SULLIVAN, MOUNTJOY, STAINBACK & MILLER PSC
ATTORNEYS AT LAW

Ronald M. Sullivan
Jesse T. Mountjoy
Frank Stainback
James M. Miller
Michael A. Fiorella
William R. Dexter
Allen W. Holbrook
R. Michael Sullivan
Bryan R. Reynolds
Tyson A. Kamuf
Mark W. Starnes
C. Ellsworth Mountjoy
Susan Montalvo-Gesser

October 4, 2007

Via Federal Express

Ms. Elizabeth O'Donnell
Executive Director
Public Service Commission
211 Sower Boulevard, P.O. Box 615
Frankfort, Kentucky 40602-0615

Re: In the matter of: The Application of Big Rivers Electric Corporation for a Certificate of Public Convenience and Necessity to Construct a 161 kV Transmission Line in Ohio County, Kentucky, Case No. 2007-00177

Dear Ms. O'Donnell:

Enclosed on behalf of Big Rivers Electric Corporation are an original and ten copies of the post-hearing brief of Big Rivers Electric Corporation. I certify that a copy of the brief has been served on the attached service list.

Sincerely,

Tyson Kamuf

TAK/ej
Enclosures

cc: Michael H. Core
David Spainhoward
John Talbert
Mark Bailey
Service List

Telephone (270) 926-4000
Telecopier (270) 683-6694

100 St. Ann Building
PO Box 727
Owensboro, Kentucky
42302-0727

SERVICE LIST
PSC CASE NO. 2007-00177

David Brown, Esq.
STITES & HARBISON
1800 Providian Center
400 West Market Street
Louisville, Kentucky 40202

Michael L. Kurtz, Esq.
BOEHM, KURTZ & LOWRY
36 East Seventh Street, Suite 1510
Cincinnati, Ohio 45202

COUNSEL FOR ALCAN ALUMINUM
AND CENTURY ALUMINUM

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the matter of:	)	
	)	
The Application of Big Rivers Electric Corporation for a Certificate of Public Convenience and Necessity to Construct a 161 kV Transmission Line in Ohio County, Kentucky	)	Case No. 2007-00177

POST-HEARING BRIEF OF BIG RIVERS ELECTIC CORPORATION

Comes Big Rivers Electric Corporation ("Big Rivers"), by counsel, and for its post-hearing brief in this matter, states as follows. Big Rivers initiated this proceeding to seek a certificate of public convenience and necessity ("CPCN") for a 13-mile, 161 kV transmission line in Ohio County, Kentucky.[1] As explained below, the proposed line is an essential risk mitigation measure in the event that Big Rivers regains operation and control of its generating units.

As the Commission is aware, Big Rivers is in the process of terminating various agreements in place since 1998 between and among it and certain subsidiaries or affiliates of E.ON U.S., LLC, formerly known as LG&E Energy LLC (the "E.ON Parties").[2] Those 1998 agreements gave the E.ON Parties operational control of Big Rivers owned or operated power plants, and ownership of the electricity generated by them.[3] The 1998 agreements also terminated Big Rivers' obligation to provide wholesale power to its distribution members for service to two aluminum smelters on the Big Rivers system, whose combined load totals approximately 850 MW, although Big Rivers does currently sell limited amounts of wholesale power to Kenergy Corp. ("Kenergy") for service to the smelters under short-term contracts.[4]

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[1] *See* Big Rivers' Application ("Application") ¶ 4.
[2] *See id.* ¶ 7.
[3] *See id.*
[4] *See id.*; Response of Big Rivers Electric Corporation to the Commission Staff's Initial Data Request of August 10, 2007 ("Data Request Response"), Response to Item 11a.

If the transaction terminating the 1998 agreements (the "Unwind Transaction") closes as contemplated, Big Rivers will resume control of its generation facilities and ownership of all the power generated by those facilities, and it will sign wholesale contractual obligations to provide power to its member, Kenergy, for service of the entire 850MW smelter load.[5] This represents approximately 55% of Big Rivers' total system demand.[6] Big Rivers' anticipated annual revenue from the smelters will be approximately $400 million.[7]

Big Rivers is currently unable to export all excess generation that would result with the loss of the 850 MW smelter load.[8] If the smelter load is lost and Big Rivers has not increased its export capacity, Big Rivers and its member cooperatives would be unable to replace the smelter revenue with revenue that could be generated from the sale of the excess generation.[9] This would likely cause a significant drop in revenue for Big Rivers and lead to a default in a matter of months under its debt instruments and leases.[10] Big Rivers' financial advisor, Goldman Sachs, has told Big Rivers that the risk of losing the smelter revenue will be a major concern for the rating agencies, who must give Big Rivers an investment-grade rating for Big Rivers to obtain the financing that is necessary for the Unwind Transaction, and that Big Rivers must have a plan to mitigate that risk.[11] Big Rivers' dependence upon the revenue from the smelters is also a major concern for Big Rivers, its members, and its creditors.[12] In fact, it is such a concern that Big Rivers has made obtaining the CPCN sought in this case a condition to closing the Unwind Transaction, and the smelters have made it a condition of closing in their draft power contracts.[13]

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[5] *See* Application ¶ 7.
[6] *See* Data Request Response, Response to Item 3a.
[7] *See id.*, Response to Item 9.
[8] *See* Application ¶ 7.
[9] *See* Data Request Response, Response to Item 2b.
[10] *See id.*
[11] *See id.*
[12] *See id.*
[13] *See id.*

Simply reducing generation to operate within the constraints of its transmission system would not protect Big Rivers against the risk of losing the smelter load. Without sufficient export capacity, Big Rivers will be economically dependent upon the continued viability of the smelters, and the loss of the smelter load and the substantial stranded excess generation that would result would be economically devastating for Big Rivers and its members.[14]

The smelters have been in operation for over 30 years; however, the smelters have experienced partial shutdowns in the past,[15] and one of the smelters has shut down one of its three potlines.[16] Moreover, as Big Rivers' President and CEO explained at the hearing in this case, aluminum smelters are an "endangered species."[17] Numerous smelters across the country have recently shut down, and there are only a handful of smelters left.[18] The smelters themselves have explained how electricity prices are a significant cost of doing business for them, and that low electric rates are "critical to the continued economic viability of [their] operations."[19] Power costs, potential carbon taxes and CO_2 cap-and-trade legislation, the world aluminum market, and any number of other factors outside the control of either the smelters or Big Rivers give rise to a real risk of the smelters leaving, and that risk is one that Big Rivers determined should be addressed in the event it resumes operation of its generators.[20] The risk of the smelters closing, along with the magnitude of harm that could result to Big Rivers and its members from the loss of the smelter load, clearly justifies Big Rivers taking reasonable measures to mitigate the risk of serving the smelters.

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[14] *See id.*
[15] *See* Transcript of Evidence of September 10, 2007, hearing ("Transcript of Evidence") at 15.
[16] *See id.*
[17] *See id.* at 21.
[18] *See id.* at 15, 21; *see also* the *Wall Street Journal* articles attached hereto as Exhibit A.
[19] *See* Petition to Intervene of Alcan Aluminum and Century Aluminum ¶ 2.
[20] *See* Transcript of Evidence at 15, 21-22; Data Request Response, Response to Item 5b.

Additionally, the circumstances under which Big Rivers proposes to resume responsibility for the wholesale power supply to the smelters are now much different than in the past. First, in 1998, when Big Rivers last provided the full aggregate load of the smelters,[21] the total smelter load was 600 MW, whereas after the Unwind Transaction, the total smelter load will be 850. This increases the risk of serving the smelters.[22] Second, the smelters' retail electric service agreements entered into in 1982 had principal terms ending in 2010, and contained take-or-pay provisions and no right to unilateral termination by the smelters during the principal term.[23] Termination by either party following any extension of the principal term required a five-year notice.[24] The smelter retail electric service agreements entered into in 1998 have termination dates of 2010 and 2011, respectively, and contain no right to unilateral termination by the smelters.[25] Under their new service contracts expected to be entered into as part of the Unwind Transaction, the smelters will have a right to unilaterally terminate their agreements on one year's notice (with the termination allowed to occur no earlier than December 31, 2011).[26] The smelters specifically negotiated for that one-year termination provision, which is a significant departure from their existing and past contracts.[27] The smelters clearly attach importance to the one-year termination provision under the new agreements, and Big Rivers must protect itself from the risk that they expect to use it. Third, prior to 1998, there was no robust wholesale power market into which power could be sold if the smelters shut down, and so, having an outlet to the market was much less important than it is now.

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[21] *See* Data Request Response, Response to Item 2b.
[22] *See id.*
[23] *See id.*, Response to Item 4c.
[24] *See id.*
[25] *See id.*
[26] *See id.*, Response to Item 2b.
[27] *See id.*, Response to Item 5b.

As demonstrated by the Bulk Transmission System Assessment that Big Rivers filed with its application in this matter,[28] the proposed transmission line is a necessary improvement for Big Rivers to be in a position to be able to mitigate the risk of serving the smelters.[29] The proposed transmission line, along with the other contemplated improvements discussed in the application, will enable Big Rivers to export all the excess generation off its system in the event of the loss of the smelter load.[30] Moreover, the Bulk Transmission System Assessment, along with the EPRI siting study that was also filed with Big Rivers' application, demonstrates that the proposed line is the best of the alternatives studied.[31] The proposed line is the most effective of the alternatives, requires the least amount of new right-of-way, is the low-cost alternative, and is the route selected by the EPRI siting methodology.[32]

Not only is the proposed line an effective mitigation measure and the best of the possible alternative improvements, but the proposed line is a prudent investment. The $4.7 million cost of the proposed line will be self-financed by Big Rivers, will not materially affect the existing financial condition of Big Rivers, and will not result in any increased charges to Big Rivers' members.[33] While the cost of building the proposed transmission line is minimal, the benefits of the line are substantial. Big Rivers would be unable to agree to the Unwind Transaction under

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[28] In addition to the Bulk Transmission System Assessment, Big Rivers also filed a 1995 Big Rivers-Kentucky Utilities Joint Interconnection Study and a 2003 Thoroughbred Energy Campus Interconnection Study. The purpose of filing these other studies was simply to show that the proposed transmission line had been studied in the past and found to be a responsive and beneficial interconnection, and to respond to a question raised in the informal conference regarding the use of 2015 demand levels in that study. The other studies reveal that the proposed line has been found to be a beneficial interconnection even using demand levels for other years. However, neither of those other studies is relied on to show the need for the line in the present case. So, while the Thoroughbred study identified a Wilson to Paradise 161 kV interconnection as a necessary system improvement to allow for the connection and operation of Thoroughbred Generating Company's proposed generating unit, the need for the proposed line in the present case is completely independent of the Thoroughbred facility. In other words, the Bulk Transmission System Assessment shows that the proposed line is needed to export the smelter load off the Big Rivers system, even if the Thoroughbred project is not constructed. *See* Testimony of Chris Bradley on behalf of Big Rivers Electric Corporation ("Bradley Testimony") at 3-4; Transcript of Evidence at 10-11.

[29] *See* Bradley Testimony at 2.

[30] *See* Application ¶ 8.

[31] *See id.* ¶¶ 10-11.

[32] *See id.*

[33] *See id.* ¶ 13.

the currently negotiated terms without the proposed transmission line, and so, the proposed transmission line will enable Big Rivers, its members, and Western Kentucky to reap the substantial benefits of the Unwind Transaction.[34] The Unwind Transaction will enable Big Rivers to regain control of the operation, maintenance and generation output of its generating units now rather than in 2024, and to manage those assets in the best interest of Big Rivers and its members.[35] The consideration received by Big Rivers from the E.ON parties will change Big Rivers' equity on the date of closing from a negative 17 % equity to a positive equity of more than 22%.[36] The Unwind Transaction will enable Big Rivers to borrow money on a long-term secured basis, something that has been virtually impossible for Big Rivers under the credit arrangements that have been in place since 1998.[37] This will position Big Rivers to respond in the most cost-effective manner to future growth demands on Big Rivers' system, and to manage its generating assets for the long-term.[38] Also, by giving Big Rivers control over all the output of its generating units, Big Rivers will be in a position to provide the power needs of the smelters, whose existing power supply contracts with Kenergy and in turn with LG&E Energy Marketing, expire in 2010 and 2011, respectively.[39] The smelters commissioned a study entitled "*The Estimated Economic and Fiscal Impacts of a Shut-Down of Kentucky's Two Aluminum Smelters,*" which was filed in evidence in this case. That study concludes that the direct loss of 1,400 high-paying industrial jobs and the other economic benefits that flow from the smelters' presence in the Big Rivers service area would have a significant, negative impact on Western Kentucky.[40] The Unwind Transaction provides Big Rivers the opportunity to provide long-term

[34] *See* Data Request Response, Response to Item 11.
[35] *See id.*, Response to Item 2c.
[36] *See id.*
[37] *See id.*
[38] *See id.*
[39] *See id.*
[40] *See id.*

power to the smelters in an effort to preserve the economic benefits of the smelter operations for the areas served by Big Rivers' members.[41] Thus, the minimal cost of building the proposed transmission line is far outweighed by the benefits of the Unwind Transaction to Big Rivers, its members, and Western Kentucky, but the Unwind Transaction is only possible if Big Rivers obtains a CPCN for the proposed line.

Construction of the proposed line is expected to take approximately 18 months, not including delays caused by the CPCN process, changes in laws, the unavailability of contractors or materials, litigation, or any number of other matters.[42] If the smelters have a right to unilaterally terminate their agreements on one year's notice,[43] waiting to construct the proposed transmission line until after the smelters give their notice would put the risk of delay on Big Rivers and its members. The inability to export the smelter load even for a short time would be economically devastating for Big Rivers and its members.[44] Moreover, it is essential for Big Rivers, its members, its creditors, and the smelters to know before the Unwind Transaction closing and the sale of Big Rivers' debt whether Big Rivers will have the CPCN and the ability to mitigate the risk of serving the smelters.[45] In fact, as noted above, it is so essential that both Big Rivers and the smelters have made the CPCN a condition of closing the Unwind Transaction.[46]

For the reasons stated, Big Rivers requests that the Commission issue an order granting it a certificate of public convenience and necessity for the proposed construction, with the order being made contingent upon and effective concurrently with approval of the Unwind Transaction.

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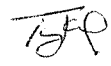
[41] *See id.*
[42] *See id.*, Response to Item 1.
[43] *See id.*, Response to Item 2b.
[44] *See id.*, Response to Item 9.
[45] *See id.*
[46] *See id.*

On this the 4th day of October, 2007.

SULLIVAN, MOUNTJOY, STAINBACK
& MILLER, P.S.C.



James M. Miller
Tyson Kamuf
100 St. Ann Street
P. O. Box 727
Owensboro, Kentucky 42302-0727
(270) 926-4000
Counsel for Big Rivers Electric Corporation

The Wall Street Journal
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CORPORATE FOCUS

Aluminum Industry Puts Focus on Energy Sources

Global Production Shifts as Companies Seek Cheaper Power

By Robert Guy Matthews

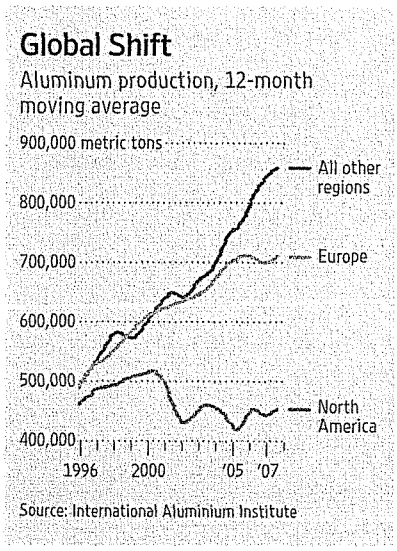
DUBAI, United Arab Emirates—With energy prices steadily increasing, the world's biggest aluminum companies are investing heavily to secure dedicated power sources, at times buying local power plants or building aluminum-making operations in remote parts of the world where energy is more abundant and cheaper.

United Co. Rusal, **Alcoa** Inc., **Norsk Hydro** ASA and others are jockeying to corner supplies of hydro power in Siberia and Iceland, and cheap natural gas in the Middle East, to fuel new metal plants. The producers are acknowledging that it is more important to be closer to energy sources than to customers, and effectively shifting the center of global aluminum production away from Europe and the U.S. to more energy-rich nations.

The moves also represent a shift in investment strategy, as producers funnel cyclical profits into power generation and less into developing aluminum products or applications. Indeed, aluminium companies are selling more consumer operations, such as packaging, to free up cash for cheaper power sources.

In the 1980s, the U.S. and Western Europe accounted for more than half of the world's aluminum production. Now those two regions account for less than 25%. "The market is moving away from North America and Europe. The market is now shifting to the developing countries," said Willem Plaizier, an analyst at AT Kearney Benelux.

Russia's Rusal, created earlier this year from the merger of OAO Rusal, Sual Group and the alumina assets of **Glencore** AG, has divested itself of its aluminum-can business and other parts of what the industry calls its downstream operations, which now account for 3% of its revenue. Rusal had $8.18 billion in 2006 revenue, excluding Sual and Glencore assets.



Alcoa also is trying to sell some of its consumer automotive-related business. "You are not going to go anywhere unless you integrate upwards, into energy and fuel," said Artem Volynets, director of corporate strategy for Rusal.

Mr. Volynets and representatives of the world's biggest aluminum makers gathered at an industry conference here to discuss industry issues, chief among them energy. The Middle East, with its abundant gas resources, is expected to be one of the fastest growth areas for new aluminum-smelter production. Rusal aims to buy small local power companies and has formed a partnership with the Siberian hydro power monopoly.

"We plan to increase our capacity in primary aluminum by 60% in 2014. All of the new smelters will have self-generation power or long-term contracts," Mr. Volynets said.

Norway's Norsk Hydro has formed a joint venture with **Qatar Petroleum** to build an aluminum plant in Qatar. And Alcoa is ramping up its new smelter in Iceland, where it has agreed with the country on a dedicated, long-term supply of hydro power.

To further efforts to tap Iceland's potential for cheap energy, this week the company said it was investing in a research-and-development program in Iceland that would use geothermal energy to power aluminum smelters. Geothermal energy is derived from underground water heated naturally by contact or close proximity to molten rock. Alcoa also is investing in hydroelectric projects in Brazil.

As these new aluminum facilities are going up, producers are shutting down high-cost smelters. Norsk Hydro since 2003 has closed about 250,000 tons of capacity in high-cost Norway and Germany in favor of Qatar in the Middle East. Last year, Alcoa closed a smelter in the U.S. because the cost to fuel it was too high.

The U.S. essentially lost its aluminum-production facilities in the Pacific Northwest a few years ago, when energy prices became too high. Canada, with its hydroelectric power, is still attractive to some aluminum companies. Part of Alcoa's unsuccessful attempt to buy Canada's **Alcan** Inc. was the need for Alcan's cheap power contracts with the Canadian government. **Rio Tinto** beat Alcoa out for Alcan this year.

Aluminum analysts expect two to four million metric tons of existing high-cost aluminum production, mostly in Europe but also in the U.S., will shut down by 2010. Meanwhile, aluminum demand is expected to rise 3% to 4% a year. As with most commodities, growth is being fueled by consumption within China for automobiles, machinery and commercial construction. Aluminum production is increasing in China, but not cheaply. Energy in China is expensive, and its availability is limited even with the vast construction of power plants.

WALL STREET JOURNAL

Aluminum's Power Shift

Access to Cheap Electricity, Plentiful Natural Resources Fuels Rise of New Producers

By Paul Glader

INDUSTRY FOCUS

A NEW BREED of aluminum makers, based in emerging economies and benefiting mainly from access to inexpensive electricity, are gearing up to challenge the supremacy of the industry's traditional giants, Alcoa Inc. and Alcan Inc.

The latest move came late last month, when Rusal Ltd. began finalizing a three-way agreement to take over Sual Group, a fellow Russian aluminum company, as well as the assets of Swiss commodities trader Glencore International AG. The new company would have the capacity to churn out five million metric tons of aluminum a year, outstripping the current No. 1 producer, Pittsburgh-based Alcoa, which has capacity for four million metric tons.

A combined company would have an advantage because Russia has abundant supplies of natural gas, oil and hydroelectric power. Aluminum is the second-most power-intensive industry in the world, behind pulp making and papermaking, according to CRU International in London, and access to cheap power is fueling the rise of new producers. Other new producers are arising in India, Africa and the Middle East, where they also often benefit from either plentiful natural resources or abundant power.

Fueling the industry's growth is an explosion in demand for the lightweight metal, which is increasingly used in goods from automobile-engine blocks to beer cans. Alcoa predicts global consumption of aluminum will nearly double by 2020 to 60.6 million metric tons, from 31.6 million metric tons in 2005. It predicts Asia will consume about half of the world's aluminum by that time, with other emerging regions such as India, Brazil and Russia also experiencing a surge in demand. That means as many as 80 new aluminum smelters are needed by 2020, the company says.

Sohar Aluminum Co. is building a large smelter in Oman that will open in 2008, while Aluminium Bahrain B.S.C (Alba) has built the Alba smelter, one of the lowest-cost smelters in the world and the third-largest anywhere, with 3,000 employees and capacity to make 840,000 tons of aluminum a year. Bahrain has plans to expand it to make as much as 1.3 million metric tons a year.

Many of the new plants in the Middle East are partially owned by local governments, which are eager to diversify their economies and create jobs for their fast-growing, youthful populations. While the Middle East has relatively cheap power, it doesn't have the abundant raw materials that Africa, India, North America, Australia and South America have. And, China, while it consumes 30% of the world's aluminum, has cheap labor costs but not abundant raw materials or cheap energy. So Chinese companies are seeking partnerships with raw-materials producers in Australia and elsewhere.

It is the new wave of activity in Russia's aluminum industry that appears most likely to shift the balance of power in the global aluminum business. "Because of our natural [energy] advantages, we believe we have the ability to grow," says Peter Finnimore, director of sales and marketing for Rusal. "We think we will be the largest."

Rusal has several new smelters planned as well as upgrades of existing smelters. Indeed, the company already planned to hit five million tons of aluminum capacity on its own by 2013, even before it entered into talks with Sual and Glencore. It is also looking for acquisitions and joint ventures.

Some executives at Alcoa and Alcan dismiss Rusal as having old, less-efficient smelter technology.

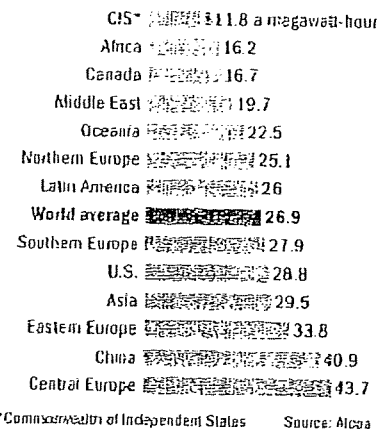
For their part, Alcoa and Canada's Alcan, the world's No. 2 producer, have idled some smelters in North America and Europe, where energy tends to be more expensive, and are building ones in places such as Iceland, Trinidad and the Middle East.

Alcoa spokesman Kevin Lowery points out that the company owns power plants for some aluminum smelters in North America, providing it with more-reasonable energy prices, and says the company, in addition to currently planned new smelters, is considering smelters in locations as varied as Brunei, Siberia and Pakistan. "There is not a corner of the world we are not looking into right now," Mr. Lowery says.

Alcan's president and chief executive, Dick Evans, says the company is selling technology to several of the up-and-coming smelters in the Middle East and notes that the company has a 20% investment stake in the one in Oman. While many newcomers are building low-cost, efficient plants, he doesn't believe those companies will be major industry players for some time.

Power Savers

Aluminum producers are shifting production to nations with low electricity costs. Average smelter power costs in 2005:



*Commonwealth of Independent States Source: Alcoa

▲ *Alcoa last year signed an agreement with the government of Guinea to develop an alumina refinery there.*