

Exhibit No.:
Issues: Open Access Pilot Program
Revenue, Production, Transmission
Witness: Donald Johnstone
Type of Exhibit: Direct Testimony
Sponsoring Party: ICI Explosives USA Inc. and Praxair, Inc.
Company: Empire District Electric Company
Case No.: ER-97-81

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the matter of **THE EMPIRE DISTRICT ELECTRIC**)
COMPANY of Joplin, Missouri for authority to file)
tariffs increasing rates for electric service provided)
to customers in the Missouri service area of the)
Company)

Case No. ER-97-81

Additional Direct Testimony of
Donald E. Johnstone

On Behalf of
ICI Explosives USA Inc.
and
Praxair, Inc.

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Brubaker & Associates, Inc.
St. Louis, MO 63141-2000

BEFORE THE PUBLIC SERVICE COMMISSION
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of Joplin, Missouri for authority to file tariffs increasing)	Case No. ER-97-81
rates for electric service provided to customers in the)	
Missouri service areas of the Company)	

Affidavit of Donald Johnstone

State of Missouri)	
)	SS
County of St. Louis)	

Donald Johnstone, being first duly sworn on his oath, states:

1. My name is Donald Johnstone. My business address is 1215 Fern Ridge Parkway, Suite 208, P. O. Box 412000, St. Louis, Missouri 63141-2000. I am a consultant in the field of public utility regulation and a principal in the firm of Brubaker & Associates, Inc.
2. Attached hereto and made a part hereof for all purposes is my Additional Direct Testimony and Schedules 2 through 5, inclusive, all of which testimony has been prepared in written form for introduction into evidence in the above-referenced docket.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.


Donald E. Johnstone

Subscribed and sworn to before me this 20th day of February, 1997.


Notary Public

My Commission expires February 26, 2000.

1 **THE EMPIRE DISTRICT ELECTRIC COMPANY**

2 Before the

3 Missouri Public Service Commission

4 PSC Case No. ER-97-81

5 **Additional Direct Testimony of Donald E. Johnstone**

6 Q PLEASE STATE YOUR NAME AND BUSINESS MAILING ADDRESS.

7 A Donald E. Johnstone, P.O. Box 412000, St. Louis, MO 63141.

8 Q PLEASE STATE YOUR QUALIFICATIONS AND EXPERIENCE.

9 A These are set forth in Schedule 1, attached to my direct testimony filed in the proceeding
10 on February 13, 1997.

11 Q WHAT ARE THE SUBJECTS OF YOUR TESTIMONY?

12 A My testimony recommends a Pilot Open Access Program, summarizes my analyses of
13 the cost incurred by The Empire District Electric Company (Empire) to serve ICI and
14 Praxair, and makes rate recommendations.

15 **Pilot Open Access Program**

16 Q WHY ARE YOU RECOMMENDING A PILOT RETAIL OPEN ACCESS PROGRAM IN
17 THIS PROCEEDING?

18 A There are a variety of reasons which are also stated in my direct testimony filed on
19 February 13, 1997 in this proceeding. Among those reasons are:

- 1) A market-based approach to electric generation supply will lead to greater efficiency, improved service, and reduced cost.
- 2) The vast majority of the states are actively considering the appropriateness of a competitive electric generation market.
- 3) Federal legislation is being actively considered in this regard.
- 4) There is a need for experience on the part of utilities, regulatory authorities, and customers.
- 5) As one of the lower cost producers in this state, Empire is a better position than most to move forward with a pilot open access program.

Q UNDER YOUR RECOMMENDATIONS, WHAT CUSTOMERS WOULD BE ELIGIBLE?

A I recommend eligibility for customers that would otherwise qualify for service under Schedule SC-ICI and Schedule SC-P. As a practical matter, that would make the pilot program available to Praxair and to ICI. I would not oppose expansion of the program to include other customers, but I am not aware of any interest having been expressed by any other customers.

Q PLEASE DESCRIBE THE ESSENTIAL ELEMENTS OF THE RECOMMENDED PILOT PROGRAM.

A Under the pilot program, ICI and Praxair would have the ability to obtain their electric supply from a third party or from Empire with the selection of supply based upon the combination of service quality and price that best meets the needs of their facilities. Delivery services would continue to be obtained from Empire, but on an unbundled basis under the recommended Missouri Public Service Commission (MPSC) pilot open access tariff, and under the Federal Energy Regulatory Commission (FERC) approved tariff for open access transmission service—Schedule OATS. I recommend that the term of the pilot program be set to provide customers with the option to continue in the pilot for up to five years.

1 **Q WHAT ARE SOME OF THE BENEFITS THAT WILL ACCRUE TO THE PARTICIPANTS,**
2 **EMPIRE, AND OTHER PARTIES?**

3 **A**Experience would be gained with respect to the unbundled delivery services and market
4 pricing. In contrast to the current service arrangement, whereunder customers use the
5 power they need without prior scheduling, the customers would be required to provide a
6 schedule of their usage to Empire and the supplier of generation. Thus, customers would
7 need to prepare a forecast of needs on an hourly basis. At times when their actual usage
8 varies from the schedule, there would be a separate charge by Empire under the terms
9 of FERC Schedule OATS. That would be the customer perspective. From the Empire
10 perspective, it will be necessary to have procedures in place to accept the customer
11 schedules, and Empire will also be in a position of administering FERC Schedule OATS
12 for retail transmission customers for the first time. The experience gained by Empire will
13 enable the Company to prepare additional open access programs in the future with the
14 knowledge that first hand experience provides. Also, to the extent that the pilot program
15 reduces costs for the eligible companies, the prospects for continuing operations improve
16 thereby contributing to the economic stability and development of the communities in
17 which they reside and the State of Missouri. Finally, I would note that implementation of
18 the pilot program would give Missouri recognition as a forward looking state.

19 **Q WHAT PRICE WILL CUSTOMERS PAY FOR ELECTRIC GENERATION THEY**
20 **PURCHASE UNDER THIS PILOT PROGRAM?**

21 **A**The price paid will be a market determined price as opposed to the current approach
22 under which the cost of electric generation is a part of the price paid for the fully bundled
23 service that is provided by Empire. Since price will be determined by the market, neither
24 the customers, nor Empire, nor the Commission can determine that price at this time.
25 Instead, customers will have the opportunity to shop for their electricity needs. Empire

1 would, of course, be interested in the price because it is quite likely that they will have to
2 sell all of their generation at a market price at some time in the not too distant future. The
3 Commission and other parties will be interested in determining whether or not the open
4 access arrangement will produce lower prices while maintaining or improving service
5 quality and reliability.

6 Q WHAT IS YOUR RECOMMENDATION WITH RESPECT TO THE TIMING OF THE
7 PROGRAM?

8 A I recommend that it be implemented with the effective date of the tariffs in this
9 proceeding. In order to provide for a five-year program, the tariff should remain effective
10 through December 31, 2002, or until superseded by a permanent retail open access tariff.

11 Q HOW WOULD THE TRANSMISSION COMPONENT OF THE DELIVERY SERVICES BE
12 PRICED?

13 A I recommend the pricing under the Empire Open Access Transmission Service rate
14 schedule, FERC Schedule OATS. The tariff would be subject to change pursuant to order
15 of the FERC and I understand that there are underway settlement discussions to which
16 ICI and Praxair are not parties. Thus, it is likely that this rate schedule will change
17 somewhat in the not too distant future.

18 Q WOULD ICI AND PRAXAIR BE ELIGIBLE FOR SERVICE UNDER FERC SCHEDULE
19 OATS?

20 A Yes. Under the rate schedule, "eligible customer" is defined to include the following:
21 "...any retail customer taking unbundled transmission service
22 pursuant to a state retail access program or pursuant to a
23 voluntary offer of unbundled retail transmission service by the
24 transmission provider."

1 I am optimistic that the ICI/Praxair pilot proposal will lead to both a voluntary offer
2 by Empire and a state-approved pilot retail access program, thereby meeting the eligibility
3 criteria for retail customers on both counts.

4 **Q IS IT NECESSARY OR APPROPRIATE FOR THE MISSOURI COMMISSION TO**
5 **PROVIDE A TARIFF FOR TRANSMISSION SERVICE?**

6 **A** In my opinion, such a tariff would be unnecessary inasmuch as all of the transmission
7 facilities necessary to provide service to these customers have been included in the
8 development of the FERC-approved rate schedule. In Order 888, FERC has taken the
9 position that it has exclusive jurisdiction over transmission facilities used in interstate
10 commerce. However, I am also sensitive to the thought that the Commission may wish
11 to preserve its right to argue that it has the right to regulate transmission services
12 provided to retail customers. From the point of view of my clients, it would be highly
13 desirable to avoid any litigation of this issue that would delay the implementation of the
14 pilot program and potentially increase the cost of implementing the pilot program. Hence,
15 to the extent the jurisdictional question is an issue of concern, I recommend that the
16 Missouri Commission simply approve the FERC open access schedule for the purpose
17 of the pilot program while, if it deems appropriate, reserving a right to address the
18 jurisdictional issue at a later time.

19 **Q SHOULD EMPIRE BE ALLOWED TO PROVIDE AN UNREGULATED ELECTRIC**
20 **GENERATION SERVICE TO ICI AND PRAXAIR?**

21 **A** Yes. ICI and Praxair would welcome an offer of unregulated generation service from
22 Empire. Of course, any such offer would be considered along with the numerous other
23 options that my clients expect to be available.

1 In order to maintain fairness and comparability with respect to other suppliers, it
2 would be necessary for the transmission service to be provided under the FERC open
3 access tariff regardless of whether Empire or another party is the supplier. Empire, if it
4 chooses to participate as a potential supplier, would be free to supply the power and
5 energy, either from its own facilities, from power procured from a third party or any
6 combination of the two.

7 **Q DO YOU RECOMMEND ANY STRANDED COST RECOVERY FOR EMPIRE?**

8 **A** No. As Empire testified in Docket No. ER-97-82, its rates are the lowest of the investor-
9 owned utilities in this state. There is no reason to believe there will be a significant
10 stranded cost problem. In addition, Empire, has maintained a degree of flexibility in its
11 capacity planning through the use of purchased power. Thus, there are at least two
12 reasons why it is unlikely that there will be any stranded cost at this time. But even if
13 there were potentially strandable costs, I would expect Empire to act to mitigate such
14 costs with actions such as, but not limited to, adjustments to power purchases and sales
15 of the released capacity and energy.

16 While I would anticipate that the same considerations would be likely to lead to
17 zero stranded costs in any permanent open access programs, I see no need to address
18 that issue or prejudice any future decisions as a part of this proceeding or as a part of the
19 proposed pilot program.

20 **Q SHOULD THE PARTICIPANTS HAVE THE RIGHT TO RETURN TO REGULATED**
21 **SERVICE DURING THE PILOT PROGRAM?**

22 **A** Since this is a pilot program, I recommend that option remain open to the program
23 participants, specifically ICI and Praxair.

1 **Q IS IT POSSIBLE THAT THE CURRENT RATES, IF LEFT INTACT, WOULD NO**
2 **LONGER BE APPROPRIATE AT SUCH TIME AS THE CUSTOMERS MAY CHOOSE**
3 **TO RETURN TO THEM?**

4 **A It is possible that either usage characteristics or cost for the services provided would**
5 **change somewhat such that modifications to the rate would be necessary. To the extent**
6 **that occurs, Empire would of course be free to apply for a rate change, and customers**
7 **would be free to file a complaint. I recommend a 12-month notice for a return to bundled**
8 **service or such lesser time as may be possible. This would provide time for Empire to**
9 **make supply arrangements and time to process a rate change, if necessary. Also,**
10 **pending development of any future studies, I would think it would be appropriate to**
11 **increase Rates SC-ICI and SC-P at the system average increase, if there are any rate**
12 **increases during the pilot program, while ICI and Praxair are participating in the pilot**
13 **program. While it is virtually impossible to anticipate all of the possibilities, I believe this**
14 **approach will provide appropriate protections for the Company and the pilot program**
15 **participants during the period that the pilot is in effect.**

16 **Q WOULD THE RETURN OF THE CLIENTS TO THE SYSTEM BE SUBJECT TO THE**
17 **AVAILABILITY OF POWER AND ENERGY FROM EMPIRE?**

18 **A Yes. The return should be conditioned upon the availability of power and energy from the**
19 **Company, and the return should not place the reliable power supply of other customers**
20 **in jeopardy. On the other hand, I believe that Empire should be required to use its best**
21 **efforts to make the power supply available if so requested.**

22 **Q WHAT RATE TO YOU RECOMMEND FOR THE PILOT OPEN ACCESS PROGRAM?**

23 **A I recommend the rate set forth in Schedule 2. The delivery service charge is based on**
24 **the cost study summarized in Schedule 3, which removes the ICI and Praxair loads from**

1 the jurisdiction for the purpose of allocating production and transmission costs. In
2 addition to the costs for ICI and Praxair jurisdictional costs identified in the study, I have
3 added a total of \$30,000 to account for miscellaneous distribution and administrative
4 costs not already included in the cost study or FERC Schedule OATS.

5 **Cost of Service—Existing Special Contract Service**

6 Q IS IT IMPORTANT TO REVIEW THE CHARACTERISTICS OF THE LOAD SERVED BY
7 THE EMPIRE SYSTEM TO PROVIDE A PROPER BACKGROUND FOR THE CLASS
8 COST OF SERVICE ANALYSIS?

9 A Yes, it is.

10 Q ARE THERE LARGE VARIATIONS AMONG THE DAILY AND MONTHLY PEAK
11 DEMANDS OF THE COMPANY LOADS THAT DEPEND, AMONG OTHER THINGS, ON
12 THE SEASON OF THE YEAR?

13 A Yes. In particular, the peak demands are most sensitive to the changes in Summer
14 weather. For example, in the twelve months ending March 31, 1996, the highest hourly
15 load occurred in August. It was 668 MW, 61% higher than the lowest monthly peak,
16 which occurred in April. In the several prior years, the Summer peak exceeded the lowest
17 monthly peak by amounts as high as 71% in 1991.

18 Generally, it is the loads at the high levels that are indicative of the amount of
19 capacity that is required by Empire in order to provide reliable service. Since the amount
20 of capacity required is a very important determinant of cost, it is appropriate to focus on
21 these high loads.

1 Q WHAT IS THE RELATIONSHIP OF THE AVERAGE LOAD OF EMPIRE TO THE
2 ANNUAL PEAK DEMAND?

3 A The ratio of the annual average demand to the annual maximum demand is the annual
4 load factor. For the years 1990 through 1994, the annual load factors ranged from 59%
5 to 62%. In the year ended March 1996, the load factor was 57%. Again, it is the high
6 load associated with air conditioning during the Summer period which is in large part
7 responsible for the load factors being in this range, otherwise they would be higher.

8 Q DO THE HIGH LOADS PERSIST FOR A LARGE NUMBER OF HOURS?

9 A No. The highest loads occur on only a relatively few days and on those days for only a
10 few hours.

11 Q DO ALL OF THE CUSTOMER CLASSES HAVE SIMILAR LOAD PATTERNS?

12 A No. For several of the customer classes, the load varies widely throughout the year.
13 Also, the contribution of some classes to the peak load is relatively much larger than their
14 contribution to the average load. The contribution to the peak monthly system loads is
15 relatively stable throughout the year for the large power and special contracts classes.
16 In contrast, there is a large variation in the contribution to the monthly peak by the
17 residential and general service customer classes.

18 Q IS THERE ALSO A LARGE VARIATION IN THE LOAD OF THE CUSTOMER CLASSES
19 THROUGHOUT THE 24 HOURS OF THE PEAK DAY?

20 A Yes. The load is relatively low in the early morning hours and reaches its highest levels
21 in the afternoon. Again, the residential and general service classes have wide variations,
22 while the loads of the large power and special contract classes are quite consistent.

1 Q DOES YOUR ANALYSIS ILLUSTRATE WHY THE LARGE HIGH LOAD FACTOR
2 INDUSTRIAL LOADS ARE MORE DESIRABLE TO SERVE IN AN OPERATIONAL
3 SENSE AND COST LESS PER KILOWATTHOUR TO SERVE THAN THE LOADS OF
4 THE OTHER CLASSES?

5 A Yes, it does. However, there are additional factors which are also important. Empire has
6 developed interruptible contracts with a number of its customers and, therefore, in
7 addition to displaying a relatively flat load profile in the first place, the loads of some
8 customers can actually be reduced during the peak hours to mitigate the high cost
9 associated with peak demand. Praxair has the largest interruptible load on the system.

10 Q IS THERE A SIGNIFICANT DIFFERENCE IN THE SIZE OF THE ENERGY REQUIRE-
11 MENTS OF THE TYPICAL RESIDENTIAL CUSTOMER, AS COMPARED TO THE
12 SPECIAL CONTRACTS CUSTOMERS?

13 A Yes. The average general residential customer consumed approximately 11,000 kWh.
14 In contrast, the average special contract customer (ICI and Praxair) consumes over 60
15 million kWh per year. Thus, on average, the special contract customers are roughly 5,000
16 times larger than the residential customers and this leads to very important economies
17 of scale in the facilities that are required to serve them. For example, while the meters
18 for large customers are somewhat more expensive, it is very much less expensive per
19 kWh to meter and bill one special contract customer than it is to meter and bill 5,000
20 residential customers that would consume an equivalent amount of energy. In addition,
21 in providing service to the large special contracts customers, the extensive array of
22 primary and secondary distribution facilities of Empire simply are not required. Thus,
23 major elements of the costs that are incurred to serve residential customers either simply
24 do not exist for the special contracts customers or are much less due to the economies
25 of scale.

1 Q IS THERE A DIFFERENCE IN THE PERCENT OF ENERGY THAT IS LOST BETWEEN
2 THE GENERATOR AND THE CUSTOMER METER AMONG THE CUSTOMER
3 CLASSES?

4 A Yes. Since there are relatively few distribution facilities required in the service to special
5 contracts customers, the amount of losses amount to only approximately 3%. In contrast,
6 the amount of energy that is lost between the generator and delivery to residential customers
7 is over 10%. This is a consequence of all the distribution facilities that are required
8 in providing service to the residential customers.

9 Q WHAT COST OF SERVICE ANALYSES HAVE YOU PREPARED?

10 A I have prepared cost of service analyses based upon the Company cost of service model.
11 Since my interest lies with ICI and Praxair, I have focused my efforts on those customers.
12 I have investigated several alternative production cost allocation methods which, in my
13 opinion, will provide an accurate measure of the cost incurred to serve the special
14 contracts customers than the Empire study.

15 Q IN YOUR DISCUSSION OF SYSTEM AND CLASS LOAD CHARACTERISTICS, YOU
16 EXPLAIN THAT THERE ARE WIDE VARIATIONS IN THE LOAD PATTERNS OF SOME
17 CUSTOMER CLASSES IN CONTRAST TO THE RELATIVELY STABLE LOAD OF THE
18 SPECIAL CONTRACTS CUSTOMERS. WHY IS THAT IMPORTANT IN THE
19 CONSIDERATION OF A PRODUCTION DEMAND COST ALLOCATION METHOD?

20 A It is important because the lowest total cost per kWh will be obtained in providing service
21 to high load factor and interruptible customers. In the simplest terms, production capacity
22 can be considered as consisting of two types. Base load, which has a relatively high fixed
23 cost and low operating cost, and peaking capacity, which has a relatively lower capacity

1 cost but a much higher variable running cost. The lowest average cost is obtained when
2 base load facilities can be operated at full load to the maximum extent. While the lowest
3 cost is obtained when utilization of the capacity is high, base load capacity typically
4 continues to be the more economical choice for new capacity even with annual utilization
5 rates as low as 17%. Said in other terms, the 17% utilization corresponds to the typical
6 break-even point of approximately 1,500 hours use per year (compare to 8,760 hours in
7 one calendar year). If the expected equivalent full load utilization is less than 1,500 hours,
8 it will generally be preferable to install peaking capacity, while an anticipated usage of
9 greater than 1,500 hours per year would result in the choice of base load capacity.

10 **Q IS THE CONCEPT OF BREAK-EVEN POINT IMPORTANT TO THE ANALYSIS OF**
11 **CAPACITY COST IN A CLASS COST OF SERVICE STUDY?**

12 **A** In some situations it is an important consideration. It is sometimes argued that the cost
13 allocation methods should attempt to capture the variations in cost for the different types
14 of capacity. Of course, when that is done, it also important to capture the variations in
15 running cost, the variable cost of production.

16 **Q IN THE EVENT THAT IT IS NECESSARY TO CAPTURE THE VARIATIONS IN CAPAC-**
17 **ITY COST IN THE ALLOCATION METHOD, HOW SHOULD THIS BE DONE?**

18 **A** It is very important to recognize that the installation of base load capacity is not dependent
19 upon use of that capacity for all hours of the year. Once the duration of the load exceeds
20 the break-even point, base load capacity will be installed whether the usage is for 2,000
21 hours, 4,000 hours or 8,000 hours in the year. Thus, from the perspective of cost-
22 causation, it is necessary to focus on usage during the 1,500 hours with the highest load.

1 **Q IS THERE A LOGICAL DIFFERENCE IN THE COST OF EXISTING CAPACITY**
2 **BETWEEN AND AMONG THE VARIOUS CAPACITY TYPES?**

3 **A No.** The cost of the existing capacity is very dependent upon the age of the unit, not just
4 the capacity type. For example, a base load unit installed many years ago would have a
5 lower capital cost than a new base load unit simply because construction costs were
6 much less in the past. In addition, depreciation accumulates over the years to reduce the
7 net investment in facilities. Consequently, the differentiation in capacity cost is blurred
8 over time. The net cost per kW of existing base load capacity is often less than that of
9 new peaking capacity. That situation exists today on the Empire system.

10 **Q WHAT IS YOUR RECOMMENDATION IN THE INSTANT PROCEEDING?**

11 **A It is my recommendation that capacity cost be allocated among customer class based on**
12 the contribution to system peak loads, those loads which determine the amount of
13 capacity which is required.

14 **Q HOW SHOULD THE CONTRIBUTION OF EACH OF THE CUSTOMER CLASSES TO**
15 **SYSTEM PEAK DEMAND BE MEASURED?**

16 **A While there are several methods that may be used to measure the contribution to peak,**
17 all with various advantages and disadvantages, those which focus on the highest peak
18 demands best reflect the importance of peak demand in causing capacity costs to be
19 incurred. As a general rule, the amount of capacity that is required to provide reliable
20 service depends to a very large extent on the firm loads that must be served during the
21 peak hour. Of course, those hours when the loads are very near to the peak also require
22 large amounts of capacity. On the one hand, the load during a relatively few hours very
23 close to the peak will provide the best measure of capacity requirements. However, on
24 the other hand, an unusual perturbation in the load of any customer class would have the

1 potential to distort the results. In this proceeding, I have prepared two studies based
2 upon the load data that is being sponsored by the Company in its class cost study. I have
3 prepared a 2 CP allocation factor for the costs of production capacity and transmission
4 capacity. All other allocation methods are those supplied by the Company. In addition,
5 to obtain a broader measure of the contribution to the peak, I have developed allocation
6 factors using the ten highest load hours in the test year. This study too defines cost
7 based on a reasonable measure of the class contributions to the system capacity
8 requirements.

9 Q HAVE YOU CONSIDERED THE FACT THAT THE COMPANY IS EXPANDING ITS
10 SYSTEM WITH NEW PRODUCTION CAPACITY?

11 A Yes. In this situation, it is particularly important that customers receive price signals in
12 their rates that reflect the cost impact on the system of their consumption patterns.
13 Otherwise, their consumption decisions will not be based on the costs that are to be
14 imposed on the system, and they will be encouraged to make inefficient choices.

15 Q WHAT IS THE AVERAGE NET INVESTMENT IN THE PRODUCTION CAPACITY OF
16 THE EXISTING SYSTEM?

17 A It is less than \$178 per kW. This is the depreciated value of the investments that the
18 Company has made in all of its production facilities, including hydro, base load coal and
19 peaking facilities. The net investment is less than half the cost of new peaking facilities.

1 Q WHAT IS THE INSTALLED COST PER KW OF THE EXISTING CAPACITY ON A
2 GROSS BASIS, THAT IS, BEFORE THE CONSIDERATION OF DEPRECIATION?

3 A The original installed cost per kW is approximately \$275 per kW. Thus, the average
4 installed cost of new peaking capacity, the lowest cost new capacity that is available
5 would also be higher than the average installed cost per kW of all the existing capacity,
6 even though much of that capacity is base load.

7 Q DOES THE INSTALLED COST OF EXISTING CAPACITY HAVE ANY BEARING ON
8 THE COST OF SERVICE STUDY?

9 A Yes. First, it produces a relatively low cost for all of Empire's customers. Second, any
10 approach which attempts to allocate production capacity based on usage throughout the
11 year will inevitably dilute the apparent importance of the need for new capacity. That is
12 not a wise thing to do in the context of a utility that is facing a need for additional capacity,
13 as is the situation with Empire.

14 Q HOW SHOULD THE INTERRUPTIBLE LOAD OF PRAXAIR BE TREATED IN THE CON-
15 TEXT OF THE CLASS COST OF SERVICE STUDIES?

16 A First, from the Testimony of Mr. Mead, it is apparent that energy cost is quite important
17 to Praxair. As a practical matter, higher quality, higher cost, firm service is not
18 economically viable for Praxair. Consequently, an approach which assumes that the
19 Praxair load would be firm, but for the existence of the interruptible credit, is inappropriate.
20 The appropriate analytical option is whether to serve Praxair load on an interruptible basis
21 or to not serve it at all. By this statement I am not suggesting that Praxair has any intent
22 to leave the system; however, from an analytical point of view, the correct paradigm from
23 which to perform the analysis is the latter because there is no practical possibility that the
24 interruptible service provided to Praxair will be converted to firm service.

1 Q HOW ARE THE OTHER INTERRUPTIBLE LOADS TREATED IN YOUR CLASS COST
2 OF SERVICE STUDIES?

3 A The total load is included, consistent with the approach followed by Empire. This is a
4 reasonable approach for the service provided since, in the context of integrated resource
5 planning, interruptible service options are developed for smaller customers where firm
6 service is a viable option. In those situations, an avoided cost analysis can be an
7 appropriate part of the analysis. It does not follow, however, that avoided cost is the only
8 approach or that it is the appropriate approach for Praxair. In any event, for the purpose
9 of the instant proceeding, I have left intact the treatment of the Company for all other
10 interruptible customers which I understand to be premised on an avoided cost analysis.
11 This means that the loads of all interruptible customers other than Praxair have been
12 treated as firm, and that for those customers the effect of the interruptible credit has been
13 removed so that class revenues are included as though their loads were entirely firm.
14 Adjustments are then made to account for the credits separately.

15 Q PLEASE IDENTIFY THE COST OF SERVICE STUDIES YOU ARE SUBMITTING.

16 A Included as Schedules 4 and 5 are summaries of the class cost of service studies based
17 on the 2 CP method for production and transmission capacity cost allocation and the 10
18 highest hours method.

19 In each study I included in the development of the allocation factors the firm load
20 of Praxair and excluded the interruptible load of Praxair. Since Empire always has the
21 option to remove the interruptible load during the peak period, it is not appropriate to
22 include the interruptible load in the demand allocation factor when defining cost
23 responsibility.

1 Q IS IT YOUR POSITION THAT THERE SHOULD BE ZERO CONTRIBUTION TO THE
2 CAPACITY COST OF THE SYSTEM FROM THE INTERRUPTIBLE LOAD?

3 A No. There should be a reasonable contribution. However, the cost studies demonstrate
4 that the rates to Praxair are well above cost, while the rate to ICI is approximately at cost.
5 The studies, before consideration of the overall system increase and before a contribution
6 to the fixed costs for the interruptible load, illustrate the need for a reduction of some 27%
7 in order to achieve a cost basis for the Praxair rates.

8 Q DO YOU RECOMMEND ADJUSTMENTS TO THE SPECIAL CONTRACT RATES?

9 A I recommend that the ICI rate be held constant and that the Praxair rate be reduced by
10 10%, both before consideration of the overall increase. It is also, of course, important for
11 the rates for all customer classes to appropriately reflect the cost of service. I will leave
12 the specific recommendations for those classes to others so long as the above
13 adjustments for ICI and Praxair are accommodated.

14
15 Q DOES THE COMPETITIVE SITUATION IMPACT THE NEED FOR COST-BASED
16 SERVICES?

17 A Yes. ICI and Praxair cannot afford to pay rates that exceed costs incurred to serve them
18 and that include costs of others. The best way to address the problem is with the pilot
19 open access program and with the adjustments I recommend to the special contract
20 rates.

21 Q SHOULD THE CURRENT RATE DESIGN FOR THE SPECIAL CONTRACT
22 CUSTOMERS BE CONTINUED?

23 A Yes.

1 Q DOES THIS CONCLUDE YOUR TESTIMONY?

2 A Yes, it does.