

# Pipelines, Offshore Drilling, and LNG Export Facilities:

## Legal Strategies to Promote More Responsible Decision-Making

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# Legal Architecture

Who authorizes the construction and operation of oil and gas pipelines, natural gas terminals, and offshore drilling?

- **Pipeline Approvals**

- Interstate gas pipelines – Federal Energy Regulatory Commission (FERC) makes siting decisions, issues certificate of public convenience and necessity, and regulates rates and service contracts
  - Example: Sabal Trail fracked methane pipeline
- Interstate oil pipelines – state makes siting decisions, issues certificate of public convenience and necessity; FERC regulates rates and service contracts
  - Example: Palmetto Pipeline, GA DOT refusal to issuance certificate
- Intrastate gas pipelines – regulated by states

- **Pipeline Safety regulated by DOT, states can prescribe additional requirements that do not conflict with federal law**

# Legal Architecture

Who authorizes the construction and operation of oil and gas pipelines, natural gas terminals, and offshore drilling?

- **LNG Import and Export Terminals**
  - FERC authorizes siting and construction of import and export terminals
    - Example: Elba Island LNG Facility
- **Offshore Drilling**
  - Dept. of Interior, Bureau of Ocean Energy Management (BOEM)
    - Approves offshore exploration, drilling activities
    - Key statute: Outer Continental Shelf Leasing Act(OSCLA)

# National Environmental Policy Act (NEPA)

- Requires environmental impact assessment (EIA) for “**major**” federal actions. More in-depth review for actions with “**significant**” environmental impacts.
- Major actions include federal authorizations for:
  - Pipelines
  - LNG export terminals
  - Offshore drilling



# Georgia Environmental Policy Act

- Requires environmental review for “proposed governmental action which may significantly adversely affect the quality of the environment”
- “Proposed government action” encompasses a broad range of government projects, but does not include the following:
  - **(A) Any action or undertaking of a nongovernmental entity, even if that action or undertaking requires a permit, license, or other approval by a government agency;**
  - **(C) The permitting or licensing by a government agency of an action or undertaking;**
- NEPA review satisfies requirements



# NEPA Basics

- Full environmental impact statement (EIS) required for projects with “significant” environmental impacts
- Other possible outcomes:
  - **Environmental Assessment (EA)** – an initial determination as to whether a project may have significant environmental impacts
    - Either concludes with an EIS or a **Finding of No Significant Impact (FONSI)**
  - **Categorical Exclusion** – agency identifies activities that do not typically result in significant environmental impacts

# Goals of NEPA

- Ensure that decision-makers fully consider environmental impacts before making decisions about projects
- Inform the public about the project + environmental impacts
- Allow the public to provide input, help inform decisions





# Public Participation in NEPA Reviews

- **Environmental Assessment** – must involve public “to the extent practicable”
- **Finding of No Significant Impact** - must publish FONSI within 30 days of decision when “the type of proposed action hasn’t been done before by the particular agency, or... the action is something that typically would require an EIS under the agency NEPA procedures.”
  - **Otherwise, public review of FONSI is not required by CEQ regulations**
  - **But interested parties can contact agency for EA/FONSI**
  - **Worst case scenario, could use Freedom of Information Act to compel disclosure of unpublished NEPA documents)**

# Public Participation in NEPA Reviews

## Environmental Impact Statement

- **Scoping process:** agency deciding what issues to cover in EA, typically holds meetings where public can submit comments verbally, and may also allow public to submit written comments
- **Draft EIS:** at minimum, agency must provide 45-day public review and comment period
  - More time often provided for major or controversial projects
- **Final EIS:** agency must wait 30 days to make decision, and accept comments during this time.

**Key takeaways:** (i) raise your concerns as early as possible; (ii) make sure that your comments are on the official administrative record, as this may be necessary for litigation.

# Public Participation in NEPA Reviews

## Further reading

- “Legal Tools for Climate Adaptation Advocacy: NEPA” (2015)
- “A Citizens Guide to the NEPA: Having your Voice Heard” (2008)
- EPA, National Environmental Policy Act
  - <http://www2.epa.gov/nepa>
- EPA, EIS Database
  - First hit on google search



# Georgia Oil and Gas Projects

- **Sabal Trail Methane Pipeline**
  - Draft EIS released on September 4, 2015
  - “Southeast Market Pipelines Project”,  
<http://www.ferc.gov/industries/gas/enviro/eis.asp>
- **Elba Island LNG Export Facility**
  - EA expected February 5, 2016; final decision by May 5, 2015
  - FERC Docket No. PF13-3, <http://elibrary.ferc.gov>
- **2017-2022 Outer Continental Shelf Oil and Gas Leasing Program**
  - Public scoping period held earlier this year; draft EIS anticipated in early 2016
  - <http://boemoceaninfo.com/>
- **Palmetto Pipeline**
  - No known plans for environmental review



# Challenging Agency Decision Not to Prepare an EIS

- Federal agencies must prepare an EIS for **major federal actions** that **significantly** affect the environment
- “Actions include new and continuing activities, including projects and programs entirely or partly **financed, assisted, conducted, regulated, or approved** by federal agencies; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals.” 40 C.F.R. § 1508.18(a)
- A determination of significance “requires considerations of both **context** and **intensity**.” 40 C.F.R. § 1508.27
  - Controversial impacts?
  - Unique or unknown risks?
  - Precedent for future decisions?
  - Relationship to other actions with cumulatively significant impacts?

# Challenging the Adequacy of an EIS

## Statutory Requirements for an EIS

In accordance with 42 U.S.C. § 4332(C), an EIS must include 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,
- (iii) Alternatives to the proposed action,
- (iv) The relationship between local short-term uses of man’s environment and the maintenance and enhancement of long-term productivity, and
- (v) Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.



# Challenging the Adequacy of an EIS

## Regulatory Requirements

- Scope of actions to review (40 C.F.R. § 1508.25)
  - **Connected actions**
    - Automatically trigger other actions that may require EISs
    - Cannot or will not proceed unless other actions are taken previously or simultaneously
    - Are interdependent parts of a larger action and depend on the larger action for their jurisdiction.
  - **Cumulative actions**
  - **Similar actions**

# Challenging the Adequacy of an EIS

## Regulatory Requirements

- Description of project and **reasonable alternatives**, including a “no action” alternative
  - Must describe the “underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action” 40 C.F.R. § 1502.13
  - Must “rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.” 40 C.F.R. § 1502.14(a)
  - Must “devote substantial treatment to each alternative considered in detail... so that reviewers may evaluate their comparative merits.” 40 C.F.R. § 1502.14(b)

# Challenging the Adequacy of an EIS

## Regulatory Requirements

- Description of **affected environment**
  - Must describe the environment of the area(s) to be affected or created by the alternatives under consideration. 40 C.F.R. § 1502.15
  - Data and analysis “shall be commensurate with the importance of the impact” on that aspect of the environment. 40 C.F.R. § 1502.15
  - **No action alternative** – an environmental baseline against which the proposed action and other alternatives are assessed; discussion should correspond with anticipated duration of project, taking into account construction, operation, and decommissioning

# Challenging the Adequacy of an EIS

## Regulatory Requirements

- “Hard look” at foreseeable **environmental impacts** from the proposed action and alternatives
  - Direct effects and their significance
  - Indirect effects and their significance
  - Cumulative effects and their significance
  - Impacts from connected, cumulative, or similar actions

# Challenging the Adequacy of an EIS

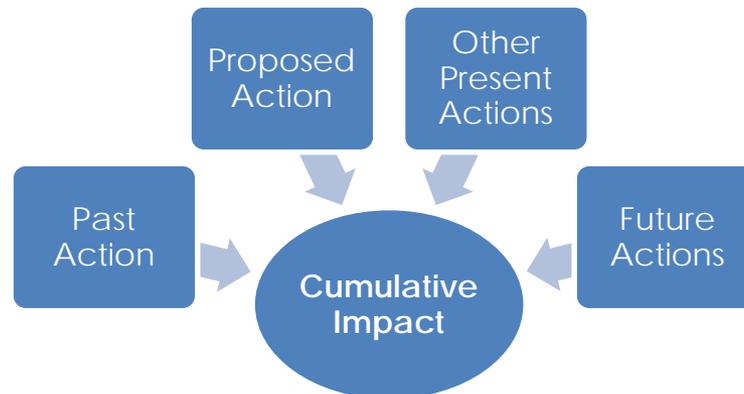
## Regulatory Requirements

- **Direct effects:** caused by the action and occur at the same place and time **§ 1508.8(a)**
- **Indirect effects:** caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. **§ 1508.8(b)**

# Challenging the Adequacy of an EIS

## Regulatory Requirements

- **Cumulative impact:** the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency... or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. **§ 1508.7**



# Challenging the Adequacy of an EIS

## Regulatory Requirements

- Must also consider (40 C.F.R. § 1502.16)
  - Possible **conflicts** between the proposed action and the objectives of Federal, regional, State, and local land use plans, policies and controls for the area concerned
  - Natural or depletable **resource requirements** and conservation potential of various alternatives and mitigation measures
  - Means to **mitigate adverse environmental impacts**

# Fossil Fuel Projects and Climate Change: NEPA Considerations

**Key question:** is agency adequately considering the effect of these proposals on climate change, the social cost of that effect, and whether the project is justified in light of that cost?

**Also relevant:** is agency adequately considering the physical effects of climate change and economic effects of climate change regulation when evaluating these projects?

# Contribution to Climate Change

- Greenhouse Gas (GHG) emissions
  - **Direct emissions:** combustion engines, vented and fugitive emissions
  - **Indirect emissions**
    - Upstream: production, transport
    - Downstream: transport, processing, combustion
  - **Cumulative emissions**
    - Cumulative impact of fossil fuel projects
  - **Emissions from “connected actions”**



# Upstream and Downstream Emissions; Connected Actions

## CEQ Draft Guidance (2014)

- When assessing direct and indirect climate change effects, agencies should take account of the proposed action—including **'connected' actions**—subject to reasonable limits based on feasibility and practicality.
- In addition, emissions from activities that have a **reasonably close causal relationship** to the Federal action, such as those that may occur as a **predicate for the agency action** (often referred to as upstream emissions) and as a **consequence of the agency action** (often referred to as downstream emission) should be accounted for in the NEPA analysis.



# Upstream and Downstream Emissions

- **Mid States Coalition for Progress v. Surface Transportation Board (8<sup>th</sup> Cir. 2003)**
  - In EIS for railway specifically being built to transport coal, must consider emissions from coal combustion.
- **Northern Plains Resource Council v. Surface Transportation Board (9<sup>th</sup> Cir. 2011)**
  - Must also consider methane emissions from coal mining in EIS for coal transport railway.
- **High Country Conservation Advocates v. US Forest Service (D. Colo. 2014)**
  - In EIS for rule authorizing expansion of coal mining, USFS must evaluate GHG emissions from coal combustion.
- **WildEarth Guardians v. US Office of Surface Mining (D. Colo. 2015)**
  - In EIS for coal mining plan modification approvals, OSM must consider emissions from coal combustion.

# Social Cost of Carbon

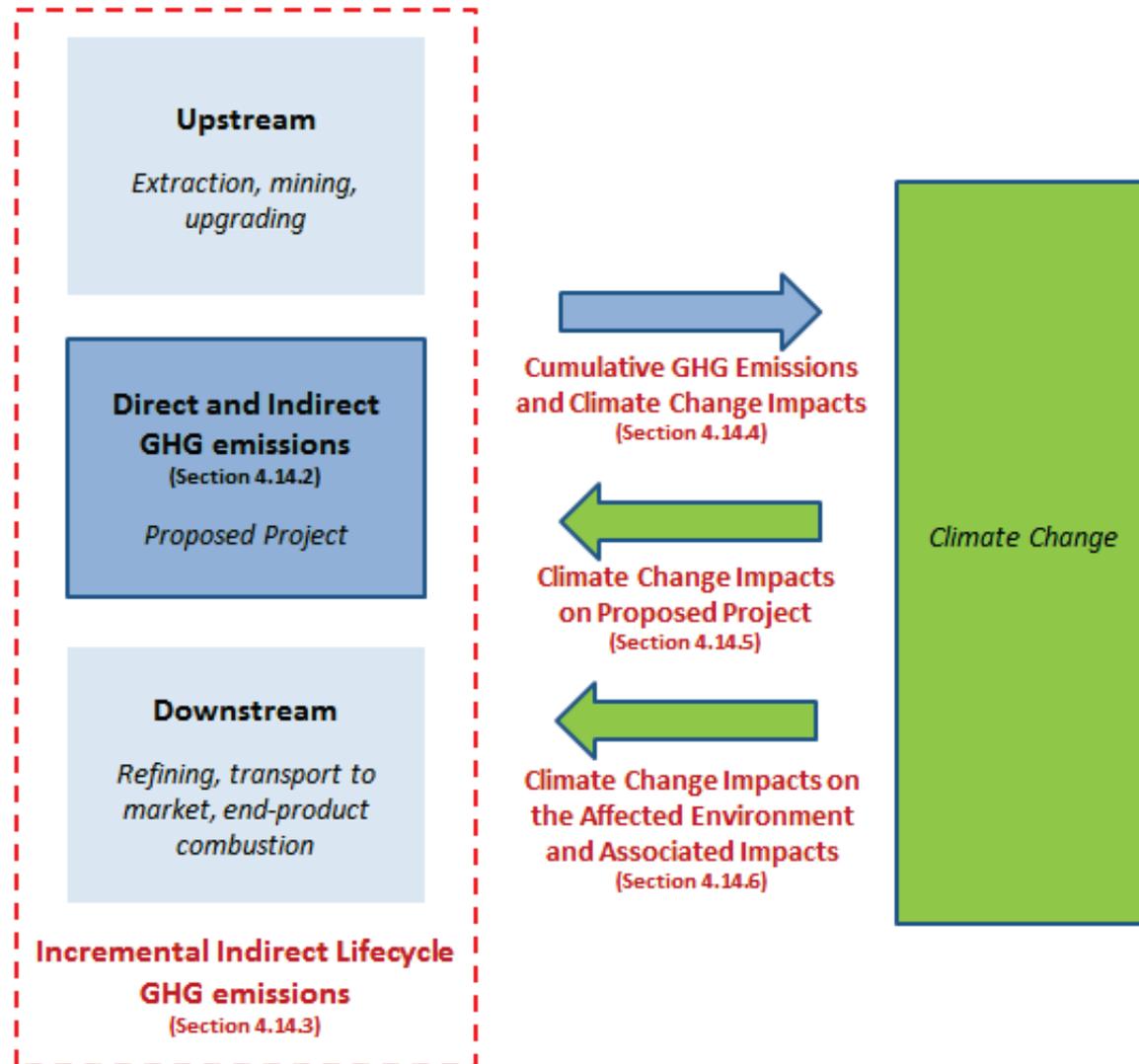
- Tool developed by federal government for analyzing costs and benefits of policies, regulations, other actions
- CEQ Recommends using this, especially when agency conducts CBA
- Ninth Circuit has overturned agency decisions for:
  - Failure to monetize the economic benefits of GHG emissions reduction. *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1200-1203 (9th Cir. 2008).
  - Failure to apply the SCC in cost benefit analysis. *High Country Conservation Advocates v. U.S. Forest Service*, No. 13-CV-01723-RBJ, 2014 WL 2922751 (D. Colo. June 27, 2014).

# Lifecycle Analysis and Keystone XL

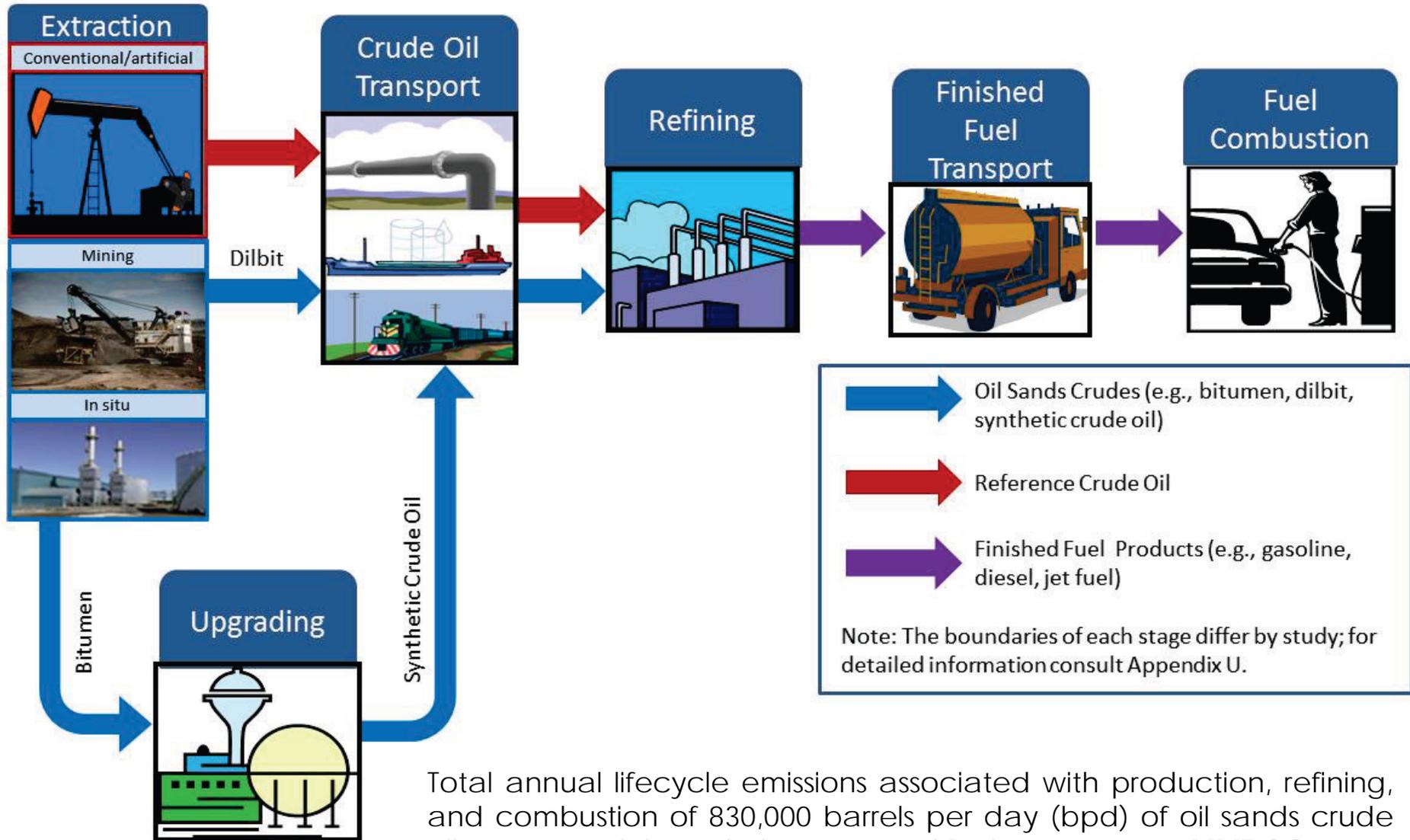
## THE KEYSTONE XL PIPELINE



# Keystone XL: Scope of Analysis



# Keystone XL: GHG Emissions



Total annual lifecycle emissions associated with production, refining, and combustion of 830,000 barrels per day (bpd) of oil sands crude oil transported through the proposed Project: **47 to 168 MMT CO<sub>2</sub>e**.



# Pipeline Example 1: Keystone XL

**Total annual lifecycle emissions = 147 – 168 MMT CO<sub>2</sub>e**

“The equivalent annual lifecycle GHG emissions from 830,000 bpd of the **four reference crudes** (representing crude oils currently refined in Gulf Coast area) examined in this section are estimated to be 124 to 159 MMTCO<sub>2</sub>e.

The range of **incremental GHG emissions** (i.e., the amount by which the emissions would be greater than the reference crudes) for crude oil that would be transported by the proposed Project is estimated to be **1.3 to 27.4 MMTCO<sub>2</sub>e annually**.

This is equivalent to annual GHG emissions from combusting fuels in approximately 270,833 to 5,708,333 passenger vehicles, the CO<sub>2</sub> emissions from combusting fuels used to provide the energy consumed by approximately 64,935 to 1,368,631 homes for 1 year, or the annual CO<sub>2</sub> emissions of **0.4 to 7.8 coal fired power plants**.

Agency also concluded that “pipeline was unlikely to significantly affect the rate of extraction in oil sands areas (based on expected oil prices, oil-sands supply costs, transport costs, and supply-demand scenarios).”

# Keystone XL: Cumulative Impacts

- Recognizes that the consideration of “other past, present, and reasonably foreseeable future actions that contribute to cumulative global GHG emissions would include any global action that emits any quantity of GHGs.”
- Discusses **context**
  - Comparison of emissions from oil and gas sector, transport sector
  - Discussion emission increases over time
  - U.S. share of global emissions
- Discusses **impacts of climate change**
  - Broad, global overview
  - How climate change will affect project area.



# Pipeline Example 2: Constitution Pipeline and Wright Compressor Station

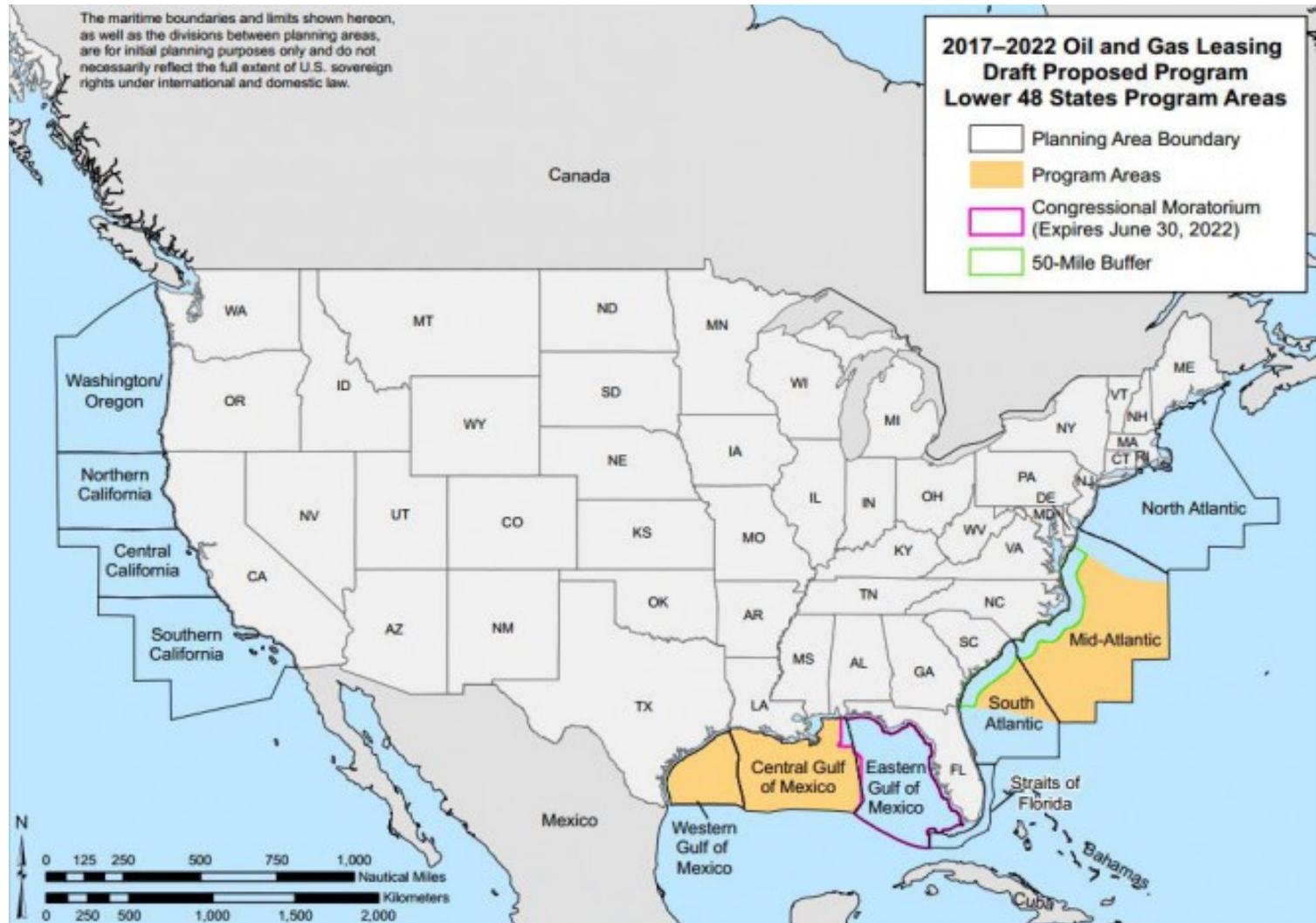
- FERC considered only direct emissions during construction, operation
  - Construction: 61,000 tons CO<sub>2</sub>e
  - Operation: 176,945 tons CO<sub>2</sub>e / year
  - Concluded this is “minimal”
- Did not consider emissions from gas production or combustion.
- Applied social cost of carbon, but only considered CO<sub>2</sub> emissions (no other GHGs) during first year operation

Discount Rate (\$/ton)	5% (\$12)	3% (\$39)	2.5% (\$61)
Social Cost Carbon	\$1.6m	\$5.3m	\$8.3m

# Offshore Drilling



# Proposed OCS Leasing Plan, 2017-2022



# Draft EISs for Outer Continental Shelf Leasing Programs (2012-2017, 2017-2022)

- Bureau of Ocean Energy Management (BOEM) does not quantify downstream emissions or consider these in its cost-benefit analysis
  - Only considers emissions from exploration, construction, operation and decommissioning of oil and gas wells
- Unlike NEPA, the Outer Continental Shelf Lands Act (OCSLA) explicitly requires a cost-benefit analysis that reflects environmental costs.
  - But D.C. Circuit has held that OCSLA only requires consideration of *local* environmental impacts. *CBD v. DOI*, 563 F.3d 466 (2009).
- In same case, D.C. Circuit declined to review NEPA claims because they were not “ripe” at this stage of oil and gas development.
  - Good news = no holding that NEPA does not require consideration of downstream (combustion) emissions
  - Bad news = barrier to plaintiffs using NEPA to challenge programmatic planning decisions (although other Circuits differ on this point)

# Key Tools for Agency Analysis

## **(1) World Resources Institute, GHG Protocol**

- Most widely used international accounting tool for quantifying and reporting GHG emissions.
- Serves as the foundation for The Climate Registry and accounting mechanisms promulgated by the International Organization for Standardization (ISO)
- WRI recently introduced a draft protocol for calculating the potential GHG emissions from fossil fuel reserves

## **(2) Social Cost of Carbon**

## **(3) Other EISs (e.g., Keystone as a starting point)**

# Recommended Reading

Lifecycle analysis of GHG emissions from fossil fuel development

- **GREENHOUSE GAS EMISSIONS FROM FOSSIL ENERGY EXTRACTED FROM FEDERAL LANDS AND WATERS** (Wilderness Society 2012) [2014 update]

Estimating economic impacts:

- **THE HIGH COST OF FOSSIL FUELS: WHY AMERICA CAN'T AFFORD TO DEPEND ON DIRTY ENERGY** (Environment America 2009)
- Drew T. Shindell, *The Social Cost of Atmospheric Release* (Climatic Change 2015)

# Impact of Climate Change on Projects

- Has agency adequately accounted for:
  - Impact of climate change on affected environment / no action alternative
  - Impact of climate change on project itself
  - Whether climate change impacts will cause damage, impair operations, require dedication of additional resources to project
  - Whether climate change will exacerbate project's environmental impacts?

# Environmental Risks and Climate Change: Examples

- Project requires water withdrawals from a water body that may be impacted by climate change
  - Changes in precipitation, snowpack and heat can affect water quality and water quality
  - An otherwise insignificant impact on those water resources could become significant in the context of these changes
- Facility sited on coastline, with storage for hazardous waste or other dangerous materials
  - Sea level rise, more severe storms, flooding could increase the risk of a spill at this facility
  - LNG terminals are considered hazardous by many state authorities, because flammable concentrations of gas may leak, accumulate in small spaces, and lead to an explosion



# Houston's Southwest Wastewater Treatment Plant



# Recommended Reading

- *Assessing the Impacts of Climate Change on the Built Environment under NEPA and State EIA Laws: A Survey of Current Practice and Recommendations for Model Protocols* (Sabin Center 2015)

# Thank you!

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