TESTIMONY OF:

ALLEN BURCHETT

GLOBAL HEAD OF STRATEGIC PROJECTS, ABB

BEFORE THE:

UNITED STATES HOUSE OF REPRESENTATIVES

COMMITTEE ON ENERGY AND COMMERCE

SUBCOMMITTEE ON ENERGY

HEARING ON

"THE IMPACTS AND FUTURE OF NORTH AMERICAN ENERGY TRADE"

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Summary of Testimony of Allen Burchett, Global Head of Strategic Projects, ABB

ABB is a pioneering technology leader in electrification products, robotics and motion, industrial automation and power grids serving customers in utilities, industry, transport and infrastructure globally with 20,000 employees in the United States across 50 manufacturing facilities in 23 states, including Michigan, Texas, Oklahoma, Ohio, Virginia, and North Carolina. Our global headquarters is in Zurich, Switzerland. The National Association of Manufacturers (NAM), represents nearly 14,000 small, medium and large manufacturers in every industrial sector and in all 50 states.

- Growth in United States' Manufacturing. Over the past decade ABB has invested over $11 billion in the U.S., tripling our workforce. The United States is our largest market worldwide and we believe in the American worker and being close to our customer. Canada and Mexico purchase more American products than the next ten countries combined. The tripling of U.S. manufactured goods exports to Canada and Mexico since 1993 has been a substantial driver of growth. Domestic growth in manufacturing and new electrical grid and natural gas innovations are creating increased demand for new energy infrastructure and products.
- Integration of North American Supply Chain is Key to Domestic Manufacturing. While a significant amount of manufacturing is domestic as are our customers, for ABB and other manufacturers in the United States, some parts of the manufacturing process occur in Canada and Mexico; and many U.S. made products are exported to Canada, Mexico and beyond. A strong North American supply chain has supported ABB's domestic growth and investments, enabling us to competitively manufacture here in the United States a variety of critical equipment that benefits the U.S. energy, electricity, and manufacturing sectors.
- Importance of Low Trade Barriers Across North America. Without duty-free transfer of inputs, components, and products between manufacturing operations in all three North American countries, the price of our products could face upward pressure, dampening competitiveness of domestic manufacturing. Building on the North American Free Trade Agreement's legacy of economic growth and job creation, we can set the stage for further gains in these areas by modernizing the agreement in ways that eliminate remaining distortions and barriers, raise standards, strengthen neutral enforcement mechanisms, and remove both duplicative regulations and unnecessary red tape at the border

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Introduction

Good morning Chairman Upton, Ranking Member Rush, members of the Subcommittee and my fellow panelists. Thank you for the opportunity to testify today. My name is Allen Burchett and I am Global Head of Strategic Projects at ABB. I am testifying on behalf of the National Association of Manufacturers, of which ABB is a member. The NAM is the nation's largest industrial trade association, representing nearly 14,000 small, medium and large manufacturers in every industrial sector and in all 50 states. Manufacturing employs more than 12 million women and men across the country, contributing more than $2.17 trillion to the U.S. economy annually. If U.S. manufacturing were a separate country, it would be the ninth-largest economy in the world. More than 90 percent of NAM members are small and medium-sized businesses.

ABB is a pioneering technology leader in electrification products, robotics and motion, industrial automation and power grids serving customers in utilities, industry, transport and infrastructure globally. Our technologies are essential to the American energy industry, from generation and production to transmission, distribution, and end use.

We are the number one manufacturer of power grids in the world and a leader in industrial automation for the petrochemical industries. Globally, we are the number one producer of electric motors and the second largest producer of electric drives and industrial robots.

ABB has a strong and growing U.S. manufacturing footprint. ABB is proud of our 20,000 employees across 50 manufacturing facilities in 23 states, including Michigan, Texas, Oklahoma, Ohio, Virginia, and North Carolina, which is home to our U.S. headquarters (Appendix A). Our global headquarters is in Zurich, Switzerland.

Over the past decade we have invested over $11 billion in the United States, tripling our workforce. We have chosen to invest in the United States because it is our largest market worldwide and we believe in being close to our customer and we believe in the American worker. A strong North American supply chain has supported our domestic growth and investments, enabling ABB to competitively manufacture here in the United States a variety of critical equipment for our North American customers in the energy industries.

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Impact of North American Trade on Energy

ABB is not alone in recognizing the importance of the U.S. market. For manufacturers throughout the United States, the North American commercial market is the most important market in the world. Over 60 percent of U.S. manufacturing output in 2016 ($1.36 trillion) was sold in the United States, Canada and Mexico. Canada and Mexico

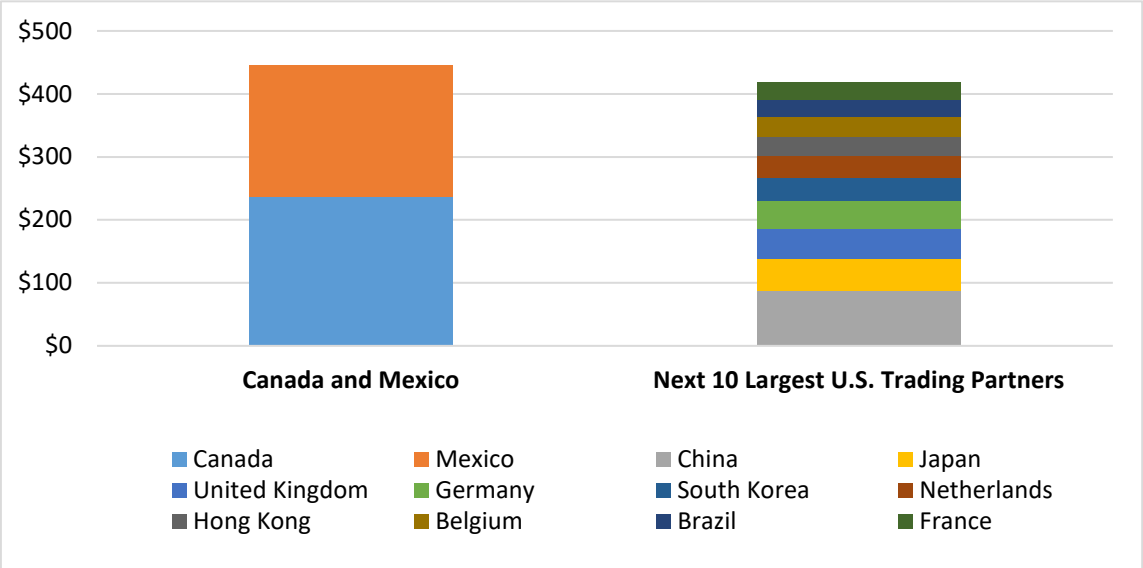

Figure 1. U.S. Manufactured Goods Exports, U.S. $ Billions, 2016. ***Source****. U.S. Dept. of Commerce*

alone purchased one-fifth of all U.S. manufactured goods production in 2016, more than the next ten U.S. trading partners combined (Figure 1).

U.S. manufacturing has grown dramatically over the past 25 years. U.S. value-added manufacturing hit a record-high of $2.18 trillion in 2016, nearly double its 1993 level of $1.13 trillion (Figure 2). That growth has been fueled by the more than tripling of U.S. manufactured goods exports to $1.27 trillion in 2016 compared to $411 billion in 1993 (Figure 2). U.S. manufactured goods exports to Canada and Mexico were a primary driver of this growth, also tripling during this period and representing about one-third of current U.S. exports.

Importantly U.S. manufactured goods exports support the jobs of more than 6.7 million men and women in manufacturing, more than half the U.S. manufacturing workforce. Exports of U.S. manufactured goods to Canada and Mexico alone directly support the jobs of more than 2.2 million women and men in U.S. manufacturing.[1] In addition, for every worker in manufacturing, another four employees are hired elsewhere.

[1] Chris Rasmussen and Susan Xu, Jobs Supported by Export Destination 20015, U.S. Department of Commerce, accessed at www.trade.gov/mas/ian/build/groups/public/@tg_ian/documents/webcontent/tg_ian_005508.pdf

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Significantly, the average manufacturing worker in the United States earned $82,023 annually, including pay and benefits, nearly 27 percent more than the average nonfarm business worker.[2]

Eleven manufacturing sectors have experienced growth of more than 50 percent since 1993 (Figure 3). Of

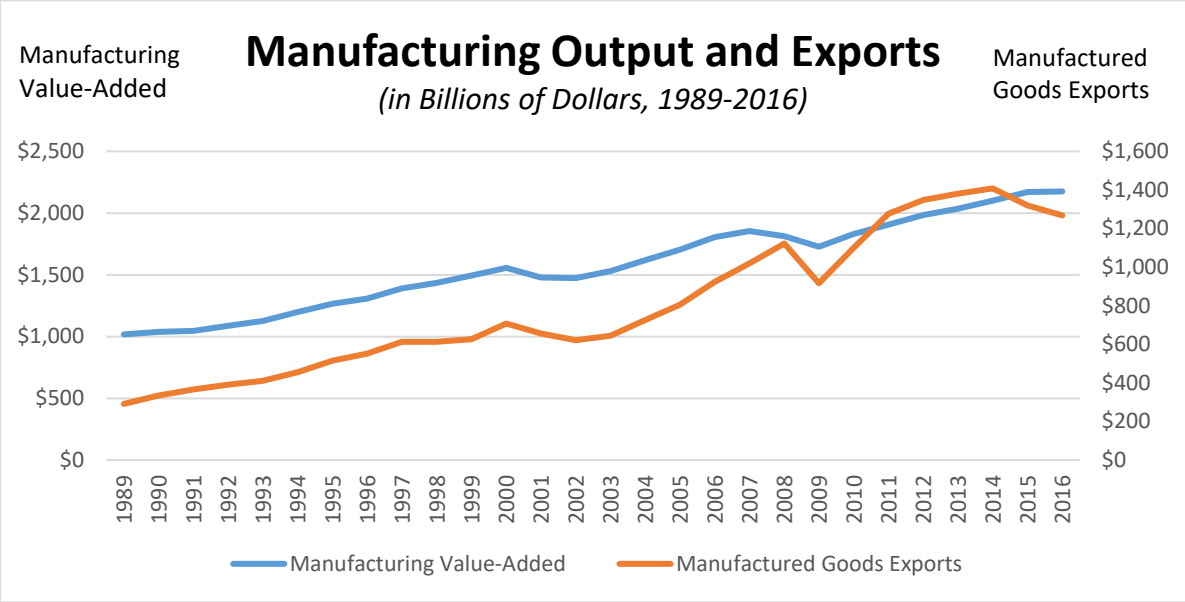

Figure 2. Manufacturing Output and Exports. ***Source****: Bureau of Economic Analysis, U.S. Commerce Department (2015 data), United Nations Database (for output data before 1997), World Trade Organization (for export data before 2002)*

particular interest to this Subcommittee, energy products have led the pack, with over 250 percent growth. Again, Canada and Mexico have played an outsized role in this growth, with most U.S. manufacturing sectors (36 out of 42) counting Canada or Mexico as their top foreign market. At ABB, we manufacture the equipment and control systems that enable the domestic upstream, midstream, and downstream oil, gas, and chemical plants to keep producing safely, efficiently, and cost-effectively.

Domestic growth in manufacturing has created a major need for new and improved energy delivery infrastructure. On the electricity side, innovation, regulations and market dynamics are driving rapid changes to the electric grid and the way electricity is produced in the United States. The electric grid has traditionally been a one-way system: power plants make electricity, and consumers use it. The grid of the future—and, increasingly, the present—is multi-directional, relying on traditional electric generation but also combined heat and power (CHP) technologies, distributed resources like rooftop solar, energy storage, microgrids, and demand-side

[2] NAM, Top 20 Facts about Manufacturing, accessed at http://www.nam.org/Newsroom/Facts-About-Manufacturing/.

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management technologies. Investor-owned utilities expect to invest more than $300 billion over the next three years to enhance the grid and reshape the nation's electric generation fleet.[3] Increased dependence on natural gas in the manufacturing and electric power sectors has also brought about a need for new infrastructure. A recent NAM-commissioned report by IHS Economics found that total natural gas demand is poised to increase by 40 percent over the next decade—double the growth of the past 10 years.[4]

Benefits of North American Trade to Energy

ABB has been a participant in this manufacturing boom and has developed an integrated North American supply chain that supports our domestic manufacturing capabilities and operations, and in turn, the United States'

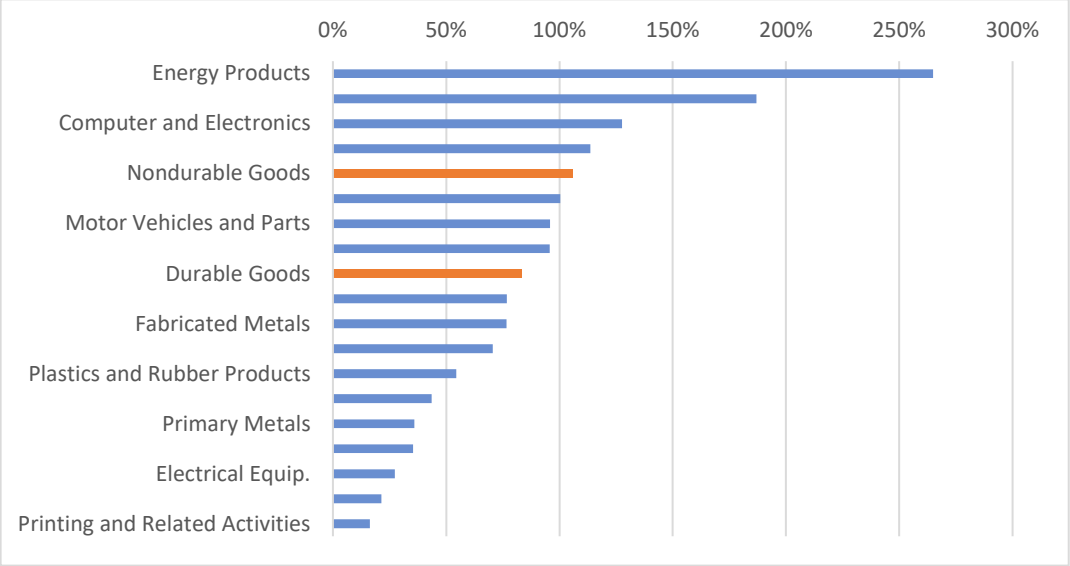

Figure 3 U.S. Manufacturing Change in Value-Added, 1993-2016 (in %). ***Source****: U.S. Dept. of Commerce. NAM calculations based on United Nations Statistical Division Commodity Trade (UN COMTRADE) Data Base, 2015, accessed at http://wits.worldbank.org/*

energy, electricity, and manufacturing sectors. As the global leader in both power grids and process automation, we supply the energy and electricity sectors with enabling technologies that help them stay competitive. For example, for the oil and gas sector, we provide the motors, control systems, electrification and automation technologies on which they depend to safely and efficiently produce and deliver their products. The massive growth in trade with Canada and Mexico in these sectors has had a positive impact on ABB and other manufacturers big and small throughout the United States, supporting millions of good-paying jobs.

[3]Edison Electric Institute, Delivering America's Energy Future: Electric Power Industry Outlook (Feb. 8, 2017), accessed at eei.org/resourcesandmedia/newsroom/Pages/Press%20Releases/EEI%20to%20Wall%20Street%20The%20Promise%20of%20Tomorrow.aspx.
[4] http://www.nam.org/Data-and-Reports/Reports/Natural-Gas-Study/Energizing-Manufacturing/

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While much of the manufacturing of these technologies happens domestically and many of our customers are domestic, certain parts of the manufacturing process occur in Canada and Mexico, and many of the offerings produced in such places as Pennsylvania, Mississippi, Oklahoma, and Virginia are exported to customers in Canada and Mexico.

I'd like to provide a few examples of how our manufacturing supply chain reaches across North American borders to provide competitive infrastructure equipment to the energy and electricity sectors. ABB is the largest producer of power transformers in the world, these transformers can be found at power plants, manufacturing facilities, and in neighborhoods across the United States. We build transformers at plants in Mississippi, Virginia, Missouri, and Tennessee. Yet the insulation material used as inputs into these transformers are sourced from a Canadian company. The transformers manufactured in Crystal Springs, Mississippi use high voltage instruments from Mexico. Transformer equipment produced in Alamo, Tennessee uses fuse assemblies, switches, and safety devices manufactured at an ABB facility in Mexico. Similarly, high voltage power circuit breakers produced in Mt. Pleasant, Pennsylvania incorporate control panels produced at an ABB facility in Mexico.

In Bartlesville, Oklahoma, ABB manufactures measurement and automation products for the oil and gas sector. Our factory imports metal housings from a supplier in Mexico and electronic circuit boards from an ABB plant in Canada, which are both then incorporated into the final products manufactured in Oklahoma. These products are found at wells, pipelines, and refineries and are purchased by household names and small to mid-sized businesses alike in the United States, Canada, and Mexico.

Our U.S. manufacturing operations also supply components to ABB's other North American factories for final assembly and sale. For example, our U.S. and Canadian factories manufacture components that are shipped to our factory in Monterrey, Mexico, where they are incorporated into electrification products and then sold to Mexican and Canadian customers. Without duty-free transfer of inputs, components, and products between manufacturing operations in all three North American countries, the price of the products we sell to our domestic and North American customers could face upward pressure; dampening the competitiveness of our domestic manufacturing plants as they sell to Canada and Mexico, who in many cases could obtain similar products from Europe or Asia.

In addition to relying on the North American market for our cross-border supply-chains, many of our domestic manufacturing facilities export final products to Canadian and Mexican customers. For example, 50

percent of high voltage surge arrestors manufactured in Mt. Pleasant, Pennsylvania are sold to Mexico and Canada. ABB's Sugar Land, Texas facility supplies electric infrastructure control systems to Mexico's electric grid operator and Canadian power generation companies. Restrictions on trade or new barriers between the United States, Canada, and Mexico, including on data transfer and digital solutions, would put up barriers to large markets in Canada and Mexico and could put upward pressure on U.S. manufactured goods to many of our Canadian and Mexican customers, potentially making U.S.-made products less competitive and adversely affecting our domestic factories.

The benefits of cross-border trade extend beyond the energy industry. In 2015 in Michigan, ABB opened the United States' first industrial robotics factory. The size of the total North American market made locating a new robotics plant in the United States attractive. Instead of importing robots from factories in Sweden and China, our Auburn Hills, Michigan factory will be able to produce 90 percent of the robots we sell in North America. But as with our technologies for energy customers, some inputs into the robots manufactured in Michigan come from Canada and Mexico, boosting Auburn Hills' cost-competitiveness. Low-cost access to Canadian and Mexican markets, and ease of sourcing cross-border inputs, makes the Auburn Hills factory possible.

These examples reflect a broader characteristic about manufactured goods trade in North America, as explained by the NAM.[5] The United States, Canada and Mexico do not simply trade with each other; we build things together and rely on each other's markets to support millions of jobs and to design, build and compete in global markets. The production of goods and services in North America and globally is increasingly taking place in partnerships with related and non-related parties in each other's markets with imports and exports – in addition to research and development, and other activities distributed between countries. ABB's experience is like many other manufacturers in the United States, where U.S. imports of intermediate goods from Mexico and Canada are used to develop products that the United States then exports back to Mexico and Canada, or to the rest of the world. These partnerships with producers overseas avoid unnecessary costs and delays, promoting the competitiveness of manufacturing in the United States, which is vital in an already fiercely competitive global economy where cents on the dollar can determine a final sale. Most importantly, these partnerships have contributed to the growth of

[5] NAM, Comments of the National Association of Manufacturers on Negotiating Objectives Regarding Modernization of the North American Free Trade Agreement with Canada and Mexico, June 12, 2017, accessed at http://www.nam.org/Issues/Trade/NAM-Comments-on-Negotiating-Objectives-Regarding-Modernization-of-NAFTA/.

an increasingly innovative, high-value modern manufacturing sector in the United States, creating higher paying and higher skilled jobs.

Conclusion

For 25 years, an integrated North American trading economy has fostered significant economic growth in the United States and ABB believes the future of the U.S economy is bright. This is particularly true in the energy sector. The economies of the United States, Canada and Mexico are linked more closely together than ever before, due, in large part, to strong trade and investment partnerships. The integration of the three major North American economies has enhanced ABB's competitiveness and encouraged our investments in the United States. Building on the North American Free Trade Agreement's legacy of economic growth and job creation, we can set the stage for further gains in these areas by modernizing the agreement in ways that eliminate remaining distortions and barriers, raise standards, strengthen neutral enforcement mechanisms, and remove both duplicative regulations and unnecessary red tape at the border.

Thank you for the opportunity to testify before the Subcommittee today. I look forward to answering your questions.

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APPENDIX A

Locations of ABB's Major Facilities in the United States

State	Location(s)	Products Made
Arkansas	Fort Smith	Industrial Motors and Generators
	Ozark	Industrial Motors and Generators
	Clarksville	Industrial Motors and Generators
	Jonesboro	Electric Installation Products
California	San Jose	Grid Automation and Digital
Florida	Ormond Beach	Electric Installation Products
	Coral Springs	Medium Voltage Products
	Lake Mary	Medium Voltage Products
Georgia	Athens	Industrial Motors and Generators
	Atlanta	Grid Automation
	Flowery Branch	Industrial Motors and Generators
Michigan	Auburn Hills	Robotics
Missouri	Jefferson City	Distribution Transformers
	St. Louis	Power Transformers Service
	St. Louis	Industrial Motors
Mississippi	Senatobia	Electrification Solutions
	Byhalia	Logistics Center
	Southaven	Electrical Installation Products
	Columbus	Industrial Motors and Generators
	Crystal Springs	Power Transformers
North Carolina	Cary	North American Headquarters
	Raleigh	Power Grids, Corporate Research
	Pinetops	Medium Voltage Products
	Kings Mountain	Industrial Motors and Generators
	Weaverville	Mechanical Power Transmission
	Marion	Mechanical Power Transmission
	Shelby	Industrial Motors and Generators
New Jersey	Hackettstown	Electrical Installation Products
New Mexico	Albuquerque	Electrical Installation Products
Ohio	Wickliffe	Oil, Gas, & Chemicals
	Westerville	Process Automation
Oklahoma	Bartlesville	Measurement & Analytics
	Westville	Industrial Motors
Pennsylvania	Warminster	Measurement & Analytics
	Mt. Pleasant	Power Grids—High Voltage
South Carolina	Belton	Mechanical Power Transmission
	Greenville	Mechanical Power Transmission
	Florence	Medium Voltage Products
Tennessee	Alamo	Transformers
	Athens	Electrical Installation Products
	Memphis	Electrical Installation Products
	Portland	Electrical Installation Products
	Rogersville	Mechanical Power Transmission
Texas	Houston	Grid Automation, Oil, Gas & Chemicals
	Sugarland	Grid Automation
Virginia	Bland	Distribution Transformers
	Richmond	Electrical Protection and Connection, Traction
	South Boston	Power Transformers

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Wisconsin	New Berlin Wauwatosa	Industrial Motors and Drives Industrial Motors and Drives
West Virginia	Lewisburg	Measurement & Analytics

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