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PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY
BEFORE THE
PUBLIC SERVICE COMMISSION
OF KENTUCKY
Case No. 2003-00376

Complaint of
North American Stainless

North American Stainless ("NAS"), which operates an electric arc furnace-based stainless steel production facility in Ghent, Kentucky, submits this complaint, pursuant to 807 KAR 5:001, Section 12, requesting that the Kentucky Public Service Commission determine appropriate rates for electric service provided to NAS by Kentucky Utilities ("KU"), a regulated utility affiliate of Louisville Gas & Electric Corporation ("LG&E"). Specifically, NAS requests an order from the Commission directing KU to provide electric service to all of the NAS Ghent facilities at terms equivalent to KU's Large Commercial and Industrial Time of Day ("LCI-TOD") tariff.

I. Summary of Complaint And Relief Requested

NAS operates a steel recycling and production facility in Carroll County that uses an electric arc furnace to melt scrap steel, which is then processed and recast into high quality stainless steel products. This is an energy intensive process, and competitively priced electric power is crucial to the economic viability of the facility.

Since 1990, KU has provided electric service to the NAS rolling and finishing facilities at Ghent based on the utility's Large Commercial/Industrial Time-of-Day (LCI-TOD) tariff with

the Curtailable Service Rider. NAS has subsequently invested hundreds of millions of dollars in additional capital, more specifically described below, for additional product lines and expanded rolling and finishing facilities that KU serves under LCI-TOD terms.

As discussed below, in the year 2000, NAS announced an additional $200 million investment in the facility to add a 100 MWA electric arc furnace "melt shop." The requirements of the melt shop exceed 50,000 Kw. The LCI-TOD tariff states: ". . . customers with new or increased load requirements that exceed 50,000 Kw will have a rate developed as part of their contract based upon their electrical characteristics." In the year 2000, NAS, therefore, believed it had no choice but to enter into the contract that will expire on March 31, 2004.[1]

The simple fact is that the LCI-TOD terms of service are reasonable, but the contract arrangement for the melt shop has resulted in an average cost of power to NAS that is not remotely competitive and cannot be justified based on KU's cost of service. KU's FERC Form 1 for 2002 reports that the NAS melt shop contract resulted in average revenue to KU of $0.0622/Kwh. (*See* Appendix A). This is more than double the average rate charged to KU's LCI-TOD customers; it is higher than the KU general service rate; and it is even higher than the average rate KU charges for residential service. Indeed, other than outdoor lighting, customers in every rate classification served by Kentucky Utilities pay a rate significantly lower than that charged under the NAS melt shop contract. (*See* Appendix A.)

The reasons why the existing melt shop contract has worked so poorly are a complicated combination of certain onerous contract terms and NAS's operational experience with the electrical consumption of its electric arc furnace melt shop, which varies from original

[1] Señor Jose Lejeune submitted testimony in Case No. 2000-095 (the PowerGen Plc merger with LG&E/KU) which described the difficulties NAS had experienced in reaching a contract with LG&E/KU during the period that immediately followed the announcement of PowerGen's intent to merge with (acquire) LG&E/KU.

assumptions of KU and NAS. While both parties have abided by the contract for its initial term, it is quite apparent that a competitive, reasonably priced power supply arrangement must be established.

NAS has advised KU that it does not wish to extend or renew the current arrangement, which expires on March 31, 2004. As is discussed below, KU's tariffs do not specify rates or terms of service for loads at the levels of the electric arc furnace at NAS's melt shop. KU responded to the NAS notice to allow the contract to expire by stating that it intended to file a new tariff establishing rates for "non-conforming loads," a term that is not defined in the utility's tariffs. KU also has advised NAS that KU will not discuss the terms of service following the expiration of the contract until this Commission considers the utility's forthcoming "non-conforming load" tariff proposal. KU has not shared any details of this putative tariff with NAS.

NAS is very concerned about the cost and terms of its KU service, but is even more concerned about KU's intentions for service after the expiration of the contract in March. Consequently, in this Complaint, for the reasons described below, NAS requests a determination from the Commission that the provisions of KU's LCI-TOD tariff should be applied to all of the NAS load in Carroll County, including the melt shop. Such an order will result in rates charged to NAS that are reasonable, cost based, fair to all other KU customers, and will allow NAS to competitively operate the melt shop.

II. Background

A. The NAS Facility

NAS is owned by Acerinox, S.A. of Madrid, Spain. In addition to the Ghent facilities, Acerinox operates steel-making facilities in Spain and South Africa.

In 1990, Acerinox chose Kentucky over competing states to begin construction of the largest and most efficient mill in North America for the production of stainless steel. In recruiting Acerinox, the Commonwealth assured Acerinox that, although NAS would not be allowed to purchase electricity in a competitive market, the rates charged NAS by KU would be established by the Commission. In 1990, NAS began construction and has never stopped. From 1990 to 1999, at a cost of more than $800,000,000, NAS constructed rolling mills, finishing lines and a $260 million hot mill, which was dedicated on March 24, 1999 by Governor Patton and His Royal Highness, D. Felipe de Borbón, Prince of Asturias (Spain). These facilities have an electric load of approximately 38,000 Kw, which is served by KU pursuant to its LCI-TOD tariff. After Governor Patton and representatives from the Economic Development Cabinet visited Acerinox, in February 2000, NAS and Governor Patton announced that NAS would construct the 100 MWA electric arc furnace melt shop in Ghent at an estimated capital cost of $200 million and add another 150 jobs at the facility site.

The electric arc furnace melts recycled scrap steel, and the molten steel is cast into slabs that are processed into flat rolled stainless steel products. This method of steel production is far more efficient than traditional "integrated" (*i.e.*, blast furnace) steel production and provides significant environmental benefits by recycling over half a million tons of scrap annually.

The long term viability of NAS requires that NAS be able to melt and cast slabs rather than rely on the purchase of excess slabs economically from other producers. The cost of electricity comprises a very high component of NAS's overall operating and production costs. Reliable and competitively priced electric power is, therefore, crucial to the economic viability of NAS. Indeed, Kentucky's generally low cost power, especially to support the

Commonwealth's economic development efforts, was a key factor in NAS's decision to locate its North American operations in Kentucky.

In recent years, while other areas have lagged and mining power sales have continued to decline, KU's sales growth has hinged on the significant expansion efforts by NAS and other very large industrial loads (*see* Joint Integrated Resource Plan filing of LG&E/KU, October 2002; Vol. I, pp.5-19). NAS has continued to expand its operations by adding more rolling mill, finishing and related equipment since the melt shop addition during the years 2000-2001. The total electric load is now approximately 130 MW. As the Economic Development Cabinet noted in its 2002 Annual Report, NAS has now invested over $1.2 billion in the Ghent facility, and NAS has created and sustained over 820 quality jobs, which will expand to over 1,000 permanent jobs in the near future as current new capital projects are completed. This facility has become an economic cornerstone of Carroll County, which has historically depended on tobacco, and is a prime example of the Commonwealth's successful efforts to attract and retain quality manufacturing jobs.

Finally, NAS intended for this facility to be designed and operated to serve not only North American stainless product markets, but to support stainless exports as well. At the current rates charged by KU, NAS cannot economically compete in stainless markets abroad. NAS must have access to competitively priced electric power for this operation to be economically competitive.

B. KU's LCI-TOD Tariff

KU's LCI-TOD tariff terms are "[A]vailable to, and mandatory for, all commercial and industrial customers, served [at] primary or transmission voltage, with demands of 5,000

kilowatts or greater," subject to several enumerated guidelines. Rate Schedule LCI-TOD, Original Sheet No. 13-A. Guideline (6) of this rate schedule provides as follows:

> Service under this schedule will be limited to maximum loads not exceeding 50,000 Kw. After the effective date of this rate schedule [June 1, 2000], customers with new or increased load requirements that exceed 50,000 Kw will have a rate developed as part of their contract based upon their electrical characteristics.

In assessing a customer's electrical characteristics, the facility's size, service voltage, overall load factor, relative off-peak usage (which is particularly important for a utility that primarily operates coal-fired generating units), and other factors should be considered. The Commission should take into account all other relevant factors as well, including the economic value of the facility to the local economy, and the importance of the cost of power to the economic viability of the facility. For the reasons described below, applying KU's LCI-TOD rates and terms to all of the NAS electric load, including the melt shop, more than adequately compensates KU for its cost of serving the NAS electric load in Ghent.

III. Discussion

A. The Electric Rate for the NAS Melt Shop Should Not Exceed the LCI-TOD Rate

As a general matter, KU requires fewer facilities and less capital investment to serve one very large transmission voltage customer than it needs to serve the same amount of load at multiple sites involving many smaller customers and accounts. This economy of scale is reflected throughout the rate structure applicable to other KU customer classes, as it is in the rate structure of most electric utilities.

The total NAS electric load in Ghent is equivalent to the power consumed by 130,000 typical KU residential customers. Because that power is delivered to NAS at transmission

voltage at a couple of metering points, the cost to KU of serving NAS is far less than the utility's cost of serving many thousands of distribution customers. By the same token, the NAS electric load is several times the size of the average KU industrial customer.[2] Thus, from a fixed cost perspective, NAS likely is the lowest cost-to-serve customer on KU's system.

Next, the vast majority of the NAS electric load (melt shop, rolling and finishing facilities) is curtailable. This is important in several respects. First, as noted in the Joint LG&E/KU October 2002 Integrated Resource Plan (*see*,, e.g. Table 5.(3)-3, pp.5-18), as well as in the utility's generation and transmission adequacy studies, KU does not build generation capacity to serve curtailable load (required capacity, including required generation reserves, are predicated upon forecasted firm annual peak demand and expected delivery losses). The curtailable character of most of the NAS load allows KU to avoid the capital costs of added peaking units. This provides a tangible cost benefit to all KU ratepayers while enhancing the reliability of KU's system. In a similar vein, KU avoids the fuel, emission and related costs of running additional peaking generating units. (These typically are high emitting, very high heat rate units).

Significantly, there are very few customers that are able or willing to take service on a curtailable basis. In fact, in 2002, KU listed only 6 customers on curtailment service.[3] There are fewer customers still that are large enough to provide immediate system benefits to KU by opening a single circuit. NAS is unique in providing curtailable service that amounts to an instant peaker for KU that carries no fuel or emissions costs for the utility.

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[2] In 2002, the NAS facilities in Ghent consumed roughly 376,000 Mwh of energy. KU's 25 remaining LCI-TOD customers averaged approximately 85,000 Mwh of annual energy use. (Sources: KU 2002 FERC Form 1, p 304.1. (after deducting the NAS LCI-TOD usage)).

[3] KU Form 1 for 2002, p. 304.1.

Further, KU schedules its generation to serve the load profile presented by the entire NAS load as part of the expected KU/LG&E integrated system load shape. Two factors are notable in this regard. First, the overall load factor of the NAS Ghent facility is roughly 50% and continues to improve.[4] This compares favorably to the KU/LG&E system load factor of roughly 54%.[5] Thus, from a system utilization standpoint, the NAS load should be treated comparably to other tariffed loads.

A second related point is that a significant amount of NAS's electric consumption occurs during off-peak periods, and it is not a weather sensitive load. This provides a substantial operational benefit to KU. KU reports that coal-fired generation supplied 97% of its kilowatt hour production in 2002. (*See* KU 10-K for 2002, p.18.) By operating large loads during low load periods, NAS allows KU to better manage the minimum loading and run time requirements of its coal-fired plants.

Other manufacturing customers that have a 50% load factor may operate a one or two-shift weekday operation. This exacerbates KU's peaking needs and does not help with the overall utilization of generation. In contrast, the NAS operations run around the clock, and the melt shop runs continuously when it is in production (unless curtailed by KU). This load profile allows KU to better use its generating portfolio.

The above considerations indicate that KU's costs of serving NAS (and, hence, the rates that should be applicable to NAS) are substantially less than KU's costs of serving other customers, including other LCI-TOD customers. KU, however, has complained that the melt

[4] For the most recent quarter of April- June 2003, the average load factor of the rolling and production facilities was approximately 73%, the load factor of the melt shop averaged roughly 34%, and the overall NAS load factor was 50%.

[5] *See* LG&E/KU October 2002 IRP, Vol. I, pp.6-8, Table 6(1)-(b).

shop is a "nonconforming load" because the load fluctuates substantially within any given hour of operation.[6] This concern is misplaced. The LG&E/KU system operator certainly follows all moment-to-moment load variations on the combined utility system, but the costs of following the effect of the NAS electric arc furnace operation on that process should be nominal. As noted above, LG&E/KU does not build or purchase generating capacity to serve curtailable load. Generating capacity, plus required reserves, are based on the forecasted firm peak load.

From an operational standpoint, LG&E/KU schedules its generation each day based on a forecasted hourly load profile. The NAS load, as it appears to KU on an hourly basis (including all equipment starts, stops, and fluctuations within each hour) is reflected in those hourly scheduled system loads. Variations from those scheduled hourly levels are accommodated as necessary by the LG&E/KU units serving as operating reserves. KU, however, does not schedule generation specifically for moment to moment variations in its system load. Rather, LG&E/ KU maintains generating operational reserves based on its *daily forecasted peak load* (i.e., the highest expected hourly peak in the day). (*See* Administrative Case No. 387, A Review of the adequacy of Kentucky's Generation Capacity and Transmission System, LG&E response to Commission question No 7, dated July 31, 2001.)

Within an hour, the LG&E/KU system operator maintains network reliability parameters (voltage and frequency) by adjusting output as needed from generating units committed to Automatic Generation Control (AGC). The variable (if any) fuel costs associated with units on AGC is the only real out-of-pocket cost to KU of following electric arc furnace load fluctuations within any hour. These fuel costs are, of course, captured in KU's fuel adjustment clause. In

[6] The electric arc furnace applies an electric charge to scrap steel several times during the course of a normal "heat." Interspersed between "charges" are down periods when more scrap is added to the furnace, steel chemistry is monitored and modified, and other production adjustments are made. The "tap-to-tap" time (i.e., the interval required to complete a heat and "tap" (pour) molten steel from the furnace) is roughly one hour.

short, the fluctuating nature of the electric arc furnace portion of the NAS electric load does not add appreciably to KU's cost of serving NAS. The rates charged by KU should not exceed the terms specified in the LCI-TOD tariff.

CONCLUSION

For the reasons stated herein, NAS requests that the Commission issue an order directing Kentucky Utilities to provide electric service to all of the NAS facilities in Ghent at rates that are equivalent to KU's prevailing LCI-TOD tariff.

Respectfully submitted,

This 23rd day of September, 2003

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CERTIFICATE OF SERVICE

I hereby certify that the original and 10 copies of this Complaint have been filed with the Kentucky Public Service Commission and served on Kentucky Utilities by mailing a true and correct copy thereof to Steven D. Phillips and Linda S. Portasik, Attorney's for Kentucky Utilities at LG&E Energy Corporation, 220 West Main Street, Louisville, Kentucky 40232.

This 23rd day of September, 2003.

Richard S. Taylor, Attorney-at-Law

Appendix A

THIS FILING IS (CHECK ONE BOX FOR EACH ITEM)	
Item 1: [Y] An Initial (Original) Submission	OR [ ] Resubmission No. ____
Item 2: [ ] An Original Signed Form	OR [ ] Conformed Copy

Appendix A

Form Approved
OMB No. 1902-0021
(Expires 3/31/2005)

FERC Form No. 1:
ANNUAL REPORT OF MAJOR ELECTRIC UTILITIES, LICENSEES AND OTHERS

This report is mandatory under the Federal Power Act, Sections 3, 4(a), 304 and 309, and 18 CFR 141.1. Failure to report may result in criminal fines, civil penalties and other sanctions as provided by law. The Federal Energy Regulatory Commission does not consider this report to be of a confidential nature.

Exact Legal Name of Respondent (Company)	Year of Report
Kentucky Utilities Company	Dec. 31, 2002

Name of Respondent	This Report Is:	Date of Report (Mo, Da, Yr)	Year of Report
Kentucky Utilities Company	(1) [X] An Original (2) [ ] A Resubmission	03/28/2003	Dec. 31, 2002

SALES OF ELECTRICITY BY RATE SCHEDULES

1. Report below for each rate schedule in effect during the year the MWH of electricity sold, revenue, average number of customer, average Kwh per customer, and average revenue per Kwh, excluding date for Sales for Resale which is reported on Pages 310-311.
2. Provide a subheading and total for each prescribed operating revenue account in the sequence followed in "Electric Operating Revenues," Page 300-301. If the sales under any rate schedule are classified in more than one revenue account, List the rate schedule and sales data under each applicable revenue account subheading.
3. Where the same customers are served under more than one rate schedule in the same revenue account classification (such as a general residential schedule and an off peak water heating schedule), the entries in column (d) for the special schedule should denote the duplication in number of reported customers.
4. The average number of customers should be the number of bills rendered during the year divided by the number of billing periods during the year (12 if all billings are made monthly).
5. For any rate schedule having a fuel adjustment clause state in a footnote the estimated additional revenue billed pursuant thereto.
6. Report amount of unbilled revenue as of end of year for each applicable revenue account subheading.

Line No.	Number and Title of Rate schedule (a)	MWh Sold (b)	Revenue (c)	Average Number of Customers (d)	KWh of Sales Per Customer (e)	Revenue Per KWh Sold (f)
1	Account 442					
2						
3	General Service - KY	1,033,043	57,266,815	61,649	16,757	0.0554
4	Net Metering Service - KY	2	174	1	2,000	0.0870
5	Combination Water Heating - KY	73	2,843	80	913	0.0389
6	All Electric School - KY	7,065	270,672	59	119,746	0.0383
7	Space Heating - KY	13,445	526,435	891	15,090	0.0392
8	Outdoor Lighting - KY	42,048	3,830,150	17,734	2,420	0.0894
9	Combined Lighting & Power - KY	4,198,718	158,761,098	11,621	361,132	0.0378
10	Large Comm./Ind. T.O.D. - KY	2,261,619	68,772,766	25	86,985,346	0.0304
11	High Load Factor - KY	1,065,892	33,992,106	83	13,083,036	0.0313
12	Water Pumping Service - KY	89	4,099	1	89,000	0.0461
13	Mine Power - KY	244,827	8,870,861	30	8,160,900	0.0362
14	Mine Power T.O.D. - KY	222,461	7,295,601	9	24,717,889	0.0328
15	West VA Pulp/Paper - KY	250,153	6,727,031	1	250,153,000	0.0269
16	No. American Stainless - KY	108,848	6,779,102	1	108,848,000	0.0622
	Curtailment Service - KY		-1,859,978	6		
18	General Service - TN	10	338	1	10,000	0.0338
19	General Service - VA	77,402	4,581,059	3,383	22,880	0.0589
20	Outdoor Lighting - VA	1,104	149,330	729	1,514	0.1353
21	Large Power Service - VA	345,979	13,993,890	284	1,221,757	0.0403
22	Curtailment Service - VA		-18,226	1		
23						
24						
25	Duplicate Customers			-17,687		
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39	Unbilled	10,083	799,000			0.0792
40	Total for Account 442	9,902,725	370,729,980	78,903	125,505	0.0374
41	TOTAL Billed	17,573,032	704,830,174	502,698	34,959	0.0401
42	Total Unbilled Rev.(See Instr. 6)	61,107	3,025,000	0	0	0.0495
43	TOTAL	17,633,139	707,880,174	502,698	35,077	0.0401

Appendix B

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

RECEIVED
APR 14 2000
PUBLIC SERVICE COMMISSION

In the matter of:	)	
Joint Application of PowerGen PLC,	)	
LG&E Energy Corp.,	)	Case No. 2000-095
Louisville Gas & Electric Company, and	)	
Kentucky Utilities Company for approval of a merger	)	

Direct Testimony of

Jose Luis Lejeune

On Behalf of

North American Stainless, L.P.

Q: PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.

A: I am Jose Luis Lejeune, President of North American Stainless, L.P. My business address is 6870 Highway 42 East, Ghent, Kentucky 41045.

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A: My testimony explains that the proposed acquisition of LG&E Energy, including its affiliate, Kentucky Utilities, is not in the public interest as proposed. I recommend that the Commission disapprove the proposed acquisition for that reason. If the Commission approves the transaction, it must impose several conditions that are essential to protect the interest of Kentucky electric consumers.

Q: PLEASE DESCRIBE NORTH AMERICAN STAINLESS.

A: North American Stainless, L.P. ("NAS") operates a stainless steel production facility in Carroll County, Kentucky. Founded in 1990, NAS has continually expanded its production facilities and has invested more than $600 million in Kentucky to date, and employs more than 400 people with an average compensation of $42,000. NAS now produces a variety of the finest stainless steel flat-rolled products available. NAS has planned for continued growth in Kentucky, and it recently announced plans to invest more than $200M in an electric arc furnace "melt shop" in Carroll County that will create more than 150 jobs.

NAS is owned by Acerinox S.A. (96 percent), which is headquartered in Madrid, Spain, and AK Steel (4 percent).

Today, NAS is one of Kentucky Utilities larger electric customers. With the construction of the planned 100 MW melt shop, NAS may become KU's largest

customer. The construction of the melt shop is essential to NAS's future business plans and its continued growth in Kentucky.

An electric arc furnace melts recycled scrapped steel. The molten steel is cast into slabs, which are processed into flat rolled stainless steel products. This method of steel production is far more efficient than traditional integrated steel operations and provides significant environmental benefits through the hundreds of thousands of tons of scrap steel recycled annually. NAS conducts business in extremely competitive global commodity markets. To remain competitive in these markets, NAS must be able to operate a melt shop and be able to produce slabs economically.

Q. **PLEASE EXPLAIN THE SIGNIFICANCE OF THE COST AND AVAILABILITY OF ELECTRICITY TO NAS'S OPERATIONS.**

A. NAS's rolling facilities use large amounts of electricity, and the electric arc furnace facility will be an energy-intensive operation. The cost of electricity is a major component of the total operating cost of the melt shop, usually exceeded only by the cost of scrap and sometimes labor. If NAS cannot obtain power at a cost that is competitive with other electric arc furnace operators, it will not be able to economically produce slabs for its operations. Competitively priced electricity is important to our rolling operations as well, and has been a key consideration in NAS's decision to locate in Kentucky. NAS has enjoyed a successful working relationship with Kentucky utilities in the past. KU's adequate supply of low-cost generation resources historically has allowed KU to provide low cost power to NAS's existing facilities and to accommodate NAS growth and load over the last decade.