

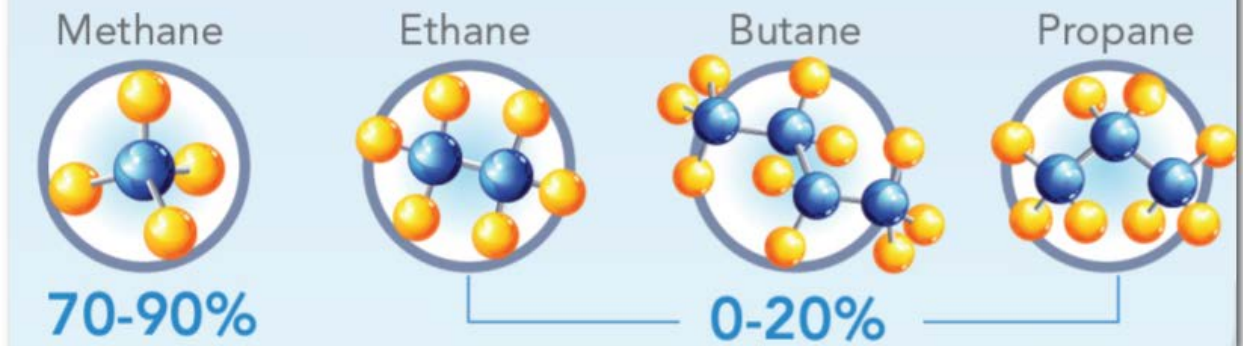


Overview & Opportunities

# THE MIDSTREAM INDUSTRY

- Separate natural gas into its useful components:
  - Methane
  - Ethane
  - Propane
  - Butane
  - Others

*Natural gas primarily consists of:*



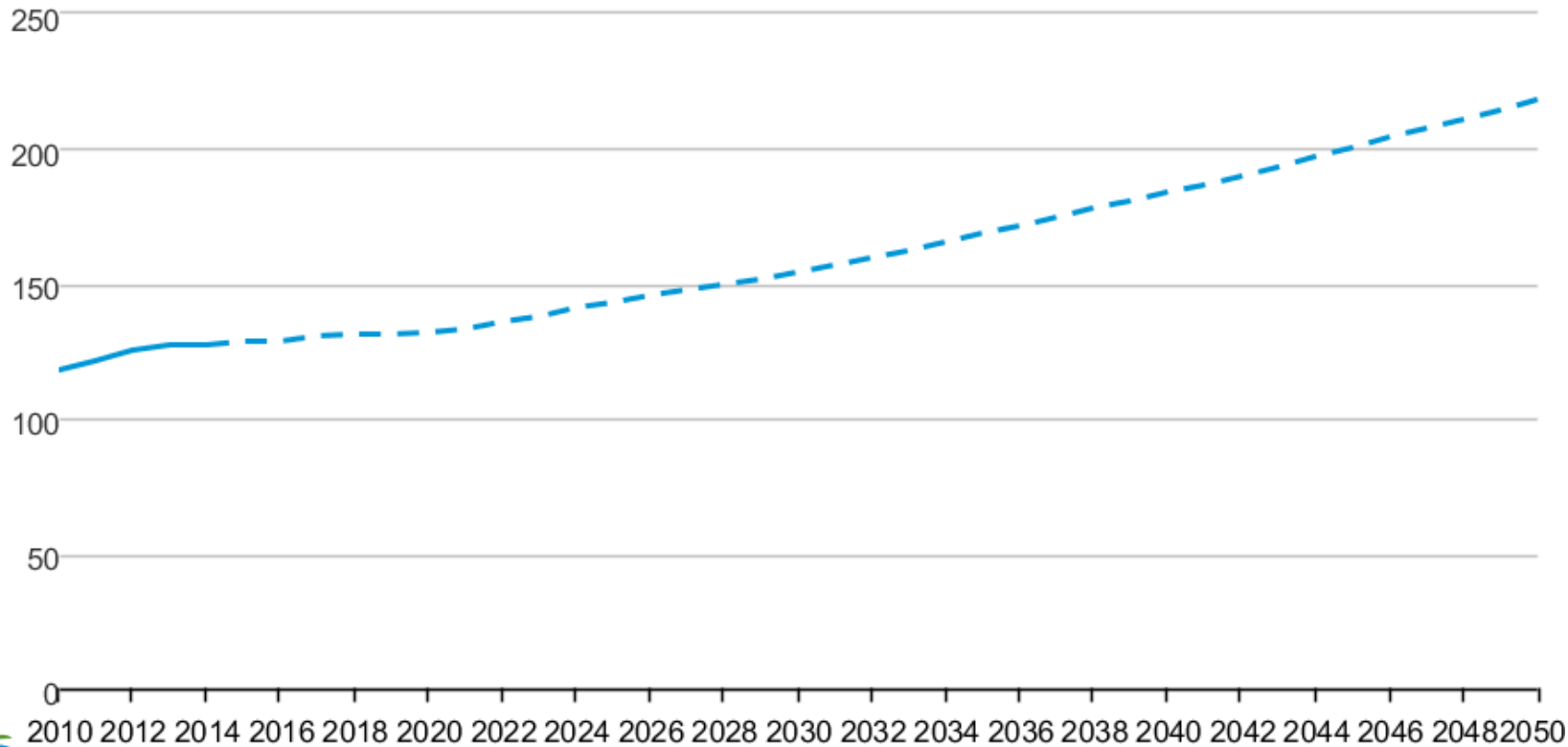
# The Midstream Industry – An Overview

- The end result:



## World Natural Gas Demand (through 2050)

quad Btu

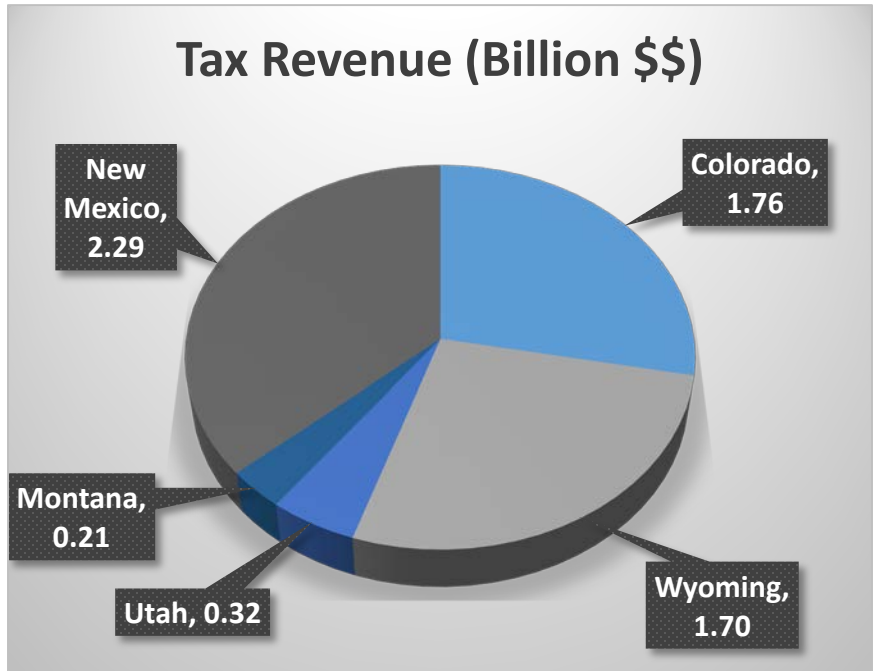
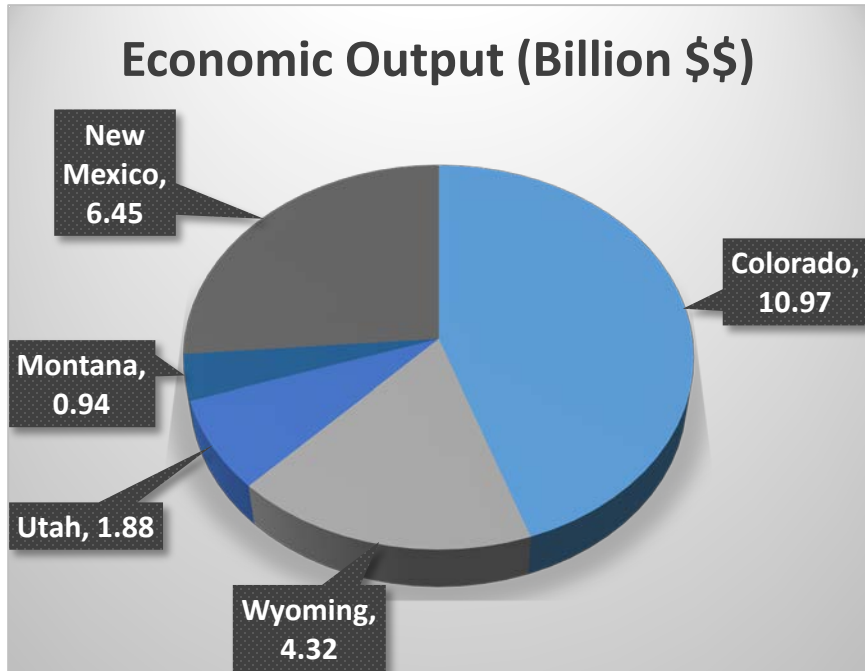


Source: U.S. Energy Information Administration

# The Midstream Industry – An Overview

## Impact to the Rocky Mountain region

State	Jobs		
	Direct	Indirect	Total
Colorado	14,162	43,562	57,724
Wyoming	8,055	11,513	19,568
Utah	3,355	6,684	10,039
Montana	2,324	3,270	5,594
New Mexico	10,547	15,158	25,705
<b>TOTAL</b>	<b>38,443</b>	<b>80,187</b>	<b>118,630</b>



- Industry size: In the U.S., there are:
  - Over 500 gas processing plants
  - Over 305,000 miles of interstate transmission pipelines
  - 110 LNG facilities
  - 400 underground storage facilities
  - 30 major gas market hubs
- U.S. jobs are predominantly located in:
  - Texas
  - Oklahoma
  - Louisiana
  - Wyoming
  - Colorado
  - Utah
  - North Dakota
  - Kansas
  - New Mexico

- Engineering opportunities
  - **Chemical/Petroleum:** Process design, equipment sizing, process optimization, operations support
  - **Mechanical:** pipeline & equipment specification & design, mechanical integrity
  - **Electrical:** instrumentation design, specification and maintenance, facility electrification, motor design
  - **Civil:** pipeline & facility site preparation, foundation design
  - **Structural:** skid design, pipe rack design, platform design

- In order to meet the scholarship criteria, the student must:
  - Demonstrate an interest in the midstream industry
  - Maintain a 2.8 GPA or greater (4.0 scale)
  - Have reached the 3<sup>rd</sup> year in their undergraduate program
  - Be a U.S. citizen
  - Be pursuing an engineering degree
  - Complete an online application
  - Submit a 1000 (maximum) word essay



# How do you apply?



- Go to our website: [www.gparamc.org](http://www.gparamc.org)
- Submit an online application and essay
  - Applications are due by October 7<sup>th</sup>
  - Award notifications will be made by October 23<sup>th</sup>
  - Award presentations will be made at the GPA Midstream Rocky Mountain Chapter Regional Conference on November 7<sup>th</sup>

- For questions about scholarships or the industry, please contact us:

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**Rocky Mountain GPA Scholarship Committee Chair:**

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**Photos and information from this presentation were sourced from the following:**

*American Petroleum Institute – [www.api.org](http://www.api.org)*

*BP Statistical Review of World Energy, 2018 – [www.bp.com](http://www.bp.com)*

*U.S. Energy Information Administration – [www.eia.gov](http://www.eia.gov)*

*Western Energy Alliance – [www.westernenergyalliance.org](http://www.westernenergyalliance.org)*

*Anadarko Petroleum Corporation – [www.anadarko.com](http://www.anadarko.com)*

*ConocoPhillips – [www.conocophillips.com](http://www.conocophillips.com)*