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U.S., Canada to require $546 billion in gas, oil and NGL infrastructure investment

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For Immediate Release Contact: Catherine J. Landry VP of Communications clandry@ingaa.org

Washington, April 12, 2016 – The United States and Canada will require annual average midstream natural gas, crude oil and natural gas liquids midstream infrastructure investment of about $26 billion per year, or $546 billion (real 2015$) total over the 21-year period from 2015 to 2035, a new study finds.

The report, North American Midstream Infrastructure through 2035: Leaning into the Headwinds, conducted by ICF International on behalf of the INGAA Foundation, updates a 2014 infrastructure report to reflect the dynamic changes in the natural gas, NGL and crude oil industry in recent years.

"We saw a need to reexamine infrastructure needs in light of significantly lower commodity prices," said INGAA Foundation President Don Santa. "While E&P activity may dip temporarily because of lower prices, we still will need significant capital investment, particularly in natural gas midstream infrastructure."

Natural gas infrastructure makes up over 60 percent of the needed energy infrastructure in the report, with total investments of between $290 billion and $376 billion ($333 billion midpoint) required from 2015-2035. Natural gas infrastructure includes gathering and transmission pipelines, compressors, laterals, gas-lease equipment, processing, gas storage and LNG export facilities. Meanwhile, between $137 billion and $190 billion of crude oil infrastructure (gathering pipeline, lease equipment, mainline pipeline and pumping, storage laterals and storage tanks) and between $43 billion and $55 billion of new NGL infrastructure (transmission pipelines, pumping, fractionation and NGL export facilities) will be required in the next 20 years.

For the first time, in the report's 20-plus year history, ICF presents two scenarios: A High Case, which is characterized a plausibly optimistic case for midstream infrastructure development, and a Low Case, a less-optimistic case, in which a slower economic recovery reduces the need for oil and gas and pipeline development. The market growth projected in the two cases is very different. For natural gas, the Low Case projects gas use rising to 110 Bcf/day by 2035, while the High Case sees growth to over 130 Bcf/day. The biggest difference occurs in the power sector, where the Low Case assumes increased energy efficiency and significant penetration of non-gas generating resources.

The midstream investment projected in the report will add between $655 billion and $861 billion of value to the U.S. and Canadian economies and result in employment of 323,000 to 425,000 workers per year. While many of the jobs associated with midstream development are concentrated in the Southwestern and Northeastern U.S. and in Canada, the positive economic impacts are geographically widespread.

"This report shows a vibrant natural gas market in the future, and this creates the need for additional midstream infrastructure to deliver affordable natural to consumers," Santa said. "The good news is that the natural gas industry has a proven track record of constructing and financing this level of infrastructure."

The report also projects $24 billion in capital spending for incremental integrity management and emissions in the natural gas midstream space over the next 20 years. The report's High and Low Cases project natural gas prices to average below $3 per MMBtu through 2017. In the High Case, Henry Hub gas prices rise to between $4.00 and $5.50 per MMBtu after 2020; the Low Case prices average 15 percent lower than the High Case between 2020 and 2035. In the High Case, electric load grows at 0.9 percent per year from 2016 to 2020, and at 1.0 percent per year after 2020. In the Low Case, electric load growth increases by only 0.3 percent per year throughout the projection.

The report assumes U.S. Gross Domestic Product growth at an average 2.6 percent in the High Case. In the Low Case, U.S. GDP grows at 2 percent per year from 2016 through 2025 and rebounds to 2.6 percent thereafter. ICF assumes oil prices remain depressed through 2017, but rebound with an Asian economic recovery and slower development of North American oil supplies. In each case, oil prices recover to a longer-term price of $75 per barrel, but the pace of recovery is much slower for the Low Case.