

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of a Petition by
Excelsior Energy, Inc. for Approval
Of a Power Purchase Agreement, Under
Minn. Stat. § 216B.1694,
Determination of Least Cost
Technology, and Establishment of a
Clean Energy Technology Minimum
Under Minn. Stat § 216B.1693

PUC Docket No. E-6472/M-05-1993
OAH Docket No. 12-2500-17260-2

**DIRECT TESTIMONY OF
THOMAS D. CROWLEY**

1 The above matter is before Administrative Law Judges Steve M. Mihalchick and
2 Bruce Johnson. Pursuant to Minnesota Rules Chapter 1400, the following is submitted as
3 direct testimony offered by Minnesota Power.

4 **Q: Would you state your name, background, and present position.**

5 A: My name is Thomas D. Crowley. I am an economist and President of the
6 economic consulting firm of L. E. Peabody & Associates, Inc. The firm's offices
7 are located at 150 Duke Street, Suite 200, Alexandria, VA 22314 and 5901 Cicero
8 Avenue, Suite 504, Chicago, IL 60646. I have been employed by L. E. Peabody
9 & Associates, Inc. since 1971.

10

11 **Q: What is your educational background?**

12 A: I received a Bachelor of Science degree in Economics from the University of
13 Maine. I have also taken graduate courses in transportation at George
14 Washington University in Washington DC.

15

16 **Q: What previous experience do you have?**

SEP 6 2006

1 A: The firm of L.E. Peabody & Associates, Inc. specializes in solving economic,
2 marketing and transportation problems. As an economic consultant, I have
3 organized and directed economic studies and prepared reports for railroads,
4 freight forwarders and other carriers, for shippers, for associations and for state
5 governments and other public bodies dealing with transportation and related
6 economic problems. Examples of studies I have participated in include
7 organizing and directing traffic, operational and cost analyses in connection with
8 multiple car movements, unit train operations for coal and other commodities,
9 freight forwarder facilities, TOFC/COFC rail facilities, divisions of through rail
10 rates, operating commuter passenger service, and other studies dealing with
11 markets and the transportation by different modes of various commodities from
12 both eastern and western origins to various destinations in the United States. The
13 nature of these studies enabled me to become familiar with the operating practices
14 and accounting procedures utilized by railroads in the normal course of business.

15
16 Additionally, I have inspected and studied both railroad terminal and line-haul
17 facilities used in handling various commodities, and in particular unit train coal
18 movements from the Powder River Basin ("PRB") of Wyoming and Montana to
19 various utility destinations in the midwestern and western portions of the United
20 States. These operational reviews and studies were used as a basis for the
21 determination of the traffic and operating characteristics for specific movements
22 of coal, both inbound raw materials and outbound paper products to and from
23 paper mills, crude and pelletized iron ore, crushed stone, soda ash, aluminum,

1 fresh fruits and vegetables, TOFC/COFC traffic and numerous other commodities
2 handled by rail.

3
4 I have frequently been called upon to develop and coordinate economic and
5 operational studies relative to the acquisition of coal and the rail transportation of
6 coal on behalf of electric utility companies. My responsibilities in these
7 undertakings included the analyses of rail routes, rail operations and an
8 assessment of the relative efficiency and costs of railroad operations over those
9 routes. I have also analyzed and made recommendations regarding the acquisition
10 of railcars according to the specific needs of various coal shippers. The results of
11 these analyses have been employed in order to assist shippers in the development
12 and negotiation of rail transportation contracts which optimize operational
13 efficiency and cost effectiveness.

14
15 Since the implementation of the Staggers Rail Act of 1980, which clarified that
16 rail carriers could enter into transportation contracts with shippers, I have been
17 actively involved in negotiating transportation contracts on behalf of coal
18 shippers. Specifically, I have advised utilities concerning coal transportation rates
19 based on market conditions and carrier competition, movement specific service
20 commitments, specific cost-based rate adjustment provisions, contract reopeners
21 that recognize changes in productivity and cost-based ancillary charges.

22
23 I have also been actively engaged in negotiating coal supply contracts for various
24 users throughout the United States. In addition, I have analyzed the economic

1 impact of buying out, brokering, and modifying existing coal supply agreements.
2 My coal supply assignments have encompassed analyzing alternative coals to
3 determine the impact on the delivered price of operating and maintenance costs,
4 unloading costs, shrinkage factor and by-product savings.

5
6 I have developed different economic analyses for over sixty (60) electric utility
7 companies located in all parts of the United States, and for major associations,
8 including American Paper Institute, American Petroleum Institute, Chemical
9 Manufacturers Association, Coal Exporters Association, Edison Electric Institute,
10 Mail Order Association of America, National Coal Association, National
11 Industrial Transportation League, the Fertilizer Institute and Western Coal Traffic
12 League. In addition, I have assisted numerous government agencies, major
13 industries and major railroad companies in solving various economic problems.

14
15 **Q: On whose behalf are you testifying?**

16 A: I am testifying on behalf of Minnesota Power, a party to this contested case.

17
18 **Q: Have you testified in prior Minnesota or other state or federal utility
19 regulatory proceedings?**

20 A: Yes. I have presented evidence before the Interstate Commerce Commission
21 (“ICC”) in Ex Parte No. 347 (Sub-No. 1), Coal Rate Guidelines - Nationwide
22 which is the proceeding that established the methodology for developing a
23 maximum rail rate based on stand-alone costs. I have submitted evidence
24 applying the ICC's stand-alone cost procedures in every proceeding before the

1 ICC and its successor the Surface Transportation Board ("STB"). I have
2 frequently presented both oral and written testimony before the ICC, STB,
3 Federal Energy Regulatory Commission, Railroad Accounting Principles Board,
4 Postal Rate Commission and numerous state regulatory commissions, federal
5 courts and state courts. This testimony was generally related to the development
6 of variable cost of service calculations, rail traffic and operating patterns, fuel
7 supply economics, contract interpretations, economic principles concerning the
8 maximum level of rates, implementation of maximum rate principles, and
9 calculation of reparations or damages, including interest. I presented testimony
10 before the Congress of the United States, Committee on Transportation and
11 Infrastructure on the status of rail competition in the western United States. I
12 have also presented testimony in a number of court and arbitration proceedings
13 concerning the level of rates, rate adjustment procedures, rail operating
14 procedures and other economic components of specific contracts.

15
16 **Q: Have you reviewed the public direct testimony filed by Excelsior Energy in**
17 **this proceeding?**

18 A: Yes, I have.

19
20 **Q: What is the purpose of your testimony?**

21 A: My testimony will address rail delivery issues related to the Mesaba Project.

22
23 **Q: Are you sponsoring any documents and exhibits in the filing?**

24 A: No.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

Q: Briefly describe why coal transportation is an important issue in this proceeding.

A: The type of coal used in a power plant is critical since there are many types of coal and coal characteristics vary considerably. These characteristics significantly affect plant operation, reliability and operating and maintenance costs. With coal type being such a major factor in the success of a coal-fired facility and since any coal must be shipped into Minnesota from mine origins that can be over 1,100 miles away, the rail delivery plan for the Mesaba Project is a critical aspect of making a decision about Excelsior’s proposal about which the Minnesota Public Utilities Commission (“Commission”) must have a thorough understanding.

Q: What is Minnesota Power’s coal transportation experience?

A: Minnesota Power has years of extensive experience with rail transportation of sub-bituminous coal from mines in the PRB of Wyoming and Montana to serve its generating facilities, including Boswell Energy Center, located in Northeastern Minnesota.

Q: Please briefly describe Excelsior Energy’s rail delivery plan for the Mesaba Project.

A: Excelsior has indicated that it anticipates putting together a competitive strategy for the delivery of PRB coal from Wyoming and Montana, and Illinois No. 6 coal from mines located in Illinois, Indiana and Western Kentucky. Excelsior contends that its site selection process addressed whether its potential generating

1 sites could be served by more than one rail provider via the railroad's own
2 trackage. Excelsior believes having access to two different rail carriers will
3 ostensibly introduce "true competition" into the fuel supply equation and result in
4 lower fuel costs over the life of the project. See Supplemental Testimony and
5 Exhibits of Excelsior Energy, Thomas L. Oстераas - Exhibit ____ TLO-2,
6 Petition - Appendix A Mesaba Energy Project Report to the Minnesota Public
7 Utilities Commission (hereinafter "Excelsior Petition") at Section IV, page 53.

8
9 **Q: Why do you believe "true competition" will not exist for coal transportation**
10 **to the Mesaba Project?**

11 A: Based on the experience of Minnesota Power, as well as my experience in
12 working with other large coal shippers, destination competition is only beneficial
13 if there also is competition at the shipment origin. If only one rail carrier can
14 access a shipment origin, such as a coal mine, it can dictate the price of
15 transportation from that origin, subject to regulatory pricing restrictions. This is
16 known as "Bottleneck Pricing Power" since the one carrier controls a critical
17 portion or "bottleneck" in the origin to destination transportation chain. The rail
18 carrier controlling the bottleneck portion of the movement can set its prices for
19 the bottleneck section such that it becomes uneconomical for any other carrier to
20 participate in the movement. Furthermore "true competition" will only lead to
21 lower rail transportation costs if there is competition at the origin, at the
22 destination, and the cost of service is relatively equal between the two rail service
23 providers. If there is a large variance in operating costs (due to distance
24 differentials or adverse conditions on one route) between the two "competing"

1 providers (as in Excelsior's case), then the rate will be based on the higher of the
2 two providers' costs. This rate will not reflect a rate derived from true competition
3 in which the competitors operate from equal footing. This is how rail system
4 economics operate, regardless of who is buying the service.

5
6 When there are a limited number of transport providers in a market, as is the case
7 in the PRB where only two rail carriers currently operate, each carrier has a large
8 amount of market power that can push prices upward. This phenomenon is
9 currently occurring in the Western rail market, resulting in higher prices to
10 consumers. Excelsior will not be immune to this reality. If anything, as a new
11 entrant for shipping service, Excelsior will likely be in a negative position.

12
13 **Q: Do you agree with the following statement from Excelsior's Petition at**
14 **Section IV, page 108: "The delivered price of coal is also experiencing**
15 **upward pricing pressure from the increased need for rail companies to make**
16 **significant capital investments. The added costs associated with incremental**
17 **demand have resulted in reluctance by railroads to enter into agreements for**
18 **periods longer than three years."**

19 **A:** I would agree with the statement in part. While it is true that certain portions of
20 the Union Pacific Railroad Company ("UP") and The BNSF Railway Company
21 ("BNSF") systems are facing some capacity constraints, especially the trans-
22 continental lines extending from western U.S. ports, large sections of the UP's
23 and BNSF's systems are still relatively fluid. I believe that the railroads are using
24 the pretext of high capital needs as justification for imposing large increases in

1 rail rates. I would also add that railroads are reluctant to compete with each other
2 on moves that are theoretically competitive. Both competitive and captive
3 shippers, whose transportation contracts expired in the 2005/2006 time frame, are
4 experiencing large increases in transportation rates for future shipments as a result
5 of this pricing dynamic. Excelsior's statement is also noteworthy from the aspect
6 of its reference concerning railroads' lack of desire to make agreements and the
7 problems facing those parties whose agreements have expired. Regardless of
8 whether it has the potential for two rail carriers to serve its proposed generating
9 sites, Excelsior will face difficulty negotiating favorable contracts with the
10 railroads.

11
12 **Q: Do you agree with Excelsior's statement at Excelsior's Petition at Section IV,**
13 **page 116: "the delivered price of coal to [Minnesota Power's Clay] Boswell**
14 **[Station] is expected to exceed that delivered to the Project."**

15 **A:** No. Minnesota Power currently has very reasonable prices for the transportation
16 of PRB coal that it uses in its facilities. This is because Minnesota Power has a
17 long-term agreement with BNSF. Minnesota Power's working relationship with
18 BNSF is decades old and the two parties have been able to successfully work
19 together as business partners. Minnesota Power has more certainty about the
20 possibility of being able to negotiate a reasonable price for future service than a
21 purchaser, like Excelsior, with no existing agreement and no existing relationship
22 with a railroad.

1 Q: Do you agree with Excelsior's claims at Excelsior's Petition at Section IV,
2 page 111 that rail competition, upon which they plan to rely, will allow the
3 Mesaba Project to "use an unprecedented variety of coals produced in the
4 PRB and Illinois Basins. Figures 41, 42 and 43 show the Northern Powder
5 River Basin of Montana, the Southern Powder River Basin of Wyoming and
6 the Illinois Basin, together with their associated mining facilities, ownership
7 and rail providers."

8 A: No. If Excelsior is identifying "competitive" transportation options, then it must
9 eliminate coal from mines north of Peabody Energy's Caballo mine in the PRB
10 and coal produced at Montana mines from its list of possible fuel sources, since
11 these mines are only served by the BNSF. Furthermore, in the Illinois Basin, most
12 mines are only served by a single railroad, once again limiting any "competitive"
13 transportation options available. Additionally, a purchaser can get the best price
14 for both coal and rail service by settling on one type of coal, so knowing with a
15 high degree of certainty what coal one will use is essential. Switching back and
16 forth between coals is not economic, and would make it harder to secure a long
17 term contract for either rail service or coal supply with the best terms.

18
19 Regarding specific logistical issues of rail shipments to the Mesaba Project from
20 the PRB, it should be noted that only one carrier, the BNSF, directly serves the
21 PRB coal mines and the potential sites of Excelsior's generating stations in single-
22 line rail service. UP, the other major carrier serving mines in the Southern PRB,
23 would have to partner with a terminating railroad, the Canadian National Railway
24 ("CN"), in order to deliver coal to Mesaba. Excelsior acknowledges that single-

1 line rail service is preferred over multiple-line service due to increases in
2 interchange and handling costs. See Excelsior's Petition at Section IV, page 115.
3 Also, any rail transportation option involving the CN would be circuitous
4 (traveling through Nebraska and Iowa, for example, versus the more direct route
5 enjoyed by BNSF to Northeastern Minnesota through the Dakotas) resulting in
6 higher rate levels from both sets of railroads.

7
8 **Q: Do you have any other comments on Excelsior's rail transportation plan?**

9 A: Yes. There is no reason to believe the railroads' lack of desire to aggressively
10 compete for business will ease for Excelsior because of the physical location of
11 their proposed facility. Excelsior's assertion at Excelsior's Petition at Section IV,
12 page 109 that the current upward trend in transportation rates is likely to moderate
13 and decline by the time the Project reaches commercial operation, primarily due
14 to the de-bottlenecking of congestion points in the PRB over the next several
15 years, if correct, will only benefit truly competitive shippers. A captive shipper,
16 like Excelsior, will always pay a premium for transportation services. It is
17 erroneous to forecast a rail cost advantage from the PRB or elsewhere given the
18 current dynamics of rail delivery regulation and that planning for those dynamics
19 to change in time for any plant to be built, including the Mesaba Project, is
20 wishful thinking. This is even more the case when the shipper, in this case
21 Excelsior, has no existing contract and is situated in a captive location.

22
23 **Q: What is the impact of the lack of competitiveness and current marketplace**
24 **on the delivered costs to the Mesaba Project?**

1 A: With current fuel trends, the Mesaba Project's fuel costs can be expected to be
2 significantly greater than the \$1.20/MBtu delivered price included in Excelsior's
3 December 2005 filing. See Excelsior's Petition at Section IV, page 117. In
4 today's marketplace, the delivered price for the Mesaba Project's fuel would be
5 more than fifty per cent higher (\$1.80-\$1.90/MBtu). I, having studied coal
6 markets extensively and understanding Minnesota Power's position of buying and
7 transporting coal from the same part of the country as the Mesaba Project is
8 expected to be supplied from, do not expect rail rates to fall. If Excelsior is
9 claiming this will happen, the Commission should require proof of this assertion
10 with a signed rail contract before accepting it because, as noted above, rail cost is
11 part of delivered fuel cost and delivered fuel cost is critical to operating a
12 successful and cost-effective power plant. The primary site of the Mesaba Project
13 is in the vicinity of what is a very poor location for competitive rail service. Only
14 BNSF is a major carrier in the general locale of the preferred site for the Mesaba
15 Project, and the CN has access only by the circuitous routing mentioned above. It
16 is also important to note that neither the BNSF nor the CN could deliver directly
17 on site to the Mesaba Project without a spur being built. Excelsior acknowledges
18 this fact in its filing at Excelsior's Petition at Section IV, page 53.

19
20 **Q: Please summarize your testimony regarding coal transportation for the**
21 **Mesaba Project.**

22 A: A thorough understanding of the fuel supply and rail transportation challenges
23 facing Excelsior is fundamental to understanding the Mesaba Project's
24 economics, and, ultimately, the Project's viability. This is because fuel supply

1 and transportation is part and parcel of the Project's delivered fuel cost. I believe
2 the delivered fuel costs, typically more than fifty per cent of annual power plant
3 operating costs, will be at least 50 percent higher than those stated by Excelsior.
4 Excelsior has not provided adequate information in the record for the Commission
5 to assess the Mesaba Project's fuel commodity and transportation costs. Finally, I
6 do not agree with Excelsior's unfounded assertions that it will enjoy the benefits
7 of "true competition" at its proposed plant sites.

8

9 **Q: Does this conclude your testimony?**

10 **A: Yes.**