

Exhibit No.:	
Issues:	<i>Refrigerated Brine</i>
Witness:	Herbert B. Zien, PE
Sponsoring Party:	Thermal North America, Inc.
Type of Exhibit:	Surrebuttal Testimony
Case No.:	HM-2004-0618
Date Testimony Prepared:	November 8, 2004

**MISSOURI PUBLIC SERVICE COMMISSION
UTILITY OPERATIONS DIVISION**

**SURREBUTTAL TESTIMONY
OF**

HERBERT B. ZIEN, PE

**TRIGEN-KANSAS CITY ENERGY CORP. and
THERMAL NORTH AMERICA, INC.**

CASE NO. HM-2004-0618

November 2004

Joint Application of)
)
Trigen-Kansas City Energy Corp.)
)
and) Case No. HM-2004-0618
)
Thermal North America, Inc.)
)
For Grant of the Authority Necessary)
for the Transfer of Control and Sale of)
All Stock Currently Owned by)
Trigen Energy Corporation, Inc. to)
Thermal North America, Inc.)

STATE OF _____)
) ss
COUNTY OF _____)

Notary Public

SURREBUTTAL TESTIMONY OF

HERBERT B. ZIEN, PE

TRIGEN-KANSAS CITY ENERGY CORP.

CASE NO. HM-2004-0618

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of my testimony is to address the position asserted by the Missouri Public Service Commission Staff that Trigen Missouri Energy Corporation is subject to the jurisdiction of the Missouri Public Service Commission. (Rebuttal Testimony of David W. Elliot, p. 5.)

Q. What is your opinion regarding Commission jurisdiction over Trigen Missouri Energy Corporation?

A. I do not believe that there any basis for the Commission to have jurisdiction and, further, even if there was a basis I do not understand why the Commission would want to exert jurisdiction.

Q. Why do you believe there is no basis for Commission jurisdiction?

A. For one reason, the facts of the situation do not appear to fit within the statutory definition of a public utility. I understand Staff's testimony as basing the purported jurisdiction on a statute that indicates that the provision of "hot or cold water" can be a public utility function by a "heating company." Staff perceives the services provided by Trigen Missouri Energy Corporation to fall within that category, and they refer to Trigen Missouri Energy Corporation's service as being the provision of "chilled water."

1 **Q. Does Trigen Missouri Energy Corporation provide chilled water to customers?**

2 A. No. The service that Trigen Missouri Energy Corporation provides to its customers is
3 air conditioning. The technology used to accomplish this is a closed loop piping system
4 through which a fluid is circulated; the fluid leaves the plant at a low temperature, circulates
5 via the pipe system through customer premises, and then is returned to the plant at a higher
6 temperature before being refrigerated again to repeat the cycle.

7 **Q. Do the customers consume this fluid?**

8 A. No. They simply utilize its thermal characteristics for air conditioning purposes.

9 **Q. Is this fluid water?**

10 A. No. The east piping loop circulates a brine solution, which was introduced into the
11 pipes upon the establishment of the system in the 1990s. This brine solution was created by
12 mixing approximately 89% water with a patented chemical product that was delivered to
13 Trigen Missouri Energy Corporation in railroad tanker cars. Since being mixed and
14 introduced into the east pipe loop, this brine solution has not left the pipes, other than in
15 small amounts for testing purposes.

16 **Q. Why is it called brine?**

17 A. Brine is a term used for a liquid solution made up of some parts water and some parts
18 salty chemicals.

19 **Q. So is it really water?**

20 A. No. Consider if you will a soft drink like Coke. By weight, Coke is made up of
21 about 90% water, and about 10% a patented solution involving sugar. Now we all know that
22 Coke is often served over ice. If the Commission were to assert jurisdiction over the service
23 of circulating the refrigerated brine in the pipes of Trigen Missouri Energy Corporation

1 because it is “chilled water,” it would be like asserting jurisdiction over a fast food restaurant
2 serving an ice cold Coke because that too is “chilled water.”

3 **Q. Is the refrigerated brine in the pipes potable?**

4 A. No. It would be inadvisable to drink it.

5 **Q. Why is this refrigerated brine and the service provided by Trigen Missouri**
6 **Energy Corporation sometimes referred to as “chilled water”?**

7 A. Technically, “chilled water” refers to water that is mechanically refrigerated, as
8 opposed to “cold water,” which is water that has not been heated. “Refrigerated brine” is
9 completely different, because it is a chemical solution that is mechanically refrigerated.

10 **Q. Why is brine solution used in the service provided by Trigen Missouri Energy**
11 **Corporation?**

12 A. The east pipe loop could physically carry “cold water,” but customers would
13 complain because their air conditioning systems would be ineffective. On the other hand, it
14 could not carry “refrigerated water” because, at the low circulating temperatures, heat
15 exchangers could freeze. Trigen Missouri Energy Corporation is only able to satisfy
16 customer needs and protect the distribution system by circulating “refrigerated brine.” The
17 brine solution has an antifreeze-like quality, which allows Trigen Missouri Energy
18 Corporation to bring the temperature of the solution lower than water for the same amount of
19 volume, and it is thus a more efficient vehicle for the thermal energy that is delivered. It also
20 has anticorrosive qualities to preserve the pipes.

21 **Q. You have referred to this refrigerated brine as being used in the east loop of**
22 **Trigen Missouri Energy Corporation. Is there another loop which uses a different**
23 **solution?**

1 A. Yes, the west loop which has only one customer.

2 **Q. So is Trigen Missouri Energy Corporation providing cold water to the public**
3 **through that loop?**

4 A. No. As with the east loop, the fluid being used in the west loop is merely a delivery
5 vehicle to deliver air conditioning, and is not consumed in the process. Further, it is not
6 being provided to the public. There is only one customer on that loop, and that customer
7 reached an individually negotiated contract with Trigen Missouri Energy Corporation. The
8 service is not offered to anyone else.

9 **Q. Is that true of the east loop as well?**

10 A. Yes. While there is more than one customer on the east loop, each of those customers
11 reached an individually negotiated contract with Trigen Missouri Energy Corporation. The
12 service was not and has not been made available to the public at large, and there is no price
13 offering by which a customer could simply decide whether or not to receive service. Trigen
14 Missouri Energy Corporation has in the past declined to offer service to potentially interested
15 parties simply because the economics of the situation did not work for Trigen Missouri
16 Energy Corporation. That would continue to be the case under new ownership.

17 **Q How many customers are on the east loop today?**

18 A. There are five very sophisticated customers.

19 **Q. You also stated that you could not imagine why the Commission would want to**
20 **exercise jurisdiction over Trigen Missouri Energy Corporation even if it had a basis to**
21 **do so. Why is that?**

1 A. For three reasons. First, the Commission does not regulate any similar business in the
2 State today, and I'm not aware of any public utility commission in any state which does so.
3 There does not seem to be any reason to change this status quo.

4 Second, regulating this business is not consistent with the purpose for which this
5 Commission and all public utility commissions were created. Only industries which are, in
6 economic terms, a natural monopoly have been historically regulated in this country as public
7 utilities. Classically this included the electric and telephone industries, where the enormous
8 costs for infrastructure and the public benefits of having a such services on a universal and
9 interconnected basis led to the conclusion that it would be appropriate to grant a monopoly
10 franchise to certain providers who in exchange would have their quality and price for service
11 regulated. There is no such situation today in the business of Trigen Missouri Energy
12 Corporation. A potential customer can secure air conditioning services in many different
13 ways from a multitude of commercial suppliers. There is no monopoly here.

14 Third, another basic premise of utility regulation is that customers need some
15 protection from potential abuses by the provider and thus the additional costs related to
16 regulation result in a net benefit. That is not the case here. Trigen Missouri Energy
17 Corporation's six customers are all sophisticated players in the marketplace. They are aware
18 of their choices and options and entered into contracts on the basis of the value being
19 provided to them under terms which they specifically negotiated. Not a single one of those
20 customers has asked this Commission to regulate this service. The additional costs of adding
21 regulation to this business is not something they have bargained for and would not be
22 welcome. The business is run today on a slim margin which essentially was determined by
23 the marketplace. Thus the additional costs of adding regulation to the business simply could

1 not be absorbed by the provider or the customer. This is a case where neither the customer
2 nor the provider see a need for or have a desire or ability to pay for the Commission's
3 involvement in their privately negotiated contracts.

4 **Q. You have testified earlier that Trigen's customers have been supportive of this**
5 **transaction. Nevertheless, the Staff is opposing this transaction unless the Staff's**
6 **conditions are imposed. What is your response?**

7 A. Our position is that the transaction is in the public interest. In fact, customers
8 themselves have affirmatively come forward supporting the transaction. Attached hereto as
9 Appendix "A" are a letter from Jackson County Executive, encouraging expeditious approval
10 of the transaction, and a letter from the Office of the Mayor expressing strong support for the
11 transaction.

Zien Appendix “A”

[Attach endorsement letter from Herman and Shields]

2 pages



KATHERYN SHIELDS

JACKSON COUNTY EXECUTIVE

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July 21, 2004

Missouri Public Service Commission
Mr. Dale Hardy Roberts, Secretary to the Commission
PO Box 360
Jefferson City, MO 65102-0360

Re: Case No. HM-2004-0618

In the Matter of the Joint Application of Trigen -)
Kansas City Energy Corp. and Thermal North)
America, Inc. for the Authority Necessary for the)
Transfer of Control, and Sale of All Stock Currently)
Owned by Trigen Energy Corporation, Inc. to)
Thermal North America, Inc.)

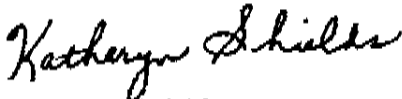
As County Executive of Jackson County, Missouri, I enthusiastically support the petition for authority from the Missouri Public Service Commission to transfer control and the sale of all stock currently owned by Trigen Energy Corporation, Inc. to Thermal North America, Inc.

Trigen-Kansas City Energy Corp. owns and operates a district heating system (the "System") that provides steam service to 70 customers in downtown Kansas City. Over the years the System has demonstrated its importance to the economic and environmental health of our community. The current owner does not plan to provide capital for expansion, and desires to sell the system. Kansas City's downtown area is growing, however, and it is important that the owner/operator of the System be ready to make investments in the System that are necessary to facilitate and serve the district's growth. The prospective owner, Thermal North America, Inc. ("Thermal NA"), which is a wholly-owned subsidiary of a major university endowment fund, takes a long-term view and is prepared to work with public officials to attract business to downtown Kansas City by investing in the System.



Major projects for downtown Kansas City are in the planning and development stage and they require immediate attention. I encourage the Public Service Commission to approve the above-cited petition expeditiously, so that the goal of economic development can be served, and these projects can benefit from capital and operating cost savings that can only come from System expansion.

Very truly yours,



Katheryn Shields
County Executive



Office of the Mayor

Mayor Kay Barnes

29th Floor, City Hall
414 East 12th Street
Kansas City, Missouri 64106-2778

(816) 513-3500
Fax: (816) 513-3518

September 2, 2004

Missouri Public Service Commission
Mr. Dale Hardy Roberts, Secretary to the Commission
PO Box 360
Jefferson City, MO 65102-0360

Re: Case No. HM-2004-0618

In the Matter of the Joint Application of Trigen - Kansas City Energy Corp.
and Thermal North America, Inc. for the Authority Necessary for the Transfer
of Control, and Sale of All Stock Currently owned by Trigen Energy
Corporation, Inc. to Thermal North America, Inc.

Dear Mr. Roberts:

We are writing this to voice our strong support for Thermal North America, Inc.'s pending application before Missouri Public Service Commission for the purchase and transfer of control of 100% of the stock of Trigen-Kansas City Energy Corporation, Inc.

The steam system, as operated by Trigen for the past 14 years, has been and remains a cost-effective, reliable and environmentally sound energy alternative for downtown. It serves commercial, institutional and governmental buildings in the central business district of Kansas City's urban core. While this record is commendable, the public is anxious to see renewed commitment to investment in the system to expand these proven economic benefits beyond the current customer base.

Thermal North America, Inc., the prospective new owner, has indicated that it is committed to pursuing system growth and expansion that will improve the overall economic health and development of the downtown district. Some of these potential opportunities for system growth are occurring within Trigen's territory even as we speak. We believe that swift action on review and approval of the application will best serve the interests of existing customers, new developers who are seeking to bring their projects to downtown, and the citizens of Kansas City. Thank you for your consideration.

Sincerely,

Kay Barnes
Mayor

Deb Hermann
City Council

Bill Skaggs
City Council

Wayne Cauthen
City Manager