VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Daniel K. Arbough**, being duly sworn, deposes and says that he is Treasurer for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Daniel K. Arbough

Daniel K. Arbough

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 15th day of February 2019.

Judy Schooler

Notary Public

My Commission Expires:

Judy Schooler
Notary Public, ID No. 603967
State at Large, Kentucky
Commission Expires 7/11/2022

KENTUCKY UTILITIES COMPANY

February 15, 2019 Supplemental Response to First Request for Information of the U. S. Department of Defense Dated November 13, 2018

Case No. 2018-00294

Question No. 3

Responding Witness: Daniel K. Arbough / Adrien M. McKenzie

Q-3. Please provide copies of all publications and credit reports referenced in or considered by witnesses Mr. McKenzie and Mr. Arbough. This is an ongoing request for all subsequent testimonies filed by these witnesses.

A-3. **Original Response:**

See Exhibit DKA-3 of Mr. Arbough's Direct Testimony (Moody's Rating Methodology, Regulated Electric and Gas Utilities, dated June 23, 2017).

See Exhibit DKA-4 of Mr. Arbough's Direct Testimony (S&P Corporate Methodology and Key Credit Factors for the Regulated Utilities Industry, dated November 19, 2013).

See Exhibit DKA-5 of Mr. Arbough's Direct Testimony (Moody's Outlook on Utility Industry, dated June 18, 2018).

With the exception of court and regulatory decision and publications of federal agencies, which are publicly available from the respective sources, copies of all publications and source documents cited in Mr. McKenzie's testimony are attached.

February 6, 2019 Supplemental Response:

Attached is a recent rating action report issued by Moody's Investors Service and is supplemental information being provided by Mr. Arbough.

February 15, 2019 Supplemental Response:

Attachment 1 and Attachment 2 are recent rating action reports issued by Standard & Poor's Financial Services and are supplemental information being provided by Mr. Arbough.

S&P Global
Ratings

RatingsDirect®

Kentucky Utilities Co.

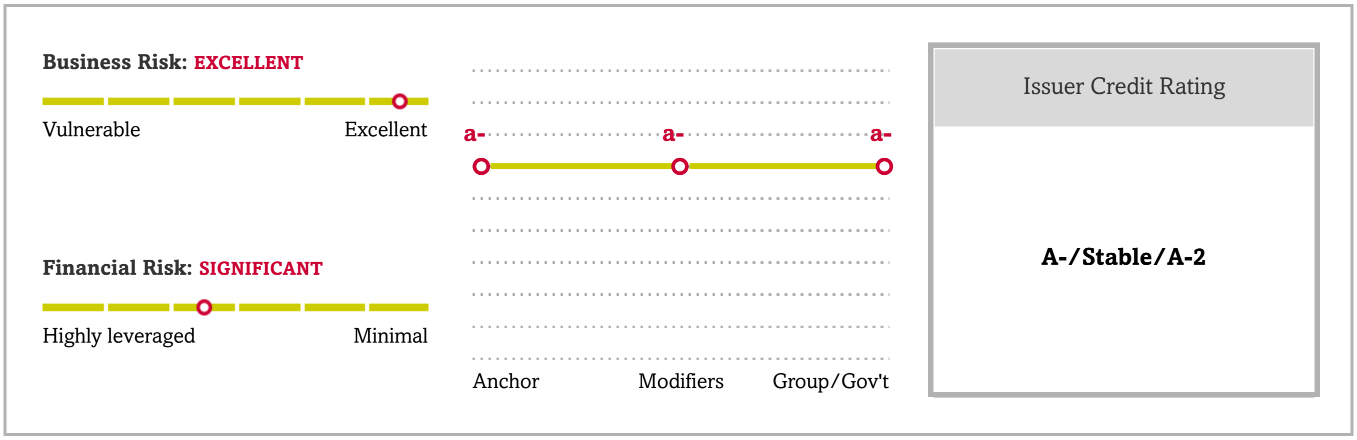
Primary Credit Analyst:
Gerrit W Jepsen, CFA, New York (1) 212-438-2529; gerrit.jepsen@spglobal.com

Secondary Contacts:
William Hernandez, New York + 1 (212) 438 9132; william.hernandez@spglobal.com
Evan Harris, New York + 1 (212) 438 2157; evan.harris@spglobal.com

Table Of Contents

Table Of Contents (cont.)

Kentucky Utilities Co.



Credit Highlights

Overview

Key strengths	Key risks
Fully regulated vertically integrated electric utility.	Limited geographic diversity and relatively small customer base.
Constructive and credit supportive regulatory framework.	Moderate operational and environmental risk relating to coal-fired generation.
Strengthening financial measures in 2019 benefiting from various cost recovery mechanisms.	Negative discretionary cash flow, in part reflecting greater capital spending.

Kentucky Utilities Co. (KU) operates under credit-supportive framework. Kentucky has a constructive regulatory framework that provides for the timely recovery of approved capital expenditures, as well as pass-through fuel cost mechanisms and various operating expenses recoveries.

Debt leverage remains modest for regulated utilities overall. Over the next few years, debt leverage, as indicated by debt to EBITDA, is expected to remain in the mid- to high-3x range, modest for regulated utilities, in part from timely cost recovery.

Capital spending has remained elevated as a result of environmental compliance. The company has had higher capital spending to comply with the Environmental Protection Agency's (EPA's) Clean Air Act rules for coal combustion waste and byproducts created through coal-fired generation. KU is entitled to cost recovery through an environmental cost recovery mechanism.

Outlook: Stable

The stable rating outlook on KU reflects S&P Global Ratings' outlook on its parent, PPL Corp. (PPL).

This stable outlook over the next 24 months is based on the company's excellent business risk profile, which we view to be at the upper end of the range, and significant financial risk profile, which is at the lower end of the range. Under our base-case scenario, we expect that adjusted funds from operations (FFO) to debt will range from 13%-14%, while adjusted debt to EBITDA will remain elevated at over 5x.

Downside scenario

We could lower the ratings over the next 24 months on PPL and its subsidiaries if core credit ratios weakened enough that adjusted FFO to debt fell below 13% on a consistent basis while still at the current level of business risk.

Upside scenario

Given our assessment of business risk and our base-case scenario for financial performance, we do not anticipate higher ratings on PPL and its subsidiaries during the outlook period. However, higher ratings would largely depend on PPL consistently achieving FFO to debt of more than 18% over the next 12-18 months, while maintaining the current level of business risk.

Our Base-Case Scenario

Assumptions

- Gross margin growth in 2019 driven by modest volume growth and ongoing rate recovery for capital spending including on environmental-compliance equipment;
- High average capital spending of $585 million per year for upgrading generation infrastructure to meet environmental standards and for improvements to transmission and distribution assets; and
- All debt maturities refinanced.

Key Metrics

	2018E	2019E	2020E
Adjusted FFO to debt (%)	19-21	19-21	21-23
Adjusted FFO cash interest coverage (X)	6.7-7.3	6.5-7.1	7.2-7.8
Adjusted debt to EBITDA	3.6-4.0	3.6-4.0	3.2-3.6

E--Estimate. FFO--Funds from operations.

Base-case projections

- After dividends and elevated capital spending, discretionary cash flow that is negative will be largely debt funded.
- Adjusted FFO to debt around 20%, but improving over time after incremental cost recovery; and

- Debt leverage, as indicated by debt to EBITDA, remains in the 3x-4x area.

Company Description

KU is a vertically integrated electric utility providing service to about 550,000 customers that are mostly in Kentucky.

Business Risk: Excellent

We assess KU's business risk profile based on the company's regulated integrated utility operations under Kentucky's generally constructive regulatory framework, which provides for the timely recovery of approved capital expenditures.

KU has moderate scale with 550,000 customers and limited geographic diversity since it operates almost entirely in Kentucky. The customer mix is mostly residential and commercial, which can insulate the company from fluctuations in electricity demand and also supports relatively stable operating cash flow.

The company has generation capacity of about 5,000 megawatts, including sizeable coal-fired capacity. However, KU has been upgrading its coal units to comply with environmental regulations. KU can recover the costs for these upgrades through an environmental cost recovery mechanism, which limits regulatory lag and supports the credit profile. Under Kentucky Public Service Commission regulation, the company benefits from other recovery mechanisms such as a pass-through fuel cost and a purchased power cost recovery rider. These mechanisms help stabilize the company's operating cash flow. Moreover, the company's low-cost, coal-fired generation and efficient operations contribute to competitive rates for customers.

Peer comparison

KU is in line with peers such as Kentucky Power, Appalachian Power, and Louisville Gas & Electric (LG&E) given the similar coal-fired generation profiles and environmental compliance spending obligations. KU has approximately 550,000 customers, which compares more favorably to Kentucky Power (which has 170,000) and LG&E (which has 400,000, but it is smaller than Appalachian Power, which has one million customers. Kentucky Power has greater industrial customer exposure with about one-half of energy sales coming from industrial customers. Whereas KU benefits from a higher level of residential and commercial customers, which contributes to steadier cash flows. All companies use regulatory mechanisms to recover environmental spending costs, pass through fuel costs, and for purchased power cost recovery. The mechanisms contribute to more robust operating cash flow and more predictable returns.

Table 2

Peer Metrics

	Kentucky Utilities Co.	Kentucky Power Co.	Appalachian Power Co.	Louisville Gas & Electric
Long-term (foreign currency)	A-/Stable	A-/Stable	A-/Stable	A-/Stable
Short-term (foreign currency)	A-2		A-2	A-2
Business risk profile	Excellent	Strong	Excellent	Excellent
Financial risk profile	Significant	Significant	Significant	Significant
Anchor	a-	bbb	a-	a-

Table 2

Peer Metrics (cont.)				
	Kentucky Utilities Co.	**Kentucky Power Co.**	**Appalachian Power Co.**	**Louisville Gas & Electric**
Capital structure	Neutral	Neutral	Neutral	Neutral
Liquidity	Adequate	Adequate	Adequate	Adequate
Financial policy	Neutral	Neutral	Neutral	Neutral
Management/governance	Satisfactory	Satisfactory	Satisfactory	Satisfactory
Comparable rating analysis	Neutral	Neutral	Neutral	Neutral
Stand-alone credit profile	a-	a-	a-	a-
GRM adjustment	0	+2	0	0
Issuer credit rating	A-	A-	A-	A-

GRM--Group rating methodology.

Table 2

Peer Comparison				
Industry sector: electric				
	Kentucky Utilities Co.	**Kentucky Power Co.**	**Appalachian Power Co.**	**Louisville Gas & Electric Co.**
Rating as of Jan. 15, 2019	A-/Stable/A-2	A-/Stable/--	A-/Stable/A-2	A-/Stable/A-2
	--Fiscal year ended Dec. 31, 2017--			
(Mil. $)				
Revenues	1,744.0	642.8	2,901.9	1,453.0
EBITDA	808.8	185.2	1,085.2	650.4
FFO	683.6	145.4	868.2	551.9
Net income from continuing operations	259.0	35.2	331.3	213.0
Cash flow from operations	647.1	134.6	874.8	537.2
Capital expenditures	432.5	94.5	812.8	459.2
Free operating cash flow	214.6	40.1	62.0	78.0
Discretionary cash flow	(11.4)	5.1	(58.0)	(114.0)
Cash and short-term investments	15.0	0.9	2.9	15.0
Debt	2,728.4	934.7	4,152.6	2,154.8
Equity	3,357.0	670.3	3,804.5	2,527.0
Adjusted ratios				
EBITDA margin (%)	46.4	28.8	37.4	44.8
Return on capital (%)	7.2	4.6	7.1	7.6
EBITDA interest coverage (x)	6.9	3.8	5.4	7.2
FFO cash interest coverage (X)	8.7	4.4	5.7	9.9
Debt/EBITDA (x)	3.4	5.0	3.8	3.3
FFO/debt (%)	25.1	15.6	20.9	25.6
Cash flow from operations/debt (%)	23.7	14.4	21.1	24.9
Free operating cash flow/debt (%)	7.9	4.3	1.5	3.6

Table 2

Peer Comparison (cont.)

Industry sector: electric

	Kentucky Utilities Co.	Kentucky Power Co.	Appalachian Power Co.	Louisville Gas & Electric Co.
Discretionary cash flow/debt (%)	(0.4)	0.5	(1.4)	(5.3)

FFO--Funds from operations.

Financial Risk: Significant

Under our base-case scenario, we project that KU's adjusted FFO to debt will be in the 19%-21% range, near the upper end the benchmark range. Bolstering the financial risk profile determination is the supplemental ratio of adjusted FFO cash interest coverage in the 6.5x-7.5x range. Over the next few years, we expect credit measures to benefit from the use of regulatory mechanisms to recover its invested capital cost. We expect continued capital spending averaging $585 million per year, when combined with the utility's dividend, will result in discretionary cash flow that is negative. To offset the negative cash flow, we expect external funding such as debt issuances and cash injections within the PPL group. We do expect debt leverage to be relatively modest for a regulated utility as indicated by debt to EBITDA averaging about 3.5x over the next few years.

We assess KU's financial risk profile as significant using our medial table financial benchmarks, which are more moderate than the typical corporate issuer, accounting for the company's low-risk regulated electric utility operations, steady cash flow, and effective regulatory risk management.

Table 3

Financial Summary

Industry sector: electric

	--Fiscal year ended Dec. 31--				
	2017	2016	2015	2014	2013
Rating history	A-/Stable/A-2	A-/Stable/A-2	A-/Stable/A-2	BBB/Watch Pos/A-2	BBB/Stable/A-2
(Mil. $)					
Revenues	1,744.0	1,749.0	1,728.0	1,737.0	1,635.0
EBITDA	808.8	807.3	719.4	662.2	651.1
FFO	683.6	648.0	637.9	658.3	500.8
Net income from continuing operations	259.0	265.0	234.0	220.0	228.0
Cash flow from operations	647.1	616.3	612.8	566.5	515.4
Capital expenditures	432.5	350.5	519.4	604.0	855.0
Free operating cash flow	214.6	265.8	93.4	(37.5)	(339.6)
Discretionary cash flow	(11.4)	17.8	(59.6)	(185.5)	(463.6)
Cash and short-term investments	15.0	7.0	11.0	11.0	21.0
Debt	2,728.4	2,725.1	2,777.7	2,604.3	2,457.7
Equity	3,357.0	3,323.0	3,287.0	3,206.0	3,044.0

Kentucky Utilities Co.

Table 3

Financial Summary (cont.)					
Industry sector: electric					
	--Fiscal year ended Dec. 31--				
	2017	**2016**	**2015**	**2014**	**2013**
Adjusted ratios					
EBITDA margin (%)	46.4	46.2	41.6	38.1	39.8
Return on capital (%)	7.2	7.5	6.9	7.0	7.7
EBITDA interest coverage (x)	6.9	6.6	6.9	6.8	8.1
FFO cash interest coverage (x)	8.7	8.6	9.9	10.3	9.5
Debt/EBITDA (x)	3.4	3.4	3.9	3.9	3.8
FFO/debt (%)	25.1	23.8	23.0	25.3	20.4
Cash flow from operations/debt (%)	23.7	22.6	22.1	21.8	21.0
Free operating cash flow/debt (%)	7.9	9.8	3.4	(1.4)	(13.8)
Discretionary cash flow/debt (%)	(0.4)	0.7	(2.1)	(7.1)	(18.9)

FFO--Funds from operations.

Liquidity: Adequate

We assess KU's standalone liquidity as adequate because we believe its liquidity sources will likely cover uses by more than 1.1x over the next 12 months and meet cash outflows even if EBITDA declines 10%. We view KU as having sound bank relationships, the ability to absorb high-impact, low probability events without the need for refinancing, and a satisfactory standing in credit markets.

Principal Liquidity Sources	Principal Liquidity Uses
• Cash and liquid investments of about $30 million • Revolving credit facility availability of $400 million • Estimated cash FFO of $615 million	• Debt maturities of about $95 million • Capital spending of about $475 million • Dividends of $230 million

Debt maturities

- 2019: $96 million
- 2020: $500 million
- 2021: $0 million
- 2022: $0 million

Covenant Analysis

Compliance expectations

As of Sept. 30, 2018, KU was in compliance with the financial covenants in its credit facilities and had sufficient cushion. Under our base-case scenario, we expect KU will remain in compliance with these covenants, especially given the stability of regulated utility operations. We expect that even if forecast EBITDA declined 10% the company would remain in compliance with the covenants.

Requirements

- Total debt-to-capitalization ratio of 70% or less.
- The covenant thresholds remain unchanged through the credit facility's expiration in January of 2023.

Environmental, Social, And Governance

Environmental factors are material in our rating analysis, while social and governance factors are not.

Most of the total generation capacity--about 5,000 megawatts--is coal-fired, representing an environmental risk factor. By 2050, PPL intends to reduce its carbon footprint by 70%. In Kentucky, the company is seeking a green energy tariff that would help grow renewable energy. The company expects to replace much of its coal-based generation with a combination of natural gas and renewables.

Social factors are neutral to our ESG assessment and are consistent with what we see across the industry for other publicly traded utilities. By pursuing greater renewable generation, the company is meeting customer demand for greener energy. Governance factors are also neutral to our ESG assessment and its governance practices are consistent with what we see across the industry for other publicly traded utilities.

Group Influence

Under our group rating methodology we consider KU a core subsidiary of parent PPL, reflecting our view that KU is unlikely to be sold, is integral to the group's overall strategy, possesses a strong long-term commitment from senior management, and is closely linked to the parent's name and reputation. As a result, the issuer credit rating on KU is 'A-', in line with the group credit profile of 'a-'.

Issue Ratings - Subordination Risk Analysis

The short-term rating on KU is 'A-2', based on the issuer credit rating.

Issue Ratings - Recovery Analysis

Key analytical factors

KU's first-mortgage bonds benefit from a first-priority lien on substantially all of the utility's real property, owned or subsequently acquired. Collateral coverage of over 1.5x supports a recovery rating of '1+' and an issue rating one notch above the issuer credit rating.

Reconciliation

Table 4

Reconciliation Of Kentucky Utilities Co. Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. $)

	--Rolling 12 months ended Sept. 30, 2018--									
Kentucky Utilities Co. reported amounts.										
	Debt	**Shareholders' equity**	**Revenues**	**EBITDA**	**Operating income**	**Interest expense**	**EBITDA**	**Cash flow from operations**	**Dividends paid**	**Capital expenditures**
	2,448	3,431	1,773	758	483	98	758	618	251	554
S&P Global Ratings' adjustments										
Interest expense (reported)	--	--	--	--	--	--	(98)	--	--	--
Interest income (reported)	--	--	--	--	--	--	--	--	--	--
Current tax expense (reported)	--	--	--	--	--	--	(25)	--	--	--
Operating leases	33	--	--	10	2	2	7	7	--	--
Postretirement benefit obligations/deferred compensation	54	--	--	3	3	1	1	(0)	--	--
Surplus cash	(18)	--	--	--	--	--	--	--	--	--
Power purchase agreements	32	--	--	3	2	2	0	0	--	0
Asset retirement obligations	166	--	--	11	11	11	(3)	20	--	--
Nonoperating income (expense)	--	--	--	--	1	--	--	--	--	--
Debt - accrued interest not included in reported debt	37	--	--	--	--	--	--	--	--	--
Debt - issuance cost	14	--	--	--	--	--	--	--	--	--
EBITDA - other income/(expense)	--	--	--	4	4	--	4	--	--	--
EBITDA - other	--	--	--	(1)	(1)	--	(1)	--	--	--
D&A - other	--	--	--	--	(4)	--	--	--	--	--
Interest expense - other	--	--	--	--	--	2	(2)	--	--	--
Total adjustments	318	0	0	29	18	19	(116)	27	0	0

Table 4

Reconciliation Of Kentucky Utilities Co. Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. $) (cont.)

S&P Global Ratings' adjusted amounts

	Debt	Equity	Revenues	EBITDA	EBIT	Interest expense	Funds from Operations	Cash flow from operations	Dividends paid	Capital expenditures
	2,766	3,431	1,773	787	501	117	642	645	251	554

D&A--Depreciation and amortization.

Ratings Score Snapshot

Issuer Credit Rating

A-/Stable/A-2

Business risk: Excellent

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Strong

Financial risk: Significant

- **Cash flow/Leverage:** Significant

Anchor: a-

Modifiers

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Neutral (no impact)

Stand-alone credit profile : a-

- **Group credit profile:** a-
- **Entity status within group:** Core (no impact)

Related Criteria

- Criteria - Corporates - General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers,

Dec. 16, 2014

- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria - Corporates - Utilities: Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Criteria - Insurance - General: Hybrid Capital Handbook: September 2008 Edition, Sept. 15, 2008

Business And Financial Risk Matrix

	Financial Risk Profile					
Business Risk Profile	Minimal	Modest	Intermediate	**Significant**	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	**a-**	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

Ratings Detail (As Of February 8, 2019)

Kentucky Utilities Co.	
Issuer Credit Rating	A-/Stable/A-2
Commercial Paper	
Local Currency	A-2
Senior Secured	A
Issuer Credit Ratings History	
01-Jun-2015	A-/Stable/A-2
10-Jun-2014	BBB/Watch Pos/A-2
15-Apr-2011	BBB/Stable/A-2
Related Entities	
LG&E and KU Energy LLC	
Issuer Credit Rating	A-/Stable/--
Senior Unsecured	BBB+

Ratings Detail (As Of February 8, 2019) (cont.)	
Louisville Gas & Electric Co.	
Issuer Credit Rating	A-/Stable/A-2
Commercial Paper	
Local Currency	A-2
Senior Secured	A
PPL Capital Funding Inc.	
Issuer Credit Rating	A-/Stable/A-2
PPL Corp.	
Issuer Credit Rating	A-/Stable/A-2
PPL Electric Utilities Corp.	
Issuer Credit Rating	A-/Stable/A-2
Commercial Paper	
Local Currency	A-2
Senior Secured	A
Western Power Distribution (East Midlands) PLC	
Issuer Credit Rating	A-/Stable/A-2
Senior Unsecured	A-
Western Power Distribution PLC	
Issuer Credit Rating	A-/Stable/A-2
Senior Unsecured	BBB+
Western Power Distribution (South Wales) PLC	
Issuer Credit Rating	A-/Stable/A-2
Senior Unsecured	A-
Western Power Distribution (South West) PLC	
Issuer Credit Rating	A-/Stable/A-2
Senior Unsecured	A-
Western Power Distribution (West Midlands) PLC	
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*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

S&P Global
Ratings

RatingsDirect®

Summary:
Kentucky Utilities Co.

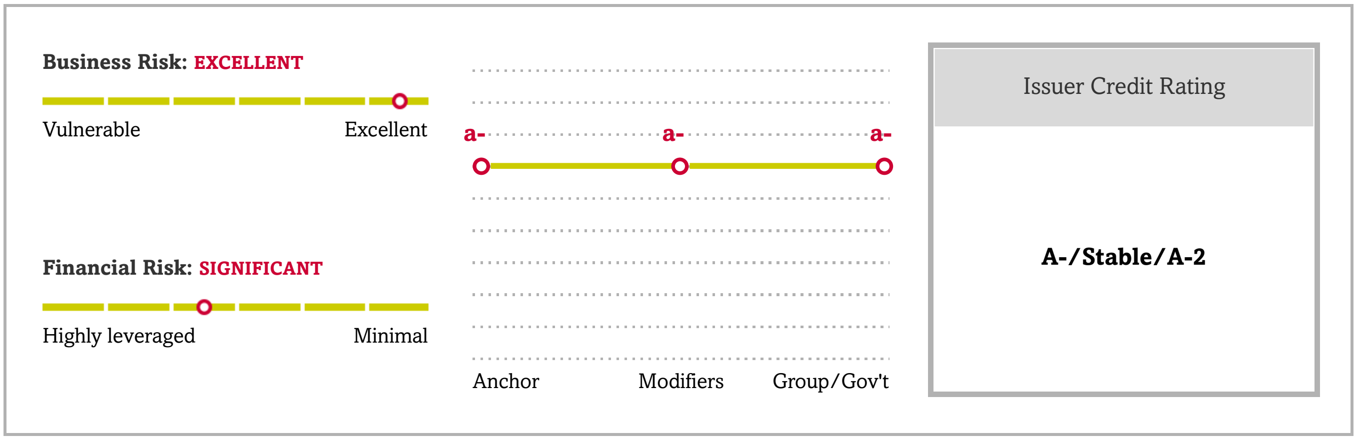
Primary Credit Analyst:
Gerrit W Jepsen, CFA, New York (1) 212-438-2529; gerrit.jepsen@spglobal.com

Secondary Contacts:
William Hernandez, New York + 1 (212) 438 9132; william.hernandez@spglobal.com
Evan Harris, New York + 1 (212) 438 2157; evan.harris@spglobal.com

Table Of Contents

Summary:

Kentucky Utilities Co.



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We assess KU's business risk profile based on the company's regulated integrated utility operations under Kentucky's generally constructive regulatory framework, which provides for the timely recovery of approved capital expenditures.

KU has moderate scale with 550,000 customers and limited geographic diversity since it operates almost entirely in Kentucky. The customer mix is mostly residential and commercial, which can insulate the company from fluctuations in electricity demand and also supports relatively stable operating cash flow.

The company has generation capacity of about 5,000 megawatts, including sizeable coal-fired capacity. However, KU has been upgrading its coal units to comply with environmental regulations. KU can recover the costs for these upgrades through an environmental cost recovery mechanism, which limits regulatory lag and supports the credit profile. Under Kentucky Public Service Commission regulation, the company benefits from other recovery mechanisms such as a pass-through fuel cost and a purchased power cost recovery rider. These mechanisms help stabilize the company's operating cash flow. Moreover, the company's low-cost, coal-fired generation and efficient operations contribute to competitive rates for customers.

Peer comparison

KU is in line with peers such as Kentucky Power, Appalachian Power, and Louisville Gas & Electric (LG&E) given the similar coal-fired generation profiles and environmental compliance spending obligations. KU has approximately 550,000 customers, which compares more favorably to Kentucky Power (which has 170,000) and LG&E (which has 400,000, but it is smaller than Appalachian Power, which has one million customers. Kentucky Power has greater industrial customer exposure with about one-half of energy sales coming from industrial customers. Whereas KU benefits from a higher level of residential and commercial customers, which contributes to steadier cash flows. All companies use regulatory mechanisms to recover environmental spending costs, pass through fuel costs, and for purchased power cost recovery. The mechanisms contribute to more robust operating cash flow and more predictable returns.

Financial Risk: Significant

Under our base-case scenario, we project that KU's adjusted FFO to debt will be in the 19%-21% range, near the upper end the benchmark range. Bolstering the financial risk profile determination is the supplemental ratio of adjusted FFO cash interest coverage in the 6.5x-7.5x range. Over the next few years, we expect credit measures to benefit from the use of regulatory mechanisms to recover its invested capital cost. We expect continued capital spending averaging $585 million per year, when combined with the utility's dividend, will result in discretionary cash flow that is negative.

To offset the negative cash flow, we expect external funding such as debt issuances and cash injections within the PPL group. We do expect debt leverage to be relatively modest for a regulated utility as indicated by debt to EBITDA averaging about 3.5x over the next few years.

We assess KU's financial risk profile as significant using our medial table financial benchmarks, which are more moderate than the typical corporate issuer, accounting for the company's low-risk regulated electric utility operations, steady cash flow, and effective regulatory risk management.

Liquidity: Adequate

We assess KU's standalone liquidity as adequate because we believe its liquidity sources will likely cover uses by more than 1.1x over the next 12 months and meet cash outflows even if EBITDA declines 10%. We view KU as having sound bank relationships, the ability to absorb high-impact, low probability events without the need for refinancing, and a satisfactory standing in credit markets.

Principal Liquidity Sources	Principal Liquidity Uses
• Cash and liquid investments of about $30 million • Revolving credit facility availability of $400 million • Estimated cash FFO of $615 million	• Debt maturities of about $95 million • Capital spending of about $475 million • Dividends of $230 million

Debt maturities

- 2019: $96 million
- 2020: $500 million
- 2021: $0 million
- 2022: $0 million

Covenant Analysis

Compliance expectations

As of Sept. 30, 2018, KU was in compliance with the financial covenants in its credit facilities and had sufficient cushion. Under our base-case scenario, we expect KU will remain in compliance with these covenants, especially given the stability of regulated utility operations. We expect that even if forecast EBITDA declined 10% the company would remain in compliance with the covenants.

Requirements

- Total debt-to-capitalization ratio of 70% or less.
- The covenant thresholds remain unchanged through the credit facility's expiration in January of 2023.

Environmental, Social, And Governance

Environmental factors are material in our rating analysis, while social and governance factors are not.

Most of the total generation capacity--about 5,000 megawatts--is coal-fired, representing an environmental risk factor. By 2050, PPL intends to reduce its carbon footprint by 70%. In Kentucky, the company is seeking a green energy tariff that would help grow renewable energy. The company expects to replace much of its coal-based generation with a combination of natural gas and renewables.

Social factors are neutral to our ESG assessment and are consistent with what we see across the industry for other publicly traded utilities. By pursuing greater renewable generation, the company is meeting customer demand for greener energy. Governance factors are also neutral to our ESG assessment and its governance practices are consistent with what we see across the industry for other publicly traded utilities.

Group Influence

Under our group rating methodology we consider KU a core subsidiary of parent PPL, reflecting our view that KU is unlikely to be sold, is integral to the group's overall strategy, possesses a strong long-term commitment from senior management, and is closely linked to the parent's name and reputation. As a result, the issuer credit rating on KU is 'A-', in line with the group credit profile of 'a-'.

Issue Ratings - Subordination Risk Analysis

The short-term rating on KU is 'A-2', based on the issuer credit rating.

Issue Ratings - Recovery Analysis

Key analytical factors

KU's first-mortgage bonds benefit from a first-priority lien on substantially all of the utility's real property, owned or subsequently acquired. Collateral coverage of over 1.5x supports a recovery rating of '1+' and an issue rating one notch above the issuer credit rating.

Ratings Score Snapshot

Issuer Credit Rating

A-/Stable/A-2

Business risk: Excellent

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Strong

Financial risk: Significant

- **Cash flow/Leverage:** Significant

Anchor: a-

Modifiers

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Neutral (no impact)

Stand-alone credit profile : a-

- **Group credit profile:** a-
- **Entity status within group:** Core (no impact)

Related Criteria

- Criteria - Corporates - General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria - Corporates - Utilities: Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

- Criteria - Insurance - General: Hybrid Capital Handbook: September 2008 Edition, Sept. 15, 2008

Business And Financial Risk Matrix

Business Risk Profile	Financial Risk Profile					
	Minimal	Modest	Intermediate	**Significant**	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	**a-**	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-