In the National Interest
The U.S. Presidential Permit Process, Cross-border Trade and the U.S. Economy

Research Team
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## Table of Contents

Executive Summary .................................................................................................................. 4

1. What is the Presidential Permit Process? ........................................................................ 6
   - Table 1: Executive and Legislative Branch Background ............................................. 6
   - Box: Overview of the Presidential Permitting Process (Energy Projects) ................. 9

2. Approach and Methodology .............................................................................................. 10
   - Figure 1: Potential Effects of Binational Infrastructure Projects ............................... 10
   - Box: North American Industry Classification System ............................................. 11

3. Major Types of Cross-border Infrastructure and Associated Economic Impacts .......... 12
   A. Ports of Entry .................................................................................................................. 12
      - Figure 2: Share of Trade with Canada by State, 2015 ............................................ 13
      - Figure 3: Share of Trade with Mexico by State, 2015 ............................................. 13
      - Table 2: Major Ports Trade with Mexico, 2015 ..................................................... 14
      - Figure 4: Crossing Volumes at the U.S.-Mexico Border, 2015 ............................... 15
      - Figure 5: Crossing Volumes at the U.S.-Canada Border, 2015 ............................. 18
   B. Cross-border Pipelines ................................................................................................... 20
      - Figure 6: Oil and Petroleum Pipelines and Border Crossings ............................... 21
      - Table 3: Employment, Oil and Gas Pipeline Construction ..................................... 22
   C. Electricity Transmission Lines ....................................................................................... 26
      - Table 4: Power Line Construction and Major Employers, 2015 ......................... 27
      - Table 5: Electrical Power Generation etc., Major Employers, 2015 ..................... 28
      - Table 6a/b/c: Summary of Lower Threshold (Minimum) Economic Impact ....... 30

4. Preliminary Findings and Recommendations ................................................................ 31

References ............................................................................................................................. 32
Executive Summary

The Process
The U.S. Presidential Permit process is a U.S. federal government process for determining whether a proposed cross-border infrastructure project is in the national interest of the United States and may proceed. Depending on the particular type of cross-border infrastructure (a proposed port of entry, oil or gas pipeline, or electrical transmission line, for example), the process is led by the U.S. Department of State, the Department of Energy, or the Federal Energy Regulatory Commission, each of which have somewhat different review processes. A National Environmental Policy Act (NEPA) review is a fundamental component of the entire Presidential permit process (and itself varies by agency). The process culminates in a National Interest Determination by the U.S. Department of State.

Perceptions of the Process
The permit process itself is perceived by some to be opaque, bureaucratic, and unnecessarily long. The reality may be changing, at least for a few key cross-border projects, including the CrossBorder Xpress binational air terminal in San Diego, which received fairly rapid approval. Various factors play into how quickly applications move through the agency review process. Numerous stakeholders interviewed for this initiative indicated that the process had improved in recent years and worked reasonably well for projects whose applications were professionally handled and presented by the relevant stakeholders.

Research Question
The principal research question of this analysis is, What are the impacts and consequences to the U.S. economy of the current U.S. Presidential permitting process for cross-border infrastructure? The idea is that a more precise idea of the economic impacts of the current process in terms of jobs and trade would clarify the costs of policy delays to the U.S. economy. This approach generally assumes that cross-border infrastructure applications presented to U.S. federal agencies represent projects that will have a significant net benefit for the U.S. economy as a whole. While that may be true, it is important to note that there is currently no standardized economic impact analysis performed as part of the Presidential permit process, making it difficult to ascertain a) if the proposed projects are as individual projects in the United States’ national economic interest (in addition to undergoing a NEPA review) and b) to what degree the entire Presidential permit process is effective as a policy in helping to develop economically beneficial cross-border infrastructure projects.

Yet while a complete economic impact analysis is beyond the scope of this limited, three-month study, to begin to answer this question, the North American Research Partnership undertook the following steps as part of an initial qualitative and quantitative analysis:

- An expert opinion review with various public and private sector stakeholders with extensive experience with cross-border infrastructure;
- A model of economic impact analysis for cross-border infrastructure projects (see Figure 1 on page 10); and
- Compiled and analyzed an array of economic impacts from primary and secondary sources for key types of cross-border infrastructure.
Limitations of the Analysis
Though the research team used all available resources to answer the question given the scope and timeframe of the project, certain limitations should be taken into account:

- **Project Scope.** A three-month timeframe allows an executive-level look at complex interactions between U.S. policy, cross-border economic interactions and the U.S. economy as a whole.

- **Data limitations.** The quantitative analysis used secondary data. In addition, TransCanada’s multi-billion dollar NAFTA claim has had the effect of severely limiting information gathering (i.e. interviews) with key U.S. Department of State personnel, who are unable to speak on the record regarding the Presidential permit process. The North American Research Partnership has filed a Freedom of Information Request with the State Department for basic information on various projects which requested a Presidential permit but has not yet received a response to date.

Key Findings
The research team made a number of key findings:

- The mandate to issue Presidential permits is found and substantiated in various Executive Orders and legislation.

- The process has therefore evolved as part of the overall process of how the United States builds cross-border infrastructure. As outlined in a recent report commissioned by the North American Development Bank, the Presidential permit process encompasses two of four phases of the port of entry development process.

- One of the most important—and most surprising—findings was that the stakeholders interviewed for this initial analysis who had personal experience with the process did not necessarily think that the process was unnecessarily burdensome.

- Another key finding was that the economic impact analysis will vary by the type of cross-border infrastructure analyzed. Each of these types will have different types of economic impacts.

- We also determined a lower threshold (minimum) economic impact to the U.S. economy for U.S.-Canada and U.S.-Mexico ports of entry of at least $993.7 billion (see Table 6a/b/c on page 30). More research is required to fully articulate the economic impact of cross-border infrastructure as well as the Presidential permit process itself.

Recommendation
One major recommendation for the different U.S. federal government agencies involved in the Presidential permit process as it currently stands is to include a full economic impact analysis for each project (this may require a new Executive Order). While traffic projections are an integral part of port of entry projects, these are not economic impact analyses per se (and are not by any means infallible). They also fail to paint a broader picture of not only local but also state, regional and national economic impact. These infrastructure projects and their review in the Presidential permit process have been intensely local in nature, and the broader picture is missed. While the NEPA review is an important part of the process, a more comprehensive understanding of the economic impact of cross-border infrastructure is needed in order for all stakeholders involved to understand whether a particular project is in the national interest. A more robust economic analysis of these infrastructure projects will enhance both policymakers’ and the public’s understanding of the importance of these projects to the national interest.
1. What is the Presidential Permit Process?
A Presidential Permit is the authorization necessary from the President of the U.S. to build any infrastructure (for example, a bridge or port of entry, a power or pipe-line, fiber-optic cable or conveyor belt) that crosses the international border.

The Presidential permit process is an interagency coordination of reviews to ensure that physical interventions of the international border zone are in the national interest of the United States. While coordination on cross-border infrastructure with foreign governments necessarily occurs, the Presidential permit process is a U.S. federal government process. Three main actors (the Department of State, the Department of Energy and the Federal Energy Regulatory Commission) drive the process and up to 30 additional agencies can interact with the process depending on the type of infrastructure under review. A National Environmental Policy Act (NEPA) review is a fundamental component of the process (and itself varies by agency). At the Department of State, the process is coordinated by the Department of State Environmental Quality and Transboundary Issues Office.

Most permits are for ports of entry construction and modernizations as well as for energy interconnections with Canada and Mexico.

The mandate to issue Presidential permits is found and substantiated in various Executive Orders and legislation. Table 1 below outlines several executive actions (in the form of Executive Orders) and federal legislation that have established the authority and formed the process of reviewing and granting Presidential permits.

<table>
<thead>
<tr>
<th>Infrastructure Type</th>
<th>Original Law Or Executive Order (EO)</th>
<th>Confirming/Secondary Law Or EO</th>
<th>Current Approving Authority</th>
<th>Determination Outcome And Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trans-Border Infrastructure</td>
<td>EO 11423 1968</td>
<td>International Bridge Act 1972</td>
<td>Department of State</td>
<td>National Interest Determination</td>
</tr>
<tr>
<td>Natural Gas Pipelines</td>
<td>Natural Gas Act</td>
<td>EO 10485 1953</td>
<td>FERC</td>
<td>Energy Security. FERC issues export licenses for all fossil fuels.</td>
</tr>
<tr>
<td>Electricity Powerlines and Cables</td>
<td>Federal Power Act created the Federal Power Commission</td>
<td>EO 10485 1953 and DOE Del # 00-004.00A</td>
<td>Various commissions combined to create the Department of Energy in 1977</td>
<td>Grid Reliability. FERC issues export licenses for all fossil fuels.</td>
</tr>
</tbody>
</table>
What a Presidential permit authorizes is actually not well understood. Presidential permits authorize projects that cross the border, whether they are a foot long or several thousand miles. Licenses from the Federal Energy Regulatory Commission (FERC) are permits to export power and fuels and are supplemental to Presidential permits. That is, an applicant may need an export license in addition to a Presidential permit if the project seeks to export oil or natural gas. While the Department of State determines “national interest,” the concept means something slightly different to each of the numerous departments, commissions and other entities consulted. For example, the Department of Defense and the Department of Homeland Security are interested primarily in national security, while the Department of Energy focuses on electrical grid reliability and the security of the nation’s energy supply.

It is a policy area that is intimately fused within the checks and balances inherent in the U.S. system of government. Namely, the Constitution grants the President’s authority over foreign affairs, the Congress retains powers over foreign commerce. During the 19th and early 20th century the presidents were hesitant to exert any powers over cross-border facilities during a time when telegraph and later telephone cables were being laid without Congressional oversight.

Through the mid-20th century legislation and rule-making was sparse in terms of either exerting or delegating power. Infrastructure projects came about under a process that was more informal than it is today; projects were built where they were needed and later where authorized by local laws. Presidential permits were given with or without feasibility studies, “vicinity of” was accepted as location, and infrastructure review processes on the two sides of the border were not simultaneous.

Prior to the Eisenhower (1953) and Johnson Administration (1968) Executive Orders, several bridges were built without Presidential permits; these bridges continue to operate today. They were codified in state laws and often granted to individuals to operate (and profit from).

The 2004 Executive Order specifically sought to expedite the permitting process for transborder energy projects and to provide a systematic process for application review. The order encouraged agencies to respond to State Department requests for their review in a timely manner, not greater than 90 days. The order also specified that State Department would remain the lead agency on petroleum, petroleum products, coal or other fuels-related crossborder infrastructure.

The Presidential Permit Process: Current Implementation and Status

The process has therefore evolved as part of the overall process of how the United States builds cross-border infrastructure. As outlined in a recent report commissioned by the North American Development Bank, the Presidential permit process encompasses two of four phases of the new port of entry development process (FOA Consultores and the Texas Transportation Institute, 2015).

Today, the basic steps of applying for a Presidential permit include the development of a project description by a specific applicant (a state, county, municipality or a private-sector entity); an environmental review and, if needed, traffic studies are conducted to determine project feasibility; and following a determination by the corresponding lead agency, applicants amend Presidential permit application based upon feedback from the determination.
Interspersed in this process are public notices (Federal Register Notice), concurrent review by the public and BOSAS (Bureaus, Offices, Services, Agencies, and State/Subnational) review. The process—if successful—concludes with a National Interest Determination by the Department of State and permit issuance by the President in the Federal Registry.

Because of the TransCanada NAFTA claim, we were unable to formally interview State Department staff to gain insights on the current implementation and status of the Presidential permit process. The North American Research Partnership (NARP) submitted a Freedom of Information Act request to the State Department to obtain general information on a handful of key cross-border infrastructure projects. As of this writing, NARP has not received any information regarding these projects.

Other interviews with key stakeholders and research conducted for this study indicated that generally speaking, all three federal agencies are accomplishing their objectives of reviewing applications in a timely, transparent and productive manner.

The box on page 9, based on information gathered by the Congressional Research Service, gives an overview of the Presidential permitting process for the cross-border energy infrastructure process.
Overview of the Presidential Permit Process for Cross-Border Energy Infrastructure Projects

Agencies involved in the process:

- Department of State: in charge of the process for oil pipelines and pipelines for the transportation of hazardous liquids
- Federal Energy Regulatory Commission: in charge of the process for natural gas pipelines
- Department of Energy: in charge of the process of electricity transmission lines

Basics of the Process:

1. Reception of the Presidential permit request
2. The agency in charge gathers the documents necessary from the applicant
3. Information from other agencies, and from state and local authorities is gathered.
4. An environmental assessment of the project is pursued
5. Agency in charge of the request gives feedback to the applicant in case necessary compliance requirements need to be met*
6. Applicant makes the necessary modifications, if applicable (steps 5 and 6 of the process are repeated if necessary)
7. Agency notifies final decision

NEPA Environmental Impact Assessment*

- Direct Effects: occur at the same time and place where the project is implemented
- Indirect Effects: impacts that occur later in time or domino effects
- Cumulative Effects: impacts related to cumulative activity of the project

National Interest Determination

Although Executive Orders 11423 and 13337 do not specify the definition of National Interest for the evaluation of a Presidential permit request, some of the elements other than the NEPA’s environmental considerations that seem to be included in the evaluation are: the impact on the security of the transport pathways for crude oil, impact on diplomatic relations, stability of the suppliers of crude oil and ability to work with them to meet environmental security goals, impact on foreign policy objectives, potential economic benefits, impact on the use of other energy sources, and other project-specific considerations.

* Each agency is responsible to determine the scope of the assessment of the project. Although for some agencies the impact may be limited to the area where the project will take place, other may prefer to extend the scope of the evaluation.

Source: Congressional Research Service (2015)
2. Approach and Methodology
For this research initiative, the North American Research Partnership undertook a literature review; conducted numerous interviews with key public and private sector stakeholders; and conducted a top-level economic impact analysis of the various types of cross-border infrastructure using secondary data. This particular mix of methodologies was utilized in order to build a full picture of the issues involved and identify key opportunities, obstacles, champions and detractors in this complex issue area. This section details the quantitative component of our analysis of the Presidential permit process.

Overview of the Economic Impact Analysis
Three different types of infrastructure projects were analyzed in order to illuminate the economic impacts of the projects and the process.

The first type of projects were international bridges and border crossings between the United States and its neighbors. (A sub-type would be the CrossBorder Xpress Bridge between San Diego and Tijuana that connects Tijuana’s Rodriguez International Airport to a terminal in Otay Mesa, California. This project has unique characteristics that are worth considering while doing an economic impact analysis but are not included in this study.)

Natural gas and oil pipeline projects were another type of project analyzed (with an emphasis on projects located along the U.S.-Canada border). Since many of these projects span large geographical areas, the analysis focuses on the activity’s trade dynamism as well as direct and indirect employment generated by the industry.
The third type of project—cross-border electricity projects—provide an excellent opportunity to examine the efficiency and efficacy of the presidential permit process.

Because these three types of projects have different economic impacts, they are analyzed separately in this study. Furthermore, it is also important to note that the Presidential permit processes required for these three types of projects are handled by different agencies. This varied analysis will help us obtain a more comprehensive perspective on how these projects affect the U.S. economy and the benefits and impacts they generate. We hope that this in turn might generate suggestions for making the Presidential permitting process more effective.

As part of our methodology, we delineated a flow (see Figure 2 above) that systematized the elements that a cross-border project should meet in order to provide economic benefits that are consistent with a vision of national interest. The flow considers the direct and indirect sectorial and societal effects that a cross-border project generates. This helped us to standardize our analysis and serves as a visual representation for how we believe these projects should be evaluated from an economic benefit standpoint.

**Limitations of the Study**

It is important to note that the research was conducted entirely with secondary sources. In addition, the Presidential permit process does not require or undertake an economic impact analysis; a standardized economic impact analysis for these types of projects as part of the process would have made it much simpler to determine the economic impact of the process as a whole.

Also, while in some cases it is not possible to isolate the direct and indirect effects quantitatively, it is possible to identify the affected sector and the “channel” in which these effects happen.

To determine the significance of potential cumulative economic impacts of cross-border infrastructure in terms of direct and indirect effects, we will use data inputs such as vehicle and pedestrian crossings, natural gas exports and imports, electricity exports and imports, business and housing agglomeration, rate of utilization, tax revenue, multiplier effects, as well as other information unique to each type of project. It is important to highlight that the use of this information is based on full availability given the time constraint of this study (three months) and consists entirely of secondary data, as noted above. Imputation was used when necessary with information from similar projects.

The analysis consists of after-the-event estimates that could serve as ex-ante information for future projects. Finally, although the types of cross-border infrastructure projects involve significant economic interaction with Mexico and/or Canada, for this study the focus is on the economic impact of these projects to the U.S. economy alone.

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**North American Industry Classification System (NAICS)**

Throughout this document, we will use NAICS codes to observe the direct impacts, in terms of employment, of the activities related to the projects examined. This system was created after NAFTA implementation and it is used to classify establishments according to the type of activities they develop. Every establishment that operates in the country is classified under one specific code.

The information can be disaggregated at the sector level (2-digit code), sub-sector level (3-digit code), industry group (4-digit code), industry level (5-digit level) and U.S. specific code (6-digit level). Most of the time, we will use information at the 3- and 4-digit level.
3. Major Types of Cross-border Infrastructure and Associated Economic Impacts

A. International Border Crossing Projects

Overview
Cross border infrastructure projects are crucial elements for the economy of the border regions as well as for the national economies as a whole. The United States has a very dynamic economic relationship with its neighbors shown by the enormous flows of goods and people across the international border crossings (see Figures 4 and 5 below). The border with Canada is the longest international border in the world, linking eight Canadian provinces and 14 states in the U.S. with around 85 border crossing points.\(^1\)

The most dynamic border crossing in terms of truck volume on the U.S.-Canada border is the Detroit-Windsor Tunnel. In terms of personal vehicles, the Peace Bridge (connecting Buffalo, New York and Fort Erie, Ontario) has the largest volume of personal vehicle crossings. At the state level, Washington and Minnesota also have high volumes of personal vehicle crossings.

The border between the United States and Mexico is also one of the most active in the world, with 48 border crossings where people and/or goods can cross. While most of the truck volume crosses through Texas (and most specifically, through Laredo), California is the most dynamic state in terms of personal vehicles and pedestrian crossings. The San Ysidro Port of Entry is considered the busiest land border in the Western hemisphere (U.S. General Services Administration, 2016).

The importance of the interaction between the United States and its neighbors is evident in the opportunities it generates in terms of trade, consumption and local development. The number of trucks that cross the border has a direct impact on trade and competitiveness, while the crossing of personal vehicles and pedestrians has important implications for consumption and local development.

The state of cross-border infrastructure can benefit or hamper the development of both local communities and trade. A lack of infrastructure generates bottlenecks and increases trade costs. An excess of infrastructure where it will be underutilized wastes resources that could have been put to better use.

When we consider that Mexico and Canada are among the top three trading partners of the United States, conditions that facilitate and expedite the movement of merchandise will benefit the development of supply chains throughout North America and specifically in the United States. In 2015, 14.2% of total trade of the United States was done with Mexico, while 16% of total trade was realized with Canada. See Figures 2 and 3 below for an overview of the share of trade with Canada and Mexico by state.

In order to evaluate the economic impact of a mega infrastructure projects such as bridges and border crossing points utilizing the methodology outlined above, it is

\(^1\) There are 119 ports of entry in operation, though not all of them are bidirectional ports. In addition, not all ports of entry work throughout the year, particularly those located on the border between Canada and Alaska.
necessary to examine the effects at the local, regional and national level. Furthermore, it is important to study both the direct and indirect impacts that these projects generate in terms of industrial development and jobs. Finally, it is also crucial to examine the local, community-level impacts of these projects.

For the U.S.-Canada border, land ports were examined for the states of Washington, Idaho, Montana, North Dakota, Minnesota, Michigan, New York, Vermont and Maine,
while in the case of Mexico, 25 border-crossing points in the four border-states were reviewed.\(^2\)

It is important to note that many of the projects analyzed in this section were constructed before 1972, when the Presidential Permits started to be required (Texas Department of Transportation, 2015). In some cases, even if some border-crossing points have been built or remodeled, it is not possible to obtain exact measures of the impacts that the construction of these projects generate in terms of employment, as no data is available. This is also the case when trying to examine the total direct jobs that the operation of those ports of entries generates. However, some of the most important effects these projects generate such as the facilitation of trade or the development of new industries will be analyzed in this section.

**United States-Mexico Border Crossings: Economic Impact**

U.S.-Mexico border crossings have received increased policy attention in recent years. The Bilateral Executive Steering Committee is fed by a number of interagency groups on both the U.S. and Mexican sides, including the 21st Century Border Management Interagency Policy Committee as well as the U.S.-Mexico Joint Working Committee and the Binational Bridges and Border Crossings Group. The U.S.-Mexico High-level Economic Dialogue, created in 2013, has in turn absorbed border infrastructure issues into its set of issue areas (which extends beyond what are expressly border issues and includes items such as innovation and competitiveness).

**Trade and Industrial Concentration-Related Impacts**

The ports of entry located in Texas represent the most important border crossings in terms of trade value. The main port of entry is Laredo, where almost $200 billion in goods cross annually. This not only generates positive economic effects that are spread around the country, as shown in Table 2 above, but the effects also translate into economic development at the local level. For instance, in Webb County, where the Laredo port of entry is located, the most concentrated industries are closely related to

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\(^2\) As of this writing, the U.S. Department of State website does not have a list of all Presidential permits for U.S.-Canada border cross-border infrastructure projects posted.
logistic operations, with freight transportation employing almost 7,500 people (U.S. Census Bureau, 2014).

**Figure 4: Crossing Volumes at the U.S.-Mexico Border, 2015**

The El Paso port of entry is the second most important border crossing in terms of trade value. As this port has become more congested, different projects have developed to address commercial needs and facilitate trade. In that sense, the Santa Teresa POE, built in 1992 to divert some of the traffic coming from El Paso port, has become the most important livestock import/export facility along the border (New Mexico Border Authority, 2016). According to the New Mexico Border Authority, each year more than 375,000 head of cattle cross throughout this point of entry (2012). This port now occupies seventh place in terms of total trade, generating important effects that spread out through Doña Ana County and to the El Paso region.

In addition to the gains from trade, the ports of entry also generate industrial agglomerations. In regions such as Paso del Norte, industries have concentrated to combine the strengths and skills of both sides of the border. This has led to the creation of one of the most important manufacturing hubs along the border, with activity in the automotive sector, defense and homeland security, life sciences and clean technologies (The Borderplex Alliance, 2016).

These trade and agglomeration effects can also be measured in an indirect way. That is, economic activities on one side of the border create spillover effects that extend to the other side, thanks to intense commercial activity. That is the case of the Nogales-Mariposa port of entry in Arizona where Mexican fresh produce imports (from agricultural areas throughout Mexico) generated a direct impact of $303.4 million, 2,644 direct jobs and $146.4 million in direct wages in 2013, according to a study commissioned by the Nogales-Santa Cruz Economic Development Corporation. These gains are related to activities such as shipping, custom brokerage, truck transportation to warehouses, truck permits, gas stations and border inspection activities. The study states that the imports of winter produce into Arizona comprised 14.6% of total jobs in Santa Cruz; one-third of the county’s output is related to this activity.
Conversely, if bridges and ports of entry in general generate important trade opportunities, inadequate capacity can also generate significant inefficiencies. The Otay Mesa port of entry is one example of this. Initially built to relieve some of the traffic at the San Ysidro Port of Entry, this port is currently the second largest in terms of daily personal-vehicles and pedestrian crossings and the first in terms of truck crossings in California. This has created important bottlenecks problems. The average crossing time is between 1.5 and 2 hours with some vehicles suffering delays of almost 4 hours (General Services Administration, 2011; SANDAG, 2007).

These delays translate into losses of $539 million per year in revenue and more than 2,900 jobs for San Diego County. For California, the impact is estimated to be of a loss of $847 million dollars in revenue and 4,300 jobs. These losses increase at the country level, as they are estimated to be of $1.5 billion per year and losses of more than 9,000 jobs (SANDAG, 2007).

The California-Baja California region is home to a number of advanced industries such as the manufacturing of electronic equipment, audio and video equipment, aerospace parts, and medical devices. According to Bloomberg, the San Diego-Tijuana connection is valued at $230 million USD with a potential labor force of over 3 million people (World Economic Forum, 2015). Having efficient port of entry operations is undoubtedly extremely important.

Local Impacts

The economic effects of the ports of entry located along the U.S.-Mexico border are not only reflected in the amount of trade or trucks that cross every day, but are also generated by the daily movement of people that use some of these ports for business, commuting or tourism.

In that sense, the ports of entry in California stand out. The San Ysidro Point of Entry, which separates Tijuana from San Diego, is considered the busiest port in the Western Hemisphere, with approximately 50,000 northbound vehicles and 25,000 northbound pedestrians crossing every day (California Transportation- District 11, 2012, General Services Administration, 2016).

The San Diego Tourism Authority estimates that the number of day visitors from Mexico reached 4.4 million in 2015. This is approximately 25% of all day visitors to the city of San Diego. The amount spent by these visitors is estimated at $263 million. This reliable source of tourism contributes to the development of industries related to entertainment and tourism, such as sightseeing transportation or amusement parks.

In addition, the San Ysidro and Otay Mesa communities have largely developed as a consequence of the dynamism along the border. The retail sector in San Ysidro was first developed to serve the Mexican market that was willing to cross to the United States to find brands that were not available in Mexico. In 2010, total taxable sales from Las Americas Premium Outlets in San Ysidro reached $227,192,000, while for other retailers in the area the total was $139,491,000, thus generating taxable sales of almost $400 million (City of San Diego Development Services, 2012).

These effects are also important in other states. For instance, in El Paso, Texas, thousands of residents of Ciudad Juárez cross the border every day to study, work or to run errands. This generates economic impacts that translate into significant government revenue. In the second quarter of 2013, the El Paso Metropolitan Statistical Area generated $953 million in taxable retail sales (The BorderPlex Alliance, 2014).
And yet it is important to note that while this enormous flow creates significant economic opportunities on both sides of the border, it also generates complications in terms of traffic and bottlenecks, which translates into significant financial, social and environmental costs.  

**Summary: United States-Mexico Border Crossings**

Some of the most important takeaways of this evaluation are:

- For numerous states, particularly border states, trade with Mexico is of great importance. Exports of Arizona and New Mexico to Mexico, for example, represent more than 40% of these states’ total exports.
- Trade intensity is linked to the development of industrial corridors. Clusters in Texas and California have been established in large degree due to their connection with industrial clusters on the Mexican side.
- Trade is also largely responsible for the growth of service industries along the border. This is particularly true for logistics and business support industries, but it is also relevant for the development of other industries.
- The effects of non-commercial border crossings are mostly local but need to be measured as well, as they are important sources of business and tax revenue and generate employment opportunities.
- Ports of entry exhibit a variety of economic dynamics that create and are impacted by local economic conditions.
- To evaluate the economic impact of the construction of new bridges and ports of entry, it is necessary to first consider if the current infrastructure can be improved and if other alternatives exist to improve their efficiency.
- A full economic impact analysis needs to be conducted before the implementation of new projects. This analysis should include an examination of the current port usage, the existence of bottlenecks, the state of current infrastructure, alternatives to improve efficiency, evaluation of infrastructure and agglomeration surrounding the port (i.e. major highways in both sides of the border, industrial concentration and urban communities), projections of the effects of the new POE/expansion of existing ports (how much can be accomplished and how much is needed), and the new ports’ projected impact on local, state, and national economies.

**United States-Canada Border Crossings: Economic Impact**

As seen in Figure 2, a large number of U.S. states have a strong trade relationship with Canada. This partnership is particularly important for the states located along the U.S.-Canada border and in the Midwest region. The configuration of trade depends greatly on the development of bi-national industrial corridors. That is to say, industries have developed in both countries and trade has increased to complement the comparative advantages in each country within each industry and across industries.

In 2011, President Obama and Prime Minister Harper issued the Joint Declaration, “Beyond the Border: A Shared Vision for Perimeter Security and Economic Competitiveness” that focused on four priority areas: addressing threats early;

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3 For more on border commercial areas, see Zones of Hope: Challenges and Opportunities in Improving U.S.-Mexico Border Economic Micro-Zones, http://naresearchpartnership.org/projects/zones-of-hope/
facilitating trade, economic growth and jobs; integrating cross-border law-enforcement; and improving critical infrastructure and cyber-security.

**Figure 5: Crossing Volumes at the U.S.-Canada Border, 2015**

As part of this initiative, different border crossings were prioritized and an Action Plan was conceived. The intent was to find areas of opportunity in those border crossings and develop a plan to modernize them and make them more efficient.

**Trade and Industrial Concentration-Related Impacts**

In terms of trade and industrial activity, the states of Michigan and New York play a key role in the relationship between Canada and the United States. In the case of Michigan, every one of the four border crossings in the state ranks among the principal ports of entry along the U.S.-Canada border. The state exported over $23 billion and imported $45.7 billion to and from Canada for total bilateral trade of almost $70 billion in 2015. Michigan thus has the highest share of total trade between the U.S. and Canada of any U.S. state. Most of the trade is concentrated in transportation, machinery & equipment, and heavy manufacturing components. In addition, in 2013, almost 2.4 million Canadians visited Michigan, spending $489 million. The amount of jobs in the state linked to trade and investment with Canada in 2013 reached 259,000.

Detroit ranked first in truck crossings between the U.S. and Canada in 2015, and it is the second busiest crossing between the two countries overall. With two major structures (the Windsor-Detroit Tunnel and the Ambassador Bridge) this port has been the most important in terms of trade and it has contributed to the development of a close partnership with Canada. It is estimated that approximately 150,000 jobs depend on the operations of these border crossings (Border Transportation Partnership, 2005).

This relationship has contributed to the development of the Detroit-Windsor region as the development of the automotive industry has spread to Windsor, where major Original Equipment Manufacturers (OEMs) have large operations.
In 2012, the state of Michigan applied for a Presidential permit to construct a new international trade crossing, now referred to as the Gordie Howe International Bridge (though in previous stages it was known as the Detroit River International Crossing and then the New International Trade Crossing). The permit was issued in 2013. The project involves the construction of a 6-lane bridge crossing between Detroit and Windsor and has an estimated cost of $2 billion.

In addition, the development of this center has contributed to the creation of a corridor that extends well into Mexico that represents one of the most important industries in North America, the automotive industry. In addition, other industries have been adding to the diversification of the regional economy, taking advantage of advanced manufacturing already present in the region. Windsor’s growing aerospace industry is an example of this phenomenon.

In the case of New York, total trade between the state and Canada reached $30.4 billion in 2015 and four of the sixteen border crossings are among the busiest along the Canada-U.S. border. In fact, according to the Canadian government, 680,900 jobs in New York depend on trade and investment between the state and Canada.

The most important port of entry in this region is the Buffalo Peace Bridge, which handles most of the traffic in the region and is Canada’s third-busiest crossing (Ontario Ministry of Transportation, 2009). As is the case with most of the other bridges in the region, this crossing was constructed before a Presidential permit was necessary.

In the case of Maine, the Jackman port of entry connects with Interstate 95 that winds down the East Coast to Florida. Considering the importance of agriculture in the state and that most of the exports go to Canada, this port is highly relevant.

Although other ports in the region are also very transited by trucks, the effects in trade are mostly local. This is not to say that the impact is minimal, as it is an important source of jobs and revenue for the states. For the state of Washington, for instance, the relationship with British Columbia generates around 223,300 jobs (Government of Canada, 2013).

Local Impacts

A particular characteristic of Canada is that most of the inhabitants of the country live near (often within 100 miles of) the border with the United States. Therefore, the most heavily utilized ports of entry are located near the major Canadian cities.

This is the case with the border crossings in British Columbia, as the crossings with more travelers are located near Vancouver and Seattle. In Michigan, as mentioned before, cross-border infrastructure plays a critical role in the relationship between Detroit and Windsor. In New York, the Buffalo-Niagara Falls port processes almost 5 million personal vehicles every year and more than 300,000 pedestrians a significant percentage taking into account that almost six million Canadians visit New York and spend $1.7 billion every year (Government of Canada, 2013).

In North Dakota, the high levels of transit through the Pembina–Emerson port of entry led to an application for a Presidential permit in April 2016 to construct additional lanes. In terms of tourism, more than 900,000 Canadians visit North Dakota every year, spending $307 million.

The International Falls border crossing in Minnesota not only has the highest volume of personal vehicle traffic but also handles a high volume of pedestrian crossings, which
makes it important in terms of non-commercial traffic. In fact, this port handles 20% of the total crossings between Canada and the U.S.

In Vermont, the Highgate Springs port of entry plays a very important role in the development of a strong relationship with Quebec. This port of entry links Montreal with Boston, providing opportunities for cultural, economic and educational exchanges.

**Summary: United States-Canada Border Crossings**

Some of the major findings in this subsection are:

- Although there are a large number of ports of entry between Canada and the U.S., the most travelled crossings are strategically located between large cities on both sides of the border.
- Canada is the top commercial partner for a large share of states in the United States. These states use these major ports to develop and strengthen their relationship.
- Border regions such as Detroit and Windsor have been able to develop a strong relationship that extends beyond the border. The proximity of these cities has aided in the development of industries whose effects have translated into the integration of a major industrial corridor that extends deep into Mexico.
- As is the case with the U.S.-Mexico border, most of the crossing projects were developed before Presidential permits were introduced. The Department of State currently reports only two Presidential permit applications, the Pembina-Emerson Port of Entry and the New International Trade Crossing.
- The U.S. and Canada have developed a very strong partnership with the objective of creating a safer and more competitive border. This has translated into the Declaration “Beyond the Border: A Shared Vision for Perimeter Security and Economic Competitiveness” and into the original and updated version of the “Border Infrastructure Investment Plan Canada-United States.” These documents identify the priorities in terms of shared infrastructure and integrate the actions according to them. The plans are very structured and in line with the Congressional High Priority Corridors.
- Having a bi-national integrated plan is a major key for cooperation. Even if traffic remains a concern in some areas, it is more feasible to build a successful strategy if both sides cooperate and agree on the priorities.

**B. Cross-border Pipeline Projects**

**Overview**

Pipelines are a very important component of the United States’ infrastructure. The country has become a major player in oil production with a daily production of 15 million barrels per day in 2015. In terms of consumption, the U.S. has kept its high levels of demand, with a consumption of 19.3 million barrels per day. The country is, in fact, a net importer of oil and petroleum products with imports reaching 9.4 million barrels per day and exports reaching 4.7 million barrels per day.

The United States is also a major producer of natural gas. In 2015, the country produced 27,033,685 million cubic feet of dry natural gas while consuming 27,475,135 million cubic feet. Imports totaled 2,718,349 million ft$^3$ of natural gas and exported 1,785,512 million ft$^3$. 
To be able to transport and deliver these utilities, it is crucial to have an adequate pipeline system. The United States accounts for 65% of total pipeline in the world. These pipelines also play an important role in the U.S.’ commercial relations with its neighbors. In 2015, 60.3% of total imports of crude and oil products came from Canada, while 34.44% of the exports went to Mexico and Canada. In the case of natural gas, 96.62% of the imports came from the pipelines that connect the United States and Canada, while 58.27% of total exports went to Mexico.

Twenty-four border crossing points with Canada and Mexico handle the cross-border transport of oil and petroleum products. Most of them are found in North Dakota and in Michigan, although the pipelines extend to other parts of the country. In the case of natural gas, the operations are even more dynamic, with 46 cross-border connections. The Department of State shows 14 Presidential permit applications related to oil and petroleum products for the period after 2010; six of them are pending as of this writing. However, most of the projects are not related to the construction of new pipelines but rather to ownership transfers or to slight changes in operations.

In the economic impact analysis section below, we examine the impacts of the construction and operation of both oil and natural gas pipelines. These impacts are not only linked to the direct functioning of the pipelines but also extend to other sectors. Although it is not possible to isolate the effects of those pipelines operating on one of the borders of the United States with its neighbors, these effects can easily be transferred to these areas. In addition, effects of trade on pipelines are directly linked to one of the border crossings pipelines.
Economic Impact Analysis

Construction Phase

Currently, most of the crude oil pipeline systems are concentrated in 17 states, though a total of 37 states have oil pipelines. In 2015, approximately 7,528 miles of hazardous liquid pipelines were added to the system. In the case of natural gas pipelines, most are concentrated in the Southwest region. In 2015, 19,484 miles of gas pipeline systems were constructed.

To estimate the direct impact of pipeline construction, it is necessary to take into account the jobs created in the design phase, the construction phase and during internal inspection. The indirect jobs are related to the industries connected to the manufacturing of the components of the pipeline system.

In 2015, 135,461 direct jobs were related to the construction of oil and gas pipelines. As one would expect, most of them are located in the states where the highest concentration of pipeline systems are located. Alaska, Iowa, Louisiana, and New Jersey are some of the states that exhibited the highest growth in employment in this industry compared to the previous year.

Taking into account the addition of new pipelines and the employment created, it is possible to do a gross estimation of 5.014 direct jobs created per mile constructed. Nevertheless, some of these jobs might be related to pipeline maintenance, which means

Table 3: Employment in Oil and Gas Pipeline Construction (NAICS 23712)

<table>
<thead>
<tr>
<th>State</th>
<th>Employees</th>
<th>Wages (Thousand USD)</th>
<th>State</th>
<th>Employees</th>
<th>Wages (Thousand USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas</td>
<td>40,598</td>
<td>$3,260,350</td>
<td>Iowa</td>
<td>2,487</td>
<td>$239,599</td>
</tr>
<tr>
<td>Louisiana</td>
<td>15,674</td>
<td>$1,248,486</td>
<td>New</td>
<td>2,443</td>
<td>$140,413</td>
</tr>
<tr>
<td>California</td>
<td>10,709</td>
<td>$781,458</td>
<td>Mexico</td>
<td>1,945</td>
<td>$220,910</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>5,640</td>
<td>$480,316</td>
<td>Alaska</td>
<td>1,918</td>
<td>$142,085</td>
</tr>
<tr>
<td>Ohio</td>
<td>5,417</td>
<td>$468,367</td>
<td>Kansas</td>
<td>1,794</td>
<td>$188,775</td>
</tr>
<tr>
<td>Colorado</td>
<td>4,682</td>
<td>$307,493</td>
<td>New York</td>
<td>1,738</td>
<td>$188,004</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>4,543</td>
<td>$323,671</td>
<td>Minnesota</td>
<td>1,439</td>
<td>$99,806</td>
</tr>
<tr>
<td>Illinois</td>
<td>3,243</td>
<td>$360,152</td>
<td>Indiana</td>
<td>1,383</td>
<td>$98,105</td>
</tr>
<tr>
<td>North Dakota</td>
<td>3,225</td>
<td>$265,016</td>
<td>Michigan</td>
<td>1,376</td>
<td>$84,295</td>
</tr>
<tr>
<td>West Virginia</td>
<td>2,898</td>
<td>$259,600</td>
<td>North Carolina</td>
<td>1,354</td>
<td>$121,269</td>
</tr>
<tr>
<td>Virginia</td>
<td>2,758</td>
<td>$186,056</td>
<td>New Jersey</td>
<td>1,299</td>
<td>$86,049</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Economics (2016)

a lower impact of job creation related to the new pipelines; however, this also means that more jobs are related to already functioning pipelines.
A study conducted by IHS Economics in 2016 estimated that the cost of oil pipeline construction that took place in 2015 was approximately $11.57 billion, with a temporary increase in employment of 164,111 jobs (IHS, 2016). According to this estimate, 13.3% of these jobs are connected to the manufacturing industry, with most of the impact concentrated on indirect activities. This estimate implies that 24.1 jobs (direct, indirect and induced) will be created per mile constructed in the case of crude oil pipelines.

Most of the indirect jobs created in manufacturing industries are, according to this study, related to the following NAICS subsectors:

- 3241- Petroleum and Coal Products
- 3251- Basic Chemicals
- 3255- Paint, Coating and Adhesives
- 3261- Plastic Products
- 3273- Cement and Concrete Products
- 3311- Iron and Steel Mills
- 3323- Architectural and Structural Mills
- 3327- Machine Shops, Turned Products, Screws, Nuts and Bolts
- 3329- Other Fabricated Metal Products
- 3331- Agriculture, Construction and Mining Machinery
- 3339- Other Machinery

This analysis helps us to determine the effects at the local and at the national level. Concerning local impacts, they can be classified in two: direct and indirect impacts. The direct impacts are related to the construction activities. The indirect impacts will be found in the manufacturing of the components necessary to construct the pipeline systems.

*Operation Phase*

During the operation phase—which extends from employment in the extraction industry to the distribution and transportation of oil and natural gas—it is evident that the presence of pipelines generates jobs. To look into that, at least five different subsectors were identified as being directly related to the operation of pipelines: oil and gas extraction, natural gas distribution, pipeline transportation of crude oil, pipeline transportation of natural gas, and other pipeline transportation. Employment estimates for these industries indicate that approximately 281,830 jobs are related to these sectors.

In addition to these jobs, there are other sectors that are closely related to the operation of pipelines in the United States. One of these sectors is the manufacturing industry. The study from IHS estimates that spending on pipelines that were operating in 2015 helped to create 26,611 jobs, including 1,189 new jobs in the manufacturing industry. The total impact of operation and maintenance of the pipeline network was estimated to be approximately $2.28 billion. This study also estimates that the pipelines created in 2015 would produce spending of $1.12 billion in 2016, as well as an increase of employment of 13,066 jobs, including 584 jobs in the manufacturing industry for 2016 (IHS, 2016).
Trade

The operation and maintenance of the pipeline system in the United States mostly supports local and state economies, as it creates stable jobs that add value to the process. But the effects can also be observed at the national level not only in numerous types of manufacturing activities but also as they boost international trade. International flows allow the country to satisfy its demand in terms of natural gas and oil that help different industries to function and also cover the needs of U.S. households.

In the case of natural gas, basically all of the international trade is done through pipelines (98.39% of the exports and 96.62% of total imports). Currently, there are 70 operating oil and gas pipelines that cross the border between the United States and Canada (31 oil and 39 natural gas). There are 16 additional pipelines that transport other commodities. In the case of Mexico, 18 natural gas pipelines exist, while 5 border crossing points for oil pipelines are in operation.

In the case of exports, they are mostly directed to Mexico (59.11% of total exports) but they also go to Canada (39.28% of total exports). Considering imports, 96.59% of total natural gas imports originate from Canada. The most active ports of entry are Eastport, Idaho; Port of Morgan, Montana; Sumas, Washington and Sherwood, North Dakota. Ports of exit are more dynamic in Saint Clair, Michigan; Niagara Falls, New York; Rio Grande, Texas; Clint, Texas and Ogilby Mesa, California (EIA, 2016).

With respect to the oil sector, 14.5% and 20% of total exports of crude oil and petroleum products go to Mexico and Canada, respectively. In the meantime, Canada is the major supplier of these commodities, with imports from this country accounting for 40% of total imports. Crude oil represents 78.19% of total imports of crude oil and petroleum products, and 84.42% of the imports of these commodities originate in Canada. As the United States is still a net importer of oil with a deficit of almost one billion barrels with its trade with Canada, the decrease in oil world prices may have some positive effects at the national level.

Summary

In this section, we have focused on the economic impact of natural gas and crude oil and petroleum products pipelines. Although these effects were not necessarily isolated to the pipelines that connect the United States with Mexico and Canada, except for those related to international flows, it is possible to transfer most of the results linked to the construction and operation of those infrastructure projects.

In general, it has been shown that the effects on employment and income are important in both the construction and the operation phases of the pipeline systems. These impacts are not only identified in terms of industries directly linked to the construction or operation of the pipelines but the effects are also indirect. The most relevant impacts found in this analysis are listed next.

- Construction stage impacts:
  - Activities are mostly concentrated in the Oil and Gas Construction Industry (NAICS code 23712) and include construction and extraction operators and engineers, among others;
  - The indirect activities are mostly concentrated in the manufacturing sector, as pipelines require heavy equipment and components.
• **Operation and Maintenance stage impacts:**
  o The effects are mostly direct and involve activities connected with the following industries: oil and gas extraction (NAICS code 2111), natural gas distribution (NAICS code 2212), pipeline transportation of crude oil (NAICS code 4861), pipeline transportation of natural gas (NAICS code 4862), and other pipeline transportation (NAICS code 4869).
  o The effects in the manufacturing industry are not as large for pipelines that are already in operation.

• **Trade and Societal Effects**
  o Most of the international trade of the United States in the natural gas and oil sector is done through the pipeline system. Mexico is an important consumer of natural gas from the U.S. and is looking to satisfy the needs of its electrical sector.
  o Canada is the largest source of imports of natural gas and oil. The U.S is looking for alternative ways to source natural gas, but Canada remains an important partner that allows it to obtain these commodities to satisfy the country’s needs.
  o The most important ports of entry/exit of natural gas are located in Idaho, Montana, Washington, Michigan, New York, Texas and California.

• **Presidential Permits**
  o Fourteen application processes for Presidential permits were identified on the U.S. Department of State website concerning oil and hazardous liquids pipelines. Six applications are still in process; most of these applications are related to ownership name changes.
  o There are still six applications in process. The one that took longest to resolve was the TransCanada Keystone XL Pipeline, whose permit was denied.
  o Starting this year, it is no longer necessary to obtain a Department of Commerce Licence in order to export crude oil⁴. This does not mean that a Presidential permit is not necessary as this one involves the construction of the infrastructure required to operate, but that a licence to undertake export operations is no longer needed and now exports of crude oil are made as No Licence Required (NLR).
  o An export or import permit of natural gas is still necessary under Section 3 of the Natural Gas Act. Applications for short term (less than 2 years) or a long-term permits are available.

• **Limitations of the analysis**
  o This analysis does not look at the effects that are not directly linked to public economic impacts of the pipelines. This includes but it is not limited to environmental impacts and private economic effects.
  o More importantly, this analysis does not examine alternative solutions to pipelines, and therefore does not evaluate their opportunity cost. It does not

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⁴ Section 101 of Division O of the Consolidated Appropriations Act, 2016, signed on December 18, 2015.
assess the effect of pipelines on prices or on the capacity of the United States to improve its generation of energy.

C. Electricity Transmission Lines

Overview

In this section, we review the impact of electricity transmission lines, and particularly transmission lines that are located along the U.S.-Canada and U.S.-Mexico border and therefore linked to the procurement of a Presidential permit.

To do so, we will follow the same approach used in the previous sections to measure the impacts in terms of employment and output. In addition, a large part of the analysis will be focused on electricity trade between the United States and Canada and Mexico to verify how it benefits or affects the economy at the local, state, and country level.

U.S. Electric Power Generation, Transmission and Distribution

In the United States, there are 7,287 power plants that generate electricity by using other sources of primary energy. The most common source for generation of electricity in the United States has traditionally been coal. However, since 2015, as natural gas prices have decreased, this has become one of the major sources for electricity generation in the country. Most of these power plants are located in California, with 1,164 power plants. However, the greatest net generation of electricity takes place in Texas, where 389 plants are located.

Economic Impact Analysis

Construction Phase

As in the previous section, it is possible to verify the impacts of the power transmission lines by looking at both the construction and the operation phases. In the case of the construction phase, the activities classified under the NAICS code 23713—Power and Communication Line and Related Structures Construction can, to some extent, provide some insights.

At the country level, this industry employs around 197,000 people; these jobs are mostly located in the states of Texas, California, North Carolina, and Pennsylvania. However, it is not possible to confirm that all of these jobs are solely related to the construction of power plants and electricity transmission lines, given that the industry also covers the construction of other types of infrastructure, such as cellular phone towers or radio transmitting towers.

A 2013 report from the National Renewable Energy Laboratory (NREL) introduced a system named JEDI which helps to estimate the economic impact of transmission lines.
According to this system, the economic impact of a 230vK AC transmission line in New Mexico with a length of 20 miles translates into 114 full-time jobs during project development and construction. Total earnings are estimated at $7 million with an estimate of $12.9 million in total economic activity.
**Operation**

The activities in this industry are classified under the NAICS Code 2211. According to the U.S. Census Bureau and the Bureau of Labor Statistics, these occupations generate approximately 509,685 direct jobs in the country (2013). Most of the employees are located in Texas, where the largest share of establishments that are related to this industry are located.

*Binational Projects - Electricity Transmission Border Crossing*

Although the effects mentioned before can absolutely be transferred for those projects that take place along the U.S. border, it is also true that there are major impacts of the binational transmission line projects that can be isolated and analyzed.

One of the most important reasons for the existence of bi-national electricity projects is to create opportunities for cooperation to satisfy peaks in the demand of one of the parties. This cooperation can be transitory, in case of an emergency, or countries can maintain operations continually.

Canada is a net exporter of electricity to the United States and most of its needs are covered by Canadian hydroelectric plants (EIA, 2015). Most of the imports from this country go to New England, New York and the Midwest and are generated by Hydro-Québec and Manitoba Hydro-Electric Board, while the exports are directed to British Columbia. The main intention of these flows, according to the EIA is “...to ensure the stability of the North American eastern and western power grids” (2015). Therefore, the imports and exports are mostly conducted on a flexible basis.

On the other hand, electricity trade with Mexico is very focused on certain areas in New Mexico, California and Texas. In the case of California, a small portion of the electric transmission grid participates in the Western Electric Coordinating Council. In the case

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**Table 5: Electric Power Generation, Transmission and Distribution Employment**

<table>
<thead>
<tr>
<th>State</th>
<th>Number of establishments</th>
<th>Employees</th>
<th>Annual payroll ($1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas</td>
<td>985</td>
<td>38,500</td>
<td>3,737,936</td>
</tr>
<tr>
<td>New York</td>
<td>416</td>
<td>34,403</td>
<td>3,489,402</td>
</tr>
<tr>
<td>Florida</td>
<td>442</td>
<td>22,935</td>
<td>2,345,165</td>
</tr>
<tr>
<td>Illinois</td>
<td>276</td>
<td>21,278</td>
<td>2,341,441</td>
</tr>
<tr>
<td>Georgia</td>
<td>478</td>
<td>20,211</td>
<td>1,765,699</td>
</tr>
<tr>
<td>California</td>
<td>518</td>
<td>18,688</td>
<td>ND</td>
</tr>
<tr>
<td>Michigan</td>
<td>243</td>
<td>16,733</td>
<td>2,143,799</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>436</td>
<td>14,752</td>
<td>2,449,830</td>
</tr>
<tr>
<td>Ohio</td>
<td>408</td>
<td>12,997</td>
<td>ND</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>242</td>
<td>12,225</td>
<td>1,145,601</td>
</tr>
<tr>
<td>Rest of the Country</td>
<td>6121</td>
<td>212984</td>
<td></td>
</tr>
</tbody>
</table>

*Notes: Most of the values obtained from the 2014 County Business Patterns survey. When estimates not available, values were obtained from the Bureau of Labor Statistics (if available).*
of Texas, operations take place mainly during emergencies. The construction of new transmission lines may help to increase the participation of Mexico as a supplier of energy to the United States. Also, the energy reform recently approved in Mexico may create some opportunities for firms in the United States to enter and be competitive in the Mexican market. Energy prices are already lower in northern Mexico thanks to the larger generation options (EIA, 2016). However, it is true that these markets are still not as integrated as the U.S.-Canadian market.

An important element of this analysis are the Presidential permit applications. The process for these projects may take a long time. A study published in 2013 by the Arizona-Mexico Commission introduces the case of a project for which a Presidential Permit Application was submitted. According to this study, the process took four and a half years to be completed, in large degree, thanks to the lack of guidance that the applicants received (pp. 43). During that time, the context for the project changed and made it no longer viable. The company spent $9 million in completing the permitting part of a process that never took place (Bi-national Electricity Transmission Opportunities for Arizona and Sonora, 2013).

Summary

The electric transmission line projects provide important economic impacts during the different stages of their implementation. Some of these impacts are:

- Construction
  - The effects in direct jobs are contained in the NAICS Code 23713. However, this code also includes activities related to the construction of other infrastructure projects, and therefore the results in terms of employment cannot be taken as definitive.

- Operation
  - NAICS code 2211 provides the major results in terms of employment and establishments for the activities related to the generation, transmission and distribution of electricity.

- Binational Projects
  - Although many of the impacts for the construction and operation of an electricity transmission line can be transferred to these binational projects, there are other effects that are not covered and which are important to examine from a binational perspective.
    - Projects to provide assistance in case of emergency or peaks in the demand.
    - Binational electricity flows help maintain the stability of the power grids.
    - Binational projects have still room to develop, both with Canada and with Mexico. In the case of Mexico, the development of new projects will help to increase its supply to the United States and may help to make energy prices more competitive in Mexico.
    - The decrease of natural gas as well as the development of alternative energy sources can boost the development of this sector, making it more competitive.
Table 6a/b/c: Summary of Lower Threshold (Minimum) Economic Impacts

### a. Ports of Entry

<table>
<thead>
<tr>
<th></th>
<th>U.S. – Mexico</th>
<th>U.S. - Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trade</strong> (2015)</td>
<td>$472,511,569,887</td>
<td>$521,203,056,751</td>
</tr>
<tr>
<td><strong>Effect on Sales</strong></td>
<td>$8,770,806,006</td>
<td>$3,924,000,007</td>
</tr>
<tr>
<td>P. Vehicle Crossing (2015)</td>
<td>74,000,000</td>
<td>29,000,000</td>
</tr>
<tr>
<td>Truck Crossing (2015)</td>
<td>5,500,000</td>
<td>5,800,000</td>
</tr>
<tr>
<td><strong>Tentative Economic Impact</strong></td>
<td>$472,511,569,887</td>
<td>$521,203,056,751</td>
</tr>
</tbody>
</table>

### b. Pipelines

<table>
<thead>
<tr>
<th></th>
<th>U.S. – Mexico</th>
<th>U.S. - Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exports Oil</strong> (thousand barrels, 2015)</td>
<td>250,863</td>
<td>346,279</td>
</tr>
<tr>
<td><strong>Imports Oil</strong> (thousand barrels, 2015)</td>
<td>276,558</td>
<td>1,370,153</td>
</tr>
<tr>
<td><strong>Exports Natural Gas (2015)</strong></td>
<td>$2,962,501,510</td>
<td>$2,207,038,050</td>
</tr>
<tr>
<td><strong>Imports Natural Gas</strong></td>
<td>$1,595,430</td>
<td>$7,456,019,560</td>
</tr>
</tbody>
</table>

### c. Electric Transmission Lines

<table>
<thead>
<tr>
<th></th>
<th>U.S. – Mexico</th>
<th>U.S. - Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exports</strong> (Megawatt hours, 2014)</td>
<td>437,364</td>
<td>12,860,889</td>
</tr>
<tr>
<td><strong>Imports</strong> (Megawatt hours, 2014)</td>
<td>7,140,624</td>
<td>59,369,660</td>
</tr>
</tbody>
</table>

---

5 Trade refers to total trade (exports plus imports) crossing through the ports of entry located along the border between the U.S. and either Canada or Mexico.
6 Data from 2005. Represents sales in that year and may not reflect the current values, as elasticities to exchange rate differentials may need to be considered as an important factor for retail expenditures. Source: Ghaddar, S. and Brown, C., 2005
7 Represents spending from Canadian visitors to New York, Minnesota, Michigan, Maine, Pennsylvania, North Dakota, Montana and Vermont. Data from 2013. This data may not represent the actual values as elasticities to exchange rate differentials may need to be considered. Does not necessarily represent cross-border crossings.
Preliminary Findings

Key Findings
The research team made a number of key findings:

- The mandate to issue Presidential permits is found and substantiated in various Executive Orders and legislation.
- The process has therefore evolved as part of the overall process of how the United States builds cross-border infrastructure. As outlined in a recent report commissioned by the North American Development Bank, the Presidential permit process encompasses two of four phases of the port of entry development process.
- One of the most important—and most surprising—findings was that the stakeholders interviewed for this analysis who had personal experience with the process did not necessarily think that the process was unnecessarily burdensome.
- Another key finding was that the economic impact analysis will vary by the type of cross-border infrastructure analyzed. Each of these types will have different types of economic impacts.
- We also determined a lower threshold (minimum) economic impact to the U.S. economy for U.S.-Canada and U.S.-Mexico ports of entry of at least $993.7 billion (see Table 6a/b/c on page 30). More research is required to fully articulate the economic impact of cross-border infrastructure as well as the Presidential permit process itself.

Recommendation
One major recommendation for the different U.S. federal government agencies involved in the Presidential permit process as it currently stands is to include a full economic impact analysis for each project (this may require a new Executive Order). While traffic projections are an integral part of port of entry projects, these are not economic impact analyses per se (and are not by any means infallible). They also fail to paint a broader picture of not only local but also state, regional and national economic impact. These infrastructure projects and their review in the Presidential permit process have been intensely local in nature; one consequence of this arrangement is that the broader picture is missed. While the NEPA review is an important part of the process, a more comprehensive understanding of the economic impact of cross-border infrastructure is needed in order for all stakeholders involved to understand whether a particular project is in the national interest. A more robust economic analysis of these infrastructure projects will enhance both policymakers’ and the public’s understanding of the importance of these projects to the national interest.
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