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US Electric Utilities & Renewables

How the UK 'Leave' Vote Impact US Utilities

Equities

Americas
Electric Utilities

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After referendum – what is next for US utilities? Actually, Constructive

The UBS Macro-Strategy team believes that the UK vote to leave the European Union will lead to a significant reduction in local growth, weakness in the Great British Pound (GBP), and lower probability of a near-term US Federal Funds rate increase. US utilities are actually up ~+25bp in early trading on Friday versus a ~-250bp decline for the broader market; we are not surprised to see utilities gain as investors look for safety amidst the global uncertainty and prospects for even lower interest rates. The yield on the US 10Yr Treasury has declined ~16bp to 1.58% with similar declines in yield for other countries government obligations, all broadly supportive of utility valuations.

Putting the utilities valuation in context

Utilities are trading at an absolute high forward P/E (18.6x) and are trading at a 17-20% premium to the S&P 500 (significant volatility), approaching their July 2012 levels on a relative basis (21% premium). In each of 2011, 2012, & 2013 utilities tested their ~20% premium versus the broader market and subsequently declined towards a 5% average premium but we reiterate that even lower interest rates and global uncertainty are supportive of these price levels. For context in November 2008 at the peak of the financial crisis the premium was 32%. Please see the Figure on Page 2.

How will the Fed react? Likely wait-and-see.

The Macro team has removed its expectation for a 25bp Federal Funds rate tightening at the September 20-21 Federal Open Market Committee (FOMC) meeting but still expects a 25bp hike at the December 13-14 meeting. There is downside risk to the US real GDP forecasts of 2% for the balance of 2016 and +2.5% in 2017.

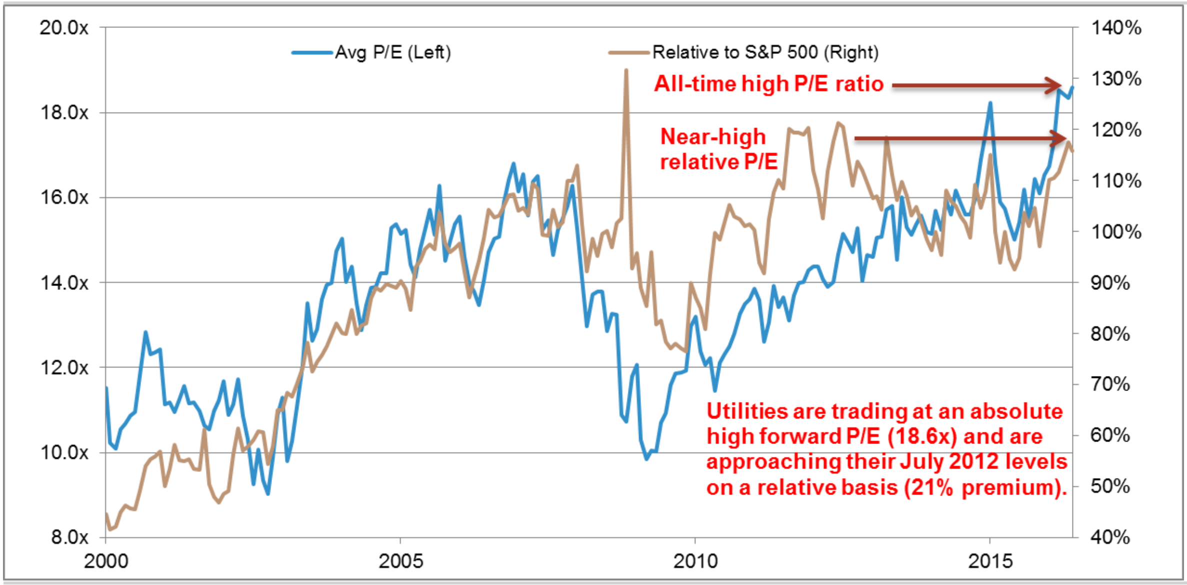
Who are the most UK-exposed utilities? PPL and AES along with the IPPs

For PPL Corp its U.K. business represented ~40% of ratebase and ~65% of ongoing earnings in 2015 which explains the immediate sell-off in shares compared with peers(-400bp underperformance). For PPL we estimate that every -0.05 change in the GBP/USD exchange rate will reduce open EPS by approx.. -$0.05 **(penny for penny equivalency)**. With the GBP/USD down -0.08 in early trading this implies -$0.08 EPS impact, or a -$1.40/sh valuation impact using the US **average forward P/E multiple (17x), inline with the move thus far today.** AES has less exposure to the GBP (-.15 change in GBP/USD has less than $0.005 impact on 2016 EPS) but due to its sensitivity to a variety of international currencies and commodities (ex. Kazakhstan Tenge, Argentine Peso, Crude oil, etc.) we see shares as relatively disadvantaged. We expect the independent power producers (IPPs) to remain under pressure due to investor rotation into safer equities and from the natural decline in commodity prices. Integrated utilities are also impacted such as Exelon but to a lesser degree.

2% CAFD Sensitivity at TERP to latest UK move, though likely hedged

Terraform Power (TERP) has ~13% of assets located in the U.K. with estimated EBITDA of $30Mn. *Management indicated that its U.K. assets represented ~20% of trailing CAFD, implying ~$35Mn.* The company does hedge currency risk and had ~117Mn GBP derivatives in place as of 3Q15 (last reported financials), but the specific currency effect remains unclear. On an open basis, we estimate EBITDA and CAFD declines of ~$2.3Mn and $2.9Mn, respectively. EBITDA/CAFD loss of ~$3.9M/~$4.5M is offset by dollar equivalent interest reduction of ~$1.6M. EBITDA/CAFD loss of ~$3.9M/~$4.5M is offset by dollar equivalent interest reduction of ~$1.6M. The recent debt refinancing provided GBP 106M, equivalent to ~$160M at the time, which would be affected if the capital was not repatriated (the stated use was to reduce commitment for bridge facility to acquire assets from the now cancelled Vivint transaction). We note $2.9M CAFD implies ~1.7% CAFD sensitivity on trailing metrics, though actual sensitivity is lower given subsequent Invenergy acquisition.

Figure 1: Regulated Electric Utilities Average P/E and Relative to the S&P 500



Source: FactSet

Framing the Moving pieces for PPL:

We break down the following variables as impacting the stock:

1) **Inflation: Partial Offset?** However UBS economists suggest inflation improvements could be muted by reduced economic activity. PPL mgmt had been pointing to this as a positive offset.

2) **Ratebase intact:** Under the RIIO-ED1, forecasted ratebase is provided for an eight year period limiting the degree of secondary exposure to potential in slowdown in economic activity in the UK.

3) **Decoupling:** Given the risk of negative load growth revisions, we emphasize the utilities remain agnostic as to KWh volume sales; however there is risk of net customer growth. As such, this could impact long-term infrastructure spend.

4) **Mid-cycle review:** Still not necessarily expecting any shifts; mgmt has been talking down expectations here as well. We see this as the opportunity for OFGEM to re-evaluate ratebase if the shift in growth is truly outsized relative to the initial plan.

Does F/X volatility make sense?

We note the latest volatility for PPL from the F/X move only highlights the added risk of foreign operations. Mgmts objective in acquiring the UK operations earlier in the decade was to reduce EPS volatility arising from the Supply power business. However, with this segment now spun out, the UK itself has become the primary

source of volatility. We note utility investors have historically shied away from more volatile EPS in utilities and see the latest UK shift as once more driving scrutiny; in PPL's press release they caution a meaningful shift in the UK F/X rate could cause them to reset their EPS growth expectations. More broadly, we see limited desirability for international exposure across US Utilities (in contrast to the diversified conglomerates in Europe).

Colleagues: UBS European Utilities Comp Sheet

Links to Recent UBS Macro Notes

Global Economic Forecast Database - June 21st

Rates Relative Value and Positioning Report - June 13th

Ways to play U.S. rates and curve in the short term (Video) - June 1st

Global Rates Strategy - The Global Rates Landscape – May 22nd

TERP Sensitivity Calculation

Below we show the estimated EBITDA and CAFD impact for TERP' UK business based upon the exchange rate in early November vs today (1.51 vs ~1.37).

Figure 2: Analysis of Estimated GBP/USD Impact for TERP

	TERP Debt (£ Mn)	USD Equiv	~Weighted Interest Rate	£M Interest	Dollar Equiv @ 1.51 £/$	Dollar Equiv @ 1.37 £/$
Tranch A	87	131.9				
Tranch B	226.5	343.3				
Total	313.5	475.2	4.00%	12.5	$18.9	$17.3
				£	$	$
			TERP UK Portfolio Expected 2016 EBITDA	30	45.3	41.4
			TERP UK Portfolio Est CAFD	35	52.8	48.2
	Estimated Currency Effect					
		EBITDA	CAFD			
	Loss	$3.9	4.5			
	Debt Offset	$1.6	$1.6			
	Net Cash Loss **(Unhedged)**	$2.3	$2.9			

Note: TERP had ~$117M notal GBP Foreign currency contract in place as of Sept 30, 2015

Source: Company Filings, FactSet, and UBS Estimates

Valuation Method and Risk Statement

Risks for Utilities and Independent Power Producers (IPPs) primarily relate to volatile commodity prices for power, natural gas, and coal. Risks to IPPs also stem from load variability, and operational risk in running these facilities. Rising coal and, to a certain extent, uranium prices could pressure margins as the fuel hedges roll off Competitive Integrateds. Further, IPPs face declining revenues as in the money power and gas hedges roll off. Other non-regulated risks include weather and for some, foreign currency risk, which again must be diligently accounted in the company's risk management operations. Major external factors, which affect our valuation, are environmental risks. Environmental capex could escalate if stricter emission standards are implemented. We believe a nuclear accident or a change in the Nuclear Regulatory Commission/Environment Protection Agency regulations could have a negative impact on our estimates.

Risks for regulated utilities include the uncertainty around the composition of state regulatory Commissions, adverse regulatory changes, unfavorable weather conditions, variance from normal population growth, and changes in customer mix. Changes in macroeconomic factors will affect customer additions/subtractions and usage patterns.

Solar sector risks include : 1)Solar panel and other input pricing is subject to ongoing price deflation, which affects economics of downstream projects and margins of upstream producers. 2) Government incentives being added or removed have had a disproportionate effect on demand in the past, and may continue to 3) reliance on power purchase agreements in electricity markets could make future contracts more difficult to sign 4) solar power is directly competing with other traditional generators as well as other renewables like wind, which creates uncertainty as wholesale power markets shift 5)Headline risk and policy risk continue to shift economics in countries as trade policies and changes to other key policies affect solar economics.

Risks to our PPL Corporation investment thesis include but are not limited to: a negative change in demand for power in the domestic and international delivery operations, adverse political, environmental, or regulatory events regarding the domestic operations or in countries where the company has operations, higher fuel costs, operating cost inflation, inability to complete construction projects on-time and within budget, change in US or UK tax policies, higher emission allowance costs, scrubber availability, and changes in foreign currency exchange rates. Valuation is based on sum-of-the-parts analysis.

Risks to our TerraForm Power investment thesis include but are not limited to: 1) corporate conduct as many board members are also on SunEdison's board; 2) contract risks as contracted assets comprise all of the portfolio; 3) reliance on wind power could create variability in generation output and thus potentially negatively affect earnings and distributions; 4) inability to access the capital markets on attractive terms; 5) declines in commodity prices; 7) adverse political/legal/regulatory changes; 8) negative outcome from the audit over the financial statements and internal controls; 9) liquidity and failure to meet liabilities and other obligations as due, 10) SunEdison's liquidity and failure to meet liabilities and other obligations as due; 11) potential liabilities from Vivint Solar and other contemplated M&A transactions; 12) natural disasters; 13) inability to re- contract assets after contract expiration; 14) acceleration of obligations based upon SEC filings not being made in timely manner; 15) increase in required capital expenditures; 16) change in dividend policy; 17) delisting of common shares; 18) other risks discussed in the note; and 19) and other unforeseen changes. TERP valuation is based on discounted cash flow analysis.

Risks to our AES Corporation investment thesis include but are not limited to: weather; weak wholesale power prices; economic downturn in its regulated service

territories; interest rate risks; negative regulatory decisions for both its regulated and merchant subsidiaries; and disruption of trading activity in power markets. The company is also exposed to risks from its international operations including adverse changes in foreign exchange rates; international regulations; and economic, social and political instability. Its United States Generation business is exposed to unfavorable regulatory developments from the FERC and state utility commissions. Further, AES is subject to stringent environmental laws and regulations by federal, regional, state and local authorities, international treaties and foreign government authorities. Its business remains exposed to commodity, power and capacity price volatility. Valuation is based on sum-of-the-parts analysis.

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Buy	FSR is > 6% above the MRA.	49%	32%
Neutral	FSR is between -6% and 6% of the MRA.	38%	26%
Sell	FSR is > 6% below the MRA.	14%	19%
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Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%
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Source: UBS. Rating allocations are as of 31 March 2016.
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Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
AES Corporation[16]	AES.N	Neutral	N/A	US$12.10	23 Jun 2016
PPL Corporation[2, 4, 5, 6a, 6b, 7, 16]	PPL.N	Buy	N/A	US$39.44	23 Jun 2016
TerraForm Power, Inc.[2, 4, 6a, 16]	TERP.O	Sell	N/A	US$9.13	23 Jun 2016

Source: UBS. All prices as of local market close.
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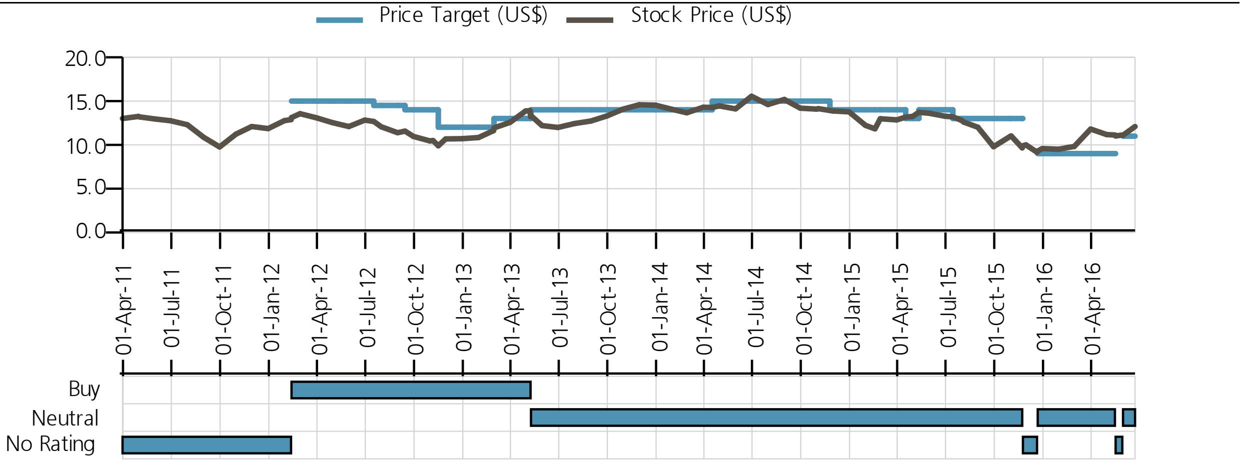

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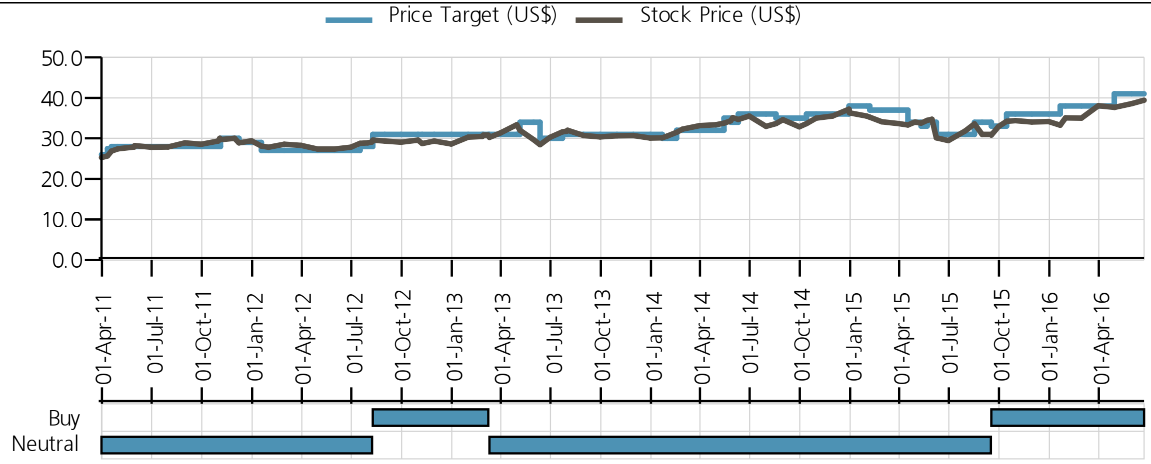
PPL Corporation (US$)



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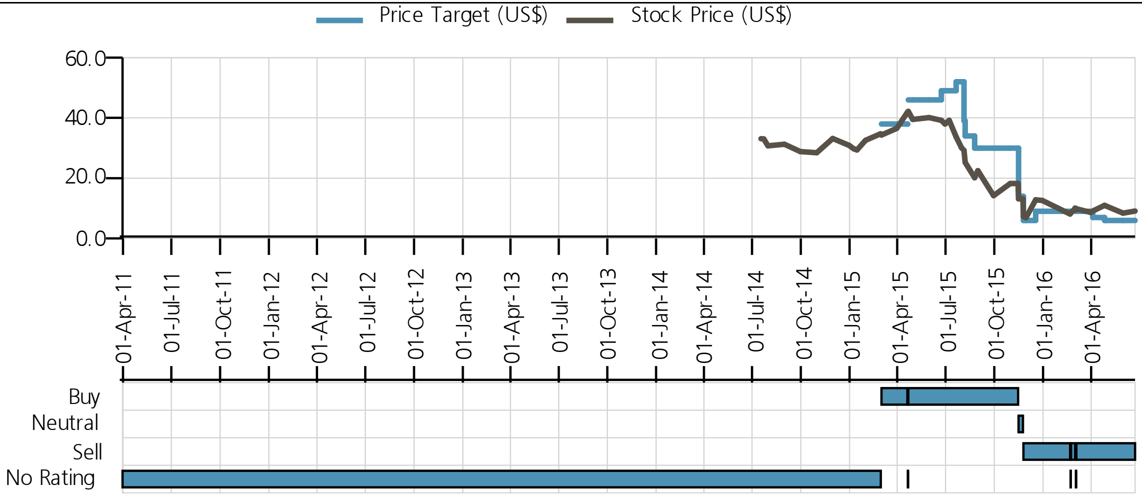
TerraForm Power, Inc. (US$)



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