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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.

#### Only antitrust can solve surging energy prices

Reich 11/11/21 [Robert, a former US secretary of labor, is professor of public policy at the University of California at Berkeley (been to a few of his lectures, good speaker), 11/11/21. https://www.theguardian.com/commentisfree/2021/nov/11/us-inflation-market-power-america-antitrust-robert-reich]

You can see a similar pattern in energy prices. If energy markets were competitive, producers would have quickly ramped up production to create more supply, once it became clear that demand was growing. But they didn’t.

Why not? Industry experts say oil and gas companies saw bigger money in letting prices run higher before producing more supply. They can get away with this because big oil and gas producers don’t operate in a competitive market. They can manipulate supply by coordinating among themselves.

Since the 1980s, two-thirds of all American industries have become more concentrated

In sum, inflation isn’t driving most of these price increases. Corporate power is driving them.

### 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.

# 2AC

## Adv 1

## Adv 2

### 2AC – FTC Tradeoff

#### The FTC is stretched thin and has losses coming

McLaughlin 1/19 [David McLaughlin, Bloomberg. “FTC’s Khan Vows to Act With ‘Fierce Urgency’ on Antitrust Front.” 1/19/22. https://www.bloomberg.com/news/articles/2022-01-19/ftc-s-khan-vows-to-act-with-fierce-urgency-on-antitrust-front]

Khan said the FTC is “severely under-resourced” and the record deal-making by companies is straining the agency’s ability to review and potentially challenge transactions. That is posing “very difficult choices” about which deals to investigate, she said.

Still, the FTC can’t hold back from bringing risky cases that the agency might lose. Under Khan’s tenure, the FTC sued to block chipmaker Nvidia Corp.’s proposed $40 billion takeover of Arm Ltd. and salvaged a lawsuit that seeks to break up Meta Platforms Inc.

**No spillover between parts of the FTC**

Spencer Weber **Waller 5**, Professor of Law and Director of the Institute for Consumer Antitrust Studies at the Loyola University Chicago School of Law, “In Search of Economic Justice: Considering Competition and Consumer Protection Law”, Loyola University Chicago Law Journal, 36 Loy. U. Chi. L.J. 631, Winter 2005, Lexis

Despite this more comprehensive mission, the FTC is organized in a way that **tends to emphasize the separation of these fields,** rather than the common elements of the agency's mission. The FTC has a Bureau of Competition and a separate Bureau of Consumer Protection, with a Bureau of Economics to support the work of both endeavors. The Bureau of Competition ("BC") primarily engages in the investigation and enforcement of mergers and complex civil antitrust cases with a recent emphasis on intellectual property and health care issues. The Bureau of Consumer Protection ("BCP") primarily investigates and challenges outright fraudulent conduct. 9 The FTC website details recent BCP activity involving Internet sales, telemarketing, false health and fitness claims, identity theft and similar issues. 10 These are **all very different issues** from the day-to-day focus of the competition staff. This basic split is further mirrored in the Bureau of Economics ("BE"), where the staff tends to specialize in either competition or consumer protection. **Any crossover** of staff and cooperation **occurs primarily in competition advocacy** before legislatures or regulatory agencies, and not **in case selection and investigation.**

### 2AC—UQ

#### Focused on mergers

Tabas 3/3 [Sonia Kuester Pfaffenroth , Matthew Tabas and Kevin Chen, Arnold & Palmer, "United States: FTC Hospital Merger Challenge Signals Future Labor Market Enforcement Actions", 3/3/22, https://www.mondaq.com/unitedstates/antitrust-eu-competition-/1167736/ftc-hospital-merger-challenge-signals-future-labor-market-enforcement-actions]

On February 17, 2022, the US Federal Trade Commission (FTC) unanimously authorized an administrative complaint and a lawsuit in US District Court for the District of Rhode Island to block the proposed merger of Lifespan Corporation (Lifespan) and Care New England. The FTC's complaint asserts that the transaction would combine two of Rhode Island's largest healthcare providers and allegedly would lead to higher prices and a lower quality of care for patients in violation of Section 7 of the Clayton Act.1

The FTC's challenge to a transaction that, according to the agency, would result in one entity controlling "at least 70 percent of the Rhode Island market for inpatient general acute care hospital services and at least 70 percent of the market for inpatient behavioral health services"2 represents a traditional Section 7 theory in a hospital merger case, albeit with the FTC alleging a transaction harmed competition in the "inpatient behavioral health services" market for the first time. In this case, however, the two Democratic Commissioners also would have brought a Section 7 claim based on a substantial lessening of competition in a relevant labor market. That claim was not supported by the two Republicans on the Commission, and thus was not included in the FTC's complaint. Nonetheless, the Democrats statement is an important reminder of the current Administration's focus on antitrust enforcement in labor markets.

#### Labor’s the core focus—especially for biden

Tabas 3/3 [Sonia Kuester Pfaffenroth , Matthew Tabas and Kevin Chen, Arnold & Palmer, "United States: FTC Hospital Merger Challenge Signals Future Labor Market Enforcement Actions", 3/3/22, https://www.mondaq.com/unitedstates/antitrust-eu-competition-/1167736/ftc-hospital-merger-challenge-signals-future-labor-market-enforcement-actions]

A Renewed Focus on Competition for Labor

Chair Khan and Commissioner Slaughter's statement in the Lifespan-Care New England matter is just the latest evidence of the Biden Administration's continuing focus on antitrust enforcement in labor markets.

In President Biden's July 2021 Executive Order on Promoting Competition in the American Economy, he specifically affirmed that "it is the policy of my Administration to enforce the antitrust laws to combat the excessive concentration of industry, the abuses of market power, and the harmful effects of monopoly and monopsony — especially as these issues arise in labor markets. . . ."11

Since then, Chair Khan has written several times about the steps that the FTC is taking to "root out unfair methods of competition and unfair or deceptive practices in the economy, a mission that protects all Americans, including workers."12 In her comments to the House of Representative's Subcommittee on Antitrust, Commercial, and Administrative Law, she highlighted that the FTC "must scrutinize mergers that may substantially lessen competition in labor markets" and that it "will work with the Department of Justice to update the agencies' merger guidelines, looking to provide guidance on how to analyze a merger's impact on labor markets."13

In January 2022, the Department of Justice, Antitrust Division (DOJ) and FTC announced a public inquiry seeking information as they update their merger guidelines, in which they featured labor market issues prominently. In her remarks at the announcement, Chair Khan spotlighted the issue of merger analysis and labor markets. She posed several questions, including whether "the guidelines adequately assess whether mergers may lessen competition in labor markets, thereby harming workers?14 Are there factors beyond wages, salaries, and financial compensation that the guidelines should consider when determining anticompetitive effects?15 And when a merger is expected to generate cost savings through layoffs or reduction of capacity, should the guidelines treat this elimination of jobs or capacity as cognizable "efficiencies?"16 The agencies' request for information specifically seeks input on how to address the issue of buyer power in labor markets.17

Even before the antitrust agencies officially update their merger guidelines, the FTC has taken some concrete steps to explore labor market issues in their merger reviews. In September 2021, the FTC announced that it was taking steps to ensure its "merger reviews are more comprehensive and analytically rigorous." Specifically, the FTC's "second requests may factor in additional facets of market competition that may be impacted[,]" including "how a proposed merger will affect labor markets . . . ."18 Second Requests now frequently require parties to produce documents discussing the parties' efforts to hire, recruit, compete for employees, including related to compensation, work schedule flexibility, or other terms of employment.

## Adv 3

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### 2AC – T Scope

**‘Scope’ means the law’s breadth.**

**Parsons ’14** [Honorable Donald F Jr; February 18; Vice Chancellor of the Court of Chancery of Delaware; Westlaw, “Vichi v. Koninklijke Philips Electronics, N.V.,” 85 A.3d 725]

As an initial matter, I reject the proposition that the determination of who can invoke a choice of law provision must precede the analysis of the provision's validity and scope. **The “scope” of a choice of law provision refers to how broadly or narrowly that provision applies and includes the question of whether the provision created enforceable rights in third parties**.310 The only case Philips N.V. cites in support of its assertion that Delaware law should govern whether it can invoke the choice of law clause merely stands for the proposition that a Delaware court will apply its own conflict of laws rules to determine which jurisdiction's substantive law will govern the claims before it.311 As noted previously, under Delaware conflict of laws rules, the scope of a valid choice of law provision is determined by the law of the selected jurisdiction—in this case, England.

**‘Scope’ of antitrust laws include scope of action, policy on anticompetitive behaviors, probability of investigation, and competition advocacy.**

**Bradford & Chilton ’18** [Anu; Professor of Law @ Columbia; and Adam; Professor of Law @ UChicago; “Competition Law Around the World from 1889 to 2010: The Competition Law Index” *Journal of Competition Law & Economics* 14(3), p. 393-432]

**Indicators for Competition Law** and Policy (CLP): Finally, the CLP **Indicators measure the** strength and **scope** **of competition regimes in 49 jurisdictions** in 2013.53 Relying on a survey conducted among competition agencies, **the CLP captures these agencies perception of whether various features of their domestic competition laws prevent anticompetitive behavior**. **These features include** (1) **the scope of action** (**including** competences, **investigative powers**, sanctions/**remedies**, **and private enforcement**); (2) **policy on anticompetitive behaviors** (**including horizontal agreements, vertical agreements, mergers, and exclusionary conducts**); (3) **probability of investigation** (**including independence, accountability, and procedural fairness);** **and** (4) **competition advocacy**. Like CPI, FNI, and Four Indicators, the CLP also attempts to measure whether the competition policy reflects generally recognized “good” practices

## 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”.

#### Antitrust is the only way to maximize competition which is key to our impacts – hamfisted regulation without expertise fails

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.

#### “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)

## Spillover da

### 2AC – AT: Spillover

#### 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.

#### Impending unexpected energy inflation collapses growth

Fitch 3/1 [Fitch Ratings, Financial Research Company. “Inflation Challenges Increase the Risk of Recession”. 3/1/22. https://www.fitchratings.com/research/sovereigns/inflation-challenges-increase-risk-of-recession-01-03-2022]

Fitch Ratings-London-01 March 2022: Inflation challenges could start to threaten the global economic outlook this year, Fitch Ratings says in a new report. A scenario where US inflation remains very high in 2H22 and medium-term inflation expectations rise is plausible and could prompt much more abrupt Federal Reserve tightening than expected.

Core inflation is widely expected to fall in the US and Europe in 2H22 as consumer goods shortages moderate, pandemic constraints on labour supply fade and growth rates normalise. This should allow central banks to gradually normalise monetary policy, with limited impacts on growth. Fitch expects the Fed to raise interest rates by 100bp in 2022 and a further 100bp in 2023, the Bank of England (BOE) to hike rates by a further 75bp this year and 50bp in 2023, with the ECB increasing rates by 20bp next year.

However, recent inflation outturns have been higher than expected and the price outlook is uncertain. Inflation is a dynamic process and can be self-reinforcing. Various factors could keep core inflation high throughout 2022. Global energy price shocks related to the Russia-Ukraine crisis exacerbate risks.

If core inflation remains high and inflation expectations rise the Fed and the BOE could be left with no choice but to quickly move rates to neutral or restrictive levels. This could entail the Fed Funds rate rising to 3% by the end of this year.

A more abrupt adjustment path could take a big toll on GDP including through tighter credit conditions and a sharp rise in long-term US bond yields. US GDP growth could fall to 0.5% or below in 2023 in such a scenario, compared with Fitch’s baseline forecast of 1.9%.

The risk of a more abrupt policy adjustment from the ECB is lower, but if eurozone inflation were to remain high quantitative easing could be wound up and interest rates increased this year.

**Thumpers – 1 – FTC and Facebook cases are enough to trigger the link**

**Pearlstein 20** – former business and economics columnist for The Washington Post and the Robinson professor of public affairs at George Mason University

Steven Pearlstein, "Facebook and Google cases are our last chance to save the economy from monopolization," The Washington Post, 12-18-2020, <https://www.washingtonpost.com/business/2020/12/18/google-facebook-antitrust-lawsuit/>

**Keeping a close eye** on both the antitrust cases and the legislative debate will be the members of the Supreme Court, including six conservative justices who have a well-documented hostility to government regulation of business. The century-old Sherman and Clayton acts are remarkably spare and concise statutes, which has meant that most antitrust law has been judge-made, based on the precedents laid down in individual cases**. Any antitrust reform that might come out of Congress**, however, is certain to be much more detailed and prescriptive than those earlier laws. Not only would such legislation **erode** the **power** and **discretion** of the court, but it **would also likely overturn a number of recent precedents** that have made it much **more difficul**t for regulators to **limit** the **size** and **business practices** of dominant firms.

All that could well be playing out in Congress just as the court considers the inevitable appeals in the cases of U.S. v. Google and FTC v. Facebook. And it would hardly be unprecedented if some members of the Supreme Court were to consider the **political and legislative consequences** as they decide the fate of two companies with whom most Americans interact on a daily basis.

A similar dilemma faced Judge Learned Hand of the U.S. Court of Appeals in 1945 as he considered U.S. v. Alcoa. After the longest federal trial in history — two years — a district court judge had ruled against the government’s request to break up Alcoa, declaring that the company had legally obtained its 90 percent share of the aluminum market. Hand himself was an antitrust skeptic. But in a memo to his fellow appeals court judges, Hand recognized that the public would not accept a highly technical ruling that any such monopoly was benign.

“If we hold that [Alcoa] is not a monopoly, deliberately planned and maintained,” Hand wrote, “everyone who does not get entangled in the legal niceties … will quite rightly, I think, write us down as asses.”

In the end, the appeals court ruled that Alcoa had illegally monopolized the market for aluminum, and Hand’s opinion **became one of the most influential**, and controversial, **in the history of antitrust**. The cases against Google and Facebook will be no less consequential or contentious.

#### No implied immunity spillover

**Denniston 7** – Independent contractor reporter covering the Supreme Court for fifty-eight years

Lyle Denniston, "Analysis: Antitrust "mistakes" and the IPO process," SCOTUSblog, 6-18-2007, https://www.scotusblog.com/2007/06/analysis-antitrust-mistakes-and-the-ipo-process/

Federal officials who regulate the stock markets **do not have to fret** that **antitrust law** will **get in their way** as they oversee the process of **bringing new stocks** to the **public exchanges**. The Supreme Court, worried that judges and juries sitting in antitrust cases lack the sophistication about the markets necessary to avoid making “unusually serious mistakes,” opted on Monday to **exempt** much — though perhaps not all — of the “initial public offering” (**IPO) process** from federal **antitrust laws**. The Court was even unwilling to accept a suggestion by U.S. Solicitor General Paul D. Clement that would have salvaged some role for antitrust.

Although Justice Stephen G. Breyer’s opinion for the majority in the 7-1 decision stressed that it was confined to “the conduct alleged in this case,” the language and rationale of the ruling was broad enough to immunize syndicates bringing new shares to market from many and probably most potential antitrust complaints by investors. It thus appears that the **Securities and Exchange Commission** will mainly have the duty of monitoring what is **allowed or prohibited in IPOs.**

Here is the specific assignment the Court said it was leaving to the SEC: the task, using its securities expertise, of drawing a “complex, sinuous line separating securities-permitted from securities-forbidden conduct” so as to assure that the process of bringing new stocks to market by underwriting syndicates continues to function quite freely. (A “sinuous line” would be one that is wavering.)

The decision was a **very broad victory** for 16 of the nation’s largest **underwriters of stock** — the major investment banking houses that were challenging a Second Circuit Court decision that had cleared the way for a trial of the antitrust claims of 60 investors joined in two class-action lawsuits. The investors had sued under the Sherman Act, Clayton Act and state antitrust laws, claiming that the investment banking houses had joined in syndicates to control the initial issuance and **post-IPO trading** in the stocks of several hundred **high-tech companies**.

The lawsuits complained of a pact among the underwriters not to sell shares of popular tech stocks unless a buyer agreed to buy added shares of that securities in the after-market at higher prices — so-called “laddering”; to pay very high commissions on later stock purchases from the underwriters, or to buy from those underwriters other, less desirable stocks (so-called “tying.”

The targeted activity of joint underwriters’ promotion and sale of new securities, Justice Breyer wrote on Monday, “is **central** to the **proper functioning** of **well-regulated capital markets**.” The antitrust complaints, he went on, “concern practices that lie at the very heart of the securities marketing enterprise.”

In the end, the Court reversed the Second Circuit, concluding that “the **securities laws are clearly incompatible** with the application of the antitrust laws in this context.” Justice John Paul Stevens joined in the result only, concluding that the challenged conduct did not violate the antitrust laws; he did not join, he said, in a “holding that Congress has **implicitly granted** [the underwriters] **immunity** from those laws.” Justice Clarence Thomas dissented alone, relying on “savings clauses” in federal securities laws “that preserve rights and remedies existing outside of the securities laws.”

The Court’s main opinion did not specifically declare that each of the challenged practices was, in fact, legal under securities laws. “In the present context,” Breyer wrote, there is “only a fine, complex, detailed line” that separates activity that the SEC permits or encourages from activity that the SEC “must (and inevitably will) forbid” — the latter being the very kind of activity that the investors here were trying to attack under antitrust laws.

Exploring further the perceived difficulty in such line-drawing, Breyer said that “evidence tending to show unlawful antitrust activity and evidence tending to show unlawful securities marketing activity may overlap, or prove identical.”

But, in sentiment as well as in logic, **much of the reasoning** of the Court in reaching its conclusions against a joint securities-antitrust regulatory regime could be **attributed to its perceptions about** the inability of **antitrust** lawsuits to avoid serious disruption of the securities markets. “The factors we have mentioned make mistakes unusually likely” in the antitrust regime, Breyer said. “Antitrust plaintiffs may bring lawsuits throughout the Nation in dozens of different courts with different nonexpert judges and different nonexpert juries…[T]here is no practical way to confine antitrust suits so that they challenge only activity of the kind the investors seek to target, activity that is presently unlawful and will likely remain unlawful under the securities law. Rather, these factors suggest that antitrust courts are likely to make unusually serious mistakes in this respect.”

## politics

### 2AC – Generic Frontline

#### Courts do the aff

Macey 20 [Joshua C. Macey, Assistant Professor of Law, University of Chicago Law School. His Article Zombie Energy Laws (73 Vand. L. Rev.) received the 2020 Morrison Award for most impactful environmental law article of the previous year. “Zombie Energy Laws .” May 2020. https://scholarship.law.vanderbilt.edu/cgi/viewcontent.cgi?article=3475&context=vlr]

The previous Part explained how three energy laws that emerged to protect consumers in the era of rate-regulated public utilities are now distorting energy markets and blocking renewable developments. This Part argues that these laws no longer make sense and should be abandoned. Overturning the filed rate doctrine should be a straightforward affair. Courts created the doctrine, and it is in their power to destroy it now that it is being applied to markets that bear no resemblance to the regulatory apparatus it was designed for.

#### court action flies under the radar.

Lohier 16 - judge on the United States Court of Appeals for the Second Circuit and formerly an Assistant United States Attorney for the Southern District of New York (Raymond, “THE COURT OF APPEALS AS THE MIDDLE CHILD,” *Fordham Law Review*, Lexis)

In the meantime, almost all of the work of our circuit courts is off the congressional radar. Circuit opinions, with or without the intercession of the Supreme Court, so rarely prompt a ripple in Congress that it becomes memorable when they do. The few ripples more often arise in cases involving issues of national security. A recent example was our decision in ACLU v. Clapper,25 which stirred a vigorous debate in Congress in 2015 when we held that the text of section 215 of the USA PATRIOT Act did not plainly authorize the systematic bulk collection of domestic phone records by the National Security Agency.26 Even more recently, Senator Orrin Hatch of Utah cited our court’s decision in Microsoft Corp. v. United States,27 in which we held that the Electronic Communications Privacy Act (ECPA) did not authorize the government to obtain electronic communications stored outside the United States.28 Senator Hatch and other members of Congress pointed to both the majority opinion and a concurring opinion in that case to ask the Department of Justice to work with Congress on fixing the ECPA.29 On extremely rare occasions, specific congressional involvement arises in the context of a discrete case, as when individual Senators or Representatives seek to influence how we decide important legal issues, such as the indefinite detention provisions of the National Defense Authorization Act for Fiscal Year 2012, by submitting amicus briefs pressing their points of view.30 There also are continuing efforts to get Congress’s attention on broader issues of statutory language. Fairly recently, for example, the Judicial Conference of the United States sought to revitalize and readvertise an excellent project to promote communications between federal courts of appeals and Congress.31 Under the project, “courts of appeals identify opinions that point out possible technical problems in statutes [such as ambiguities and gaps] and send those opinions to Congress for its information and whatever action it wishes to take.”32 Yet, for whatever reason, only three opinions were submitted to Congress under this project in 2015 and only fifty-two altogether have been submitted since 2007.33 Of course, other ways to solicit legislative attention exist short of using this formal mechanism. An opinion that cries for congressional action or decries congressional inaction is one example. But, as I explain later, that opinion is apt to be ignored by Congress if it comes from a circuit court, rather than even a lone dissenter on the Supreme Court.

#### The plan is not partisan.

Robert Manduca 19, Assistant Professor, Sociology, University of Michigan, "Antitrust Enforcement as Federal Policy to Reduce Regional Economic Disparities," The ANNALS of the American Academy Political and Social Science, Vol. 685, Issue 1, 09/10/2019, SAGE.

Among possible federal regional development policies, reinvigorated antitrust enforcement stands out in several ways that make its establishment as a policy more likely. First, it is salient and familiar to voters. Most voters have encountered monopolies in their daily lives, whether they be airlines, utilities, internet providers, or tech platforms. Almost everyone has had a negative experience with a company too large or omnipresent to avoid in the future. Breaking such companies up offers a response to angry customers who would otherwise not have any way to express their frustration.

Moreover, aggressive antitrust enforcement has a long history in the United States, and it was widely practiced within the lifetimes of many voters. It has been a stated principle of capitalist economics since Adam Smith (Smith 1827), albeit one that has often been honored in the breach. In the United States specifically, antitrust enforcement fits with a longstanding American skepticism toward “bigness” (Lemann 2016; Rosen 2016). Perhaps for these reasons, the current antitrust movement has managed to find support among both liberals and conservatives. A poll conducted in September 2018, for instance, found that 65 percent of Americans—and 54 percent of Trump voters—think the government “should do more to break up corporate monopolies” (Dayen 2018). And leading proponents of antitrust enforcement in Congress and the media are found on both sides of the aisle (Crane 2018).

Perhaps more important than its broad appeal among voters, antitrust enforcement has the potential to attract support, or at least avoid opposition, from a wide range of organized interest groups. Of particular note is the potential for corporate ambivalence on this issue. Unlike many progressive economic policies, many companies—including quite powerful ones—stand to benefit from a reinvigorated antitrust regime. Yelp, for instance, has been a major critic of Google’s abuse of its search monopoly for several years (Dougherty 2017). When AT&T attempted to acquire T-Mobile in 2010, some of the most vocal opposition came from competitor Sprint (Singel 2011), though that did not stop Sprint from initiating its own bid for T-Mobile recently. Even Walmart, the largest retailer in the country, recently joined with other brick and mortar retailers to call on the Federal Trade Commission (FTC) to examine “persistent oligopolies in other parts of the retail system,” specifically singling out the market power of Amazon and Google (Dodge 2019). Companies like these could potentially become strong supporters of specific antitrust enforcement actions or a new antitrust movement in general.

### 2AC – Politics DA – UQ

#### Support for Ukraine overwhelms the link

Palmer 3/3 [John Bresnahan, Anna Palmer And Jake Sherman, Punchbowl News AM: NEWS: W. H.’s makes its move on Ukraine, Covid cash, 3/3/22, https://email.punchbowl.news/t/ViewEmail/t/6C0941AE537CF7AA2540EF23F30FEDED/28A0A10B8D38581C63B21DE8DA818551?alternativeLink=False]

Senate Minority Whip John Thune told us Wednesday that if the Ukraine money is embedded in the omnibus, it would entice Republicans to vote for it.

“Presumably that would help,” Thune said in an interview. “Most of our guys are going to be for the Ukraine funding. So is it additive? Probably.”

#### Vaccine fight outweighs link

Bolton 3/4 [ALEXANDER BOLTON, "Senate conservatives threaten to hold up government funding over vaccine mandate", 3/4/22, https://thehill.com/homenews/senate/596929-senate-conservatives-threaten-to-hold-up-government-funding-over-vaccine?rl=1]

A group of 10 Senate conservatives led by Republican Steering Committee Chairman Mike Lee (R-Utah) are threatening to hold up a government-funding measure and possibly trigger a federal shutdown unless they can vote on an amendment to defund President Biden’s COVID-19 vaccine mandates.

Lee and nine other Senate Republicans circulated a “Dear Colleague” letter Friday afternoon threatening to object to procedural requests to speed up passage of a funding bill before the March 11 deadline unless leaders allow them to vote on an amendment to defund the Biden administration’s vaccine mandates for medical workers, military personnel, federal employees and federal contractors.

“We are writing to let you know that we will once again not consent to a time agreement that eases passage of a CR or Omnibus that funds these mandates,” they wrote. “At the very least, we will require a roll call vote on an amendment that defunds the enforcement of these vaccine mandates for the spending period covered by the government funding measure.”

#### Biden’s already spending PC on antitrust—bills are moving in Congress

Nylen 2/3 [Leah Nylen , Adam Cancryn, "White House backs U.S. tech antitrust bills", 2/3/22, https://subscriber.politicopro.com/article/2022/02/white-house-backs-tech-antitrust-bills-00005513?source=email]

The White House said Thursday that it supports congressional efforts to rein in the U.S. tech giants, pushing back on concerns that a Biden administration statement critiquing European regulatory efforts signaled a change in policy.

“We are supportive of bipartisan progress being made in Congress on these issues,” the White House said in a statement to POLITICO. “The United States shares the concerns and policy objectives that the European Union seeks to address. Even as we engage on concerns we have about distinct elements of the EU’s approach, we are encouraging the bipartisan progress being made in Congress on these issues.”

While Biden has picked a number of progressive antitrust advocates for his administration, this marks the first time the administration has weighed in on the antitrust measures moving through both houses of Congress.

Easing anxiety: The White House statement comes as the Biden administration offered criticism of European legislation to curb the power of the tech giants. Antitrust advocates in Washington worried that could also mean Biden wouldn't support pending U.S. legislation to rein in the largest tech players.

White House officials, speaking anonymously to discuss internal deliberations, stressed that the administration’s concerns with the planned European tech rules had no bearing on their support for U.S. congressional efforts. Those include legislation in both the House and Senate that aim to help level the playing field for technology companies by forbidding tech giants Apple, Amazon, Facebook, Google and Microsoft from discriminating against rivals and buying startups before they can grow into competitors.

Convenient timing: The statement came hours after a key Senate panel advanced legislation (S. 2710 (117)) to rein in Apple and Google’s dominance over mobile app markets.

#### Ukraine, prescription drugs, and SCOTUS thump

Carney 3/1 [JORDAIN CARNEY, "Ukraine crisis, Supreme Court scramble Democrats' agenda", 3/1/22, https://thehill.com/homenews/senate/596221-ukraine-crisis-supreme-court-scramble-democrats-agenda?rl=1]

But Democrats had been expected to focus on smaller bills that could tackle myriad areas including lowering the cost of prescription drugs and insulin, as well as discussions on suspending the gas tax. What exactly the plan would look like is in flux, but Democrats pitched ideas during a closed-door lunch before of their recent break. The effort is being led, in part, by Democrats who face tough Senate races in November.

“We are focused on getting costs down, and you’re going to see a lot of activity in March from us on that issue,” Senate Majority Leader Charles Schumer (D-N.Y.) said at the time.

However, that effort is still in its nexus and lawmakers are under pressure to move quickly to supply billions in new funding to help aid Kyiv and other countries in Eastern Europe in the wake of Russia’s invasion of Ukraine.

The administration requested $6.4 billion from Congress over the weekend, including $2.9 billion for the State Department and U.S. Agency for International Development for humanitarian assistance as well as security assistance to Ukraine, Poland, the Baltic states and other allies on NATO’s eastern flank, according to a Biden administration official.

The Biden administration is also asking Congress for $3.5 billion in additional funding for the Pentagon, according to the official.

Lawmakers are looking at putting the emergency spending in a government funding bill that they are trying to pass by March 11, when the government will shutter unless they pass the massive bill known as an omnibus or a short-term continuing resolution that would keep the government running at current levels.

“The administration has asked for a $6.4 billion package of humanitarian aid, of economic aid and of the kind of military aid that will help the Ukrainians defend themselves. We intend to work on a bipartisan basis to include it in the upcoming omnibus bill,” Schumer said.

Even as Democrats and Biden grapple with an international crisis, the Supreme Court battle is already overshadowing much of the domestic agenda.

Democrats want to confirm Ketanji Brown Jackson, Biden’s pick to succeed Justice Stephen Breyer, by April 8, when they will leave for a two-week break.

Jackson is launching her charm offensive this week. She is scheduled on Wednesday to meet with Schumer, Senate Minority Leader Mitch McConnell (R-Ky.), Durbin and Sen. Chuck Grassley (R-Iowa), the chairman and top Republican on the Senate Judiciary Committee, respectively.

The meetings, even though they are closed-door, will garner the public spotlight and launch what will be weeks of sit-downs with Jackson, who would be the first Black female justice if she’s confirmed. Senators are also already starting the paperwork process, including sending the White House a questionnaire that Supreme Court nominees fill out for the Judiciary Committee.

Durbin said on Monday that Democrats haven’t locked down a week for the committee hearing. But he’s previously said that the hearing would last three days, including a day of opening statements, a day of questions to Jackson and a final day of outside experts and witnesses.

“I would like to,” Durbin said about the April 8 timeline, “but I want to do it in a respectful, fair and orderly way.”

### 2AC – Impact

#### No readiness impact

* Readiness trades off with modernization
* Modernization is key to long term capabilities and deterrence
* ICBMs, cyber, and tech make modernization more important

Morgan 2/9/19 [Brandon Morgan, Harrison (Brandon) Morgan is an active duty Army infantry officer. He commissioned from the United States Military Academy in May 2013. He served as an infantry weapons platoon leader in Iraq during Operation Inherent Resolve and deployed to Europe with 2nd ABCT, 1st ID, where he served as the Atlantic Resolve Mission Command Element Liaison to Lithuania. He now serves as the brigade battle captain. FUTURE CAPABILITIES OR READINESS? IT’S TIME TO RETHINK THE ARMY’S PRIORITIES. Feb 2, 2019. https://mwi.usma.edu/future-capabilities-readiness-time-rethink-armys-priorities/]https://mwi.usma.edu/future-capabilities-readiness-time-rethink-armys-priorities/]

The US Army has been the world’s most dominant ground combat force for decades. But it now faces an uncertain question as to whether it can retain that dominance in the decades to come. To do so, it must take a hard look at the service’s priorities. For years, the service’s top priority has been readiness. While that remains important, it now needs to drop to the number two spot on the Army’s priority list, replaced by something else: the future fight. Specifically, developing future capabilities, technologies, and concepts should be the Army’s number one priority. Without considering such a change, the Army’s continued ability to fight well today will come at the cost of its ability to fight supremely tomorrow.

Upon assuming the duties of US Army chief of staff in August 2015, Gen. Mark Milley announced that “readiness is the number one priority, and there is no other number one.” In short, he directed that funding for the current fight (i.e., training at home station, rotations at combat training centers, and unit equipment) would take precedence over developing the future Army (his number two priority) and taking care of troops (number three). This prioritization made sense given the state of the Army and the context of the time. In Europe, the Army had withdrawn all remaining armored forces and cased the colors of its remaining Europe-based Corps command just prior to the 2014 Russian intervention in eastern Ukraine and annexation of Crimea. At the same time, ISIS emerged as a force that pillaged its way through much of war-torn Syria and a weak Iraq. All the while, North Korea, Iran, and China continued to defy the international community on things ranging from weapons development to malicious cyber activity. Prioritizing readiness made sense at the time and given that context. But as Gen. Milley prepares to depart his post, his successor as chief of staff of the Army must consider a new context, the conditions of which argue for transitioning to capability development for the future fight as the number one priority.

There is, of course, the issue of opportunity cost—essentially what must be given up when resources are committed to a particular course of action.” In the context of Army prioritization, every additional combat training center rotation (a necessary component of building readiness), for example, results in an equivalent opportunity cost for developing new technologies, weapon systems, vehicles, and concepts focused on the future fight. Although Gen. Milley’s 2015 announcement may suggest that prioritizing readiness was a shift, that’s not the case. Readiness—a unit’s ability to deploy and execute its wartime mission—has been the Army’s number one priority since the beginning of US operations in Afghanistan and Iraq. While the Army focused its budget, time, manpower, and resources on meeting immediate deployment and battlefield needs, the future Army paid the opportunity cost with no new armored vehicles, helicopters, or individual weapon systems since “the big five” of the 1980s.

One could argue that the Army is, in fact, placing great emphasis on developing new platforms and technologies with the creation of a Futures Command and announcement of its six modernization priorities. While the renewed emphasis is important, emphasis does not necessarily translate to prioritization. This modernization announcement followed the election of President Donald Trump, and subsequent massive defense budget increases forecasted for the coming years. This will likely prove extremely challenging, as the viability of expecting six major modernizations, each of which involves long-term research, development, and procurement timelines and all dependent upon congressional acquiescence to unchecked, consistent growth in DoD’s budget, is a dubious strategy of hope. This is why Army prioritization matters.

As readiness has been the Army’s number one priority since 2001, DoD has spent over $51.2 billion, just $10 billion shy of the entire Russian military budget of 2017 on canceled projects with nothing to show for the taxpayer. The Army, necessarily focusing on immediate readiness and wartime needs, canceled a new Ground Combat Vehicle, Crusader artillery system, and Comanche reconnaissance helicopter, all three of which represent capabilities that are desperately needed for the future fight. With readiness remaining as the number one priority, any reduction in the DoD budget will likely result in more delayed or canceled future acquisitions and concepts. This became readily apparent when a proposed 2.2-percent budget cut from $716 billion in 2019 down to $700 billion in 2020 sent DoD into a tailspin, with future acquisitions first on the chopping block in order to preserve readiness.

Senior Army leaders must ask tough questions as they look to the horizon of future competition and potential conflict with rising adversaries. Does the Army truly need to have two-thirds of its active duty brigades, and one third of its National Guard brigades, fully ready in order to deter and if necessary, immediately fight and win a war? Gen. Milley has already said, “I can assure you the US Army has sufficient readiness to take on whatever adversary the United States meets today or tomorrow.” So why the two-thirds/one-third readiness standard? This is an extraordinarily high mark to achieve when compared to the Army’s historical readiness prior to major wars in which vital, strategic US objectives were at stake. The Civil War, World War I, and World War II all showcased how an untrained and nearly non-existent US Army, with political determination, strategic patience, and the incredible fortitude of the American people, could become a premier fighting force capable of defeating its most formidable foes.

Although the advent of intercontinental ballistic missiles, cyber, electronic, and information warfare, and other features of modern conflict have greatly changed the strategic operating environment since these major wars, the fact of the United States’ overwhelming victories, all begun with a meagerly trained Army, should at least encourage us to question whether the two-thirds/one-third readiness standard—and the consequent opportunity cost to the future fight—is the right answer for American security. Certainly no one could ever advocate for allowing the conditions for a repeat of the Task Force Smith disaster of July 1950, when an untrained, poorly equipped US Army battalion was overrun by a rapidly advancing North Korean force. Readiness levels must be carefully managed to ensure the US Army can meet the immediate needs of sudden combat before training and deploying follow-on forces. Undoubtedly, this will require skillful collaboration between policymakers and diplomats, who play a role in shaping a favorable political operating environment, and senior military leaders, who must be prepared to deter, and if necessary, deploy with well-trained soldiers and the capabilities that enable them to fight and win with decisive overmatch.

As combat operations in our long post-9/11 wars continue to draw down, and with uncertain political dynamics wrapping the future defense spending in uncertainty, the US Army must consider making capability and concept development for the future fight its top priority in order to ensure that units, soldiers, and their vehicles and equipment are outfitted to dominate the fight tomorrow. When DoD’s budget inevitably tightens, the Army must make the difficult, but correct decision to protect funding for advanced artillery systems, next-generation combat vehicles, and air defense capabilities over protecting all aspects of unit training. Rotations at the combat training centers today may make the Army more capable in 2020, but they do considerably less for us in 2030, 2040, or beyond. This fact is especially magnified as our major combat platforms and weapon systems rapidly approach a half century in age and replacements continue to be delayed or canceled.

## Pharma

### 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).

#### 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

# 1AR

### A1

#### Warming outweighs nuclear war

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.

### cp

#### ‘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.

#### Public trust doctrine worse for the environment.

Simmons 07 [Randy T. Simmons — Ph.D. from the University of Oregon in Political Economy, Professor of Political Economy and Director of the Institute of Political Economy, Senior Fellow at the Property and Environment Research Center as well as the Independent Institute; "Property and the Public Trust Doctrine"; The Property and Environment Research Center; April 2007; Accessible Online at https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.331.8362&rep=rep1&type=pdf] DL 9-6-2021

CONSEQUENCES OF THE PUBLIC TRUST DOCTRINE

The public trust doctrine returns resources to their open-access past. Everyone who wants access to the resources gets it. Overuse results. This raises the question of the desirability of applying the public trust doctrine to Montana lands and streams. I would contend that Montana’s ranches and farms ares too important to put in the public trust. They need far better protection than an open-access rule allows.

A key reason not to apply the public trust doctrine to private lands has to do with investment and expectations. Without the ability to exclude, owners cannot know if an investment will pay off because they will not be able to control the actions of non-owners. As the Supreme Court has explained, “The right to exclude others” is “one of the most essential sticks in the bundle of rights that are commonly characterized as property” (Kaiser Aetna v. United States 1979, 164). The degree of exclusivity determines a property owner’s expectations about whether his decisions about the uses of his property are likely to be effective. “The greater the probability those expectations will be upheld in one way or another (custom, social ostracism, or government punishment of violators), the stronger are his property rights” (Alchian and Allen 1977, 114). When exclusivity rules are clearly defined and enforced, they would require me to gain your permission to your property through sale or gift. To do otherwise would be to trespass on your property or to convert (steal) it.

Gaining permission illustrates a unique feature of private property—owners can transfer their rights to others. Unlike open access, private property owners may sell or lease hunting rights for mule deer to one set of users, fishing rights to others, and upland game rights to still others, while retaining the right to raise crops. We also see in Montana many examples of property owners kindly granting public access to designated trails that pass through their property.

The ability to transfer property holds people accountable for their choices about their property. If they treat their property poorly, its value decreases. If they treat it well, its value increases. Higher value means that others approve of the actions owners are taking and indicates that approval through market prices to purchase or use the property. Besides the personal pleasure a property owner may obtain by treating property well, owners have a financial incentive to care for and improve their property’s value. If, however, owners cannot control access to their property, they have little incentive to care about others’ preferences.

Because public trust rights cannot be sold—owners cannot transfer their rights to others—there are no owners to capture the benefits of good decisions or pay the costs of poor decisions. Members of the public may use, but do not manage, control, or have reason to evaluate the costs they impose on others or on the resource.

This section began by asking if rivers, streams, and beaches should be open for public access. Why not do the same with land? The purpose in asking if the public trust doctrine should be applied to resources currently considered private is to demonstrate the costs that occur from such an action. If public access to ranches would cause overuse and reduce incentives to protect, invest, and care about others’ preferences, might it not do the same to rivers, streams, watersheds, beaches, and shorelines and all the other resources exposed to public trust?

### da

#### It’ll inevitably pass—Ukraine

Romm 3/1 [Tony Romm, "Democrats, Republicans eye large Ukraine aid package, new punishments against Russia", 3/1/22, https://www.washingtonpost.com/us-policy/2022/03/01/congress-ukraine-russia-aid/]

Congressional Democrats and Republicans are preparing a massive, multibillion-dollar aid package for Ukraine, hoping to address a fast-worsening humanitarian crisis and bolster the region’s defenses against any further Russian incursion.

In a Capitol often wracked by partisanship, the two parties have found early common ground this week in calling for prompt passage of an emergency spending measure, which some lawmakers say will ultimately exceed the Biden administration’s initial request to deliver roughly $6 billion in foreign assistance.

#### 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.