## **BEFORE THE**

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## LOUISIANA PUBLIC SERVICE COMMISSION

**CENTERPOINT ENERGY ENTEX, EX PARTE** 

DOCKET NO. 8- 36/24

In Re: Application for Renewal of CenterPoint Energy Entex Rate Stabilization Plan Rider RSP-R4 for a Three Year Term.

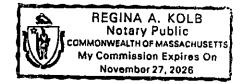
COMMONWEALTH OF MASSACHUSETTS COUNTY OF MIDDLE SEX

## <u>AFFIDAVIT</u>

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Ann E. Bulkley, who being duly sworn, deposed and said that she is appearing as a witness on behalf of CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex before the Louisiana Public Service Commission in the above-captioned matter, and if present before the Commission and duly sworn, her statements would be as set forth in the annexed Direct Testimony.

SWORN TO AND SUBSCRIBED before me, Notary Public this 2b day of July, 2021.

) Notary Public Print Name of Notary: <u>K-eqino</u> (). Kolo My Commission Expires <u>11-27-26</u>



## **BEFORE THE**

## LOUISIANA PUBLIC SERVICE COMMISSION

**CENTERPOINT ENERGY ENTEX, EX PARTE** 

DOCKET NO. 8- 36/24

In Re: Application for Renewal of CenterPoint Energy Entex Rate Stabilization Plan Rider RSP-R4 for a Three Year Term.

COMMONWEALTH OF MASSACHUSETTS COUNTY OF MIDDLE SEX

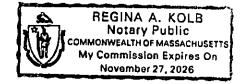
## <u>AFFIDAVIT</u>

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Ann E. Bulkley, who being duly sworn, deposed and said that she is appearing as a witness on behalf of CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Entex before the Louisiana Public Service Commission in the above-captioned matter, and if present before the Commission and duly sworn, her statements would be as set forth in the annexed Direct Testimony.

SWORN TO AND SUBSCRIBED before me, Notary Public this <u>26</u> day of July, 2021.

Notary Public

) Notary Public Print Name of Notary: <u>Keojo O.</u> KOU My Commission Expires <u>11-37-26</u>





ANN E. BULKLEY Senior Vice President

Ms. Bulkley has more than two decades of management and economic consulting experience in the energy industry. Ms. Bulkley has extensive state and federal regulatory experience on both electric and natural gas issues including rate of return, cost of equity and capital structure issues. Ms. Bulkley has provided expert testimony on the cost of capital in more than 30 regulatory proceedings before regulatory commissions in Arizona, Arkansas, Colorado, Connecticut, Kansas, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New Mexico, New York, North Dakota, Oklahoma, Pennsylvania, Texas, South Dakota, West Virginia, and the Federal Energy Regulatory Commission. In addition, Ms. Bulkley has prepared and provided supporting analysis for at least forty Federal and State regulatory proceedings. In addition, Ms. Bulkley has worked on acquisition teams with investors seeking to acquire utility assets, providing valuation services including an understanding of regulation, market expected returns, and the assessment of utility risk factors. Ms. Bulkley has assisted clients with valuations of public utility and industrial properties for ratemaking, purchase and sale considerations, ad valorem tax assessments, and accounting and financial purposes. In addition, Ms. Bulkley has experience in the areas of contract and business unit valuation, strategic alliances, market restructuring and regulatory and litigation support. Prior to joining Concentric, Ms. Bulkley held senior expertise-based consulting positions at several firms, including Reed Consulting Group and Navigant Consulting, Inc. where she specialized in valuation. Ms. Bulkley holds an M.A. in economics from Boston University and a B.A. in economics and finance from Simmons College. Ms. Bulkley is a Certified General Appraiser licensed in the Commonwealth of Massachusetts and the State of New Hampshire.

## **REPRESENTATIVE PROJECT EXPERIENCE**

Regulatory Analysis and Ratemaking

Ms. Bulkley has provided a range of advisory services relating to regulatory policy analysis and many aspects of utility ratemaking. Specific services have included: cost of capital and return on equity testimony, cost of service and rate design analysis and testimony, development of ratemaking strategies; development of merchant function exit strategies; analysis and program development to address residual energy supply and/or provider of last resort obligations; stranded costs assessment and recovery; performance-based ratemaking analysis and design; and many aspects of traditional utility ratemaking (e.g., rate design, rate base valuation).

## Cost of Capital

Ms. Bulkley has provided expert testimony on the cost of capital and capital structure in more than 80 regulatory proceedings before state and federal regulatory commissions in the United States including: Arizona, Arkansas, Colorado, Connecticut, Idaho, Illinois, Iowa, Kansas, Massachusetts, Michigan, Minnesota, Missouri, Montana, New Jersey, New



Mexico, New York, North Dakota, Oklahoma, Oregon, Pennsylvania, Texas, South Dakota, Washington, West Virginia, Virginia, and the Federal Energy Regulatory Commission.

## Valuation

Ms. Bulkley has provided valuation services to utility clients, unregulated generators and private equity clients for a variety of purposes including ratemaking, fair value, ad valorem tax, litigation and damages, and acquisition. Ms. Bulkley's appraisal practices are consistent with the national standards established by the Uniform Standards of Professional Appraisal Practice.

Representative projects/clients have included:

- Northern Indiana Fuel and Light: Provided expert testimony regarding the fair value of the company's natural gas distribution system assets. Valuation relied on cost approach.
- Kokomo Gas: Provided expert testimony regarding the fair value of the company's natural gas distribution system assets. Valuation relied on cost approach.
- Prepared fair value rate base analyses for Northern Indiana Public Service Company for several electric rate proceedings. Valuation approaches used in this project included income, cost and comparable sales approaches.
- Confidential Utility Client: Prepared valuation of fossil and nuclear generation assets for financing purposes for regulated utility client.
- Prepared a valuation of a portfolio of generation assets for a large energy utility to be used for strategic planning purposes. Valuation approach included an income approach, a real options analysis and a risk analysis.
- Assisted clients in the restructuring of NUG contracts through the valuation of the underlying assets. Performed analysis to determine the option value of a plant in a competitively priced electricity market following the settlement of the NUG contract.
- Prepared market valuations of several purchase power contracts for large electric utilities in the sale of purchase power contracts. Assignment included an assessment of the regional power market, analysis of the underlying purchase power contracts, a traditional discounted cash flow valuation approach, as well as a risk analysis. Analyzed bids from potential acquirers using income and risk analysis approached. Prepared an assessment of the credit issues and value at risk for the selling utility.
- Prepared appraisal of a portfolio of generating facilities for a large electric utility to be used for financing purposes.
- Prepared an appraisal of a fleet of fossil generating assets for a large electric utility to establish the value of assets transferred from utility property.



- Conducted due diligence on an electric transmission and distribution system as part of a buy-side due diligence team.
- Provided analytical support for and prepared appraisal reports of generation assets to be used in ad valorem tax disputes.
- Provided analytical support and prepared testimony regarding the valuation of electric distribution system assets in five communities in a condemnation proceeding.
- Valued purchase power agreements in the transfer of assets to a deregulated electric market.

## Ratemaking

Ms. Bulkley has assisted several clients with analysis to support investor-owned and municipal utility clients in the preparation of rate cases. Sample engagements include:

• Assisted several investor-owned and municipal clients on cost allocation and rate design issues including the development of expert testimony supporting recommended rate alternatives.

Worked with Canadian regulatory staff to establish filing requirements for a rate review of a newly regulated electric utility. Analyzed and evaluated rate application. Attended hearings and conducted investigation of rate application for regulatory staff. Prepared, supported and defended recommendations for revenue requirements and rates for the company. Developed rates for gas utility for transportation program and ancillary services.

Strategic and Financial Advisory Services

Ms. Bulkley has assisted several clients across North America with analytically based strategic planning, due diligence and financial advisory services.

Representative projects include:

- Preparation of feasibility studies for bond issuances for municipal and district steam clients.
- Assisted in the development of a generation strategy for an electric utility. Analyzed various NERC regions to identify potential market entry points. Evaluated potential competitors and alliance partners. Assisted in the development of gas and electric price forecasts. Developed a framework for the implementation of a risk management program.
- Assisted clients in identifying potential joint venture opportunities and alliance partners. Contacted interviewed and evaluated potential alliance candidates based on company-established criteria for several LDCs and marketing companies. Worked with several LDCs and unregulated marketing companies to establish alliances to enter into the retail energy market. Prepared testimony in support of several merger cases and participated in the regulatory process to obtain approval for these mergers.



• Assisted clients in several buy-side due diligence efforts, providing regulatory insight and developing valuation recommendations for acquisitions of both electric and gas properties.

## **PROFESSIONAL HISTORY**

## Concentric Energy Advisors, Inc. (2002 - Present)

Senior Vice President Vice President Assistant Vice President Project Manager

Navigant Consulting, Inc. (1995 – 2002) Project Manager

Cahners Publishing Company (1995) Economist

**EDUCATION** 

**Boston University** M.A., Economics, 1995

## Simmons College

B.A., Economics and Finance, 1991

## CERTIFICATIONS

Certified General Appraiser licensed in the Commonwealth of Massachusetts and the State of New Hampshire.



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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Arizona Corporation Comm	ission			
Arizona Public Service Company	10/19	Arizona Public Service Company	Docket No. E-01345A- 19-0236	Return on Equity
Tucson Electric Power Company	04/19	Tucson Electric Power Company	Docket No. E-01933A- 19-0028	Return on Equity
Tucson Electric Power Company	11/15	Tucson Electric Power Company	Docket No. E-01933A- 15-0322	Return on Equity
UNS Electric	05/15	UNS Electric	Docket No. E-04204A- 15-0142	Return on Equity
UNS Electric	12/12	UNS Electric	Docket No. E-04204A- 12-0504	Return on Equity
Arkansas Public Service Cor	nmissio	D		
Arkansas Oklahoma Gas Corporation	10/13	Arkansas Oklahoma Gas Corporation	Docket No. 13-078-U	Return on Equity
Colorado Public Utilities Co	mmissio	)11		
Public Service Company of Colorado	02/20	Public Service Company of Colorado	20AL-0049G	Return on Equity
Public Service Company of Colorado	05/19	Public Service Company of Colorado	19AL-0268E	Return on Equity
Public Service Company of Colorado	01/19	Public Service Company of Colorado	19AL-0063ST	Return on Equity
Atmos Energy Corporation	05/15	Atmos Energy Corporation	Docket No. 15AL-0299G	Return on Equity
Atmos Energy Corporation	04/14	Atmos Energy Corporation	Docket No. 14AL-0300G	Return on Equity
Atmos Energy Corporation	05/13	Atmos Energy Corporation	Docket No. 13AL-0496G	Return on Equity
<b>Connecticut Public Utilities</b>	Regulat	tory Authority	han da bilina Marina da bilina	
Connecticut Water Company	01/21	Connecticut Water Company	Docket No. 20-12-30	Return on Equity
Connecticut Natural Gas Corporation	06/18	Connecticut Natural Gas Corporation	Docket No. 18-05-16	Return on Equity
Yankee Gas Services Co. d/b/a Eversource Energy	06/18	Yankee Gas Services Co. d/b/a Eversource Energy	Docket No. 18-05-10	Return on Equity
The Southern Connecticut Gas Company	06/17	The Southern Connecticut Gas Company	Docket No. 17-05-42	Return on Equity
The United Illuminating Company	07/16	The United Illuminating Company	Docket No. 16-06-04	Return on Equity
Federal Energy Regulatory	Commis	sion		
Florida Gas Transmission	02/21	Florida Gas Transmission	Docket No. RP21-441	Return on Equity
TransCanyon	01/21	TransCanyon	Docket No. ER21-1065	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Duke Energy	12/20	Duke Energy	Docket No. EL21-9-000	Return on Equity
Wisconsin Electric Power Company	08/20	Wisconsin Electric Power Company	Docket No. EL20-57-000	Return on Equity
Panhandle Eastern Pipe Line Company, LP	10/19	Panhandle Eastern Pipe Line Company, LP	Docket Nos. RP19-78-000 RP19-78-001	Return on Equity
Panhandle Eastern Pipe Line Company, LP	08/19	Panhandle Eastern Pipe Line Company, LP	Docket Nos. RP19-1523	Return on Equity
Sea Robin Pipeline Company LLC	11/18	Sea Robin Pipeline Company LLC	Docket# RP19-352-000	Return on Equity
Tallgrass Interstate Gas Transmission	10/15	Tallgrass Interstate Gas Transmission	RP16-137	Return on Equity
Indiana Utility Regulatory C	ommiss	ion		
Indiana Gas Company Inc.	12/20	Indiana Gas Company Inc.	IURC Cause No. 45468	Return on Equity
Southern Indiana Gas and Electric Company	10/20	Southern Indiana Gas and Electric Company	IURC Cause No. 45447	Return on Equity
Indiana and Michigan American Water Company	09/18	Indiana and Michigan American Water Company	IURC Cause No. 45142	Return on Equity
Indianapolis Power and Light Company	12/17	Indianapolis Power and Light Company	Cause No. 45029	Fair Value
Northern Indiana Public Service Company	09/17	Northern Indiana Public Service Company	Cause No. 44988	Fair Value
Indianapolis Power and Light Company	12/16	Indianapolis Power and Light Company	Cause No.44893	Fair Value
Northern Indiana Public Service Company	10/15	Northern Indiana Public Service Company	Cause No. 44688	Fair Value
Indianapolis Power and Light Company	09/15	Indianapolis Power and Light Company	Cause No. 44576 Cause No. 44602	Fair Value
Kokomo Gas and Fuel Company	09/10	Kokomo Gas and Fuel Company	Cause No. 43942	Fair Value
Northern Indiana Fuel and Light Company, Inc.	09/10	Northern Indiana Fuel and Light Company, Inc.	Cause No. 43943	Fair Value
Idaho Public Utilities Comm	ission			
PacifiCorp d/b/a Rocky Mountain Power	05/21	PacifiCorp d/b/a Rocky Mountain Power	Case No. PAC-E-21-07	Return on Equity
Illinois Commerce Commiss	ion			
North Shore Gas Company	02/21	North Shore Gas Company	No. 20-0810	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Iowa Department of Comme	rce Util	ities Board		-
Iowa-American Water Company	08/20	Iowa-American Water Company	Docket No. RPU-2020- 0001	Return on Equity
Kansas Corporation Commi	ssion			
Atmos Energy Corporation	08/15	Atmos Energy Corporation	Docket No. 16-ATMG- 079-RTS	Return on Equity
Kentucky Public Service Co	nmisšio	n, , ,		
Kentucky American Water Company	11/18	Kentucky American Water Company	Docket No. 2018-00358	Return on Equity
Maine Public Utilities Comm	ission			· · · · · · · · · · · · · · · · · · ·
Central Maine Power	10/18	Central Maine Power	Docket No. 2018-194	Return on Equity
Maryland Public Service Co	mmissic	m		
Maryland American Water Company	06/18	Maryland American Water Company	Case No. 9487	Return on Equity
Massachusetts Appellate Ta	x Board			·
Hopkinton LNG Corporation	03/20	Hopkinton LNG Corporation	Docket No.	Valuation of LNG Facility
FirstLight Hydro Generating Company	06/17	FirstLight Hydro Generating Company	Docket No. F-325471 Docket No. F-325472 Docket No. F-325473 Docket No. F-325474	Valuation of Electric Generation Assets
Massachusetts Department	of Publi	c Utilities		
National Grid USA	11/20	Boston Gas Company	DPU 20-120	Return on Equity
Berkshire Gas Company	05/18	Berkshire Gas Company	DPU 18-40	Return on Equity
Unitil Corporation	01/04	Fitchburg Gas and Electric :	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Michigan Public Service Cor	nmissio	η.		
Michigan Gas Utilities Corporation	03/21	Michigan Gas Utilities Corporation	Case No. U-20718	Return on Equity
Wisconsin Electric Power Company	12/11	Wisconsin Electric Power Company	Case No. U-16830	Return on Equity
Michigan Tax Tribunal			1	•
New Covert Generating Co., LLC.	03/18	The Township of New Covert Michigan	MTT Docket No. 000248TT and 16- 001888-TT	Valuation of Electric Generation Assets



SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Covert Township	07/14	New Covert Generating Co., LLC.	Docket No. 399578	Valuation of Electric Generation Assets
Minnesota Public Utilities C	ommiss	ion		hataa a
Otter Tail Power Company	11/20	Otter Tail Power Company	E017/GR-20-719	Return on Equity
Allete, Inc. d/b/a Minnesota Power	11/19	Allete, Inc. d/b/a Minnesota Power	E015/GR-19-442	Return on Equity
CenterPoint Energy Resources Corporation d/b/a CenterPoint Energy Minnesota Gas	10/19	CenterPoint Energy Resources Corporation d/b/a CenterPoint Energy Minnesota Gas	G-008/GR-19-524	Return on Equity
Great Plains Natural Gas Co.	09/19	Great Plains Natural Gas Co.	Docket No. G004/GR-19- 511	Return on Equity
Minnesota Energy Resources Corporation	10/17	Minnesota Energy Resources Corporation	Docket No. G011/GR-17- 563	Return on Equity
Missouri Public Service Con	nmissio			· · · · ·
Ameren Missouri	03/21	Ameren Missouri	Docket No. ER-2021- 0240 Docket No. GR-2021- 0241	Return on Equity
Missouri American Water Company	06/20	Missouri American Water Company	Case No. WR-2020-0344 Case No. SR-2020-0345	Return on Equity
Missouri American Water Company	06/17	Missouri American Water Company	Case No. WR-17-0285 Case No. SR-17-0286	Return on Equity
Montana Public Service Cor	nmissio	n in the second s		
Montana-Dakota Utilities Co.	06/20	Montana-Dakota Utilities Co.	D2020.06.076	Return on Equity
Montana-Dakota Utilities Co.	09/18	Montana-Dakota Utilities Co.	D2018.9.60	Return on Equity
New Hampshire - Board of	lax and	Land Appeals		
Public Service Company of New Hampshire d/b/a Eversource Energy	11/19 12/19	Public Service Company of New Hampshire d/b/a Eversource Energy	Master Docket No. 28873-14-15-16-17PT	Valuation of Utility Property and Generating Assets
New Hampshire Public Util	ties Con	nmission		<b>e -</b> Alta di Antonio Alta di Antonio
Public Service Company of New Hampshire	05/19	Public Service Company of New Hampshire	DE-19-057	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
New Hampshire-Merrimack	County	Superior Court		
Northern New England Telephone Operations, LLC d/b/a FairPoint Communications, NNE	04/18	Northern New England Telephone Operations, LLC d/b/a FairPoint Communications, NNE	220-2012-CV-1100	Valuation of Utility Property
New Hampshire-Rockingha	m Super	ior Court		
Eversource Energy	05/18	Public Service Commission of New Hampshire	218-2016-CV-00899 218-2017-CV-00917	Valuation of Utility Property
New Jersey Board of Public	Utilities			
Public Service Electric and Gas Company	10/20	Public Service Electric and Gas Company	E018101115	Return on Equity
New Jersey American Water Company, Inc.	12/19	New Jersey American Water Company, Inc.	WR19121516	Return on Equity
Public Service Electric and Gas Company	04/19	Public Service Electric and Gas Company	E018060629 G018060630	Return on Equity
Public Service Electric and Gas Company	02/18	Public Service Electric and Gas Company	GR17070776	Return on Equity
Public Service Electric and Gas Company	01/18	Public Service Electric and Gas Company	ER18010029 GR18010030	Return on Equity
New Mexico Public Regulati	on Com	mission	tha the Auguster Auguster Auguster	
Southwestern Public Service Company	07/19	Southwestern Public Service Company	19-00170-UT	Return on Equity
Southwestern Public Service Company	10/17	Southwestern Public Service Company	Case No. 17-00255-UT	Return on Equity
Southwestern Public Service Company	12/16	Southwestern Public Service Company	Case No. 16-00269-UT	Return on Equity
Southwestern Public Service Company	10/15	Southwestern Public Service Company	Case No. 15-00296-UT	Return on Equity
Southwestern Public Service Company	06/15	Southwestern Public Service Company	Case No. 15-00139-UT	Return on Equity
New York State Department	ofPubl	ic Service		· · · · · · · · · · · · · · · · · · ·
Central Hudson Gas and Electric Corporation	08/20	Central Hudson Gas and Electric Corporation	Electric 20-E-0428 Gas 20-G-0429	Return on Equity
Niagara Mohawk Power Corporation	07/20	National Grid USA	Case No. 20-E-0380 20-G-0381	Return on Equity
Corning Natural Gas Corporation	02/20	Corning Natural Gas Corporation	Case No. 20-G-0101	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SÜBJECT
New York State Electric and Gas Company	05/19	New York State Electric and Gas Company	19-E-0378 19-G-0379 19-E-0380	Return on Equity
Rochester Gas and Electric		Rochester Gas and Electric	19-G-0381	
Brooklyn Union Gas Company d/b/a National Grid NY KeySpan Gas East Corporation d/b/a National Grid	04/19	Brooklyn Union Gas Company d/b/a National Grid NY KeySpan Gas East Corporation d/b/a National Grid	19-G-0309 19-G-0310	Return on Equity
Central Hudson Gas and Electric Corporation	07/17	Central Hudson Gas and Electric Corporation	Electric 17-E-0459 Gas 17-G-0460	Return on Equity
Niagara Mohawk Power Corporation	04/17	National Grid USA	Case No. 17-E-0238 17-G-0239	Return on Equity
Corning Natural Gas Corporation	06/16	Corning Natural Gas Corporation	Case No. 16-G-0369	Return on Equity
National Fuel Gas Company	04/16	National Fuel Gas Company	Case No. 16-G-0257	Return on Equity
KeySpan Energy Delivery	01/16	KeySpan Energy Delivery	Case No. 15-G-0058 Case No. 15-G-0059	Return on Equity
New York State Electric and Gas Company Rochester Gas and Electric	05/15	New York State Electric and Gas Company Rochester Gas and Electric	Case No. 15-E-0283 Case No. 15-G-0284 Case No. 15-E-0285 Case No. 15-G-0286	Return on Equity
North Dakota Public Service	Commi	ssion		
	08/20	Montana-Dakota Utilities Co.	C-PU-20-379	Return on Equity
Northern States Power Company	12/12	Northern States Power Company	C-PU-12-813	Return on Equity
Northern States Power Company	12/10	Northern States Power Company	C-PU-10-657	Return on Equity
Oklahoma Corporation Com	missior			
Arkansas Oklahoma Gas Corporation	01/13	Arkansas Oklahoma Gas Corporation	Cause No. PUD 201200236	Return on Equity
Oregon Public Service Com	nission			
PacifiCorp d/b/a Pacific Power & Light	02/20	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-374	Return on Equity
Pennsylvania Public Utility	Commis			
American Water Works Company Inc.	04/20	Pennsylvania-American Water Company	Docket No. R-2020- 3019369 (water) Docket No. R-2020- 3019371 (wastewater)	Return on Equity



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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
American Water Works Company Inc.	04/17	Pennsylvania-American Water Company	Docket No. R-2017- 2595853	Return on Equity
South Dakota Public Utilitie	s Comm	ussion		
Northern States Power Company	06/14	Northern States Power Company	Docket No. EL14-058	Return on Equity
Texas Public Utility Commis	sion			
Southwestern Public Service Commission	08/19	Southwestern Public Service Commission	Docket No. D-49831	Return on Equity
Southwestern Public Service Company	01/14	Southwestern Public Service Company	Docket No. 42004	Return on Equity
Utah Public Service Commis	sion			
PacifiCorp d/b/a Rocky Mountain Power	05/20	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20-035-04	Return on Equit
Virginia State Corporation (	ommis	sion		
Virginia American Water Company, Inc.	11/18	Virginia American Water Company, Inc.	Docket No. PUR-2018- 00175	Return on Equity
Washington Utilities Transp	ortatio	n Commission		· · · · · · · · · · · · · · · · · · ·
Cascade Natural Gas Corporation	06/20	Cascade Natural Gas Corporation	Docket No. UG-200568	Return on Equity
PacifiCorp d/b/a Pacific Power & Light	12/19	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-191024	Return on Equity
Cascade Natural Gas Corporation	04/19	Cascade Natural Gas Corporation	Docket No. UG-190210	Return on Equity
West Virginia Public Service	Comm	ission		
West Virginia American Water Company	04/18	West Virginia American Water Company	Case No. 18-0573-W-42T Case No. 18-0576-S-42T	Return on Equity
Wisconsin Public Service Co	mmissi	ON		
Wisconsin Electric Power Company and Wisconsin Gas LLC	03/19	Wisconsin Electric Power Company and Wisconsin Gas LLC	Docket No. 05-UR-109	Return on Equity
Wisconsin Public Service Corp.	03/19	Wisconsin Public Service Corp.	6690-UR-126	Return on Equity
Wyoming Public Service Co	nmissio	n.	and the second sec	
PacifiCorp d/b/a Rocky Mountain Power	03/20	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20000-578- ER-20	Return on Equity
Montana-Dakota Utilities Co.	05/19	Montana-Dakota Utilities Co.	30013-351-GR-19	Return on Equity

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Constant Gro	owth DCF (Includes	flotation cost adj	.)
	Mean Low	Mean	Mean High
30-Day Average	8.36%	9.73%	11.88%
90-Day Average	8.40%	9.77%	`11.92%
180-Day Average	8.57%	9.96%	12.11%
Constant Growth Average	8.44%	9.82%	11.97%
	CAPM		
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	12.74%	12.79%	12.88%
Bloomberg Beta	11.62%	11.71%	11.88%
Long-Term Avg. Beta	10.76%	10.88%	11.12%
	ECAPM		
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	13.06%	13.09%	13.16%
Bloomberg Beta	12.21%	12.28%	12.41%
Long-Term Avg. Beta	11.57%	11.66%	11.84%
	Risk Premiur	n	
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Risk Premium Results	9.46%	9.63%	10.00%

## SUMMARY OF ROE ANALYSES RESULTS<sup>1</sup>

## Notes:

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[1] The analytical results included in the table reflect the results of the Constant Growth analysis excluding the results for individual results that did not meet the minimum threshold of 7 percent.

## Docket No. U-Exhibit AEB-3 Page 1 of 1

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AND RESUI
ROXY GROUP SCREENING DATA AND RESULT
PROXY GROUP

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	r	[1]	[2]	[6]	[4]	[5]	[6]	E
Company	Ticker	Dividends	S&P/Moody's Credit Rating Between BBB- and AAA	Covered by More Than 1 Analyst	Positive Growth Rates from at least two sources (Value Line, Yahool, First Call and Lacks)	% Regulated Operating Income > 60% (Average 2018-2020)	% Regulated Natural Gas Operating Income > 60% (Average 2018-2020)	Announced Merger
Atmos Energy Corporation	ATO	Yes	¥	Yes	Yes	100.00%	64.64%	No.
New Jersev Resources Conocration	ALR	Yes	A1	Yes	Yes	67.77%	100.54%	No
NiSource Inc.	Z	Yes	888+	Yes	Yes	99.82%	66.71%	No
Northwest Natural Holdino Company	NWN	Yes	*	Yes	Yes	99.84%	91.42%	No
ONE Gas, Inc.	OGS	Yes	888+	Yes	Yes	100,00%	100.00%	No No
South Jersev Industries. Inc.	S	Yes	888	Yes	Yes	97,52%	100.00%	No
Southwest Gas Holdings, Inc.	SWX	Yes	888+	Yes	Yes	75.55%	100.00%	No
Spire Inc.	SR	Yes	4	Yes	Yes	97.04%	100.00%	No

Notes: [1] Sourca: Bloomberg Professional as of June 30, 2021 [2] Sourca: Bloomberg Professional as of June 30, 2021; NJR's credit rating from Moody's reflects fits rating for subsidiary New Jersey Natural Gas [2] Sourca: Yahool Financo and Zacks [4] Sourca: Yanool Financo Alau Line Investment Survey, and Zacks [5] Sourca: Form 10-K's for 2020, 2019, and 2018 [6] Sourca: Form 10-K's for 2020, 2019, and 2018 [7] Source: S&P Global Market Intelligence Financial News Releases

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## Docket No. U-Exhibit AEB-4 Page 1 of 3

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,		R	30-DAY CON	STANT GROV	WH DCF - (	CONSTANT GROWTH DCF - CENTERPOINT ENERGY ENTEX GAS PROXY GROUP	VT ENERGY	ENTEX GAS	PROXY GRO		All Dover Control		-	Afth Evchietone	
		E	[2]	[6]	[4]	[2]	[8]	Ū.	[8]	[e]	10]	[11]	[12]	13]	[14]
-							Yahool								
					Expected	Value Line	Finance	Zacks	Average						
		Annualized	Stock	Dividend	Dividend	Eamings	Earnings	Eamings	Growth						
Company	Ticker	Dividend	Price	Yeld	Yield	Growth	Growth	Growth	Rate	Low ROE	Mean ROE	High ROE	Low ROE	Mean ROE	High ROE
Atmos Enemy Comoration	ATO	\$2.50	\$99.29	2.52%	2.61%	7.00%	7.17%	7.30%	7.16%	9.61%	9.76%	9.91%	9,61%	9.76%	8.81%
New Jersey Resources Comoration	N.R	\$1.33	\$42.42	3.14%	3.21%	2.00%	6.00%	7,10%	5.03%	5,17%	8.25%	10.35%		8,25%	10.35%
NiSource Inc.	z	\$0.88	\$25.40	3.46%	3.58%	9.50%	3.52%	6.20%	6.41%	7.05%	9,98%	13.13%	7.05%	9.99%	13,13%
Northwest Natural Holding Company	NWN	\$1.92	\$53,60	3.58%	3.66%	5.50%	3,80%	3.90%	4.40%	7.45%	8,06%	9.18%	7.45%	8.06%	9,18%
ONE Gas, Inc.	065	\$2.32	\$75,34	3.08%	3.16%	6,50%	5.00%	5.00%	5.50%	8,16%	8,66%	9,69%	8,16%	0.66%	9,68%
South Jersev Industries, Inc.	S.II	\$1.21	528.81	4.51%	4.68%	11.50%	4,80%	5.40%	7.23%	9.42%	11.81%	16.27%	9.42%	11.01%	16.27%
Southwest Gas Holdinos, Inc.	SWX	\$2.38	\$65.95	3,61%	3.72%	9,00.6	4,00%	5.50%	6,17%	7.68%	9,89%	12.77%	7.68%	9,89%	12.77%
Spire the.	SR	\$2.60	\$73.09	3.56%	3.69%	10,00%	7.31%	5.50%	7,60%	9.16%	11.30%	13.74%	9.16%	11.30%	13.74%
Mean				3.43%	3.54%	7.63%	5.20%	5.74%	6.19%	7.96%	9.73%	11.88%	8.36%	9.73%	11.88%

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Notes: [1] Source: Bicomberg Professional [2] Source: Bicomberg Professional, equals 30-day average as of June 30, 2021 [3] Equals [3] x (1 + 0.50 x [8]) [4] Equals [3] x (1 + 0.50 x [8]) [5] Source: Vatuch Line [6] Source: Vatuch Line [7] Source: Vatuch Line [7]

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90-DAY CONSTANT GROWTH DCF -- CENTERPOINT ENERGY ENTEX PROXY GROUP

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										<	All Proxy Group	0	>	With Exclusions	
		Ξ	[2]	6	[4]	. [5] .	[6]	[1]	[8]	[8]	[10]	[11]	[12]	[13]	[14]
							Yahool								
					Expected	Value Line	Finance	ZBcks	Average						
		Annualized	Stock	Dividend	Dividend	Eamings	Earnings	Eamings	Growth						
Company	Ticker	Dividend	Price	Yield	Yield	Growth	Growth	Growth	Rate	Low ROE	Mean ROE	High ROE	Low ROE	Mean ROE	High ROE
	014	6-1 EO	607 03	7007 6	1050	7000 %	7 4792	7006 2	7 1002	74790	76000	79900	0 6492		O DE02
		P0.74		200.7	e 75.7	8 S. 1	e			R 5.0	e 00.0		R S in	e 25.0	e 70.0
New Jersey Resources Corporation	NJR	\$1.33		3.19%	3.27%	2.00%	6.00%	7.10%	5.03%	5.23%	8.31%	10,41%		6.31%	10,41%
NiSource Inc.	ź	\$0.88		3.57%	3.68%	9.50%	3.52%	6.20%	6.41%	7.15%	10.09%	13.24%	7.15%	10.09%	13.24%
Northwest Natural Hotding Company	NWN	\$1.92	\$53,26	3,60%	3.68%	5.50%	3.60%	3.90%	4.40%	7.47%	8.08%	9.20%	7.47%	6.08%	9.20%
ONE Gas, Inc.	065	\$2.32		3.06%	3.14%	6.50%	5.00%	5.00%	5.50%	8,13%	8.64%	8.00%	8.13%	6.64%	9.66%
South Jersey Industries, Inc.	SJI	\$1.21		4.74%	4.91%	11.50%	4.80%	5.40%	7.23%	9.65%	12.14%	18.51%	9,65%	12.14%	18.51%
Southwest Gas Holdings, Inc.	SWX	\$2.38		3.51%	3.62%	9,00%	4,00%	5.50%	6,17%	7.58%	8.79%	12.67%	7.58%	9.79%	12.67%
Spire Inc.	SR	\$2.60		3,53%	3.67%	10.00%	7.31%	5.50%	7.60%	9.13%	11.27%	13.71%	9.13%	11.27%	13.71%
Mean				3.47%	3.58%	7.63%	5.20%	5.74%	6,19%	8.00%	9.77%	11.92%	8.40%	9.77%	11.92%

Notes: 11 Source: Bloomberg Professional 21 Source: Bloomberg Professional, equals 90-day average as of June 30, 2021 23 Equas: (1) (2) 24 Equals (3) x (1 + 0.50 x [8]) 25 Source: Value Line 51 Source: Value Line 52 Source: Value Line 53 Source: Value Line 54 Source: Value Line 55 Source: Value Line 56 Source: Value Line 57 Source: Value Line 58 Source: Value Line 59 Source: Value Line 50 Source

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160-DAY CONSTANT GROWTH DCF -- CENTERPOINT ENERGY ENTEX PROXY GROUP

			180-DAY C	ONSIANI G	KOWIH DCF	GROWIN DUP - CENIERPUIN	_		ENERGY EN LEY PROAT GROUP	ł					
										<	Il Proxy Group	0	>	<b>Nith Exclusions</b>	
		E	[2]	6	[4]	[2]	[8]	E	[8]	[6]	[10]	[11]	[12]	[13]	[14]
							Yahool								
					Expected	Value Line	Finance	Zacks	Average						
		Annualized	Stock	Dividend	Dividend	Eamings	Earnings	Earnings	Growth						
Company	Ticker	- 1	Price	Yleid	Yield	Growth	Growth	Growth	Rate	Low ROE	Mean ROE	High ROE	Low ROE	Mean ROE	High ROE
Atmos Eberov Comoration	ATO	\$2.50	395.85	2.61%	2.70%	7,00%	7.17%	7.30%	7.16%	9.70%	9,86%	10.00%	8.70%	9.86%	10.00%
New Jacesy Bestimes Convertion	a n	61 33	\$38.02	3.50%	3 69%	2 00%	8 00%	7,10%	5.03%	6.63%	8.62%	10.72%		8.62%	10.72%
Nicours Inc.	Ĩ	\$0.88	\$23.87	3.69%	3.81%	8.50%	3.52%	6.20%	6.41%	7.27%	10.21%	13.36%	7.27%	10.21%	13.36%
Modifices Natural Holding Company	NWN	5	28 972	3.84%	3,93%	5.50%	3.80%	3.80%	4.40%	7.72%	8.33%	9.45%	7.72%	8,33%	9.45%
ONE Gas Inc.	OGS	\$2.32	\$75,36	3.08%	3.16%	6.50%	5.00%	5.00%	5,50%	8,16%	8,66%	9,68%	8.16%	8,66%	9.68%
South Jarsey Industrias Inc		\$1.21	\$23.82	5.08%	5.26%	11.50%	4,60%	5.40%	7.23%	10.00%	12.50%	16.87%	10.00%	12.50%	16.87%
Southwest Gas Holdings Inc	SWX	\$2.38	265.86	3.61%	3.73%	9,00%	4,00%	5.50%	8.17%	7.69%	8.83%	12.78%	7,69%	9.89%	12.78%
Spire Inc.	SR	\$2.60	\$67.94	3.83%	3.97%	10.00%	7.31%	5.50%	7.60%	8,43%	11.58%	14.02%	9.43%	11.58%	14.02%
Mean				3.65%	3.77%	7.63%	5.20%	5.74%	6.19%	0.19%	9.96%	12.11%	8.57%	9,96%	12.11%

 Notes:
 Notes:

 [1] Source: Bloomberg Professional
 [2] Source: Bloomberg Professional, equals 180-day average as of June 30, 2021

 [3] Equals [1]/[7]
 [4] Equals [1]/[7]

 [5] Source: Value Lina
 [5] Source: Value Lina

 [6] Source: Value Lina
 [5] Source: Value Lina

 [6] Source: Value Lina
 [5] Source: Zata

 [7] Source: Zata
 [3] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [9], [7])

 [9] Equals Average ([5], [9], [7])
 [9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Maximum ([5], [6], [7])

 [10] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])
 [11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7])

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## CAPITAL ASSET PRICING MODEL - CURRENT RISK-FREE RATE & VL BETA

## K = Rf + β x (Rm - Rf) K = Rf + 0.25 x (Rm) + 0.75 x β x (Rm - Rf)

		[1]	[2]	(3)	[4]	(5)	[6]
		Current 30-day					
		average of 30-year		Market	Market Risk		
		U.S. Treasury bond		Return	Premium	CAPM ROE	ECAPM
Company	Ticker	yield	Beta (β)	(Rm)	(Rm - Rf)	(K)	ROE (K)
Atmos Energy Corporation	ATO	2,20%	0.80	14,00%	11.80%	11.64%	12.23%
New Jersey Resources Corporation	NJR	2.20%	1.00	14.00%	11.80%	14.00%	14.00%
ViSource Inc.	NI	2.20%	0.85	14.00%	11.80%	12.23%	12.67%
forthwest Natural Holding Company	NWN	2.20%	0.85	14.00%	11.80%	12.23%	12.67%
ONE Gas, Inc.	OGS	2.20%	0,80	14.00%	11.80%	11.64%	12.23%
South Jersey Industries, Inc.	SJI	2.20%	1.05	14.00%	11.80%	14.59%	14,44%
Southwest Gas Holdings, Inc.	SWX	2.20%	0,95	14.00%	11.80%	13.41%	13.55%
Spire Inc.	SR	2.20%	0.85	14.00%	11.80%	12.23%	12.87%
Vean						12.74%	13.08%

Notes: Notes: [1] Source: Bloomberg Professional, as of June 30, 2021 [2] Source: Vahue Line [3] Source: Schedule 5, pages 5-11 [4] Equals [3] - [1] [5] Equals [3] - [1] [5] Equals [1] + [2] x [4] [6] Equals [1] + 0.25 x [(4]) + 0.75 x ([2] x [4])

## CAPITAL ASSET PRICING MODEL - NEAR-TERM PROJECTED RISK-FREE RATE & VL BETA

## $K = Rf + \beta x (Rm - Rf)$ K = Rf + 0.25 x (Rm) + 0.75 x β x (Rm - Rf)

		[1]	[2]	[3]	[4]	(5)	[6]
		Near-term projected					
		30-year U.S. Treasury		Market	Market Risk		
		bond yield (Q4 2021 -		Return	Premium	CAPM ROE	ECAPM
Company	Ticker	Q4 2022)	Beta (β)	(Rm)	(Rm - Rf)	(K)	ROE (K)
Atmos Energy Corporation	ATO	2.62%	0.80	14,00%	11.38%	11.72%	12.29%
New Jersey Resources Corporation	NJR	2.62%	1.00	14.00%	11.38%	14.00%	14.00%
NiSource Inc.	NI	2.62%	0.85	14.00%	11.38%	12.29%	12.72%
Northwest Natural Holding Company	NWN	2.62%	0.85	14.00%	11.38%	12.29%	12,72%
ONE Gas, Inc.	OGS	2.82%	0.80	14.00%	11.38%	11.72%	12.29%
South Jersey Industries, Inc.	SJI	2.62%	1.05	14.00%	11.38%	14.57%	14.42%
Southwest Gas Holdings, Inc.	SWX	2.62%	0.95	14.00%	11.38%	13.43%	13,57%
Spire Inc.	SR	2.62%	0.85	14.00%	11.38%	12.29%	12.72%
Moan						12.79%	13.09%

Notes:

Notes: [1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 7, July 1, 2021, at 2 [2] Source: Value Line [3] Source: Schedule 5, pages 5-11 [4] Equals [3] - [1] [5] Equals [1] + [2] x [4] [6] Equals [1] + (2] x [4])

CAPITAL ASSET PRICING MODEL - LONG-TERM PROJECTED RISK-FREE RATE & VL BETA

## K = Rf + β x (Rm - Rf) K = Rf + 0.25 x (Rm) + 0.75 x β x (Rm - Rf)

		[1]	[2]	[3]	[4]	[5]	[6]
		Projected 30-year		Market	Market Risk		
		U.S. Treasury bond		Return	Premium	CAPM ROE	ECAPM
Company	Ticker	yield (2023 - 2027)	Beta (β)	(Rm)	(Rm - Rf)	(K)	ROE (K)
Atmos Energy Corporation	ATO	3.50%	0,80	14.00%	10.50%	11.90%	12.42%
New Jersey Resources Corporation	NJR	3.50%	1.00	14.00%	10,50%	14.00%	14,00%
NiSource Inc.	NI	3.50%	0.85	14.00%	10.50%	12.42%	12.82%
Northwest Natural Holding Company	NWN	3.50%	0.85	14.00%	10.50%	12.42%	12,82%
ONE Gas, Inc.	OGS	3,50%	0.80	14.00%	10.50%	11.90%	12.42%
South Jersey Industries, Inc.	S.II	3.50%	1.05	14.00%	10.50%	14.52%	14.39%
Southwest Gas Holdings, Inc.	SWX	3.50%	0.95	14.00%	10.50%	13.47%	13.60%
Spire Inc.	SR	3.50%	0.85	14.00%	10,50%	12.42%	12,82%
Mean						12.88%	13.16%

Notes:

Notas: [1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14 [2] Source: Value Line [3] Source: Schedule 5, pages 5-11 [4] Equals [3] - [1] [5] Equals [1] + [2] x [4] [6] Equals [1] + 0.25 x [[4]) + 0.75 x [2] x [4]]

## CAPITAL ASSET PRICING MODEL - CURRENT RISK-FREE RATE & BLOOMBERG BETA

## K = Rf + β x (Rm - Rf) K = Rf + 0.25 x (Rm) + 0.75 x β x (Rm - Rf)

		[1]	[2]	[3]	[4]	(5)	[6]
		Current 30-day					
		average of 30-year		Market	Market Risk		
		U.S. Treasury bond		Return	Premium	CAPM ROE	ECAPM
Company	Ticker	yield	Beta (β)	(Rm)	(Rm - Rf)	(K)	ROE (K)
Atmos Energy Corporation	ATO	2.20%	0,75	14.00%	11.80%	11.00%	11.75%
New Jersey Resources Corporation	NJR	2.20%	0.82	14.00%	11.80%	11.90%	12.42%
NiSource Inc.	NI	2.20%	0.60	14.00%	11.80%	11.67%	12.25%
Northwest Natural Holding Company	NWN	2.20%	0.73	14,00%	11.80%	10,76%	11.57%
ONE Gas. Inc.	OGS	2.20%	0.84	14.00%	11.80%	12.08%	12.55%
South Jersey Industries, Inc.	SJI	2.20%	0.84	14.00%	11.80%	12.08%	12.54%
Southwest Gas Holdings, Inc.	SWX	2.20%	0,85	14.00%	11.80%	12.26%	12.69%
Spine Inc.	SR	2.20%	0.77	14.00%	11.80%	11.25%	11.94%
Mean				•		11.62%	12.21%

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 Notes:

 [1] Source: Bloomberg Professional, as of June 30, 2021

 [2] Source: Bloomberg Professional, as of June 30, 2021

 [3] Source: Schedule 5, pages 5-11

 [4] Equals [3] - [1]

 [5] Equals [1] + [2] x [4]

 [8] Equals [1] + 0.25 x [[4]) + 0.75 x [[2] x [4])

## CAPITAL ASSET PRICING MODEL - NEAR-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

## $K = Rf + \beta x (Rm - Rf)$ $K = Rf + 0.25 x (Rm) + 0.75 x \beta x (Rm - Rf)$

		[1]	[2]	[3]	[4]	(5)	[6]
		Near-term projected					
		30-year U.S. Treasury		Market	Market Risk		
		bond yield (Q4 2021 -		Return	Premium	CAPM ROE	ECAPM
Company	Ticker	Q4 2022)	Beta (β)	(Rm)	(Rm – Rf)	(K)	ROE (K)
Atmos Energy Corporation	ATO	2.62%	0.75	14.00%	11.38%	11.11%	11,63%
New Jersey Resources Corporation	NJR	2.62%	0.82	14,00%	11,38%	11.97%	12.48%
NiSource Inc.	NI	2.62%	0.80	14,00%	11,38%	11,75%	12.31%
Northwest Natural Holding Company	NWN	2.62%	0.73	14.00%	11.38%	10.88%	11,66%
ONE Gas, Inc.	OGS	2.62%	0.84	14.00%	11.38%	12,13%	12.60%
South Jersey Industries, Inc.	SJI	2.62%	0.84	14.00%	11.38%	12.13%	12.60%
Southwest Gas Holdings, Inc.	SWX	2.62%	0.85	14.00%	11.38%	12.32%	12.74%
Spire Inc.	SR	2.62%	0.77	14,00%	11.38%	11.35%	12.01%
Mean						11.71%	12.28%

Notes: 
 Notes:
 [1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 7, July 1, 2021, at 2

 [2] Source: Bloomberg Professional, as of June 30, 2021
 [3] Source: Schedule 5, pages 5-11

 [4] Equals [3] - [1]
 [6] Equals [1] + [2] × [4]

 [6] Equals [1] + [2] × [4]
 [6] Equals [1] + 0.25 × ([4]) + 0.75 × ([2] × [4])

## CAPITAL ASSET PRICING MODEL - LONG-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

## K = Rf + β x (Rm - Rf) K = Rf + 0.25 x (Rm) + 0.75 x β x (Rm - Rf)

		[1]	[2]	[3]	[4]	(5)	[6]
Company	Ticker	Projected 30-year U.S. Treasury bond vield (2023 - 2027)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	CAPM ROE	ECAPM ROE (K)
Atmos Energy Corporation	ATO	3.50%	0.75	14.00%	10.50%	11.33%	12.00%
New Jersey Resources Corporation	NJR	3.50%	0.82	14.00%	10.50%	12.13%	12.60%
NiSource Inc.	NI	3,50%	0.60	14.00%	10.50%	11.93%	12.45%
Northwest Natural Holding Company	NWN	3.50%	0.73	14.00%	10.50%	11.12%	11.84%
ONE Gas, Inc.	OGS	3.50%	0.84	14.00%	10.50%	12.28%	12.71%
South Jersey Industries, Inc.	SJI	3.50%	0.84	14.00%	10.50%	12.27%	12,70%
Southwest Gas Holdings, Inc.	SWX	3.50%	0.85	14.00%	10.50%	12.45%	12.84%
Spire Inc.	SR	3.50%	0.77	14.00%	10.50%	11.55%	12,16%
Mean			• • • • • •			11.88%	12.41%

Notes: [1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14 [2] Source: Bloomberg Professional, as of June 30, 2021 [3] Source: Schedule 5, pages 5-11 [4] Equals [3] - [1] [5] Equals [1] + [2] x [4] [8] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

## CAPITAL ASSET PRICING MODEL - LONG-TERM AVERAGE BETA

## CAPM: $K = R_{f} + \beta (R_{m} - R_{f}) / ECAPM: K = Rf + 0.25(Rm - Rf) + 0.75\beta (Rm - Rf)$

	[4]	[5]	[6]	[7]	[8]	(9]
	Risk-Free Rate (R1)	Beta <i>(β)</i>	Market Return (R.m.)	Market Risk Premium (R <sub>m</sub> - R <sub>f</sub> )	CAPM (K)	ECAPM (K)
Current 30-day average of 30-year U.S. Treasury bond yield [1]	2.20% /	0.726	14.00%	11.80%	10.76%	11.57%
Near-term projected 30-year U.S. Treasury bond yield (Q4 2021 - Q4 2022) [2]	2,62%	0.726	14.00%	11.38%	10.88%	11.66%
Projected 30-year U.S. Treasury bond yield (2023 - 2027) [3]	3.50%	0.726	14,00%	10.50%	11.12%	11.84%
				Average:	10.92%	11.69%

Notes:		
[1] Source: Bloomberg Professional, as of June 30, 2021	AIL CAPM/ECAPM	I Results:
[2] Source: Blue Chip Financial Forecasts, Vol. 40, No. 7, July 1, 2021, at 2	Mean	12.09%
[3] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2021, at 14	Minimum	10.76%
[4] See Notes [1], [2], and [3]	Maximum	13.16%
[5] Source: Schedule 5, page 4		
[6] Source: Schedule 5, pages 5-11		
[7] Equals [6] - [4]		

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[7] Equals [6] - [4] [8] Equals [4] + [5] x [7] [9] Equals [4] + 0.25 x ([7]) + 0.75 x ([5] x [7])

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Company         [1]         [2]         [3]         [4]         [5]         [6]         [7]         [8]         [9]           Atmos Energy Corporation         Ticker         12/31/2011         12/31/2013         12/31/2015         12/31/2016         12/31/2016         12/31/2019

Noles: 11 Value Line, dated December 9, 2011. 22 Value Line, dated December 7, 2012. 33 Value Line, dated December 6, 2013. 44 Value Line, dated December 5, 2014. 59 Value Line, dated December 2, 2016. 77 Value Line, dated December 1, 2017. 59 Value Line, dated November 30, 2018. 59 Value Line, dated November 22, 2020. [10] Value Line, dated November 27, 2020. [11] Average [[1] - [10]).

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MARKET RISK PREMIUM DERIVED FROM S&P 500 INDEX

[1] Estimate of the S&P 500 Dividend Yield	1.41%
[2] Estimate of the S&P 500 Growth Rate	12.50%
[3] S&P 500 Estimated Required Market Return	14.00%

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Notes: [1] Sum of [6] [2] Sum of [8] [3] Equals ([1] x (1 + 0.5 x [2])) + [2]

## STANDARD & POOR'S 500 INDEX

<u> </u>		[4]	[5]	[6]		(8)
						Cap-Weighted
		Weight in	Current	Cap-Weighted		Long-Term
Name	Ticker	indax Ç	Jividend Yteld	Dividend Yield	Growin ESL	Growth Est
Lyondell'Basell Industries NV	LYB	0.10%	4,39%	0.00%	0.00%	0.00%
American Express Co	AXP	0.37%	1.04%	0.00%	6.00%	0.02%
Verizon Communications Inc	VZ	0.65%	4,48%	0.03%	3,50%	0.02%
Broadcom inc	AVGO	0.55%	3.02%	0.02%	27.00%	0.15%
Boeing Co/The	BA	0.00%	n/a	n/a	0.00%	0.00%
Caterpillar Inc	CAT	0.33%	2.04%	0.01%	8.50%	0.03%
JPMorgan Chase & Co	JPM	1.32%	2.31%	0.03%	6.50%	0.09%
Chevron Corp	CVX	0.57%	5.12%	0.03%	23.50%	0.13%
Coca-Cola Co/The AboVie Inc	KO ABBV	0.65% 0.56%	3.10% 4.62%	0.02% 0.03%	6.50% 6.50%	0.04% 0.04%
Walt Disney Co/The	DIS	0.90%	4.02 /k	n/a	14.00%	0.13%
FleetCor Technologies Inc	FLT	0.06%	n/a	n/a	11.00%	0.01%
Extra Space Storage Inc	EXR	0.06%	2.44%	0,00%	5.00%	0.00%
Exxon Mobil Corp	XOM	0.75%	5.52%	0.04%	2.50%	0.02%
Phillips 66	PSX	0.11%	4,19%	0.00%	20.00%	0.02%
General Electric Co	GE	0.33%	0.30%	0.00%	4.00%	0.01%
HPInc	HPQ	0.10%	2.57%	0.00%	14.00%	0.01%
Home Depot Inc/The	HD	0.95%	2.07%	0.02%	8.00%	0.08%
Monolithic Power Systems Inc	MPWR	0.05%	0.64%	0.00%	17.50%	0.01%
International Business Machines Corp Johnson & Johnson	MBI LAL	0.37% 1.22%	4.48% 2.57%	0.02% 0.03%	1.50% 10.00%	0.01% 0.12%
McDonald's Corp	MCD	0.48%	2.23%	0.01%	10.00%	0.05%
Merck & Co Inc	MRK	0.55%	3.34%	0.02%	7.50%	0.04%
3M Co	MMM	0.32%	2.98%	0.01%	4.50%	0.01%
American Water Works Co Inc	AWK	0.08%	1.56%	0.00%	8.50%	0.01%
Bank of America Corp	BAC	0.99%	1,75%	0.02%	4.50%	0.04%
Baker Hughes Co	BKR	0.00%	3.15%	0.00%	0.00%	0.00%
Pfizer Inc	PFE	0.61%	3.98%	0.02%	8.00%	0.05%
Proctar & Gamble Co/The	PG	0.93%	2.58%	0.02%	7.00%	0.05%
AT&T inc	T	0.58%	7.23%	0.04%	2.50%	0.01%
Travelers Cos Inc/The Raytheon Technologies Corp	TRV RTX	0.11% 0.36%	2.35% 2.39%	0.00% 0.01%	8.00% 1.00%	0.01% 0.00%
Analog Devices Inc	ADI	0.18%	1.60%	0.00%	8.50%	0.02%
Walmart Inc	WMT	1.11%	1.56%	0.02%	6.00%	0.07%
Cisco Systems Inc/Delaware	CSCO	0.63%	2.79%	0.02%	6.00%	0.04%
Intel Corp	INTC	0.64%	2.48%	0.02%	7.00%	0.04%
General Motors Co	GM	0.24%	n/a	n/a	11.00%	0.03%
Microsoft Corp	MSFT	5.72%	0.83%	0.05%	15.00%	0.86%
Dollar General Corp	DG	0.14%	0.78%	0.00%	10.50%	0.02%
Cigna Corp	CI KMI	0.23% 0.12%	1.69%	0.00% 0.01%	11.00%	0.03%
Kinder Morgan Inc Citigroup Inc	C	0.12%	5.92% 2.88%	0.01%	19,00% 5.00%	0.02% 0.02%
American International Group Inc	ĂIG	0.11%	2.69%	0.00%	28,50%	0.03%
Altria Group Inc	MO	0.25%	7.21%	0.02%	6.50%	0.02%
HCA Healthcare Inc	HCA	0.20%	0.93%	0.00%	10.50%	0.02%
Under Armour Inc	UAA	0.01%	n/a	n/a	11.00%	0,00%
International Paper Co	IP	0.07%	3.34%	0.00%	11.00%	0.01%
Hewlett Packard Enterprise Co	HPE	0.05%	3.29%	0.00%	6.50%	0.00%
Abbott Laboratories.	ABT	0.58%	1.55%	0.01%	11.50%	0.07%
Aflac Inc Air Products and Chemicals Inc	AFL APD	0.10%	2.46% 2.09%	0.00% 0.00%	8.50% 12.00%	0.01% 0.02%
Royal Caribbean Cruises Ltd	RCL	0.18%	2.09% n/a	0.00% n∕a	0.00%	0.02%
Hess Corp	HES	0.00%	1,15%	0,00%	0.00%	0.00%
Archer-Daniels-Midland Co	ADM	0.09%	2.44%	0.00%	7.50%	0.01%
Automatic Data Processing Inc	ADP	0.24%	1.87%	0.00%	9.00%	0.02%
Verisk Analytics Inc	VRSK	0.08%	0.66%	0.00%	7.50%	0.01%
AutoZone Inc	AZO	0.09%	n/a	n/a	14,50%	0.01%
Avery Dennison Corp	AVY	0.05%	1,29%	0.00%	9.50%	0.00%
Enphase Energy Inc	ENPH	0.07%	n/a o sow	n/a 0.00%	40.00%	0.03%
MSCI Inc Ball Corp	MSCI BLL	0.12% 0.07%	0.59% 0.74%	0.00% 0.00%	16.00% 22.00%	0.02% 0.02%
Carrier Global Corp	CARR	0.00%	0.74%	0.00%	0.00%	0.02%
Bank of New York Mellon Corp/The	BK	0.13%	2.42%	0.00%	3.00%	0.00%
Otis Worldwide Corp	OTIS					
	Ulla	0.00%	1. <b>17</b> %	0.00%	0.00%	0,00%

### [4] [5] [6] 7 [8] Value Line Cap-Weighted Cap-Weighted Long-Term Weight in Current Long-Term Dividend Yield Dividend Yield Growth Est. Growth Est Ticker Index Name 8.50% 0.01% 0.00% Baxter International Inc BAX 0.11% 1.39% BDX 1.37% 0.00% 7.50% 0.01% 0.20% Becton Dickinson and Co 0.06% Berkshire Hathaway Inc BRK/B 1.03% 6.00% n/a n/a 68Y 0.08% 2.44% 0.00% 8.50% Best Buy Co Inc 17,50% 0.03% 0.17% Boston Scientific Corp RSX n/a n/a BMY 0.42% 2.93% 0.01% 12.50% 0.05% Bristol-Myers Souibb Co 0.04% 1.04% 0,00% 10.00% 0.00% Fortune Brands Home & Security Inc. FBHS Brown-Forman Corp BF/B 0.07% 0.96% 0.00% 11.00% 14.50% 0.00% 0.00% 2.52% Cabot Oil & Gas Corp COG CPB 5.00% 0.00% 0.04% 3.25% 0,00% Campbell Soup Co 0.01% Kansas City Southern KSU 0.07% 0.76% 0.00% 12.50% n∕a n⁄a 26 50% Hilton Worldwide Holdings Inc HLT 0.09% n/a 0.00% 0.00% 0.00% Carnival Corp CCL n/a 0.06% 19.50% 0.01% QRVO n/a n/a Corvo Inc Lumen Technologies Inc LUMN 0.04% 7.36% 0.00% 2.50% 0.00% UDR Inc 6.00% 0.00% 0.00% UDR 0.04% 2.96% Clorex Co/The 0.06% 2.58% 0.00% 0.00% CLX 6.00% 0.06% 19.50% 0.01% Paycom Software Inc PAYC n/a rı∕a 0.00% CMS Energy Corp CMS 0.05% 2,95% 7.50% 0.00% 0.00% 0.00% NWL 0.00% 3.35% Newell Brands Inc Coloate-Palmolive Co CL 0.19% 2.21% 0.00% 4,50% 0.01% Comerica Inc СМА 0.03% 3.81% 0.00% 2.50% 0.00% **IPG Photonics Corp** IPGP 0.03% n/a n/a 0.00% 17.00% 5.00% 0.01% 3.02% 0.00% Conagra Brands Inc Consolidated Edison Inc CAG 0.05% 0.00% 4.00% 0.00% ED 0.07% 4.32% GLW 0.10% 2.35% 0.00% 20.00% 0.02% Corning Inc. Cummins Inc. CMI 0.10% 2.21% 0.00% 7.50% 0.01% 0.00% 0.00% CZR Caesars Entertainment Inc n/a n/a DHR 0.54% 0.31% 0.00% 18.00% 0.10% Danaher Corp 0.00% 0.04% Target Corp TGT 0.34% 1.49% 13.00% 1.02% 14.00% Deere & Co DE 0.31% D 0.17% 3.43% 0.01% 12.00% 0.02% **Dominion Energy Inc** Dover Corp DOV 0.06% 1.31% 0.00% 6.50% 0.00% Alliant Energy Corp LNT 0.04% 2.89% 0.00% 5.50% 0.00% 7.00% 0.01% Duke Energy Corp Regency Centers Corp 3.91% 0.01% DUK REG 0.03% 0.00% 10.00% 0.00% 3.71% Eaton Corp PLC ETN 0.17% 2.05% 0,00% 5,50% 0.01% 6.00% Ecolab Inc ECL 0.17% 0.93% 0.00% 0.01% 0.05% 0.18% 0.00% PKI 11.00% 0.01% PerkinElmer Inc Emerson Electric Co EMR 0.16% 2.10% 0.00% 10.50% 0.02% 0.00% EOG Resources Inc EQG 0.14% 1.98% 12.50% **0**.02% AON 0.01% Aon PLC 0.15% 0.85% 7.00% Entergy Corp Equifax Inc ETR 0.06% 0.00% 3.00% 0.00% 3.81% EFX 0.08% 0.65% 0.00% 5.50% 0.00% IQVIA Holdings Inc IQV 0.13% n/a n/a 14.00% 0.02% 15.50% Gartner Inc IT 0.06% n/a n/a 0.01% FedEx Corp FDX 8,50% 0.22% 1.01% 0.00% 0.02% FMC Corp FMC 0.04% 1.77% 0.00% 9.50% 0.00% Ford Mator Co F 0.16% 0.40% n/a n∕a 0.01% 46.00% 0.08% . NEE 2.10% 10.50% 0.04% NextEra Energy Inc. 0.05% 3.50% 0.00% 11.50% 0.01% Franklin Resources Inc BEN Freeport-McMcRan Inc FCX 0.15% 0.81% 0.00% 36.50% 0.06% 0.00% 25.00% 0.01% Gap Inc/The GPS 0.04% 1.43% 0.12% DXCM 27.50% 0.03% n/a n/a Dexcom Inc. General Dynamics Corp 0.15% 0.00% 5.00% 0.01% GD 2.53% General Mills Inc GIS 0.10% 3.35% 0.00% 3,50% 0.00% 7.00% GPC 0.00% 0.00% Genuine Parts Co 0.05% 2.58% ATO 0.04% 2.60% 0.00% 7.00% 0.00% Atmos Energy Corp GWW 0.06% 1.48% 0.00% 5.50% 0.00% WW Grainger Inc Halliburton Co HAL 0.06% 0.78% 0.00% 7.00% 0.00% 0.00% 0.00% 0.00% LHX L3Harris Technologies Inc 1.89% 0.05% 12.00% Healthoeak Properties Inc. PEAK 3.60% 0.00% -0.01% Catalent Inc CTLT 0.05% 21.00% 0.01% n/a rv∕a FTV 0.00% Fortive Corp 0.07% 0.40% 6.00% 0.00% 5,50% Hersney Co/The HSY 0.07% 1.85% 0.00% 0.00% Synchrony Financial SYF 0.08% 1.81% 0.00% 4.50% 0.00% 0.07% 2.05% Hormel Foods Corp HRL 0.00% 9.00% 0.01% Arthur J Gailagher & Co Mondelez International Inc 0.00% 12.50% 0.01% AJG MDLZ. 0.25% 2,02% 0.00% 8.00% 0.02% CenterPoint Energy Inc CNP 0.04% 2.61% 0.00% B.00% 0.00% HUM 11.00% 0.02% Humana Inc. 0.63% Willis Towars Watson PLC 0.08% 1.23% 11.50% WLTW 0.00% 0.01% Illinois Tool Works Inc ITW 0.20% 2.04% 0,00% 11.00% 0.02% CDW 0.92% 1.28% 11.00% CDW Corp/DE 0.07% 0.00% 0.01% 0.00% 0.00% 0.00% 0.00% Trane Technologies PLC Interpublic Group of Cos Inc/The IPG 0.04% 3.32% 0.00% 12.00% 0,00% International Flavors & Fragrances Inc iFF 0.10% 2.08% 0.00% 7.50% 0.01%

0.00%

n/a

0.05%

0.07%

GNRC

Jacobs Engineering Group Inc

Generac Holdings Inc

4

0.63%

n/a

15.00%

23.50%

0.01%

0.02%

### STANDARD & POOR'S 500 INDEX

					Value Line	[8] Cap-Weight
Mana	Tiekee	Weight in	Current	Cap-Weighted Dividend Yield	Long-Term	Long-Terr
Name	Ticker					Growth Es
XP Semiconductors NV	NXP1	0.16%	1.09%	0.00%	11.00%	0.02%
lanesbrands Inc	HBI	0.02%	3.21%	0.00%	6.50%	0.00%
iellogg Co	K BR	0.06%	3.61%	0.00% 0.00%	3.00% 10.50%	0.00%
roadridge Financial Solutions Inc	PRGO	0.05% 0.02%	1.42% 2.09%	0.00%	-2.00%	0.01% 0.00%
errigo Co PLC Imberty-Clark Corp	KMB	0.02%	3.41%	0.00%	5.50%	0.00%
Inco Realty Corp	KIM	0.03%	3.26%	0.00%	-2.00%	0.00%
hade Corp	ORCL	0.61%	1.64%	0.01%	9.50%	0.06%
loger Co/The	KR	0.08%	2.19%	0.00%	5.00%	0.00%
eggett & Platt Inc	LEG	0.02%	3.24%	0.00%	10.00%	0.00%
ennar Corp	LEN	0.08%	1.01%	0.00%	9.00%	0.01%
II Lilly & Co	LLY	0.62%	1.48%	0.01%	11.00%	0.07%
Brands Inc	LB	0.06%	0.83%	0.00%	28.50%	0.02%
harter Communications Inc	CHTR	0.38%	n/a	n/a	28.50%	0.10%
incoln National Corp	LNC	0.03%	2.67%	0.00%	9.00%	0.00%
oews Corp	L	0.04%	0,46%	0.00%	12.00%	0.00%
owe's Cos Inc	LOW	0.38%	1.65%	0.01%	14.00%	0.05%
DEX Corp	IEX	0.05%	0,98%	0.00%	7.50%	0.00%
larsh & McLennan Cos Inc	MMC	0.20%	1.32%	0,00%	9.50%	0.02%
fasco Corp	MAS	0.04%	1.60%	0.00%	9.00%	0.00%
&P Global Inc	SPGI	0.28%	0.75%	0.00%	8.50%	0.02%
ledtronic PLC	MDT	0.47%	2.03%	0.01%	7.00%	0.03%
fiatris Inc	VTRS	0.00%	3,08%	0.00%	0.00%	0.00%
VS Health Corp	CVS	0.31%	2.40%	0.01%	6.00%	0.02%
PuPont de Nemours Inc	00	0.00%	1.55%	0,00%	0.00%	0.00%
licron Technology Inc totorola Solutions Inc	MU MSI	0.27% 0.10%	n/a 1.31%	n/a 0.00%	11,50% 7.00%	0.03% 0.01%
iotorola Solutions Inc iboe Global Markets Inc	CBOE	0.10%	1.31%	0.00%	12.00%	0.00%
aboratory Corp of America Holdings	LH	0.04%	n/a	n/a	9.50%	0.00%
lewmont Corp	NEM	0.14%	3.47%	0.00%	14.50%	0.02%
IKE Inc	NKE	0.55%	0.71%	0,00%	24.00%	0.13%
liSource Inc	NI	0.03%	3.59%	0.00%	9.50%	0.00%
lorfolk Southern Corp	NSC	0.19%	1.49%	0.00%	9.00%	0.02%
rincipal Financial Group Inc	PFG	0.05%	3.86%	0.00%	5.50%	0.00%
versource Energy	ES	0.08%	3.00%	0.00%	5.50%	0.00%
lorthrop Grumman Corp	NOC	0,16%	1.73%	0.00%	7.00%	0.01%
Velis Fargo & Co	WFC	0.52%	0.88%	0.00%	5.00%	0.03%
lucor Corp	NUE	0.08%	1.69%	0.00%	8.00%	0.01%
VH Corp	PVH	0.02%	n/a	n/a	12.50%	0.00%
Occidental Petroleum Corp	OXY	0.08%	0,13%	0.00%	36,50%	0.03%
Dmnicom Group Inc	OMC	0.05%	3,50%	0.00%	6.00%	0.00%
NEOK Inc	OKE	0.07%	6.72%	0.00%	9.50%	0.01%
Raymond James Financial Inc	RJF	0.05%	1.20%	0.00%	6.50%	0.00%
Parker-Hannifin Corp	PH	0,11%	1,34%	0,00%	13,00%	0.01%
Rollins Inc	ROL	0.05%	0,94%	0.00%	11.50%	0.01%
PL Corp	PPL	0.06%	5.93%	0.00%	3.00%	0.00%
ConocaPhillips	COP	0.23%	2.82%	0.01%	10.50%	0.02%
ruiteGroup Inc	PHM	0.04%	1.03%	0.00%	11.00%	0.00%
Pinnacle West Capital Corp	PNW	0.03%	4.05%	0.00%	5.00%	0.00%
NC Financial Services Group Inc/The	PNC	0.23%	2.41%	0.01%	3.00%	0.01%
PG Industries Inc	PPG	0.11%	1.27%	0.00%	3.00%	0.00%
Progressive Corp/The Public Service Enterprise Group Inc	PGR PEG	0.16% 0.08%	0,41% 3,41%	0.00% 0.00%	5.00% 3.50%	0.01% 0.00%
tobert Half International Inc	RHI	0.08%	3,41% 1.71%	0.00%	3.50% 7.50%	0.00%
dison International	EIX	0.03%	4.58%	0.00%	23.50%	0.00%
ichumberger NV	SLB	0.13%	1.56%	0,00%	8.50%	0.01%
catchedge NV harles Schwab Corp/The	SCHW	0.37%	0,99%	0.00%	7.50%	0.03%
herwin-Williams Co/The	SHW	0.20%	0.81%	0,00%	10.50%	0.02%
Vest Pharmaceutical Services Inc	WST	0.07%	0.19%	0.00%	17.00%	0.01%
M Smucker Co/The	SJM	0.04%	2.78%	0.00%	4.00%	0.00%
inap-on inc	SNA	0.03%	2.20%	0.00%	5,00%	0.00%
METEKInc	AME	0.09%	0.60%	0.00%	10.00%	0.01%
outhern Co/The	SO	0.18%	4.36%	0.01%	5,00%	0.01%
ruist Financial Corp	TFC	0.21%	3.24%	0.01%	5.50%	0.01%
outrwest Airlines Co	LUV	0.09%	n/a	n/a	1.50%	0.00%
V R Bendey Corp	WRB	0.04%	0.70%	0.00%	14.50%	0.01%
tanley Black & Decker Inc	SWK	0.09%	1.37%	0.00%	6.00%	0.01%
ublic Storage	PSA	0,15%	2.66%	0.00%	2,50%	0.00%
rista Networks Inc	ANET	0.08%	n/a	n/a	4.50%	0.00%
ysco Corp	SYY	0.11%	2.42%	0.00%	11.50%	0.01%
corteva inc	CTVA	0.00%	1.17%	0.00%	0.00%	0.00%
exas instruments inc	TXN	0.50%	2.12%	0.01%	8.50%	0.04%
extron Inc	TXT	0.04%	0,12%	0.00%	7,50%	0.00%
hermo Fisher Scientific Inc	TMO	0.56%	0.21%	0.00%	13.00%	0.07%
JX Cos Inc/The	XLT	0.23%	1.54%	0.00%	12.00%	0.03%
Biobe Life Inc	GL	0.03%	0.83%	0.00%	8.00%	0.00%
Iohnson Controls International pic	JCI	0.14%	1.57%	0.00%	8,50%	0.01%
Jita Beauty Inc	ULTA	0.05%	n/a	л/а 0.040/	12.50%	0.01%
Union Pacific Corp	UNP	0.41%	1.95%	0.01%	10.00%	0.04%

## STANDARD & POOR'S 500 INDEX

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STANDARD & POOR'S 500 INDEX

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		[4]	[5]	[6]	[7] Value Line	[8] Cap-Weigt
Name	Ticker	Weight in Index		Cap-Weighted Dividend Yield	Long-Term	Long-Ter Growth E
Keysight Technologies Inc	KEYS	0.08%	n/a	n/a	17.00%	0.01%
JnitedHealth Group Inc	UNH	1.06%	1,45%	0.02%	12.00%	0.13%
Inum Group	UNM	0.02%	4.23%	0.00%	3.50%	0.00%
farathon Oil Corp	MRO	0.03%	1.17%	0.00%	49.00%	0.01%
Bio-Rad Laboratories Inc	BIO	0.04%	n/a	n/a	11.50%	0.01%
/entas Inc	VTR	0.06%	3,15%	0.00%	4.50%	0.00%
/F Corp	VFC	0.09%	2.39%	0.00%	5.50%	0.00%
formado Realty Trust	VNO	0,03%	4.54%	0.00%	-19.00%	0.00%
/ulcan Materials Co	VMC	0.06%	0.85%	0.00%	10.00%	0.01%
Veyerhaeuser Co	WY	0.07%	1.98%	0.00%	21.00%	0.02%
Vhirippool Corp	WHR	0.04%	2,57%	0.00%	5,50%	0.00%
Villiams Cos Inc/The	<b>WMB</b>	0.09%	6,18%	0,01%	12.00%	0.01%
VEC Energy Group Inc	WEC	0.08%	3,05%	0.00%	6.50%	0.01%
dobe Inc	ADBE	0.78%	nla	n/a	14.50%	0.11%
ES Corp/The	AES	0.05%	2.31%	0.00%	24.00%	0.01%
ungen linc	AMGN	0.39%	2.89%	0.01%	6.00%	0.02%
pple Inc	AAPL	6.41%	0,64%	0.04%	14.50%	0.93%
utodesk Inc	ADSK	0.18%	n/a	n/a	18.00%	0.03%
Cintas Corp	CTAS	0.11%	0.79%	0.00%	13.00%	0.01%
Comcast Corp	CMCSA	0.73%	1.75%	0.01%	11.00%	0.08%
Iolson Coors Beverage Co	TAP	0.03%	n/a	n/a	41.00%	0.01%
LA Corp	KLAC	0.14%	1.11%	0.00%	17.50%	0.02%
famioti International Inc/MD	MAR	0.12%	n/a	n/a	17.50%	0.02%
AcCermick & Co Inc/MD	MKC	0.06%	1.54%	0.00%	5.50%	0.00%
ACCAR Inc	PCAR	0.09%	1.52%	0.00%	5,50%	0.00%
ostco Wholesale Corp	COST	0,49%	0.80%	0.00%	9.50%	0.05%
Trst Republic Bank/CA	FRC	0.09%	0.47%	0.00%	12,50%	0.01%
stryker Corp	SYK	0.27%	0.97%	0.00%	11.00%	0.03%
yson Foods Inc	TSN	0.06%	2.41%	0.00%	6.50%	0.00%
amb Weston Holdings Inc	LW	0.03%	1.17%	0.00%	2.50%	0,00%
oplied Materials Inc	AMAT	0.35%	0.67%	0.00%	16.00%	0.06%
merican Airlines Group Inc	AAL	0.04%	n/a	n/a	-3.50%	0.00%
Cardinal Health Inc	CAH	0.05%	3.44%	0.00%	12.00%	0.01%
Cerner Corp	CERN	0.07%	1.13%	0.00%	9.00%	0.01%
Lincinnati Financial Corp	CINF	0.05%	2.16%	0.00%	13.50%	0.01%
AccomCBS Inc	VIAC	0.08%	2.12%	0.00%	8.00%	0.01%
R Horton Inc	DHI	0.09%	0.89%	0.00%	14,50%	0.019
Jectronic Arts Inc	EA	0.12%	0.47%	0.00%	9.00%	0.01%
Expeditors International of Washington Inc	EXPD	0.06%	0.92%	0.00%	8.50%	0.01%
astenal Co	FAST	0.08%	2.15%	0.00%	9.00%	0.01%
A&T Bank Corp	MTB	0.05%	3.03%	0.00%	4.00%	0.00%
(cel Energy Inc	XEL	0.10%	2.78%	0.00%	6.00%	0.01%
Fiserv Inc	FISY	0.20%	n/a	n/a	13.00%	0.03%
Fifth Third Bancorp	FITB	0.08%	2.83%	0.00%	7.00%	0.01%
Silead Sciences Inc	GILD	0.24%	4.12%	0.01%	3.50%	0.01%
lasbro inc	HAS	0.04%	2.88%	0.00%	12.50%	0,00%
luntington Bancshares Inc/OH	HBAN	0.06%	4.20%	0.00%	6.00%	0.00%
Velitower Inc	WELL	0.10%	2.94%	0.00%	-1.50%	0.00%
Rogen Inc	BIIB	0.15%	n/a	n/a	7.00%	0.019
lorthern Trust Corp	NTRS	0.07%	2.42%	0.00%	7.00%	0.00%
Packaging Corp of America	PKG	0.04%	2.95%	0.00%	5.00%	0.009
Paychex Inc	PAYX	0.11%	2.46%	0.00%	6,50%	0.019
People's United Financial Inc	PBCT	0.02%	4.26%	0.00%	4.00%	0,00%
UALCOMM Inc	QCOM	0.45%	1.90%	0.01%	14.00%	0.069
Roper Technologies Inc	ROP	0.14%	0.48%	0.00%	10.00%	0.019
Ross Stores Inc	ROST	0.12%	0.92%	0.00%	14.00%	0.029
DEXX Laboratories Inc	IDXX	0.15%	n/a	n/a	13.50%	0.029
larbucks Corp	SBUX	0.37%	1.61%	0.01%	16.00%	0.069
(eyCorp	KEY	0.06%	3,58%	0.00%	9.50%	0.019
Fox Corp	FOXA	0.00%	1.24%	0.00%	0.00%	0.009
Tox Corp	FOX	0.00%	1.31%	0.00%	0.00%	0.009
State Street Corp	STT	0.08%	2,53%	0.00%	6,50%	0.019
lowegian Cruise Line Holdings Ltd	NCLH	0.00%	n/a	n/a	0.00%	0.009
IS Bancorp	USB	0.24%	2.95%	0.01%	4.50%	0.019
O Smith Corp	AOS	0.03%	1.44%	0.00%	5,00%	0.009
lortonLifeLock Inc	NLOK	0.04%	1.84%	0.00%	7.00%	0.009
Rowe Price Group Inc	TROW	0.13%	2.18%	0.00%	8.00%	0.019
Vaste Management Inc	WM	0.17%	1.64%	0.00%	6.00%	0.019
Constellation Brands Inc	STZ	0.11%	1.30%	0.00%	6.50%	0.019
Glinx Inc	XLNX	0.10%	n/a	n/a	7.50%	0.019
JENTSPLY SIRONA Inc	XRAY	0.04%	0.70%	0.00%	5,50%	0.009
Zions Bancorp NA	ZION	0.02%	2.57%	0.00%	7.00%	0.009
Naska Air Group Inc	ALK	0,02%	n/a	n/a	77.50%	0.029
nvesco Ltd	IVZ	0.03%	2.54%	0.00%	12.00%	0.009
Linde PLC	LIN	0.00%	1.47%	0.00%	0.00%	0.009
ntuit Inc	INTU	0.38%	0.48%	0.00%	14.50%	0.059
Morgan Stanley	MS	0.48%	1.53%	0.01%	8.50%	0.049
Microchip Technology Inc	MCHP	0.11%	1,10%	0,00%	9.00%	0.019
and a second in the second sec	Life Greek 1		2.01%	0.00%	10.00%	0.029

## STANDARD & POOR'S 500 INDEX

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		[4]	[5]	[6]	[7] Value Line	[8] Cap-Weigh
		Weight In	Current	Cap-Weighted	Long-Term	Long-Ter
Name	Ticker_	Index [	Dividend Yiel	d Dividend Yield	Growth Est	Growth E
Hologic Inc	HOLX	0.05%	n/a	r/a	25.00%	0.01%
Citizens Financial Group Inc	CFG	0.05%	3.40%	0.00%	12.00%	0.01%
O'Reilly Automotive Inc	ORLY	0.11%	n/a	n/a	11.00%	0.01%
Alistate Corp/The	ALL	0.11%	2.48%	0.00%	5.00%	0,01%
Equity Residential	EQR	0.08%	3.13%	0,00%	2.00%	0.00%
BorgWamer Inc	BWA	0.03%	1.40%	0.00%	5.50%	0.00%
Organon & Co	OGN	0.00%	n/a	n/a	0.00%	0.00%
Host Hotels & Resons Inc	HST	0.03%	n/a	n/a	10.00%	0,00%
Incyte Corp	INCY	0.05%	n/a	n/a	59.00%	0.03%
Simon Property Group Inc	SPG	0.12%	4.29%	0,01%	1.50%	0.00%
Eastman Chemical Co	EMN	0.04%	2.36%	0.00%	5.00%	0.00%
Twitter Inc	TWTR	0.15%	n/a	n/a	29.00%	0.04%
AvalonBay Communities Inc	AVB	0.08%	3.05%	0.00%	1.00%	0.00%
Prudential Financial Inc	PRU	0.11%	4.49%	0.01%	4.50%	0.01%
United Parcel Service Inc	UPS	0.42%	1.96%	0.01%	10.50%	0.04%
Walgreens Boots Alliance Inc	WBA	0.13%	3.55%	0.00%	6.00%	0.01%
STERIS PLC	STE	0.06%	0.78%	0.00%	10.00%	0.01%
McKesson Corp	MCK	0.08%	0.88%	0.00%	9.00%	0.01%
Lockheed Martin Corp	LMT	0.29%	2.75%	0.01%	7.50%	0.02%
AmerisourceBergen Corp	ABC	0.07%	1.54%	0.00%	6.50%	0.00%
Capital One Financial Corp	COF	0.20%	1.03%	0.00%	5.50%	0.01%
Waters Corp	WAT	0.06%	n/a	n/a	6.00%	0.00%
Dollar Tree Inc.	DLTR	0.06%	n/a	n/a	9.50%	0.00%
Darden Restaurants Inc	DRI	0.05%	3.01%	0.00%	9.50%	0.01%
			0.81%	0.00%	13.00%	0.01%
Domino's Pizza Inc	DPZ	0.05% 0.05%			8.00%	
NVR inc	NVR	0.05%	n/a	n/a 0.00%		0.00%
NetApp Inc	NTAP		2.44%		6.50%	0.00%
Citrix Systems Inc	CTXS	0.04%	1.26%	0.00%	9.00%	0.00%
DXC Technology Co	DXC	0.03%	n/a	n/a	2,50%	0.00%
Old Dominion Freight Line Inc	ODFL	0.08%	0.32%	0.00%	9,00%	0.01%
DaVita Inc	DVA	0.04%	n/a	n/a	15.00%	0.01%
Hartford Financial Services Group Inc/The	HIG	0.06%	2.26%	0.00%	8.50%	0.01%
Iron Mountain Inc	IRM	0.03%	5.85%	0.00%	7,50%	0.00%
Estee Lauder Cos Inc/The	EL	0.21%	0.67%	0.00%	11.00%	0.02%
Cadence Design Systems Inc	CDNS	0.11%	n/a	n/a	9.50%	0.01%
Tyler Technologies Inc	TYL	0.05%	n/a	n/a	8.00%	0.00%
Universal Health Services Inc	UHS	0.03%	0,55%	0.00%	10.00%	0.00%
Skyworks Solutions Inc	SWKS	0.09%	1.04%	0.00%	13.50%	0.01%
NOV Inc	NOV	0,00%	n/a	n/a	0.00%	0.00%
Quest Diagnostics Inc	DGX	0.05%	1.88%	0.00%	7.00%	0.00%
Activision Blizzard Inc	ATVI	0.21%	0.49%	0,00%	14.50%	0.03%
Rockwell Automation Inc	ROK	0.09%	1.50%	0.00%	6.50%	0.01%
Kraft Heinz Co/The	KHC	0.14%	3.92%	0.01%	1.50%	0.00%
American Tower Corp	AMT	0.34%	1.88%	0.01%	10.00%	0.03%
Regeneron Pharmaceuticals Inc	REGN	0.16%	n/a	n/a <sup>/</sup>	12,50%	0.02%
Amazon.com Inc	AMZN	4.86%	n/a	n/a	28.50%	1.39%
Jack Henry & Associates Inc	JKHY	0.03%	1,13%	0.00%	10.50%	0.00%
Ralph Lauren Corp	RL	0.02%	2.33%	0.00%	6.00%	0.00%
Boston Properties Inc	BXP	0.05%	3.42%	0.00%	-2.00%	0.00%
Amphenol Corp	APH	0.11%	0.85%	0.00%	10.50%	0.01%
Howmet Aerospace Inc	HWM	0.04%	n/a	n/a	12.00%	0.01%
Pioneer Natural Resources Co	PXD	0.11%	1.38%	0.00%	17.50%	0,02%
Valero Energy Corp	VLO	0.09%	5.02%	0,00%	2.00%	0.00%
Synopsys Inc	SNPS	0.12%	n/a	n/a	12.50%	0.01%
Western Union Co/The	WU	0.03%	4.09%	0.00%	6.00%	0.00%
Etsy Inc	ETSY	0.07%	n/a	n/a	27,00%	0.02%
CH Robinson Worldwide Inc	CHRW	0.03%	2.18%	0.00%	8.00%	0.00%
Accenture PLC	ACN	0.52%	1.19%	0.01%	9.50%	0.05%
	TDG	0.52%	n/a	n/a	9.50%	0.05%
TransDigm Group Inc	YUM		1.74%	0.00%	9.50%	0.017
Yumi Brands Inc	PLD	0.10%	1,74%	0.00%	8.50%	0.01%
Prologis Inc		0.25%				
FirstEnergy Corp	FE	0.06%	4,19%	0.00%	11.50%	0.01%
VeriSign Inc	VRSN	0.07%	n/a	n/a 0.000/	9.50%	0.01%
Quanta Services Inc	PWR	0.04%	0.26%	0.00%	12.50%	0.00%
Henry Schein Inc	HSIC	0.03%	n/a	t/a	6.50%	0.00%
Ameren Corp	AEE	0.08%	2.75%	0.00%	6.50%	0.00%
ANSYS Inc	ANSS	0.08%	n/a	n/a	8.00%	0.01%
NMDIA Corp	NVDA	1.40%	0.08%	0.00%	15.50%	0.22%
Sealed Air Corp	SEE	0.03%	1.35%	0.00%	13.50%	0.00%
Cognizant Technology Solutions Corp	CTSH	0,10%	1.39%	0.00%	6.50%	0.01%
SVB Financial Group	SIVB	0.08%	n/a	n/a	8.00%	0.01%
Intuitive Surgical Inc	ISRG	0.31%	n/a	n/a	15.00%	0.05%
Take-Two Interactive Software Inc	TTWO	0.06%	n/a	п/а	15.50%	0.019
Republic Services Inc	RSG	0.10%	1.55%	0.00%	7.50%	0.019
eBay Inc	EBAY	0.13%	1.03%	0.00%	16.50%	0.029
Goldman Sachs Group Inc/The	GS	0.36%	1.32%	0.00%	7.00%	0.039
SBA Communications Corp	SBAC	0.10%	0.73%	0.00%	43.50%	0.049
Sempra Energy			3.32%	0.00%	10.00%	0.01%
	SRE	0.12%	J.JZ 78		0,0070	U.U.1-5

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Name	Ticker	Weight in Index	Current Dividend Yield	Cap-Weighted Dividend Yield	Long-Term	Long-Ter Growth E
	DIANO	0.05%	-t-	- 1-	44.000/	0.04%
ooking Holdings Inc	BKNG FFIV	0.25% 0.03%	n/a n/a	n/a n/a	14.00% 7.00%	0.04%
5 Networks Inc			n/a n/a			
kamai Technologies Inc	AKAM	0.05%	n/a	n/a	9.50% 7.00%	0.01% 0.00%
hartes River Laboratories International Inc	CRL MKTX	0.05% 0.05%	0.57%	n/a 0.00%	15.00%	0.00%
arketAxess Holdings Inc	DVN	0.05%	1.51%	0.00%	21.00%	0.01%
evon Energy Corp Iphabet Inc	GOOGL	0.00%	n/a	n/a	0.00%	0.00%
elefiex (nc	TFX	0.05%	0.34%	0.00%	14.50%	0.00%
legion plc	ALLE	0.04%	1.03%	0.00%	8.50%	0.00%
ettix inc	NFLX	0.66%	n/a	n/a	23,50%	0.15%
gilent Technologies Inc	A	0.13%	0.52%	0.00%	11.00%	0.01%
imble Inc	TRMB	0.06%	n/a	л/а	14.00%	0.01%
them inc	ANTM	0.26%	1.18%	0.00%	12.50%	0.03%
ME Group Inc	CME	0.21%	1.69%	0.00%	8.00%	0.02%
iniper Networks Inc	JNPR	0.03%	2.93%	0.00%	7.00%	0.00%
ackRock Inc	BLK	0.37%	1.69%	0.01%	9,50%	0.04%
TE Energy Co	DTE	0.06%	2.99%	0.00%	6.00%	0.00%
	CE	0.05%	1.79%	0.00%	5.50%	0.00%
elanese Corp	NDAQ		1.23%	0.00%	5.00%	0.00%
asdaq Inc hilip Monts International Inc	PM	0.08% 0.43%	4.84%	0.02%	5.00%	0.00%
gersoll Rand Inc	IR	0.43%	4.04% n/a	0.02%	0,00%	0.02%
	CRM	0.63%	n/a	n/a	39,50%	0.25%
alesforce.com inc	HII	0.02%	2,16%	0.00%	39.50% 7.00%	0.23%
untington Ingalls Industries Inc.	MET	0.02%	3.21%	0.00%	6.50%	0.00%
etLife Inc			J.2 170 D/8		0.00%	0.01%
nder Armour Inc	UA TPR	0.00%	nva n/a	n/a n/a	1.50%	0.00%
apestry Inc	CSX	0.03% 0.20%	1.16%	0.00%	8.50%	0.00%
SX Corp	EW	0.18%	n/a	n/a	13.00%	0.02%
dwards Lifesciences Corp			1.82%	0.00%	13.00%	0.02%
meriprise Financial Inc	AMP	0.08%	n/a	n/a		
ebra Technologies Corp	ZBRA	0.08%			11.00%	0.01%
Immer Blomet Holdings Inc	ZBH CBRE	0.09%	0,60%	0.00%	8.50%	0.01%
BRE Group Inc		0.08%	n/a	n/a	8.50%	0.01%
astercard Inc	MA	1.01%	0,48%	0.00%	12.50% 11.00%	0.13% 0.01%
arMax inc	KMX	0.06%	n/a	n/a 0.00%		
Itercontinental Exchange Inc	ICE FIS	0.19% 0.25%	1.11% 1.10%	0.00%	8.00% 28.00%	0.01% 0.07%
delity National Information Services Inc	CMG	0.12%	n/a	0.00% n/a	18.50%	0.07%
hipotle Mexican Grill Inc	WYNN	0.12%	n/a	n/a	27.00%	0.02%
Vynn Resorts Ltd ive Nation Entertainment Inc	LYV	0.00%	n/a	n/a	0.00%	0.00%
ssurant inc	AIZ	0.00%	1,69%	0.00%	11.50%	0.00%
RG Energy Inc	NRG	0.03%	3,23%	0.00%	-1.50%	0.00%
lonster Beverage Corp	MNST	0,14%	0,23% ∩/a	n/a	11.50%	0.02%
regions Financial Corp	RF	0.05%	3.07%	0.00%	9.00%	0.02%
Iosaic Co/The	MOS	0.03%	0.94%	0.00%	33.50%	0.01%
ixpedia Group Inc	EXPE	0.00%	n/a	r/a	0.00%	0.00%
ivergy Inc	EVRG	0.04%	3.54%	0.00%	8.00%	0.00%
iscovery Inc	DISCA	0.01%	n/a	n/a	15.50%	0.00%
F Industries Holdings Inc	CF	0.03%	2.33%	0.00%	19.50%	0.01%
PA Corp	APA	0.02%	0.46%	0.00%	47.00%	0.01%
eidos Holdings Inc	LDOS	0.04%	1.35%	0.00%	9.50%	0.00%
Iphabet Inc	GOOG	2.27%	n/a	n/a	15.00%	0,34%
ooper Cos Inc/The	000	0.05%	0.02%	0.00%	14.50%	0.01%
E Connectivity Ltd	TEL	0.13%	1.48%	0.00%	9.00%	0.01%
iscover Financial Services	DFS	0.10%	1,49%	0.00%	5.50%	0.01%
isa Inc	v	1.11%	0,55%	0.01%	12.00%	0.13%
lid-America Apartment Communities Inc	MAA	0.05%	2,43%	0.00%	0.50%	0.00%
ylem inc/NY	XYL	0,06%	0.93%	0.00%	10.50%	0.01%
arathon Petroleum Corp	MPC	0.11%	3.84%	0.00%	3.50%	0.00%
dvanced Micro Devices Inc	AMD	0,32%	n/a	n/a	26.50%	0.08%
ractor Supply Co	TSCO	0.06%	1.12%	0.00%	10.00%	0.01%
esMed Inc	RMD	0,10%	0.63%	0.00%	8.50%	0.01%
ettier-Toledo International Inc	MTD	0.09%	n/a	n/a	11,50%	0.01%
opart Inc	CPRT	0,09%	n/a	n/a	10.00%	0.01%
ortinet Inc	FTNT	0.11%	n/a	n/a	19.00%	0.02%
Ibemarte Corp	ALB	0.06%	0,93%	0.00%	4,00%	0,00%
ssex Property Trust Inc	ESS	0.05%	2,79%	0.00%	-0,50%	0.00%
ealty Income Corp	0	0.07%	4.23%	0.00%	6.00%	0.00%
/estrock Co	WRK	0.04%	1,80%	0.00%	8.00%	0.00%
IS Markit Ltd	INFO	0,13%	0.71%	0.00%	11.50%	0.01%
lestinghouse Air Brake Technologies Corp	WAB	0.04%	0.58%	0.00%	9,50%	0.00%
ool Corp	POOL	0.05%	0.70%	0.00%	15.00%	0.01%
Vestern Digital Com	WDC	0,06%	n/a	n/a	1.00%	0.00%
epsiCo Inc	PEP	0.57%	2,90%	0.02%	6.00%	0.03%
Marrondback Energy Inc	FANG	0.05%	1.70%	0.00%	0.50%	0.00%
laxim Integrated Products Inc	MXIM	0.08%	n/a	n/a	11.00%	0.01%
erviceNow Inc	NOW	0.30%	n/a	n/a	44.50%	0.14%
hurch & Dwight Co Inc	CHD	0.06%	1.19%	0.00%	8.00%	0.00%
Juke Realty Corp	DRE	0,05%	2.15%	0.00%	-1.00%	0.00%
and tranks work				0.0070		0.00%

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			_			Cap-Weighted
		Weight in	Current	Cap-Weighted		Long-Term
Name	Ticker	Index	Dividend Yield	Dividend Yield	Growth Est.	Growth Est.
MGM Resorts International	MGM	0,06%	0.02%	0.00%	25,00%	0.01%
American Electric Power Co Inc	AEP	0.12%	3.50%	0.00%	6,50%	0.01%
PTC Inc	PTC	0.05%	n/a	n/a	33.50%	0.02%
JB Hunt Transport Services Inc	JBHT	0.05%	0.74%	0.00%	8.00%	0.00%
Lam Research Corp	LRCX	0.26%	0.80%	0.00%	17.50%	0.05%
Mohawk Industries Inc	MHK	0.04%	n/a	n/a	6.50%	0.00%
Pentair PLC	PNR	0.03%	1,19%	0.00%	5.50%	0.00%
Vertex Pharmaceuticals Inc	VRTX	0.15%	n/a	n/a	28.50%	0.04%
Amear PLC	AMCR	0.00%	4.10%	0.00%	0.00%	0.00%
Facebook Inc	FB	2.34%	n/a	n/a	15.50%	0.36%
T-Mobile US Inc	TMUS	0.51%	n/a	n/a	8.50%	0.04%
United Rentals Inc	URI	0.05%	n/a	n/a	7.50%	0.00%
Alexandria Real Estate Equities Inc	ARE	0,08%	2.46%	0.00%	13.00%	0.01%
Honeywell International Inc	HON	0.43%	1.70%	0.01%	8.00%	0.03%
ABIOMED Inc	ABMD	0.04%	n/a	0.01% n/a	10.00%	0.00%
	DAL	0.04%	n/a	n/a	49.00%	0.04%
Delta Air Lines Inc	UAL	0.00%	n/a	n/a	0.00%	0.00%
United Airlines Holdings Inc	STX	0.06%	3.05%	0.00%	4.00%	0.00%
Seagate Technology Holdings PLC						
News Corp	NWS	0.00%	0.82%	0.00%	0.00%	0.00%
Centene Corp	CNC	0.12%	n/a	n/a	9,50%	0.01%
Martin Marietta Materials Inc	MLM	0.06%	0.65%	0.00%	6.00%	0.00%
Teradyne Inc	TER	0.06%	0.30%	0.00%	13.00%	0.01%
PayPal Holdings Inc	PYPL	0.98%	n/a	n/a	19.00%	0.18%
Tesia Inc	TSLA	0.00%	n/a	n/a	0.00%	0.00%
DISH Network Corp	DISH	0.03%	n/a	n/a	2.50%	0.00%
Alexion Pharmaceuticals Inc	ALXN	0.11%	n/a	n/a	19.50%	0,02%
Penn National Garring Inc	PENN	0.03%	n/a	n/a	27,00%	0.01%
Dow Inc	DOW	0.00%	4.42%	0.00%	0.00%	0.00%
Everest Re Group Ltd	RE	0.03%	2.46%	0.00%	10.50%	0.00%
Teledyne Technologies Inc	TDY	0.05%	n/a	n/a	7.50%	0.00%
News Corp	NWSA	0.00%	0.78%	0.00%	0.00%	0.00%
Exelon Corp	EXC	0.12%	3.45%	0.00%	5.50%	0.01%
Global Payments Inc	GPN	0.16%	0.42%	0.00%	16.50%	0,03%
Crown Castle International Corp	CCI	0.24%	2.73%	0.01%	11.50%	0,03%
Aptiv PLC	APTV	0.12%	r/a	n/a	15.50%	0.02%
Advance Auto Parts Inc	AAP	0.04%	1.95%	0,00%	11.00%	0.00%
Align Technology Inc	ALGN	0.14%	rt∕a	n/a	17.00%	0.02%
Illumina Inc	ILMN	0,19%	n/a	n/a	14.00%	0.03%
LKQ Corp	LKQ	0.04%	n/a	n/a	12.00%	0.01%
Nielsen Holdings PLC	NLSN	0.00%	0.97%	0.00%	0.00%	0.00%
Garmin Ltd	GRMN	0.08%	1.85%	0.00%	9.00%	0.01%
Zoetis Inc	ZTS	0.25%	0.54%	0.00%	10.50%	0.03%
Digital Realty Trust Inc	DLR	0.12%	3.08%	0.00%	7.00%	0.01%
Equinix Inc	EQIX	0.12%	1.43%	0.00%	17.00%	0.03%
Las Vegas Sands Corp	LVS	0.11%	n/a	0.00% n/a	19.00%	0.02%
						0.00%
Las Vegas Sands Corp Discovery Inc	DISCK	0.00%	n/a n/a	n/a n/a	19.00% 0,00%	

## STANDARD & POOR'S 500 INDEX

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Notes: [4] Source: Bloomberg Professional as of June 30, 2021 [5] Source: Bloomberg Professional as of June 30, 2021 [6] Equals [4] x [5] [7] Source: Value Line as of June 30, 2021 [8] Equals [4] x [7]

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## Risk Premium - Natural Gas Utilities (US)

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	remuum – Nat [1]	[2]	[3]
	Average	U.S. Govt.	
	Authorized Gas ROE	30-year Treasury	Risk Premium
1992.1	12.42%	7.80%	4.62%
1992.2 1992.3	11.98% 11.87%	7.89% 7.45%	4.09% 4.42%
1992.4	11.94%	7.52%	4.42%
1993,1 1993,2	11.75% 11.71%	7.07% 6.86%	4.68% 4.85%
1993.2	11.39%	6.31%	4.85%
1993.4	11.16%	6.14%	5.02%
1994.1 1994.2	11. <b>12%</b> 10.84%	6.57% 7.35%	4.55% 3.48%
1994.3	10.87%	7,58%	3.28%
1994.4 1995.2	11.53% 11.00%	7.96% 6.94%	3.57% 4.06%
1995.3	11.07%	6.71%	4.35%
1995.4 1996.1	11.61%	6.23% 6.29%	5.37% 5.16%
1996.2	11.45% 10.88%	6,92%	3.96%
1996.3	11.25%	6.96%	4.29%
1996.4 1997.1	11. <b>19%</b> 11. <b>31%</b>	6.62% 6.81%	4.58% 4.49%
1997.2	11.70%	6.93%	4.77%
1997.3	12.00%	8.53%	5,47%
1997.4 1998.2	10.92% 11.37%	6.14% 5.85%	4.78% 5.52%
1998.3	11.41%	5.47%	5.94%
1998.4 1999.1	11.69% 10.82%	5.10% 5.37%	6.59% 5.44%
1999.2	11.25%	5.79%	5.46%
1999.4 2000.1	10.38% 10.66%	6.25% 6.29%	4.12% 4.36%
2000.1	11.03%	5.97%	5.06%
2000.3	11.33%	5.79%	5.55%
2000.4 2001.1	12. <b>10%</b> 11.38%	5.69% 5.44%	6,41% 5,93%
2001.2	10.75%	5.70%	5.05%
2001.4 2002.1	10.65% 10.67%	5.30% 5.51%	5.35% 5.15%
2002.1	11.64%	5.61%	6.03%
2002.3	11.50%	5.08%	6.42%
2002.4 2003.1	11.01% 11.38%	4,93% 4.85%	6.08% 6.53%
2003.2	11.36%	4.60%	6.76%
2003.3 2003.4	10.61% 10,84%	5.11% 5,11%	5,50% 5.73%
2004.1	11.06%	4.88%	6,18%
2004.2	10.57%	5.32%	5.25%
2004.3 2004.4	10.37% 10.66%	5.06% 4.86%	5.31% 5.79%
2005.1	10.65%	4.69%	5.96%
2005.2 2005.3	10.54% 10.47%	4,47% 4,44%	6.07% 6.03%
2005.4	10.32%	4.68%	5.63%
2006.1 2006.2	10.68% 10.60%	4.63% 5.14%	6.05% 5.46%
2006.3	10.34%	4.99%	5,34%
2006.4	10.14%	4.74%	5,40%
2007.1 2007.2	10.52% 10.13%	4.80% 4.99%	5.72% 5.14%
2007.3	10,03%	4,95%	5.08%
2007.4 2008.1	10.12% 10.38%	4.61% 4.41%	5,50% 5,97%
2008.2	10.17%	4.57%	5.60%
2008.3 2008.4	10.55% 10.34%	4.44% 3.65%	6.11% 6.69%
2008.4	10.24%	3.44%	6,81%
2009.2	10.11%	4.17%	5.94%
2009.3 2009.4	9.88% 10.31%	4.32% 4.34%	5.56% 5.97%
2010.1	10.24%	4.62%	5.61%
2010.2 2010.3	9.99% 10.43%	4.36% 3,86%	5,62% 6.57%
2010.4	10.09%	4.17%	5.93%
2011.1 2011.2	10.10% 9.85%	4.56% 4.34%	5.54% 5.51%
2011.2	9.65%	4.3478 3.69%	5.96%
2011.4	9.88% 9.63%	3.04%	8.84%
2012.1 2012.2	9.63%	3,14% 2,93%	6.50% 6.90%
2012.3	9.75%	2.74%	7.01%
2012.4 2013.1	10.06% 9.57%	2.86% 3.13%	7.19% 8.44%
2013.2	9.47%	3.14%	6.33%

## Docket No. U-\_\_\_\_ Exhibit AEB-6 Page 2 of 3

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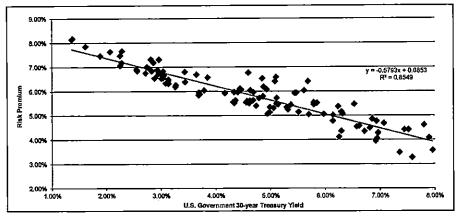
## Risk Premium – Natural Gas Utilities (US)

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	(1)	[2]	[3]
	Average	U.S. Govt	
	Authorized	30-year	Risk
	Gas ROE	Treasury	Premium
2013.3	9.60%	3.71%	5,89%
2013.4	9.83%	3.79%	6.04%
2014.1	9.54%	3.69%	5.85%
2014.2	9.84%	3.44%	6.39%
2014.3	9.45%	3.26%	6.19%
2014.4	10.28%	2.96%	7.32%
2015.1	9.47%	2.55%	6.91%
2015.2	9.43%	2.88%	6.55%
2015.3	9.75%	2.96%	6.79%
2015.4	9.68%	2,96%	6.72%
2016.1	9.48%	2.72%	6.76%
2016.2	9.42%	2,57%	6.85%
2016.3	9.47%	2.28%	7.19%
2016.4	9,67%	2.83%	6,84%
2017.1	9.60%	3.04%	6.56%
2017.2	9.47%	2,90%	6.58%
2017.3	10.14%	2,82%	7.32%
2017.4	9,70%	2.82%	6.88%
2018.1	9.68%	3,02%	6.66%
2018.2	9.43%	3.09%	6,34%
2018.3	9,71%	3.06%	6.65%
2018.4	9.53%	3.27%	6.26%
2019.1	9,55%	3.01%	6,54%
2019.2	9.73%	2.76%	6.94%
2019.3	9.95%	2.29%	7.66%
2019.4	9.73%	2.25%	7.48%
2020.1	9,35%	1.89%	7.46%
2020.2	9.55%	1,38%	8.17%
2020.3	9.52%	1.37%	8.15%
2020,4	9.47%	1.62%	7.86%
2021.1	9.71%	2.07%	7.64%
2021.2	9.33%	2.25%	7.07%
AVERAGE	10,46%	4.59%	5.87%
MEDIAN	10.35%	4.62%	5.94%



SUMMARY OUTPUT

Regression St	atistics
Multiple R	0.924616934
R Square	0.854916475
Adjusted R Square	0,853621087
Standard Error	0.003905573
Observations	114

## ANOVA

	df	SS	MS	É	Significance F	
Regression		0.010066838	0.010066838	659.9691129	9,12786E-49	
Residual	112	0.001708392	1,52535E-05			
Total	113	0.01177523				
	Coefficients	Standard Error	t Stat	<u>P-valu</u> e	Lower 95%	Upper 959
Intercept	0.085298907	0.001097571	77,71608692	2.834E-99	0.083124211	0.08747
30-Year Treasury Yield	-0.579341221	0.022551354	-25.68986401	9.12786E-49	-0.624023839	-0.53465

	[7]	(8)	[9]
	U.S. Govt.		
	30-year	Risk	
	Treasury	Premium	ROE
Current 30-day average of 30-year U.S. Treasury bond yield [4]	2.20%	7.25%	9.46%
Blue Chip Near-Term Projected Forecast (Q4 2021 - Q4 2022) [5]	2.62%	7.01%	9.63%
Blue Chip Long-Term Projected Forecast (2023-2027) [6]	3.50%	6.50%	10.00%
AVERAGE	-		9.70%

Notes:

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 Notes:

 [1] Source: Regulatory Research Associates, rate cases through June 30, 2021

 [2] Source: Bloomberg Professional, quarterly bond yields are the average of each trading day in the quarter

 [3] Equals Column [1] - Column [2]

 [4] Source: Bloomberg Professional, 30-day average as of June 30, 2021

 [5] Source: Bloomberg Professional, 30-day average as of June 30, 2021

 [6] Source: Blue Chip Financial Forecasts, Vol. 40, No. 7, July 1, 2021, at 2

 [6] Source: Blue Chip Financial Forecasts, Vol. 40, No. 6, June 1, 2020, at 14

 [7] See notes [4], [5] & [6]

 [8] Equals 0,055299 + (-0.579341 x Column [7])

 [9] Equals Column [7] + Column [8]

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## SIZE PREMIUM CALCULATION

### Proxy Group Market Capitalization and Market-to-Book Ratio

		[1]	[2]
Company	Ticker	Market Capitalization (\$ billions)	Market-to- Book Ratio
Atmos Energy Corporation	ATO	12.98	1.66
New Jensey Resources Corporation	NJR	4,09	2,24
NiSource Inc.	N	8.01	2,07
Northwest Natural Gas Company	NWN	4.43	1.83
ONE Gas Inc.	OGS	3.24	1.75
South Jersey Industries, Inc.	SJI	3.35	1.74
Southwest Gas Corporation	SWX	3.50	1.48
Spire, Inc.	SR	3.80	1.47
Average		5.42	1.78
Median		3.94	1.75

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CenterPoint Energy Entex Common Equity (3 millions) [3] Impled Market Capitalization [4] As a percent of Proxy Group Median Market Capitalization 61,72 107,82 2.73% \$

## Ouff & Phelps Cost of Capital Navigator - Size Premium

	(5)	[6]
	Market	
	Capitelization	
	of Largest	
	Company	Size
Breakdown of Deciles 1-10	(\$ millions)	Premium
1-Largest	1,966,078.88	-0.22%
2 -	28,808.07	0.49%
3	13,177.83	0.71%
4	6,710.68	0.75%
5	3,836.54	1.09%
6	2,444.75	1.37%
7	1,591.77	1.54%
8	911.10	1.46%
9	451.60	2.29%
10-Smallest	169.63	5.01%
CenterPoint Energy Entex - Implied Market Capitalization	107.82	5.01%
Proxy Group Median	3,943.42	0.75%
Size Premium [7]		4.26%

Notes: [1] Source: Bloomberg Professional; equais 30-day average as of June 30, 2021. [2] Source: Bloomberg Professional; equais 30-day average as of June 30, 2021. [3] Data provided by CenterPoint Energy Entex. [4] Equals [3] & proxy group median market-to-book ratio [5] Duff & Phelpa Cost of Capital Navigator - Size Premium: Annual Data as of 12/31/2020 [6] Duff & Phelpa Cost of Capital Navigator - Size Premium: Annual Data as of 12/31/2020 [7] Equals 5.01% - 0.75%

g		020	es Size Premia as of December	CRSP Dec
	<del>'venium</del> an in Excess PRI)	t Company (In USD {	Smalless Company (in USD	
		•		Decle
	0.78%	13,177.828	2445.695	Mid Cap
	1,43%	2,444,745	451.955	Low Cap
	3.21%	451.30	2194	Micro Cap
				Breakdown of CRSP Declina 1 - 50
	-0.22%	1,966.075.682	29.025.003	1
	#e4.0	29,803.073	15,178,743	2
	0.71%	19,177.828	6,743.361	2
	0.75%	6,710.575	1261.253	4
	1.09%	5,838.536	2,445.693	5
	1.37%	2,444,745	1,591.865	6
	1.54%	1,591.765	511.525	7
	1.46%	911.103	451.955	3
	2.29%	451.80	191019	3
	5.01%	159.831	2.194	10
				Breakdown of CASP 19th Declin
	9,19%	159.831	96.53	104
	2.6%	169.631	138581	1014
	4.65%	137.883	96.55	10.4
	8.12%	95.182	2.194	109
	6.6%	95,182	46.901	107
	11,29%	45,687	2194	302

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## Docket No. U-Exhibit AEB-9 Page 1 of 1

COMPARISON OF CENTERPOINT ENERGY ARLKA AND PROXY GROUP COMPANIES REGULATORY RISK ASSESSMENT

				[1]	, [2]	[2]	[4]		[5]	
							Capital Cost Recovery	~		
Company	Operating Subsidiary	Jurisdiction	Service	Test Year	Rate Base	Revenue Decoupling	Mechanism		Formula Rate Plan	Plan
		:				jejte D		202	-	Also
Atmos Energy Corporation	Atmos Energy Corporation	Kansas	GBS	HISTORICE				201		2
	Atmos Energy Corporation	Kentucky	Gas	Fully Forecast	Average	Fartial		Tes		PN.
	Atmos Energy Corporation	Louisiana	Gas	Historical	Year End	Partia		Yes	-	Yes
	Atmos Energy Corporation	Mississippi	Gas	Partially Forecast	Average	Partial		Yes	,	Yes
	Atmos Energy Corporation	Tennessee	Gas	Fully Forecast	Average	Parliat		٩	~	Yes
	Atmos Enerov Corporation	Texas	· Gas	Historical	Year End	Partial		Yes	~	Yes
New Jersey Resences Corporation	New Jersev Natural Gas Co.	New Jersev	Gas	Partially Forecast	Year End			Yes	-	۶ ۶
NiSource Inc.	Northern Indiana Public Service Co.	Indiana	Electric	Fully Forecast	Year End	Partial		Yes	-	۶
	Northern Indiana Public Service Co.	Indiana	Gas	Fully Forecast	Year End	°N N		Yes	-	٩
	Cotumbia Gas of Kentucky Inc	Kentucky	Gas	Fully Forecast	Average	Partial		Yes	-	٩
	Cotumbia Gas of Marvland Inc.	Mantand	Gas	Partially Forecast	Average	Partial		Yes	-	<del>گ</del>
	Columbia Gas of Ohio Inc.	Ohio	Gas	Partially Forecast	Year End	SFV		Yes	-	2 2
	Columbia Gas of Pennsylvania Inc.	Pennsylvania	Gas	Fully Forecast	Year End	Partial		Yes	-	ŝ
	Columbia Gas of Virginia Inc.	Varginia	Gas	Historical	Average	Partial		Yes	-	2 Z
Northwest Natural Gas Company	Northwest Natural Gas Co.	Oregon	Gas	Fully Forecast	Average	Partial		2	-	Ŝ
	Northwest Natural Gas Co.	Washington	Gas	Historical	Average	No.		ę	-	٩
ONE Gas. Inc.	Kansas Gas Service Co.	Kansas	Gas	Historical	Year End	Partial		Yes	_	92
	Oklahoma Natural Gas Co.	Oklahoma	Gas	Historical	Year End	Partial		£	ŕ	Yes
	Texas Gas Service Co. Inc.	Texas	Gas	Historical	Year End	Partial		Yes	ŕ	Yes
South Jersey Industries. Inc.	Elizabethtown Gas Co.	New Jersey	Gas	Partially Forecast	Year End	Partial		Yes	_	°2
	South Jersey Gas Co.	New Jersey	Gas	Partially Forecast	Year End	Full		Yes		Ñ
Southwest Gas Corporation	Southwest Gas Corp.	Arizona	Gas	Historical	Year End	Full		Yes	_	۶
	Southwest Gas Corp.	California	Gas	Fully Forecast	Average	Ful		Yes		۶
	Southwest Gas Corp.	Nevada	Gas	Historical	Year End	Ful		Yes		°2
Spire. Inc.	Spire Alabama Inc.	Alabama	Gas	Fully Forecast	Average	Partial		2		Yes
	Spire Guff Inc.	Alabama	Gas	Fuily Forecast	Average	Partial		8	~	Yes
	Soire Missouri Inc East	Missouri	Gas	Historical	Year End	Partial		Yes		ŝ
	Spire Missouri Inc West	Missouri	Gas	Historical	Year End	Partial		Yes		₽
Proxy Group Totats		Fully Forecast		9	Year End 17	Ful 5	Yes	2	Yes	20 5
		Partially Forecast		9	Average 11	Partial 20	ŝ	9	ŝ	20
		Historical		12						
						No 2				
		Encast		57 14%	Year End 60.71%	RDM 92.66%	CCRM	78.57%	FRP 28	28.57%
CenterPoint Energy Entex [6]		Louisiana	1	Historical	Average	Yes		No		Yes

Notes [1]-[2] Sources: S&P Global - Market Intelligence Rate Case i History (Past Rate Cases), accessed 602/21, ATO LA Tariff, ATO MS Tariff, SR AL Tariff, and SR Guf Tariff. [3] - [4] Sources: "Adjustment Clauses: A State-by-state Overview," Regulatory Research Associates, November 12, 2019. Operating subsidiaries not covered in this report were excluded from this exhibit. [3] - [4] Sources: "Adjustment Clauses: A State-by-state Overview," Regulatory Research Associates, November 12, 2019. Operating subsidiaries not covered in this report were excluded from this exhibit. [3] - [4] Sources: "Adjustment Clauses: A State-by-state Overview," Regulatory Research Associates, November 12, 2019. Operating subsidiaries not covered in this report were excluded from this exhibit. [3] Sourcess: "Adjustment Clauses: A State-by-state Overview," Regulatory Research Associates, April 16, 2020; Oklahoma Nalural Gas's Performance-Based Rate Change mechanism is a Formuta Rate Plan. https://www.oklahomanaturalgas.com/imedia/ONG/Tariffs/1201, pdf [6] Data provided by CenterPoint Energy Entex.

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## FLOTATION COST ADJUSTMENT

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		Ξ	٦	E	6	Ξ		ß		19	E	Ð	6
	Deta ()	Sharea texued (000)	84	Officering Price	Under- witing Discourt [6]	Offering Expense (\$000)	-	(et Proceeds Per Share	Tot _	(otal Floiatton Costa (\$000)	Gross Equity leaus Defore Costs (\$000)	Nat Proceeds (\$000)	Fletation Cost Percentage
CartarPoint Enargy, inc CartarPoint Ermany, inc	6/26/2018 6/9/2018	52 60 52 60		27.25	0.76	900 900 900	88	8 8 7 7	**	63,225 11,013	005/160.1 \$ 076.855 \$	1,044,275	2.805%
otal			Ш						₩.	11ED AVE	5 2223,869.69 RAGE FLOTATION	1 2,158 B22 27 COSTS	2.825%

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Mithers 18 Officers 14 Underweiting decourt was seloutated as the market price minue and and the prospectual of the prospectual

The ficialition cost educiment is derived by dwdrard yield by 1 - F (when F = Rotation costs excressed in percentage terms), or by 0.5706, and ocdan that new 16 b for carsurd provin that to determine the cost of equaly. Using the formulas shown previously firm teatmany, de Constant Growth DCF detruision is mooding as to be so carsurd and advertised on advect and advection costs:

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 $k = \frac{D \times (1 + 0.5g)}{P \times (1 - F)} + g$ 

, vrachno	Tickar	Annaitad	Stock Price	Dhidorrd Yand	Expected Dividend Yield	Expected Dividents Yield Adjusted for Flotation Conte	Vatue Line Earninge Growth	Yshool Finarce Eamings Growth	Zacka Euminga Growth	Average Earrhoge Growth	ROE	ROE Adjusted (n/ Fatatan Costs
trois France Convestion	UI.	09.05	52,651	252	281%	2.69%	2005	4252	1.30%	7.16%	0.76%	<b>%</b> *86
und letter Resolution Commission	E N	813	12.42	3.14%	3214	3116	2003	8	100	2 CON	8238	8.34%
Source free	z	50.65	1254	146	356%	3.66%	09.0	3.52%	6.20%	8.41%	0.90%	10.09%
ortheast Natural Insident Company	NWN	21.92	153.60	3.50%	3.66%	3.77.6	102.0	100.0	3.80%	¥4¥	8.06%	8178
NF (See Inc.	800	20	175.34	3087	316%	3.26%	0.50%	5.00%	100.0	560%	8.60%	8,76%
soft lerney industries inc.	13	1.21	526.01	4.51%	4.66%	4.02%	11.50%	180%	5.40%	7.27%	11.01%	12.05%
withwest Gan Maldines Inc.	SIME	12.23	\$65.95	381%	122.0	WCG.E	1000	1001	5,50%	8.17K	8.65M	10.00%
bita lino.	SR	12.60	512.03	3 56%	3.69%	1007E	10.00%	7,31%	5.50%	7.60%	11.30%	11.41%
international de la service et											8.73% ft21	9.83% 0.11%

Network 15. Sources: Comment-provided / Minimitan 15. Source: Comment-provided / Minimitan 15. Source: Comment-provided information 15. Equal (p(1)) 15. Equal (p(1)) 15. Equal (p(1)) 15. Equal (p(1)) 17. Equal (p(1)) 17. Equal (p(1)) 17. Equal (p(1)) 17. Source: Boundary Professional 17. Source: Boundary Professional

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## CAPITAL STRUCTURE ANALYSIS

COMMON	EQUITY RATIO	[1]		
Proxy Group Company	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	58.31%	57.85%	58.31%
New Jersey Resources Corporation	NJR	55.13%	57.55%	55.13%
NiSource Inc.	NI	54.43%	54.33%	54.43%
Northwest Natural Gas Company	NWN	41.92%	45.77%	41.92%
One Gas Inc.	OGS	60.07%	63.28%	60.07%
South Jersey Industries, Inc.	SJI	53.66%	48.82%	53.66%
Southwest Gas Corporation	SWX	47.10%	46.35%	47.10%
Spire Inc.	SR	52.90%	53.20%	52.90%
Proxy Group				
MEAN		52.94%	53.39%	52.94%
LOW		41.92%	45.77%	41.92%
		60.07%	63.28%	60.07%

## COMMON EQUITY RATIO - UTILITY OPERATING COMPANIES

	Ticker	2020	2019	MRY
Company Name			-	
Atmos Energy Corporation	ATO	58.31%	57.85%	58.31%
New Jersey Natural Gas Company	NJR	55.13%	57.55%	55.13%
Columbia Gas of Kentucky, Inc.	NI	54.68%	54.23%	54.68%
Columbia Gas of Maryland, Inc.	NI	54.95%	52.38%	54.95%
Columbia Gas of Ohio, Inc.	NI	50.45%	53.00%	50.45%
Columbia Gas of Pennsylvania, Inc.	NI	55.68%	55.59%	55.68%
Columbia Gas of Virginia, Inc.	NI	43.69%	42.53%	43.69%
Northern Indiana Public Service Company LLC	NI	58.01%	56.43%	58.01%
Northwest Natural Gas Company	NWN	41.92%	45.77%	41.92%
Kansas Gas Service Company, Inc.	OGS	60.33%	63.55%	60.33%
Oklahoma Natural Gas Company	OGS	59.85%	63.10%	59.85%
Texas Gas Service Company, Inc.	OGS	0.00%	63.23%	0.00%
South Jersey Gas Company	SJI	53.66%	48.82%	53.66%
Southwest Gas Corporation	SWX	47.10%	46.35%	47.10%
Spire Alabama Inc.	SR	58.95%	60.54%	58.95%
Spire Gulf Inc.	SR	39.49%	37.18%	39.49%
Spire Mississippi Inc.	SR	0.00%	45.95%	0.00%
Spire Missouri Inc.	SR	50.65%	50.45%	50.65%

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[1] Ratios are weighted by actual common capital, preferred equity, short-term debt and long-term debt of Operating Subsidiaries.

## CAPITAL STRUCTURE ANALYSIS

LONG	G-TERM DEBT RAT	IO [1]		
Proxy Group Company	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	41.69%	41.16%	41.69%
New Jersey Resources Corporation	NJR	44.29%	40.21%	44.29%
NiSource Inc.	NI	45.57%	45.67%	45.57%
Northwest Natural Gas Company	NWN	46.45%	47.27%	46.45%
One Gas Inc.	OGS	39.93%	36.72%	39.93%
South Jersey Industries, Inc.	SJI	44.39%	43.51%	44.39%
Southwest Gas Corporation	SWX	51.70%	49.17%	51.70%
Spire Inc.	SR	37.51%	34.23%	37.51%
Proxy Group				
MEAN		43.94%	42.24%	43.94%
LOW		37.51%	34.23%	37.51%
HIGH		51.70%	49.17%	51.70%

## LONG-TERM DEBT RATIO - UTILITY OPERATING COMPANIES

LUNG-TERM DEDT RATIO -				
Company Name	Ticker	2020	2019	MRY
Atmos Energy Corporation	ÂTŌ	41.69%	41.16%	41.69%
New Jersey Natural Gas Company	NJR	44.29%	40.21%	44.29%
Columbia Gas of Kentucky, Inc.	NI	45.32%	45.77%	45.32%
Columbia Gas of Maryland, Inc.	NI	45.05%	47.62%	45.05%
Columbia Gas of Ohio, Inc.	NI	49.55%	47.00%	49.55%
Columbia Gas of Pennsylvania, Inc.	NI	44.32%	44.41%	44.32%
Columbia Gas of Virginia, Inc.	NI	56.31%	57.47%	56.31%
Northern Indiana Public Service Company LLC	NI	41.99%	43.57%	41.99%
Northwest Natural Gas Company	NWN	46.45%	47.27%	46.45%
Kansas Gas Service Company, Inc.	OGS	39.67%	36.45%	39.67%
Oklahoma Natural Gas Company	OGS	40.15%	36.90%	40.15%
Texas Gas Service Company, Inc.	OGS	0.00%	36.77%	0.00%
South Jersey Gas Company	SJI	44.39%	43.51%	44.39%
Southwest Gas Corporation	SWX	51.70%	49.17%	51.70%
Spire Alabama Inc.	SR	32.66%	30.07%	32.66%
Spire Gulf Inc.	SR	57,90%	62.82%	57.90%
Spire Mississippi Inc.	SR	0.00%	0.00%	0.00%
Spire Missouri Inc.	SR	38.72%	34.99%	38.72%

Notes:

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[1] Ratios are weighted by actual common capital, preferred equity, short-term debt and long-term debt of Operating Subsidiaries.

## CAPITAL STRUCTURE ANALYSIS

PREF	ERRED EQUITY RATIO	[1]		
Proxy Group Company	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	0.00%	0.00%	0.00%
New Jersey Resources Corporation	NJR	0.00%	0.00%	0.00%
NiSource Inc.	NI	0.00%	0.00%	0.00%
Northwest Natural Gas Company	NWN	0.00%	0.00%	0.00%
One Gas Inc.	OGS	0.00%	0.00%	0.00%
South Jersey Industries, Inc.	SJI	0.00%	0.00%	0.00%
Southwest Gas Corporation	SWX	0.00%	0.00%	0.00%
Spire Inc.	SR	0.00%	0.00%	0.00%
Proxy Group				
MEAN		0.00%	0.00%	0.00%
LOW		0.00%	0.00%	0.00%
HIGH		0.00%	0.00%	0.00%

## PREFERRED EQUITY RATIO - UTILITY OPERATING COMPANIES

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Notes:

[1] Ratios are weighted by actual common capital, preferred equity, short-term debt and long-term debt of Operating Subsidiaries.

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## CAPITAL STRUCTURE ANALYSIS

SHORT-TERM DEBT RATIO [1]
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Proxy Group Company	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	0.00%	0.99%	0.00%
New Jersey Resources Corporation	NJR	0.58%	2.23%	0.58%
NiSource Inc.	NI	0.00%	0.00%	0.00%
Northwest Natural Gas Company	NWN	11.63%	6.96%	11.63%
One Gas Inc.	OGS	0.00%	0.00%	0.00%
South Jersey Industries, Inc.	SJI	1.95%	7.67%	1.95%
Southwest Gas Corporation	SWX	1.20%	4.48%	1.20%
Spire Inc.	SR	9.59%	12.57%	9.59%
Proxy Group				
MEAN	•	3.12%	4.36%	3.12%
LOW		0.00%	0.00%	0.00%
HIGH		11.63%	12.57%	11.63%

## SHORT-TERM DEBT RATIO - UTILITY OPERATING COMPANIES

SHORT-TERMIDEDT RATIO-C				
Company Name	Ticker	2020	2019	MRY
Atmos Energy Corporation	ATO	0.00%	0.99%	0.00%
New Jersey Natural Gas Company	NJR	0.58%	2.23%	0.58%
Columbia Gas of Kentucky, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Maryland, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Ohio, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Pennsylvania, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Virginia, Inc.	N!	0.00%	0.00%	0.00%
Northern Indiana Public Service Company LLC	NI	0.00%	0.00%	0.00%
Northwest Natural Gas Company	NWN	11.63%	6.96%	11.63%
Kansas Gas Service Company, Inc.	OGS	0.00%	0.00%	0.00%
Oklahoma Natural Gas Company	OGS	0.00%	0.00%	0.00%
Texas Gas Service Company, Inc.	OGS		0.00%	0.00%
South Jersey Gas Company	SJI	1.95%	7.67%	1.95%
Southwest Gas Corporation	SWX	1.20%	4.48%	1.20%
Spire Alabama Inc.	SR	8.40%	9.39%	8.40%
Spire Gulf Inc.	SR	2.61%	0.00%	2.61%
Spire Mississippi Inc.	SR	0.00%	54.05%	0.00%
Spire Missouri Inc.	SR	10.63%	14.56%	10.63%

Notes:

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[1] Ratios are weighted by actual common capital, preferred equity, short-term debt and long-term debt of Operating Subsidiaries.

													L	Fage 1 of 1
		CENTERPO	DINT ENE	RGY Entex	LONG-TEF	CENTERPOINT ENERGY Entex LONG-TERM DEBT AND SHORT-TERM DEBT COSTS ANALYSIS	ORT-TERM DI	EBT COSTS	ANALYSIS					
Company Debt Issuance	lssue A Çate	Maturity Date	Length	S&P Bond Rating at 1 Issuance 1	Moody's Bond Rating at Issuance	Principal Outstanding	Amoritza of Issuan Coupon Rete Annual Interest Expense	Annual Inte	Amortization of Issuance rest Expense	Annualized Cost of LTD	Moody's A Util. Bonds	Moody's Baa Util. Bonds	CERC Debt CERC Debt Over Moody's Over Moody's A Yield Baa Yield	CERC Debt Over Moody's Baa Yield
CenterPolnt Energy Resources Corp. SENIOR NOTES	02/08/07 0	02/01/37	29	888	Baa3	\$ 150.000.000	6.25%	\$ 9.375.000	00 \$ 77.728	6,30%	5.84%	6,15%	0.38%	0.15%
SENIOR NOTES		11/01/37	8	888	Baa3	\$ 250,000,000	6.63%	\$ 18,582,500	- 69	6.69%	6.02%	6.28%	0.67%	0.43%
SENIOR NOTES		1/15/21	2	BBB+	Baa3	\$ 592,998,000	4.50%	\$ 26,684,910	\$0 \$	5.85%	5.53%	6.03%	0.12%	-0.38%
SENIOR NOTES	01/11/11 0	01/15/41	30	888+	Baa3	\$ 300,000,000	5.85%	\$ 17,550,000	•	5,90%	5.53%	6.03%	0.37%	-0.13%
SENIOR NOTES	08/23/17 0	08/01/47.	8	¥	Baa2	\$ 300,000,000	4.10%	\$ 12,300,000	θ	-	3.83%	4.20%	0.33%	-0.04%
SENIOR NOTES		04/01/23	ŝ	¥	Baa2	\$ 300,000,000	3.55%	\$ 10,650,000	00 \$ 615,848	3.78%	4.11%	4.52%	-0.35%	-0.76%
SENIOR NOTES	3/28/2018 0	04/01/28	₽	A-	Baa2	\$ 300,000,000	4.00%	\$ 12,000,000	**	·	4.11%	4,52%	-0.02%	-0.43%
INTERCOMPANY DEBT (MONEY POOL)	NA	AN	٩N				0.00%	67	• •	٩N	AN	٩N	NA	٨A
CENTERPOINT ENERGY RESOURCES CORP. LONG-TERM DEBT RATE COST	3-TERM DEBT R	ATE COST				\$ 2,192,998,000		\$105,122,	\$105,122,410 \$ 8,282,800	5.17%			0.21%	-0.17%
											Bioamberg Fe	Bloomberg Fair Value Curve	Bioomberg Fair Value Curve	-Value Curve
											(apol	(spot yield)	(12-mo. Average) 1-vr L	.verage) 1-vr Litüliv
									Amortization		1-yr Ulillty A-	1-yr Uulity BBB- 1-yr Utility A-	1-yr Utiliy A-	BBb-rated
						Principal		:	of Issuance	Annualized	rated Yield as	rated Yield as of rated Yield as	rated Yield as	Yield as of
CERC CP AND BANK LOANS						Outstanding	Coupon Hate Annual Interest Expense	Annual Inte	rest Expense	Cost of LIU	of 6/30/2021	6.400	01 0/3U/2U21	
Revolving Credit Facility due US/US/2UZZ - Commercial Paper	aper					ann'nn+'202 +	1077n		•	0.20%	0.20.0	804-D	2450	277.0
CENTERPOINT ENERGY RESOURCES CORP. TOTAL SHORT TERM	L SHORT TERM					\$ 232,400,000		<b>\$</b> 604,240	240 \$	0.26%	-0.06%	-0.14%	-0.08%	-0.16%

Sources: Company provided data; Bloombarg Professional Service

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## Docket No. U-\_\_\_\_\_ Exhibit AEB-12 Page 1 of 1

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## Docket No: U-Exhibit AEB-13 Page 1 of 1

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# BUSINESS SEGMENT DATA FOR NISOURCE

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				Ű	Source Inc Ope	NiSource Inc Operating Income (\$000)	(000		*		
			MA Incident /		•	1	MA Incident /				
		Gas Distribution	Impairment	Gas Distribution	Electric	Corporate and	Impairment	Corporate and			Percent Gas
Year	Total	Operations	Charges	Restated	Operations	Other	Charges	Other Restated	Eliminations	Notes	Dist. / Total
2020	963,200	199,100	412,400	611,500	348,800		•	2,900	7	Ξ	63.49%
2019	1,305,200	675,400	209,700	885,100	406,800	(191,500)	204,800	13,300	•	Ξ	67.81%
2018	1,215,400	(254,100)	1,090,700	836,600	386,100			(17,300)	•	E	68.83%
3 yr. average											66.71%
2017	921,200	550,100		550,100	367,400	3,700		3,700	ı	2	59.72%
2016	866,100	569,700	•	569,700	301,300	(4,900)	-	(4,900)	٠	2	65.78%
2015	789,900	555,800 .	•	555,800	264,400	(20,300)	•	(20,300)	•	[3], [4]	69.48%
2014	789,100	537,000	•	537,000	282,700	(30,600)	ı	(30,600)	•	[3]	68.05%
2013	702,000	445,400	J	445,400	265,500	(8,900)	•	(8'800)	•	[2]	63.45%
2012	641,700	391,300	,	391,300	250,800	(400)	•	(400)	•	[2]	60.98%
2011	554,400	376,400	•	376,400	208,400	(30,400)	•	(30,400)	i	[5]	67.89%
2010	515,200	319,500	•	319,500	219,800	(24,100)	•	(24,100)		[9]	62.01%
2010-2017 Average	rage										64.67%

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Notes: [1] Source: NiSource -2020 Form 10-K pages 32, 34, 36, 71, and 113 [2] Source: NiSource - 2017 Form 10-K, pages 98-99 [3] Source: NiSource - 2015 Form 10-K, pages 102-103 [4] The calculation for 2010 through 2015 excludes the segment data for Columbia Pipetine Partners Group which separated from NiSource in July 2015. [5] Source: NiSource - 2013 Form 10-K, pages 124-125 [6] Source: NiSource - 2012 10-K, pages 128-125

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