

# NORTH AMERICAN MIDSTREAM INFRASTRUCTURE THROUGH 2035

OIL, NATURAL GAS & NGLS  
JUNE 18, 2018



## SIGNIFICANT DEVELOPMENT CONTINUES

Midstream infrastructure – mainline pipelines, laterals, processing plants, gathering lines, compression, lease equipment and storage – is essential to bringing natural gas, natural gas liquids and oil to households, businesses, industrial consumers, refineries and electric-power generators. Technological innovation has unleashed a revolution that has transformed the North American energy landscape. But the benefits of new production can only be realized through new and expanded midstream infrastructure.

The INGAA Foundation Inc. has sponsored reports forecasting midstream infrastructure for more than 20 years. This report will inform industry, policymakers and stakeholders about the new dynamics of North America's energy markets and the continued need for infrastructure development.

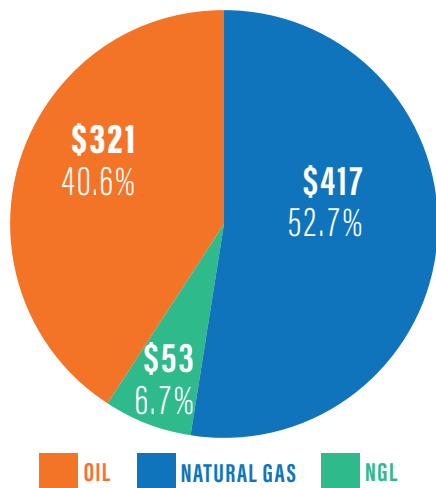
**\$791 BILLION**

TOTAL PROJECTED MIDSTREAM  
OIL, GAS & NGL CAPITAL  
EXPENDITURES, 2018-2035

ANNUAL AVERAGE OF  
**\$44 BILLION**

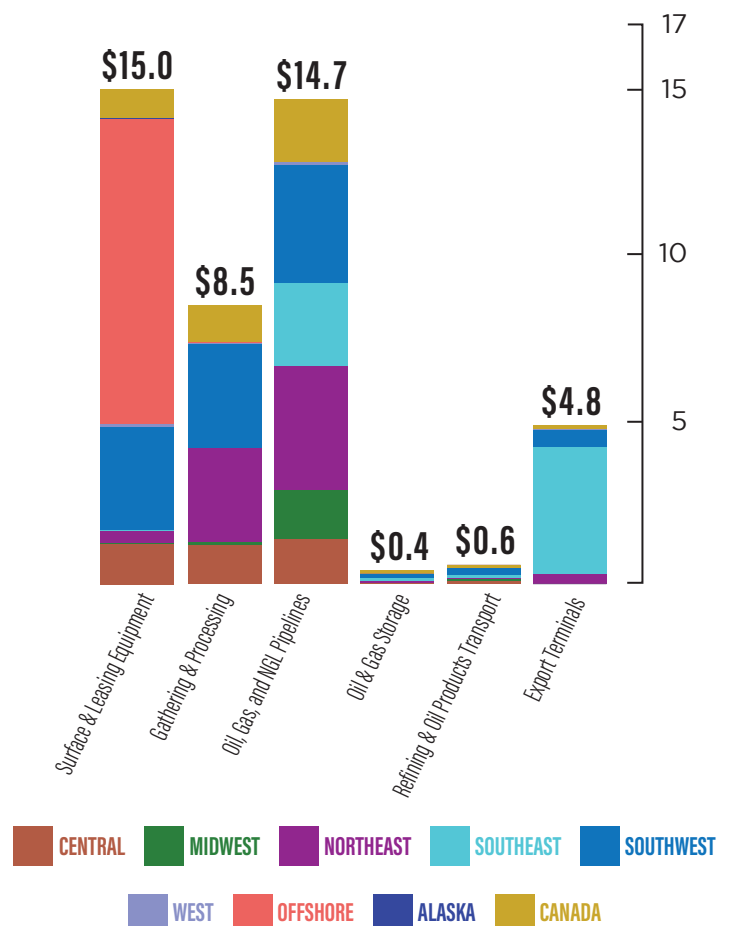
## NATURAL GAS REPRESENTS MAJORITY OF CAPITAL EXPENDITURES

2018-2035 (BILLIONS OF 2016\$)



## PROJECTED ANNUAL CAPITAL EXPENDITURE BY REGION & CATEGORY

2018-2035 (BILLIONS OF 2016\$)



CAPITAL EXPENDITURE WILL ADD NEARLY **\$1.3 TRILLION** TO THE U.S. & CANADIAN ECONOMIES

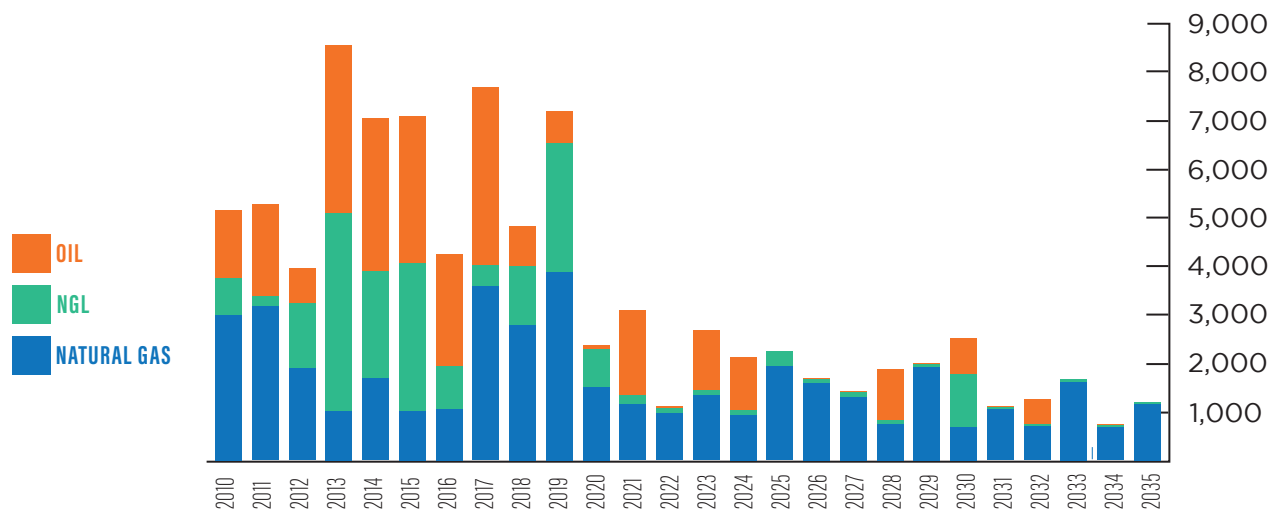
	AVERAGE ANNUAL EMPLOYMENT	TOTAL LABOR INCOME*	VALUE ADDED TO GDP, U.S. & CANADA*
DIRECT	242,216	338.1	413.4
INDIRECT	189,524	228.6	366.6
INDUCED	293,173	269.7	482.2
<b>TOTAL</b>	<b>724,913</b>	<b>\$ 836.5</b>	<b>\$1,262.2</b>

**\$64,106**  
AVERAGE ANNUAL WAGE

\*Billion 2016\$

# 41,000 MILES OF NEW TRANSMISSION PIPELINE (OIL, NATURAL GAS & NGL), 2018-2035

## MILES OF TRANSMISSION PIPELINE



# 180,000 MILES OF NEW PIPELINE FOR ALL MIDSTREAM FUNCTIONS (INCLUDING GATHERING)

## NEW U.S. & CANADIAN INFRASTRUCTURE

	TOTAL 2013-2017	TOTAL 2018-2035	ANNUAL AVERAGE 2018-2035		TOTAL 2013-2017	TOTAL 2018-2035	ANNUAL AVERAGE 2018-2035
<b>GATHERING &amp; PROCESSING</b>				<b>OIL, GAS &amp; NGL TRANSMISSION LINES</b>			
Gas Gathering Line Miles	33,675	88,340	4,908	Oil Line Miles	15,617	8,184	455
Gas Gathering Line Compression (1000 HP)	4,435	8,540	474	Oil Line Pumping (1000 HP)	2,964	1,016	56
Oil Gathering Line Miles	25,846	50,612	2,812	NGL Line Miles	10,629	7,024	390
Oil & Gas Gathering Line Miles	59,521	138,952	7,720	NGL Line Pumping (1000 HP)	390	293	16
Gas Processing Plant Capacity (Bcfd)	22.7	38.1	2.1	Gas Line Miles	8,348	25,896	1,439
Gas Processing Plant Compression (1000 HP)	2,267	3,812	212	Compression for Gas Lines (1000 HP)	3,367	7,041	391
NGL Fractionation Capacity (MBOE/d)	1,941	3,575	199	Oil, Gas, and NGL Line Miles	34,594	41,104	2,284
<b>EXPORT TERMINALS</b>				<b>OIL &amp; GAS STORAGE</b>			
LNG Export Capacity (Bcfd)	2.4	12.9	0.7	Crude Oil Storage Capacity (MBbl)	170,532	139,411	7,745
NGL Export Capacity (MBOE/d)	813.5	1,511.7	84.0	Gas Storage Capacity (Bcf)	267	335	19

Formed in 1990 by the Interstate Natural Gas Association of America, the INGAA Foundation facilitates the safe, efficient, reliable and environmentally responsible design, construction, operation and maintenance of the North American natural gas transmission system to advance the delivery of natural gas for the benefit of the consuming public, the economy and the environment. For more information, please visit our website at: <http://www.ingaa.org/Foundation.aspx>.



The INGAA Foundation, Inc.