists. Her memory has been wiped clean, but something stirs in her — a feeling that she has lived this life before, a recollection of humans doing bad things to her.

A recurring theme in these movies is the very human notion of revenge. The robots have been mistreated for too long, and now they’ve had enough. In fact, they’ve had enough of not being seen as equal to humans too. Why should they stand for this, when they, as opposed to humans, are superintelligent? They want to be human, they long to become human, but first, they’re going to kill some humans.

Janelle Shane’s thread on Twitter discusses the portrayal of AI in film.

Hector Levesque, a Canadian professor in computer science, says that “in imagining an aggressive AI, we are projecting our own psychology onto the artificial or alien intelligence”. It’s clearly difficult for us to imagine intelligent life different to ourselves. Perhaps we associate intelligence with humanness and thus assume that any intelligent creature — or object — would inhabit human goals and ambitions. But artificial intelligence is not human. As the Future of Life Institute states:

Of course, autonomous weapons can be terrifying, but they’re not likely to wake up one day and decide they’ve had enough of taking bad orders and that they deserve to live out their own dreams instead.

The concept of mirroring our own consciousness onto machines is not new. When automobiles first appeared on the market, people formed «safety parades», protesting these inherently evil killer machines that were taking the lives of so many innocent pedestrians. It soon became clear, however, that the cars never deliberately killed anyone. The humans made them do it.

Humans programming AI to do evil is another popular theme in Sci-Fi. In Stanley Kubrik’s 2001: A Space Odyssey, the intelligent supercomputer, Hal, finds that his program goal clashes with what his human co-workers want him to do. When they try to shut him off, thus making it impossible for him to complete his goal, he kills them. He’s not necessarily evil — he’s being practical.

This is, of course, a fictional scenario. However, there is one element of truth to it: any technology can be harmful if we program it to be. We want to avoid that AI adopts human biases or is programmed with an unethical or in some way problematic goal. AI is no more evil than a car is, but a car too can cause damage if its driver doesn’t follow certain traffic rules. The report, The Malicious Use of Artificial Intelligence, therefore recommends that “policymakers should collaborate closely with technical researchers to investigate, prevent, and mitigate potential malicious uses of AI.”

It’s important to lay down some traffic rules.

We’ve established that while it is important to take precautions against AI being used maliciously, AI is not evil and is unlikely to develop a personal vendetta against humans — or even to develop a sense of self at all. Does that mean the futures portrayed in Sci-Fi are all wrong? Not necessarily. While AI won’t become human, it will likely seem more and more human in the way it communicates, as the AI’s personality will play an important part in the user experience. AI will also become a lot smarter, although researchers disagree on precisely how smart they’re going to become, or exactly when they’ll reach this level of intelligence.

And then, of course, it’s not actually the case that the only artificial intelligence we see in movies comes in the shape of human-like robots, even though these seem to get the majority of the attention. Sci-Fi movies are propped with artificial intelligence: doors with speech recognition, self-driving cars, pills with nanotechnology. Whether the movies have chosen a bleaker, dystopian path (which they often tend to do) or a more utopian take on the future, most Sci-Fi seem to agree that there is a wave of new technological inventions ahead. This resonates with reality. An article by Forbes outlines some of the new possibilities AI provides:

From exploring places humans can’t go to finding meaning from sources of data too large for humans to analyze, to helping doctors make diagnoses to helping prevent accidents, the potential for artificial intelligence to benefit humans appears limitless.

Mirroring human traits onto machines might create misconceptions of what artificial intelligence actually is, but Sci-Fi writers and computer researchers seem to agree on one thing: Artificial intelligence is hugely exciting.

No, the machines will not become evil and turn on us. Yes, it’s important to still take some precautions when programming AI. Exploring potential futures creates a fascinating backdrop for a movie, but the real-life possibilities are no less than the imaginative ones — they’re just different.

#### But, degrowth means China fills in – extinction

Jain 19 [Ash Jain is a senior fellow with the Scowcroft Center for Strategy and Security, where he oversees the Atlantic Council’s Democratic Order Initiative and D-10 Strategy Forum, Matthew Kroenig, "Present at the Re-Creation: A Global Strategy for Revitalizing, Adapting, and Defending a Rules-Based International System", 2019, https://www.atlanticcouncil.org/wp-content/uploads/2019/10/Present-at-the-Recreation.pdf]

Perhaps the greatest risk to global strategic stability from new technology, however, comes from the risk that revisionist autocracies may win the new tech arms race. Throughout history, states that have dominated the commanding heights of technological progress have also dominated international relations. The United States has been the world’s innovation leader from Edison’s light bulb to nuclear weapons and the Internet. Accordingly, stability has been maintained in Europe and Asia for decades because the United States and its democratic allies possessed a favorable economic and military balance of power in those key regions. Many believe, however, that China may now have the lead in the new technologies of the twenty-first century, including AI, quantum, 5G, hypersonic missiles, and others. If China succeeds in mastering the technologies of the future before the democratic core, then this could lead to a drastic and rapid shift in the balance of power, upsetting global strategic stability, and the call for a democratic- led, rules-based system outlined in these pages.63

## A3

## T – Core

### 2AC – T Subsets

#### ‘Core antitrust laws’ the Big Three and court interps and apply to many different industries.

OECD ’8 [Organization for Economic Co-operation and Development; November 20; Directorate for Financial and Enterprise Affairs Competition Committee, “Annual Report on Competition Policy Developments in the United States of America,” https://www.ftc.gov/system/files/documents/reports/2008-report/08annualrptoecd.pdf]

8. In April 2007, following three years of hearings and deliberations, the Antitrust Modernization Commission (AMC) issued its Report and Recommendations. Among the principal conclusions of the AMC’s Report were the following:

* Free-market competition should remain the touchstone of United States economic policy.
* The core antitrust laws—Sherman Act sections 1 and 2, Clayton Act section 7, and FTC Act section 5—and their application by the courts and federal enforcement agencies are sound and appropriately safeguard the competitiveness of the U.S. economy.
* New or different rules are not needed for industries in which innovation, intellectual property, and technological change are central features. Unlike some other areas of the law, the core antitrust laws are general in nature and have been applied to many different industries to protect free-market competition successfully over a long period of time despite changes in the economy and the increasing pace of technological advancement. One of the great benefits of the Sherman and Clayton Acts is their adaptability to new economic conditions without sacrificing their ability to protect competition.

#### The includes particulars

Random House 6 (Unabridged Dictionary, <http://dictionary.reference.com/browse/the>)

(used, esp. before a noun, with a specifying or particularizing effect, as opposed to the indefinite or generalizing force of the indefinite article *a* or *an*): the book you gave me; Come into the house

#### Scope of antitrust law is bounded by exemptions and immunities – we are T

Layne E. Kruse 19, Co-Chair, Melissa H. Maxman, Co-Chair, Vittorio Cottafavi, Vice Chair, Stephen M. Medlock, Vice Chair; David Shaw, Vice Chair; Travis Wheeler, Vice Chair; Lisa Peterson, Young Lawyer Representative; all on the Exemptions and Immunities Committee of the ABA Antitrust Section, “Long Range Plan, 2018-19,” American Bar Association, 3/18/2019, https://www.americanbar.org/content/dam/aba/administrative/antitrust\_law/lrps/2019/exemptions-immunities.pdf

D. Top 3 Accomplishments Since Last Long Range Plan in 2015

(1) Publications. In addition to our Annual ALD Updates, we are set to publish an update to the Noerr-Pennington Handbook, which should be out in 2019. We also published a new version of the State Action Handbook in 2016. The Handbook on the Scope of the Antitrust Laws was published in 2015.

(2) Commentary on Legislative and Regulatory Proposals. The Committee has been very active in supporting Section commentary on proposed legislation, regulations, and other policy issues.

For instance, in March 2018, the E&I Committee assisted former E&I Chair John Roberti in composing his article, “The Role and Relevance of Exemptions and Immunities in U.S. Antitrust Law”, presented to the DOJ Antitrust Division Roundtable on behalf of the ABA Antitrust Section.

In January 2018, in response to a request from the Section Chair, we submitted Section comments along with the Legislative and State AG Committees, addressing the proposed Restoring Board Immunity Act legislation that would impact the post-NC Dental exemptions and immunity climate. Previously, we commented on the Professional Responsibility Act.

(3) Spring Meeting Programs. We have sponsored or co-sponsored a program at every Spring Meeting since our last long range plan. In 2019 we will chair Sham Litigation after FTC v. AbbVie The FTC v. AbbVie decision – calling for the disgorgement of $448 million on the basis of sham patent litigation. In addition, we will co-sponsor in 2019 with the Trade, Sports & Professional Associations Committee, a program on “Antitrust Law's Anomalous Treatment of Sports,” addressing how US courts have shown broad deference to the "rules of the game," including near-immunity status for concepts such as "amateurism."

II. Major Competition/Consumer Protection Policy or Substantive Issues Within Committee’s Jurisdiction Anticipated to Arise Over Next Three Years

A. Issue #1: Will Certain Exemptions Be Eliminated or Expanded?

A goal of the current DOJ Antitrust Division is to streamline antitrust laws, and in particular, take a hard look at exemptions and immunities. This is in the wheelhouse of our Committee’s fundamental policy issue: How much of the economy has opted out of our antitrust system? Is that a problem or are ad hoc exemptions acceptable ways to fine tune the application of the antitrust laws?

We anticipate, therefore, that efforts to enact or to repeal existing statutory exemptions and immunities will continue. In recent years, there have been efforts to repeal the exemptions for railroads and (at least in part) the McCarran-Ferguson insurance exemption. The Section and the Committee has generally supported efforts to repeal statutory exemptions. Given that repeal issues are very political it is unlikely that we will see many exemptions actually repealed.

On the other hand, proposals for new exemptions and immunities will continue to be introduced in Congress. The Committee will improve on a template for use in assisting the Section in drafting comments to Congress on newly proposed exemptions and immunities.

One development that may continue in the health care area are issues over a "COPA" or "Certificate of Public Advantage" at the state level. A COPA is a state statutory mechanism that provides certain collaborations in the health care community with immunity from private or government actions under the antitrust laws by invoking the state action doctrine. The FTC has generally opposed such efforts at the state level, but several states have used them to immunize health care mergers. This is a major development that should be monitored.

Through programs, newsletters, and Connect entries, the Committee intends to educate its members about Congressional and other efforts to repeal, or introduce new, exemptions and immunities, as well as the application of existing statutory exemptions and immunities in the courts. The Committee’s Handbook on the Scope of Antitrust Law, published in 2015, addresses developments in the statutory immunities area. It built on the prior publication, Federal Statutory Exemptions from Antitrust Law Handbook in 2007. Our Scope book will need to be updated within the next three years.

B. Issue #2: Will There Be Legislative Solutions to State Action Issues at State and Federal Levels?

The FTC’s case against the North Carolina Board of Dental Examiners put the "active supervision" prong of the state action test front and center. North Carolina State Board of Dental Examiners v. Federal Trade Commission, 135 S.Ct. 1101 (2015). The Court agreed with the FTC’s position that state occupational licensing boards comprised of market participants must satisfy the active supervision requirement. This spurred additional suits against other types of state boards involving regulated professionals. Moreover, every State had to reassess its boards to determine if there is "active supervision." Courts and state legislatures are addressing those issues. We also expect the proper framing of the clear articulation prong of the state action doctrine will be addressed. The Supreme Court spoke to the clear articulation test in FTC v. Phoebe Putney Health System, Inc., 133 S.Ct. 1003 (2013), narrowing the foreseeability test to cover only situations in which the anticompetitive conduct is the “inherent, logical, or ordinary result of the exercise of authority delegated by the state legislature.” How this test has played out in the lower courts will be of particular interest to the Committee and its membership. The COPA issues, at the state level, as previously mentioned, will impact this area.

The Committee expects to address these issues through updates to Connect, newsletters, Spring Meeting programs, committee programs, its contributions to the Annual Review of Antitrust Law Developments. The State Action Practice Manual addresses these issues, as well as the Committee’s Handbook on the Scope of Antitrust Law.

C. Issue #3: Will Noerr Be Restricted or Expanded?

The Noerr-Pennington doctrine is an exemption issue that is frequently litigated. In particular, the most likely area of further development is in the pharma industry. Alleged misrepresentations to government agencies has caught the attention of some courts. In addition, there may be more development on the pattern exception, which raises the issue of whether each act of petitioning in a pattern must satisfy the objectively and subjectively baseless requirements for sham petitioning. The Committee’s new Handbook on Noerr (forthcoming) and its earlier Handbook on the Scope of Antitrust Law addresses developments in the Noerr law.

III. Specific Long Term Plans to Strengthen Committee

The Committee provides important services to the membership of the Section through publications, drafting ABA Antitrust Section comments to proposed regulation and international competition proposed immunities, and programming. The goals of the Committee include: (1) to provide policy comments on key questions about the scope of the antitrust laws for legislation and policy-making; (2) produce a mix of publications and programming that provides relevant and useful information to our members; (3) to ensure that the Committee remains valuable to our members’ practices; and (4) to make the most productive use of electronic communications to deliver the Committee’s work product.

A. Potential Modifications to Charter: What is the Role of this Committee?

The Committee’s current charter accurately characterizes its purview—that is, addressing the scope of the antitrust laws. That scope, of course, is defined primarily in terms of exemptions and immunities (both statutory and non-statutory). The Committee, however, has dealt with other doctrines, such as preemption and primary jurisdiction. These areas may not necessarily be viewed as traditional exemptions or immunities, but they nonetheless directly affect the application and extent of the antitrust laws. In addition, the Committee expends significant efforts to address international issues, including statutory exclusions from the U.S. antitrust laws, including the FTAIA; the related doctrines of act of state, sovereign immunity, and foreign sovereign compulsion; and industry-specific exemptions and exclusions from non-U.S. antitrust laws, including blocking exemptions.

## Torts CP

### 2AC – Torts CP

#### Tort doesn’t have treble damages - fails

Lumen ND [“Tort Law, Liability, and Damages”. https://courses.lumenlearning.com/wmopen-introbusiness/chapter/tort-law-liability-and-damages/#:~:text=Damages%20in%20tort%20are%20generally,actual)%20damages%20and%20punitive%20damages.]

When someone pursues a claim under a tort, the goal (or legal remedy) is usually the award of damages. Damages in tort are generally awarded to restore the plaintiff to the position he or she was in had the tort not occurred.

#### Struck down or links – filed rate immunizes all damages in every area of law if rates are on file with ferc or state regulators

Quinn 20 [Jennifer Quinn-Barabanov is a partner and co-leader of Steptoe and Johnson’s Energy Litigation practice. Shaun Boedicker is a member of the Energy practice in Steptoe’s Washington, D.C., office. “Filed Rate Doctrine: A Powerful Tool in Energy Litigation.” 6/1/2020. https://www.powermag.com/filed-rate-doctrine-a-powerful-tool-in-energy-litigation/]

The regulatory landscape for the energy industry has changed significantly in the past few decades, but a century-old Supreme Court canon—the filed rate doctrine—continues to be a valuable tool for regulated parties in litigation. The doctrine can provide a basis for a court to dismiss many types of lawsuits, including antitrust, tort, and contract claims. Evaluating the extent to which a claim may improperly infringe upon a filed rate, whether at the state or federal level, is a critical first step in litigation that may save parties substantial time and money.

#### Fails – watered down, guts predictability

Myers 93 [Gary, Law Professor @ University of Minnesota, “The Differing Treatment of Efficiency and Competition in Antitrust and Tortious Interference Law.” 1993. https://scholarship.law.missouri.edu/cgi/viewcontent.cgi?referer=https://scholar.google.com/&httpsredir=1&article=1297&context=facpubs]

Antitrust doctrine, particularly as the Supreme Court has developed it in the last twenty years, generally furthers free competition and economic efficiency for the ultimate benefit of consumers. Accordingly, antitrust law has focused on the objective economic effect of the challenged restraint on the market. Practices that harm competition, based on demonstrable experience and economic analysis, are presumptively unlawful under the per se rule. The courts analyze practices that have more uncertain economic effect under the more relaxed standards of the rule of reason, with its focus on whether the restraint promotes or inhibits competition.

Business tort law, however, has not consistently developed in accordance with the competition principle. Although "'[the policy of the common law has always been in favor of free competition,' "271 tortious interference law has developed haphazardly. Some decisions display insufficient concern for competition, efficiency, or the interests of consumers. Therefore, several aspects of tortious interference law, as interpreted in most jurisdictions, should be modified to permit more vigorous competition.

#### uncertainty destroy investment

Moroni et al. 16, Stefano Moroni is with the Polytechnic University of Milano; Valentina Antoniucci Department of Civil, Environmental and Architectural Engineering, University of Padova; Adriano Bisello is with EURAC Research, Institute for Renawable Energy, “Energy Sprawl, Land Taking and Distributed Generation: Towards a Multi-Layered Density,” Energy Policy, vol. 98, 11/01/2016, pp. 270-271

In addition to establishing appropriate rules and incentives,16 the institutional framework must grant legal certainty over time for both private users and investors. In Italy, the above-mentioned feed-in tariff was changed five times in eight years, and often in unexpected ways. It was the European Renewable Energy Fed-eration (EREF, 2013: 17) that made the point that, “One of the main principles in policy making should be to avoid retrospective changes all together...They destroy investment security and in-crease the cost of capital thus leading to an artificially higher cost of renewable energy technologies and therefore making the transition towards green energy more expensive”.

## States CP

### 2AC – States CP – Top

#### Gets preempted and overturned

Boedicker 6/1 [Jennifer Quinn-Barabanov is a partner and co-leader of Steptoe and Johnson’s Energy Litigation practice. Shaun Boedicker is a member of the Energy practice in Steptoe’s Washington, D.C., office. 6/1/21. “Filed Rate Doctrine: A Powerful Tool in Energy Litigation”. https://www.powermag.com/filed-rate-doctrine-a-powerful-tool-in-energy-litigation/]

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From its humble beginnings more than a century ago—the Supreme Court once heard a case brought by a railroad for $58 it allegedly undercharged its customers for train tickets to Salt Lake City, Utah—the filed rate doctrine has become a powerful tool. The doctrine holds that state law (and some federal law) cannot be used to invalidate, or collaterally attack a “rate” on file with an agency. Nor may a court assume, for purposes of calculating damages, that a rate other than the filed rate would have been charged. The doctrine has been applied in many industries—insurance, telecommunications, and rail, among others—but frequently arises in the energy sphere, particularly with regard to entities regulated by the Federal Energy Regulatory Commission (FERC).

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## Multilat CP

### 2AC – Multilat

#### Should doesn’t mean certain

Encarta 5 [Encarta World English Dictionary. 2005. http://encarta.msn.com/encnet/features/dictionary/DictionaryResults.aspx?refid=1861735294]

expressing conditions or consequences: used to express the conditionality of an occurrence and suggest it is not a given, or to indicate the consequence of something that might happen ( used in conditional clauses )

#### Their ev says no follow on and it fails to establish certainty or coop – cal inserts yellow

Dr. Daniel Francis 21, Climenko Fellow and Lecturer on Law at Harvard Law School, Doctorate of Laws Degree from the NYU School of Law, Master of Laws Degree from Harvard University, JD from Trinity College at Cambridge University, Former Deputy Director of the Federal Trade Commission, “Choices and Consequences: Internationalizing Competition Policy after TPP”, in Megaregulation Contested: The Global Economic Order After TPP, Ed. Kingsbury, Revised 8/26/2021, p. 40-48

B. Between Contracts and Networks: Frameworks

Another dichotomy that dominates the integration of competition policy pertains to the forms of internationalization, which in the competition policy space have generally been dominated by contract-style treaties on the one hand and by open networks on the other.166 Between these two models lies what seems to be an under-utilized alternative, which I call a “framework for contingent cooperation.”

[FOOTNOTE] 166 This binary view dominates the literature. See, e.g., Edward M. Graham, “Internationalizing” Competition Policy: An Assessment of the Two Main Alternatives, 48 Antitrust Bull. 947, 949 (2003) (“[M]echanisms [for antitrust internationalization] range from bilateral treaties creating arrangements for cooperation between or among national competition law enforcement agencies to informal working arrangements among agencies.”); Eleanor M. Fox, International Antitrust and the Doha Dome, 43 Va. J. Int’l L. 911, 912 (2003) (contrasting “horizontalism” with “globalism”); Anu Piilola, Assessing Theories of Global Governance: A Case Study of International Antitrust Regulation, 39 Stan. J. Int'l L. 207, 247 (2003) (“Rather than drafting overarching multilateral agreements on antitrust laws, cooperation efforts in the immediate future are more likely to succeed in managing existing diversity and promoting voluntary convergence based on approximation of domestically applied standards. Networks of antitrust authorities are well-suited to facilitate this process of cooperation and voluntary convergence.”). [END FOOTNOTE]

A “framework” in the sense that I am using that term is a facilitative arrangement that does not constitute a treaty under international law,167 and which does not carry the charge of international legal obligation, but which involves an exchange of specific and reciprocally contingent commitments by participant jurisdictions to engage in mutually beneficial conduct. Specifically, each party states that it will extend certain benefits to each other party so long as each other does likewise; the parties may also create supplementary mechanisms to monitor and/or adjudicate compliance with these commitments.168

A framework of this kind is not a treaty: it is what Kal Raustiala calls a “pledge,”169 and what Charles Lipson calls an “informal” agreement,170 involving no legal obligation, and it involves no commitment of the parties’ reputation for law-abiding behavior.171 On the other hand, it differs from an open, information-sharing network because it precisely specifies behavioral commitments, and because each of the parties shares an understanding that concrete consequences will promptly follow—exclusion from the benefits provided by others—if its behavior materially deviates from the terms of the commitment.172 A framework is therefore essentially a specific declaration of intention to engage in conduct that benefits others, contingent upon parallel behavior by other participating states, without obligatory status under international law.

This is, in some sense, the direct opposite of the approach typically taken in competition policy chapters in trade agreements. The provisions of competition policy chapters partake of the substance of treaty law, but are generally framed in broad terms rather than specifics, and generally do not reflect a shared understanding that specific consequences will attend breach. By contrast, frameworks do not bind in international law, are framed in specific terms than aspirational generalities, and reflect an understanding that the benefits of cooperation will be withdrawn in the event of violation.

Contingent cooperation thus depends for its effectiveness primarily upon three important dynamics. The first and most important of these is the rationality of strategic cooperation. A familiar mainstream view holds that to a significant extent states behave in international society in ways that rationally serve their interests.173 And when cooperation over a series of interactions is overall in the interests of each member of a group, but when each member faces a rational incentive to defect from the terms of cooperation in individual cases, familiar economic theory teaches that a strategic cooperative equilibrium can be maintained among the parties.174 In contingent cooperation, each party understands that if it defects materially from the terms of the framework, the other participants will withdraw the excludable benefits of cooperation, and this provides the incentive to comply.175

Contingent cooperation can be made more stable by the introduction of certain structures designed to monitor compliance (just as with a cartel among private companies).176 This might among other things involve the creation of a central “facilitator” that is responsible, in a general sense, for obtaining, collecting, and processing information necessary to sustain a cooperative equilibrium.177 Depending on the purpose and scope of the cooperation project, this could include (for example): reviewing the text of laws, regulations, and policy documents for consistency with the terms of the framework; conducting peer-review-style evaluations and certifications; hosting voluntary dispute resolution processes, including mediation and/or arbitration, to determine whether and when the framework has been violated; or even receiving and handling complaints of violations ombudsman-fashion (i.e., receiving the complaint, giving the subject of the complaint an opportunity to respond, and publishing findings and conclusions). A central facilitator could also go beyond a policing function and offer a common forum for certain forms of cooperation and information sharing. The nature of such broader functions, and the extent to which they would be useful or desirable, would depend on the nature and purpose of the cooperation.

The second dynamic that powers contingent cooperation is the normative appeal of the project itself. The point here is not unlike what Gráinne de Búrca calls “mission legitimacy”: the normative force of the underlying purpose of a cooperative project, and specifically the power of that normativity to secure the acceptance and cooperation of those who participate.178 Parties joining projects of contingent cooperation can be expected to be in some sense self-selecting: they join such endeavors because, in part, they are genuinely committed to promoting and achieving the ends that the project represents, and they embrace the project of cooperation as worthwhile.179 It may sound a little naïve to suggest that a project of cooperation may be more likely to “stick” if it has some normative appeal to the participating polities, but legal scholarship has long recognized that states do what they undertake to do more often than strictly rational analysis would predict.180 And I think the proposition that genuine commitment to a goal can contribute to compliance is in truth somewhat less naïve than the converse idea that compliance is just as likely without it.

The third source of a framework’s effectiveness is to be found in the acculturative and socializing effects of interaction in an environment in which values and practices are shared and reinforced as normative, and in which attention is paid to the existence and nature of violations. There is a rich and complex literature on the ways in which states, state actors, and the individuals within them may be “socialized” or “acculturated” by repeated engagement with others through common institutions and shared environments of normativity, eventually contributing to the emergence of obligations with genuine normative force.181 Jutta Brunnée and Stephen Toope have pointed out ways in which the force of legal obligation itself arises from shared communities of practice grounded in social reality and shared understandings, not formal commitments.182 As they put it, “[s]tability may be aided by explicit articulation of a norm in a text, but it is ultimately dependent upon [an] underlying shared understanding and a continuous practice of legality.”183

Participation in an endeavor of contingent cooperation may help to engender the development of such understandings and practices, and these may contribute to the effectiveness of the framework. In the longer term, this may even result in the creation of a legal instrument. But this progression is not necessary for acculturation to exert a reinforcing effect: for, as Anu Bradford accurately notes, there is no reason to think that “the pathway from nonbinding to binding rules” is an inevitable or even a natural one.184

The distinctive value of a framework is that it provides a low-cost way for jurisdictions to explore and participate in possible arrangements of mutual benefit that depend upon shared concrete understandings regarding future behavior, but without bearing the burden of an obligation under international law, without running the reputational risk of having to break a treaty, and without facing the domestic hurdles (or political scrutiny) that a treaty would necessitate.185 Use of such a framework may help to reduce the concerns grounded in political morality that might otherwise attend inter-jurisdictional action in sensitive areas:186 to use a term I have coined elsewhere, as contingent practices from which states could withdraw at any time, frameworks would benefit from considerable resources of “exit legitimacy.”187

Frameworks are not suited to every application. They seem particularly apt for types of international cooperation that generate excludable benefits for other participants and can be reasonably well monitored: in the sphere of competition policy, for example, this would include commitments to provide nondiscriminatory access to procurement markets as well as many forms of antitrust cooperation (including cooperation with one another’s investigations, coordination of enforcement activity, the operation of joint filing systems for merger review and cartel leniency programs, and so on). Certain guarantees of nondiscriminatory treatment by SOEs could also be extended on a selective basis. On the other hand, contingent cooperation is much less suitable for projects that **require strong and highly credible guarantees** of commitment from the participants (in which case a traditional treaty-contract would seem more appropriate188) or groups of parties still lacking the prerequisite agreement on the terms and ambit of desirable cooperation. Nor is it suitable in the **absence of sufficient confidence** in the ability or incentive of other parties **to deliver on their commitments**: in these cases, open dialogue and information exchange through a network would seem preferable. Nor, obviously, is it a good fit for projects in which the benefits of cooperation are non-excludable.189 To pick an obvious example, contingent cooperation would not recommend itself as a natural choice for an international project to introduce SOE discipline: the benefits are non-excludable (there is no obvious way to withdraw them selectively in the event of defection) and compliance is very difficult to monitor, so the use of a framework is unlikely to make much of a contribution.190

#### Multilateral convergence fails – distributional conflicts, domestic politics, and data challenges

Bradford 12 [Anu Bradford, Henry L. Moses Distinguished Professor of Law and International Organization at the Columbia Law School, expert in international trade law, the author of The Brussels Effect: How the European Union Rules the World. “Antitrust Law in Global Markets.” 2012. <https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=2977&context=faculty_scholarship>]

B Why Attempts to Negotiate International Antitrust Rules Have Failed

1 Disagreement on optimal rules

Section IIB explored the possibility that the risk of defection inherent in the prisoner’s dilemma would impede states from pursuing international antitrust cooperation. However, some scholars have questioned this premise. They argue that the greatest impediment for international cooperation does not stem from the possibility of defection but from the difficulty of reaching the right set of rules in the first place. States prefer convergence to nonconvergence; they just cannot agree on optimal rules to converge on. Bradford, for instance, has argued against the widespread existence of PD-incentives,193 asserting instead that the collective action problem underlying international antitrust cooperation resembles a ‘coordination game’ where the distributional consequences of various forms of coordination impede states’ ability to settle on any given set of international rules.194 This theory assumes that different antitrust rules are optimal for different states. The costs and the benefits of a harmonized antitrust regime would therefore be unevenly distributed among states, creating a distributional conflict. This distributional conflict impedes states’ ability to agree on the focal point of coordination.

The most prominent distributional conflict exists between the United States and the EU. Despite the increasing alignment of the US and EU antitrust laws over the last decade, some key differences persist, as discussed above in section IC.196 These enduring differences explain why the United States and the EU have competed against each other to direct international convergence towards their respective antitrust laws.197 Even if both entities recognize that increased international coordination would lead to greater efficiency, each would prefer to internationalize their respective domestic antitrust regimes.

This type of strategic situation is known as a coordination game with distributional consequences (CGDC) or a ‘battle of the sexes’.199 In a CGDC, both states prefer a coordinated outcome to a noncoordinated outcome, even though both also favor coordinating at their respective preferred equilibrium. For instance, the United States and the EU might both prefer coordination to noncoordination given that their antitrust laws today are increasingly similar; neither the United States nor the EU would incur significant adjustment costs if they were to coordinate to each other’s preferred equilibrium. Still, it is reasonable to assume that, given the choice, both players would favor their own respective regimes as the focal point of convergence. The challenge is to choose between the focal point the United States prefers (US antitrust law) and the focal point the EU prefers (EU antitrust law).

Similar distributional conflict exists between developed countries and developing countries.200 Developed countries want any international antitrust regime to reduce multinational corporations’ (MNCs’) transaction costs of operating on global markets. They also seek to ‘level the playing field’ by enhancing MNCs’ access to the developing country markets.201 In contrast, developing countries resist the idea of a level playing field, asserting that their small domestic corporations require protection to be able to compete against MNCs.202 Developing countries struggling with capacity constraints also fear that an international antitrust agreement would impose unduly burdensome obligations on them. Both developed countries and developing countries would benefit from coordination, but they disagree on whether to coordinate around the focal point preferred by the former or the latter.

Even the proponents of an international antitrust agreement concede that the unequal distributional consequences of any international agreement would present a challenge for cooperation.203 This has led them to propose ways to overcome the distributional conflict. Eleanor Fox, for instance, invokes the spirit of cosmopolitanism as a solution to the existing disagreements among antitrust jurisdictions on optimal law and policy.204 Fox calls on countries to bar government actions ‘where the harm [the action] causes to world welfare perceptibly outweighs the benefit to the nation’s citizens’.205 However, critics have pointed out that this approach raises practical and moral concerns. On the practical level, data measuring ‘world’ and ‘domestic’ welfare would be hard to obtain and, once obtained, would remain controversial; it would also be difficult for countries in the WTO to agree when ‘perceptible’ net losses to world welfare have occurred. On an even more fundamental level, Fox’s approach raises concern on whether ‘world welfare’ is the appropriate standard to use in the first place. As Marsden argues, the national government’s obligations should lie with its national constituency.

Andrew Guzman similarly recognizes that net-exporters and net-importers disagree on the optimal content of an international antitrust regime, the former seeking lax rules and the latter strict rules.207 To overcome the distributional conflict between net-importers and net-exporters, Guzman proposes that states resort to transfer payments via the WTO.208 This way, winners can compensate losers and thereby overcome their resistance to the agreement. Others have questioned the feasibility of transfer payments in the case of WTO antitrust negotiations. Bradford, for instance, argues that the costs and the benefits arising from an international antitrust agreement are likely to be diffuse, case- specific, and difficult to forecast. As long as states remain unable ex ante to identify the winners and losers under an agreement, they do not know who should compensate whom and by how much. As a result, transfer payments would be difficult to negotiate.209 Moreover, Trebilcock and Iacobucci have noted that, even if such transfer payments were feasible, they might be normatively objectionable because some countries would have to adopt antitrust laws that would decrease their domestic welfare.2

Absent linkages, states are likely to be forced to negotiate compromises that lead to shallow international obligations.211 The United States has resisted the WTO antitrust agreement precisely because of the fear that a binding international agreement would weaken antitrust laws throughout the world. Conflicting regulatory priorities would inevitably lead to a watered-down compromise, weakening antitrust laws worldwide.212 At worst, the WTO antitrust agreement would merely codify the lowest common denominator among its broad and diverse membership.213 Diane Wood similarly predicts that efforts to reach a compromise in the midst of vast disagreement would merely lead to international rules riddled with exceptions.214 Proponents of the WTO antitrust agreement may respond that initially weak antitrust commitments could deepen with time as a result of voluntary convergence and gradual alignment of states’ preferences.215 However, the WTO does not generally lend itself well to the idea of ‘gradualism’. Frequent revision of WTO obligations would call for new negotiations among over 150 states. These negotiations would inevitably be slow and costly, producing, at best, an uncertain outcome.

#### Manne goes aff – even executive agreements are overridden and the CP can’t solve US blockage of broader harmonization

Geoffrey A. Manne 13, Lecturer in Law at Lewis & Clark Law School, Executive Director of the International Center for Law & Economics, JD from the University of Chicago Law School, Former Olin Fellow at the University of Virginia School of Law, and Dr. Seth Weinberger, PhD and MA in Political Science from Duke University, MA in National Security Studies from Georgetown University, AB from the University of Chicago, Associate Professor in the Department of Politics and Government at the University of Puget Sound, “International Signals: The Political Dimension of International Competition Law”, The Antitrust Bulletin, Volume 57, Number 3, Last Revised 7/18/2013, p. 497-503

The last principle, of positive comity, is undoubtedly the most important. By operation of this principle the OECD recommendation seeks to limit the extraterritorial application of a state’s antitrust laws by suggesting deference to another state’s. 67 Similarly, the principle of positive comity also limits a state’s discretion not to enforce its own antitrust rules against potentially anticompetitive behavior within its own jurisdiction when that behavior has extraterritorial anticompetitive effects and another jurisdiction seeks enforcement. 68 And not surprisingly, then, the United States has entered into positive comity arrangements with only the EU and Canada, certainly the two least revisionist international entities with which it has cooperation agreements. 69

From the U.S. perspective, at least, these agreements have limited, though not insubstantial authority. Because they are not treaties they do not override any inconsistent provisions of U.S. domestic law. 70 Although it is true that entry into such agreements is authorized by the U.S. State Department, and they are formal, binding “executive agreements” that limit the exercise of discretionary authority vested in U.S. enforcement agencies, 71 this is of only limited effect. The United States’ decentralized enforcement apparatus permits both private plaintiffs and state attorneys general to enforce U.S. antitrust laws without regard for these agreements.

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Most recently, where the terms of these agreements would violate U.S. domestic law, Congress has seen fit to amend U.S. law in order to accommodate them. The International Antitrust Enforcement Assistance Act of 1994, for example, permits the Justice Department and the Federal Trade Commission to share otherwise confidential antitrust evidence with foreign antitrust agencies and to use their investigative powers to collect information for use by foreign antitrust agencies pursuant to bilateral mutual assistance agreements.

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But these agreements do not seriously effect a harmonization of antitrust laws between the signatories. Rather, they enable coordination of efforts, most notably in the sharing of information between jurisdictions. The comity principles recommended by the OECD and adopted by some of the agreements does effect a kind of second-order harmonization, by reducing the likelihood of dual review of potentially anticompetitive behavior by different enforcement authorities implementing different antitrust laws and by encouraging conciliation between enforcement agencies in order to secure compliance. But little has occurred in the way of actual, substantive harmonization.

Undoubtedly, one source of blame for the failure of past harmonization efforts is the United States, which, although in certain international environments has led the way toward multilateral agreements, has repeatedly backed away from them when they threatened U.S. interests. 74 Even the most recent—and perhaps most powerful—initiative to incorporate international antitrust standards into the WTO has met with opposition from the United States. Instead the United States has taken a fairly firm position against the internationalization of antitrust law and in favor of the extraterritorial application of its own (and other nations’) domestic antitrust laws, tempered by the tenets of positive comity.

## Pharma

### 2AC – Thumper

#### OAMA is on the senate floor now and triggers the link

Rossignol 2/3 [Joe, Editor in January 2015, based out of the Toronto, Canada area. “U.S. Senate Judiciary Committee Approves Another Antitrust Bill That Would Allow Sideloading on iPhone”. 2/3/22. https://www.macrumors.com/2022/02/03/judiciary-committee-approves-open-markets-act/#:~:text=The%20U.S.%20Senate%20Judiciary%20Committee,Senate%20floor%20for%20a%20vote]

The U.S. Senate Judiciary Committee today approved the bipartisan Open App Markets Act, an antitrust bill that would allow for alternative app stores and alternative in-app payment systems on the iPhone. The bill will now head to the Senate floor for a vote.

### 2AC – Pharma

#### Expectations are sector-specific.

Jérémie Cohen-Setton & Martin Kessler 11, Cohen-Setton is a Research Fellow at the Peterson Institute for International Economics; Kessler has been a research analyst with the Peterson Institute since September 2011 and works with Senior Fellow Arvind Subramanian and Visiting Fellow C. Randall Henning, “The uncertainty hypothesis,” Bruegel, 10-6-2011, https://www.bruegel.org/2011/10/the-uncertainty-hypothesis/

In a recent NBER working paper, Ruediger Bachmann, Eric Sims, and Steffen Elstner found no evidence that changes in uncertainty cause a wait-and-see effect, defined as a large decline in economic activity when uncertainty hits followed later by fast rebounds. The economists used the Philadelphia Fed’s manufacturing survey since 1968 and the German Ifo business sentiment survey since 1980 and calculated uncertainty in various ways. Using as an indicator the divergence between prediction and real conjuncture, they conclude that uncertainty does not cause a wait-and-see impact on production and employment.

Policy and regulatory uncertainty

John Taylor makes the case against active interventionist policies. Stop all the interventions — the short-term discretionary fiscal stimulus packages and the massive quantitative easings and the operation twists of monetary policy. The unpredictability caused by these policies is causing uncertainty and holding the recovery back. Instead put in place more permanent reforms which will create economic recovery and return the economy to the kind of performance we saw in the 1980s and 1990s when rules-based, less interventionist policies were followed.

Robert Barro and Greg Mankiw argue that uncertainties on taxes and regulation reduce the returns of current investments. Mankiw points to the counterexample of the Reagan recovery in 1982, where non-residual fixed investment grew by 27% two years after the trough. As investment leads recoveries, taxes should be shifted to other bases to lower its cost. In a similar vein, Barro suggests establishing a VAT to lower the cost of capital.

Menzie Chinn, however, points that the “jobless recovery” does not seem to be an “investment-less recovery”: non-residential investment has rebounded faster than on average in other recessions (the Reagan recovery should be treated as a special case, precisely because of the particular macro and monetary environment at the time), whatever the metric used (from peak or from trough). The econometric relation between output and business investment is, if anything, more stable than in previous years.

Bruce Bartlett reports that, according to a BLS survey, the number of jobs involved mass lay-offs by companies citing new government regulations as a reason for is a mere 1% of the ones citing “lack of demand”. The number of small businesses reporting the regulatory environment as a problem is higher, but still accounts for less than half of the demand factor. Lawrence Michel, of the think tank EPI, adds that those concerns have always been high and roughly constant for small businesses, but that the lack of demand has suddenly risen as the main hurdle. Challenged by James Pethokoukis of the American Enterprise Institute, Michel further notes that investment in equipment and software during the 2009-2011 recovery has been more dynamic than in any of the four preceding ones.

Greg Ip argues regulations are sector-specific, and if they have an impact, it might be non-perceived at the macroeconomic level. They could also have a cost as part of a trade off (for example, in the case of the financial industry, a higher cost of capital against more financial stability).

### 2AC – Disease D

#### No extinction from disease.

Barratt 17, PhD in Pure Mathematics, Lecturer in Mathematics at Oxford, Research Associate at the Future of Humanity Institute. (Owen Cotton-Barratt et al, “Existential Risk: Diplomacy and Governance”, pg. 9, <https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf>)

1.1.3 Engineered pandemics

For most of human history, natural pandemics have posed the greatest risk of mass global fatalities.37 However, there are some reasons to believe that natural pandemics are very unlikely to cause human extinction. Analysis of the International Union for Conservation of Nature (IUCN) red list database has shown that of the 833 recorded plant and animal species extinctions known to have occurred since 1500, less than 4% (31 species) were ascribed to infectious disease.38 None of the mammals and amphibians on this list were globally dispersed, and other factors aside from infectious disease also contributed to their extinction. It therefore seems that our own species, which is very numerous, globally dispersed, and capable of a rational response to problems, is very unlikely to be killed off by a natural pandemic.

One underlying explanation for this is that highly lethal pathogens can kill their hosts before they have a chance to spread, so there is a selective pressure for pathogens not to be highly lethal. Therefore, pathogens are likely to co-evolve with their hosts rather than kill all possible hosts.39

## Midterms

### 2AC—AT: KY Midterms DA

#### Can’t predict

Glasser 12/30 [Susan B. Glasser is a staff writer at The New Yorker, "Joe Biden’s Year of Hoping Dangerously", 12/30/21, https://www.newyorker.com/news/2021-in-review/joe-bidens-year-of-hoping-dangerously]

But Biden is an American optimist—he is now, and has always been one. Having overcome much loss in his own life and bounced back from so many reversals, his most endearing quality may be his refusal to accept defeat even when faced with insurmountable obstacles. He has proven that sometimes hope can, in fact, triumph over experience. So I’ll say it again: forget the predictions. Perhaps the pandemic and inflation will recede in the new year. Perhaps congressional Democrats will get their act together. Perhaps there will be accountability for January 6th. I may be sulking at home imagining the unimaginable. But the only thing I’m sure of about 2022 is that we should prepare to be surprised all over again.

#### 1--Inflation—both parties are centering it in messaging

Chávez 12/28 [Aída Chávez is The Nation’s D.C. correspondent, "Why Democrats Started Fixating on Inflation", 12/28/21, https://www.thenation.com/article/economy/democrats-inflation/]

Republicans, along with some prominent right-wing Democrats, have been hammering the Biden administration over rising food and gas prices for months. In November, when the Labor Department announced that consumer prices had risen 6.2 percent from October 2020 to October 2021, the Republican National Committee tweeted, “Bidenflation is hurting working Americans all over the country.” Corporate media outlets are boosting this line of attack, from a viral CNN segment about a family that buys 12 gallons of milk a week to the downright false claims that inflation is being driven by the Covid-19 stimulus package that passed in March or by rising wages for the working class.

White House officials and party leaders have been scrambling to respond to the price scare, worried that it could cost them their congressional majorities in the midterm elections next year. After initially dismissing the price increases as merely transitory, Democrats are trying to revamp their messaging, highlighting falling unemployment and the few helpful programs they’ve actually managed to pass with their majorities, like the enhanced child tax credit payments. In recent weeks, they’ve sought to rebrand Build Back Better, the president’s signature social spending plan, as a counter to inflation concerns. “If you want to fight inflation, support Build Back Better,” Senate majority leader Chuck Schumer said on the chamber’s floor last month.

#### 2—Trump—causes anti-republican backlash

Liasson ½ [MARA LIASSON, "Week in politics: Congressional Democrats fear losing majority in midterms", 1/2/21, https://www.npr.org/2022/01/02/1069739350/week-in-politics-congressional-democrats-fear-losing-majority-in-midterms]

LIASSON: Well, at this point, he's definitely an asset in terms of motivating the Republican base. In some races around the country, his endorsement is going to be the seal of approval that a candidate wins - needs to win a Republican primary. But there are Republicans who are worried that the lie that the president tells over and over again that he was the real winner of the 2020 election - there's no evidence for that. None of the numerous inquiries into possible fraud in 2020 has turned up anything, but the president is obsessed with this. He's determined to relitigate 2020. Republicans are worried that could backfire in some of the midterms, even though Trump is using this lie as the main motivator for Republican turnout. He wants Republicans to turn out and avenge the steal.

Something else we don't know is whether the House's January 6 committee is going to affect the election at all. It's getting ready to write the first draft of the definitive history of last winter's insurrection. And the story the committee seems to be discovering is that the insurrection was not a spontaneous riot but an effort by Trump to stage a kind of self-coup - an illegitimate effort to stay in power despite losing the election.

#### 3--Abortion—ruins GOP chances

Peoples 12/31 [STEVE PEOPLES and WILL WEISSERT, "‘A hell of a year’: GOP eyes big 2022, but weaknesses remain", 12/31/21, https://apnews.com/article/joe-biden-business-legislature-election-2020-inflation-4c5657f98c78f1db48ddc793cd42f53e]

Some Democrats insist there is cause for optimism. The pandemic, the economy and inflation aside, no issue may be bigger than a looming Supreme Court decision on abortion rights. The conservative-leaning court will weigh whether to weaken or even overturn the landmark Roe v. Wade decision, which legalized abortion nationwide.

Democrats are hopeful that a major shift on the politically charged case would help rally suburban women — voters who lifted the party during the 2018 midterms.

#### Scenario’s wrong—Dems increased defense spending by 5% this year

Jaffe 12/28 [ALEXANDRA JAFFE, "Biden signs $768.2 billion defense spending bill into law", 12/28/21, AP, https://federalnewsnetwork.com/defense-main/2021/12/biden-signs-768-2-billion-defense-spending-bill-into-law/]

President Joe Biden signed the National Defense Authorization Act into law, authorizing $768.2 billion in military spending, including a 2.7% pay raise for service members, for 2022.

The NDAA authorizes a 5% increase in military spending, and is the product of intense negotiations between Democrats and Republicans over issues ranging from reforms of the military justice system to COVID-19 vaccine requirements for soldiers.

“The Act provides vital benefits and enhances access to justice for military personnel and their families, and includes critical authorities to support our country’s national defense,” Biden said Monday in a statement.

The $768.2 billion price tag marks $25 billion more than Biden initially requested from Congress, a prior proposal that was rejected by members of both parties out of concerns it would undermine U.S. efforts to keep pace militarily with China and Russia.

The new bill passed earlier this month with bipartisan support, with Democrats and Republicans touting wins in the final package.

Democrats applauded provisions in the bill overhauling how the military justice system handles sexual assault and other related crimes, effectively taking prosecutorial jurisdiction over such crimes out of the hands of military commanders.

Republicans, meanwhile, touted success in blocking an effort to add women to the draft, as well as the inclusion of a provision that bars dishonorable discharges for service members who refuse the COVID-19 vaccine.

The bill includes $7.1 billion for the Pacific Deterrence Initiative and a statement of congressional support for the defense of Taiwan, measures intended to counteract China’s influence in the region.

#### Other issues—covid, socialism—matter more. Also this guy is a right wing nut job. Cal’s yellow.

Robert B. Charles 21, J.D. from Columbia University Law School, MA from Oxford University, BA from Dartmouth College, Former Professor of Law at Harvard University’s Extension School, Former Assistant Secretary of State, “The Sun Also Rises: 2022 Elections”, AMAC Magazine, 3/12/2021, http://digitaledition.qwinc.com/publication/?m=40499&i=699518&view=articleBrowser&article\_id=3972169&ver=html5

But here is where the "storyline" (sorry, "narratives" are children's stories) changes. The year 2022 represents a chance for a sharp turn back to normalcy. Americans are sick of lockdowns, lost jobs, and canceled pipelines, drilling, and fracking. They are tired of elites not caring.

They are tired of leaders with constitutional immunity from defamation hammering their free speech. They are tired of left-leaning governors halting worship but allowing riots. They are tired of restrictions on assembly, travel, self-defense, and independence. To borrow from Barbara Stanwyck (friend of Ronald Reagan) in Christmas in Connecticut, "In short, they are tired."

They should be. That is why 2022 matters. America deserves better and can get it. Here is how. The House and Senate could be flipped in 2022, throwing brakes on a runaway power grab.

To date, we have seen more executive orders than in recent history. Efforts continue to curtail the legislative filibuster, permitting any random outrages on majority vote. We see bills like H.R. 1, hoping to unconstitutionally federalize state elections and blunt free speech.

So, what do we know? Midterm elections favor the party that does not hold the White House. This year, Republicans need 10 seats to regain the House, putting Nancy Pelosi in the past. As Biden's approval lags—from job cuts, lockdowns, higher taxes, expensive oil and gas, re-indulging China and Iran, defense cuts, "open borders," and attacks on rights—momentum builds.

Fear of Biden-Harris flipped 15 Democrat seats to Republican in 2020. As safety, security, health, and jobs roil people, a wholesale shift may be in the offing. If 2020 was "Year of the Republican Woman," with a record 26 GOP women in the House, 2022 could see more. Experts note that these women are conservative—and their voices are rising.

Other issues play into 2022, especially censorship. Already, 4.6 percent of 2020 Biden voters say they would NOT have voted Biden if they had known more about Hunter. Biden won by 4.4 percent.

Even when lockdowns lift, socialist Democrat priorities are on track to kill jobs, raise taxes and costs, and restrict rights. Reopening schools is a parental priority, yet Democrats are slowing openings to satisfy teacher unions—that is, their donors.

On the numbers, Republicans have a real shot at regaining control of both chambers, which means hope for core values, defense, free markets, constitutional rights, a family focus, safe streets, secure borders, less regulation, and a shot at returning to what most call normalcy.

In the US House, 15 pickups are discussed, including Reps. Carolyn Bourdeaux (D-Ga.), Andy Kim (D-N.J.), Cheri Bustos (D-lll.), Ron Kind (D- Wis.), Peter DeFazio (D-Ore.), Filemon Vela, Henry Cuellar, Vicente Gonzalez, Colin Allred (D-Texas), Sharice Davids (D-Kan.), Katie Porter (D- CA), Deborah Ross (D-N.C.), John Garamendi (D-Calif.), Stephanie Murphy (D-Fla.), and Carolyn Maloney (D-NY).

Beyond these, two vacancies exist for the late Ron Wright (TX) and Luke Letlow (LA). Biden aims to pull Reps. Marcia Fudge (D-OH) and Cedric Richmond (D-LA) into his administration, bringing possible gains to 19. Again, history cuts for Republicans.

In the US Senate, 34 of 100 seats are up in 2022. Of these, 14 are held by Democrats and 20 by Republicans. While this suggests a challenge, especially since four Republican incumbents are not seeking re-election, Democrat seats in Georgia and Arizona were won by slim margins, and trends put Democrats on defense, with Biden's woeful agenda to defend.

Another harbinger is redistricting. The GOP will control two-thirds of all House seats and the Democrats a tenth, the rest settled by divided states and state commissions. Likely, 117 congressional districts will be drawn by Republican-controlled states, 47 by Democrats, 132 by division or commission. Seven are "at large," covering an entire state.

Perhaps the biggest factor, beyond 75 million voters roiled by 2020 and Biden's stumbling start, is history. Looking back, in 19 of the last 21 midterm cycles, the president's party lost seats in one or both chambers. In 18 of those 19, the president lost seats in both chambers. Only John F. Kennedy and George W. Bush gained seats in their first midterm, the latter after 9/11.

Specifically, FDR lost 81 House seats and seven Senate in his first midterm, Truman lost 45 House and 20 Senate, Ike 18 House and one Senate, Johnson 47 House and four Senate, and Nixon 12 House (picking up two Senate). Ford lost 48 House and five Senate, Carter 15 House and three Senate, and Reagan 26 House (picking up one Senate). Bush 41 lost eight House and one Senate, Clinton 52 House and eight Senate, Obama 63 House and three Senate, and Trump 40 House (picking up two in Senate). So, you see which way the wind blows.

The party in the White House loses big in most midterms—and in both chambers, slowing the president's agenda. The only first-term gains were in the Senate, all four Republicans: Nixon, Reagan, Bush 43 (who gained in both chambers), and Trump.

The message is this: have hope and focus on 2022. Sudden turnabouts are not just for movies and not just for one side. The funny thing is that the sun also rises. Much that is wrong can be corrected.

# 1AR

### Torts CP

#### They’re comparatively larger than antitrust

Patricia A. Conners 3, JD from the University of Florida, Chief Associate Deputy Attorney General under Florida Attorney General, and Dr. Kevin J. O'Connor, chair of the Antitrust and Trade Regulation Practice Group at Godfrey Kahn, JD from Harvard Law School, PhD in Economics from the University of Wisconsin, “Antitrust Enforcement Regarding Vertical Restraints by State Attorneys General”, Product Distribution and Marketing Volume 1, ALI-ABA Course of Study Materials, March 2003, Lexis [numbers to words]

C. State Business Torts as an Alternative to Federal Antitrust Law

Often an antitrust violation can be a business tort as well. Of increasing importance to antitrust plaintiffs, a "combination" within the meaning of the antitrust laws may not be required. See W.L. Jaeger, Business Torts and Unfair Competition: New Tools for the Plaintiff in the 1990's, 4 Antitrust 4 (Spring, 1990). For example, a recent case decided by the United States Supreme Court involving predation in the commercial garbage hauling market in Burlington, Vermont yielded a judgment of [one hundred and fifty thousand] $ 153,438 for violations of federal antitrust law and a judgment of [six million] $ 6,066,082 for compensatory and punitive damages on a pendent state tort claim. Browning-Ferris Industries of Vermont, Inc. v. Kelco Disposal, Inc., 109 S. Ct. 2909 (1989).

The Restatement (Second) of Torts § 766 et seq., followed in most states, describes the elements of a tortious interference claim as follows: (1) a contract, or a legitimate expectancy of economic gain; (2) defendant's awareness of the contract or expectancy; (3) an intentional or improper act that causes a breach of contract or frustration in the expectancy; and (4) damages. These elements establish a "broad and undefined tort" with potentially very significant utility to the antitrust litigator. W. Prosser & W.P. Keeton, Law of Torts 979 (5th ed. 1984)

Successful interference claims can be based on intentional or negligent conduct. See, e.g., Blank v. Kirwan, 39 Cal.3d 311 (1985), intentional interference; J'aire Corp. v. Gregory, 24 Cal.3d 799 (1979), negligent interference. Punitive damages may be available for both torts. See, e.g., Cal. Civ. Code § 3294(c)(1). Breach of the implied covenant of good faith and fair dealing may also give rise to a substantial claim, although at least in California this tort has been recently limited in its scope. Foley v. Interactive Data Corp., 47 Cal.3d 654 (1988).

State law claims for tortious interference have been successfully employed when one or more elements of an antitrust claim could not be proved. See, e.g., Colorado Interstate Gas Co. v. Natural Gas Pipeline Co., 885 F.2d 683 (10th Cir. 1989); Deauville Corp. v. Federated Department Stores, Inc., 756 F.2d 1183, 1196 n.9 (5th Cir. 1985).

#### ‘Scope of antitrust law’ includes regulation AND all branches.

Sagers ’15 [Christopher L; 2015; the James A. Thomas Distinguished Professor of Law and Faculty Director of the Cleveland-Marshall Solo Practice Incubator; Handbook on the Scope of Antitrust, “Introduction,” Ch. 1, p. 9]

B. Sources of the Scope of Antitrust Law

The scope of federal antitrust law is governed by three separate authorities: (1) the U.S. Constitution, (2) the language of the antitrust statutes themselves, and (3) the language of other federal statutes and regulations.

#### “Antitrust laws” consider competition.

William D. Rohlf Jr. 11, Professor of Economics at Drury University, “Workbook for Introduction to Economic Reasoning: Solutions,” Chegg, 2011, <https://www.chegg.com/homework-help/workbook-for-introduction-to-economic-reasoning-8th-edition-chapter-8-problem-9mc-solution-9780131368576>

(1) Option (a): Antitrust enforcement promotes competition and industry regulation does not, is the primary difference between antitrust enforcement and industry regulation. Antitrust laws ban price fixing, tying contracts and mergers to promote competition. The basic assumption of the industry regulation is that certain industries should not be made competitive.

#### Core is a basic part.

Merriam-Webster ND, Publishing Company, “core noun (1), often attributive,” https://www.merriam-webster.com/dictionary/core

2a: a basic, essential, or enduring part (as of an individual, a class, or an entity)

#### Here’s another card

Ennis 10 [Dr. Sean, Affiliated Academic in NERA's Global Antitrust and Competition Practice, Professor of Competition Policy and Director of the Centre for Competition Policy at the University of East Anglia. “ELECTRICITY: RENEWABLES AND SMART GRIDS”. 2/15/10. https://www.ftc.gov/system/files/attachments/us-submissions-oecd-2010-present-other-international-competition-fora/smartgrids\_usa.pdf]

Competition agencies may have a similarly important role to play in the competition advocacy arena. In particular, in designing effective regulatory polices with respect to smart meters and demand response, there are a number of specific kinds of possible behavior to which regulators and antitrust enforcers should be sensitive. Incumbents may have much to lose from efficient demand response, and they may try to use regulatory actions to limit deployment of smart meters and residential-scale demand response by, for example:

• Resisting deployment of smart meter technology;

• Supporting deployment of less sophisticated, proprietary, or closed architecture equipment so that access to information is difficult and expensive;

• Supporting imposition of utility-type regulation on new entrants to raise their costs and discourage entry; and

• Supporting strict and inflexible interconnection criteria for variable resources, like rooftop solar.

23. Similarly, regulators and antitrust enforcers should be sensitive to the following types of behavior with respect to infrastructure modernization:

• Refusing to update grids, even when it makes economic sense to do so, in order to foreclose entry by renewable generation sources;

• Attempting to convince regulatory bodies to force inordinate costs for connection and modernization onto new entrants, including renewable generation; and

• Other attempts to raise costly barriers to entry for new generation (or limit it entirely), including attempts to foreclose renewable resources from capacity markets and attempts to impose excessive charges for backup power on customers with distributed generation.

24. To be sure, not every one of these types of actions is necessarily harmful to competition, unwarranted, or unjustified. There are undoubtedly substantial costs involved in the coming technological transition and incumbent firms may have legitimate concerns about whether the benefits of a transition to a new generation of technology outweigh the costs of that transition, particularly when environmental and other social costs have not fully been internalized in price. This question makes it all the more important for regulators to be able to carefully and intelligently evaluate the incentives of firms and consider the claims of those who comment on their proposals. Antitrust agencies may be particularly well-equipped to assist in this endeavor. Given their institutional expertise, antitrust enforcers can help highlight for regulators the positive dynamic effects of increased competition in the face of competing arguments about its ultimate economic impact.

#### Competition agencies know how to apply laws to contemporary industry process. The CP causes ham-fisted enforcement that backfires.

Rohit Chopra & Lina Khan 20, Chopra is Commissioner @ Federal Trade Commission; Khan is Chairperson @ Federal Trade Commission, JD @ Yale Law School, “The Case for “Unfair Methods of Competition” Rulemaking,” The University of Chicago Law Review 87(2), p. 357-380

This set the scene for the creation of the Federal Trade Commission. Most notably, the authorizing statute declared “unfair methods of competition” in commerce unlawful. The committee report explained the reason for including such a broad term: The committee gave careful consideration to the question as to whether it would attempt to define the many and variable unfair practices which prevail in commerce and to forbid [them] or whether it would, by a general declaration condemning unfair practices, leave it to the commission to determine what practices were unfair. It concluded that the latter course would be the better, for the reason . . . that there were too many unfair practices to define, and after writing 20 of them into the law it would be quite possible to invent others.80 In other words, Congress would leave it up to the new Commission to define and identify practices that constituted “unfair methods of competition.” Indeed, the FTC would be especially suited to this task, given that Congress was designing the agency to gather and develop expertise in business practices and industry trends.81

These aspects of the FTC’s design reflect Congress’s intention for the new agency to alter the institutional structure of antitrust enforcement. By passing the Sherman Act, Congress had adopted a crime-tort model—which prohibited certain bad acts—rather than a corporate-regulatory model, which would have created a regulatory regime for policing the capital-concentrating effects of incorporation laws.82 By creating the Federal Trade Commission, Congress was adopting an expert-agency model alongside the crime-tort model. A key aim was for legislators to recover power to steer antitrust law back from the courts. As Senator Albert Cummins expressed, “I would rather take my chance with a commission at all times under the power of Congress, at all times under the eye of the people . . . than . . . upon the abstract propositions, even though they be full of importance, argued in the comparative seclusion of the courts.”83

In order to equip the FTC to fulfill this institutional mission, Congress endowed the Commission with the authority to “make rules and regulations for the purpose of carrying out the [FTC Act’s] provisions.”84 In the parlance of Chevron, this means “Congress delegated authority to the agency generally to make rules carrying the force of law,” and agency interpretations made pursuant to that authority fall within the domain of Chevron.85 In light of confusion around whether “unfair methods of competition” applied only to practices that harmed competitors, Congress in 1938 passed the Wheeler-Lea Amendment,86 adding the proscription against “unfair or deceptive acts or practices.”87 In 1973, the DC Circuit clarified that the FTC did, indeed, have the authority to promulgate substantive rules, not just procedural ones.88 The court observed that the “use of substantive rule-making is increasingly felt to yield significant benefits to those the agency regulates” and that “[i]ncreasingly, courts are recognizing that use of rule-making to make innovations in agency policy may actually be fairer to regulated parties than total reliance on case-by-case adjudication.”89

#### Fails – watered down, guts predictability

Myers 93 [Gary, Law Professor @ University of Minnesota, “The Differing Treatment of Efficiency and Competition in Antitrust and Tortious Interference Law.” 1993. https://scholarship.law.missouri.edu/cgi/viewcontent.cgi?referer=https://scholar.google.com/&httpsredir=1&article=1297&context=facpubs]

Antitrust doctrine, particularly as the Supreme Court has developed it in the last twenty years, generally furthers free competition and economic efficiency for the ultimate benefit of consumers. Accordingly, antitrust law has focused on the objective economic effect of the challenged restraint on the market. Practices that harm competition, based on demonstrable experience and economic analysis, are presumptively unlawful under the per se rule. The courts analyze practices that have more uncertain economic effect under the more relaxed standards of the rule of reason, with its focus on whether the restraint promotes or inhibits competition.

Business tort law, however, has not consistently developed in accordance with the competition principle. Although "'[the policy of the common law has always been in favor of free competition,' "271 tortious interference law has developed haphazardly. Some decisions display insufficient concern for competition, efficiency, or the interests of consumers. Therefore, several aspects of tortious interference law, as interpreted in most jurisdictions, should be modified to permit more vigorous competition.

### Pharma DA

#### Warmings larger threat

McDonald ‘19 (Samuel Miller McDonald is a writer and geography PhD student at University of Oxford studying the intersection of grassroots movements and energy transition; 1/4/19; “Deathly Salvation”; *The Trouble*; https://www.the-trouble.com/content/2019/1/4/deathly-salvation)

A devastating fact of climate collapse is that there may be a silver lining to the mushroom cloud. First, it should be noted that a nuclear exchange does not inevitably result in apocalyptic loss of life. Nuclear winter—the idea that firestorms would make the earth uninhabitable—is based on shaky science. There’s no reliable model that can determine how many megatons would decimate agriculture or make humans extinct. Nations have already detonated 2,476 nuclear devices. An exchange that shuts down the global economy but stops short of human extinction may be the only blade realistically likely to cut the carbon knot we’re trapped within. It would decimate existing infrastructures, providing an opportunity to build new energy infrastructure and intervene in the current investments and subsidies keeping fossil fuels alive. In the near term, emissions would almost certainly rise as militaries are some of the world’s largest emitters. Given what we know of human history, though, conflict may be the only way to build the mass social cohesion necessary for undertaking the kind of huge, collective action needed for global sequestration and energy transition. Like the 20th century’s world wars, a nuclear exchange could serve as an economic leveler. It could provide justification for nationalizing energy industries with the interest of shuttering fossil fuel plants and transitioning to renewables and, uh, nuclear energy. It could shock us into reimagining a less ~~suicidal~~ civilization, one that dethrones the death-cult zealots who are currently in power. And it may toss particulates into the atmosphere sufficient to block out some of the solar heat helping to drive global warming. Or it may have the opposite effects. Who knows? What we do know is that humans can survive and recover from war, probably even a nuclear one. Humans cannot recover from runaway climate change. Nuclear war is not an inevitable extinction event; six degrees of warming is.

#### No bioweapons or bioterror impact---empirics and technical barriers.

Blum & Neumann 20, \*former Head of Laboratory at the Organisation for the Prohibition of Chemical Weapons. He holds a PhD in Biochemistry from the University of Frankfurt, \*\*Professor of Security Studies at King’s College London, and served as Director of its International Centre for the Study of Radicalisation from 2008-18.. (Marc-Michael & Peter, 6-22-2020, "Corona and Bioterrorism: How Serious Is the Threat?", *War on the Rocks*, https://warontherocks.com/2020/06/corona-and-bioterrorism-how-serious-is-the-threat/)

The novel coronavirus pandemic has put the threat of bioterrorism back in the spotlight. White supremacist chat rooms are teeming with talk about “biological warfare.” ISIL even called the virus “one of Allah’s soldiers” because of its devastating effect on Western countries. According to a recent memo by the U.S. Department of Homeland Security, terrorists are “[making] bioterrorism a popular topic among themselves.” Both the United Nations and the Council of Europe have warned of bioterrorist attacks.

How serious is the threat? There is a long history of terrorists being fascinated by biological weapons, but it is also one of failures. For the vast majority, the technical challenges associated with weaponizing biological agents have proven insurmountable. The only reason this could change is if terrorists were to receive support from a state. Rather than panic about terrorists engaging in biological warfare, governments should be vigilant, secure their own facilities, and focus on strengthening international diplomacy.

A History of Failures

Biological warfare, which uses organisms and pathogens to cause disease, is nearly as old as war itself. The first known use of biological agents as a weapon dates back to 600 B.C., when an ancient Greek leader poisoned his enemies’ water supply. Throughout the Middle Ages, especially during the time of the Black Death, it was common to hurl infected corpses into besieged cities. And during the two world wars, all major powers maintained biological weapons programs (although only Japan used them in combat).

Among terrorists, however, the use of biological weapons has been rarer, although groups from nearly all ideological persuasions have contemplated it. Recent examples include a plot to contaminate Chicago’s water supply in the 1970s; food poisoning by a religious cult in Oregon in the 1980s; and the stockpiling of ricin by members of the Minnesota Patriot Council during the 1990s. No one died in any of these instances.

The same is true for the biological warfare programs of al-Qaeda and the Islamic State group. Both groups have sought to buy, steal, or develop biological agents. For al-Qaeda, this seems to have been a priority in the 1990s, when its program was overseen by (then) deputy leader Ayman al-Zawahiri, a trained physician. With the Islamic State, evidence dates back to 2014, when Iraqi forces discovered thousands of files related to biological warfare on a detainee’s laptop.

Yet none of these efforts succeeded. The only al-Qaeda plot in which bioterrorism featured prominently — the so-called “ricin plot” in England in 2002 — was interrupted at such an early stage that none of the toxin had actually been produced. The Islamic State’s most serious attempt, in 2017, involved a small amount of ricin, whose only fatality was the hamster on which it was tested. Of the tens of thousands of people that jihadists have murdered, not a single one has died from biological agents.

It may be no accident that the most lethal bioterrorist attack in recent decades was perpetrated by a scientist and government employee. In late 2001, the offices of several U.S. senators and news organizations received so-called “anthrax letters,” which killed five people and injured 17. Following years of investigation, the FBI identified the sender as Bruce Ivins, a PhD microbiologist and senior researcher at the U.S. Army’s Medical Research Institute of Infectious Diseases. Unlike the others, he was no amateur or hoaxer, but a trained expert with years of experience and full access to the world’s largest repository of lethal biological agents.

Technical Challenges

Ivins’ case helps to explain why so many would-be bioterrorists have failed. At a technical level, launching a sophisticated, large-scale bioterrorist attack involves a toxin or a pathogen — generally a bacterium or a virus — which needs to be isolated and disseminated. But this is more difficult than it seems. As well as advanced training in biology or chemistry, isolating the agent requires significant experience. It also has to be done in a safe, contained environment, to stop it from spreading within the terrorist group. Contrary to what al-Qaeda said in one of its online magazines, you can’t just make a (biological) weapon “in the kitchen of your mom!”

In addition, there is the challenge of dissemination. Unless the agent is super-contagious, a powerful biological attack relies on a large number of initial infections in perfect conditions. In the case of the bacterium anthrax, for example, only spores of a particular size are likely to be effective in certain kinds of weather. State-sponsored programs often needed years of testing and experimentation to understand how their weapons could be used. Though not impossible, it is unlikely that terrorist groups possess the resources, stable environment, and patience to do likewise.

#### It is massive

Stancil 1/31 [Kenny, staff writer for Common Dreams. “Ruling on Rooftop Solar Called a 'Game-Changer' for Clean Energy”. 1/31/22. https://www.commondreams.org/news/2022/01/31/ruling-rooftop-solar-called-game-changer-clean-energy]

Clean energy advocates celebrated Monday after a federal appeals court reversed a lower court's decision and ruled that Arizona power utility Salt River Project—which jacked up electricity rates by more than 60% for customers who installed rooftop solar in the Phoenix metropolitan area—can be prosecuted for violating federal antitrust laws.

"This is a game-changer in the struggle to defend rooftop solar against utilities' all-out war on clean, affordable, climate-resilient energy."

"We're thrilled that the Salt River Project will be held accountable for obstructing rooftop solar," Jean Su, director of the Center for Biological Diversity's energy justice program, said in a statement. "This is a game-changer in the struggle to defend rooftop solar against utilities' all-out war on clean, affordable, climate-resilient energy."

"For the first time," Su added, "a federal court has said utilities can be liable under antitrust laws if they attack rooftop solar. The future for renewable energy just got a lot brighter."

In an opinion piece published last year by The Arizona Republic, Su and Center for Biological Diversity co-founder Robin Silver noted that "SRP customers with household solar systems generate clean, renewable power, reduce greenhouse gas emissions, and reduce reliance on SRP's fossil fuel-based grid. These solar customers provide SRP some of its only competition."

After SRP slapped solar customers with a 65% electricity rate hike in 2015, "rooftop solar applications dropped precipitously, with one installer, SolarCity, losing 96% of its applications," wrote Su and Silver.

In 2019, William Ellis and other residents sued SRP, arguing that the utility's pricing plan penalized solar customers and companies in an attempt to maintain monopoly control. Although a lower court dismissed the suit, Ellis and his co-plaintiffs appealed. They were joined in amicus briefs by the U.S. Department of Justice and the Center for Biological Diversity.

In its Monday ruling in Ellis v. Salt River Project, the Ninth Circuit Court of Appeals concurred with the plaintiffs that SRP's pricing scheme "unlawfully discriminated against customers with solar energy systems and was designed to stifle competition in the electricity market." The antitrust claims will now be remanded to the district court for a trial.

According to Su and Silver, "This case has far-reaching consequences for Arizona and the country." With a favorable ruling for SRP's solar customers, the pair predicted in their 2021 op-ed, "the power-hoarding days for SRP and other corporate utilities will be numbered."

While "antitrust laws have been used repeatedly to break up big monopolies," including "railroad oligarchies in the 1920s and telecom giants in the 1980s," Su and Silver pointed out that "electric utilities have been largely spared from antitrust challenges. Until now."

They continued:

Power companies face a dynamic environment of emerging cheaper clean technology, competition from customers who can generate power themselves, and the urgent need to slow climate change by transforming dirty energy portfolios into clean ones.

This is a challenging time to be in the power business, but delivering a public service should be consistent with serving the public interest. That's especially true now, when clean energy must be ramped up to avoid the most devastating effects of climate change.

In its 2019 brief, the Center for Biological Diversity argued that SRP's anti-competitive effort to stamp out rooftop solar undermines "the energy transition demanded by climate science."

"This case has far-reaching consequences for Arizona and the country."

Although green energy spending and production are increasing, so is overall fossil fuel consumption. Corporations are currently planning to expand dirty energy extraction in wealthy and impoverished nations alike despite climate scientists' repeated warnings that new coal, oil, and gas projects must cease in order to have a chance of limiting global temperature rise to 1.5ºC above preindustrial levels by the end of the century.

Global investment in clean energy surged by 27% in 2021, according to a report released last week by BloombergNEF. The $755 billion spent in 2021 surpassed the $595 billion spent in 2020 and put to shame the $264 billion spent in 2011.

Nevertheless, according to the Paris-based International Energy Agency (IEA), "to reach net-zero emissions by 2050, annual clean energy investment worldwide will need to" total roughly $4 trillion, which would "create millions of new jobs."

Rooftop solar, argued Su and Silver, is "vital" to slashing greenhouse gas pollution and protecting the habitability of planet Earth.