

Environmental Review of Energy Transport & Global Energy Markets

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ENVIRONMENTAL REVIEW OF ENERGY TRANSPORT & GLOBAL ENERGY MARKETS

James W. Coleman*

ABSTRACT: In recent years the role of transport infrastructure in energy markets has become a flashpoint for conflict in environmental assessment law. On one hand, an increasingly international fossil fuel industry is in the midst of an unprecedented build-out of all kinds of transport infrastructure: oil and gas pipelines, liquefied natural gas projects, and port facilities for coal, oil, and gas. On the other hand, environmental advocates have increasingly insisted that pipelines and other transport infrastructure should not be built if it would encourage “upstream” fossil fuel production and “downstream” fuel consumption. To that end, these groups argue that environmental reviews of transport projects must include an assessment of how the projects increase upstream and downstream emissions of greenhouse gases and other pollutants.

Governments have struggled with how to respond to this argument. President Obama famously promised to assess the upstream emissions from the Keystone XL pipeline project but the resulting analysis was criticized by all sides as confusing and incomplete. In the meantime, many energy transport facilities, including liquefied natural gas projects, were being approved without any upstream or downstream analysis over the objection of environmental groups. On the other hand, some states and foreign countries were proving more receptive to environmental arguments for broader environmental reviews.

This Article argues that it is unhelpful for environmental assessments of transport infrastructure to focus on how these transport projects might affect upstream and downstream markets. First, it is very hard to judge the marginal impact of a single energy transport project that would compete with other transport options in ever-changing global energy markets. Second, to approve or reject an energy transport project on the basis of how it could affect international energy markets is to assert both the power and the authority to control energy markets in other countries—an undiplomatic encroachment on those countries authority to achieve a balance between environmental and economic concerns in regulating their own energy markets. The article concludes by noting some exceptional cases where it may be helpful to consider upstream and downstream emissions.

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INTRODUCTION

In March 2008, near the end of President George W. Bush's second term, the United States Department of State issued a presidential permit to a new pipeline that would ship oil from Alberta to Illinois: the Keystone Pipeline. It was a relatively obscure decision—at the time, new pipelines were considered perhaps the most boring part of the energy industry.¹ But it nevertheless attracted a lawsuit: the Natural Resources Defense Council sued in the United States District Court for the District of Columbia, arguing that the Department of State had improperly failed to provide an environmental review of the way that the pipeline would encourage oil production in Western Canada.²

The State Department's response to this allegation was simple: it had not considered how the pipeline might lead to increased oil production in Canada because its review was necessarily "limited to the pipeline which is a transportation system."³ The State Department would not speculate on how the pipeline would impact energy markets: how it could increase oil production in the upstream areas that would supply the pipeline, or how it could increase oil refining and consumption in the downstream areas served by the pipeline.⁴ The State Department noted that it would be especially inappropriate to consider upstream oil production in Canada because that production is

¹ Lauren Krugel, *What the Keystone decision will mean for your portfolio*, THE GLOBE & MAIL, Mar. 28, 2013 ("Once upon a time pipeline companies were viewed as rather boring investments.")

² United States Department of State, Scoping Summary for the Keystone Pipeline Project, Environmental Impact Statement (Dec. 2006) 18, Table 2 (Comment from the Natural Resources Defense Council (NRDC): "The proposal makes it clear that the pipeline is being built, primarily to increase imports of synthetic crude oil from the Canadian tar sands region. Canada's tar sands region, located within the Western Canadian Sedimentary Basin, is a leading example of the type of development underway in this rush to develop unconventional oil. More importantly, the proposed TransCanada Keystone Pipeline is integral in this effort to expand exploitation of tar sands oil resources in Northern Alberta.").

³ *Id.* (Response from Department of State: "The [Draft Environmental Impact Statement] addresses the reasonably foreseeable environmental impacts of the construction and operation of the proposed Keystone Pipeline within the United States and is limited to the pipeline which is a transportation system. The scope of the [Environmental Impact Statement] is necessarily limited to the scope of the proposed project and does not extend to the supply of crude oil to the transportation system or the operation of refineries that are supplied by it.")

⁴ *Id.*

“properly the subject of review by appropriate Canadian governmental entities.”⁵

In three sentences, the State Department made its position plain: when it reviewed the environmental impact of the pipeline, it would focus on the pipeline itself, on land disturbance, community impacts, and the danger of leaks or spills. It would not try to predict how the pipeline would affect larger energy markets, particularly foreign markets supervised by other countries’ regulators. President Obama’s State Department stuck by this decision and successfully defended it in court, convincing the D.C. district court that the pipeline approval was unreviewable—a determination that the plaintiffs did not appeal.⁶ In these few words, the State Department laid out one side of a debate that, in the following years, would become a focus of policy debates, trade disputes, protests, and political campaigns across North America.

In September 2008, six months after the original Keystone pipeline received its permit, TransCanada filed an application for another pipeline. The new pipeline’s proposed name, *Keystone XL*, reflects the time—a time when the last thing that a pipeline company worried about was attracting attention. Just one month later, NRDC would file its federal suit against the original Keystone pipeline. Though its arguments in that case would be rejected by both the Obama administration and the court, they would eventually spark a movement that would lead President Obama to reverse his position on the relevance of foreign emissions, block the *Keystone XL* proposal, and scramble the rules of environmental review for energy infrastructure.

Ultimately, President Obama would declare that, far from being irrelevant, the decision on the *Keystone XL* pipeline would actually turn on the State Department’s analysis of how the pipeline could affect oil production in Canada.⁷ But even that seemingly clear standard proved deceptive and temporary. After more than seven years of review, the State Department reached a conclusion: the pipeline was “unlikely to significantly impact the level of ...

⁵ *Id.* (“Further, as provided in Executive Order 12114, “Environmental Effects Abroad of Major Federal Actions,” Jan. 4, 1979, a federal agency is directed to consider extra-territorial environmental impacts only in limited circumstances not applicable here. Possible impacts of the construction or operation of the *Keystone Pipeline* in Canada are properly the subject of review by appropriate Canadian governmental entities.”).

⁶ *Natural Resources Defense Council (NRDC) v. U.S. Department of State*, 658 F. Supp. 2d 105, 109 (D.D.C. 2009).

⁷ Remarks by President Obama on Climate Change, Jun. 25, 2013, <http://www.whitehouse.gov/the-press-office/2013/06/25/remarks-president-climate-change> (stating that *Keystone XL* crude pipeline would not be approved if it would “significantly exacerbate the problem of carbon pollution”).

extraction of oil sands crude.”⁸ The State Department, however, conceded that its analysis was incomplete, because it had focused on how the pipeline would affect oil markets where oil traded at over \$75 per barrel; by the time that it issued its decision, oil traded at \$45 barrel.⁹ Ultimately, the State Department simply stated that the pipeline should be rejected because, regardless of its seven years of analysis, the pipeline would be “perceived as enabling further GHG emissions globally.”¹⁰

Eight years after the original Keystone pipeline was approved, no company can predict how the U.S. will now review its energy transport proposals: the federal and state governments have taken various inconsistent and conflicting approaches, often on the same project. And the confusion has spread to other countries, particularly Canada, where the government is struggling to answer the same questions. When a government approves new pipelines, new port facilities, and new electric transmission:

- Should it consider the “upstream” impact of the new transport facility—i.e. how the fuels and power that will supply the facility will be created?
- Should it consider the “downstream” impact—how those fuels and power will be used in their destination market?
- Should it consider the upstream and downstream impact, even when the fuels or electric power are created or used in another country?
- Should the government consider all overseas environmental impacts that are linked with its domestic transport facilities, or should it focus only on global pollutants such as greenhouse gases?
- Even when it should consider the impact of its transport facilities on wider energy markets how *can* the government estimate the impact that a particular transport facility will have on global energy markets when there are other competing modes of transport?
- Even if the government can estimate the overseas impact of its transport facilities, how should it use that information to make a decision on the facility?

⁸ United States Department of State, Record of Decision and National Interest Determination (Nov. 3, 2015) 29.

⁹ *Id.* at 12.

¹⁰ *Id.* at 29.

The United States government has hardly begun to answer these broad questions. The administration's public statements and the Council of Environmental Quality's draft guidance on considering related greenhouse gas emissions in an environmental review have been cryptic and inconsistent. The government's actual practice, in environmental assessments of transport projects, has been if anything, less satisfying and more inconsistent.

This uncertainty could not come at a worse moment: the world is currently in the midst of three energy transitions that are creating a demand for new and reliable transport infrastructure. *First*, a transition from conventional to unconventional sources of crude oil and natural gas is combining with developing world growth to scramble established oil and gas trade routes, leading to a new build out of pipelines and port facilities designed to bring oil and gas from new production sources in North America to growing demand centers in Asia. *Second*, to transition from fossil fuel electricity to renewable electricity, the United States will need to rapidly build power transmission from the deserts and prairies where solar power and wind power are often sited to the metropolitan centers of energy demand. *Third*, to reduce use of coal power and support the transition to renewable power, the U.S. will need a massive build out of pipelines to transport natural gas to power plants that can replace coal and easily ramp up and down to accommodate the variable output of solar and wind power.

This Article proceeds in three parts. Part I explains the U.S. government's inconsistent practices and pronouncements on considering upstream and downstream emissions for pipelines, port facilities, and power transmission. It examines the few environmental assessments that have attempted to consider upstream and downstream emissions, showing how their static assumptions made them unhelpful in changing energy markets. In doing so, it surveys the market changes that are fueling the drive for new energy transport infrastructure. This part also considers the Council on Environmental Quality's sparse draft guidance on assessing greenhouse gas emissions related to federal actions under the National Environmental Policy Act (NEPA). And it demonstrates that, even in theory, it is nearly impossible to draw conclusions about how a single energy transport project will affect global energy markets.

Part II shows how upstream and downstream reviews of energy transport projects in the United States tend to encroach on the authority of its energy trading partners to strike a balance between environmental and economic concerns in their own energy markets. If a regulator says that it is rejecting a pipeline, port facility, or transmission line in order to prevent development of energy markets in another country, it is asserting that it has both the power and the authority to control energy markets in that foreign country. This assertion is a recipe for conflict in energy trade and it is already becoming apparent that countries, advocating for their industries, will take every opportunity to cloak protectionist and mercantilist policies in the guise of environmental assessment. This part concludes with a broader considera-

tion of how state and federal environmental assessments should interact with limits on federal jurisdiction as a matter of international trade and domestic federalism policy.

Part III considers how the law should be adjusted to ensure that environmental assessments focus on areas where they will be helpful to regulators and avoid engendering energy trade conflict. Courts and agencies should make plain that the upstream and downstream market impacts of energy transport projects are generally not “reasonably close” impacts that must be assessed in NEPA reviews. They should also make clear that environmental assessments will not turn on how a project will impact energy markets in another country. If necessary, Congress should mandate these principles through amendments of NEPA. This part concludes by discussing some of the rare instances where an upstream or downstream project might be necessarily linked with a transport project. It suggests how courts and agencies can recognize and provide for these exceptions while following a general rule against considering upstream and downstream effects.

I. THE MIXED AND INCONSISTENT PRACTICE OF UPSTREAM AND DOWNSTREAM ASSESSMENTS OF ENERGY TRANSPORT PROJECTS

If pipeline projects and pipeline approvals themselves were once obscure, the scope of environmental assessments for pipelines would seem like archetypal arcana. But the media firestorm surrounding Keystone XL made it a stand-in for broader disputes about energy and climate. So perhaps it is not shocking that when President Obama laid out his new climate plan at a 2013 speech at Georgetown University he made a digression to announce a new assessment standard for Keystone XL: it would be assessed based on its impact on international energy markets.¹¹

But the salience of the pipeline and the President’s announcement have left some legal observers with the inaccurate impression that United States environmental reviews now consistently assess the impact of energy transport projects on global energy markets.¹² Nothing could be further from the truth. In fact, Keystone XL’s environmental review is emblematic of U.S.

¹¹ Remarks by President Obama on Climate Change, Jun. 25, 2013, <http://www.whitehouse.gov/the-press-office/2013/06/25/remarks-president-climate-change>.

¹² Clare Demerse, *We Should Assess New Pipelines Like the Americans Do*, THE GLOBE & MAIL, Feb. 25, 2014, <http://www.theglobeandmail.com/opinion/we-should-assess-new-pipelines-like-the-americans-do/article17077926/> (arguing that, like the United States, pipeline reviews should “consider not just the impact of the pipeline itself, but also the impact of the product that flows through it”).

reviews of energy transport in another way: the confused and inconsistent environmental review standards applied to the pipeline during the seven years it was reviewed reflect a wider confusion over how all U.S. energy transport facilities should be assessed.

A. Natural Gas Pipelines and Liquefied Natural Gas Exports

Since 2008, hydraulic fracturing has transformed U.S. natural gas markets by unlocking vast reserves of natural gas stored in shale formations.¹³ The “shale revolution” boosted production, tanked prices, and doubled U.S. reserves.¹⁴ The one constant over this period of rapid change has been a drive for new natural gas transport infrastructure.¹⁵

¹³ James W. Coleman, *Importing Energy, Exporting Regulation*, 83 FORDHAM L. REV. 1357, 1364-65 (2014).

¹⁴ *Id.* U.S. Energy Info. Admin., U.S. Natural Gas Wellhead Price, EIA.GOV, <http://www.eia.gov/dnav/ng/hist/n9190us3m.htm>; United States Energy Information Administration, U.S. Crude Oil and Natural Gas Proved Reserves, www.eia.gov/naturalgas/crudeoilreserves/.

¹⁵ During the decade of peaking natural gas prices, the U.S. added over 20,000 miles of natural gas pipelines to connect expanding sources of natural gas production with natural gas demand. United States Energy Information Administration, Major Changes in Natural Gas Pipeline Transport Capacity 1998-2008, http://www.eia.gov/oil_gas/fwd/ngpipelinetc.html (“More than 20,000 miles of new natural gas transmission pipeline, representing more than 97 billion cubic feet per day of capacity, were placed in service in the United States over the past 10 years.”). That building boom has continued in the new era of natural gas abundance and is only likely to increase. And there is every likelihood that the pace of pipeline building will continue as the nation moves from coal to natural gas for electricity and heating oil to natural gas for heating. United States Energy Information Administration, Natural Gas Year-in-Review (With Data for 2011) (2012) http://www.eia.gov/naturalgas/review/print_version.cfm. In the decade of high gas prices, U.S. importers sought to build several new LNG import facilities. Clifford Krauss, *Exports of American Natural Gas May Fall Short of High Hopes*, N.Y. TIMES, Jan. 5, 2013 at B1 Now with shale-gas driving U.S. prices below \$3 per million BTUs, and Asian shale-gas prices over \$15¹⁵investors have submitted several applications to the Department of Energy for new LNG export facilities that could ship to Asia. Ernst & Young, Global LNG, Will new demand and new supply mean new pricing?, [http://www.ey.com/Publication/vwLUAssets/Global_LNG_New_pricing_ahead/\\$FILE/Global_LNG_New_pricing_ahead_DW0240.pdf](http://www.ey.com/Publication/vwLUAssets/Global_LNG_New_pricing_ahead/$FILE/Global_LNG_New_pricing_ahead_DW0240.pdf). Since 1981, the global LNG trade has doubled every eight years. International Gas Union, World LNG Report 2011, [6](http://www.igu.org/gas-knowhow/publications/igu-</p>
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Unlike coal or oil, natural gas is very expensive to transport on a small scale. The two main methods of moving natural gas—pipeline and ships carrying liquefied natural gas—both require billions of dollars of capital investment. Interstate natural gas pipelines must be designed to avoid gas leakage, and liquefaction facilities must cool natural gas two thirds of the way to absolute zero until the gas turns into a liquid that can be transported on quarter-billion dollar refrigerated ships. So when natural gas production increases in one place, the local price falls rapidly until new infrastructure can bring it to an established market in need of more gas; by the same token when natural gas demand increases it often creates a local price spike that will persist until new supplies can be connected to the market.¹⁶ As a result, changing natural gas markets often open price differentials that set off a race to build new multi-billion dollar infrastructure, and companies that win the race can reap even greater rewards.¹⁷

Increased natural gas transport is also crucial to meeting several of the United States' national and domestic policy goals. If it can be brought to urban markets, natural gas can replace dirtier sources of electricity and heat such as coal and fuel oil. And liquefied natural gas exports to developing countries could help them move away from coal power. Natural gas is also a natural complement for increased renewable energy; the electric grid operators must constantly balance power supplied and demanded, and natural gas, unlike nuclear and coal, can be easily ramped up or down to compensate for fluctuations in power from wind and solar. Natural gas is also often produced as a byproduct of oil extraction and if there are no pipelines to take it

publications/LNG%20Report%202011.pdf Figure 1. Knut Einar Rosendahl & Eirik Lund Sagen, *The Global Natural Gas Market: Will Transport Cost Reductions Lead to Lower Prices?*, 30 ENERGY J. 17, 17 (2009) (“[o]ver the last decade the costs of LNG have been significantly reduced, more producers have entered the gas market in general and the LNG market in particular, and the trade between continents has increased”).

¹⁶ The U.S. government has repeatedly said that until global prices converge, global liquefied natural gas transport will continue to increase. United States Energy Information Administration, *Effect of Increased Natural Gas Exports on Domestic Energy Markets*, http://www.eia.gov/analysis/requests/fe/pdf/fe_lng.pdf (“Unlike the oil market, current natural gas markets are not integrated globally. In today’s markets, natural gas prices span a range from \$0.75 per million British thermal units (MMBtu) in Saudi Arabia to \$4 per MMBtu in the United States and \$16 per MMBtu in Asian markets that rely on LNG imports. Prices in European markets, which reflect a mix of spot prices and contract prices with some indexation to oil, fall between U.S and Asian prices.”).

¹⁷ James W. Coleman et al., *Calibrating Liquefied Natural Gas Export Life Cycle Analysis: Accounting for Legal Boundaries & Post-Export Markets*, CAN. INST. RES. L., Occasional Paper No. 49 (2015).

to market, it is simply burned off (a process known as “flaring”), wasting the gas while releasing carbon dioxide into the atmosphere.¹⁸ Conversely, if there were strong markets for natural gas, extraction and transport companies would have strong incentives to avoid leakage and flaring as their product grew more valuable.

Many environmental groups strongly oppose increased natural gas transport for a related reason: they agree that increased transport will encourage use of natural gas but they want to stop all fossil fuel use as quickly as possible rather than starting a transition from coal to gas.¹⁹ As a result, they are pushing the federal government to expand environmental assessments for new liquefied natural gas facilities and interstate pipelines to consider how those transport facilities will encourage natural gas production and consumption.²⁰

Downstream emissions from liquefied natural gas facilities are difficult to assess for two related reasons. First, these facilities are designed to last for several decades so it is difficult to tell where liquefied natural gas will eventually be shipped.²¹ Second, it is hard to know what alternative sources of energy these natural gas exports will displace in importing countries.²² If gas is used to replace dirtier sources, like coal, it may reduce greenhouse gas emissions in importing countries; but if it is used to phase out nuclear power, or delay a transition to renewables, it could raise greenhouse gas emissions in importing countries.²³

In theory the case for considering the upstream consequences of natural gas transport projects is actually stronger than the case for considering the upstream impacts of an oil pipeline like Keystone XL project for at least two reasons. First, natural gas production is more clearly linked to new major

¹⁸ Alexandra B. Klass & Danielle Meinhardt, *Transporting Oil and Gas: U.S. Infrastructure Challenges*, 100 IOWA L. REV. 947, 1009-15 (2015).

¹⁹ Hannah Northey, *Democrats Face Tricky Balancing Act As Export Debate Grows Louder*, E&E NEWS, Jan. 15, 2014, <http://www.eenews.net/stories/1059992926>.

²⁰ Aaron Flyer, *FERC Compliance Under NEPA: FERC’s Obligation to Fully Evaluate Upstream and Downstream Environmental Impacts Associated with Siting Natural Gas Pipelines and Liquefied Natural Gas Terminals*, 27 GEO. INT’L ENVTL. L. REV. 301 (2015) (arguing that FERC must consider upstream and downstream impacts in natural gas pipeline and liquefied natural gas facility approvals); Amy Harder, *Are Natural-Gas Exports the Next Keystone?*, WALL ST. JOURNAL, May 18, 2014.

²¹ James W. Coleman et al., *Calibrating Liquefied Natural Gas Export Life Cycle Analysis: Accounting for Legal Boundaries & Post-Export Markets*, CANADIAN INSTITUTE OF RESOURCES LAW, Occasional Paper No. 49 (2015).

²² *Id.*; James W. Coleman & Sarah Marie Jordaan, *Clearing the Air: How Canadian Liquefied Natural Gas Exports Could Help the World Meet Its Climate Goals*, C.D. HOWE INSTITUTE, ISSUE BRIEF (2016).

²³ *Id.*

transport projects than oil production; after all, even if oil cannot move by pipeline, it can still be transported to market using existing infrastructure such as tank cars by rail, or barges by rivers.²⁴ Second, most of the new natural gas production that supplies these projects is in the United States, and so U.S. review of these upstream markets would arguably be more appropriate than U.S. review of energy markets in other countries.²⁵

Nevertheless, the U.S. government has thus far declined to consider how new pipelines and liquefied natural gas facilities will affect natural gas production and consumption.²⁶ The Federal Energy Regulatory Commission (FERC) has approved 11 of 14 proposed liquefaction facilities and 154 pipeline applications since 2009.²⁷ Yet FERC has resisted all calls to consider the environmental impact of increased natural gas production enabled by these new transport facilities.²⁸

FERC's reluctance to consider upstream and downstream emissions related to new natural gas transport projects, however, may be little comfort

²⁴ Both of these modes of oil transportation have expanded rapidly with increased oil production from tight oil formations in the United States.

²⁵ Of course, as a matter of policy it would be wiser to leave some of these decisions to the states rather than allowing the federal government to set natural gas production policy. *See infra* Part II.D.

²⁶ *See, e.g.*, Federal Energy Regulatory Commission, Sabine Pass Liquefaction Project Modification, Environmental Assessment (Apr. 2013) 66–67; Federal Energy Regulatory Commission, Environmental Assessment for the Sabine Pass Liquefaction Project (Dec. 2011) 2-99–2-100 <http://energy.gov/sites/prod/files/EA-1845-FEA-2011.pdf>. FERC has exclusive authority to approve or deny siting, construction, and operation of liquefied natural gas facilities. 15 U.S. Code § 717b(e)(1) (As amended by the Energy Policy Act of 2005, Pub.L. 109–58, this provision reads: “The Commission shall have the exclusive authority to approve or deny an application for the siting, construction, expansion, or operation of an LNG terminal.”).

²⁷ The Department of Energy has approved 18 of these projects and is reviewing 38 more. United States Department of Energy, Summary of LNG Export Applications, <http://energy.gov/sites/prod/files/2016/03/f30/Summary%20of%20LNG%20Export%20Applications.pdf>.

²⁸ *Sierra Club v. FERC*, (D.C. Cir. No. 14-1249) 2016 WL 3525562; *Sierra Club v. FERC*, (D.C. Cir. No. 14-1275), 2016 WL 3524262; Michael Burger & Jessica Wentz, Working Paper, Downstream and Upstream Greenhouse Gas Emissions: The Proper Scope of NEPA Review (2016) 23 (“FERC has consistently maintained that it has no obligation to consider greenhouse emissions or any other environmental effects associated with upstream and downstream activities in the natural gas production and supply chain”). In one older case, FERC did consider the downstream impact of increased natural gas use, concluding that it could be controlled by ensuring transport of low sulfur natural gas for combustion. *S. Coast Air Quality Mgmt. Dist. v. FERC*, 621 F.3d 1085, 1089-90 (9th Cir. 2010).

to investors pursuing multi-billion dollar, multi-decade projects. After all, the rules of the Keystone XL review changed in the middle of the environmental assessment process and FERC has never explained why the reasoning applied in that case might not be applied to natural gas projects. The most realistic rationale may be that while the President has repeatedly indicated that he is skeptical of Canadian oil,²⁹ the government has, at times, championed the U.S. natural gas industry.³⁰

Yet if the procedural requirements for transport project assessments depend on the political winds, there are some preliminary signs that natural gas may no longer have those winds at its back. The administration's final climate plan for U.S. electricity production sharply cut back on the role that it envisioned for natural gas in the future U.S. electricity mix.³¹ The U.S. has also begun to crack down on methane emissions from natural gas production.³² And, in a shock to many, the Federal Energy Regulatory Commission recently rejected a natural gas pipeline designed to serve an Oregon liquefied natural gas facility on the basis that there was no need for the facility.³³ At the same time, state governments have pushed for a larger role in assessing natural gas projects and environmental groups have continued their lobbying for expanded environmental assessments.³⁴ Thus, natural gas transport projects

²⁹ President Obama repeatedly responded to complaints from pipeline supporters by admonishing them to remember “this is Canadian oil, this isn’t U.S. oil.” *Transcript: President Obama’s Nov. 5 News Conference on Midterm Election Results*, WASHINGTON POST, Nov. 5, 2014. *See also* Glen Kessler, *Fact Checker: Obama’s claim that Keystone XL Oil ‘Bypasses the U.S.’ Earns Four Pinocchios*, WASHINGTON POST, Nov. 5, 2014. (“I’ve already said I’m happy to look at how we can increase pipeline production for U.S. oil, but Keystone is for Canadian oil to send that down to the Gulf.”).

³⁰ Denise Garcia, *A ‘real’ natural gas revolution in the US: Moniz*, CNBC, Feb. 24, 2016 (United States Secretary of Energy Moniz praising U.S. potential to be a major natural gas producer and exporter).

³¹ Barry Jopson, *Shale Gas is Loser in Obama Climate Plan*, FINANCIAL TIMES, Aug. 3, 2015.

³² Oil and Natural Gas Sector: Emission Standards for New and Modified Sources, 80 Fed. Reg. 56,593 (Sep. 18, 2015).

³³ United States Federal Energy Regulatory Commission, Order Denying Applications for Certificant and Section 3 Authorization, Mar. 11, 2016. *See also* Jonathan Crawford & Naureen Malik, *U.S. Rejects Multibillion-Dollar Jordan Cove Gas Export Plan*, BLOOMBERG, Mar. 11, 2016.

³⁴ Oregon Department of Land Conservation and Development, Motion to Intervene, FERC Docket CP09-6 (Jul. 11, 2013); Oregon Department of Energy, Motion to Intervene, FERC Docket CP09-6 (Jul. 11, 2013); Sierra Club, Petition to the Federal Energy Regulatory Commission, State of Oregon, and State of Washington, http://action.sierraclub.org/site/Pages/Navigator/LNG_Petition.html.

may well be the next industry to experience expanded environmental assessments.

B. Oil Transport

Though Keystone XL has gotten the bulk of attention, in the seven years that it was under review, numerous other oil pipelines were approved, under very different environmental assessment processes. Only international pipelines require a Presidential Permit.³⁵ But domestic pipelines still cross federal, navigable waters, which requires a Clean Water Act permit that could, in theory, require an environmental review. As the the Keystone XL pipeline was being delayed, however, the Obama administration reissued a twelve page nationwide general permit that allows domestic pipelines to be built without any review of their effects on energy markets.³⁶ At the same time, President Obama issued a memorandum to expedite all reviews of domestic pipeline projects.³⁷

Thus, far from reflecting a new practice on oil pipelines, the Keystone XL review remains a complete outlier from the U.S. government's general practice, which may reflect the President's stated goal of increasing pipeline transport for U.S. oil, but not Canadian oil.³⁸ And the need for increased pipeline transport is indeed urgent as U.S. oil production has nearly doubled in the past seven years, rising from five million barrels per day in 2008, to nearly ten million barrels per day in 2015. This has meant much larger volumes of oil traveling by methods such as crude-by-rail, that are more expensive and less safe than oil pipelines.

³⁵ *Sierra Club et al. v. United States Army Corps of Engineers*, 990 F. Supp. 2d 9, 17 (D.D.C. 2013) (denying motion for preliminary injunction against domestic crude oil pipeline because it, unlike Keystone XL “is an entirely *domestic* pipeline”)(emphasis in original).

³⁶ *Id.*; Nationwide Permit 12, http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2012/NWP_12_2012.pdf (environmental analysis that accompanies domestic crude pipelines makes no mention of climate change).

³⁷ Presidential Memorandum, *Expediting Review of Pipeline Projects from Cushing, Oklahoma, to Port Arthur, Texas, and Other Domestic Pipeline Infrastructure Projects* United States Army Corps of Engineers, Mar. 22, 2013.

³⁸ Glen Kessler, *Fact Checker: Obama's claim that Keystone XL Oil 'Bypasses the U.S.' Earns Four Pinocchio's*, WASHINGTON POST, Nov. 5, 2014. (“I’ve already said I’m happy to look at how we can increase pipeline production for U.S. oil, but Keystone is for Canadian oil to send that down to the Gulf.”).

As with natural gas, however, it is not clear whether the Keystone XL model or the run-of-the-mill U.S. practice is a better guide to the future of oil pipeline environmental reviews. In fact, Canada, is now in the process of adopting environmental assessment rules that will require consideration of upstream production in oil and gas pipeline reviews. To be sure, the government, led by newly elected Prime Minister Justin Trudeau, has not yet explained how its expanded environmental reviews will work. Initially, it simply promised to report the “upstream” emissions associated with existing oil pipeline proposals.³⁹ Most recently, the government has proposed to consider upstream emissions from all oil and gas proposals, but has seemingly defined “upstream” narrowly to include only extraction, processing, handling and transport of fossil fuels that is “exclusively linked to the project.”⁴⁰ The government’s recent draft assessment of the upstream impact of the Trans Mountain project—a proposal to triple the size of an existing pipeline from Alberta to Vancouver, British Columbia—is equivocal: the government calculates the upstream greenhouse gas emissions that would be required to produce the quantity of oil that the pipeline would carry, but then states that the oil would be produced regardless of the pipeline, so the pipeline’s marginal impact is negligible.⁴¹

Canada’s first steps, like the Keystone XL review, illustrates the fundamental difficulty of calculating the impact of a pipeline on global energy markets. After all, if one pipeline is not approved, producers may find other ways to ship their product to consumers. Even if producers do not find alternate transport to market, their product may merely be replaced by oil producers in other countries around the world. So even in theory, it is difficult to predict how a pipeline will impact global energy markets. In practice, in unpredictably changing energy markets, it is nearly impossible to predict the upstream and downstream impact of a new pipeline project.

Take the example of Keystone XL. Tasked with reviewing its impact on Canadian oil production, the State Department initially concluded that it would have no impact because “any one crude transport project . . . is unlike-

³⁹ Government of Canada, Interim Measures for Pipeline Reviews, Jan. 27, 2016, <http://news.gc.ca/web/article-en.do?mthd=tp&ctr.page=1&nid=1029989> (stating that for two current oil pipeline proposals, the government would “Assess the upstream greenhouse gas emissions associated with this project and make this information public”).

⁴⁰ Government of Canada, Department of Environment and Climate Change, Canada Gazette, Mar. 19, 2016 <http://www.gazette.gc.ca/rp-pr/p1/2016/2016-03-19/pdf/g1-15012.pdf>

⁴¹ Environment & Climate Change Canada, To the Government of Canada re: Trans Mountain Pipeline ULC, Trans Mountain Expansion, Review of Related Upstream Greenhouse Gas (GHG) Emissions Estimates, <http://www.ceaa-acee.gc.ca/050/document-eng.cfm?document=114550>.

ly to significantly impact the rate of extraction” of oil.⁴² The State Department supported this statement with a lengthy market analysis which showed that at any price over \$75 per barrel of oil, oil production would expand in Canada regardless of whether new pipelines were built.⁴³ If all pipeline proposals were rejected, producers would just pay a little more to send oil by rail.⁴⁴ So approving the pipeline would increase oil profits, increase transport safety, and actually decrease global greenhouse gas emissions by preventing inefficient and dangerous transport of oil by railroad tank car.⁴⁵

The State Department, however, recognized that oil prices could change, so it considered two other scenarios. Using the same economic models, it found that if oil prices fell to \$65-75 dollars per barrel, then rejecting the pipeline could have a drastic impact on Canadian oil production because rising transportation costs could endanger all new production projects—in this price band, rejecting the pipeline would potentially decrease new production by a volume greater than the volume that the pipeline would have carried.⁴⁶ Finally, if prices fell below \$65 the State Department’s conclusions were more equivocal—the models showed that, at that price, there would be no new projects regardless of what happened to the pipeline but the State Department speculated that rejecting the pipeline “could further curtail production.”⁴⁷

The State Department’s analysis of the upstream impact of the Keystone XL pipeline was state of the art: one hundred and fifty pages modeling the cost of transport by the new pipeline, the cost of transport by alternate routes, and the cost curve of upstream projects that could, in theory, depend on the new pipeline. It was also useless as a guide to action.

By the time, the State Department actually made a decision on the project, a barrel of oil was selling at \$40 per barrel, so its years of analysis were beside the point. And even in theory, its carefully modeled conclusions made little sense as both environmental and industry groups quickly pointed out:

- Is it plausible that lowering transport costs—and thus increasing profits—of oil producers would not encourage *any* marginal investment in increased Canadian oil production?

⁴² United States State Department, Final Supplemental Environmental Impact Statement (Jan. 2014) ES-16.

⁴³ *Id.*

⁴⁴ *Id.* at ES-34.

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

- Is it plausible that the rail system could, on the margin, take another pipeline worth of crude without substantially raising crude-by-rail costs?
- Is it plausible that at exactly \$75 per barrel of oil the pipeline would suddenly switch from having no impact at all on oil production to being an economic necessity for the entire industry?
- Even if rejecting the pipeline would decrease oil production, and thus, greenhouse gas emissions in Canada, why would that necessarily have any net impact on the greenhouse gas emissions of the global oil industry?

The state of the art Keystone XL environmental assessment process vividly demonstrates why assessing upstream and downstream emissions from energy transport projects can be a costly and useless endeavor. In the end, after seven years of review, the State Department apparently reached this conclusion as well. It confirmed its view that the project was “unlikely to significantly impact [oil] extraction” but said that it should be rejected anyway because, despite its analysis, it was “perceived as enabling” oil extraction.⁴⁸ Seven years of review and the State Department’s best economic modeling produced a result that even the Department decided was so useless that it should be subordinated to popular perception.

C. Coal Exports

Environmental reviews of coal export facilities have been just as inconsistent and contentious as reviews of oil and gas transport. Two large coal export facilities are being planned in the northwestern United States to receive coal by rail from the Powder River Basin in Wyoming and Montana so that it can be shipped to Asia: the Millennium Bulk Logistics Longview Terminal in Longview, Washington and the “Gateway Pacific Terminal” at Cherry Point near Ferndale, Washington.⁴⁹ The United States Army Corps of

⁴⁸ *Id.*

⁴⁹ Jennifer Moyer, Acting Chief, Regulatory Program, United States Army Corps of Engineers, Statement to Committee on Energy and Commerce on “U.S. Energy Abundance: Regulatory, Market and Legal Barriers to Export” (Jun. 18, 2013). At one point there were also plans for exports from new facilities in Grays Harbor, Washington, and Coos Bay and St. Helens Bay, Oregon, but these plans have been shelved. Kim Murphy, *Plans shelved for coal export terminal in Oregon*, LA TIMES, May 8, 2013; Scott Learn, *Port of Coos Bay coal-export proposal ends after 18 months of work*, THE

Engineers, which is responsible for considering the environmental impact of these facilities, and ultimately approving their construction, has said that its analysis will not consider “burning of coal overseas” because those events are “outside the Corps’ control and responsibility.”⁵⁰

The State of Washington, on the other hand, has declared that its analysis of the Longview Terminal *will* consider greenhouse gas emissions from “end-use coal combustion” because those emissions “contribute to climate change which in turn can affect snow pack levels, ocean acidification and wildfire season in Washington.”⁵¹ Thus the Longview Terminal creates an anomalous situation in which a U.S. state, but not the federal government is focusing its environmental review on energy markets in other countries. On the other hand, Washington will not consider local environmental impacts in Asia from burning coal shipped from Longview Terminal.⁵²

Coal exports might seem like the easiest case to review the downstream impact of an energy transport project. Coal combustion produces more air pollution than any other fuel used in the United States,⁵³ so encouraging more coal combustion might seem like an unmitigated environmental bad. The counterarguments of the coal industry, however, illustrate how difficult it can be to assess the downstream impacts of energy transport.

First, the coal industry argues that U.S. coal exports will not increase global consumption of solid fuels—it will simply replace other solid fuels.⁵⁴ Second, it argues that importing countries will use low-sulfur United States

OREGONIAN, Apr. 1, 2013; *Rail company shelving coal export plans for Hoquiam port*, ASSOCIATED PRESS, Aug. 14, 2012.

⁵⁰ Jennifer Moyer, Statement *supra* note 49.

⁵¹ Millennium Bulk Terminals-Longview Environmental Impact Statements, Frequently Asked Questions, State Environmental Policy Act Environmental Impact Statement, <http://www.millenniumbulkeiswa.gov/frequently-asked-questions.html>.

⁵² *Id.* (“The analysis does NOT include evaluating environmental impacts within any country importing the coal.”). Greenhouse gas emissions, of course, will have the same climate impact regardless of whether the coal is burned in the United States or across the globe in European and Asian countries importing U.S. coal. And even conventional pollutants such as particulate matter are increasingly reaching the United States from their sources across the Pacific Ocean. M. Huang *et al.*, *Impacts of transported background pollutants on summertime western US air quality: model evaluation, sensitivity analysis and data assimilation*, 13 ATMOSP. CHEM. & PHYS. 1 (2013).

⁵³ A. R. Brandt, *et al.*, *Methane Leaks from North American Natural Gas Systems*, 343 Science 733 (2014).

⁵⁴ Lisa Palmer, *Facing Tough Market at Home, U.S. Coal Giant Pushes Overseas*, YALE ENVIRONMENT 360, July 29, 2013, http://e360.yale.edu/feature/facing_tough_market_coal_giant_peabody_energy_pushes_overseas/2676/.

coal to replace low-grade domestic coal that burns even dirtier.⁵⁵ Third, it argues that, in some countries, citizens must rely on burning biomass for heat, which produces more air pollution than any kind of coal, making U.S. exports an environmental boon.⁵⁶ Of course, environmental groups would contest each of these points, and also note that cheap U.S. coal exports delay a transition to cleaner fuels that would improve the environment in importing countries. But the coal industry arguments demonstrate how complex and contested any environmental review of downstream impacts of energy transport facilities would eventually become.

D. Electricity Transmission

If the United States is to meet its goals for transforming the power sector, it will require a massive build out of electricity transmission. The U.S. electric grid is worth nearly a trillion dollars⁵⁷ and will require another trillion dollars of investment merely to maintain the current level of service.⁵⁸ One tenth of all capital investment in the United States goes to the power industry.⁵⁹ Expanding wind and solar power will require further ramping up this investment. For one thing, wind and solar power is often strongest in desert and prairie regions far from urban demand.⁶⁰ For another, wind and solar

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ Alexandra B. Klass & Jim Rossi, *Revitalizing Dormant Commerce Clause Review for Interstate Coordination*, 100 MINN. L. REV. 129, 140 (2015) (“The U.S. electric grid constitutes an \$876 billion asset managed by over 3,000 utilities serving nearly 300 million customers.”).

⁵⁸ *Id.* (“in order to maintain even current levels of grid reliability, the electric industry must make investments in transmission and distribution alone of nearly \$900 billion”).

⁵⁹ DANIEL YERGIN, *THE QUEST* 401 (2012) (“Electric power is a classically long-term business. A power plant built today may be operating 60 to 70 years from now. It is also a big ticket business—in fact, it is the most capital-intensive major industry in the United States. Fully 10 percent of all capital investment in the United States is embedded in the power plants, transmission lines, substations, poles, and wires that altogether make up the power infrastructure.”).

⁶⁰ This sort of long-distance directional power transfer is encouraging a transition to a direct current model for power transmission instead of the regular two-way alternating current. Alexandra B. Klass, *Takings and Transmission*, 91 N.C. L. REV. 1079, 1111 & n.196 (2013) (“Today, new, high-voltage DC (‘HVDC’) lines are often proposed as the most efficient and economical method of transporting wind power long distances.”).

power are not dispatchable sources of electricity—that is, they only provide power when the wind is blowing or the sun shining—so they may require extra inter-regional transmission to make up for local weather anomalies.

Such massive capital investments are particularly vulnerable to the kind of uncertainty created by shifting rules of environmental assessment. Of course, it might seem that transmission presents the happy flip side of the contentious debates over fossil fuels. After all, new transmission lines could benefit the renewable industry upstream and could clean the air downstream by replacing dirtier sources such as coal plants that are often located near urban centers. Indeed, the Federal Energy Regulatory Commission has mandated that when states make transmission decisions they must consider how their decisions will impact the ability of neighboring states to meet their renewable targets.⁶¹

But there is no reason to think that electric transmission will be uniquely immune from the uncertainties and delay caused by expanded and uncertain environmental assessments. Opponents of wind and solar projects will use the same tactics employed in pipeline debates: even a project that has received site approvals will never be built if it cannot connect to centers of demand. With an expanded environmental impact assessment, the transmission approval process will provide another opportunity to relitigate familiar disputes that wind turbines endanger bird populations and damage scenic vistas or that solar farms have impacts on water use, land use, and endangered species. And the arguments for considering upstream and downstream consequences of electricity transmission are, if anything, more reasonable than the same case for oil pipelines: oil can go by rail, ship, or pipeline, power can only go by line. Thus, transmission is, if anything, more vulnerable than oil pipelines to delay-by-environmental-review tactics.

E. The National Environmental Policy Act and Council of Environmental Quality Guidance

Neither the National Environmental Policy Act itself nor the Council on Environmental Quality's draft guidance for consideration of a project's

⁶¹ Federal Energy Regulatory Commission, Order 1000, Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, 76 Fed. Reg. 49842 (Aug. 11, 2011). And states making decisions about siting power generation facilities must consider likely transmission decisions in other states. See Amy Stein, *The Tipping Point of Federalism*, 45 CONN. L. REV. 217, 245–46 (2012) (exploring disparity between electricity generation siting which nominally remains in state control and siting regimes governing electricity and natural gas transmission); Uma Outka, *Environmental Law and Fossil Fuels: Barriers to Renewable Energy*, 65 VAND. L. REV. 1679, 1692 n.45 (2012).

climate change impacts provide any clear rule about whether upstream and downstream emissions should be considered in environmental reviews of energy transport infrastructure.

The notorious convoluted case law governing environmental reviews under the National Environmental Policy Act lends itself to few concrete conclusions. Sometimes the courts have held that a federal decision on one segment of a project means that the entire project must undergo an environmental assessment,⁶² and sometimes they have not.⁶³ In a particularly notable, but somewhat outlying, case, the United States Court of Appeals for the Eighth Circuit even held that construction of a railroad line required consideration of increased coal use that the line would enable.⁶⁴

[Insert summarizing CEQ guidance on “connected actions,” “indirect effects,” “cumulative effects”, alternatives for consideration, etc.]

The Council on Environmental Quality issued long-awaited revised draft guidance on how to consider greenhouse gas emissions from energy projects. But it did little to address whether upstream and downstream emissions should be considered as part of environmental reviews of pipelines and transport facilities. It blandly stated that upstream and downstream emissions should be included in environmental reviews when they have a “reasonably close causal relationship to the Federal action” without offering any suggestion of what “reasonably close” means or how it might apply to particular energy transport projects.⁶⁵ It also suggested that “connected actions” should

⁶² *Sierra Club v. Marsh*, 769 F.2d 868, 881 (1st Cir. 1985) (Army Corps of Engineers must consider environmental impact of the industrial park enabled by the causeway that it permitted). This doctrine is often referred to as the “small federal handle” doctrine because it says the a small federal action may require environmental review of a large private project.

⁶³ *Save the Bay, Inc. v. U.S. Corps of Engineers*, 610 F.2d 322, 327 (5th Cir. 1980) (no need to consider manufacturing facility that required federal approval of an outfall pipeline); *Winnebago Tribe of Nebraska v. Ray*, 621 F.2d 269, 272 (8th Cir. 1980) (approval of water crossings did not require review of entire transmission line).

⁶⁴ *Mid States Coal. Progress v. Surface Transp. Bd.*, 345 F. 3d 520, 548-50 (8th Cir. 2003).

⁶⁵ United States Council on Environmental Quality, Revised Draft Guidance for Greenhouse Gas Emission and Climate Change Impacts (Dec. 2014) 11. (“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 emissions) should be accounted for in the NEPA analysis.”).

only be considered “subject to reasonable limits based on feasibility and practicality” of assessing those emissions, again without providing examples of what kind of reviews should be considered reasonable or practical.⁶⁶

II. U.S. ENVIRONMENTAL REVIEWS OF FOREIGN ENERGY MARKETS ENCROACH ON THE JURISDICTION OF ITS ENERGY TRADING PARTNERS

Environmental reviews of domestic energy transport infrastructure contain an awkward implication when they focus on how that infrastructure will impact global markets: if the United States rejects or approves a pipeline or a liquefied natural gas facility because it will change foreign energy markets, then the U.S. is, by implication, asserting the power and the right to alter energy markets in another country. Of course, from a realist perspective, any regulatory approval may have an impact on global markets because supply and demand disperses price signals across international borders. What is different about upstream and downstream environmental reviews is that they purport to measure how a U.S. government action will affect its trading partners and then make that effect *a basis* for the United States’ decision.⁶⁷ This assertion is an unusually explicit encroachment on U.S. trading partners’ authority to achieve a balance between environmental and economic concerns in regulating their own energy markets.

Of course, the U.S. has an unusually strong interest in greenhouse gas emissions abroad because these gases are well-mixed in the atmosphere so that, unlike conventional pollutants, emissions abroad cause just as much harm as domestic emissions.⁶⁸ And perhaps countries around the world will move to new models of sovereignty and trade law that recognize some kind of shared jurisdiction to monitor and discourage greenhouse gas emissions associated with domestic industries. But for now, while nations have proven willing to pledge domestic action to meet global climate goals, they have continued to assert their fundamental authority to choose how to regulate their domestic energy industries and how much to sacrifice to help the world limit climate change.

If U.S. trading partners believe that they should be able to choose their own energy policies, how will they react to U.S. assertions that it can choose for them? The United States already has several avenues for influenc-

⁶⁶ *Id.*

⁶⁷ James W. Coleman, *Importing Energy, Exporting Regulation*, 83 *FORDHAM L. REV.* 1357, 1385-86 n. 169 (2014).

⁶⁸ NAT’L RESEARCH COUNCIL, *CLIMATE CHANGE SCIENCE: AN ANALYSIS OF SOME KEY QUESTIONS* 10–11 (2001).

ing environmental regulation in its trading partners from diplomacy, to agreements like the Montreal Protocol, to multilateral bodies such as the Commission for Environmental Cooperation. The question is whether asserting the power and the authority to unilaterally alter energy markets in other countries through environmental reviews of transport infrastructure is a useful addition to those other methods of influencing environmental regulation abroad.

Ultimately, this assertion is an undiplomatic invitation to conflict in energy trade. As the State Department's review of the Keystone XL pipeline made plain, even the most thorough and well-intentioned review of the foreign impacts of a domestic pipeline results in tenuous and contested conclusions. The best modeling still requires innumerable assumptions and estimations, each of which could easily be contested in a conflict between trading partners.⁶⁹ And if countries began shading their reviews in service of their domestic industries, the complexity of these assessments could be a cloak for protectionism.

There are some preliminary indications that jurisdictions do settle on assumptions and estimations that will cast their domestic industry in a favorable light. For example, U.S. officials, including Secretary of Energy Ernest Moniz, have consistently suggested that liquefied natural gas from the United States will lower global greenhouse gas emissions by replacing coal combustion in other countries.⁷⁰ This is not an unreasonable position: coal dominates electricity production in many countries that are looking to import more liquefied natural gas, and natural gas is a good replacement for coal because, unlike wind and solar power, it is a reliable source of electricity.⁷¹ But environmental groups opposed to gas exports have a reasonable response: when countries install new electric generation capacity, they are more likely to choose cleaner sources such as solar and wind, so natural gas imports are delaying a transition to cleaner renewable sources.⁷² So far, U.S. regulators seem

⁶⁹ And the U.S. government's decision on Keystone XL has been challenged by TransCanada on exactly this grounds as discrimination and expropriation in violation of the North American Free Trade Agreement. Ian Austen, *TransCanada Seeks \$15 Billion From U.S. Over Keystone XL Pipeline*, N.Y. TIMES, B2, Jan 7, 2016; James W. Coleman, *TransCanada Sues U.S. Government For Rejecting Keystone XL Pipeline*, <http://www.energylawprof.com/?p=691>.

⁷⁰ Ken Silverstein, *Energy Secretary Moniz Signals LNG Exports Will Soon Get Moving*, FORBES, June 15, 2013.

⁷¹ James W. Coleman et al., *Calibrating Liquefied Natural Gas Export Life Cycle Analysis: Accounting for Legal Boundaries & Post-Export Markets*, CAN. INST. RES. L., Occasional Paper No. 49 (2015).

⁷² *Id.*; Institute for Energy Economics and Financial Analysis, *China Delivers Global Record Wind and Solar Installs While National Coal Consumption Drops*, Feb. 29, 2016,

to be ignoring this response: the Department of Energy’s principal study on the downstream impact of gas exports only compared gas exports to other fossil fuels such as coal.⁷³

In fact, the United States has been as effective as any industry trade group in promoting plausible but controversial theories for how its fossil fuel exports are uniquely suited to cut pollution abroad. For example, before the U.S. finally dropped its crude oil export ban, the United States Energy Information Administration posted a briefing making the case that sending more U.S. oil to Mexico could, counterintuitively, lower pollution in Mexico.⁷⁴ It argued that, due to the special characteristics of Mexican oil refineries, they would be able to produce more low sulfur gasoline if they were able to use light crude oil from the United States instead of heavy, sulfurous oil from Mexico.⁷⁵ Again, the argument is plausible, but nearly any fossil fuel export can be justified if it is compared exclusively to a dirtier competitor.

[Insert with a bit more on a) how conflicting reviews could break up international energy markets, squandering gains from energy trade and b) how federal environmental reviews should take account of state authority over resource and energy regulation.]

Further insert with discussion of how reviews of global energy markets would be assessed under NAFTA, WTO, and other trade law.]

III. CLARIFYING THE SCOPE OF ENVIRONMENTAL REVIEW OF ENERGY TRANSPORT

Courts and agencies should make plain that the upstream and downstream impacts of energy transport projects are generally not “reasonably

<http://ieefa.org/china-delivers-global-record-win-and-solar-installs-while-national-consumption-drops-3-7-percent-in-2015/>.

⁷³ TJ Skone et al, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from United States*, United States Department of Energy (2014). The same is true in British Columbia, where the government initially promised that it would produce the “cleanest [liquefied natural gas] in the world [on a] life cycle basis.” Government of British Columbia, *British Columbia’s Natural Gas Strategy: Fuelling B.C.’s Economy for the Next Decade and Beyond* (2012), http://www.gov.bc.ca/ener/popt/down/natural_gas_strategy.pdf.

⁷⁴ United States Energy Information Administration, *Crude oil swaps with Mexico could provide economic and environmental benefits*, Sep. 10, 2015, <https://www.eia.gov/todayinenergy/detail.cfm?id=22872>.

⁷⁵ *Id.*

close” impacts that must be assessed in NEPA reviews. In the terms of the Council on Environmental Quality’s draft guidance, it is infeasible and impractical to assess the impact of a single transport project on global energy markets. As the Keystone XL environmental impact statement makes clear, even if an agency devotes substantial time and expertise to such an assessment, it is very unlikely to produce helpful results. Predicting the impact of a single transport project requires too many assumptions and estimations to produce reliable results or constrain a regulator seeking a predetermined outcome. Thus, it fails to serve the principal goals of environmental assessment law: neither providing useful information to the public nor improving the quality of regulator’s decisionmaking.⁷⁶

[Insert with more on instances where an upstream or downstream project might be necessarily linked with a transport project—e.g. pipelines to isolated production sites, floating liquefied natural gas facilities tied to one field, electric transmission to isolated site. In those instances, where possible, environmental assessment should be coordinated between the production and transmission project so that a transport review is not an opportunity to re-litigate an approval for the production project.]

Add suggestions on how courts and agencies can recognize these exceptions and, when agencies consider these connected projects, how they can assess the project without encroaching on state or foreign primary authority to regulate resource production.]

CONCLUSION

The coming decades will determine the course of several energy transformations: new global markets in oil and gas serving growing demand centers in the developing world, new national markets in electricity bringing renewable power to urban demand centers, and new low-carbon power sources driving a modern energy grid. Each of these transformation requires a massive build-out of new infrastructure and increased cooperation between regulators in competing jurisdictions. To navigate these transformations, the United States needs to ensure that its environmental assessment law does not throw up roadblocks to new energy transport facilities and to energy diplomacy. Shoehorning a review of global energy markets into already-complex environmental assessments would not provide environmental benefits but it

⁷⁶ A. Dan Tarlock, *Is There a There There in Environmental Law?*, 19 J. LAND USE & ENVTL. L. 213 (2004).

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would endanger energy diplomacy. Congress and the courts should ensure that environmental assessments stay within their appropriate scope.