

**CAPITAL ASSET PRICING MODEL (CAPM) COST OF COMMON EQUITY ESTIMATES FOR LDC
PEER GROUP, INCLUDING SPIRE INC., BASED ON DUFF & PHELPS NORMALIZED RISK-FREE RATE**

	(1)	(2)	(3)	(4)
Company Name	D&P Normalized Risk-free Rate	Beta	D&P Equity Risk Premium	CAPM Cost of Common Equity
Atmos Energy Corporation	2.50%	0.779	5.50%	6.78%
New Jersey Resources Corporation	2.50%	0.741	5.50%	6.58%
NiSource Inc.	2.50%	0.769	5.50%	6.73%
Northwest Natural Holding Company	2.50%	0.687	5.50%	6.28%
ONE Gas, Inc.	2.50%	0.811	5.50%	6.96%
South Jersey Industries, Inc.	2.50%	0.798	5.50%	6.89%
Southwest Gas Holdings, Inc.	2.50%	0.826	5.50%	7.04%
Spire Inc.	2.50%	0.773	5.50%	6.75%
Average		<u>0.77</u>		<u>6.75%</u>
Average of Pure-Play Regulateds	2.50%	0.76	5.50%	6.69%

Column 1 = D&P Most Recent Guidance on Normalized Risk-free Rate as of December 8, 2020

<https://www.duffandphelps.com/insights/publications/cost-of-capital/duff-and-phelps-recommended-us-equity-risk-premium-decreased-december-2020>

Column 2 = Beta is a measure of the movement and relative risk of an individual stock to the market as a whole. I used a template provided by S&P Market Intelligence that calculates raw betas based on the Value Linen approach. This approach measures the covariance of the company's weekly returns with that of the S&P 500 divided by the variance of the S&P 500 returns over an historical 5 year period. This raw beta is then adjusted by the Blume formula, which is the following:

Adjusted Beta = 0.35 + 0.67 * Unadjusted Beta

Column 3 = D&P guidance as of December 8, 2020 on equity risk premium to be used in conjunction with normalized risk-free rate.

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Column 4 = (Column 1 + (Column 2 * Column 3)).