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CLIMATE CHANGE™

LAW & POLICY REPORTER

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JUDICIAL DEVELOPMENTS

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CLIMATE CHANGE NEWS

CALIFORNIA GOVERNOR FORMS STRIKE FORCE THAT PROPOSES WILDFIRES STRATEGY

At his February 12, 2019, State of the State address, California Governor Gavin Newsom announced that he had directed a strike force to develop a comprehensive strategy to deal with the challenges faced by state's utilities as a result of recent, catastrophic wildfires. On April 12, 2019, the strike force detailed its strategy in its report entitled "Wildfires and Climate Change: California's Energy Future" (Report).

The Wildfires and Climate Change Report

According to the Governor's office, the Report:

> . . .sets out the steps the state must take to reduce the incidence and severity of wildfires, including significant wildfire mitigation and resiliency efforts the Governor has already proposed.

The Report includes the following roadmap:

- Part 1: Catastrophic Wildfire Prevention and Emergency Response
- Part 2: Mitigating Climate Change through Clean Energy Policies
- Part 3: Fair Allocation of Catastrophic Wildfire Damages
- Part 4: A More Effective CPUC with the Tools to Manage a Changing Utility Market
- Part 5: Holding PG&E Accountable & Building a Utility that Prioritizes Safety

The remainder of this article will focus on Parts 3 and 5, with Part 3 addressing the Report's "most vexing public policy challenge…the equitable distribution of wildfire liability."

Part 3 of the Report—Fair Allocation of Catastrophic Wildfire Damages

From 2010 to 2016, statewide wildfire damages were under $3 billion per year. In 2017 and 2018, statewide wildfire damages were over $17 billion and $22 billion, respectively. The Report notes that although it is not clear whether that jump is the new normal, experts predict a heightened risk of severe wildfires going forward.

Utilities face significant wildfire-liability exposure due to California's legal framework, which imposes damages upon utilities under an inverse condemnation theory. As the Reports notes, in inverse condemnation, an:

> . . .entity may be held strictly liable for damages so long as the plaintiff proves that the utility was a substantial cause of such damage—even if it was only one of several concurrent causes. Investor-owned utilities that are faced with inverse condemnation damages, can, if approved by the California Public Utilities Commission (PUC), recover damage payouts via their rate-setting. In 2017, however, the PUC denied San Diego Gas & Electric's (SDG&E) request to recover $379 million in damages imposed upon it for three large wildfires in 2007.

After the 2017 PUC ruling, SDG&E and other utilities experienced credit-rating downgrades, which raised their costs of obtaining credit to fund infrastructure improvements. In 2018, Pacific Gas & Electric Company (PG&E) filed for bankruptcy.

Three Concepts for Allocation of Wildfire Damages

The Report recommends three concepts to consider for the fair allocation of catastrophic wildfire damages:

- Concept 1: Liquidity-Only Fund. This concept would create a fund to provide liquidity for utilities to pay wildfire damage claims pending CPUC determination of whether or not those claims are appropriate for cost recovery and may be coupled with modification of cost recovery standards.

•Concept 2: Changing Strict Liability to a Fault-Based Standard. This concept would involve modification of California's strict liability standard under inverse condemnation to one based on fault to balance the need for public improvements with private harm to individuals.

•Concept 3: Wildfire Fund. This concept would create a wildfire fund coupled with a revised cost recovery standard to spread the cost of catastrophic wildfires more broadly among stakeholders.

Part 5 of the Report—Holding PG&E Accountable & Building a Utility that Prioritizes Safety

The Report takes a strong stance concerning PG&E. First, the Report notes that although PG&E has stated that it filed its bankruptcy in order to provide fair compensation for fire victims, PG&E failed to "honor scheduled settlement payments to victims of the Butte Fire" just before its bankruptcy filing. Stronger still, the Report continues:

> . . .PG&E's willingness to use the bankruptcy process to the advantage of its investors, and at the expense of Californians, cannot be repeated.

The Report maintains that PG&E's bankruptcy-filing decision "punctuates more than two decades of mismanagement, misconduct, and failed efforts to improve its safety culture" and notes that it was already on criminal probation in connection with the San Bruno gas explosion in 2010. The Report also notes that PG&E has been investigated in connection with or settled claims for several wildfires and explosions in the last 25 years.

While the Report includes a number of recommendations to address the strike force's PG&E concerns, it also concludes Part 5 by stating that no options are off the table, including:

•municipalization of all or a portion of PG&E's operations;
•division of PG&E's service territories into smaller, regional markets;
•refocusing PG&E's operations on transmission and distribution; or
•reorganization of PG&E as a new company structured to meet its obligations to California.

Conclusion and Implications

Recent climate change assessments have highlighted the potential for more catastrophic wildfires in California's future. Governor Newsom has signaled that finding solutions to this problem is a priority and the Report takes a strong stance against investor-owned utilities that the strike force believes have not done enough to address the problem. PG&E responded to the Report by vowing to work on solutions and "embracing the calls for change." If it fails to do so, the focus will turn back to Governor Newsom to see whether he takes any steps to change PG&E's operations and organization.
(Kathryn Casey)

FLORIDA MAKES SCIENCE PARAMOUNT IN WATER RESOURCES, WATER QUALITY AND SEA LEVEL RISE CONCERNS

Florida's Governor Ron DeSantis, on the campaign trail, has been pushing for improvements to water resources and water quality improvements throughout the state. The Governor has now, via Executive Order, created a "Science Officer" who will be charged with these tasks. He also will soon create the position of Chief Resilience Officer to address other related issues like sea level rise from climate change.

Background

In the six months since he took office Florida's Governor, Ron DeSantis, has surprised many Floridians by backing his campaign expressions of concern about the importance of environmental protection with pledges to expend upwards of $2.5 billion on projects to preserve Lake Okeechobee and improve the state's water quality and water resources.

The Office of Environmental Accountability

The Governor had spoken of putting science as the basis on which program decisions would be made. In April he appointed the first-ever Science Officer for the state. The man he chose for the role is Dr. Thomas K. Frazer. Dr. Frazer will lead the newly established Office of Environmental Accountability and Transparency within the State's Department of Environmental Protection.

According to the DeSantis administration:

> Dr. Frazer will guide funding and strategies to address priority environmental issues, as well as, but not limited to, making recommendations for increased enforcement of environmental laws necessary to improve water quality within key waterbodies.

Dr. Frazer, a water ecologist, formerly was the Director of the University of Florida's School of Natural Resources and Environment. And formerly served as Acting Director of the UF Water Institute. Before this position, he served as Associate Director of the School of Forest Resources and Conservation and the Leader of the Fisheries and Aquatic Sciences Program. At UF, his research focused on the effects of anthropogenic activities on the ecology of both freshwater and marine ecosystems.

On May 17, the DEP invited Florida journalists to a press briefing in order to ask questions of Dr. Frazer. Together with Noah Valenstein, the Director of Department of Environmental Protection, Frazer indicated that one of the most important priorities for him is mitigating the problem of algae in Florida's waters. He noted the Governor's program establishes a Blue-Green Algae Task Force, charged with focusing on expediting reduction of the adverse impacts of blue-green algae blooms. This task force of a half dozen or so experts will identify priority projects for funding that are based on scientific-data. There will be a push to acquire more data immediately through existing restoration programs in order to facilitate informed decision-making by the Task Force in formulating an effective plan.

Clean Air and Climate Change-Related Sea Level Rise

When asked whether greenhouse gases are a priority, both Dr. Frazer and Director Valenstein responded that sea level rise is a priority, but that the main focus of the Department of Environmental Protection is on nitty-gritty clean air and clean water issues. Valenstein noted that a separate position, "Chief Resilience Officer," will be filled soon by the Governor once applications for it are fully reviewed. That position, through a beefed-up Division of Coastal Protection will focus on improving coastal resilience.

Small Strategic Projects

Dr. Frazer indicated that the $680 million available this year from the legislative session just ended will help jump-start a number of small but strategically important projects around the state, to begin the restoration process for water bodies affected by the blue-green algae. The Task Force is expected to convene in June. It will formulate longer term strategy recommendations. It will be meeting in a venue where the public is able to attend.

Conclusion and Implications

Dr. Frazer and the DeSantis administration will have to deal with resistance from Florida's water management districts. These regional districts throughout the state have the direct authority to manage the flow of water and its availability. The Governor has already clashed with some district officials regarding the need to immediately build additional reservoir capacity near Lake Okeechobee to assure freshwater availability for future drinking water needs of the population. The administration wishes to see two new reservoirs constructed, but actions of the South Florida Water Management District have, so far, been contrary to that vision. The Governor has asked for resignations of some commissioners, including a number appointed by his predecessor, Rick Scott. His Executive Order urged better transparency and accountability from the Water Districts. A copy of the DeSantis Executive Order on the priority of water quality efforts can be found at https://www.flgov.com/wp-content/uploads/orders/2019/EO_19-12.pdf
(Harvey M. Sheldon)

REPORT ON CLIMATE CHANGE'S IMPACT ON THE ECONOMICS OF WINTER SPORTS

Through the years we have written about a number of climate change impacts, including sea level rise, wildfires, and increased flooding from hurricanes. Showing that climate change reaches many areas, this article looks at the recreational impacts from climate change—specifically, the impact on winter sports.

Economic Impact to Ski Towns from Climate Change

Protect our Winters (POW) is a nonprofit organization founded by professional snowboarder Jeremy Jones in 2007, which "turns passionate outdoor people into effective climate advocates." In 2018, POW released a comprehensive report on the economic contributions of winter sports and the dangers posed by climate change. The report, "The Economic Contributions of Winter Sports in a Changing Climate" (Report), is a case study of conditions in ski towns:

> . . .with a simple message: winter is warming, snow is declining, and that trend hits our communities in the wallet.

The Economic Contributions Report

Highlights from the Report include the following:

> •In the winter season of 2015–2016, more than 20 million people participated in downhill skiing, snowboarding, and snowmobiling, with a total of 52.8 million skiing and snowboarding days, and 11.6 million snowmobiling days.
>
> •These snowboarders, skiers and snowmobilers added an estimated $20.3 billion in economic value to the U.S. economy…
>
> •High snow years result in increased winter sports participation resulting in more jobs and added economic value, with the opposite occurring in low snow years (to a more dramatic extent).
>
> •Increased participation levels in high snow years meant an extra $692.9 million in value added and 11,800 extra jobs compared to the 2001–2016 average. In low snow years, reduced participation decreased value added by over $1 billion and cost 17,400 jobs compared to an average season.

Ski Resorts are improving their sustainability practices and their own emissions while also finding innovative ways to address low-snowfall and adapt their business models.

The Report provides information regarding how ski resorts are responding to climate change. It notes that the National Ski Areas Association (NSAA) "has led the way in advocating for environmental sustainability at ski resorts," raising awareness of the potential impacts of climate change. In 2017-18, 36 NSAA-member resorts agreed to track and reduce their greenhouse gas emissions (up from 8 in 2011 when its Climate Challenge program began).

Sustainability Projects

The Report notes that more than 75 percent of United States ski resorts have launched sustainability projects since 2014, in generally six categories: 1) energy efficiency of buildings, 2) snowmaking efficiency, 3) utility energy management, 4) food and beverage waste reduction and recycling, 5) sustainability marketing and communications, and 6) human resource efforts to increase retention and worker productivity.

Snowmaking is an option at 89 percent of the ski areas in the United States, and, although energy consumption associated with snowmaking is a concern, snowmaking energy efficiency has greatly improved. Many ski resorts are also diversifying by adding year-round activities, including mountain biking, ziplines, concerts, music festivals and other special events.

Emotional Impact from Loss of Winter Sports Traditions

In an April 22, 2019, *Sports Illustrated*® article, "Winter Is Going: How Climate Change Is Imperiling Outdoor Sporting Heritage," author Stanley Key explored the impacts of climate change on hockey in Canada and the northern U.S. The article begins with a trip to Brantford, Ontario, Canada, the childhood home of National Hockey League Hall of Famer Wayne Gretzky. The article retells the story of how

Mr. Gretzky learned to play hockey in his backyard, on a patch of ice that his father transformed into an outdoor ice rink.

Even though backyard rinks have been called "the heart and soul of hockey," the article notes that the tradition of backyard rinks, and outdoor rinks in general, is threatened due to rising temperatures. On a larger scale, holding events like the 2018 Montana Hockey Classic (cancelled in 2018 for the second time in three years) and the U.S. Pond Hockey Championships in Montana has become more stressful due to the inability to rely on thick, natural ice.

Mr. Kay opines that if the warming trend continues, thereby further impacting hockey and other winter sports in Canada, the resulting effect "would create a national identity crisis." Mr. Kay also poses the question, "What will we lose if we can't play sports where they were meant to be played"?

Conclusion and Implications

Climate change affects many areas and looking at winter sports shows how it can have a direct impact on communities in a number of different ways. Many communities rely on winter sports to maintain their way of life. Climate change has the potential to impact those towns, both economically and emotionally. While communities may be able to diversify their business methods to lessen the economic impacts, the emotional impact may be irreversible.
(Kathryn Casey)

CALIFORNIA RESTAURANTS AND THE CLIMATE SURCHARGE

Change is coming to a table near you, as some California restaurants plan to add a surcharge intended to fight climate change to their bills later this year. The initiative—called Restore California Renewable Restaurants—will allow restaurants throughout the state the option of charging diners an additional 1 percent, with proceeds going towards California's Healthy Soil Program, which helps farmers transition to methods that put carbon back in soil.

Background

The Restore California Renewable Restaurants Initiative is a partnership between the California Department of Food and Agriculture, the California Air Resources Board, and the Perennial Farming Initiative, a San Francisco nonprofit dedicated to creating a renewable food system rooted in healthy soil. The Perennial Farming Initiative was founded by Karen Leibowitz and Anthony Myint, restaurateurs who run Mission Chinese Food and Commonwealth in San Francisco. They gained recognition last year when another nonprofit they run, Zero Foodprint, led an initiative in which more than 40 Bay Area restaurants went carbon neutral for a week. Perennial will act as a liaison between the state agencies and restaurants, recruiting new restaurateurs to participate in the program. The goal is to sign on 200 restaurants statewide by the end of 2019.

Like other surcharges added to bills in recent years, the climate surcharge will be added to every bill at participating restaurants, with diners able to opt out by asking their server to remove it. Perennial estimates that if just 1 percent of restaurants in California join the program, it would create as much as $10 million per year in funding for supported farming practices. It is also estimated that if all diners at a given restaurant opt to pay the fee, the proceeds would likely make the establishment carbon neutral. If every restaurant in California were to participate, it would raise $1 billion annually.

Proceeds from the surcharge would go to the California Air Resources Board to fund programs promoting healthier soils at farms and ranches statewide, with a focus on returning carbon to the soil. The programs reward farmers who have created carbon farm plans, paying farmers expanding their sustainable practices $10 for each ton of carbon they remove from the atmosphere. Reintroducing carbon to soil can improve crops' resilience, flavor, nutrient density and tolerance to drought. As an added benefit, it would reduce carbon emissions into the atmosphere, fighting the effects of global warming.

According to Perennial's 2018 report, the nonprofit hopes to support 500,000 acres of new carbon farmed land per year, which would effectively sequester 150,000 tons of additional carbon emissions annually. The Center for Food Safety estimates that the world's cultivated soils have lost between 50 and 70 percent of their original carbon stocks, which reduces soil's ability to function properly. Rebuilding

soil carbon requires utilizing biological processes like photosynthesis that takes carbon dioxide out of the atmosphere and stores it in the ground as soil carbon. Healthy soils then act as a "carbon sink," drawing carbon down into the soil to store it. Thus, improving soil may be an important tool in fighting climate change.

In the restaurant industry, climate impacts are rarely created by the ingredients chefs choose to utilize, but rather, how those ingredients are produced and sourced for use in restaurants.

Conclusion and Implications

The Restore California Renewable Restaurants Initiative represents a public-private partnership dedicated to combating climate change through small shifts in how business owners and the consumers they serve think about environmental impacts. A 1 percent surcharge is unlikely to alter the behavior of most diners (it would add only $1 to a $100 dinner tab), but may pave the way to more sustainable farming practices and decreases in carbon emissions throughout the state. Partnerships and initiatives like the Restore California Renewable Restaurants Initiative can create massive cumulative change through minor shifts in consumers' purchasing patterns, raising revenue that would not otherwise exist and directing it towards programs that can play an important role in reducing the impacts of climate change. (Jordan Ferguson)

LEGISLATIVE DEVELOPMENTS

OREGON MOVES TOWARD CARBON REDUCTION BILL

The state of Oregon has been steadily working towards legislation to implement a cap and trade program with the goal of significantly reducing carbon emissions by 2050. The legislation would make Oregon the second state after California to implement such a cap and trade program.

The proposal is backed by Governor Kate Brown and would be managed by Oregon's Carbon Policy Office, though there is some discussion of creating a new agency, the Oregon Climate Agency to oversee the initiative. The legislation was recently approved by the state's Joint Carbon Reduction Committee and is currently before the Legislature's budget committee to run a fiscal analysis.

Cap and Trade: How it Would Work

HB 2020 would work as a traditional cap and trade program wherein a cap is set for emissions and, under Oregon's legislation, entities emitting more than 25,000 metric tons of carbon dioxide are required to purchase "allowances" for each ton emitted annually starting in 2021. Gradually the cap or limit would be decreased such that lower and lower levels of carbon are emitted into the atmosphere. Any surplus of funds collected from the carbon trading would—much as it does under California's existing program—be directed towards climate-friendly initiatives across the state, such as:

> . . .accelerating the adoption of renewable resources, weatherizing homes and thinning excess forest debris that feeds larger wildfires.

In its current form, approximately two-thirds of the revenue generated under HB 2020, an estimated $350 million annually, would be derived from fuel distributors. However, an existing state constitutional provision that was put in place by voters in the 1980s requires that any money raised by fuel taxes must go to the State Highway Fund where it can be spent:

> . . .exclusively for the construction, reconstruction, improvement, repair, maintenance, operation and use of public highways, roads, streets and roadside rest areas. . . .

Some have claimed that cap and trade funds should instead be used in other efforts that will lower emissions, such as energy efficiency rebates. State Senator Lee Beyer, D-Springfield, recently announced that he would move forward legislation that would specifically allow for funds under the cap and trade program to be allocated towards rebate programs such as for electric vehicles, or to help public transit and freight interests switch to lower-emissions options.

Other modifications and proposals have been implemented as the bill moves towards passage. For example, under a recent amendment to appease large emitters and alleged concern for ratepayer costs, natural gas utilities will now receive special allowance credits that they are required to sell at auction. Any proceeds from the sale of these credits must be invested in energy efficiency programs and other efforts specifically aimed at helping the utilities transition to more "renewable" natural gas projects. In addition, at least 25 percent of the auction proceeds will be applied as credits to customer bills. The gas companies would still be responsible for buying allowances to cover about 85 percent of their emissions in the annual state auction, which reflects a compromise with environmental groups from the gas companies' original lobbying position wherein they requested a first year one-hundred percent free allowances, and easing into after that.

Overall, Oregon's Carbon Policy Office currently estimates that HB 2020 would apply to approximately one-hundred companies in the state and that allowances would cost $16 per ton during the first year of operation. The Oregon bill includes some combination offerings, such as a "best available technology" offering that would allow special credits for emitters eying technology that "will most efficiently reduce the greenhouse gas emissions associated with the manufacture of a good"—in their industry. Under the HB 2020's latest amendments, 20 percent of auction revenues will be dedicated to projects that reduce

emissions or store carbon in the forestry and agricultural sectors.

Opposition

Opposition to the bill has largely come from Oregon farmers and ranchers who claim it will disproportionately and unfairly increase their fuel and energy prices.

While agricultural and forestry operations are currently exempted from the bill, they may subsequently fall under the cap and trade mandate as the program grows. Even absent direct regulation, however, the Oregon Farm Bureau estimates that the legislation could cost such businesses an additional $1,000 to $5,0000 per year in fuel and other related costs depending on consumption levels. Supporters of the proposal push back against the cost criticism, arguing that action on climate change is both necessary and inevitable. From a climate perspective, HB 2020 is estimated to eliminate 43.4 million metric tons of carbon annually from the atmosphere by year 2050 if implemented.

Conclusion and Implications

Oregon's legislation reflects the greater trend across states to take up the mantle in efforts to reduce carbon emissions where federal action has languished. HB 2020 is passed and Oregon adopts a cap and trade program, some speculate that it would likely join the Western Climate Initiative, which links and manages similar cap and trade programs already underway in California and Quebec, Canada and could lead to a more widespread movement to implement state emissions reduction policies.
(Lilly McKenna)

CLIMATE CHANGE SCIENCE

RECENT SCIENTIFIC STUDIES ON CLIMATE CHANGE

Rapid Loss of Permafrost and the Release of Carbon

Permafrost is perennially frozen ground composed of rock, soil, or sediment with large chunks of ice primarily found in polar regions. It holds carbon from organic material from dead plants, animals, and microbes. The soils in permafrost hold twice as much carbon as in the atmosphere. In recent years, we have been observing a fast warming of the permafrost regions. This warming allows for microorganisms to break down organic matter in the soil, releasing carbon into the atmosphere. Additionally, the landscape is physically collapsing due to the destabilization of soil and from inundation of land by lakes and wetlands from warmer temperatures, releasing additional carbon from the ground. These physical changes are also a problem for communities that live in these areas as roads buckle, houses become unstable, and access to traditional foods becomes more dangerous.

Current models have underpredicted the release of carbon from the thawing of permafrost; they estimate that a slow and steady rate of thawing will release 200 billion metric tons of carbon over the next 300 years under a business-as-usual scenario. This is roughly 15 % of all soil carbon in the frozen north. However, around 20 percent of the permafrost region has features that increase the likelihood of abrupt thawing such as large quantities of ice and unstable slopes. In these areas, abrupt thawing can trigger landslides and rapid erosion, which releases carbon as material is destabilized, decomposed, or washed into streams. Moreover, the most unstable regions tend to be the most carbon-rich. The Yedoma permafrost, containing carbon from glacial dust and grasslands from the last ice age, contains 130 billion metric tons of organic carbon.

Researchers led by Merritt Turetsky of the Department of integrative Biology of the University of Guelph synthesized results from published studies of abrupt thawing across the permafrost zone. They looked at how this abrupt thawing influences plants, soils, and moisture in the ground. The researchers estimated that this rapid permafrost thawing could release between 60 billion and 100 billion metric tons of carbon by 2300, in addition to the 200 billion metric tons of carbon released from gradual thaws. The sudden collapse of permafrost releases more carbon per square meter because it disrupts stockpiles deep in frozen layers. Additionally, abrupt thawing releases more methane, which is more potent than carbon dioxide. Thus, these two effects taken together can result in climate impacts that are much higher than originally estimated from current models.

Based on current knowledge gaps, the researchers recommend the following next steps to better understand the impacts from rapid loss of permafrost: 1) Extend measurement technology to better track permafrost and carbon in the Arctic to establish reliable baselines; 2) Fund monitoring sites to obtain better recordings of organic matter in waterways to better understand how plant and microbial communities respond to thawing; 3) Gather more data from field measurements to quantify how much carbon dioxide and methane are released as frozen soils melt and collapse and post the data publicly; 4) Build holistic models for key processes affecting carbon release; 5) Improve reports for policymakers so that they have the best estimates of the implications of abrupt thawing.

See, M.R. Turetsky et al. Permafrost Collapse is Accelerating Carbon Release. *Nature* 569, 32-34 (2019) doi: 10.1038/d41586-019-01313-4

Urban Trees Are Dying Too Fast to Sequester Carbon

Planting trees is a common way to sequester carbon dioxide on both small and large scales. Trees are eventually a net sink for greenhouse gases, sequestering carbon within their biomass as they grow and maintaining that sink unless the completely decompose or burn. Urban street trees must survive for 26 to 33 years to attain carbon neutrality due to the lifecycle emissions associated with nursery production, irrigation, planting, pruning, removal,

and disposal; though they may have other air quality or quality-of-life co-benefits before that time. Many large carbon offsets protocols relate to tree sequestration, through afforestation (tree-planting) efforts or forest management techniques. Given the large scale and economic costs of these offset programs, coupled with the potential importance of tree carbon to the global carbon cycle, it is important to accurately quantify the sequestration of different tree species and locations.

Researchers from Boston University undertook a decades-long study to evaluate the carbon sequestration in urban trees in Boston compared to rural trees west of Boston in the Harvard Forest. In 2005 and 2006, the City of Boston trained 26 full-time interns and over 300 volunteers to collect basic tree demographics such as type, diameter, and location across the city. In 2014, the Boston University's researchers sampled these same transects and collected the same data, covering a range of soil types, pruning intensities, and traffic intensities. Trees present in the 2005-2006 study that no longer existed in 2014 were considered lost to mortality or removal, while trees that were not present in 2005-2006 but present in 2014 were considered planted recruits. Annual measurements of tree growth and tree mortality in the Harvard Forest were analyzed for the same time period. The street trees grew more than four times faster than the rural trees by diameter, on average. However, street tree mortality rates were more than double rural tree mortality rates overall, with the largest-diameter trees showing an even more pronounced difference in mortality. Overall, the biomass from dying trees exceeded the biomass from planting urban trees in Boston, resulting in a net carbon loss over the study period.

Under a business-as-usual tree planting scenario, mean street tree biomass density in Boston is expected to continue to decline by 26 percent below 2006 levels by 2030; while biomass density in the Harvard Forest is projected to increase by 34 percent above 2006 levels. Better tree management programs are needed to ensure survival of urban trees, particularly large trees. Increased planting alone is insufficient to ensure an increase in carbon sequestration from urban trees. Future studies could evaluate whether these conclusions hold true for other cities or climates.

See, Smith, I.A., Dearborn, V.K, and Hutyra, L.R. 2019. Live Fast, Die Young: Accelerated Growth, Mortality, and Turnover in Street Trees. *PLOS One*. DOI: 10.1371/journal.pone.0215846.

Understanding Climate Damages Across the United States

Climate change is expected to have significant impacts across the U.S. as its effects accelerate. In order to inform policymaking decisions to stop or slow climate change, it is important for legislators to have access to comprehensive estimates of physical and economic damages associated with climate change.

A team of researchers from the U.S. Environmental Protection Agency (EPA) evaluated impacts for 22 specific sectors across the U.S. that are likely to be harmed by climate change. These sectors can be grouped broadly into human health, infrastructure, electricity, water resources, agriculture, and ecosystems sectors. To understand the physical and economic impacts associated with each of these sectors, they ran a comprehensive process-based model that incorporated inputs from ten climate projections. These models were run spatially across the continental U.S., allowing the team to analyze the overall physical and economic effects of climate change from a variety of sectors onto one geographic region. This analysis was also repeated to incorporate adaptation measures and mitigation measures, which are policies that reduce the effects and causes of climate change, respectively.

The first major finding of this study is that each region of the US is projected to experience a different combination of physical and economic effects. For example, while the Northeast is expected to have worse human health-related impacts, the Northwest is projected to have increased electricity demand and flood events. No region within the U.S. is projected to be safe from effects in all 22 modelled sectors. The second finding was that adaptation and mitigation measures are beneficial across the continental U.S. The team finds that significant and proactive adaptation measures would be effective at reducing projected physical and economic damages across the country. Mitigation measures are even more effective, resulting in millions to tens of billions of dollars in avoided damages.

While economic and climate modelling has become more refined over recent years, there is still an overall lack of projections of physical and economic effects expected to accompany climate change.

Models like the one used in this study are important for demonstrating the risks associated with inaction against climate change, the economic benefits of creating adaptation and mitigation policies, and the specific regional impacts that future policy decisions should consider.

See, Martinich, J., & Cimmons, A. Climate damages and adaptation potential across diverse sectors of the United States. Nature Climate Change, 2019; DOI: 10.1038/s41558-019-0444-6.

Forest Carbon Storage Potential Reduced as Climate Warms

During photosynthesis, trees take in carbon dioxide and use it to create new cells. Long-lived trees can thus store carbon for many centuries before tree death and decomposition releases stored carbon back into the carbon cycle. As the Earth's climate warms, tree growth is expected to accelerate, leading some to hypothesize that planting more trees as the planet warms will lead to greater carbon removal from the atmosphere. However, a new international study from the University of Cambridge finds trees grow faster in a changing climate, but also die younger, storing carbon for shorter periods of time.

The study authors collected samples from over 1,000 living and dead undisturbed high-elevation trees from the Spanish Pyrenees and the Russian Altai, covering trees that grew during pre-industrial and industrial conditions. Core samples from the living trees and disc samples from the dead trees were used to develop juvenile growth rates and total lifespan. The authors found that trees grow slower in cold conditions but also live longer. By contrast, trees that grow quickly in the first 25 years die much sooner than those that grow slower.

The study implies that accelerated tree growth is not likely to result in enhanced carbon sequestration, as a faster turnover of individual trees may suggest shorter carbon residence time, which is the duration that trees store carbon. These findings are based on the two conifer species studied in undisturbed high-elevation forests and thus do not address questions of drought stress impacts on forest productivity at lower elevations. Drought-induced slowdowns in tree growth may lead to longer-lived trees with increased carbon storage potential, whereas drought-induced forest death would serve as a carbon source. This balance is a significant unknown in projecting the global carbon stock, and could be addressed by future studies.

See, Ulf Büntgen, Paul J. Krusic, Alma Piermattei, David A. Coomes, Jan Esper, Vladimir S. Myglan, Alexander V. Kirdyanov, J. Julio Camarero, Alan Crivellaro, Christian Körner. Limited capacity of tree growth to mitigate the global greenhouse effect under predicted warming. *Nature Communications*, 2019; 10 (1) DOI: 10.1038/s41467-019-10174-4
(David Kim, Libby Koolik, Malini Nambiar, Shaena Berlin Ulissi)

REGULATORY DEVELOPMENTS

CALIFORNIA PUBLIC UTILITIES COMMISSION REQUIRES UTILITIES TO PRIORITIZE RENEWABLE RESOURCES AND TRANSITION AWAY FROM FOSSIL FUELS

The California Public Utilities Commission (CPUC) decided last month to require utilities' integrated resource plans (IRP) to meet state climate and clean air goals. Last year saw the first IRP cycle completed, which left the CPUC's review largely informed by the IRPs submitted by each utility. The CPUC has decided to take concrete steps, consistent with California laws including SB 100 and SB 350, to monitor utilities progress towards phasing out fossil fuels and reducing air pollution that impacts disadvantaged communities.

Background

On April 25, 2019, the CPUC issued Decision 19-04-040, adopting a preferred system portfolio and plan for IRPs through an evaluation of the 2017-2018 IRP cycle. Utilities were required to file individual IRPs by August 1, 2018, and proceedings followed to evaluate the IRPs, identify common themes and issues, and determine whether refiling is required or changes should be mandated in future IRP filings. The CPUC split review into two parallel tracks: in the first, it reviewed narrative plans to assess whether each section met the 2030 Greenhouse Gas (GHG) Benchmark and adequately described its treatment of disadvantaged communities; in the second, the CPUC reviewed data submissions to evaluate the substantive impact of each utility.

The decision expressed concern with some utilities which cautioned against utilizing the 2018 plans in statewide planning, instead recommending that the Commission wait until subsequent internal data is prepared and submitted. The CPUC indicated that the integrity of the IRP process depends on the provision of accurate, up-to-date data, and that the CPUC expects all IRPs to meet the commission's requirements for implementing California law, rather than conforming its procedures to any similar local or internal data collection. The CPUC reaffirmed that it is the only appropriate body to assess utilities' progress towards meeting statewide goals. While the CPUC did not consider failure to provide detailed information in this regard grounds for rejection of individual IRPs, the decision indicated that in future rounds of IRP review, such a failure would constitute grounds for rejection.

While all IRPs identified whether the utility served disadvantaged communities, about half of the submitted plans did not meet the criteria pollutant reporting requirements. The CPUC is requiring resubmission of those plans. In order to remedy deficiencies, the CPUC intends to require, at a minimum, an appendix or supplement providing missing or inadequate information from the August 2018 filings.

New Resources Planned

Utilities propose combining baseline and new resources to meet reduction goals over the next 11 years. The largest categories of new resource spending are wind, hydro, nuclear, and solar, in terms of total planned purchases of energy. Nuclear resources are planned to decline after 2025 due to the approved retirement of the Diablo Canyon plant. The present analysis was not conducted to determine compliance with resource adequacy requirements, and so cannot constitute an assessment of whether proposed resource spending will be adequate to meet the state's goals. In concert with planned new resource spending, a decreasing reliance on existing non-renewable resources is anticipated. Resources receiving less long-term commitment include geothermal, biogas, pumped storage, and hydro, in addition to thermal non-renewable resources.

2030 Emissions Results

The decision also relates commission staff's conclusions as to GHG emissions results. Emissions were grouped into two categories: those from generating units located in disadvantaged communities, and those from generation not located in disadvantaged

communities. The data indicates increased GHG emissions relative to 2017 assumptions, based on higher reliance on unspecified imports effecting GHG emissions, on relying less on out-of-state wind, and moderately less on solar energy production, which in concert contribute to an increase of emissions in the short term.

These results were not without controversy among commenters, but the decision affirms that adjustments in calculations were reasonable in order to form a complete picture of current emissions and projected emissions from a 2030 portfolio. In an effort to avoid being forced to make adjustments to calculations in the future, the CPUC intends to create stricter filing requirements to ease the commission's efforts to distinguish between existing contract resources and resources that are aspirational choices for the future which may or may not be developed. The CPUC will resolve this discrepancy by requiring that utilities disclose the contractual and development status of all resource choices in future IRP filings, including the option for information to be submitted confidentially in order to protect the development of future resources. The decision affirms that in order to balance the system between now and 2030, the resource balance will by necessity include a mix of existing and new resources, a mix of baseload and intermittent resources, and a mix of renewable, storage, and conventional fossil-fueled resources. Eliminating natural gas-fueled resources altogether by 2030, while maintaining system reliability, would require technological solutions well beyond those that have been surfaced or analyzed to date.

Conclusion and Implications

The CPUC decision is but the first step in the commission's ongoing efforts to review and analyze steps by utilities towards achieving state climate and clean air goals. Future IRP cycles will further hone the data collection process and analyze progress as the goal date of 2030 approaches. By implementing more strenuous data-reporting requirements, the CPUC is asserting a stronger role in monitoring progress towards phasing out fossil fuels and reducing air pollution that impacts disadvantaged communities. Refining data collection procedures is not the flashiest improvement, but it will allow California to more accurately measure its progress towards a more renewable energy infrastructure.
(Jordan Ferguson)

CALIFORNIA PUBLIC UTILITIES COMMISSION INITIATES DECARBONIZATION PROCEEDING TO ADDRESS BUILDING EMISSIONS

The California Public Utilities Commission (CPUC) recently initiated a rulemaking proceeding (R.19-01-011) to address building decarbonization issues, a long-overlooked area contributing to greenhouse gas emissions. The proceeding comes at the direction of the legislature and as a result of the California Energy Commission's "2018 Integrated Energy Policy Report (IEPR) Update," which found that greenhouse gas emissions from the building sector are second only the transportation sector.

The decarbonization proceeding was spurred by two related bills that were passed and signed into law by Governor Brown in September 2018: AB 3232 (Friedman) and SB 1477 (Stern), both of which build upon a series of California legislation aimed at reducing emissions. Under California tate law, the California Air Resources Board (CARB) is required to implement and oversee policies that will reduce statewide greenhouse gas emissions to 40 percent below 1990 levels by 2030. In addition, in 2018, Governor Brown signed a series of climate change bills, including SB 100 and Executive Order B-55-10, which established a new statewide goal of achieving carbon neutrality by 2045 or sooner, and maintaining negative emissions thereafter.

Background

The electricity and heating fuels used in buildings are responsible for a quarter of California's greenhouse gas emissions and contribute to indoor and outdoor air pollution. Under SB 1477, the CPUC is required to develop, in consultation with the California Energy Commission, two programs aimed at reducing greenhouse gas emissions associated with buildings: 1) Building Initiative for Low Emissions Development (BUILD), and 2) Technology and Equipment for Clean Heating (TECH). AB 3232

directs the Energy Commission to develop an assessment of the feasibility of reducing the greenhouse gas emissions of California's buildings 40 percent below 1990 levels by 2030, working in consultation with the CPUC and other state agencies. These programs will serve as pilot programs that will raise awareness of building decarbonization technologies and test out program and policy designs to be deployed on a larger scale if successful. Funding for these programs, estimated from a $50 million allocation, will be made available from California's cap and trade program and the sale of greenhouse gas emission allowances.

CPUC Rulemaking

In January 2019, the CPUC launched R.19-01-011 and proposed to address the following issues within the scope of its rulemaking proceeding: 1) implementing SB 1477; 2) potential pilot programs to address new construction in areas damaged by wildfires; 3) coordinating CPUC policies with Title 24 Building Energy Efficiency Standards and Title 20 Appliance Efficiency Standards developed at the Energy Commission; and 4) establishing a building decarbonization policy framework. The Rulemaking is looking to first implement these programs in areas damaged by wildfires, especially as they are already looking for new construction.

A wide range of parties totally approximately 50 distinct representations have already sought an active role in the proceeding and a prehearing conference to identify parties and issues was held in San Francisco on April 24, 2019. Early party motions show this will be a contested proceeding, as the Sierra Club recently submitted a filing protesting the party status of "Californians for Balanced Energy Solutions" (C4BES), a coalition of natural and renewable natural gas users. The Sierra Club contends that the coalition is largely funded by Southern California Gas Company, and that "utility-created front groups have no place in commission proceedings." C4BES responded that Sierra Club's efforts are no more than an attempt to "squelch" its ability:

> . . .to discuss an alternative viewpoint that California needs smart, balanced policies to reduce greenhouse gas emissions and that also promote affordability, reliability, and equity by employing diverse energy resources, not misguided one-size-fits-all electricity mandates."

Conclusion and Implications

While the CPUC has already implemented a number of policies to facilitate a reduction of greenhouse gas emissions in the transportation sector, such as significant authorizations for utility investment in electric vehicle charging infrastructure and the development of new rate designs and education and outreach efforts targeted to increase the adoption of electric vehicles, very little attention has been focused on building emissions despite their significant contribution to total greenhouse gas emissions, and the prevalence of "low-hanging fruit" technologies that can contribute to reduction with minimal, or more economic, cost. The CPUC and CEC's newly-directed efforts in the building sector are cheered by many who see the effort as both overdue and a necessary component to realizing the aggressive clean energy legislation recently adopted by California. The CPUC's decarbonization rulemaking will prove an important area in developing new technologies and addressing a new, untapped component of California's efforts to address climate change and reduce greenhouse gases.
(Lilly B. McKenna)

PENALTIES & SANCTIONS

RECENT INVESTIGATIONS, SETTLEMENTS, PENALTIES AND SANCTIONS

Editor's Note: Complaints and indictments discussed below are merely allegations unless or until they are proven in a court of law of competent jurisdiction. All accused are presumed innocent until convicted or judged liable. Most settlements are subject to a public comment period.

•On May 13, 2019, the U.S. Environmental Protection Agency (EPA) announced that it had reached a settlement with Producers Dairy Foods Inc. over chemical safety and risk management violations at Producers' facility in Fresno, California. Producers is one of the largest family-owned and operated dairies in the west. Under the settlement, Producers will pay a $89,960 civil penalty and make improvements to its risk management practices. In 2018, EPA inspectors found violations of the federal Clean Air Act (CAA) Risk Management Plan regulations associated with the dairy's refrigeration facilities that use anhydrous ammonia. The violations included deficiencies in the facility's process safety information, pipe labeling, operating procedures, mechanical integrity program, and follow-up on compliance audits findings. The company also failed to submit annual chemical inventory on the amount of ammonia at the facility, in violation of the Emergency Planning and Community Right-to-Know Act (EPCRA). In addition to the penalty, Producers is required to complete a supplemental environmental project to purchase and provide approximately $26,300 worth of emergency response instruments, including protective, communications, and rescue equipment to the Fresno City Fire Department to improve the Department's ability to respond to a hazardous materials emergency such as an ammonia release.

•On May 20, 2019, EPA announced a settlement with Del Monte Fresh Produce (West Coast) Inc. for violations of federal chemical safety and reporting requirements, which stem from an ammonia release at Del Monte's storage and distribution facility located in Sanger, California. Del Monte will pay a $80,000 civil penalty and spend approximately $110,000 to reduce the risk of chemical accidents at its facility. EPA inspected the distribution facility after a release of more than 24,000 pounds of anhydrous ammonia at the facility in December 2016. During the inspection, EPA found violations of the CAA Risk Management Plan regulations, including deficiencies in the plant's hazard assessment, mechanical integrity program, compliance audits, and emergency response program. EPA also found that the company failed to immediately notify the National Response Center and the California Office of Emergency Services as soon as it knew of the release, in violation of the federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)and EPCRA.

•On May 1, 2019, the U.S. Department of Justice announced that after a four week trial, a federal jury in Reading, Pennsylvania convicted David M. Dunham Jr. of conspiracy to commit wire fraud and defraud the United states, wire fraud, filing false tax documents, and obstruction of justice. The conviction stemmed from Dunham planning and executing a scheme to defraud EPA, the Internal Revenue Service, and his customers to obtain renewable fuel credits under the Renewable Fuel Standard Program. The government is seeking forfeiture of approximately $1.7 million in fraudulently obtained revenue and several parcels of real estate. In Dunham's scam, he fraudulently applied for, received, and sold "credits" for selling renewable biofuels that he, in fact, did not sell and, in many instances, had never possessed in the first place. He obtained these credits from government agencies, which resulted in Dunham obtaining $50 million in fraudulent revenue.

•On May 22, 2019, EPA announced a proposed settlement with Kayem Foods, Inc. to resolve alleged violations of the CAA Risk Management Plan regulations related to its ammonia-based refrigeration system. Kayem Foods operates a meat processing, cooking, packaging, and storage facility located in Chelsea, Massachusetts. In July 2014, EPA discovered violations of the Risk Management Plan regulations

at the facility. Kayem Foods was out of compliance and needed to upgrade and improve access to critical valves in case of emergency, provide alarms to warn of a release, reposition pressure relief piping, improve maintenance of system piping, improve the ventilation system for managing a potential ammonia release, and make other corrections at the facility. Under the proposed settlement, Kayem Foods has agreed to pay a $138,281 penalty and has verified to EPA that the facility is now in compliance with Risk Management Plan regulations.

•On May 19, 2019, the California Air Resources Board announced a settlement with Benjamin Moore & Company, of Montvale, New Jersey for manufacturing, selling, supplying, and offering for sale nonaerosol paint thinners and multi-purpose solvents which contained concentrations of volatile organic compounds and aromatic compound content that exceeded California standards. Benjamin Moore will pay a penalty of $82,000 and has stopped sales of the noncompliant products.

•On May 22, 2019, IAV GmbH, a German company that engineers and designs automotive systems, was sentenced in federal court in Detroit, Michigan to pay a $35 million criminal penalty associated with the company's guilty plea for its role in the scheme for Volkswagen AG to sell approximately 335,000 diesel vehicles in the U.S. with a defeat device to cheat on federal and California emissions tests. IAV pled guilty in December 2018 to participating in a conspiracy to defraud the United States and Volkswagen's customers about whether certain Volkswagen and Audi-branded diesel vehicles complied with U.S. emissions standards. IAV admitted that it and its co-conspirators knew the vehicles did not meet U.S. emission standards and worked collaboratively to design, test, and implement software to cheat the U.S. testing process. IAV further admitted that it was aware that Volkswagen concealed material facts about its cheating from federal and state regulators and U.S. customers. Pursuant to the U.S. sentencing guidelines, IAV's $35 million fine was set according to the company's inability to pay a higher fine amount without jeopardizing its continued viability.

•On May 21, 2019, EPA announced that its Office of Enforcement and Compliance Assurance has issued administrative compliance orders on consent to four owners/operators of coal refuse-burning electric generating units in West Virginia and Pennsylvania: American Bituminous Power Partners, L.P., owner/operator of the Grant Town Power Plant; InterPower/AhlCon Partners L.P., owner/operator of the Colver Power Project; Northern Star Generation, LLC, owner/operator of Cambria CoGeneration Company facility; and Ebensburg Power Company, owner/operator of the Ebensburg Power facility. The orders address non-compliance with the acid gas provisions of the Mercury and Air Toxics Standard (MATS). While the recipients of the orders have reported compliance with the mercury limits under MATS, EPA has found they are not currently in compliance with the acid gas emission standards for hydrochloric acid (HCI), which are evaluated for these units using sulfur dioxide emissions as a surrogate for HCI. The orders establish enforceable sulfur dioxide emission limits for each unit and require that each unit come into compliance with MATS no later than April 15, 2020.
(Allison Smith)

JUDICIAL DEVELOPMENTS

NINTH CIRCUIT HALTS MOTORIZED TRAFFIC IN SOUTHEASTERN OREGON'S HIGH DESERT IN THE FACE OF NEPA, FLPMA AND WILDERNESS ACT CHALLENGES

Oregon Natural Desert Association v. Rose, 921 F.3d 1185 (9th Cir. 2019).

The Oregon Natural Desert Association (ONDA) brought an action alleging that the United States Bureau of Land Management's (BLM) travel management plan and comprehensive recreation plan for a wilderness area violated the Steens Mountain Cooperative Management and Protection Act (Steens Act), the Federal Land Policy and Management Act (FLPMA), the Wilderness Act, and the National Environmental Policy Act (NEPA). The District Court granted the government's motion for summary judgment and plaintiff appealed. The Ninth Circuit affirmed in part, reversed in part, and remanded for further proceedings.

Factual and Procedural Background

This case arose from the BLM's decisions regarding the route network for motorized vehicles in the Steens Mountain Cooperative Management and Protection Area (Steens Mountain Area). The BLM issued two plans: the Steens Mountain Travel Management Plan (Travel Plan) and the Steens Mountain Comprehensive Recreation Plan (Recreation Plan). Plaintiff ONDA challenged the Recreation Plan and the Interior Board of Land Appeals' (IBLA) approval of the Travel Plan under NEPA, FLPMA, and the Steens Act. Harney County intervened to defend the IBLA's approval of the Travel Plan but also cross-claimed against the BLM to challenge the Recreation Plan as arbitrary and capricious. The U.S. District Court upheld both agency actions and an appeal to the Ninth Circuit then followed.

The Ninth Circuit's Decision

Consultation with the Steens Mountain Advisory Council

The Ninth Circuit first addressed the claim that the BLM had failed to satisfy its obligation to consult the Steens Mountain Advisory Council before issuing the Recreation Plan. Although the BLM must make any decision "to permanently close an existing road" or "restrict the access of motorized or mechanized vehicles on certain roads" in the Steens Mountain Area "in consultation with the advisory council," the Steens Act does not specify how such consultation must occur. Here, the Ninth Circuit found it sufficient that the BLM had: 1) opened the public comment period on the revised Recreation Plan Environmental Assessment in January 2015; 2) formally briefed the advisory council two weeks later and provided information regarding route analysis; and 3) been directed by the advisory council to "use the information" from the meetings and act as the BLM saw fit. Further, the Ninth Circuit concluded that, even if the consultation had been insufficient, any error was harmless to Harney County.

Definition of 'Roads and Trails'

The Ninth Circuit next found that the IBLA acted arbitrarily and capriciously by changing its definition of "roads and trails" without providing a reasonable explanation for the change. The Steens Act prohibits the use of motorized vehicles "off road" but also authorizes the use of motorized vehicles on "roads and trails," without defining those terms. The IBLA has reconciled this seeming contradiction by concluding that since the statute:

> . . .clearly meant to allow [the BLM] to designate roads and trails as open to motorized travel, the prohibition against motorized off-road travel logically can only mean that motorized travel that does not occur on either a road or a trail is prohibited.

In a 2009 decision on the Travel Plan, the IBLA had decided that a route that is now "difficult or impossible to identify on the ground" is neither a road

nor a trail under the Steens Act. Based on this logic, the IBLA reversed the BLM's decision to allow motorized travel on certain "obscure routes." In its 2014 remand decision on the Travel Plan, however, the IBLA reversed course and overturned its own decision to close these routes. For the first time, the IBLA defined a "road" or "trail" to encompass something that "existed as a matter of record" in October 2000 (when Congress enacted the Steens Act) "and that might again be used in the future, despite a present difficulty in tracing [it] on the ground." Because the IBLA failed to "display awareness" that it was changing position and did not "show that there are good reasons for the new policy," the Ninth Circuit found that the IBLA had acted arbitrarily and capriciously.

The Travel Plan

The Ninth Circuit next held that the IBLA had acted arbitrarily and capriciously by affirming the BLM's issuance of the Travel Plan. Specifically, it concluded that the BLM had failed to establish the baseline environmental conditions necessary for a procedurally adequate assessment of the Travel Plan's environmental impacts. Nothing in the Travel Plan Environmental Assessment, for example, established the physical condition of the routes, such as whether they were overgrown with vegetation or had become impassable in certain spots. Despite this lack of information, the Environmental Assessment authorized most routes for "Level 2" maintenance, which involves mechanically grading a route and removing roadside vegetation. Without understanding the actual condition of the routes on the ground, however, the Ninth Circuit found that the BLM could not properly assess the environmental impact of allowing motorized travel on more than 500 miles of routes or of carrying out mechanical maintenance on these routes.

The Recreation Plan

Finally, the Ninth Circuit found that the BLM had acted arbitrarily and capriciously in issuing the Recreation Plan. Again, the court held that the BLM had failed to establish the baseline conditions necessary for it to consider information about significant environmental impacts. In particular, it had failed to provide baseline conditions for the "obscure routes," at least until after the public comment period had closed.

Conclusion and Implications

The case is notable for its application of the "arbitrary and capricious" standard of review for agency actions. In the end, the court found the Bureau of Land Management's actions, especially its failure to establish baseline conditions necessary for it to consider environmental impacts, deficient. The Ninth Circuit's decision is available online at: http://cdn.ca9.uscourts.gov/datastore/opinions/2019/04/25/18-35258.pdf
(James M. Purvis)

SIXTH CIRCUIT HOLDS PUBLIC COMMENTS IN ADMINISTRATIVE PROCEEDINGS ARE INSUFFICIENT TO ESTABLISH 'INJURY' FOR STANDING IN CHALLENGING AGENCY ACTION

Protecting Air for Waterville v. Ohio Environmental Protection Agency, ___F.3d___, Case No. 18-3025 (6th Cir. Feb. 21, 2019).

Citizen groups brought a petition directly in the Sixth Circuit Court of Appeals challenging the issuance of air quality permits by the Ohio Environmental Protection Agency pursuant to delegated federal Clean Air Act the authority. To establish standing, the groups cited in sworn statements regarding individual harms submitted in the Ohio administrative proceedings. The Circuit Court rejected these as sufficient to support Article III standing, requiring, at a minimum, affidavits attesting to feared or actual harms.

Background

Three citizens groups representing owners of property along a "257-mile natural gas pipeline system originating in Ohio and running into Michigan"

challenged issuance of air quality permits issued for two natural gas compressor stations proposed in Ohio as part of the pipeline system.

In August 2017 the Federal Energy Regulatory Commission (FERC) granted a certificate of public convenience and necessity for the pipeline pursuant to the Natural Gas Act, 15 U.S.C. § 717f(c), conditioned "on the pipeline proponent obtaining air pollution-control permits required by the federal Clean Air Act." As it happened:

> . . .[t]he Ohio EPA Director had issued the permits in September 2016 pursuant to chapter 3745-31 of the Ohio Administrative Code, part of Ohio's implementation of the federal Clean Air Act. See 40 C.F.R. § 52.1870.

Prior to issuing the permits, the Ohio EPA had held public hearings, publicized in local papers, and provided the public with an opportunity to submit written comments, which were in turn responded to in writing by the agency. The three citizen groups challenged the Ohio EPA's issuance of the permits including by appeal to the Ohio Environmental Review Appeals Commission (ERAC):

> In August 2017, while discovery was ongoing, NEXUS filed motions to dismiss the ERAC proceedings for lack of subject-matter jurisdiction, claiming that the Natural Gas Act, 15 U.S.C. § 717r(d)(1), vests jurisdiction over such appeals exclusively with the United States Courts of Appeal. ERAC agreed and dismissed the appeals.

The citizens groups filed a petition for review of the ERAC dismissal directly in the Sixth Circuit, arguing that ERAC had jurisdiction to hear their challenge and the dismissal violated their due process rights, and that the Ohio EPA issued the permits in violation of its own "*de minimis*" exemption.

The Sixth Circuit's Decision

As an initial matter, the Sixth Circuit declined to resolve the jurisdictional issue because the citizens groups had failed to name ERAC as a respondent to their petition, did not serve ERAC, and the record of the proceedings before ERAC was not before the Circuit Court. The groups failed to timely address these deficiencies once they were pointed out by the pipeline proponent and Ohio EPA, and therefore the Circuit Court declined to reach their jurisdictional and due process claims.

Standing

Turning to the claim that the Ohio EPA improperly relied on its *de minimis* exception in issuing the air quality permits for the compressors, the Sixth Circuit again identified a preliminary impediment to reaching the merits: whether the citizens groups had established standing to bring their petition, *i.e.*, that they:

> . . .(1) suffered an injury in fact, (2) that is fairly traceable to the challenged conduct of the defendant, and (3) that is likely to be redressed by a favorable judicial decision. *Spokeo, Inc. v. Robins*, —— U.S. ——, 136 S. Ct. 1540, 1547, 194 L.Ed.2d 635 (2016).

The Sixth Circuit requires, in seeking direct appellate review of agency decisions, that petitioners must establish standing by presenting:

> . . .specific facts supporting standing through citations to the administrative record or 'affidavits or other evidence' attached to its opening brief, unless standing is self-evident. *Tenn. Republican Party v. SEC*, 863 F.3d 507, 517 (6th Cir. 2017).

Here, the citizens groups failed to address standing in their opening brief, so that "[e]ven the first element of standing—injury in fact—was far from self-evident in this case." The groups failed to identify any harms they themselves, or their members, would suffer:

> We cannot simply assume that petitioners have members who would be affected by the compressor stations' emissions; petitioners were required to 'present specific facts ... through citations to the administrative record or 'affidavits or other evidence' attached to its opening brief,' *Tenn. Republican Party*, 863 F.3d at 517, demonstrating that identified members of their organizations had, or would imminently, suffer a sufficiently concrete injury.

The court rejected the argument that the dismissal

of the groups' administrative appeal by ERAC had deprived them of the opportunity to, in an adversarial setting, develop a record supporting standing:

> But petitioners did not need to utilize an intensive fact-finding process to establish an injury sufficient for Article III purposes. There were many ways petitioners could have established injury without resort to the factfinding proceedings available in ERAC. While we will not decide the hypothetical question of precisely what would have sufficed, we note that courts have accepted, for example, affidavits from individual members attesting to fear of health concerns in combination with expert reports detailing the injuries that could follow from exposure.
>
> Here, however, the groups did not file any affidavits of their members attesting to any concrete or feared health-related harms, and the Court rejected reliance on unsworn statements submitted as public comments in the Ohio EPA public review proceedings. Accordingly, the petition was dismissed.

Conclusion and Implications

The seemingly low bar to establish Article III standing does nonetheless require sworn affidavits. Even had these petitioners lodged a complete administrative record of the state agency proceedings with the Circuit Court, they would nonetheless have had to supplement that record with separate, attested statements regarding individual, particularized harms. The court's opinion, which was *partially published*, appears online at: http://www.opn.ca6.uscourts.gov/opinions.pdf/19a0088n-06.pdf

'MULTI-STATE' POLLUTION—D.C. CIRCUIT ADDRESSES THE ROLE OF EPA AND STATES IN ENFORCING THE CLEAN AIR ACT'S PROTECTION AGAINST OZONE POLLUTION

State of New York v. U.S. Environmental Protection Agency, ___F.3d___, Case No. 17-1273 (D.C. Cir. 2019).

Ozone pollution creates a unique set of regulatory issues because of the way it is formed and transmitted. Ozone pollution is formed through the mixture of chemicals emitted into the air mostly by automobiles and industrial emissions that essentially combine in the air and then cook in the sun to form air pollutants. Once created, ozone pollution travels through the air and therefore can affect areas hundreds of miles downwind from the pollution sources. *Virginia v. EPA* 108 F.3d 1397, 1399-1400 (D.C. Cir.). Thus, ozone pollution created in one state can severely affect the air pollution levels of neighboring states. The federal Clean Air Act provides the U.S. Environmental Protection Agency (EPA) as well as states with several mechanisms to address this "multi-state" ozone pollution issue. However, many states see the protection mechanisms available to states inadequate and therefore, have pushed to compel the EPA to enact the enforcement mechanisms exclusively granted to the EPA by the Clean Air Act. In *State of New York v. U.S. EPA*, the U.S. Court of Appeals for the District of Columbia Circuit provided further clarity regarding these mechanisms and the responsibilities and rights that the EPA and states have in enforcing them. The court's decision suggests that the EPA retains significant discretion in this area, despite growing concerns from effected states.

Multi-State Ozone Pollution Protection Mechanisms

The Clean Air Act generally establishes three mechanisms to address multi-state ozone pollution: 1) the Northeast Ozone Transport Region, 2) the "Good Neighbor" Provision, and 3) "Section 126 Petitions." The Northeast Ozone Transport Region (NOTR) is perhaps the most stringent mechanism because it subjects any state included in the region to mandatory ozone controls. 42 USC 7511c(b).

The Clean Air Act grants the EPA the authority to identify the states that are subject to the NOTR:

> . . .whenever the Administrator has reason to believe that the interstate transport of air pollutants from such State significantly contributes to a violation of the [air-quality] standard in the transport region. 42 U.S.C. § 7506a(a)(1).

The other mechanisms do not create mandatory requirements and rely on specific assessments. The good-neighbor provision puts the onus on states by requiring each state to develop a plan to prohibit pollutants that significantly affect another state's ability to meet air-quality standards. 42 USC § 7410(a)(2)(D)(i)(I). If a state fails to develop a sufficient "good-neighbor" plan, the EPA has the authority to impose a federal plan on the state. 42 USC § 7410(c)(1), (k). Finally, the Section 126 Petition mechanism allows states to submit a petition asking EPA to investigate an air pollutant in another State that violates the good-neighbor provision. The EPA must then require the subject of the petition to come into compliance or cease operations. 42 U.S.C. § 7426(b).

State Action to Expand the NOTR

The NOTR currently consists of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, the District of Columbia, and a portion of Virginia. 42 U.S.C. § 7511c(a). Several of these "NOTR Member States" asked the EPA to expand the NOTR to include several states that they alleged to be "upwind States" or states that created significant ozone pollution effecting NOTR States due to their location and the flow of air. The proposed "Proposed New States" are Illinois, Indiana, Kentucky, Michigan, North Carolina, Ohio, Tennessee, West Virginia, and the remaining portions of Virginia. The EPA denied this request, claiming that the other ozone pollution enforcement mechanisms of the Clean Air Act were sufficient and better suited to address the potential pollution of the Proposed New States. Thus, the NOTR Member States filed court action against EPA, claiming its refusal to include the New States violated the Clean Air Act.

The D.C. Circuit's Decision

In court, the NOTR Member States made three arguments to support their contention that the EPA violated the Clean Air Act by refusing to include the Proposed New States into the NOTR. First, the NOTR Member States focused on the EPA's claim that expanding NOTR was unnecessary because the other enforcement mechanisms were sufficient to address the Proposed New States' pollution. The NOTR Member States acknowledged that the Clean Air Act gave the EPA discretion to identify the states subject to the NOTR. However, the NOTR Member States claimed that the EPA could not refrain from expanding NOTR based on a preference to rely on other enforcement mechanisms.

Second, the NOTR Member States claimed that the Clean Air Act required the EPA to expand membership if it determined that a nonmember state contributed to air pollution in other states. Since EPA acknowledged that the New Proposed States may contribute to air quality violation in other states, the NOTR Member States argued that the Clean Air Act required the EPA to expand the NOTR to include the New Proposed States.

The Circuit Court found nothing in the Clean Air Act to support either of NOTR Member State's first two contentions. In sum, the Clean Air Act states that the EPA may expand the NOTR if it determines that other areas are significantly contributing to violations of air quality standards in the existing NOTR region. 42 U.S.C. § 7506a(a)(1).

The court focused on the specific language of the Clean Air Act, noting that the EPA "may" expand the NOTR under these circumstances but is not required to do so. Thus, the Court concluded that the Clean Air Act allowed EPA to refrain from expanding the NOTR to other regions that may cause air pollution in other states if it decided that the other ozone pollution protection mechanisms were sufficient or better suited to address the specific issues.

Finally, the NOTR Member States argued that, even if the Clean Air Act grants EPA discretion to determine if the NOTR should be expanded, EPA's decision regarding the New Proposed States was an abuse of this discretion. The court similarly rejected this argument, citing to case law establishing that the EPA is entitled to an extremely deferential review of its decision. The court noted that the other enforcement mechanisms support the policy of granting the EPA deference with respect to the NOTR because the Clean Air Act generally creates a system of multiple protections options. Specifically, states can seek protection pursuant to the Section 126 Petition and the EPA can use the good-neighbor policy to protect against ozone pollution if it deems that expansion of the NOTR is not the best course of action based on the specifics of the situation.

Conclusion and Implications

The D.C. Circuit's decision provides further clarity regarding the role of the EPA and states in enforcement of the Clean Air Act's ozone pollution protections. While the Clean Air Act provides mechanisms to states to call attention to multi-state ozone pollution, the EPA retains discretion to determine how best to address specific pollution concerns. Thus, if states believe the EPA is failing to adequately address ozone pollution, the D.C. Circuit here suggests that they may have limited avenues to compel the EPA to act. However, the court also noted that several states have found recent success in utilizing the other enforcement mechanisms available to them, including the "Section 126 Petitions." Thus, states may now start focusing on these measures to address multi-state ozone pollution when the EPA fails to take action. (David Boyer)

DISTRICT COURT FINDS FEDERAL GOVERNMENT WAIVED SOVEREIGN IMMUNITY FOR NEGLIGENT RESPONSES TO FLINT WATER CRISIS

Burgess v. United States, ___F.Supp.3d___, Case Nos. 17-11218, 18-10243 (E.D. Mich. Apr. 18, 2019).

The U.S. District Court for the Eastern District of Michigan denied the federal government's motions to dismiss residents' suit against the United States under the Federal Tort Claims Act (FTCA) for the U.S. Environmental Protection Agency's (EPA) role in the Flint water crisis. A group of Flint residents alleged that EPA officials were negligent in carrying out the agency's oversight authority under the federal Safe Drinking Water Act (SDWA). The federal government moved to dismiss plaintiffs' action for lack of subject matter jurisdiction, contending sovereign immunity had not been waived because: 1) state law would not impose liability in similar circumstances (the premise for waiving immunity under the FTCA), and 2) the discretionary function exception to liability would apply. The District Court rejected both contentions.

Factual and Procedural Background

Plaintiffs' suit against the United States, arising from what is now known as the Flint Water Crisis, follows earlier actions brought against the City of Flint, the State of Michigan, and related officials.

The Safe Drinking Water Act

Section 1414 of the SDWA requires the EPA to notify a state and provide technical assistance when a public water system does not comply with the act. If the state fails to take timely enforcement action, the EPA is required to issue an administrative order requiring compliance or commence a civil action. Section 1431 of the SDWA further grants the EPA emergency powers when it has information that (i) a contaminant has entered or is likely to enter a public water system, (ii) which may present "an imminent and substantial endangerment to the health of persons," and (iii) state or local authorities have not acted to protect the public health.

The Flint Water Crisis

In April 2014, the City of Flint (City), Michigan changed the source of its water supply, suspending the purchase of finished drinking water from Detroit to draw on raw water from the Flint River processed through Flint's outdated water treatment plant.

Within weeks after the switch, EPA received a record number of resident complaints about skin rashes, hair loss, and foul smelling and tasting water. After some investigation, EPA determined that: (1) the water service lines in Flint were galvanized iron, (2) water drawn from the Flint River was highly corrosive and lead-based service lines posed a significant danger of lead leaching out of pipes, (3) Michigan was not requiring corrosion control treatment in Flint (despite communications from EPA staff urging otherwise), (4) the City was distorting its water samples to give residents false assurances about water lead levels, and (5) water samples from residents' homes showed noncompliant lead levels. The EPA was also aware of the health risks posed by lead exposure, particularly to children and pregnant women.

Internal reports established that EPA had the authority and sufficient information to issue an SDWA

§ 1431 emergency order to protect Flint residents from lead-contaminated water as early as June 2015. The EPA did not issue an emergency order until January 2016. In at least some of its communications with Flint residents, EPA also indicated that the City's drinking water met applicable health standards.

The District Court's Decision

The United States must waive its sovereign immunity in order for a court to have jurisdiction over a claim against the federal government. Through the FTCA, Congress waived the federal government's immunity from claims of injury arising from an act or omission of an employee, if state law imposes liability on a private person under similar circumstances. The FTCA excludes from its waiver of immunity any claim based on a discretionary function.

Liability under State Law

Rejecting the federal government's contention that Michigan law would not impose liability on private individuals in similar circumstances, the District Court found plaintiffs stated a cause of action under Michigan's Good Samaritan doctrine. The doctrine provides that undertaking services to protect another person creates a duty of care and liability for negligent performance, if the negligence increases the risk of harm. The court found that EPA had undertaken to render services to plaintiffs by engaging in the oversight of state and local actors under the SDWA. By alleging EPA's negligent oversight increased the risk of harm to Flint's residents, plaintiffs' stated a claim for liability under state law sufficient to proceed under the FTCA.

The Discretionary Function Exception

To determine whether plaintiffs' suit was barred by the discretionary function exception, the District Court applied a two-step analysis. The court first determined whether the challenged act or omission was discretionary in nature, and second, if so, whether the challenged discretionary conduct was susceptible to policy analysis. The discretionary function exception applies only to judgments based on policy.

Plaintiffs alleged that EPA was negligent in failing to timely respond to the crisis as mandated by §§ 1414 and 1431 of the SDWA, including failing to warn residents of the health risks posed by Flint water. Plaintiffs also alleged the EPA was negligent when responding to residents' complaints by misleading them about the safety of the water and the character of state and local management.

On plaintiffs' first claim, the District Court found that EPA had discretion to issue warnings under the SDWA, but that the agency's failure to warn residents could not be justified by any permissible exercise of policy judgment. While regulatory decisions are generally presumed to be based in policy, the court found that the SDWA authorized EPA to exercise discretion in oversight based only on objective scientific and professional standards. Moreover, the facts of the crisis presented:

> . . .a safety hazard so blatant that [officials'] failure to warn the public could not reasonably be said to involve policy considerations.

Given the "obvious danger" to the community and EPA's knowledge of the facts, the court concluded "this is an instance where decisions by government actors, even if discretionary, may pass a threshold of objective unreasonableness" that bars exemption from liability.

On plaintiffs' second claim, the court again found EPA's decision regarding whether and how to respond to residents' complaints was discretionary, but that once the government decided to act, "it was required to do so without negligence." Exemption from liability was thus denied.

Conclusion and Implications

The exercise of administrative discretion is presumed to be grounded in considerations of public policy, and thus beyond the reach of tort liability. This case provides a rare example of discretionary conduct that falls outside the presumption of regulatory immunity. The court's decision is available online at: https://www.courthousenews.com/wp-content/uploads/2019/04/burgess-flint.pdf
(Kathy Shin, Rebecca Andrews)

DISTRICT COURT GRANTS MOTIONS FOR SUMMARY JUDGMENT CHALLENGING TRUMP ADMINISTRATION'S LIFT OF COAL LEASING STAY

Citizens for Clean Energy, et al. v. U.S. Department of the Interior, et al., ___F.Supp.3d ___, Case No. 4:17-cv-00030-BMM (D. Mt. Apr. 19, 2019).

The U.S. District Court for Montana granted in part and denied in part motions for summary judgment filed on behalf of several state plaintiffs, including the State of California, and other plaintiff environmental groups. The District Court held that the Department of the Interior (Interior) and Bureau of Land Management (BLM) acted arbitrarily and capriciously by failing to initiate an environmental review, pursuant to the National Environmental Policy Act (NEPA), when ending the moratorium on the coal leasing program throughout the United States. The court denied, in part, the motions for summary judgment based on precedent that the District Court cannot compel federal agencies to act.

Factual Background

The federal government owns approximately 570 million acres of coal mineral estate. This land is administered through federal coal mining leases with BLM, pursuant to the Federal Lands Policy and Management Act (FLPMA) and the Mineral Leasing Act of 1920 (MLA). Over 40 percent of the coal produced in the United States comes from federal land.

The original environmental review of the federal coal program, including the lease of federal lands for coal mining purposes, occurred in the late 1970s. These initial studies contained little to no discussion of the impacts of coal mining on climate change and greenhouse gas emissions. By 2013, the Office of the Inspector General and the Government Accountability Office identified several shortfalls concerning the federal coal program, including the failure of BLM to receive fair market value for such leases and the lack of discussion related to increased concerns and impacts on climate change.

In January 2016, under the Obama administration, former Secretary of the Interior Sally Jewell issued an order (Jewell Order), directing BLM to prepare a programmatic Environmental Impact Statement (PEIS) relating to a review of the federal coal program. The Jewell Order placed a stay on new coal leasing activity in federal mineral estates. The purpose of the Jewell Order was:

> . . .to ensure conservation of public lands, the protection of their scientific, historic, and environmental values, and compliance with applicable environmental laws.

Secretary Jewell also acknowledged several concerns in the study of greenhouse emissions from coal use that needed to be addressed in the federal coal program.

On March 28, 2017, about a year and a half into the Jewell Order, President Trump issued Executive Order 13783, entitled, "Promoting Energy Independence and Economic Growth." Specific to the federal coal program, President Trump ordered the Secretary of the Interior Ryan Zinke to:

> . . .take all steps necessary and appropriate to amend or withdraw [the Jewell Order], and to lift any and all moratoria on Federal land coal leasing activities.

A day after the Executive Order, Secretary Zinke issued an order that revoked the Jewell Order, restarted the federal coal program, and terminated the environmental review process under NEPA (Zinke Order). Secretary Zinke justified such actions by alleging that the completion of a PEIS and environmental review would cost millions of dollars, and that the public interest would not be served by staying the federal coal program. The Zinke Order directed BLM to process coal lease applications of federal lands expeditiously and ceased all activities related to the completion of a PEIS.

Relevant Federal Statutes

The plaintiffs argued that Secretary Zinke failed to consider the environmental impacts of restarting the coal leasing program, which violates the govern-

ment's obligations under NEPA, the MLA, and the FLPMA.

NEPA's goals are to ensure that:

> . . .environmental information is available to public officials and citizens before decisions are made and before actions are taken. . . [and that]. . .public officials make decisions that are based on understanding the environmental consequences, and take actions that protect, restore, and enhance the environment. 40 C.F.R. § 1500.1(b)-(c).

In order to align with its goals, NEPA requires the preparation of a detailed Environmental Impact Statement (*i.e.*, PEIS) for any "major federal action significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). Any "major federal action" is defined to include "new and continuing activities," such as "new or revised agency rules, regulations, plans, policies, or procedures," and:

> . . .official documents prepared or approved by federal agencies which guide or prescribe alternative uses of Federal resources, upon which future agency actions will be based. 50 C.F.R. § 1508.18.

The Mineral Leasing Act authorizes and governs the leasing of public lands for the production of coal and other minerals. 30 U.S.C. § 181 *et seq*. Under the MLA, the Secretary of the Interior is authorized to lease coal on public lands "as he finds appropriate and in the public interest," provided that every sale is made by competitive bid and provides the public with fair market value.

The Federal Lands Policy and Management Act establishes the framework in which BLM manages public lands for multiple uses in a way that "will best meet the present and future needs of the American people." 43 U.S.C. § 1702(c). Congress intended that:

> . . .public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values. 43 U.S.C. § 1701(a)(8).

Lastly, the Administrative Procedure Act (APA) provides the standards for review of plaintiffs' claims. The APA provides that a court must "hold unlawful and set aside" a final agency action that is deemed "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A).

The District Court's Decision

The Zink Order Not Merely Procedural

Generally, plaintiffs argued that the decision of the Trump administration, specifically BLM and the Interior, to lift the stay on the federal coal lease program amounted to major federal action subject to NEPA review. Plaintiffs further alleged that the defendants' decision not to prepare an EIS is a decision that is reviewable under the APA. Defendants contend that the Zinke Order was simply an agency policy to proceed with coal lease applications and that no major federal or final agency action occurred.

The District Court closely examined the facts of this case against *Cal. Ex rel Lockyer v. U.S. Dept. of Agriculture*, 575 F.3d 999 (9th Cir. 2009) to determine whether the Zinke Order constituted major federal action. In *Lockyer*, President Clinton created a nationwide plan to protect roadless areas in the national forests. *Id.* at 1006. The Forest Service established a rule that prohibited road construction, reconstruction, and timber harvest in such roadless areas (Roadless Rule). *Id.* Due to a change in the executive administration, the Bush administration began work on a new rule to replace the Roadless Rule. *Id.* The Bush Administration excluded the new rule from NEPA considerations because it was "categorically exempt," and the decision to replace the Roadless Rule was:

> . . .merely procedural in nature and scope and, as such, has no direct, indirect, or cumulative effect on the environment. *Id.* at 1008.

The Ninth Circuit determined that the repeal of the Roadless Rule and its protections could not be characterized as "merely procedural" because of the significant environmental protections that were afforded by the Roadless Rule. *Id.* at 1018.

The facts and analysis in *Lockyer* were applied by the District Court in the instant case. The Jewell Order, like the Roadless Rule, involved a nationwide programmatic plan to reevaluate a federal program. Similar to the new Bush administration rule replac-

ing the Roadless Rule, the Zinke Order replaced the Jewell Order approximately a year and a half after its implementation. The one major distinction between *Lockyer* and the instant case was that the defendants in *Lockyer* determined that the replacement rule of the Roadless Rule was categorically exempt. In the instant case, defendants did not participate in NEPA at all. Defendants did not find an exemption for the Zinke Order replacing the Jewell Order, nor did defendants prepare any environmental review study.

The District Court was convinced that plaintiffs provided enough evidence to prove that the Zinke Order was not "merely procedural," and that substantial questions were raised once the moratorium on the federal coal program was lifted. Plaintiffs evidenced that ending the moratorium of the coal leasing program caused expedited coal mining on public lands that may result in environmental impacts. The potential of these impacts was so significant that NEPA should have been triggered and defendants failed its environmental obligations.

The NEPA and the Need for an EIS

Plaintiffs also requested that the District Court issue an order to defendants to complete the preparation of the PEIS under the Jewell Order. However, the District Court found that "federal courts cannot compel an agency to take specific actions." *Gardner v. U.S. Bureau of Land Mgmt.*, 638 F.3d 1217, 1221 (9th Cir. 2011). The courts can only compel an agency to act upon its legislative command. *Id.* Thus, it is up to the defendants to decide to prepare a PEIS or, at the very least, supply a "convincing statement of reasons" to explain why the Zinke Order's impacts would be insignificant. The District Court might defer to a federal agency to determine the extent of its environmental analysis pursuant to NEPA but the court found that NEPA compels defendants to take the initial step of determining the extent of the environmental analysis that the Zinke Order must endure.

Conclusion and Implications

The District Court's decision to compel the Trump administration and federal agencies engage in the requirements of NEPA is a success for environmentalist groups. The demand for an environmental review will not necessarily bring forth an exhaustive analysis and summary of critical impacts of coal mining on climate change, as the federal agencies may find that the Zinke Order does not have a significant environmental impact. Nevertheless, any level of review will require the federal government and the coal mining industry to, at the very least, become more transparent in its decisions relating to the lease of federal lands for mining purposes. The District Court's opinion is available online at: https://www.eenews.net/assets/2019/04/22/document_ew_02.pdf
(Nicolle A. Falcis, David D. Boyer)

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