2018

Turning the Tide in Coastal and Riverine Energy Infrastructure Adaptation: Can An Emerging Wave of Litigation Advance Preparation for Climate Change?

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ONE J

Oil and Gas, Natural Resources, and Energy Journal

VOLUME 4 NUMBER 4

TURNING THE TIDE IN COASTAL AND RIVERINE ENERGY INFRASTRUCTURE ADAPTATION: CAN AN EMERGING WAVE OF LITIGATION ADVANCE PREPARATION FOR CLIMATE CHANGE?

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Recent hurricanes have inundated energy infrastructure with the realities of a changing climate. When Hurricane Harvey slammed into the heart of the oil industry in 2017, it exposed as many as 650 energy and industrial facilities to flooding.[1] In the aftermath of Harvey, Texas refineries, storage terminals, and other facilities, spilled over 22,000 barrels of crude oil, gasoline, diesel, and drilling wastewater.[2] These leaks are only a fraction of the 90,000 barrels spilled in Louisiana in 2005 after Hurricane Katrina.[3] Flooding from Hurricanes Harvey also triggered industrial facilities to spew air pollution during electrical failures, resultant accidents, and unexpected shut-downs. Across Texas, Hurricane Harvey resulted in the release of 8.3 million pounds of unpermitted air pollution from petrochemical plants

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1. Union of Concerned Scientists, *Hurricane Harvey's Impact on Energy and Industrial Facilities*, https://ucsusa.maps.arcgis.com/apps/MapJournal/index.html?appid=1e958eff5c3e45a983e52ad523c2ffdd (last visited Oct. 12, 2018).

2. Emily Flitter and Richard Valdmanis, *Oil and Chemical Spills from Hurricane Harvey Big, But Dwarfed by Katrina*, REUTERS (Sept. 15, 2017), https://www.reuters.com/article/us-storm-harvey-spills/oil-and-chemical-spills-from-hurricane-harvey-big-but-dwarfed-by-katrina-idUSKCN1BQ1E8.

3. *Id.*

including toxic fumes released from the Arkema Chemical plant in Crosby which forced evacuations of everyone within a 1.5 mile radius.[4] These incidents underscore the growing vulnerability of many coastal and riverine facilities that store, process, or transport petroleum products and chemicals, to the many impacts of a changing climate, including increasing heavy precipitation, hurricanes, and sea level rise-enhanced storm surge.[5]

A new wave of "failure to adapt" lawsuits has sought to clarify how a changing climate may change what reasonable preparations governments and private actors must take, including increasing the resilience of their infrastructure.[6] These suits span constitutional, tort, and statutory law more broadly, but unprepared owners of energy infrastructure may risk additional violations under environmental law due to unpermitted releases of air and water pollution during extreme weather events for which they are not adequately prepared. This piece will specifically consider recent legal and administrative suits that may indicate shifting legal responsibilities for coastal and riverine energy infrastructure owners under the Clean Water Act (CWA), the Resource Conservation & Recovery Act (RCRA), state air and water codes, and the National Environmental Policy Act (NEPA). Even if redress is unavailable to plaintiffs, these suits help clarify where the current regulatory regime does obligate consideration of changing

4. ENVIRONMENTAL INTEGRITY PROJECT, PREPARING FOR THE NEXT STORM: LEARNING FROM THE MAN-MADE ENVIRONMENTAL DISASTERS THAT FOLLOWED HURRICANE HARVEY (Aug. 16, 2018), http://www.environmentalintegrity.org/wp-content/uploads/2018/08/Hurricane-Harvey-Report-Final.pdf (synthesizing reports of unpermitted air pollution from industry filed with the state of Texas Environmental Electronic Reporting System, STEERS 2018, available at https://www3.tceq.texas.gov/steers/ and accessed 7/21/2018).

5. *See generally* U.S. DEPT. OF ENERGY, CLIMATE CHANGE AND THE U.S. ENERGY SECTOR: REGIONAL VULNERABILITIES AND RESILIENCE SOLUTIONS (Oct. 2015), https://www.energy.gov/sites/prod/files/2015/10/f27/Regional_Climate_Vulnerabilities_and_Resilience_Solutions_0.pdf (discussing the wide variety of climate change impacts on different components of the energy sector by region).

6. *See* JUSTIN GUNDLACH AND JENNIFER KLEIN, Chapter 6: The Built Environment, in CLIMATE CHANGE, PUBLIC HEALTH, AND THE LAW, 147-168 (Michael Burger & Justin Gundlach, eds. New York: Cambridge University Press 2018), (available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3086217) (summarizing negligence and takings claims against governments for failure to adapt to climate change); *DEANNA MORAN AND ELENA MIHALY, CONSERVATION LAW FOUNDATION, CLIMATE ADAPTATION AND LIABILITY: A LEGAL PRIMER AND WORKSHOP SUMMARY REPORT*, 7-37(January 2018), https://www.clf.org/wp-content/uploads/2018/01/GRC_CLF_Report_R8.pdf (discussing potential liability and emerging suits against design professionals, contractors, developers, realtors, insurance agents, and governments for failure to adapt to climate change).

conditions and where regulatory reform could reduce climate change-related risks to communities and the surrounding environment.

Climate Change & Energy Infrastructure

Climate change will exacerbate flood risk for coastal and other energy infrastructure vulnerable to flooding worsened by a combination of factors that combine synergistically, including heavier precipitation events, sea level rise, and greater storm surge.[7] The U.S. Global Climate Change Research Program (USGCCRP), the body designated by Congress to determine the state of climate science to inform federal policy, concludes that global average sea levels will rise by 1–4 feet by 2100 and that a rise of as much as 8 feet by 2100 is possible.[8] Sea level rise coupled with increased hurricane storm intensity, greater frequency of more severe hurricanes, and increased heavy precipitation events leave energy infrastructure in low-lying coastal plains particularly vulnerable to increases in flooding.[9] High winds, coastal erosion, flooding, and large waves from hurricanes and sea level rise-enhanced storm surge threaten the hotbed of oil and gas production, ports, pipelines, refineries, and storage facilities along the Gulf Coast.[10]

While climate change will help shape the extent and timing of adaptation efforts, attributing extreme weather events to the climate change fingerprint may not prove the most critical factor for facilities seeking to minimize their physical—or legal—vulnerability. Already, coastal energy and industrial facilities are facing the challenges of increasingly intense and frequent storm events, associated flooding risks, and resulting lawsuits for flooding-related alleged violations of environmental law as illustrated by

7. *See e.g.*, U.S. Dept. of Energy, *supra* note 5, at 5-1—5-6 and 8-1—8-8; *see also* JAN DELL ET AL., *CLIMATE CHANGE IMPACTS IN THE UNITED STATES: CHAPTER 4 ENERGY SUPPLY AND USE* 113-129 (J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., 2014) (available for download at doi:10.7930/J0BG2KWD); Craig Zamuda et al., *Energy Supply, Delivery, and Demand*, *in* IMPACTS, RISKS, AND ADAPTATION IN THE UNITED STATES: FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II 165-192 (D.R. Reidmiller et al. Eds. 2018) (available for download at. doi: 10.7930/NCA4.2018.CH4).

8. Donald J. Wuebbles et al., *Executive Summary*, *in* CLIMATE SCIENCE SPECIAL REPORT: FOURTH NATIONAL CLIMATE ASSESSMENT VOLUME I 25-26 (Donald J. Wuebbles et al. eds.,2017) (available at https://science2017.globalchange.gov/chapter/executive-summary/).

9. *See e.g*., U.S. Dept. of Energy, *supra* note 5, at 5-1—5-6 and 8-1—8-8.; *see also*, Third National Climate Assessment: Chapter 4, *supra* note 7.

10. *Id.*

the cases below. However, infrastructure owners seeking to limit the vulnerability of their facilities into the future should adopt a number of best practices for consideration of climate change impacts including evaluation of climate impacts under multiple scenarios and over the expected operational life of the facility and any decommissioning activities. That consideration of these impacts should inform the selection of design features, alternatives, site location, and mitigation measures.[11]

"Failure to Adapt" Under the Clean Water Act and Resources Conservation & Recovery Act

Coastal energy infrastructure owners have a number of existing legal obligations under the CWA and RCRA to prepare their facilities for the risk of flooding. The CWA prohibits discharge of pollutants from a point source into a water of the United States without a National Pollutant Discharge Elimination System ("NPDES") permit or state-level equivalent permit.[12] Under these permits, industrial facilities must comply with technology-based "effluent limitations" achieved in part through the design and implementation of stormwater pollution prevention plans ("SWPPPs") that observe best management practices including structural and non-structural controls. [13] Facilities with oil or hazardous substances must additionally undertake spill prevention, control and countermeasures plans ("SPCCs"), containing "procedures, methods, equipment, and other requirements" to prevent discharging oil or other pollutants into waterways.[14] As illustrated by the spills of petroleum products during Hurricanes Harvey and Katrina, preparation for storms plays a crucial role in avoiding unpermitted discharges.

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11. *See e.g.*, Jessica Wentz, Assessing the Impacts of Climate Change on the Built Environment under NEPA and State EIA Laws, SABIN CENTER FOR CLIMATE CHANGE LAW 49-56 (Aug. 2015), http://columbiaclimatelaw.com/files/2016/06/Wentz-2015-08-Climate-Change-Impact-on-Built-Environment-.pdf (describing a model protocol for agency environmental review of climate change considerations that could also serve as a model of best practices for industry).

12. 33 U.S.C. § 1311(a) (2018). Most states are now authorized to administer the NPDES program. For the purposes of this paper, "states" also refers to territories and tribes.

13. 40 C.F.R. § 122.26(c) (2018); *See also* ENVIRONMENTAL PROTECTION AGENCY, DEVELOPING YOUR STORMWATER POLLUTION PREVENTION PLAN: A GUIDE FOR INDUSTRIAL OPERATORS 14-25 (Feb. 2009), https://www3.epa.gov/npdes/pubs/industrial_swppp_guide.pdf.

14. 40 C.F.R. § 112.1 (2018).

RCRA regulations similarly require facilities which produce, handle, or dispose of hazardous waste to develop emergency contingency plans that "minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water."[15] To obtain a permit under RCRA, applicants must describe their practices and equipment to prevent flooding, prevent runoff from hazardous waste handling areas, and mitigate equipment failure and power outages.[16] Facilities located in a 100-year flood plain must specifically provide information related to how the facility will withstand a 100-year flood.[17]

As climate change increases the flood exposure faced by coastal energy facilities and the extent of the 100-year floodplain, facilities will need to update their best management practices and infrastructure to avoid accidental releases. However, as long as facilities are in compliance with the planning and other requirements of their permits, they are generally "shielded" from enforcement of violations under CWA and RCRA even if they exceed discharge limitations. Recent litigation may clarify whether CWA and RCRA permitees are required to change their practices in light of climate change or risk losing this "shield." In 2017, the Conservation Law Foundation (CLF) filed a citizen suit (hereinafter "Shell Complaint") against Shell Oil, alleging that their bulk storage and fuel terminal in Providence, RI violated RCRA and the CWA because they did not prepare for the increased coastal flooding risk from climate change.[18] The lawsuit is similar to one brought by CLF in 2016 against ExxonMobil concerning its Everett Terminal in Massachusetts ("the Exxon Case").[19] In these cases, CLF argued that in light of each company's knowledge about climate change risks, both companies violated the CWA in myriad ways, including failure to conform a SWPPP with good engineering practices, to identify all

15. 40 C.F.R. § 265.51(a) (2018). *See also* 40 C.F.R. § 265.52 (2018) (describing requirements for contingency planning and emergency procedures for facilities generating or accumulating more than 6000 kg of hazardous secondary material). *See also* 40 C.F.R. § 270.14 (2018) (describing emergency procedures for facilities generating less than 6000 kg of hazardous secondary material).

16. 40 C.F.R. § 270.14(b)(11)(iii-iv) (2018).

17. *Id.*

18. Amended Complaint, Conservation Law Found., Inc. v. Shell Oil Products US, No. 1:17-cv-00396 (D.R.I. Oct. 25, 2017) (alleging 20 violations of the CWA and 1 violation of RCRA). On October 4, 2018, the Conservation Law Foundation filed a motion for leave to file a second amended complaint which alleges an additional RCRA violation.

19. Amended Complaint, Conservation Law Found. v. ExxonMobil Corp., No. 1:16-cv-11950 (D. Ma. Oct. 20, 2017) (alleging 14 violations of the CWA and 1 violation of RCRA).

sources of pollution, to describe and implement practices to reduce pollutants and their discharge, to address the adequacy of containment measures for leaks and spills in storage and/or truck loading areas, to amend or update the relevant SWPPP, and to properly operate and maintain facilities and systems of treatment.[20] CLF further alleged that both companies violated RCRA by their handling, storage, treatment, transportation, or disposal of solid and hazardous wastes in manner which may present an imminent and substantial endangerment to health or the environment.[21]

In September 2017, the U.S. District Court for the District of Massachusetts found that CLF lacked standing in the Exxon Case to sue for "for injuries that allegedly will result from rises in sea level, or increases in the severity and frequency of storms and flooding, that will occur in the far future, such as in 2050 or 2100."[22] The court reasoned that such harms were not "imminent" and thus unripe because "the Environmental Protection Agency may require changes to the [p]ermit that will prevent the harms from occurring."[23] However, the court recognized CLF's standing to sue for present and imminent storm-related risks and found facts sufficient to support a claim that Exxon was currently discharging pollutants in excess of its permit and to recognize the "substantial risk" that severe weather events could cause the terminal to violate its permit in the near future.[24] CLF amended its complaints in both the Exxon and Shell suits based on this determination and both cases are still pending as of completion of this article.

The district court's decision on standing underscores the lesson that recent hurricanes graphically depict—climate change damages are happening now and industry is on notice to update their technological controls and best practices. As the court order in the Exxon suit indicates, the attribution of storm-related risks to climate change is not a necessary component of a viable suit.[25] However, as climate change increases the frequency and intensity of storms, static technology and planning standards combined with permit shields for leaking facilities, could quite literally

20. *See* Exxon Complaint at 51-68; Shell Complaint at 60-80.

21. *See* Exxon Complaint at 68-71; Shell Complaint at 80-84.

22. Order Granting In Part and Denying In Part Defendants' Motion to Dismiss at 2, Conservation Law Found. V. ExxonMobil Corp., No. 1:16-cv-11950 (D. Ma. Sept. 13, 2017).

23. *Id.* at 3.

24. *Id.* at 2.

25. *Id.*

water down environmental protections. Regardless of the outcome of CLF's litigation, changing conditions should trigger state updates of permitting requirements to better protect citizens and the environment from a new reality. For example, the CWA is designed such that when baseline technology requirements prove insufficient to protect state-adopted water quality standards, the EPA Administrator or states are responsible for tightening the allowances in permits.[26] The devastation suffered over recent hurricane seasons demonstrates it is past time for the EPA and the states to update the permitting requirements for facilities vulnerable to climate change impacts such as sea level rise, storm surge, and more frequent and intense storms.

State-Level Air & Water Code Violations

In addition to potential federal statutory violations, flooding-related harms also raise claims under state-level air and water codes and tort law. Suits concerning flooding-related harms under tort law or state-level codes may not mention climate change explicitly, but climate may nevertheless shift the parameters of what constitutes a "reasonably foreseeable" flooding event that causes an illegal discharge to air or water.

Though not explicitly mentioned, climate change nevertheless plays a role in litigation filed by Harris County and the state of Texas[27] after Hurricane Harvey flooded the Arkema Crosby chemical plant leaking chemicals into surrounding waters and causing explosions which exposed nearby residents and first responders to toxic fumes. Flooding from the storm caused a power failure and highly combustible chemicals at the plant exploded upon the loss of refrigeration. The Harris County suit alleged

26. 33 U.S.C. §§ 1312(a), 1314(l) (describing when the Administrator or a state should enact additional effluent limitations (including alternative effluent control strategies) for such point source or sources which are interfering with attainment or maintenance of water quality under the current controls); *see also* Robin Kundis Craig, *The Clean Water Act on the Cutting Edge: Climate Change and Water-Quality Regulation*, 24 Nat. Res. & Env't 14, 17 (Fall 2009) ("Ordinarily, most of the discharge limitations in an NPDES permit reflect technology-based effluent limitations. *See* 33 U.S.C. § 1311(b). However, if these requirements are not stringent enough to ensure that the waterbody in question meets its WQS, EPA or the state is supposed to adjust the permit limits with water-quality-based effluent limitations. 33U.S.C. § 1312(a).").

27. Petition, Harris County, Texas v. Arkema Inc., No. 2017-76961-7 (Tex. Dist. Ct. Nov. 16, 2017). (petition available at http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/case-documents/2017/20171116_docket-2017-76961_petition.pdf).

violations of the Texas Air and Water Codes as did a subsequent suit filed months later by neighboring Liberty County.[28] First responders also sued Arkema under several theories of negligence.[29]

In August 2018, a grand jury indicted Arkema, its CEO for North America, and the Crosby plant manager for "recklessly" releasing harmful air pollutants during Hurricane Harvey.[30] Harris County's suit under the Texas Water Code's "reckless" standard for release of a contaminant raises interesting questions for other Gulf facilities which could release chemicals during a flooding event.[31] The Texas Penal Code defines "reckless" acts as those taken by an individual or entity who is "aware of but consciously disregards a substantial and unjustifiable risk ... of such a nature and degree that its disregard constitutes a gross deviation from the standard of care that an ordinary person would exercise under all the circumstances as viewed from the actor's standpoint."[32] Under the ever growing body of evidence for sea level rise and improving projections for increased intensity and frequency of hurricanes and extreme precipitation events, facilities may become increasingly at risk of committing "reckless" activity unless they update their infrastructure and planning. The pursuit of the suit by Harris County also marks a shift in at least one governments' willingness to hold companies accountable for failing to adapt and prepare their facilities for an unprecedented level of local flooding.[33] Arguably, such suits would be climate cases by another name, especially as extreme events such as Harvey grow increasingly foreseeable, and the science of attributing extreme weather events to climate change continues to develop.

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28. Keri Blackinger, *Liberty County Sues Arkema for $1 Million over Harvey Disaster*, HOUSTON CHRONICLE (Mar. 12 ,2018), https://www.chron.com/news/houston-texas/article/Liberty-County-sues-Arkema-for-1-million-over-12746382.php.

29. Complaint at 11-14, Graves v. Arkema Inc., No. 4:17-cv-03068 (S.D. Tex. Oct. 12, 2017).

30. Harris County District Attorney, Press Release for Indictment of Arkema North America (Aug. 3, 2018), https://app.dao.hctx.net/sites/default/files/2018-08/Arkema%20Indicted_0.pdf.

31. *See* TEX. WATER CODE ANN. § 7.182(a) (West 2018) (" A person commits an offense if the person recklessly, with respect to the person's conduct, emits an air contaminant that places another person in imminent danger of death or serious bodily injury, unless the emission is made in strict compliance with Chapter 382, Health and Safety Code, or a permit, variance, or order issued or a rule adopted by the commission.").

32. TEX. PENAL CODE ANN. § 6.03(c) (West 2017)

33. Benjamin Patton and Mary Balaster, *What The Arkema Indictment Means For Chemical Cos.*, LAW360 (Sept. 6, 2018), https://www.law360.com/texas/articles/1079659/what-the-arkema-indictment-means-for-chemical-cos-.

Failure to Consider Climate Impacts During Environmental Review Under NEPA

The construction of new energy infrastructure may also present obligations to consider climate change impacts as part of the environmental review process. The National Environmental Policy Act (NEPA) requires all agencies of the Federal Government conducting major federal actions significantly affecting the quality of the human environment—which can include permitting energy infrastructure—to produce a detailed statement on "(i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, [and] (iii) alternatives to the proposed action."[34] This analysis includes considerations on how the environment may affect a project—sometimes known as "reverse environmental impact analysis."[35] In 2016, the Council on Environmental Quality (CEQ) finalized guidance clarifying how "climate change effects on the environment and on the proposed project should be considered in the analysis of a project considered vulnerable to the effects of climate change such as increasing sea level, drought, high intensity precipitation events, increased fire risk, or ecological change."[36] While this guidance was subsequently withdrawn by the Trump Administration, that does not affect the judicially upheld obligations underlying its recommendations, as was explicitly noted in the withdrawal notice.[37]

The recent surge in proposals for LNG projects may test how climate change impacts will factor into environmental review. Under the Natural Gas Act, the Federal Energy Regulatory Commission (FERC) bears responsibility to conduct review of new natural gas-related infrastructure. In

34. 42 U.S.C.A. § 4332 (2018).

35. Michael B. Gerrard, *Reverse Environmental Impact Analysis: Effect of Climate Change on Projects*, NEW YORK LAW JOURNAL, (March 8, 2012), http://columbiaclimatelaw.com/files/2016/06/Gerrard-2012-03-Reverse-Environmental-Impact-Analysis.pdf.

36. COUNCIL ON ENVTL. QUALITY EXEC. OFFICE OF THE PRESIDENT, *MEMORANDUM FOR HEADS OF FEDERAL DEPARTMENTS AND AGENCIES, FINAL GUIDANCE FOR FEDERAL DEPARTMENTS AND AGENCIES ON CONSIDERATION OF GREENHOUSE GAS EMISSIONS AND THE EFFECTS OF CLIMATE CHANGE IN NATIONAL ENVIRONMENTAL POLICY ACT REVIEWS*, 24 (2016), https://perma.cc/QP7E-7PUM.

37. Withdrawal of Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 82 Fed. Reg. 16576-01 (April 5, 2017) ("The withdrawal of the guidance does not change any law, regulation, or other legally binding requirement.").

2017, FERC put forward guidance concerning environmental review of natural-gas related projects, recommending facilities report on natural hazards in the project area including: "extreme winds and flooding (including scour effects) associated with hurricanes, flashfloods, storm surge, tsunami, or sea level rise due to climate change"[38] and "assess the proposed [project's] design in the context of climate change and anticipated sea level rise or storm surge flooding."[39] It contained further instructions in a second volume pertaining to LNG facilities that included instructions for natural hazard design to consider sea level rise during the life of the project in conjunction with tsunamis, flooding, and hurricanes.[40] Two recent administrative proceedings before FERC contested whether climate impacts were adequately considered during the environmental review process for two natural gas infrastructure projects. In one case FERC found the impacts of climate change on the project were adequately considered as part of an environmental assessment.[41] In the other case, involving the Atlantic Bridge Project, FERC denied a rehearing, rejecting the need for further environmental review or consideration of additional claims concerning climate change-related risks.[42]

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38. FEDERAL ENERGY REGULATORY COMMISSION, *GUIDANCE MANUAL FOR ENVIRONMENTAL REPORT PREPARATION FOR APPLICATIONS FILED UNDER THE NATURAL GAS ACT, VOL. 1* 4-86 (February 2017), (available at https://www.ferc.gov/industries/gas/enviro/guidelines/guidance-manual-volume-1.pdf).

39. *Id*. at 4-89 (instructing applicants to "describe the predicted rise in sea levels or flood elevations at the site, evaluate the associated risk to the facility, and discuss the measures that you incorporated into the design to mitigate for higher sea or flood levels").

40. FEDERAL ENERGY REGULATORY COMMISSION, *GUIDANCE MANUAL FOR ENVIRONMENTAL REPORT PREPARATION FOR APPLICATIONS FILED UNDER THE NATURAL GAS ACT, VOL. 2* 13-6, 13-119—13-122, 13-124 (February 2017), (available at https://www.ferc.gov/industries/gas/enviro/guidelines/guidance-manual-volume-2.pdf).

41. Order Denying Rehearing and Stay, Dominion Cove Point LNG, LP, 151 FERC ¶ 61095 at 24-25, (2015) (finding the impacts of climate change including sea level rise, storm surge, and more intense winds and storms were adequately considered because the facility would be constructed at sufficient elevation, to withstand 150 mile-per-hour winds, and that operations could be suspended during storm or wind events). Further challenges to this order went through the appeals process and were upheld by the D.C. Circuit, Earthreports, Inc. v. FERC, 828 F.3d 949 (D.C. Cir. July 15, 2016), but these matters were not focused on the question of climate change impacts on the project.

42. Order on Rehearing, Algonquin Gas Transmission, LLC, 161 FERC ¶ 61255 at 12-13, 14-15, 49-50, 68-69 (2017) (rehearing denied) (asserting in several places that the permanent station facility footprint was not within a flood zone, the compressor station would be elevated, and the facility would be designed to mitigate climate change-induced sea level rise and storm surge over the next fifty years).

While these two administrative suits turned in favor of the facility owners, they do not lessen or undermine any legal obligations for facilities to prepare for climate impacts—they only find those obligations met in the circumstances reviewed. Recent case law concerning non-energy sector facilities and projects affirms a requirement to consider climate impacts during environmental review of major federal projects affecting the environment; both before and after withdrawal of the CEQ Guidance, several federal courts have confirmed that NEPA regulations require federal agencies to evaluate the impacts of a changing climate on their actions.[43] Facility owners are already incentivized to protect their investments, but these developments drive home the necessity of making the review of climate change impacts part of the planning process.

Conclusion

A changing climate may not yet have resulted in a clearly changed landscape of legal obligations to account for climate change impacts. However, the developing suits discussed in this piece should put owners of coastal and riverine energy infrastructure on notice of their existing obligations to prepare for extreme weather events and potential changes to those obligations as regulatory regimes better integrate consideration of climate change impacts. Even if plaintiffs are unsuccessful in the above suits, energy infrastructure owners can limit legal and physical risks to their facilities by planning for the impacts of climate change over the lifetime of their facilities and selecting design features, alternatives, site location, and mitigation measures accordingly.

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43. Central Oregon Landwatch v. Connaughton, 696 F. App'x 816 (9th Cir. 2017) (finding that qualitative rather than quantitative analysis of climate change impacts on proposal and stream flows was sufficient); AquaAlliance, et al., v. U.S. Bureau of Reclamation, No. 1:15-CV-754-LJO-BAM, 2018 WL 903746, at *38-*39 (E.D. Cal. Feb. 15, 2018) (finding that the Bureau failed to adequately account for effects of climate change on water management project);; Idaho Rivers United v. United States Army Corps of Engineers, No. C14-1800JLR, 2016 WL 498911, at *17 (W.D. Wash. Feb. 9, 2016) (finding the USACE analysis of the effect of climate change on sediment disposition was adequate); Kunaknana v. U.S. Army Corps of Engineers, No. 3:13-CV-00044-SLG, 2015 WL 3397150, at *10-*12 (D. Alaska May 26, 2015) (finding the USACE reasonably concluded, based on a supplemental information report, that a supplemental EIS was not necessary); Kunaknana v. U.S. Army Corps of Engineers, 23 F. Supp. 3d 1063, 1092-98 (D. Alaska 2014) (determining that USACE should consider whether to prepare supplemental EIS for issuance of § 404 permit in light of new information on climate change).