Exhibit B-16

Yukon Utilities Board
In the Matter of ATCO Electric Yukon
2016-2017 General Rate Application

RESPONSE TO UNDERTAKING

November 1, 2016
Transcript Volume 1

Undertaking: By Mr. J. Coyne to Ms. A. Sabo

Page 96, Lines 15-23

To provide the Morningstar data referred to in information response 63, PDF 351, hard copy page 1 of 2; to check if there's additional data in addition to that provided in the table provided as part of that IR response; and to provide the names of the companies provided in the decile column of table 7.1.

ATCO Electric Yukon Response:

The tables and pages of the 2015 Ibbotson SBBI Classic Yearbook, which are referenced below, are provided in the attachment.

The Morningstar data in the response to YUB-YECL-63 is provided in Table 7-1 of the 2015 Ibbotson SBBI Classic Yearbook.

In analyzing the historical returns for companies of different sizes, Morningstar divides companies into deciles from largest to smallest. The upper half of Table 7-5 shows the number of companies in each decile and the total market capitalization of all companies in each decile. The lower half of Table 7-5 shows the market capitalization of the largest company in each decile and the name of that company. Table 7-6 provides the arithmetic mean return and the long-term size premium for each decile. The attached pages describe the size cut-offs (in market cap) for the companies in each decile, but it only provides a few representative company names.

The point of this data provided by Concentric is to illustrate that investors require a size premium for smaller companies in relationship to larger companies. Given the size and scale of AEY, if translated to the deciles, investors would require a substantial size premium versus those that are larger and more diversified.

Third, the size effect is seasonal. For example, small-cap stocks outperformed large-cap stocks in January in a large majority of the years. Such predictability is surprising and suspicious in light of modern capital market theory. These three aspects of the size effect—long-term returns in excess of systematic risk, serial correlation, and seasonality—will be analyzed thoroughly in the following sections.

Presentation of the Decile Data

Summary statistics of annual returns of the 10 deciles and size groupings from 1926 to 2014 are presented in Table 7-1. Note that the average return in this table tends to increase as one moves from the largest decile to the smallest.

Because securities are ranked quarterly, returns on the ninth and 10th deciles are different than those suggested by the small-cap stock index presented in earlier chapters. A detailed methodology for the small-cap stock index is included in Chapter 3.

The total risk, or standard deviation of annual returns, also increases with decreasing company size. The serial correlations of returns are near zero for all but the smallest decile.

Table 7-2 is a year-by-year history of the returns for the different size categories. Table 7-3 shows the growth of $1.00 invested in each of the categories at year-end 1925. Please note that decile data from CRSP was updated for the 2015 edition of the Classic Yearbook. The update resulted in some significant differences in the decile data, most notably in the 2014 index values in Table 7-3.

The sheer magnitude of the size effect in some years is noteworthy. While the largest stocks actually declined in 2001, the smallest stocks rose more than 30%. A more extreme case occurred in the depression-recovery year of 1933, when the difference between the first and 10th decile returns was far more substantial.

The divergence in the performance of small- and large-cap stocks is evident. In 30 of the 89 years since 1926, the difference between the total returns of the largest stocks (decile 1) and the smallest stocks (decile 10) has been greater than 25 percentage points.

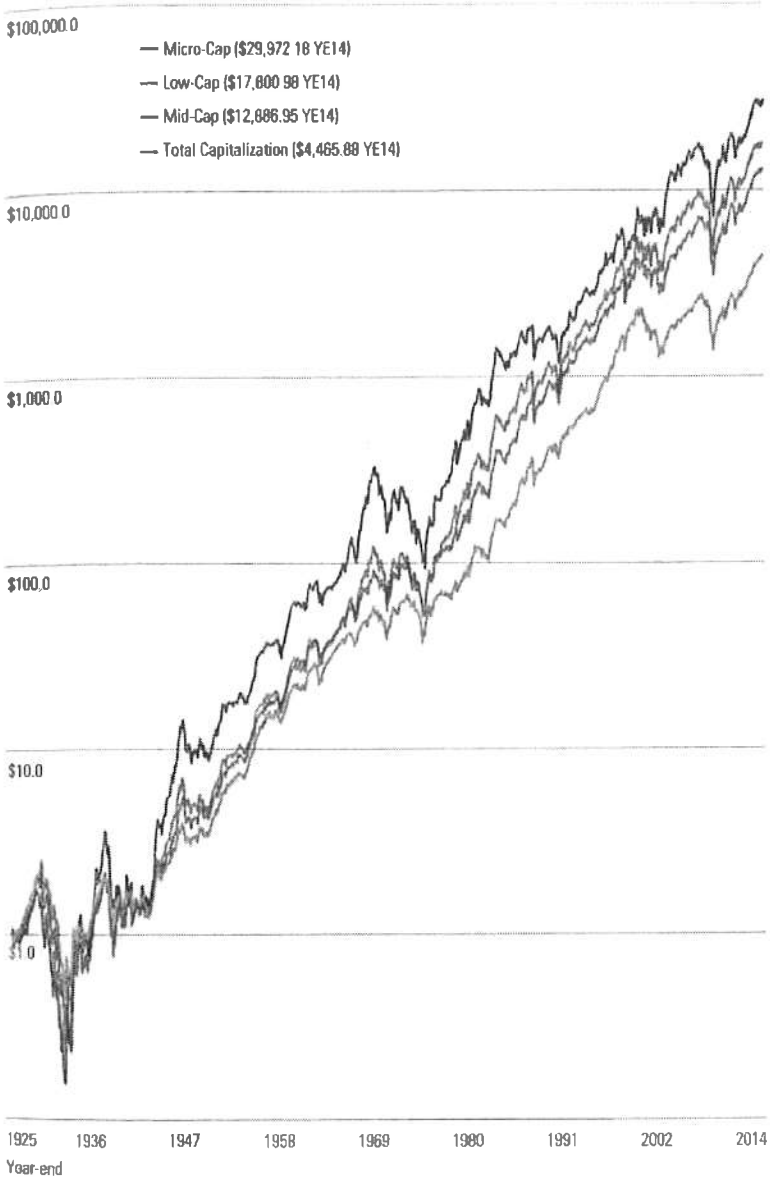
Table 7-1: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Summary Statistics of Annual Returns

Decile	Geometric Mean	Arithmetic Mean	Standard Deviation	Serial Correlation
1-Largest	9.4	11.2	19.1	0.07
2	10.7	13.0	21.7	0.01
3	11.1	13.7	23.6	-0.03
4	11.0	14.0	25.8	-0.03
5	11.7	14.8	26.4	-0.03
6	11.5	15.0	27.3	0.01
7	11.6	15.5	29.2	0.01
8	11.7	16.3	33.3	0.00
9	11.6	17.1	37.4	0.06
10-Smallest	13.5	20.6	42.8	0.14
Mid Cap	11.2	14.0	24.6	-0.03
Low Cap	11.6	15.4	28.9	0.01
Micro	12.3	18.3	39.1	0.08
Total Value Weighted Index	9.9	11.9	20.2	0.01

Data from 1926–2014. Source: Morningstar and CRSP. Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2015 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

Results are for quarterly reranking for the deciles. The small-cap stock summary statistics presented in earlier chapters include a reranking of the portfolios every five years prior to 1982.

Graph 7-1: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Wealth Indexes of Investments in Mid-, Low-, Micro-, and Total Capitalization Stocks
Index (Year-End 1925 = $1.00)



Data from 1925–2014.

In Table 7-4, the decile returns and index values of the NYSE/AMEX/NASDAQ population are broken down into mid-cap, low-cap, and micro-cap stocks. Mid-cap stocks are defined here as the aggregate of deciles three through five. Based on the most recent data, as shown in the bottom section of Table 7-5, companies within this mid-cap range have market capitalizations at or below $10,105,622,000 but greater than $2,552,441,000. Low-cap stocks include deciles 6-8, and currently include all companies in the NYSE/AMEX/NASDAQ with market capitalizations at or below $2,542,913,000 but greater than $549,056,000. Micro-cap stocks include deciles 9-10, and include companies with market capitalizations at or below $548,839,000. The returns and index values of the entire NYSE/AMEX/NASDAQ population are also included. All returns presented are value-weighted based on the market capitalizations of the deciles contained in each subgroup. Graph 7-1 depicts the growth of $1.00 invested in each of these capitalization groups as well as the entire NYSE/AMEX/NASDAQ.

Size of the Deciles

Table 7-5 reveals that the top three deciles of the NYSE/AMEX/NASDAQ account for most of the total market value of its stocks. More than 60% of the market value is represented by the first decile, which consists of 185 stocks, while the smallest decile accounts for less than 1% of the market value. The data in the second column of Table 7-5 are averages across all 89 years. Of course, the proportion of market value represented by the various deciles varies from year to year.

Columns three and four give recent figures on the number of companies and their market capitalization, presenting a snapshot of the structure of the deciles as of Sept. 30, 2014.

The lower portion of Table 7-5 shows the largest firm in each decile and its market capitalization.

Table 7-5: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ Number of Companies, Historical and Recent Market Capitalization

Decile	Historical Average Percentage of Total Capitalization	Recent Number of Companies	Recent Decile Market Capitalization (in Thousands)	Recent Percentage of Total Capitalization
1-Largest	64.03%	185	14,808,784,274	64.25%
2	14.04	199	3,247,447,914	14.09
3	6.89	194	1,579,432,904	6.85
4	4.56	221	1,042,428,212	4.52
5	3.03	215	694,147,086	3.01
6	2.56	265	585,657,120	2.54
7	1.99	317	449,325,255	1.95
8	1.51	417	333,731,801	1.45
9	0.80	395	173,673,205	0.75
10-Smallest	0.61	948	135,401,288	0.59
Mid-Cap 3-5	14.47	630	3,316,008,202	14.39
Low-Cap 6-8	6.05	999	1,368,714,176	5.94
Micro-Cap 9-10	1.41	1,343	309,074,493	1.34

Data from 1926–2014. Source: Morningstar and CRSP. Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2015 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

Historical average percentage of total capitalization shows the average, over the last 89 years, of the decile market values as a percentage of the total NYSE/AMEX/NASDAQ calculated each month. Number of companies in deciles, recent market capitalization of deciles, and recent percentage of total capitalization are as of Sept. 30, 2014.

Decile	Recent Market Capitalization (in Thousands)	Company Name
1-Largest	$591,015,721	Apple Inc
2	24,272,837	Cummins Inc
3	10,105,622	Murphy Oil Corp
4	5,844,592	Alaska Airgroup Inc
5	3,724,186	Great Plains Energy Inc
6	2,542,913	Wolverine World Wide Inc
7	1,686,860	Wesco Aircraft Holdings Inc
8	1,010,634	First Bancorp P R
9	548,839	G P Strategies Corp
10-Smallest	300,725	M V Oil Trust

Source: Morningstar and CRSP. Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2015 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission. Market capitalization and name of largest company in each decile are as of Sept. 30, 2014.

Long-Term Returns in Excess of Systematic Risk

The capital asset pricing model, or CAPM, does not fully account for the higher returns of small-cap stocks. Table 7-6 shows the returns in excess of the riskless rate over the past 89 years for each decile of the NYSE/AMEX/NASDAQ.

The CAPM can be expressed as follows:

$$k_s = r_f + (\beta_s \times ERP) \quad (26)$$

where,

k_s = the expected return for company **s**;
r_f = the expected return of the riskless asset;
β_s = the beta of the stock of company **s**; and,
ERP = the expected equity risk premium, or the amount by which investors expect the future return on equities to exceed that on the riskless asset.

Table 7-6 uses the CAPM to estimate the return in excess of the riskless rate and compares this estimate to historical performance. According to the CAPM, the expected return on a security should consist of the riskless rate plus an additional return to compensate for the systematic risk of the security. The return in excess of the riskless rate is estimated in the context of the CAPM by multiplying the equity risk premium by β (beta). The equity risk premium is the return that compensates investors for taking on risk equal to the risk of the market as a whole (systematic risk). Beta measures the extent to which a security or portfolio is exposed to systematic risk. The beta of each decile indicates the degree to which the decile's return moves with that of the overall market.

A beta greater than one indicates that the security or portfolio has greater systematic risk than the market; according to the CAPM equation, investors are compensated for taking on this additional risk. Yet, Table 7-6 illustrates that the smaller deciles have had returns that are not fully explained by their higher betas. This return in excess of that predicted by CAPM increases as one moves from the largest companies in decile 1 to the smallest in decile 10. The excess return is especially pronounced for micro-cap stocks (deciles 9-10). This size-related phenomenon has prompted a revision to the CAPM, which includes a size premium.

ERATA Table 7-6, Graph 7-2

This phenomenon can also be viewed graphically, as depicted in the Graph 7-2. The security market line is based on the pure CAPM without adjusting for the size premium. Based on the risk (or beta) of a security, the expected return should fluctuate along the security market line. However, the expected returns for the smaller deciles of the NYSE/AMEX/NASDAQ lie above the line, indicating that these deciles have had returns in excess of those appropriate for their systematic risk.

Table 7-6: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ Long-Term Returns in Excess of CAPM

Decile	Beta*	Arithmetic Mean Return (%)	Actual Return in Excess of Riskless Rate**† (%)	CAPM Return in Excess of Riskless Rate† (%)	Size Premium (Return in Excess of CAPM) (%)
1	0.92	11.15	6.08	6.44	-0.36
2	1.04	12.96	7.89	7.26	0.63
3	1.11	13.71	8.64	7.73	0.91
4	1.13	14.01	8.93	7.88	1.06
5	1.17	14.84	9.76	8.16	1.60
6	1.17	15.01	9.94	8.21	1.74
7	1.25	15.53	10.46	8.75	1.71
8	1.30	16.35	11.27	9.12	2.15
9	1.34	17.13	12.06	9.36	2.69
10	1.40	20.62	15.54	9.76	5.78
Mid-Cap, 3-5	1.12	14.00	8.93	7.86	1.07
Low-Cap, 6-8	1.22	15.44	10.36	8.56	1.80
Micro-Cap, 9-10	1.35	18.26	13.18	9.45	3.74

Data from 1926–2014.

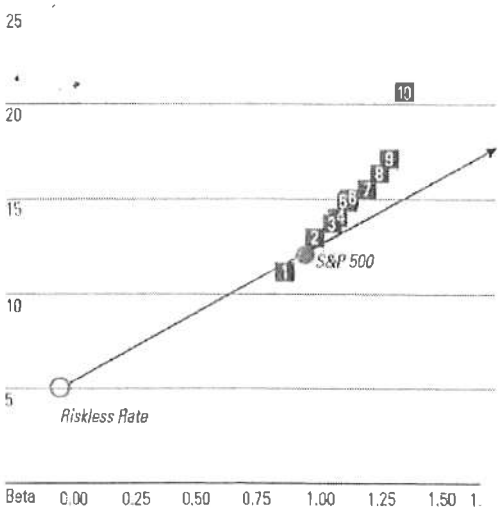
*Betas are estimated from monthly returns in excess of the 30-day U.S. Treasury bill total return, January 1926–December 2014.

**Historical riskless rate measured by the 89-year arithmetic mean income return component of 20-year government bonds (5.07%).

†Calculated in the context of the CAPM by multiplying the equity risk premium by beta. The equity risk premium is estimated by the arithmetic mean total return of the S&P 500 (12.07%) minus the arithmetic mean income return component of 20-year government bonds (5.07%) from 1926–2014.

Source: Morningstar and CRSP. Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2015 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

Graph 7-2: Security Market Line Versus Size-Decile Portfolios of the NYSE/AMEX/NASDAQ



Data from 1926–2014

Serial Correlation in Small-Cap Stock Returns

In four of the last 10 years, large-capitalization st (deciles 1-2 of NYSE/AMEX/NASDAQ) have ou formed small-capitalization stocks (deciles 9-10). has led some market observers to speculate that the no size premium. But statistical evidence suggests periods of underperformance should be expected. instance, large-cap stocks have outperformed small-cap stocks in nearly half of the years since 1926. It should be noted, however, that large-cap stocks' average historical outperformance has been less than the average historical outperformance of small-cap stocks.

History tells us that small companies are riskier than large companies. Table 7-1 [see page 100] shows the standard deviation (a measure of risk) for each decile of the NYSE/AMEX/NASDAQ. As one moves from larger to smaller deciles, the standard deviation of return grows. Investors are compensated for taking on this additional risk by the higher returns provided by small companies. It is important to note, however, that the risk/return profile is over the long term. If small companies did not provide higher long-term returns, investors would be more inclined to invest in the less-risky stocks of large companies.