

**North Dakota Gas Rate Case  
Case No. PU-17-295  
Technical Hearing  
May 30 - June 1, 2018**

**J. Stephen Gaske  
Concentric Energy Advisors  
Exhibit MDU-14**



*In the Community  
to Serve*

# Recommended Ratemaking ROE for Montana-Dakota North Dakota Gas

# 10.00%

- Step 1: Select Proxy Companies**
- Step 2: Determine Zone of Reasonableness**
- Step 3: Compare Montana-Dakota Risk to Proxy Companies**
- Step 4: Determine where M-D North Dakota Gas Falls Within Zone of Reasonableness**

# Methods Used to Estimate Cost of Equity

## 1) Discounted Cash Flow (“DCF”)

- Dividend Yield + Expected Future Growth Rate

## 2) Risk Premium

- Bond Yield + Equity Risk Premium

## 3) Unbiased Capital Asset Pricing Model (“CAPM”)

- Bond Yield +  $\beta$ \*Market Risk Premium + Size Risk Premium

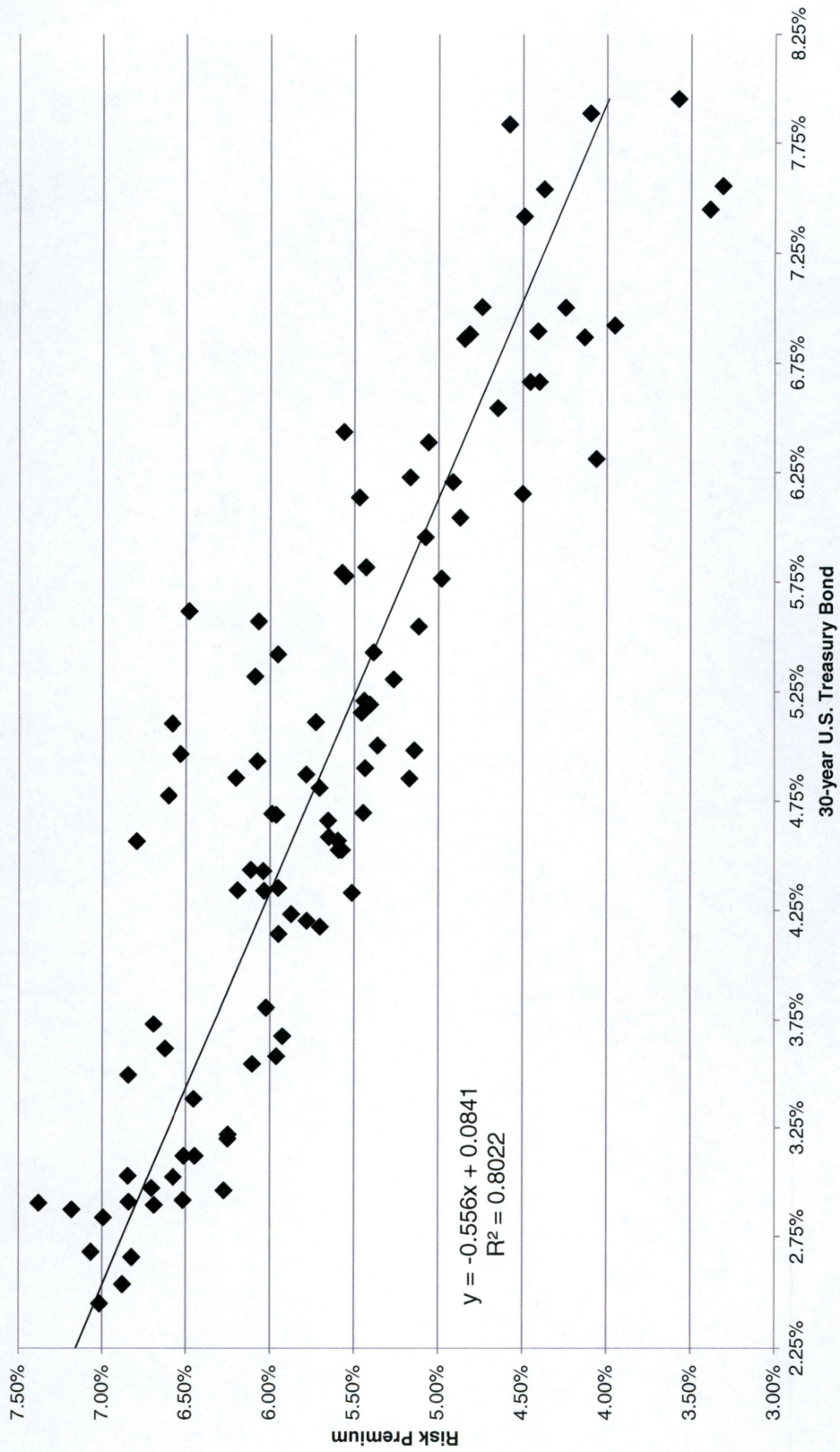
## 4) Comparable Earnings

- Returns Earned by Comparable Companies

# Results of Cost of Equity Studies

	Basic DCF Analysis	Blended Growth Rate DCF Analysis	Gas Utility Risk Premium	Unbiased CAPM	Value Line Projected ROE
High	11.8%	10.8%		12.2%	11.5%
Median	9.2%	9.1%	10.0%	11.3%	10.0%
Low	7.1%	7.9%		10.7%	9.5%

# Gas Utility Risk Premiums

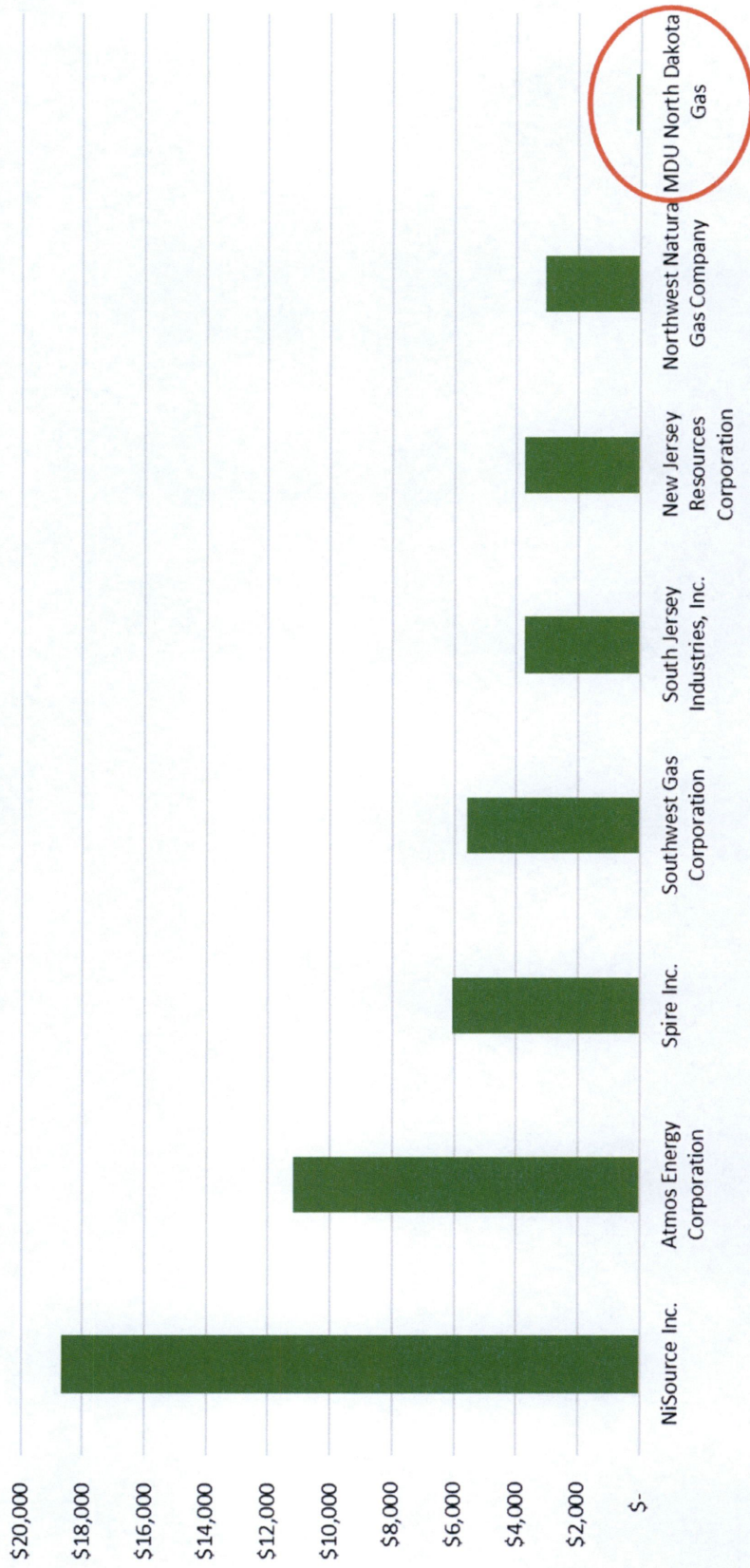


# Relative Risk Factors

- Business Risk
  - Above Average (Small Size, Slower Customer Growth and Economic Uncertainty in Service Territory)
- Financial Risk
  - Average (51.00% Equity Ratio, BBB+ Bond Rating)
- Regulatory Risk
  - Average/1

# Size v. Proxy Companies - Assets -

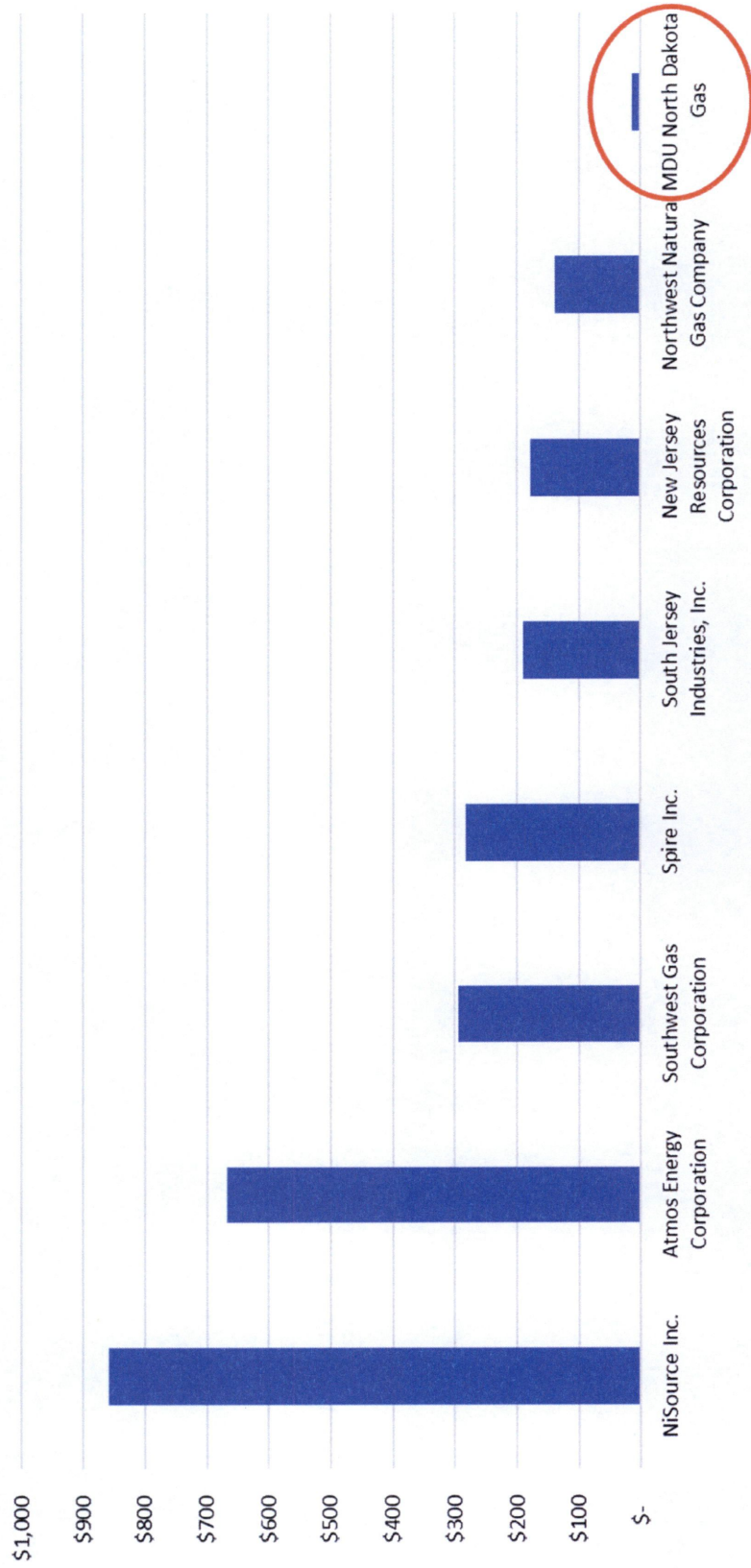
Total Assets  
(\$million)



# Size v. Proxy Companies

## - Income -

Operating Income  
(\$million)

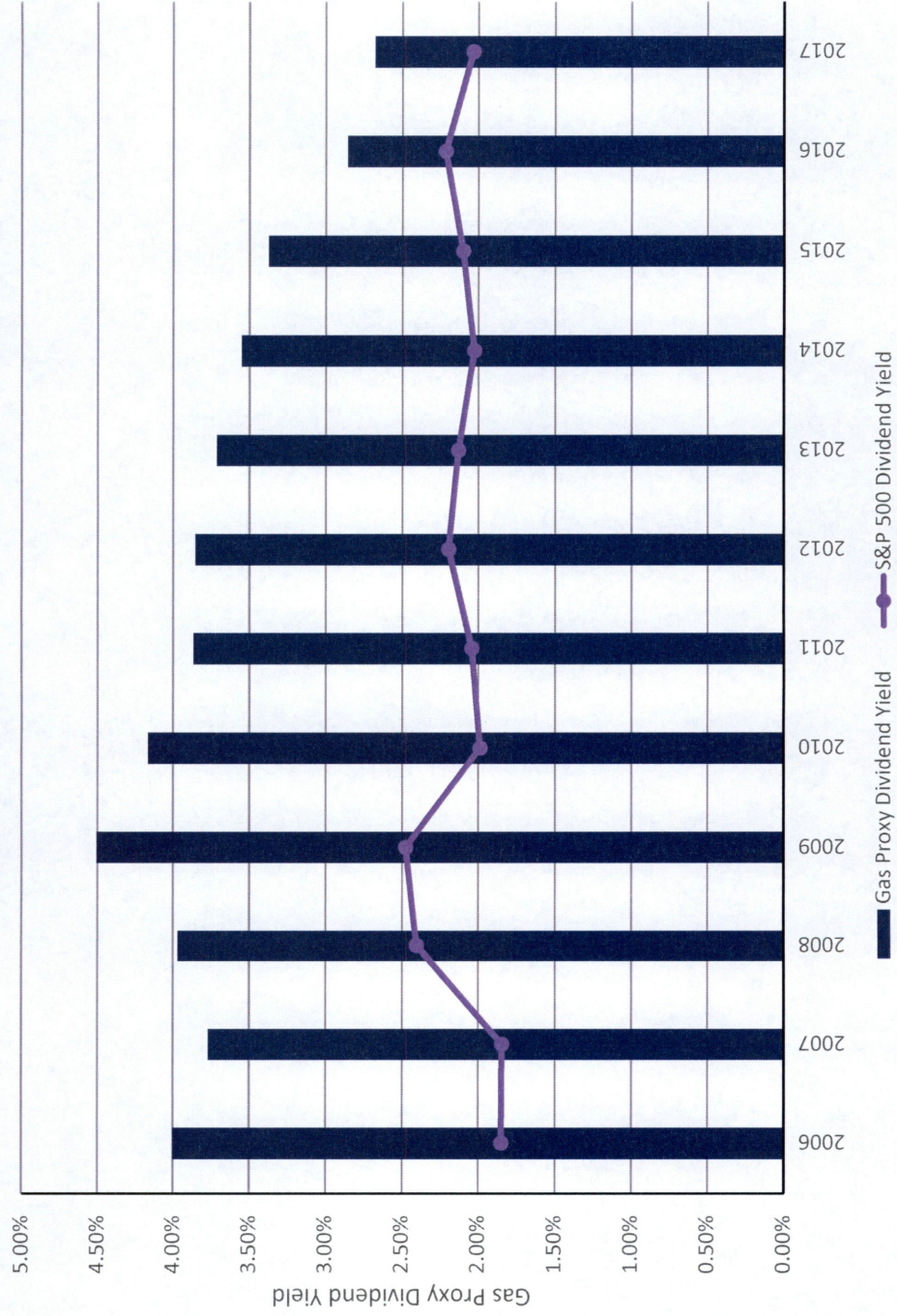


# Moody's Utility Size & Diversity Risk

“We also consider the diversity of utility operations ...

- **Economic diversity** is typically a function of the population, size and breadth of the territory and the businesses that drive its GDP and employment.
- For the **size of the territory**, we typically consider the number of customers and the volumes of generation and/or throughput.
- For breadth, we consider the number of **sizeable metropolitan areas** served, the economic diversity and vitality in those metropolitan areas, and any **concentration in a particular area or industry.**”

# Dividend Yields of Proxy Group and S&P 500 Index



Commission-Determined ROEs Allowed for  
Gas Distribution Utilities  
January – May 2018

<u>Company</u>	<u>State</u>	<u>Date</u>	<u>Allowed ROE %</u>
Atmos Energy Corporation	KY	5/3/2018	9.70%
Northern Illinois Gas Company	IL	5/2/2018	9.80%
Liberty Utilities	NH	4/27/2018	9.30%
Avista Corporation	WA	4/26/2018	9.50%
Northern Utilities, Inc.	ME	2/28/2018	9.50%
Spire Missouri Inc.	MO	2/21/2018	9.80%
Missouri Gas Energy	MO	2/21/2018	9.80%
<b>MEDIAN</b>			<b>9.70%</b>

# Value Line Projected ROEs

Company	ROE 2020-2022
Atmos Energy Corporation	11.50%
New Jersey Resources Corporation	11.50%
NiSource Inc.	11.50%
Northwest Natural Gas Company	10.00%
South Jersey Industries, Inc.	9.50%
Southwest Gas Corporation	10.00%
Spire Inc.	9.50%
<b>Average</b>	<b>10.50%</b>

Source: Value Line, December 1, 2017