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CREDIT OPINION
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Update

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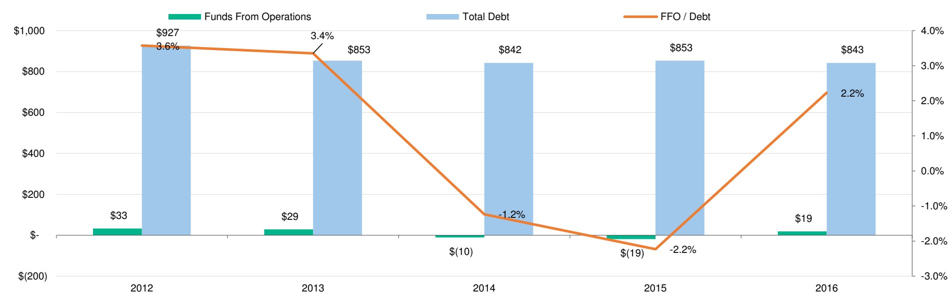
Big Rivers Electric Corporation

Update following outlook change to positive

Summary

Big Rivers Electric Corporation (Big Rivers, Ba2 positive) has good prospects for achieving stronger financial metrics that is providing positive momentum for the cooperative's credit quality despite its substantial excess generation capacity, which represents a primary credit constraint along with execution risk while management further implements its load loss mitigation strategies. Big Rivers is demonstrating a good track record since 2013 to combat the significant load loss. For example, sizable rate increases approved by the Kentucky Public Service Commission (KPSC) and cost saving initiatives, among other steps are helping to compensate for the load loss and maintain the cooperative's viable financial performance. The regulatory support should help its funds from operations (FFO) coverage of interest and debt strengthen over the next 12-18 months closer to 4% and 2.0x, respectively, compared to 2.2% and 1.5x, respectively, for FY 2016, and should result in the utility being free cash flow positive for the next three years. Big Rivers maintains ample liquidity with a $130 million bank line which supplements internal cash flow generation.

Exhibit 1
Historical FFO, Total Debt and FFO to Total Debt
($ in millions)



Source: Moody's Financial Metrics

Credit Strengths

- » Contracted sales of some excess capacity and energy beginning in 2018-19
- » Expected increase in net margins, no patronage capital returns to members and routine capital spending should drive free cash flow and contribute to debt reduction
- » Regulatory support for base rate increases, a variable cost adjustment mechanism and an environmental cost surcharge provide support for timely recovery of costs of service
- » Revenues from electricity sold to rural residential and other non-smelter customers under long term wholesale power contracts with three member owners through 2043
- » Ownership of generally competitive coal-fired generation plants

Credit Challenges

- » Bill credits have expired and the full impact of approved increases to members' wholesale power rate has increased retail rates for members' customers
- » Need for future cost recovery of regulatory assets resulting from ongoing deferral of depreciation expense associated with certain coal-fired generation assets
- » Significant excess of mostly coal-fired, carbon-emitting, owned generation capacity while awaiting more clarity on future environmental regulations
- » Finding additional market opportunities to sell significant excess capacity
- » Local economic dependence on industrial activity, including two aluminum smelters

Rating Outlook

The positive rating outlook reflects good progress in implementing load concentration mitigation strategies, the most critical ones being the credit supportive rate case outcomes at the KPSC and better than expected success in selling excess energy and capacity off system in the Midcontinent Independent System Operator (MISO) and other markets at good margins. The outlook also considers that rate relief and expected benefits from contracts to sell energy and capacity beginning in 2018-19 should produce increases in operating margins and cash flow to drive free cash flow and debt reduction. The positive outlook also incorporates our view that the smelters will continue to operate, thereby providing support for the local economy, including employment levels, and that Big Rivers will continue to pursue additional long-term contracts for the sale of its excess capacity beyond those already in place.

Factors that Could Lead to an Upgrade

- » A rating upgrade is possible within 12-18 months if FFO coverage of interest and debt move closer to 2.0x and 4%, respectively and the debt service coverage ratio keeps tracking close to 1.2x
- » Credit supportive regulatory treatment remains intact and there is future support for cost recovery relating to regulatory assets
- » Achieving further successful results through other ongoing load concentration mitigation strategies (e.g., additional contracted sales of excess generating capacity)

Factors that Could Lead to a Downgrade

- » A rating downgrade is unlikely during the next 12-18 months owing to the positive rating outlook

» We could take a negative rating action if there was a shift to a less credit supportive regulatory environment and the bank line is not extended this year as anticipated

» A scenario under which either or both of the smelters discontinued operations would be credit negative owing to the potential residual negative effects on the local economy

» The likelihood of a negative rating action would increase if full and timely recovery of environmental compliance costs and increasing regulatory assets does not occur as anticipated under the KPSC approved environmental cost recovery mechanism and future rate proceedings, especially if such amounts increase substantially from currently anticipated levels

Key Indicators

Exhibit 2
Big Rivers Electric Corporation

	2012	2013	2014	2015	2016
Times Interest Earned Ratio (TIER)	1.3x	1.5x	1.6x	1.3x	1.1x
DSC (Debt Service Coverage)	0.9x	0.8x	1.5x	1.2x	1.2x
FFO / Debt	3.6%	3.4%	-1.2%	-2.2%	2.2%
(FFO + Interest Expense) / Interest Expense	1.7x	1.7x	0.8x	0.5x	1.5x
Equity / Total Capitalization	30.3%	33.1%	34.9%	35.3%	36.2%

Source: Moody's Investors Service

Obligor Profile

Big Rivers is an electric generation and transmission cooperative headquartered in Henderson, Kentucky and owned by its three member system distribution cooperatives -- Jackson Purchase Energy Corporation; Kenergy Corp; and Meade County Rural Electric Cooperative Corporation. These member system cooperatives provide retail electric power and energy to more than 116,000 residential, commercial, and industrial customers in 22 Western Kentucky counties.

Detailed Credit Considerations

Contract terminations of two large aluminum smelters necessitates load concentration mitigtion plans; smelters continue to operate and provide residual benefits to the economy

Although Big Rivers now benefits from less exposure to customer and sales concentration with two previously volatile sources of revenue, it faces risks resulting from a sizable exposure to excess owned coal-fired generation capacity. Big Rivers' contracts with its largest customer, Century Aluminum of Kentucky (a subsidiary of Century Aluminum Company, which owns the Hawesville and Sebree smelters) historically made up roughly two-thirds of Big Rivers' annual energy sales and accounted for just under 60% of its system demand and in excess of 60% of annual revenues. Revenues which Big Rivers had been receiving from base energy charges paid by the smelters ended in August 2013 and January 2014 in the cases of the Hawesville and Sebree smelters, respectively.

Since canceling their respective contracts, both of the smelters continue to operate. We understand that the Hawesville smelter has only been operating at about 40% of its capacity for more than a year, while the Sebree smelter is at full production. When compared with the alternative scenario of having both smelters permanently shut down, this outcome is acceptable particularly since Big Rivers and Kenergy are being reimbursed for any incremental costs to their members of the smelters' continued operation and there are residual benefits to the local economy.

Following regulatory approvals from the KPSC in 2013 and 2014, Century continues to operate its Hawesville and Sebree smelters by purchasing electricity on the open market. Under an agreement that Big Rivers and Kenergy have with Century, Kenergy arranges with a third party for the energy purchases at wholesale market prices and Century pays the market price and additional amounts to cover any incremental costs incurred by Big Rivers and Kenergy to accommodate Century's desire to purchase energy on the market for the two smelters.

Rate case decisions by KPSC in 2013-14 and ongoing cost recovery mechanisms are credit positive factors

Credit supportive rate case decisions by the KPSC in October 2013 and April 2014, resulted in approval of a combined wholesale power rate increase of about $90.4 million. With the expiration of bill credits in 2016, the full effects of the wholesale power rate increases are now being fully borne by Big Rivers' members and, in turn, the members' retail customers. The rate increases are credit positive for Big Rivers because the incremental amounts are estimated to result in about 90% of Big Rivers' total gross margins coming from its members that have all requirements contracts in place through 2043. We expect that the current wholesale power rates will continue to support strengthened financial performance, ensure a degree of cushion for compliance with financial covenants and should allow for Big Rivers to further advance load concentration mitigation strategies.

Even though Big Rivers has substantial excess capacity owing to the large customer contract terminations, the KPSC made supportive comments in the rate orders about mitigation steps taken by Big Rivers and the commission clearly states its intent to ensure rates are sufficient to maintain Big Rivers' financial integrity. For example, the KPSC rates approved in the April 2014 order are designed to enable Big Rivers to achieve a 1.3 times interest earned ratio (TIER), a level that is 20 basis points higher than the 1.1x margins for interest (MFI), essentially the equivalent of TIER, required as defined under Big Rivers' indenture. The additional revenue amounts to support Big Rivers' TIER at 1.3x is credit positive because the amounts help to partially offset certain other cost items not covered by the approved rate increases, the most significant of which relate to deferrals of any recovery of depreciation costs relating to the 443 megawatt (MW) Coleman and 417 MW Wilson plants that are currently in excess of Big Rivers' needs at this time.

Another key credit supportive consideration is the KPSC's approval of accelerated use of the economic reserve, rural economic reserve and transmission revenue economic reserve accounts. Pursuant to the terms of the KPSC rate case decision in 2014, the restricted accounts were used in full to provide bill credits during 2014-16, which temporarily minimized the rate shock until September 2015 for large industrial/business (non-smelter) customers and August 2016 for rural (residential) customers.

In addition to the 2013 and 2014 rate increases approved by the KPSC, the existence of certain fuel and purchased power cost adjustment mechanisms and the existence of an environmental cost surcharge in rates are favorable to Big Rivers' credit profile since they can temper risk of cost recovery shortfalls if there is a mismatch relative to existing rate levels.

Overall credit positive impact from KPSC mandated independent management audit

As required by the KPSC in its April 2014 rate order, an independent consultant conducted a comprehensive management audit, with a particular focus on Big Rivers' load mitigation strategies, and a final action plan was issued in December 2015. The action plan is a credit positive since it incorporates a combination of many supportive or neutral findings about Big Rivers' past decisions and future plans, as well as five specific, seemingly manageable, recommendations. Of those five recommendations, four were already in process as of the report date, including those relating to increasing expertise regarding the MISO market, pursuing new energy sales and analyzing the best use of the currently idled Coleman plant. Two of the five action items have been closed by the KPSC, including an agreement that the recommendation of adding a new board member with energy expertise is not warranted and that Big Rivers was sufficiently pursuing new energy sales.

Big Rivers has added to staff resources focused on enhancing internal expertise in production cost and financial modeling to further leverage its association as a member of ACES and is far along in seeking amendments to its debt documents which would address any restrictions around the sale or early retirement of the Coleman plant. After analyzing the various options for its Coleman plant, Big Rivers determined that it is best to await further clarity around how future environmental regulations and power markets materialize before making a final decision on the Coleman plant. As Big Rivers moves forward in addressing the still open audit recommendations, it is required to report to the KPSC each six months from the completion of the report for two years and annually thereafter if necessary. Big Rivers has provided three reports to this point and anticipates filing its next report with the KPSC in October.

Good progress on other load mitigation strategies

Besides obtaining regulatory support for rate increases, Big Rivers' other load concentration mitigating strategies include securing long-term contracts for the sale of capacity and energy from its fleet to load serving municipal-distribution entities in Nebraska and Kentucky, temporarily idling generation, reducing staff, making short-term off system sales and participating in the capacity markets.

Big Rivers currently has three nine-year contracts to sell capacity and energy to three Nebraska entities. During July 2015, the KPSC approved the long-term power sales contracts which collectively will facilitate Big Rivers transmitting about 69 MWs to the Nebraska entities, with power beginning to flow in 2018 and reaching full output in 2022. Then in late July 2016 the cooperative announced a 10-year contract to transmit as much as 100 MWs from its Wilson Station to Kentucky Municipal Energy Agency (KyMEA), beginning in 2019, with the potential to increase the contract for sale of capacity by another 50 MW starting in 2022. In December 2016, the KPSC approved the contract with KyMEA. These contracts are credit positive for Big Rivers because they lock up some of its substantial excess capacity and energy with load-serving municipal-distribution entities for multiple year periods, helping the cooperative replenish the smelter load lost during 2013-2014. We expect that the contracts will support Big Rivers' long-term financial performance and provide a reliable source of recovery for Big Rivers' fixed and variable costs and contribute to its overall competitiveness through better rates for its members. Moreover, the contracts allow Big Rivers to become less dependent on the currently depressed wholesale power market for incremental revenues and helps diversify the cooperative's revenue stream, which historically was heavily dependent on the aluminum industry, to one that is less volatile and more predictable.

In addition to the predictable revenue stream provided by the contracts, entering the long term contracts for the sale of excess power also bodes well for Big Rivers' regulatory relationship with the KPSC, since the regulators established an action plan in 2013 that called for the pursuit of such supply contracts. Maintaining supportive regulatory relationships is an important credit factor for Big Rivers since its rate-setting is subject to regulation, which is atypical for an electric generation and transmission cooperative. Rate regulation can potentially introduce uncertainty around the timeliness and extent of future cost recovery, making that uncertainty an especially important credit risk factor for Big Rivers as its regulatory asset balance is increasing.

Although the Coleman plant was idled in May 2014, it is being maintained to permit restart should market conditions become economically feasible. By idling the Coleman plant, Big Rivers achieved overall cost savings of about $26 million annually. Big Rivers is reporting internal load growth and additional longer term opportunities may also arise for sales of electricity, depending on economic development activity in its service territory. For example, Big Rivers has an industrial customer utilizing the cooperative's economic development incentive rate in its business expansion, which will contribute significant growth to the cooperative's load.

In addition to owning the Wilson and Coleman plants, Big Rivers also owns and operates the 130 MW Robert A. Reid and the 454 MW Robert D. Green plants. In aggregate, Big Rivers owns 1,444 net MWs of generating capacity and including its rights to about 197 MWs of coal-fired capacity from Henderson Municipal Power and Light Station Two and about 178 MWs of contracted hydro capacity from the Southeastern Power Administration (SEPA) its total power capacity is 1,819 MWs. Setting aside the SEPA capacity which Big Rivers rarely receives much energy from and the 443 MWs associated with the idled Coleman plant, Big Rivers has about 1,198 MWs of capacity available. This amount compared with average member peak load of 650 MWs, additional contracted capacity sales of about 185 MWs anticipated during 2018-19 and allocating about 130 MWs for an approximate 15% reserve margin, leaves Big Rivers with about 233 MWs of excess capacity, representing a key credit challenge. Achieving additional capacity sale contracts and further economic growth in its service territory to reduce this long capacity position would be an important credit positive development.

Reasonably competitive position maintained

Although Big Rivers' rates have increased following the loss of the smelter loads and KPSC approved rate increases, the economics of power produced from Big Rivers' generation sources have enabled it to still maintain a reasonable competitive position in the Southeast and even more so when compared to other regions around the country. The capacity factors and efficient operations of the assets resulted in a 2016 average member rate per MWh for rural members and large industrial members of $82.21 and $63.96, respectively, compared to $82.35 and $63.20, respectively, for 2015, $81.79 and $63.56, respectively, for 2014 and $57.74 and $47.00, respectively, for 2013 (in all instances, excluding the benefits of member rate stability mechanism).

Wholesale power contracts support Big Rivers' credit profile

The revenues derived under Big Rivers' long-term wholesale contracts with its members for sales to non-smelter customers will continue as the contracts are in effect through December 31, 2043. The underlying favorable economics of power produced by Big Rivers' generation assets and bill credits provided during 2014-16 appear to have tempered any expressed or latent member disenchantment now that members are feeling the full impact of significant rate increases. Despite a relatively competitive starting point in 2013 and other price mitigating strategies, it remains possible that member unrest could surface, especially if further substantial rate increases become necessary to recover an increasing regulatory asset balance or if environmental compliance and other operating cost pressures surface unexpectedly.

Base rate increases and other load mitigation strategies are supporting financial viability

Big Rivers' financial performance is being supported by the outcomes in its last two rate cases and other mitigation strategies. Big Rivers' financial performance in fiscal year December 31, 2016 was reasonably consistent with its budget expectations, including net margins of $12.9 million, which supported a 1.31x TIER, a contractual MFI ratio of 1.31x and a debt service coverage (DSC) ratio of 1.23x, all as defined in the cooperative's debt documents. Although the net margins in fiscal years 2015 and 2016 were far below the net margins of $32.7 million achieved in 2014, financial performance during 2014 was aided by the positive weather effects of the polar vortex which added more than $25 million on a non-reoccurring basis to Big Rivers' off-system margins that year.

For fiscal years 2014-2016 (including Moody's standard adjustments), Big Rivers' FFO coverage of interest, FFO to debt and DSC ratios averaged in the "B", "B" and "A" rating categories, respectively, for the ratios covered under the Rating Methodology for U.S. Electric G&T Cooperatives. For example, Big Rivers' three year average FFO coverage of interest, FFO to Debt, and DSC for 2014-2016 were 0.9x, -0.4%, and 1.3x, respectively. Although the average scores for two of these three metrics are at weak levels under the rating methodology, the ratio of FFO to interest and FFO to debt metrics during FY 2014-16 are negatively affected by the accounting effects of noncash member rate mitigation revenue. Importantly, the 2013 and 2014 rate case decisions have firmly established the necessary revenue requirements and rate levels to maintain Big Rivers' financial viability and restore these metrics to stronger levels now that the economic reserve, rural economic reserve and transmission revenue economic reserve accounts have been utilized. The A category ranking for the average DSC ratio for the same period primarily reflects some improvement because a large principal payment which was made in FY 2013 is no longer pressuring the three-year average DSC ratio. We expect that the DSC ratio can be sustained near 1.2x for the next couple of years. For the same 2014-2016 period, the TIER averaged 1.3x (in the "A" category range) primarily reflecting supportive regulatory decisions which support net margins, and equity to total capitalization averaged 35.5% (in the "Aa" category range) as the metric is benefitting from debt reduction and full retention of net margins. As noted in our summary above, we expect that Big Rivers' FFO coverage of interest and debt and DSC ratios will strengthen over the next 12 to 18 months, which provides positive momentum for the cooperative's credit quality despite the substantial overcapacity at Big Rivers and the remaining execution risk as Big Rivers implements its mitigation strategies.

Liquidity

We expect that Big Rivers will maintain ample liquidity over the next 12-18 months and will generate positive cash flow each year for the next several years.

Big Rivers supplements its existing cash on hand and internally generated cash flow with a three year $130 million syndicated senior secured credit agreement with five banks, led by National Rural Utilities Cooperative Finance Corporation (NRUCFC), which expires in March 2018. As of March 31, 2017, Big Rivers had a cash and temporary investments balance of about $44.3 million and $122.2 million available under the NRUCFC credit agreement. Usage under the credit agreement is comprised of $7.8 million of outstanding letters of credit. Big Rivers has manageable debt maturities over the next eight quarters, which are largely comprised of scheduled amortizations of long-term debt to be paid at roughly $5.5 million per quarter. Terms of the NRUCFC credit agreement reserve $30 million for interim financing of KPSC approved environmental related capital expenditures. Big Rivers' application for long-term senior secured financing of the KPSC approved environmental related capital expenditures under the U.S. Department of Agriculture's Rural Utilities Service (RUS) loan program was approved in September 2016. Big Rivers anticipates drawing those funds before the end of FY 2017, which would reduce its liquidity requirements. Accordingly, Big Rivers is negotiating with its existing bank group to amend and extend the $130 million agreement to reduce the aggregate amount to $100 million and extend the maturity for another multi-year term. There are no other material changes contemplated for the agreement, so the quality of the alternate liquidity to be provided by the planned amendment and extension of the syndicated credit agreement would continue to benefit from a multi-year tenor and the absence of any onerous financial covenants, which largely mirror the financial covenants in existing debt documents. Big Rivers is in compliance with those covenants. Additionally, the credit agreement benefits from no ongoing material adverse change (MAC) clause. The syndicated credit agreement does not have any rating triggers, just a pricing grid based on Big Rivers' rating.

Big Rivers is considering expanding its bank relationships by negotiating a $15 million term loan with Federal Agricultural Mortgage Corporation, proceeds from which it would likely use to pre-pay a portion of the existing series A loan from RUS to achieve interest cost savings.

Debt Structure

As part of the unwinding of various transactions completed in 2009, Big Rivers replaced the previously existing RUS mortgage with a senior secured indenture. Under the senior secured indenture RUS and all senior secured debt holders, including the $83.3 million of County of Ohio, Kentucky Pollution Control Refunding Revenue Bonds (Big Rivers Electric Corporation Project; cusip number 677288AG7), are on equal footing in terms of priority of claim and lien on assets. The current senior secured indenture provides Big Rivers with the flexibility to access public debt markets without first obtaining a case specific RUS lien accommodation, while retaining the right to request approval from the RUS for additional direct borrowings under the RUS loan program, if they choose to do so. Given persistent questions about the availability of funds under the federally subsidized RUS loan program, the added flexibility of the current senior secured indenture is credit positive.

Other Considerations

Big Rivers' mapping under Moody's U.S. Electric Generation & Transmission Cooperative Rating Methodology grid below is based on historical data through December 31, 2016. The grid indicated rating for Big Rivers' senior most obligations under the Methodology is currently Baa3. However, Big Rivers' actual senior secured rating of Ba2 reflects several of the unique risks at Big Rivers and the challenges facing the cooperative in mitigating these risks, including further implementation of its load mitigation strategies following the smelter contract terminations. The positive outlook for the Ba2 rating reflects the good track record in addressing these risks and prospects for credit improvement over the next 12-18 months.

Methodology

Exhibit 3

U.S. Electric Generation & Transmission Gooperative Rating Methodology

Rating Factors				
Big Rivers Electric Corporation, KY				
U.S. Electric Generation & Transmission Cooperatives [1][2]	Current FY 12/31/2016		Moody's 12-18 Month Forward View As of Published Date [3]	
Factor 1 : Wholesale Power Contracts and Regulatory Status (20%)	Measure	Score	Measure	Score
a) % Member Load Served and Regulatory Status	Ba	Ba	Ba	Ba
Factor 2 : Rate Flexibility (20%)				
a) Board Involvement / Rate Adjustment Mechanism	Baa	Baa	Baa	Baa
b) Purchased Power / Sales (%)	24.5%	A	20%-35%	A
c) New Build Capex (% of Net PP&E)	Aa	Aa	Aa	Aa
d) Rate Shock Exposure	B	B	B	B
Factor 3 : Member / Owner Profile (10%)				
a) Residential Sales / Total Sales	30.4%	Ba	25%-35%	Ba
b) Members' Consolidated Equity / Capitalization	37.5%	Baa	37%-40%	Baa
Factor 4 : 3-Year Average G&T Financial Metrics (40%)				
a) Times Interest Earned Ratio (TIER)	1.3x	A	1.2x-1.4x	A
b) Debt Service Coverage Ratio (DSC)	1.3x	A	1.2x-1.3x	A
c) FFO / Debt	-0.4%	B	1% - 3%	Ba
d) (FFO + Interest) / Interest Expense (3 Year Avg)	0.9x	B	1.3x - 1.7x	Baa
e) Equity/Total Adjusted Capitalization	35.5%	Aa	36% - 38%	Aa
Factor 5 : G&T Size (10%)				
a) MWh Sales	7.7	Baa	8 - 10	Baa
b) Net PP&E	$1.1	A	$1 - $1.1	A
Rating:				
Indicated Rating from Grid		Baa3		Baa2
Actual Rating Assigned (Senior Secured)		Ba2		Ba2

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

[2] As of 12/31/2016; Source: Moody's Financial Metrics™

[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's Investors Service

RATINGS

BIG RIVERS ELECTRIC CORPORATION, KY	
Rating: County of Ohio, Kentucky Pollution Control Refunding Revenue Bonds (Big Rivers Electric Corporation Project; cusip number 677288AG7)	Ba2
Outlook	Positive

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CLIENT SERVICES

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