

### **COST OF CAPITAL STUDY**

7.28%

# YIELD CAPITALIZATION 2019 Assessment Year

APPENDIX C

### **Power Industry**

**WEIGHTED AVERAGE COST OF CAPITAL** 

UITY RATE						10.00%	
CAPITAL ASSET PRICING MODEL							PAGE
CAPM Ex Ante			8.09%				4
DIVIDEND GROWTH MODELS Single Stage	e						
Value Line, based on Dividends Growth			10.50%				5
Value Line, based on Earnings Growth			10.50%				6
Value Line, based on Return on Equity			9.50%				7
FCFE GROWTH MODEL Multi Stage			10.00%				8
					RANGE	8.09-10.50%	
BT RATE						6.00%	9
RKET CAPITAL STRUCTURE							
Equity	50%	x	10.00%	=		5.00%	3
	50%	x	6.00%	=	3.00%		3
Debt			(4 24)		3.00%	2.28%	
	24%	=	(124)	Х	3.00%	<u> </u>	

### **SUPPORT FOR GUIDELINE COMPANIES**

Washington State Department of Revenue 2019 Assessment Year

Power Industry

Capital Structure at Book Value

Company	Ticker	Beta	Fin'l Strength	P/E Ratio	Div'd Yield	Common Stock	%	Preferred Stock	%	Long Term Debt	%	Total Debt & Equity
AES Corp	aes	1.15	В	10.0	3.6%	3,205,092,600	15.4%			17,636,000,000	84.6%	20,841,092,600
Exelon Corp	exc	0.70	B++	22.7	3.1%	30,750,909,923	46.8%			34,909,000,000	53.2%	65,659,909,923
NextEra Energy Inc	nee	0.60	A+	26.2	2.6%	32,643,661,053	54.7%			27,048,000,000	45.3%	59,691,661,053
NRG Energy Inc	nrg	1.30	B+	76.7	0.3%	(1,233,336,416)	-22.6%	250,000,000	4.6%	6,449,000,000	118.0%	5,465,663,584
Pattern Energy Group Inc	pegi	1.25	В	nmf	9.1%	1,046,948,837	34.3%			2,004,000,000	65.7%	3,050,948,837
Southern Co	so	0.50	Α	14.5	5.4%	25,053,439,455	37.5%	324,000,000	0.5%	41,425,000,000	62.0%	66,802,439,455
TransAlta Corp	tato	1.00	C++	nmf	3.9%	1,686,730,611	30.8%	665,000,000	12.2%	3,119,000,000	57.0%	5,470,730,611
Vistra Energy Corp	vst	1.00	B+	nmf	nmf	7,866,630,466	42.0%			10,874,000,000	58.0%	18,740,630,466
Mean		0.94		30.0	4.0%	12,627,509,566	29.9%		5.7%	17,933,000,000	68.0%	
Harmonic Mean		0.84							1.3%		62.8%	
Weighted Mean						101,020,076,529	41.1%	1,239,000,000	0.5%	143,464,000,000	58.4%	245,723,076,529
Median		1.00			3.6%		35.9%		4.6%		60.0%	

## **SUPPORT FOR CAPITAL STRUCTURE Market Value**

Washington State Department of Revenue 2019 Assessment Year Power Industry

Company	Ticker	Stock Price	Common Shares	Common Stock	%	Preferred Stock	%	Long Term Debt	%	Total Debt & Equity
AES Corp	aes	14.460	660,843,835	9,555,801,854	32.5%	-		19,846,000,000	67.5%	29,401,801,854
Exelon Corp	exc	45.100	967,009,746	43,612,139,545	54.0%	-		37,218,000,000	46.0%	80,830,139,545
NextEra Energy Inc	nee	173.820	477,945,257	83,076,444,572	73.4%	-		30,043,000,000	26.6%	113,119,444,572
NRG Energy Inc	nrg	39.600	308,334,104	12,210,030,518	63.7%	250,000,000	1.3%	6,697,000,000	35.0%	19,157,030,518
Pattern Energy Gro	pegi	18.620	97,572,119	1,816,792,856	44.8%	-		2,240,000,000	55.2%	4,056,792,856
Southern Co	so	43.920	1,028,888,684	45,188,791,001	50.0%	324,000,000	0.4%	44,824,000,000	49.6%	90,336,791,001
TransAlta Corp	tato	4.120	288,330,019	1,187,919,678	23.6%	665,000,000	13.2%	3,181,000,000	63.2%	5,033,919,678
Vistra Energy Corp	vst	22.890	485,894,408	11,122,122,999	50.8%	=		10,765,000,000	49.2%	21,887,122,999
			Mean		49.1%		5.0%		49.0%	
			<b>Harmonic Mean</b>		43.7%		0.8%		45.1%	
			<b>Weighted Mean</b>	207,770,043,023	<b>57.1%</b>	1,239,000,000	0.3%	154,814,000,000	42.6%	363,823,043,023
			Median		50.4%		1.3%		49.4%	
			Std Dev		15.9%		7.2%		13.6%	
		Coeffi	icient of Variation		32.5%		144.5%		27.7%	
			Target		50%				50%	100%

## SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT CAPITAL ASSET PRICING MODEL

2019 Assessment Year

### Ex Ante

Ke = Rf + B (Rp)

Ke =	Cost of Equity					8.09%
						to page
		Rm =	rate of return	8.65%		
		Rf =	risk free rate	3.00%		
		Rp =	risk premium	5.65%		
		B =	Beta	0.90		page
Rp =	Risk Premium					5.65%
						to above
	Shannon Pratt and	_			3.50% - 6.00%	
			pital, App & Exam, 5th	n Ed, 2014	5.000/	
	Dr. Aswath Damo			d/	5.96%	chart page 13
			s.stern.nyu.edu/~adar	nodar/	5.65%	adjusted for Rf
	Jahn Craham 9 C	•	ed Premium		0.040/	10
	John Graham & C	-	-	in and Outlands are all	6.21%	10 year expected real re
			-	iness Outlook survey - U	5.89%-6.54%	95% Interval 10 year ex
		4th Qtr 201	8		6.27%	adjusted for Rf
					3.06%	Rf rate used in survey
f =	Risk Free Rate					3.00%
						to above
	Value Line Investr as of 12-26-18	• .		uary 4, 2019, page 1949		
	as 01 12-26-18	US Treasu	ry Securities year end		2 650/	
				5 year	2.65%	
				10 year	2.81%	
				30 year	3.06%	
				30 year Zero	3.10%	
		Statistical Re		ederalreserve.gov/Release		
	Federal Reserve S as of 12-31-18	Statistical Re	lease (http://www.fe Treasury Consta	ont Maturities 5 year 10 year 20 year 30 year	2.51% 2.69% 2.87% 3.02%	
		Statistical Re		ont Maturities 5 year 10 year 20 year 30 year 20 year 20 year	2.51% 2.69% 2.87% 3.02% 1.09%	1.78%
		Statistical Re		ont Maturities 5 year 10 year 20 year 30 year	2.51% 2.69% 2.87% 3.02%	1.81%
flat:	as of 12-31-18	Statistical Re		ont Maturities 5 year 10 year 20 year 30 year 20 year 20 year	2.51% 2.69% 2.87% 3.02% 1.09%	1.81% TIPS inflation indication
ıflatio	as of 12-31-18	Statistical Re		ont Maturities 5 year 10 year 20 year 30 year 20 year 20 year	2.51% 2.69% 2.87% 3.02% 1.09%	1.81% TIPS inflation indication
flatio	as of 12-31-18		Treasury Consta	ont Maturities 5 year 10 year 20 year 30 year 20 year TIPS 30 year TIPS	2.51% 2.69% 2.87% 3.02% 1.09% 1.21%	1.81% TIPS inflation indication
ıflatio	as of 12-31-18	ment Survey,	Treasury Consta	ont Maturities 5 year 10 year 20 year 30 year 20 year 20 year	2.51% 2.69% 2.87% 3.02% 1.09% 1.21%	1.81% TIPS inflation indication
ıflatio	as of 12-31-18  On  Value Line Investr	ment Survey, Consumer	Treasury Consta	ant Maturities 5 year 10 year 20 year 30 year 20 year TIPS 30 year TIPS anuary 4, 2019, page 1500 ate of Change 2021-2023	2.51% 2.69% 2.87% 3.02% 1.09% 1.21%	1.81% TIPS inflation indication
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	as of 12-31-18  On  Value Line Investr	ment Survey, Consumer urvey Decemi Inflation me	Economic Series Ja Price Index Annual Rober 21, 2018, page 4 edian (measured by the	ant Maturities 5 year 10 year 20 year 30 year 20 year TIPS 30 year TIPS anuary 4, 2019, page 1500 ate of Change 2021-2023	2.51% 2.69% 2.87% 3.02% 1.09% 1.21%	1.81% TIPS inflation indication
	on  Value Line Investr  The Livingston Su	ment Survey, Consumer urvey Decemi Inflation me	Economic Series Ja Price Index Annual R ber 21, 2018, page 4 edian (measured by the	ant Maturities 5 year 10 year 20 year 30 year 20 year TIPS 30 year TIPS anuary 4, 2019, page 1500 ate of Change 2021-2023 10 are CPI) over next 10 year	2.51% 2.69% 2.87% 3.02% 1.09% 1.21%	1.81% TIPS inflation indication 2.00% to appraisal template
	on  Value Line Investr  The Livingston Su	ment Survey, Consumer urvey Decemi Inflation me ct (GDP) No	Economic Series Ja Price Index Annual R ber 21, 2018, page 4 edian (measured by the	ant Maturities 5 year 10 year 20 year 30 year 20 year TIPS 30 year TIPS anuary 4, 2019, page 1500 ate of Change 2021-2023 10 acc CPI) over next 10 year	2.51% 2.69% 2.87% 3.02% 1.09% 1.21%	1.81% TIPS inflation indication  2.00% to appraisal template  3.90% real GDP + inflation es
	on  Value Line Investr  The Livingston Su	ment Survey, Consumer urvey Decemi Inflation me ct (GDP) No e Projected Median Pro	Economic Series Ja Price Index Annual R ber 21, 2018, page 4 edian (measured by the ominal d Long Run Real ( bijection Value From D	ant Maturities 5 year 10 year 20 year 30 year 20 year TIPS 30 year TIPS anuary 4, 2019, page 1500 ate of Change 2021-2023 10 acc CPI) over next 10 year	2.51% 2.69% 2.87% 3.02% 1.09% 1.21% 2.30%	1.81% TIPS inflation indication  2.00%  to appraisal template  3.90%  real GDP + inflation es
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	on  Value Line Investr  The Livingston Su  Domestic Product  Federal Reserv	ment Survey, Consumer Inflation me ct (GDP) No e Projected Median Pro https://ww	Economic Series Ja Price Index Annual R ber 21, 2018, page 4 edian (measured by the ominal d Long Run Real ( objection Value From D ow.federalreserve.g	ant Maturities 5 year 10 year 20 year 30 year 20 year TIPS 30 year TIPS anuary 4, 2019, page 1500 ate of Change 2021-2023 at 10 are CPI) over next 10 year  GDP Growth ec 19, 2018 Report ov/monetarypolicy/files/fi nomic Projections	2.51% 2.69% 2.87% 3.02% 1.09% 1.21% 2.30%	1.81% TIPS inflation indication  2.00%  to appraisal template  3.90%  real GDP + inflation es  1.90%
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oflatio	on  Value Line Investr  The Livingston Su  Domestic Product  Federal Reserv	ment Survey, Consumer  urvey Decemi Inflation me  ct (GDP) No  e Projected Median Pro https://www  Budget Off The Budge Average Po http://www	Economic Series Ja Price Index Annual R ber 21, 2018, page 4 edian (measured by the ominal d Long Run Real ( ojection Value From D ow.federalreserve.g ice Real GDP Econ t and Economic Outloe ercentage Change Ye v.cbo.gov/publication	ant Maturities 5 year 10 year 20 year 30 year 20 year TIPS 30 year TIPS 30 year TIPS  anuary 4, 2019, page 1500 ate of Change 2021-2023 10 ac CPI) over next 10 year  GDP Growth ac 19, 2018 Report by/monetarypolicy/files/fr	2.51% 2.69% 2.87% 3.02% 1.09% 1.21% 2.30% 2.23%	1.81% TIPS inflation indication  2.00%  to appraisal template  3.90%  real GDP + inflation es  1.90%  1219.pdf  Table D-1 pg 140  2.18%
	on  Value Line Investr  The Livingston Su  Domestic Product  Federal Reserv  Congressional	ment Survey, Consumer  Irvey Decemi Inflation me  Ct (GDP) No  e Projected Median Pro https://www  Budget Off The Budge Average Pe http://www  e Bank of F	Economic Series Ja Price Index Annual R ber 21, 2018, page 4 edian (measured by the series) ber 21, 2018, page 4 edian (me	ant Maturities 5 year 10 year 20 year 30 year 20 year TIPS 30 year TIPS 30 year TIPS  anuary 4, 2019, page 1500 ate of Change 2021-2023 10 ac CPI) over next 10 year  GDP Growth ac 19, 2018 Report by/monetarypolicy/files/fr	2.51% 2.69% 2.87% 3.02% 1.09% 1.21% 2.30% 2.23%	1.81% TIPS inflation indication  2.00%  to appraisal template  3.90%  real GDP + inflation es  1.90%  1219.pdf  Table D-1 pg 140  2.18%
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## SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT DIVIDEND GROWTH MODEL

Washington State Department of Revenue 2019 Assessment Year Power Industry

### **Based on Dividend Growth**

Ke = (D1 / Po) + G

 $\begin{array}{lll} \mbox{Ke} &= & \mbox{Cost of Equity} \\ \mbox{D1} &= & \mbox{Expected Dividends} \\ \mbox{Po} &= & \mbox{Current Price} \\ \mbox{G} &= & \mbox{Sustainable Growth} \\ \end{array}$ 

Company	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/Po)	Dividend Growth (G)	Ke with Short Term Growth
AES Corp	aes	14.460	0.56	3.87%	6.00%	9.87%
Exelon Corp	exc	45.100	1.45	3.22%	5.00%	8.22%
NextEra Energy Inc	nee	173.820	5.00	2.88%	10.50%	13.38%
NRG Energy Inc	nrg	39.600	0.14	0.35%	-3.50%	nmf
Pattern Energy Group	pegi	18.620	1.69	9.08%	2.50%	11.58%
Southern Co	S0	43.920	2.46	5.60%	3.00%	8.60%
TransAlta Corp	tato	4.120	0.18	4.37%	8.00%	12.37%
Vistra Energy Corp	vst	22.890	0.50	2.18%	nmf	nmf
			•		Mean	10.67%
				Ha	armonic Mean	10.32%
					Median	10.72%
					Max	13.38%
					Min	8.22%
					Std Dev	2.10%
				Coefficien	t of Variation	19.65%

Say 10.50%

# SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT DIVIDEND GROWTH MODEL

Washington State Department of Revenue 2019 Assessment Year Power Industry

### **Based on Earnings Growth**

Ke = (D1 / Po) + G

 $\begin{array}{lll} \mbox{Ke} & = & \mbox{Cost of Equity} \\ \mbox{D1} & = & \mbox{Expected Dividends} \\ \mbox{Po} & = & \mbox{Current Price} \\ \mbox{G} & = & \mbox{Sustainable Growth} \\ \end{array}$ 

Company	Ticker	Stock Price (Po)	Expected Dividend (D1)	Dividend Yield (D1/Po)	Earnings Growth (G)	Ke with Short Term Growth
AES Corp	aes	14.460	0.56	3.87%	nmf	nmf
Exelon Corp	exc	45.100	1.45	3.22%	7.50%	10.72%
NextEra Energy Inc	nee	173.820	5.00	2.88%	9.00%	11.88%
NRG Energy Inc	nrg	39.600	0.14	0.35%	nmf	nmf
Pattern Energy Grou	pegi	18.620	1.69	9.08%	nmf	nmf
Southern Co	S0	43.920	2.46	5.60%	3.50%	9.10%
TransAlta Corp	tato	4.120	0.18	4.37%	nmf	nmf
Vistra Energy Corp	vst	22.890	0.50	2.18%	nmf	nmf
					Mean	10.56%
				Ha	rmonic Mean	10.44%
					Median	10.72%
					Max	11.88%
					Min	9.10%
					Std Dev	1.39%
				Coefficien	t of Variation	13.19%

Say 10.50%

# SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT DIVIDEND GROWTH MODEL

Washington State Department of Revenue

2019 Assessment Year

Power Industry

Based on Return on Equity Ke = (D1 / Po) + G

**Ke =** Cost of Equity

D1 = Expected Dividends E1 = Expected Earnings Po = Current Price

**G** = Sustainable Growth

**b** = Retained Earnings % = (1-Payout Ratio)

**ROE** = Return on Equity = (E1/Po)

Company	Ticker	Stock Price (Po)	Expected Dividend (D1)	Expected Earnings (E1)	Dividend Yield (D1/Po)	Retained Earnings (b)	ROE (E1/Po)	Growth (b*ROE)	K <sub>e</sub> Dividend s	K <sub>e</sub> Earnings
AES Corp	aes	14.460	0.56	1.30	3.87%	71.0%	8.99%	6.38%	10.26%	15.37%
Exelon Corp	exc	45.100	1.45	3.15	3.22%	37.0%	6.98%	2.58%	5.80%	9.57%
NextEra Energy Inc	nee	173.820	5.00	8.25	2.88%	34.0%	4.75%	1.61%	4.49%	6.36%
NRG Energy Inc	nrg	39.600	0.14	2.05	0.35%	86.0%	5.18%	4.45%	4.81%	9.63%
Pattern Energy Grou	pegi	18.620	1.69	0.50	9.08%	nmf	2.69%	nmf	nmf	nmf
Southern Co	S0	43.920	2.46	3.05	5.60%	20.0%	6.94%	1.39%	6.99%	8.33%
TransAlta Corp	tato	4.120	0.18	0.05	4.37%	nmf	1.21%	nmf	nmf	nmf
Vistra Energy Corp	vst	22.890	0.50	1.50	2.18%	nmf	6.55%	nmf	nmf	nmf
								Mean	6.47%	9.85%
							На	rmonic Mean	5.93%	9.08%
								Median	5.80%	9.57%
								Std Dev	2.33%	3.36%
							Coefficien	t of Variation	36.04%	34.09%

Say 9.50%

# SUPPORT FOR YIELD CAPITALIZATION EQUITY COMPONENT FREE CASH FLOW TO EQUITY MODEL MULTI STAGE

Washington State Department of Revenue 2019 Assessment Year Power Industry

Company	Ticker	Stock Price	Expected Earnings	P/E	Payout Ratio	ROE	Ke
AES Corp	aes	14.46	1.30	11.12	43.00%	26.00%	13.50%
Exelon Corp	exc	45.10	3.15	14.32	45.00%	9.50%	10.65%
NextEra Energy Inc	nee	173.82	8.25	21.07	59.00%	12.00%	6.39%
NRG Energy Inc	nrg	39.60	2.05	19.32	7.00%	nmf	8.15%
Pattern Energy Group	pegi	18.62	0.50	37.24	nmf	4.50%	3.73%
Southern Co	so	43.92	3.05	14.40	78.00%	12.00%	10.40%
TransAlta Corp	tato	4.12	0.05	82.40	nmf	0.50%	11.67%
Vistra Energy Corp	vst	22.89	1.50	15.26	33.00%	8.50%	11.39%
Mean				26.89	44.17%	10.43%	9.49%
Harmonic Mean				18.48	24.15%	2.64%	8.12%
Median				17.29	44.00%	9.50%	10.52%
Industry Summary	,			18.00	44.00%	10.00%	

Say 10.00%

### SUPPORT FOR DEBT RATING AND DEBT YIELD RATE

Washington State Department of Revenue 2019 Assessment Year Power Industry

Company	Ticker	Mergent's Ratings	S&P Ratings
AES Corp	aes	Ba1	BB+
Exelon Corp	exc	Baa2	BBB
NextEra Energy Inc	nee	Baa1	A-
NRG Energy Inc	nrg	Ba2	BB
Pattern Energy Group	pegi	Ba3	BB-
Southern Co	so	Baa2	A-
TransAlta Corp	tato	Ba1	BBB-
Vistra Energy Corp	vst	Ba2	BB
Overall Average De	ebt Rating	Baa3	BBB-

Mergent's Bond Record January 2019, page 250									
Corporate	Aaa	Aa	Α	Baa					
October	4.14%	4.28%	4.46%	5.07%					
November	4.22%	4.37%	4.53%	5.22%					
December	4.02%	4.20%	4.37%	5.13%					
4th Qtr Average	4.13%	4.28%	4.45%	5.14%					
<b>Public Utilities</b>	Aaa	Aa	Α	Baa					
October		4.31%	4.45%	4.91%					
November		4.40%	4.52%	5.03%					
December		4.24%	4.37%	4.92%					
4th Qtr Average		4.32%	4.45%	4.95%					

Industrials	Aaa	Aa	Α	Baa
October	4.14%	4.24%	4.45%	5.22%
November	4.22%	4.34%	4.53%	5.42%
December	4.02%	4.16%	4.36%	5.34%
4th Qtr Average	4.13%	4.25%	4.45%	5.33%

		Ave YTM	Med YTM
S&P's Long Term Bond Yield	BBB-	6.53%	6.49%
Moody's Long Term Bond Yiel	Baa3	6.04%	5.90%

Bloomberg Dec 2018	20y	25Y	30Y	
BBB-	6.15%	6.16%	6.19%	

Debt Yield Rate 6.	00%
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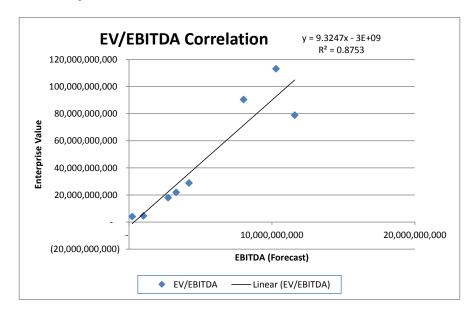
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### SUPPORT FOR DIRECT CAPITALIZATION EQUITY COMPONENT

2019 Assessment Year

Company	Ticker	Stock Price	Enterprise Value	EBITDA Historical	Annual Change VL	EBITDA Forecast	EV / EBITDA Forecast	Revenue Forecast	EV / Sales Forecast	Cashflow Forecast	Debt Service	EV / CF Forecast
AES Corp	aes	14.46	28,785,801,854	3,385,000,000	24.00%	4,197,400,000	6.86	10,870,881,086	2.65	1,916,447,122	1,190,760,000	9.26
Exelon Corp	exc	45.10	78,874,139,545	9,813,000,000	18.18%	11,597,181,818	6.80	38,341,936,429	2.06	9,428,345,024	2,233,080,000	6.76
NextEra Energy Ir	nee	173.82	113,119,444,572	9,473,000,000	8.53%	10,281,276,451	11.00	17,588,385,458	6.43	7,599,329,586	1,802,580,000	12.03
NRG Energy Inc	nrg	39.60	17,955,030,518	1,691,000,000	61.70%	2,734,382,979	6.57	9,789,607,802	1.83	1,171,669,595	401,820,000	11.41
Pattern Energy Gr	pegi	18.62	4,056,792,856	282,000,000	-18.39%	230,137,931	17.63	546,403,866	7.42	346,381,022	134,400,000	8.44
Southern Co	so	43.92	90,336,791,001	7,659,000,000	4.69%	8,018,015,625	11.27	24,693,328,416	3.66	6,893,554,183	2,689,440,000	9.43
TransAlta Corp	tato	4.12	4,594,919,678	933,000,000	7.89%	1,006,657,895	4.56	2,176,891,643	2.11	591,076,539	190,860,000	5.88
Vistra Energy Corp	vst	22.89	21,887,122,999	2,024,000,000	63.04%	3,300,000,000	6.63	10,203,782,568	2.15	2,186,524,836	645,900,000	7.73
8		Mean					8.91		3.54			8.87
		<b>Harmonic Mean</b>					7.61		2.75			8.41
		Median					6.83		2.40			8.85
		Std Dev					4.21		2.18			2.13
Source:		Sav					6.25		3.00			8.50

Value Line & Morning Star



### Forecast EV/EBITDA By Rank

Guideline Companies	EV/EBITDA forecast		
TransAlta Corp	4.56	5.98	Low Harmonic Mea
NRG Energy Inc	6.57	6.14	Low Average
Vistra Energy Corp	6.63	6.60	Low Median
Exelon Corp	6.80	6.25	Say
AES Corp	6.86	10.47	High Harmonic Mea
NextEra Energy Inc	11.00	11.69	High Average
Southern Co	11.27	11.13	High Median
Pattern Energy Group Inc	17.63	11.00	Say

### SUPPORT FOR DIRECT CAPITALIZATION EQUITY COMPONENT

2019 Assessment Year

Power Industry

			2018 2019			20	018	2019		
Company	Ticker	Stock Price		Earnings EPS/P)	Earnin	ected gs Ratio PS/P)		ow Ratio F/P)	-	ted Cash Ratio
AES Corp	aes	14.46	1.81	12.5%	1.30	9.0%	3.35	23.2%	2.90	20.1%
Exelon Corp	exc	45.10	2.07	4.6%	3.15	7.0%	8.25	18.3%	9.75	21.6%
NextEra Energy Inc	nee	173.82	6.68	3.8%	8.25	4.7%	14.65	8.4%	15.90	9.1%
NRG Energy Inc	nrg	39.60	0.87	2.2%	2.05	5.2%	2.35	5.9%	3.80	9.6%
Pattern Energy Group In	pegi	18.62	1.45	7.8%	0.50	2.7%	4.35	23.4%	3.55	19.1%
Southern Co	S0	43.92	2.90	6.6%	3.05	6.9%	6.40	14.6%	6.70	15.3%
TransAlta Corp	tato	4.12	(0.86)	nmf	0.05	1.2%	1.90	46.1%	2.05	49.8%
Vistra Energy Corp	vst	22.89	(0.11)	nmf	1.50	6.6%	2.76	12.1%	4.50	19.7%
	Harmon	Mean ic Mean Median		6.3%		5.4% 3.7%		19.0% 13.3%		20.5% 16.0%
		5.6% 12.5%		5.9% 9.0%		16.4% 46.1%		19.4% 49.8%		
Min Std Dev Coefficient of Variation				2.2% 3.7% 58.4%		1.2% 2.5% 46.6%		5.9% 12.7% 66.7%		9.1% 12.7% 62.1%
		6.0%		5.5%		15.0%		18.0%		

Source: Value Line / yr end stock price

### SUPPORT FOR DIRECT CAPITALIZATION EQUITY COMPONENT

2019 Assessment Year Power Industry

_		Stock			Cash				Book	
Company	Ticker	Price	Revenues	Multiple	Flow	Multiple	Earnings	Multiple	Value	Multiple
AES Corp	aes	14.46	16.25	0.89	3.35	4.32	1.81	7.99	4.85	2.98
Exelon Corp	exc	45.10	37.15	1.21	8.25	5.47	2.07	21.79	31.80	1.42
NextEra Energy I	nee	173.82	33.45	5.20	14.65	11.86	6.68	26.02	68.30	2.54
NRG Energy Inc	nrg	39.60	30.74	1.29	2.35	16.85	0.87	45.52	(4.00)	nmf
Pattern Energy G	pegi	18.62	4.95	3.76	4.35	4.28	1.45	12.84	10.73	1.74
Southern Co	S0	43.92	23.10	1.90	6.40	6.86	2.90	15.14	24.35	1.80
TransAlta Corp	tato	4.12	7.80	0.53	1.90	2.17	(0.86)	nmf	5.85	0.70
Vistra Energy Cor	vst	22.89	18.82	1.22	2.76	8.29	(0.11)	nmf	16.19	1.41
		Mean		2.00		7.51		21.55		1.80
	Harmo	nic Mean		1.25		5.27		15.98		1.49
		Median		1.25		6.16		18.47		1.74
		Max		5.20		16.85		45.52		2.98
		Min		0.53		2.17		7.99		0.70
		1.25		6.50		17.00		1.50		