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Secretary Kimberly D. Bose
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

December 5, 2017

RE: Planned Fourchon LNG Project; Notice of Intent to Prepare an Environmental Impact Statement for the Planned Fourchon LNG Project (PF17-9-000)

Secretary Bose:

The Sabin Center for Climate Change Law (“SCCCL”)¹ submits these comments on the scope of the proposed environmental impact statement (“EIS”) for the Fourchon LNG Project, announced by the Federal Energy Regulatory Commission (“FERC” or the “Commission”) in October 2017.

For the limited purposes of these comments, SCCCL takes no position on the export of liquefied natural gas (“LNG”) or on whether FERC should approve the Fourchon LNG Project (the “Project”). Rather, consistent with the scoping process’s goal of identifying significant issues for FERC to consider, SCCCL’s comments focus on the potential impacts of climate change on the Project—impacts not identified in FERC’s Notice of Intent.

NEPA and Climate Change

Pursuant to its obligations under the National Environmental Policy Act (“NEPA”), the Commission must consider the environmental impacts of sea level rise and associated storm surge, flooding, and coastal erosion risks, as exacerbated by increased frequency and intensity of hurricanes and tropical storms. In addition, it would be consistent with the purposes of NEPA for the agency to also assess the indirect impacts of upstream and downstream Project-related activities and to disclose the greenhouse gas emissions associated with them. NEPA’s implementing regulations provide that agencies must consider significant and reasonably foreseeable indirect and cumulative environmental impacts.² Several federal courts have confirmed that NEPA regulations require federal agencies to evaluate the climate change-related impacts of their actions³—meaning both impacts arising from a changing climate and those that

¹ The Sabin Center for Climate Change Law at Columbia Law School develops legal techniques to fight climate change, trains law students and lawyers in their use, and provides the public with up-to-date resources on key topics in climate law and regulation. SCCCL works closely with the scientists at Columbia University’s Earth Institute and with governmental, nongovernmental, and academic organizations. See <http://web.law.columbia.edu/climate-change>. Please contact SCCCL for assistance locating any sources.

² See 40 C.F.R. §§ 1508.7 (defining “cumulative impact”), 1508.8 (defining “effects” as including direct and reasonably foreseeable indirect effects), 1508.25(c) (providing that EISs must consider direct, indirect, and cumulative impacts); see also CEQ, *Considering Cumulative Effects under the National Environmental Policy Act* (1997) [hereinafter “Considering Cumulative Effects Under NEPA”], available at <http://1.usa.gov/JLkM2I>.

³ *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1215-1217 (9th Cir. 2008) (finding that “[t]he impact of greenhouse gas emissions on climate change is precisely the kind of cumulative

give rise to climate change. Accordingly, the Commission must consider sea level rise, the increasing frequency and severity of hurricanes, and their combined effects on storm surge as future baseline environmental conditions.⁴ Agencies must define an appropriate baseline for considering projected environmental impacts and that such a baseline should incorporate anticipated environmental conditions.⁵ Furthermore, the withdrawal of the CEQ guidelines does not affect the above judicially upheld obligations as was explicitly noted in the withdrawal notice.⁶

In addition, the Commission should consider the downstream greenhouse gas emissions caused by fossil fuel combustion,⁷ as well as the other life cycle emissions from the facility's production and transportation of LNG.⁸ Recent decisions from the D.C. Circuit have left a fundamental gap in accounting for the greenhouse gas emissions resulting from export-induced increases in domestic production,⁹ and FERC should fill this gap using its authority under the Natural Gas Act as designated lead agency for NEPA compliance.¹⁰

impacts analysis that NEPA requires agencies to conduct"); *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 548-50 (8th Cir. 2003) (finding that degradation in air quality was a reasonably foreseeable indirect effect of a project that would increase the supply of coal to power plants); *High Country Conservation Advocates v. United States Forest Serv.*, No. 13-CV-01723-RBJ, 2014 WL 2922751, at *8-11, 13-15 (D. Colo. June 27, 2014) (holding that it was arbitrary and capricious for federal agencies to omit analysis of GHG emissions and related costs in EISs for mining exploration projects); FERC, Guidance Manual for Environmental Report Preparation for Applications Filed Under the Natural Gas Act, FN 15, 4-123—4-127 (Feb. 2017), <https://perma.cc/7DAW-BX9P> (instructing "[y]ou should provide the data needed to support our NEPA analysis (e.g., the project's contribution to GHG emissions; local or state GHG emissions; and any local, state, or regional goals for GHG emissions or climate change," and requiring reporting on greenhouse gas emissions from construction and operation of facilities).

⁴ See Considering Cumulative Effects under NEPA, *supra* note 2, at 41; 40 C.F.R. 1502.15 (defining "affected environment").

⁵ *Id.*

⁶ 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 (April 5, 2017), available at <https://www.federalregister.gov/documents/2017/04/05/2017-06770/withdrawal-of-final-guidance-for-federal-departments-and-agencies-on-consideration-of-greenhouse-gas> ("The withdrawal of the guidance does not change any law, regulation, or other legally binding requirement.").

⁷ *Sierra Club v. Fed. Energy Regulatory Comm'n*, 867 F.3d 1357, 1373–74 (D.C. Cir. 2017) ("We conclude that the EIS...should have either given a quantitative estimate of the downstream greenhouse emissions that will result from burning the natural gas that the pipelines will transport or explained more specifically why it could not have done so. As we have noted, greenhouse-gas emissions are an indirect effect of authorizing this project, which FERC could reasonably foresee, and which the agency has legal authority to mitigate."). See also, *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 549 (8th Cir. 2003) (finding in NEPA review for coal railway, STB must account for greenhouse gas emissions and air quality effects from foreseeable increase in coal consumption and combustion).

⁸ *Sierra Club v. United States Dep't of Energy*, 867 F.3d 189, 201–02 (D.C. Cir. 2017) (noting that as part of its review "the Department evaluated the upstream and downstream greenhouse-gas emissions (CO₂ and methane) from producing, transporting, and exporting LNG in its Life Cycle Report").

⁹ *Id.* (finding the Department of Energy did not need to consider export-induced increases in natural gas production); *Sierra Club v. Fed. Energy Regulatory Comm'n*, 827 F.3d 36 (D.C. Cir. 2016) (finding that FERC did not need to consider emissions that would only occur if the Department of Energy approved the facility for LNG export).

¹⁰ 15 U.S.C. § 717n(b)(1) (designating the Commission to be "the lead agency for the purposes of coordinating all applicable Federal authorizations and for the purposes of complying with the National Environmental Policy Act"); see also 42 U.S.C. § 7172(a)(2)(B).

Complementing NEPA requirements, state law also supports consideration of climate change adaptation in the proposed EIS. In response to hurricanes Katrina and Rita, the Louisiana Legislature passed Act 8 of the First Extraordinary Session of 2005 (Act 8). Act 8 which established the Coastal Protection and Restoration Authority (CPRA). The CPRA is legally required to develop and implement a comprehensive coastal protection plan, consisting of a master plan (revised every five years) and annual plans.¹¹ In June 2017, the Louisiana State Legislature unanimously approved the state's 2017 Coastal Master Plan.¹² Additionally, under Louisiana Executive Order JBE2016-09, signed by the Governor in April 2016, all state agencies, departments, and offices must carry out their regulatory programs, practices, grants, and contracts "in a manner consistent with the Coastal Master Plan and the public interest to the maximum extent possible."¹³

Federal guidance also directs the Commission to assess climate change impacts. First, the Securities and Exchange Commission ("SEC") has issued guidance regarding publicly traded companies' obligation to disclose the impacts that climate change may have on their operations.¹⁴ FERC can facilitate such disclosure by conducting an analysis of climate change impacts on the proposed facility.

FERC itself has already recognized the relevance and importance of climate change impacts to similar and similarly situated facilities in Louisiana and elsewhere. For instance, FERC required consideration of climate change impacts in connection with a proposed LNG export facility in flood-prone coastal Louisiana (the "Mississippi River LNG Project").¹⁵ After the applicant for the Mississippi River LNG Project submitted draft resource reports to the Commission, FERC directed the applicant to supplement the reports with information regarding potential impacts of sea level rise and storm impacts for the design life of the facility.¹⁶ Similarly, FERC's Environmental Assessments—not even full Environmental Impact Statements—of the Dominion Cove Point LNG export facility on the Chesapeake Bay and the Cameron LNG facility in coastal Louisiana both consider several implications of climate change for their respective facilities.¹⁷ Nothing about the Fourchon LNG Project makes it less

¹¹ LA. STAT. ANN. § 49:214.5.2-3 (Current through the 2017 Second Extraordinary Session).

¹² Coastal Protection and Restoration Authority, *State Legislature Approves 2017 Coastal Master Plan* (June 2017), http://coastal.la.gov/wp-content/uploads/2017/06/2_Whats-New-Legislature-Approves-Coastal-Master-Plan_2017-04-25_final.pdf (last visited Dec. 5, 2017).

¹³ State of Louisiana, Exec. Order No. JBE 2016-09, Consistency with Louisiana's Comprehensive Master Coastal Plan to Ensure a Sustainable Integrated Coastal Ecosystem (April 4, 2016), *available at* <http://gov.louisiana.gov/assets/ExecutiveOrders/JBE16-09.pdf>.

¹⁴ SEC, *Commission Guidance Regarding Disclosure Related to Climate Change* (2010) ("Significant physical effects of climate change... have the potential to affect a registrant's operations and results. For example, severe weather can cause catastrophic harm to physical plants and facilities and can disrupt manufacturing and distribution processes.... Registrants whose businesses may be vulnerable to severe weather or climate related events should consider disclosing material risks of, or consequences from, such events in their publically filed disclosure documents."), *available at* <http://www.sec.gov/rules/interp/2010/33-9106.pdf>.

¹⁵ Louisiana LNG Energy, LLC, Proposed Mississippi River LNG Project (PF14-17-000).

¹⁶ Letter to Louisiana LNG Energy, LLC providing comments on Draft Resource Reports 2 through 9 re the Mississippi River LNG Project under PF14-17 (Nov. 24, 2014) (enclosed).

¹⁷ See FERC, Environmental Assessment for the Cove Point Liquefaction Project, Dominion Cove Point LNG, LP Docket No. CP13-113-000, at 40, 169–171 (May 2014), <http://bit.ly/1k5fNM0> ("Climate change in the northeast region could have two effects that may cause increased storm surges: temperature increase of the Chesapeake Bay waters, which would increase storm intensity; and a rising sea level. The final grade elevation of the Liquefaction

susceptible to climate change than these earlier examples of FERC-licensed LNG infrastructure projects. Accordingly, its EIS must take the effect of climate change into account.

1. Sea Level Rise

As anthropogenic greenhouse gas emissions warm the planet, causing glaciers and ice sheets to melt and oceans to absorb increasing volumes of heat, global sea levels will continue to rise, and will do so at increasing rates.¹⁸ In the next several decades, storm surges and high tides will combine with sea level rise and, in some locations, land subsidence to increase flooding, threatening coastal communities and industries.¹⁹

Sea level rise is occurring particularly rapidly along the western gulf coast²⁰ contributing to a particularly high vulnerability for Louisiana's coasts.²¹ The Coastal Protection and Restoration Authority has data specifically examining the flood risk, associated economic risk, and adaptation projects for the Port Fourchon area.²² Regionally, coastal counties, and parishes in Alabama, Mississippi, Louisiana, and Texas already face significant losses from hurricane winds, land subsidence, and sea level rise that annually average \$14 billion.²³ The same study

Facilities Project site would range between 70 and 130 feet above mean sea level. Therefore, even with increased sea levels due to climate change and increased storm surge, the Project facilities would not be vulnerable to even a 100-year climate change-enhanced storm surge because of its significant elevation above sea level.”); FERC, Environmental Assessment for the Cameron LNG Expansion Project, Cameron LNG, LLC Docket No. CP15-560-000, at 115 (Feb. 2016), <https://perma.cc/7MA8-DW2W> (“Climate change in the region would have two effects that may cause increased storm surges, increased temperatures of Gulf waters, which would increase storm intensity, and a rising sea level. In Louisiana, relative sea level changes have been estimated by the NOAA to be about 14 inches by 2050. This is greater than the global average because of regional ground subsidence. The Cameron LNG Terminal is designed for a 500-year storm surge elevation level of 12.4 feet amsl. Given that the Expansion Project’s process equipment minimum elevation point of support would be 12.5 feet amsl and the LNG storage tank (T-205) would be 14.0 amsl at top of the elevated pile cap, climate change-enhanced sea level rise and subsidence are considered adequately addressed in the Expansion Project design.”).

¹⁸ Walsh et al., *Ch. 2: Our Changing Climate*, in *Climate Change Impacts in the United States: The Third National Climate Assessment* at 44 (J. M. Melillo et al., eds., U.S. Global Change Research Program, 2014) [hereinafter “Third National Climate Assessment Chapter 2”]; *see also*, Wuebbles, D.J., et al., 2017: Executive summary, in *Climate Science Special Report: Fourth National Climate Assessment, Volume I* 12-34 (Wuebbles, D.J., et al. eds., U.S. Global Change Research Program, 2017).

¹⁹ Third National Climate Assessment Chapter 2 at 45; Kate Gordon et al., *The Risky Business Project, Risky Business: The Economic Risks of Climate Change in the United States* at 20 (2014) [hereinafter “Risky Business”], available at <http://bit.ly/1GxEdZc>.

²⁰ NOAA, *U.S. Sea Level Trend Map* (2016) [hereinafter “NOAA Sea Level Trend Map”], available at <https://tidesandcurrents.noaa.gov/sltrends/slrmap.html>.

²¹ Hammar-Klose, E., and E. Thieler, 2001: *National Assessment of Coastal Vulnerability to Future Sea-Level Rise: Preliminary Results for the US Atlantic, Pacific and Gulf of Mexico Coasts*. US Reports 99–593, 00-178, and 00-179. U.S. Geological Survey, available at <http://woodshole.er.usgs.gov/project-pages/cvi/>.

²² Coastal Protection and Restoration Authority, Master Plan Data Viewer, available at <http://cims.coastal.louisiana.gov/masterplan/>; *Coastal Protection and Restoration Authority of Louisiana, Louisiana’s Comprehensive Master Plan for a Sustainable Coast* (2017), [Hereafter “Louisiana’s Coastal Plan”], available at http://coastal.la.gov/wp-content/uploads/2017/04/2017-Coastal-Master-Plan_Web-Single-Page_CFinal-with-Effective-Date-06092017.pdf; Louisiana’s Coastal Plan Appendices (2017), available at <http://coastal.la.gov/our-plan/2017-coastal-master-plan/>.

²³ America's Wetland Foundation, America's Energy Coast, and Entergy, *Building a Resilient Energy Gulf Coast: Executive Report* (2010), available at www.entropy.com/content/our_community/environment/GulfCoastAdaptation/Building_a_Resilient_Gulf_Coast.pdf.

estimates that future losses for the 2030 timeframe could reach between \$18 billion to \$23 billion with approximately 50% of the increase in the estimated losses related to climate change.²⁴

Many sources provide current and credible data regarding sea level rise and its potential consequences generally and in Louisiana in particular. As relevant examples, SCCCL directs the Commission's attention to:

- Intergovernmental Panel on Climate Change (“IPCC”), Chapter 2.2.3 Ocean, Cryosphere and Sea Level, in *Climate Change 2014 Synthesis Report, Fifth Assessment Report*, at 65, *available at* <https://perma.cc/9K4F-LDFC>²⁵
- Intergovernmental Panel on Climate Change (“IPCC”), Chapter 13 Sea Level Change, in *Climate Change 2013: The Physical Science Basis*, *available at* <https://perma.cc/EK2J-WSLX>²⁶
- The Third National Climate Assessment, at 44–45, 119, 396–417, 579–618, *available at* <http://nca2014.globalchange.gov>²⁷
- U.S. Global Change Research Program, *Climate Science Special Report: Fourth National Climate Assessment, Volume I*, at 333-363, *available at* <https://science2017.globalchange.gov/>²⁸
- Coastal Protection and Restoration Authority of Louisiana, *Louisiana’s Comprehensive Master Plan for a Sustainable Coast*, *available at* <https://perma.cc/LC5J-Z7UN>
- Climate Central, *Surging Seas: Sea Level Rise Analysis*, *available at* <https://perma.cc/D7GV-BUTQ>
- *Risky Business: The Economic Risks of Climate Change in the United States*, *available at* <https://perma.cc/U62D-KRVG>
- America's Wetland Foundation, America's Energy Coast, and Entergy, *Building a Resilient Energy Gulf Coast: Executive Report*, *available at* <https://perma.cc/NZ33-9ZUC>

²⁴ *Id.*

²⁵ Intergovernmental Panel on Climate Change, *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (R.K. Pachauri and L.A. Meyer, eds., 2014).

²⁶ J.A. Church et al., *Sea Level Change*, in *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (T.F. Stocker et al., eds., 2013).

²⁷ U.S. Global Change Research Program, 2014: *Climate Change Impacts in the United States: The Third National Climate Assessment* (Melillo, Jerry M. et al., eds., 2014).

²⁸ Sweet, W.V. et al., *Sea Level Rise*, in 2017: *Climate Science Special Report: Fourth National Climate Assessment, Volume I* 333-363 (Wuebbles, D.J., et al. eds., U.S. Global Change Research Program, 2017).

2. Increasing Frequency and Severity of Hurricanes and Tropical Storms

Since the early 1980's, Atlantic hurricane activity has substantially increased by measures including intensity, frequency, and duration as well as the number of strongest (Category 4 and 5) storms.²⁹ Warming sea surface temperatures in the Atlantic are linked to this increase in hurricane activity.³⁰ Human-induced emissions of heat-trapping gases and particulate pollution influence these local sea temperatures.³¹ As noted in the above the combination of sea level rise with more severe and frequent hurricanes will affect storm surge and coastal damages, especially in the Gulf Coast. The previously listed resources describe these impacts and costs.

The 2017 hurricane season was particularly catastrophic with 17 named storms, 10 of which became hurricanes, including three category 4 storms that made landfall in the U.S.³² By early estimates it is the most costly hurricane season on record in the U.S.³³ Global models project further increases in intensity, precipitation rate, and wind speed for tropical cyclones over the 21st Century.³⁴

3. Upstream and Downstream Impacts

Fourchon LNG proposes to construct and operate a LNG liquefaction facility with a peak capacity of approximately five (5.0) million metric tons of LNG per annum (MTPA) and a ship berth on Belle Pass, Port Fourchon. Extracting natural gas from wells, processing it for transport, cooling it for loading into tankers, transporting it in those tankers, and, of course, combustion by end-users, are all activities that will occur as a result of the Project. Each of these component activities has predictable environmental impacts.³⁵ Further, these activities will contribute to the Project's upstream and downstream greenhouse gas emissions. DOE has analyzed the life cycle impacts of greenhouse gas emissions from U.S. LNG export facilities.³⁶ In a 2014 addendum

²⁹ National Climate Assessment at 41-42; Christensen, J.H., et al., *Climate Phenomena and their Relevance for Future Regional Climate Change*, in *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Stocker, T.F., et al. eds.) (See especially 14.3.4-5, 14.6, 14.8.3); *see also*, Kossin, J.P. et al., *Extreme storms*, in *2017: Climate Science Special Report: Fourth National Climate Assessment, Volume I 257-276* (Wuebbles, D.J., et al. eds., U.S. Global Change Research Program, 2017)[hereinafter "NCA 4 Extreme Storms"].

³⁰ *Id.*

³¹ *Id.*

³² Brian Sullivan, *The Most Expensive U.S. Hurricane Season Ever: By the Numbers*, Bloomberg (Nov. 26, 2017), available at <https://perma.cc/R3JM-PXAY>.

³³ *Id.* (estimating \$202.6 billion in U.S. damages for the 2017 hurricane season).

³⁴ *Supra* note 32, NCA 4 Extreme Storms.

³⁵ *See, e.g.*, Timothy Vinciguerra et al., *Regional air quality impacts of hydraulic fracturing and shale natural gas activity: Evidence from ambient VOC observations*, 110 *Atmospheric Env't* 144 (2015) (identifying natural gas hydrofracture drilling operations as sole plausible cause for increase in ambient emissions of ethane and VOCs—and, by inference, methane—in region downwind of drilling operations in Pennsylvania and West Virginia); Victor M. Heilweil et al., *Stream Measurements Locate Thermogenic Methane Fluxes in Groundwater Discharge in an Area of Shale-Gas Development*, 49 *Env't. Sci. & Tech.* 4057 (2015) (measuring migration of fingerprinted methane, i.e., gas not attributable to sources other than drilling, into waters near shale-gas development operations); Christopher W. Moore et al., *Air Impacts of Increased Natural Gas Acquisition, Processing, and Use: A Critical Review*, 48 *Env't. Sci. & Tech.* 8349 (2014) (discussing several case study-based natural gas lifecycle emissions assessments).

³⁶ U.S. Dept. of Energy, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States*, 79 *Fed. Reg.* 32,260 (June 4, 2014). Report available at <https://perma.cc/V353-JDYZ>.

analyzing the upstream greenhouse gas emissions of LNG export facilities, DOE estimated that that each incremental increase in natural gas production of 1 trillion standard cubic feet (scf) per year will generate an additional 6.8 million metric tons of CO₂e per year.³⁷ While the exact downstream emissions of combusting natural gas may depend on several uncertain variables, FERC should engage in “reasonable forecasting” and provide a quantitative estimate of the downstream greenhouse emissions, or else a complete explanation for why it cannot provide the estimate.³⁸

* * *

To adequately protect the Fourchon LNG Project and its surrounding environment from future climate change impacts, the Commission should consider the risks arising from increasing frequency and severity of hurricanes combined with sea level rise and associated storm surge, flooding, and coastal erosion risks. Consideration of such risks by a federal agency would not be a novel undertaking,³⁹ and is especially exigent here given that the Project will support the compression and transport of combustible and potentially explosive gas.

Specifically, the Commission should assess the projected range of sea level rise and related potential for storm surge and coastal erosion throughout the planned life of the Fourchon Project, and should identify ways to respond effectively. Similarly, the Commission should assess projected changes to frequency and severity of hurricanes in the vicinity of the Project and identify engineering solutions capable of responding to the host of risks that extreme weather poses to sensitive infrastructure.

In its projections of the future state of coastlines, the Commission should take note of the West Gulf Coast’s high rate of sea level rise relative to other regions of the U.S. and the world⁴⁰ coupled with its vulnerability to hurricanes and tropical storms. Louisiana lost approximately 4,833 square kilometers of land along its coast between 1932 and 2016, equal to a loss of 25% of the 1932 land area.⁴¹ High wetland loss rates occurred during the 2005 and 2008 hurricane seasons, which were particularly hard on the Louisiana Coast.⁴² The baseline of the Project’s future environmental circumstances should reflect that Louisiana’s Coasts appear to be highly sensitive to climate change.

Thank you for the opportunity to submit comments on the Fourchon LNG Project. Please feel free to contact SCCCL with any questions.

³⁷ U.S. Dept. of Energy, Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States, 79 Fed. Reg. 48,132 (Aug. 15, 2014). Report available at <https://perma.cc/7Y6A-PM5Z>.

³⁸ *Sierra Club v. Fed. Energy Regulatory Comm’n*, 867 F.3d 1357, 1373–74 (D.C. Cir. 2017); *see also Delaware Riverkeeper Network v. F.E.R.C.*, 753 F.3d 1304, 1310 (D.C. Cir. 2014).

³⁹ *See, e.g.*, Department of Interior, Seward Peninsula - Nulato Hills - Kotzebue Lowlands Rapid Ecological Assessment, Final Report II-3-c (Oct. 2012), *available at* <http://bit.ly/207u2Rk>.

⁴⁰ NOAA Sea Level Trend Map.

⁴¹ Couvillion, B.R., et al., *Land Area Change in Coastal Louisiana from 1932 to 2016*, U.S. Geological Survey Scientific Investigations Map 3381, 16 p. pamphlet, *available at* <https://pubs.er.usgs.gov/publication/sim3381>.

⁴² *Id.*

Sincerely,

A handwritten signature in cursive script that reads "Dena Adler".

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enclosures:

- FERC's Letter to Louisiana LNG Energy, LLC providing comments on Draft Resource Reports 2 through 9 re the Mississippi River LNG Project under PF14-17 (Nov. 24, 2014)
- Coastal Protection & Restoration Authority's Master Plan Data Viewer Flood Risk Map, showing map of future flooding risk in Port Fourchon (accessed Dec. 5, 2017)