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BEFORE THE ARIZONA CORPORATION COMMISSION

JIM IRVIN
Commissioner – Chairman
RENZ D. JENNINGS
Commissioner
CARL J. KUNASEK
Commissioner

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PROCEDURAL CONTROL

IN THE MATTER OF THE COMPETITION IN) DOCKET NO. U-0000-94-165
THE PROVISION OF ELECTRIC SERVICES)
THROUGHOUT THE STATE OF ARIZONA.) **NOTICE OF FILING**

Pursuant to the Commission's Procedural Orders dated December 1 and 11, 1997, the City of Tucson hereby files the Direct Testimony and Summary for Eugene P. Coyle in the above captioned matter.

RESPECTFULLY SUBMITTED this 20th day of January, 1998.

THOMAS J. BERNING
City Attorney

By: Loretta Humphrey
Loretta Humphrey
Principal Assistant City Attorney
Office of the City Attorney
Civil Division
P.O. Box 27210
Tucson, AZ 85726-7210

Original and ten copies of the foregoing filed this 20th day of January, 1998, with:

Docket Control
ARIZONA CORPORATION COMMISSION
1200 West Washington Street
Phoenix, AZ 85007

Office of the City Attorney
P.O. Box 27210
Tucson, Arizona 85726-7210

Office of the City Attorney
P.O. Box 27210
Tucson, Arizona 85726-7210

1 **Copies of the foregoing hand-delivered**
2 **this 20th day of January, 1998, to:**

3 Jerry L. Rudibaugh, Chief Hearing Officer
4 ARIZONA CORPORATION COMMISSION
5 1200 West Washington Street
6 Phoenix, AZ 85007

6 Paul Bullis, Chief Counsel
7 Legal Division
8 ARIZONA CORPORATION COMMISSION
9 1200 West Washington Street
10 Phoenix, AZ 85007

9 David P. Jankofsky, Assistant Director
10 Utilities Division
11 ARIZONA CORPORATION COMMISSION
12 1200 West Washington Street
13 Phoenix, AZ 85007

13 **Copies of the foregoing sent via U.S. Mail**
14 **This 20th day of January, 1998, to:**

15 Stephen Ahearn
16 Arizona Department of Commerce
17 3800 N. Central Ave., Suite 1500
18 Phoenix, Arizona 85012

17 Ajo Improvement Company
18 P.O. Drawer 9
19 Ajo, Arizona 85321

20 Marv Athey
21 Trico Electric Coop.
22 P.O. Box 35970
23 Tucson, AZ 85740

Carl Robert Aron
Itron, Inc.
2818 N. Sullivan Road
Spokane, Washington 99216

George Allen
Arizona Retailers Association
137 University
Mesa, Arizona 85201

A.B. Baardson
Nordic Power
4281 N. Summerset
Tucson, Arizona 85715

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24
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26

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23
24
25
26
27
28
29
30

Stan Barnes
Copper State Consulting Group
100 W. Washington St., Suite 1415
Phoenix, Arizona 85003

Tom Broderick
6900 E. Camelback Rd., Suite 700
Scottsdale, Arizona 85251

William D. Baker
Electric District No. 6
Pinal County, Arizona
P.O. Box 16450
Phoenix, Arizona 85011

C. Webb Crockett
Fennemore Craig
3003 N. Central Ave., Suite 2600
Phoenix, Arizona 85012-2913

Columbus Electric Coop.
P.O. Box 631
Deming, New Mexico 88031

Michael A. Curtis
2712 N. Seventh Street
Phoenix, arizona 85006-1003

Patricia Cooper, Esq.
Arizona Electric Power Cooperative
P.O. Box 670
Benson, Arizona 85602

Michael Block
Goldwater Institute
201 N. Central, Concourse
Phoenix, Arizona 85004

Steve Brittle
Don't Waste Arizona, Inc.
6205 S. 12th Street
Phoenix, Arizona 85040

Barbara S. Bush
Coalition for Responsible Energy Educatio
315 W. Riviera Drive
Tempe, Arizona 85252

Clifford Cauthen
Graham County Electric Coop.
P.O. Drawer B
Pima, Arizona 85543

Ellen Corkhill
American Assoc. of Retired Persons
5606 N. 17th Street
Phoenix, Arizona 85016

Continental Divide Electric Coop.
P.O. Box 1087
Grants, New Mexico 87020

Carl Dabelstein
2211 E. Edna Avenue
Phoenix, Arizona 85022

1
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12
13
14
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27
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29
30

Suzanne Dallimore
Antitrust Unit Chief
Department of Law Building
Attorney General's Office
1275 W. Washington Street
Phoenix, Arizona 85007

Dixie Escalante Rural Electric Assoc.
CR Box 95
Beryl, Utah 84714

Sam Defraw
Department of Navy
Naval Facilities Engineering Command
Navy Rate Intervention
901 M St. SE, Bldg 212
Washington, DC 20374

Norman J. Furuta
Department of the Navy
900 Commodore Dr., Bldg 107
P.O. Box 272 (Attn: Code 90C)
San Bruno, California 94066-0720

Barbara R. Goldberg
Office of the City Attorney
3939 Civic Center Blvd.
Scottsdale, Arizona 85251

Karen Glennon
19037 N. 44th Avenue
Glendale, Arizona 85308

Peter Glaser
Doherty, Rumble & Butler
1401 New York Ave., N.W., Suite 1100
Washington, DC 20005

Jim Driscoll
Arizona Citizen Action
2430 S. Mill, Suite 237
Tempe, Arizona 85282

Joe Eichelberger
Magma Copper Company
P.O. Box 37
Superior, Arizona 85273

Elizabeth S. Firkins
International Brotherhood of Electrical
Workers, L.U. #1116
750 S. Tucson Blvd.
Tucson, Arizona 85716-5698

Rick Gilliam
Land & Water Fund of the Rockies
Law Fund Energy Project
2260 Baseline, Suite 200
Boulder, Colorado 80302

Andrew Gegerich
BHP Copper
P.O. Box M
San Manuel, Arizona 85631

Garkane Power Association, Inc.
P.O. Box 790
Richfield, Utah 84701

Creden Huber
Sulphur Springs Valley Electric Coop.
P.O. Box 820
Wilcox, Arizona 85644

1
2
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23
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26
27
28
29
30

Michael M. Grant, Esq.
Gallagher & Kennedy, P.A.
2600 N. Central Avenue
Phoenix, Arizona 85012

Charles R. Huggins
Arizona State AFL-CIO
110 N. 5th Ave.
P.O. Box 13488
Phoenix, Arizona 85002

Christopher Hitchcock
P.O. Box 87
Bisbee, Arizona 85603-0087

Barry N. P. Huddleston
Regional Manager, Regulatory Affairs
Destec Energy
2500 City West Blvd., Suite 150
Houston, Texas 77042

Robert Julian
PPG
1500 Merrell Lane
Belgrade, Montana 59714

Steve Kean
Enron Capital & Trade Resources
1400 Smith St., Suite 1405
Houston, Texas 77002

Barbara Klemstine
Law Department – Station 9909
Arizona Public Service Company
P.O. Box 53999
Phoenix, Arizona 85072-3999

Thomas C. Horne
Michael S. Dulberg
Horne, Kaplan & Bistrow, P.C.
40 N. Central Ave., Suite 2800
Phoenix, Arizona 85004

Vincent Hunt
City of Tucson, Dept. of Operations
4004 S. Park Ave., Bldg. 2
Tucson, Arizona 85714-0000

Russell E. Jones
P.O. Box 2268
Tucson, Arizona 85702

Sheryl Johnson
Texas-New Mexico Power Co.
4100 International Plaza
Fort Worth, Texas 76109

David C. Kennedy
Law Offices of David C. Kennedy
100 W. Clarendon Ave., Suite 200
Phoenix, Arizona 85012-3525

David X. Kolk
Power Resource Managers
2940 Inland Empire Blvd., Suite 123
Ontario, California 91764

John Jay List
National Rural Utilities Coop. Finance Cor
2201 Cooperative Way
Herndon, Virginia 21071

1 Wallace Kolberg
2 Andrew Bettwy
3 Debra Joluc Walley
4 Southwest Gas Corporation
5 P.O. Box 98510
6 Las Vegas, Nevada 89193-8510

7 Choi Lee
8 Phelps Dodge Corp.
9 2600 N. Central Avenue
10 Phoenix, Arizona 85004-3014

11 Rick Lavis
12 Arizona Cotton Growers Assoc.
13 4139 E. Broadway Road
14 Phoenix, Arizona 85040

15 Larry McGraw
16 USDA- RUS
17 6266 Weeping Willow
18 Rio Rancho, New Mexico 87124

19 Mick McElrath
20 Cyprus Climax Metals Co.
21 P.O. Box 22015
22 Tempe, Arizona 85285-2015

23 Craig A. Marks
24 Citizens Utilities Company
25 2901 N. Central Ave., Suite 1660
26 Phoenix, Arizona 85012-2736

27 Roderick G. McDougall
28 City Attorney
29 Attn: Jesse Sears, Asst. Chief Counsel
30 200 W. Washington St., Suite 1300
Phoenix, Arizona 85003-1611

Robert S. Lynch
340 E. Palm Ln., Suite 140
Phoenix, Arizona 85004-4529

Steve Montgomery
Johnson Controls
2032 W. 40th Street
Tempe, Arizona 85781

Douglas Mitchell
San Diego Gas and Electric Co.
P.O. Box 1831
San Diego, California 92112

Walter Meek
Arizona Utilities Investors Assoc.
P.O. Box 34805
Phoenix, Arizona 85067

William J. Murphy
200 W. Washington St., Suite 1400
Phoenix, Arizona 85003-1611

Morenci Water & Electric Co.
P.O. Box 68
Morenci, Arizona 85540

Doug Nelson
7000 N. 16th St., Suite 120-307
Phoenix, Arizona 85020

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30

Mohave Electric Coop.
P.O. Box 1045
Bullhead City, Arizona 86430

Dan Neidlinger
Neidlinger & Assoc.
3020 N. 17th Drive
Phoenix, Arizona 85015

Greg Patterson
RUCO
2828 N. Central Ave., Suite 1200
Phoenix, Arizona 85004

Nancy Russell
Public Interest Coalition on Energy
2025 N. Third St., Suite 175
Phoenix, Arizona 85004

Terry Ross
Center for Energy & Economic Dev.
7853 E. Arapahoe Ct., Suite 2600
Englewood, Colorado 80112

Phyllis Rowe
Arizona Consumers Council
6841 N. 15th Place
Phoenix, Arizona 85014

Lex Smith
Michael Patten
Brown & Bain PC
2901 N. Central Avenue
Phoenix, Arizona 85001-0400

Douglas A. Oglesby
Vantus Energy Corporation
353 Sacramento St., Suite 1900
San Francisco, California 94111

Betty K. Pruitt
ACAA Energy Coordinator
Arizona Community Action Assoc.
202 E. McDowell, #255
Phoenix, Arizona 85004

Wayne Retzlaff
Navopache Electric Coop.
P.O. Box 308
Lakeside, Arizona 85929

Michael Rowley
Calpine Power Services Co.
50 W. San Fernando
San Jose, California 95113

Lawrence V. Robertson Jr.
Munger Chadwick PLC
333 N. Wilmot, suite 300
Tucson, Arizona 85711-2634

Jack Shilling
Duncan Valley Electric Coop.
P.O. Box 440
Duncan, Arizona 85534

Albert Sterman
Arizona Consumer Council
2849 East 8th Street
Tucson, Arizona 85716

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
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20
21
22
23
24
25
26
27
28
29
30

Louis A. Stahl
Streich Lang
Two N. Central Ave.
Phoenix, Arizona 85004

William Sullivan
Martinez & Curtis, P.C.
2716 N. 7th Street
Phoenix, Arizona 85006

Myron L. Scott
1628 E. Southern Ave., No. 9-328
Tempe, Arizona 85282-2179

Wallace F. Tillman
Susan N. Kelly
National Rural Electric Coop. Assoc.
4301 Wilson Blvd
Arlington, Virginia 22203-1860

Jeff Woner
K.R. Saline & Associates
P.O. Box 30279
Mesa, Arizona 85275

Steven M. Wheeler
Thomas L. Mumaw
Snell & Wilmer
One Arizona Center
Phoenix, Arizona 85004

Larry K. Udall
Arizona Municipal Power User's Assoc.
2717 N. 7th Street
Phoenix, Arizona 85006-1090

Jessica Youle
Salt River Project
P.O. Box 52025 - PAB 300
Phoenix, Arizona 85072-2025

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AZ CORP COMMISSION

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BEFORE THE ARIZONA CORPORATION COMMISSION

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JIM IRVIN

Commissioner -- Chairman

RENZ JENNINGS

Commissioner

CARL J. KUNASEK

Commissioner

IN THE MATTER OF THE COMPETITION IN) DOCKET NO. U-0000-94-165
THE PROVISION OF ELECTRIC SERVICES)
THROUGHOUT THE STATE OF ARIZONA) **DIRECT TESTIMONY OF**
_____) **EUGENE P. COYLE**

On Behalf of
THE CITY OF TUCSON

JANUARY 21, 1998

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BEFORE THE ARIZONA CORPORATION COMMISSION

JIM IRVIN
Commissioner -- Chairman
RENZ JENNINGS
Commissioner
CARL J. KUNASEK
Commissioner

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IN THE MATTER OF THE COMPETITION IN) DOCKET NO. U-0000-94-165
THE PROVISION OF ELECTRIC SERVICES) SUMMARY OF
THROUGHOUT THE STATE OF ARIZONA) DIRECT TESTIMONY OF
_____) EUGENE P. COYLE

~~Arizona Corporation Commission~~
DOCKETED

JAN 20 1998

DOCKETED BY *JH*

On Behalf of
THE CITY OF TUCSON

JANUARY 21, 1998

DIRECT TESTIMONY OF EUGENE P. COYLE

SUMMARY

My direct testimony addresses the eleven issues set forth in the Arizona Corporation Commission's Procedural Orders dated December 1, and 11, 1997.

Issue One The Commission's first question is whether the Electric Competition Rules should be modified regarding stranded costs, and if so, how. I do not suggest major changes in the Rules but do suggest some in order to better accomplish the goals of protecting consumers and advancing fairness. I suggest, first, that the Rules should be strengthened to emphasize that the burden of proof is on the Affected Utilities with respect to a showing on stranded costs. The claim of a regulatory compact is a weak justification for stranded costs and even if accepted is not a justification for asking consumers to pay 100% of any stranded costs.

I next recommend that the Commission, using rule R14-21607 K, Order the Affected Utilities to file estimates of stranded costs in this Docket so as to inform the Commission before it makes policy decisions on the other questions before it. It explain further on this point later in my testimony, but at heart the Commission is entitled to know, and should know, the impacts of its decisions before finalizing them. I also make other recommendations with respect to the Rules in response to this first question.

Issue Two asks when should the Affected Utilities be required to make a stranded cost filing, and I recommend, as just noted, that the filing should be required in this Docket.

Issue Three asks two questions. The first asks what cost should be included as part of stranded costs. My testimony on this covers two areas: the first raises the issue of whether or not the utilities have been

compensated already for taking the risk that costs might be stranded. This is an empirical question that can be answered by reviewing past Commission decisions on the cost of capital with respect to the risk premium(s) allowed by the Commission. The second area is a discussion of the contention that there is a "regulatory compact" which requires the Commission to afford the recovery of 100% of any "stranded costs." I conclude on this point that the Commission is not required to grant the utilities the recovery of 100% of stranded costs.

The second question of Issue Three addresses how stranded costs should be calculated. Here I recommend one method over the others discussed in the Report of the Stranded Cost Working Group, while reviewing the merits of each. The method I favor is called "Replacement Cost Valuation" by the Working Group, and I provide an extensive discussion of how it should be modified before adoption. I point out that the Western U.S. presently has significant excess capacity and argue that utility earnings are always burdened when they have excess capacity. A special provision for stranded costs should not be made because of cyclical phenomena. In this section I also note that the gas turbine industry itself is experiencing a cyclical glut of capacity and caution that today's price quotes for turbines should not be used as a basis for calculating stranded costs. I also argue in this section that an industry with the cost characteristics of electric generation will not reach a stable equilibrium price equal to the cost of power from the most cost-effective technology available on the market. Price in the market will not be equal to the cost of the lowest cost unit but rather by the most expensive unit that actually gets dispatched.

To be brief, I point out that an expectation of oligopoly pricing - that is, higher than textbook "competitive pricing" -- must be a factor in calculation of stranded cost.

Issue Four asks about a limitation on the timeframe over which stranded costs are calculated. I point out that there is a tension between competing needs here. First, the Commission should be patient in watching developments in the industry, but against that is the need to close the issue lest it get confused over time with general economic developments, including deflation and inflation, and with technological innovation.

Issue Five asks about a limitation on the time for recovery of stranded costs. Here I recommend that resolution of this should await the results of the Affected Utilities filings of estimates on stranded costs. If the dollar amounts are very large, a short recovery period might actually raise customers' rates, contrary to the hopes of all. I also point out that

California had a solid expectation that the utilities' costs were dropping, and that the underlying cost drop made recovery possible without raising rates. In this section I also briefly touch on the issue of securitization. I also point out that generational equity is an issue that must be considered in setting a recovery period. Senior citizens might only live through the recovery period but no longer, and thus get no benefit from a short recovery period.

Issue Six asks how and who should pay for "stranded costs." I first mention that those customers who had a right prior to the restructuring of the industry to purchase power from another supplier should be excluded from paying for stranded costs. For this issue I discuss the question of cost allocation and agree with adopting the recommendation of the Stranded Cost Working Group, which I quote in the testimony.

Issue Seven concerns the "True-up mechanism." I believe that a "true-up mechanism" should be adopted by the Commission because the many uncertainties facing the industry over the next few years make a confident, once-and-for-all determination of stranded costs unwise. At the same time, I point out that the design of such a mechanism should be one of the last issues that the Commission resolves because it will depend on the interplay of the recovery period and the adoption of a price cap or rate freeze, which the Commission has yet to resolve.

Issue Eight asks if there should be a price cap or a rate freeze imposed as part of a stranded cost recovery program. I recommend against a rate freeze. Unless existing rates are now providing a utility with over-collection from the customers, a rate freeze will not generate any cash for the recovery of stranded cost. Advocating a rate freeze implies a belief that rates are too high now. If a rate freeze were to be adopted it must be preceded by a general rate case to determine the correct level of rates and to establish how much the freeze would generate for the recovery of stranded costs.

A price cap is more reasonable than a rate freeze because it carries the implication that rates can't go up but might go down. Price caps, however, have significant problems of their own which I discuss. One problem, called the recontracting argument, is that any subsequent reductions in the cap takes away management's incentive to be efficient. This is a groundless contention but nevertheless, can be expected. In the end, price caps do need to be revisited to bring rates in line with cost of service. A more important problem with Price Cap regulation is that, if poorly designed, it deprives customers of Commission oversight over the fairness of rates among classes and among customers within a class. "Just,

reasonable, and non-discriminatory” rates should remain a goal of the Commission.

Issue Nine takes up the factors to be considered in the “mitigation” of stranded cost. Here I recommend that the Commission consider “mitigable” along with “mitigated” in dealing with Stranded Costs. The Commission must keep the right to compel the utilities to actually mitigate stranded costs to the maximum extent, or to penalize them if they do not.

I note in this section that I had already mentioned, in Issue Three, that there may be new opportunities to profit from transmission transactions as the result of restructuring of the industry, and that those should be used to mitigate any stranded costs. I emphasize that it is important for the Commission to be able to review and respond to other business enterprises of the regulated utilities to save customers from harm and to capture, as appropriate, gains from non-utility enterprises.

In this section I also point out that the value of the distribution system and the transmission system will likely rise because they are less risky than investment in generation, and that the increase in the value of these should be used to mitigate stranded cost.

Issue Ten asks about calculation methodology and assumptions made in determining the market clearing price. I discussed calculation methods in answering questions on Issue Three and don't add to that in response to Issue Ten. I do however, discuss the problem of determining the market clearing price. I point out that many, if not most of the utilities in the Western United States are asserting that they have stranded costs. This is something like Lake Woebegone, where all the children are above average. If all the utilities are at risk for stranded costs, where is the low-priced competitive power coming from? In this section I list a number of questions that must be addressed, if not answered, before developing reasonable estimates of stranded costs.

Issue Eleven concerns Financial Accounting Standard No. 71 on which I do not comment.

BEFORE THE ARIZONA CORPORATION COMMISSION

JIM IRVIN

Commissioner -- Chairman

RENZ JENNINGS

Commissioner

CARL J. KUNASEK

Commissioner

IN THE MATTER OF THE COMPETITION IN) DOCKET NO. U-0000-94-165
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_____) **EUGENE P. COYLE**

On Behalf of
THE CITY OF TUCSON

JANUARY 21, 1998

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DIRECT TESTIMONY OF EUGENE P. COYLE

I. Qualifications

Q. Please state your name and address.

A. My name is Eugene P. Coyle. I am a consulting economist. My business address is Suite 702, 433 Town Center, Corte Madera, Ca. 94925

Q. Please briefly summarize your professional experience and education.

A. I received a BA degree with a major in economics from Providence College in 1954. Following military service as a pilot in the U. S. Air Force and employment as a commercial pilot in South America, I enrolled in graduate school in 1960.

I began studying public utilities professionally in 1962 at a private bank on Wall Street, Brown Bothers Harriman & Co. I have continued, since then, to closely follow public utilities.

At Brown Brothers I was responsible for recommending investments in the common stock of utility companies. As part of the duties I traveled throughout the country to familiarize myself with the growth prospects of utility service territories, to interview and evaluate utility management (generally seeing the Chief Executive Officer and/or the Chief Financial Officer) and, in short, to make a judgment about the future prospects of the company.

I was also responsible, at , for appraising all corporate bond offerings as investment vehicles for the bank's clients. I evaluated the suitability of each offering for various classes of investors and forecast the yield at which the offering would be made.

1 I was awarded a Teaching Fellowship at Boston College in 1964 and took a
2 leave of absence Brown Brothers Harriman & Co. I was a Teaching Fellow for
3 two years and earned my Ph. D. in economics from Boston College in 1969. In
4 addition to the full graduate program leading to the Ph. D. I also took courses in
5 accounting and public utility investment at New York University's Graduate
6 School of Business Administration.

7
8 In 1969 I was invited to participate in a conference on financial aspects of
9 utility regulation at Stanford University, co-sponsored by American Telephone
10 and Telegraph and in 1972 I received a National Science Foundation grant to
11 participate in a six week conference on applied price theory at Brown University.
12 My dissertation, The Theory of Investment of The Regulated Firm -- In the
13 Special Context of Electric Power was partially supported by a grant from the
14 Institute for Public Utilities at Michigan State University.

15
16 I taught economics and finance at the graduate and undergraduate level
17 on a full-time basis for seven years and have occasionally taught evening course
18 at the undergraduate level. I spent the Spring semester of 1989 teaching full-time
19 in the MBA program of the University of La Verne in Naples, Italy.

20
21 Since 1974 I have maintained a consulting practice in economics. My
22 focus has been on regulatory, resource and energy economics for a variety of
23 clients, including the U. S. Department of Justice, resource owners, law and
24 geophysical firms, agencies of numerous states, and consumer and
25 environmental groups.

26
27 I participated in the significant reform of utility regulation, especially with
28 respect to cost allocation and rate design, triggered by the energy crisis of the
29 1970s. In 1979 I developed and executed the first computerized cost allocation
30 study for a state consumer agency in the U. S. and both the pioneering method
31 and results were adopted by the New Jersey Commission. Subsequently this
32 method was approved and used in other states as well.

33
34 I have testified as an expert witness in Federal and State Courts and before
35 public utility commissions in 22 states and the territory of Guam. In addition I

1 have testified on utility and energy issues before the United States House of
2 Representatives and legislative bodies and public authorities in several states.

3

4 I have participated actively in the national debate on restructuring and
5 have testified before state commissions and state legislatures on restructuring
6 issues, including on stranded costs, and have spoken widely at national
7 conferences on restructuring.

8

9

10 II. Purpose of Testimony

11

12 Q. What is the purpose of your testimony?

13

14 A. I have been asked by the City of Tucson to respond to the eleven questions
15 proposed by the Commission in connection with developing policy on the issue
16 of "stranded cost."

17

18

19

20

21 III. The Commission's Questions

22

23

24

25 **Issue 1. Should Electric Competition Rules be modified regarding stranded**
26 **costs, if so, how?**

27

28 Q. What do you believe are the fundamental issues regarding the rules?

29

30 A. The basic issues concerning the rules are: 1) are they fair; 2) are they
31 consistent; 3) are they clear, and most importantly; 4) do they help accomplish
32 the goals to protect consumers and advance competition and the public interest.

33

34 Q. What is your opinion of the rules and proposed changes?

35

1 A. I do not suggest major changes in the rules. In general, they do contain
2 fairness and consistency, but in order to accomplish the goals of protecting
3 consumers and advancing competition some modifications to create greater
4 clarity and detail are necessary.

5

6 Q. What changes do you support?

7

8 A. First, I believe that consensus that the burden of proof is on the Affected
9 Utilities should be incorporated more fully in the rules.

10

11 It is fundamental to the whole issue of Stranded Costs to note that there is
12 a valid debate over the legal right of the Affected Utilities to recovery of full
13 stranded costs. I am not an attorney and will not testify on legal matters. I can
14 report, however, that several state utility commissions have found in their
15 investigations that utilities do not have that right. Beyond the legal issues,
16 which are outside my area of expertise, I can say that, based on thirty-five years
17 of professional work in utility finance and theory, I find the claim of a
18 "regulatory compact" as proposed by the Affected Utilities to be a weak
19 justification for granting stranded costs. Even if the claim of a regulatory
20 compact were accepted it is not a justification for requiring customers to pay
21 100% of any stranded costs. I will discuss this further in responding to the
22 Commission's Issue 3.

23

24 Q Are there other issues regarding the rules that you believe require
25 clarification?

26

27 A Yes. In regard to rule R14-2-1607 K: "The Commission may order an
28 Affected Utility to file estimates of Stranded Cost and mechanisms to recover or,
29 if negative, to refund Stranded Cost."

30

31 Q. What is your recommendation?

32

33 A. I recommend that the Affected Utilities file stranded cost estimates and
34 associated work papers as soon as possible, and before the Commission finishes
35 taking testimony in this Docket. The Affected Utilities filings should show, in
36 addition, the impacts on the rates of the various customer classes which would

1 result from the interaction of the estimates and the Affected Utilities policy
2 recommendations.

3

4 This filing would provide vital perspective to this discussion and give the
5 Commission, Staff, intervenors, and Affected Utilities a clearer sense of the
6 impact of policies and rules. Prior to the Commission adopting policy with
7 respect to "stranded costs" it is entitled to have, and must have, a clear
8 understanding of the impacts, in dollar terms, on customer bills.

9

10 The Commission and staff, as well as the intervenors and Affected Utilities
11 will be much more effective in presenting arguments regarding policies on
12 methodologies of calculation or mitigation, or recovery of stranded costs with a
13 clear sense of the relative impacts. The public's acceptance of any Commission
14 decision is much more likely if it can be shown that the Commission had a good
15 understanding of the impact of the policies it adopted.

16

17 Later in my testimony I will discuss more fully the interaction of certain of
18 the issues before the Commission in this Docket. Let me offer here one example
19 of the problem of adopting complicated policy without knowing the impacts.
20 Suppose that the Commission adopts a fairly short period for the recovery of
21 "stranded costs" in response to Issue 5, the question of the limitation of recovery
22 time. ~~And suppose that, at the same time, the Commission adopts a policy for~~
23 the recovery of "stranded costs" that turns out to be a large dollar amount for a
24 particular utility. In that event it may turn out that customers bills will jump
25 sharply, which is clearly neither a desirable nor an intended result.

26

27 At this point the Affected Utilities may differ, and other parties may differ,
28 on various categories to be included or methods to be employed. Having dollar
29 estimates included as part of the discussion is essential to clarifying the relative
30 magnitude of impacts and what tradeoffs or compromises may need to be made.
31 Examination of differing methodologies would also help to advance the
32 considerations undertaken in this proceeding. Without quantifying stranded
33 costs, even if in the form a preliminary estimate, there is no ability to gauge the
34 fairness or impacts on competition that should guide policy-making.

35

36 Q. What is your response to concerns that such information is proprietary?

1

2 A. It is clear that the information must be provided to the Commission at
3 some point. Confidentiality agreements and protective orders can be used to
4 deal with proprietary information. The issue is when it is needed. In my view it
5 is needed now, before policy decisions are made.

6

7 I would be surprised, furthermore, if the Affected Utilities have not
8 already produced their own estimates or ranges of estimates. And since the
9 utilities will have to produce estimates soon, in any event, they should be
10 produced for this Docket, when they can inform policy decisions.

11

12 Much of the data required to provide estimates of stranded cost for any
13 given utility is available in public documents and from industry sources. Both
14 financial analysts and major competitors have already conducted competitive
15 assessments, including stranded cost assessments of most utilities. As noted by
16 the Staff, Fitch Investor Services, Moody's and Resource Data International,
17 among others have produced such estimates. Delay in having the Affected
18 Utilities provide their own estimates, and including those estimates as part of
19 discussions on methods of calculation, mitigation, and recovery interferes with
20 policy-making. Within the Working Group, moreover, consumer representatives
21 supported filing of stranded cost estimates as part of this discussion.

22

23 Q. Do you recommend other changes?

24

25 A. Yes. Regarding rule R-14-2-1607 B which states: "The Commission shall
26 allow recovery of unmitigated Stranded Cost by Affected Utilities." In both this
27 rule and subsection G, I believe it is important to change the term "unmitigated"
28 to "unmitigable." Rule R-14-2-1607 A makes very clear the Commission's intent
29 that the Affected Utilities undertake "every feasible, cost-effective measure to
30 mitigate or offset Stranded Cost." In order to assure that this level of effort
31 occurs, any stranded cost should be determined to be unmitigable, not just
32 "unmitigated." This change is much more than one of semantics. It implies that
33 there will be active determinations concerning the process and level of effort,
34 rather than utility determination and submission or what is "unmitigated." It
35 could also help to set up clear categories and standards for what is indeed
36 unmitigable. The process should not be one in which one Affected Utility has an

1 "unmitigated" element which another has resolved. I believe the Commission
2 and Staff would benefit from working toward standards of "unmitigable"
3 stranded cost.

4

5 Perhaps most important, this change would emphasize that the burden of
6 showing the level of effort and success rests with the utilities, rather than on the
7 Commission or intervenors to demonstrate that not every measure possible has
8 failed to be achieved.

9

10 Q. What is your position in regard to proposals to change the rules to limit
11 the Arizona Corporation Commission's (ACC) review of efforts to mitigate or
12 offset stranded costs?

13

14 A. Rule R14-2-1607 A says that the "Affected Utility shall take every feasible,
15 cost-effective measure to mitigate or offset Stranded Cost by means such as
16 expanding wholesale or retail markets, or offering a wider scope of services for
17 profit, among others." This rule should not be modified in any manner that
18 would limit the scope of the ACC's review and injure the interests of consumers
19 and the viability of competition. In answer to the questions in Issue 9 I discuss
20 this and provide some examples.

21

22 Q. Besides any points you will make later in discussing Issue 9, what support
23 do you offer for this position on Rule R14-2-1607 A?

24

25 A. There is a general recognition that recent regulatory reform has released
26 constraints on vertical and horizontal diversification of public utilities. Not all of
27 these efforts are profitable, or as profitable as the regulated business.

28

29 Q. How does this affect consumers?

30

31 A. The financial viability of a company influences its access to capital and the
32 cost of that capital. This has a direct impact on consumers. If losses are large, the
33 Commission, consumers, and other public bodies may be called upon to assist
34 the utility financially. Since the customers of the regulated utility, and the same
35 customers as taxpayers might be at risk for the non-regulated business

1 enterprises of a utility, the Commission must be able to maintain a broad scope of
2 review as currently indicated in R14-2-1607 A.

3

4 Q. Are there any other modifications in the rules which you would oppose?

5

6 A. Yes. Rule 14-2-1607 J states "Stranded cost may only be recovered from
7 customer purchases made in the competitive market using the provisions of this
8 Article. Any reduction in electricity purchases from an Affected Utility resulting
9 from self-generation, demand side management, or other demand reduction
10 attributable to any cause other than the retail access provisions of this Article
11 shall not be used to calculate or recover any Stranded Costs from a consumer."
12 While there has been support given to assuring that all consumers pay their fare
13 share of any stranded cost burdens, this rule should not be altered in a manner
14 that allows the shifting of cost burdens, either from the utility to consumers , or
15 between classes of consumers. This rule should also not be modified in a manner
16 that bypasses the validity of franchise contracts held by local governments and
17 raises both statutory and constitutional obstacles. Nor should it be altered in a
18 manner that would stifle self-generation, demand-side management, or the other
19 goals which the Commission supports.

20

21 Q. What modification of this rule do you propose?

22

23 A. I would recommend minor alteration of the first sentence in a manner that
24 provides discretion to the Commission as implied in the remainder of the rule.
25 Specifically I would strike the fourth word, "only," so that the rule would read

26

27 ""Stranded cost may be recovered from customer purchases made in the
28 competitive market using the provisions of this Article. Any reduction in
29 electricity purchases from an Affected Utility resulting from self-
30 generation, demand side management, or other demand reduction
31 attributable to any cause other than the retail access provisions of this
32 Article shall not be used to calculate or recover any Stranded Costs from a
33 consumer."

34

35 Q. What will this change accomplish?

36

1 A. This change will avoid significant obstacles and give the Commission
2 flexibility to assure that there will be no cost shifting. It will provide also a firm
3 basis for subsequent efforts to define this goal within the development of tariffs
4 for distribution and transmission, as well as demand, energy, and access charges
5 for "standard offer" and competitive consumers prior to market competition.

6

7 Q. Are there other issues regarding the rules that you would like to address?

8

9 A. There are two remaining issues that are vital to consumer protection and
10 the meaning of the transition to a competitive market. The first is that economic
11 savings on electric rates should not be shifted to increase tax burdens. It does not
12 make sense for consumers to fund savings from electric rates with increases in
13 their tax bills. Any guidance from the rules should assure that there are neutral
14 impacts on tax revenue streams.

15

16 **Issue 2. When should "Affected Utilities" be required to make a "stranded**
17 **cost" filing pursuant to A. A. C. R 14-2-1607?**

18

19 Q. When should "Affected Utilities" be required to make a "stranded cost"
20 filing pursuant to A. A. C. R 14-2-1607?

21

22 A. The Affected Utilities should be required to make a "stranded cost" filing
23 immediately, during this Docket, so that the Commission's decision can be
24 informed by the estimates presented. Please refer to my earlier testimony on this
25 rule, on beginning on page 5, for elaboration on this point.

26

27 **3. What costs should be included as part of "stranded costs" and how**
28 **should those costs be calculated?**

29

30

31 Q. What costs should be included as part of "stranded costs"?

32

33 A. There are two levels at which to consider this question.

34

1 Q. Let's take them one at a time. What is the first level?

2

3 A. The first level addresses the issue of whether or not the utilities have
4 already been compensated for the risk that there would be "stranded cost."

5

6 The issue here is empirical: Has the Commission in a past decision or
7 decisions on rate of return provided a risk premium which compensated a utility
8 for the risk of a change in the regulatory regime. If the Commission in a past
9 decision has required the customers to cover the utility's risk, it cannot ask the
10 customers to pay a second time for the risk in "stranded costs."

11

12 Q. Before explaining further, please explain how this empirical question
13 should be resolved.

14

15 A. As I said, this is an empirical question. What is needed to resolve it is a
16 review of past Commission decisions on rate of return. Obviously if there is
17 explicit Commission language that the utility in question was being compensated
18 through a premium on rate of return for bearing the risk that output from its
19 plants would be unmarketable at remunerative rates, that would answer the
20 question. Explicit language is not necessary, but the absence of it makes the
21 empirical research more difficult and perhaps problematic. The absence of
22 explicit language requires an examination of the record in an effort to discern if
23 the Commission gave a risk premium for the risk being discussed in this Docket,
24 i. e. the risk of stranded cost as a result of a change in the regulatory regime.

25

26 The portion of a rate case which addresses the rate of return a utility is to
27 be allowed is typically referred to as the "cost of capital" proceeding. The
28 Commission identifies the cost of debt and the cost of equity. Usually on the
29 equity portion of the total capital the return is higher than the return on the debt
30 portion of the capital structure. The reason for the higher return on equity is that
31 the shareholders are at higher risk than the bond holders.¹

32

33 The empirical question that must be answered is what risk (or risks) has
34 the Commission acknowledged when it allowed a specific return (or range of

¹ Bondholders have accepted risk as well, of course, otherwise the interest rate on an electric utility mortgage bond would not be higher than on a U. S. Treasury bond.

1 returns) on equity? Certainly there are risks of sales not reaching the forecasted
2 level, the risk of spikes in fuel costs, and so on. But part of the premium allowed
3 for risk may in fact have paid the shareholders for the risk of a changing industry
4 structure.

5

6 To the extent that the shareholders have been compensated for bearing the
7 risk of a change in the regulatory regime, they should not be compensated a
8 second time for "stranded costs."

9

10 Q. What is the second level in answering what cost should be included as
11 part of "stranded cost"?

12

13 A. The second level to consider is whether "stranded cost" should include
14 anything at all, above what has already been compensated for. This is the issue
15 of whether or not a "regulatory compact" requires Commissions to award utilities
16 full recovery of stranded cost. The Report of the Stranded Cost Working Group
17 asserted that:

18

19 "While some absorption by the Affected Utilities' investors would
20 undoubtedly reduce the stranded cost burden for consumers to ultimately
21 bear, the Staff is unaware of any legal or regulatory basis for doing so.
22 Presumably the prudence of expenditures underlying existing service
23 rates has been established and there is no legal opportunity for a
24 revisiting."²

25

26 Framing the issue as the staff has done in that statement improperly
27 reduces the discussion to the question of "prudence" and whether prudence can
28 be revisited. The issue is not prudence but rather whether or not a "regulatory
29 compact" exists which requires the Arizona Corporation Commission to give the
30 affected utilities 100% of "unmitigated stranded cost" as R14-2-1607 B. seems to
31 say.

32

33 My view, based on experience on Wall Street beginning in 1962 and
34 continuing as a student of public utility regulation until today, is that there is and

² Report of the Stranded Cost Working Group, Sept. 30, 1997, page 49

1 has been no "regulatory compact" which would guarantee 100% recovery of
2 unmitigated stranded cost under the circumstances of deregulating generation.

3
4 So far as I know, the phrase a "regulatory compact" did not appear in
5 printed books and articles until deregulation and the issue of stranded cost
6 became important to utilities. My conclusion is that the notion of a "regulatory
7 compact" is a recent invention which is used to, but does not, justify "stranded
8 cost."

9
10 My memories of concerns held by utility investors, security analysts, and
11 electric utility executives explicitly includes concerns about competitive threats
12 from new technology -- including, even in the early 1960s, natural gas-fired self
13 generation and co-generation, fuel cells, photovoltaics, as well as black boxes yet
14 to be invented. Included in these concerns was the fear that customers would
15 entirely leave electric systems for self-generation. I recall no discussion that a
16 regulatory compact would protect the shareholders from such competition. The
17 most outstanding and useful book on utility economics was and is Bonbright's
18 Principles of Utility Rates.³ Bonbright does discuss competitive threats to
19 earnings but does not mention a "regulatory compact" in a very thorough book.

20
21 One of the leading advocates of the idea of the "regulatory compact" is
22 Professor Alfred Kahn, often credited as the father of airline deregulation. Dr.
23 Kahn wrote a two volume book, published in 1970,⁴ which covered utility
24 regulation in detailed fashion. Although Dr. Kahn's book is very detailed he
25 curiously omits mention of something as important as he now asserts the
26 regulatory compact to be. I have reviewed other assertions that the regulatory
27 compact requires Commissions to afford the recovery of 100% of "stranded cost"
28 and am not persuaded that there is an historical basis for the assertion.

29
30 Q. If there is no regulatory compact, is it your testimony that the utilities
31 should be denied all stranded cost?

32

³ Principles of Public Utility Rates, James C. Bonbright, Columbia U. Press, N. Y., 1961. (Do not confuse this with a different and trivial book which is marketed as the 2nd edition of Bonbright's work. It is not the same book and is not useful.)

⁴ The Economics of Regulation: Principles and Institutions, John Wiley & Sons, Inc., New York, 1970

1 A. No. I am asserting that the Commission is not required by a regulatory
2 compact to grant the utilities 100% of "stranded cost." What this means is that the
3 Commission, if it finds that in fact there are stranded costs for one or more
4 Arizona utilities, can make a judgment about how those costs should be
5 apportioned between customers and investors.

6

7 Q. Let's turn to the second part of the Commission's issue 3, which is the
8 question of how should stranded costs be calculated. What methods does the
9 Stranded Cost Working Group mention?

10

11 A. The Report mentions, on page 19, what it calls two administrative
12 methodologies and two "market-based approaches. The first two are the "Net
13 Revenues Lost" and the "Replacement Cost Valuation." The market-based
14 approaches are "Auction and divestiture" and "Stock Market Valuation."

15

16 Q. Please address the administrative methodologies, the "Net Revenues Lost"
17 and the "Replacement Cost Valuation." Which of these do you favor, and why?

18

19 A. The "Replacement Cost Valuation" approach, changed in the way I will
20 describe, is clearly superior. The "Net Revenues Lost" has serious problems, both
21 theoretical and practical.

22

23 Q. Please discuss the "Replacement Cost Valuation" approach and tell how
24 you would change it from the way it is described in the report of the Stranded
25 Cost Working Group.

26

27 A. Stranded costs, either positive or negative, arise because of a difference
28 between the cost to serve on an embedded cost of service basis and what costs
29 would be, or would be expected to be, in an unregulated market. Given the basis
30 for stranded costs, either positive or negative, it seems reasonable to approach
31 the calculation by trying to identify what the difference between embedded costs
32 and unregulated costs would be.

33

34 An asset-by-asset approach can take into account the competitive merits
35 of a particular generating asset. The calculation then becomes very specific,
36 looking at a particular plant to see if it is (or will be) below cost or above cost in

1 the expected unregulated market. Among other things, a plant might have
2 locational advantages that makes it more valuable compared to another of the
3 same type, fuel, and age. An older hydro electric plants might be below the
4 average cost of generation in a future unregulated market.

5

6 The Stranded Cost Working Group, in its Report dated September 30,
7 1997,⁵ put forward one calculation methodology, "Replacement Cost Valuation,"
8 that is an asset-by-asset approach but which needs some alteration to result in
9 what will be a reasonable way to calculate stranded costs.

10

11 Q. What alterations do you feel are important?

12

13 A. The "Replacement Cost Valuation" approach, to quote from the Report,
14 computes stranded costs

15

16 "... on a bottom up basis, as the difference between the reported net book
17 value of generation assets and their current replacement value (a proxy for
18 market value) based on the most cost-effective technology available in the
19 market, a gas-fired combined cycle combustion turbine."⁶

20

21 We should recognize first that each generating unit is not going to be
22 replaced by a new combined cycle combustion turbine (CCCT). To assume that
23 each plant is going to compete head-on with a new CCCT plant would result in a
24 substantial overstatement of stranded cost. Price in the market will not be driven
25 by the lowest cost unit but rather by the most expensive unit that actually gets
26 dispatched. The difference is likely to be enormous.

27

28 It is also important to recognize that any price drop in electricity following
29 a deregulation of generation will occur because of excess capacity . The drive for
30 deregulation is fueled by excess capacity in the Western United States. Excess
31 capacity is a temporary phenomena that is corrected when expansion of capacity
32 is slowed or halted, or plants are mothballed while demand grows. Utility

⁵ Report to the Arizona Corporation Commission, in the matter of the competition in the provision of electric service throughout the State of Arizona, Docket No. U00000-94-165, Submitted by the Stranded Cost Working Group, September 30, 1997.

⁶ Report, page 22.

1 earnings are always burdened when they have excess capacity. A special
2 provision for "stranded cost" should not be made as a result of excess capacity.

3

4 Q. What are the implications for the calculation of stranded cost of the
5 existence of excess generating capacity in the Western United States?

6

7 A. When new capacity is to be built is a separate critical element in
8 determining stranded cost. The existence of excess generating capacity means
9 that new power plants will not be built in significant numbers until the excess is
10 reduced. Stranded cost calculations should reflect an assessment of when and
11 in what number new CCCT plants might be build.

12

13 Q. Why is "when" new capacity is added important in the stranded cost
14 calculation?

15

16 A. Any payment for stranded cost should not be because of a cyclical
17 problem of excess capacity but rather because of a permanent change in
18 institutional arrangements.⁷ It seems clear that some generating plants in the
19 Western United States will be high cost relative to the market during periods of
20 excess capacity. But if and as excess capacity is reduced because of retirements
21 and/or growth in demand, the market price will rise to reflect that. Plants that
22 were unable to financially compete during the capacity glut would now be
23 profitable. Stranded costs should not be afforded to cover a cyclical problem and
24 any calculation should reflect that.

25

26 Q. Do you recommend other changes in the details of the bottom-up
27 approach described in the Stranded Cost Working Group report?

28

29 A. Yes. A key element in the bottom-up calculation of stranded cost is the
30 estimated price of an efficient new power plant. Any price quotes for new
31 capacity must be both scrutinized and then adjusted for market conditions in the
32 turbine manufacturing industry.

33

⁷ I want to stress here that I am discussing the calculation of stranded cost in the abstract. This discussion does not imply that any stranded costs are justified.

1 The Stranded Cost Working Group posited gas turbines as the type of
2 capacity that will be added in the future in the electric power industry -- the
3 CCCT machine.⁸ The Commission, however, should not take, for purposes of
4 calculating stranded costs, today's price quotes as if they would be available
5 indefinitely, or even drop from today's depressed levels. The turbine market is
6 itself plagued at the moment with over-capacity and prices for CCCTs are
7 depressed.

8
9 Reuters, in September, 1997 reported what those familiar with the power
10 industry already knew, that there is over capacity in the turbine business, that a
11 shakeout is likely, to be followed by a price rise. ABB, Asea Brown Boveri, is the
12 world's largest power engineering group. Armin Meyer, worldwide head of
13 ABB's Power Generation division, said in an interview with Reuters that he
14 expects a shakeout in the power generation business in the next two years with
15 not more than six firms surviving. "I see further moves in the industry and
16 smaller companies disappearing," Meyer said, adding: "There is no way around
17 it but that capacity in our business has to be reduced."⁹

18
19 A subsequent report on a Westinghouse restructuring noted that:

20
21 "The utility industry, which is in the early stages of deregulation, has
22 reduced orders for new generators, and delayed maintenance on old ones.
23 Power -generating sales were off by 29 percent in the first half, from the
24 first six months of 1996, ... "¹⁰

25
26 Since that item appeared Westinghouse has sold its non-nuclear power
27 generation business to a competitor. Low prices for CCCTs today reflect excess
28 capacity in that industry, with higher prices to follow if demand for the units
29 increases and a turbine industry shakeout has occurred. A calculation of
30 stranded costs in electric power must be adjusted so that a cyclically low price in

⁸ Report, page 22. There is a widespread industry view that the CCCT will be the overwhelming choice for future capacity additions. We should note, however, that some expect baseload coal plants to be built. Any actual calculations should reflect a careful assessment of what the most cost effective technology is likely to be, and the price of electricity resulting from investment in such capacity.

⁹ September 16, 1997.

¹⁰ The New York Times, October 11, 1997.

1 the turbine market does not unjustly result in a windfall for shareholders of a
2 utility.

3

4 Q. Assuming that a CCCT is the "most cost-effective technology available in
5 the market" as the Report asserts, and the price of a CCCT has been correctly
6 adjusted for the business cycle in turbines, are other adjustments also necessary
7 in order to reach the correct value for this calculation?

8

9 A. Yes. Even after calculating a value, or range of values for cost of the
10 output of the most efficient technology, we will not yet have calculated the price
11 of electric power. Price and cost are not the same thing.

12

13 Beginning economic textbooks show that under perfect competition
14 prices will be driven down to the level of the most efficient firm. Less efficient
15 firms lose markets to the more efficient, and must strive to become more efficient
16 themselves. That is how and why consumers are said to be better off with
17 "competition."

18

19 Presumably the process of deregulation lets low-cost providers force
20 prices lower. The airline industry is often mentioned as an example of how this
21 process works. But in non-regulated industries prices charged depend less on
22 costs than on "what the traffic will bear." It is instructive to compare costs and
23 prices in the airline industry to see if prices are tied to costs.

24

25 Figure 1 shows an index of airline fares from 1978 through 1996 provided
26 by the Bureau of Labor Statistics.¹¹ On the same graph is plotted the "Airline
27 Cost Index" developed by the Air Transport Association.¹² What comes through
28 clearly in Figure 1 is the ability of the airline industry to raise prices faster than
29 costs given two conditions. The first is the gradual elimination of excess
30 capacity, and the second is the strong economy of the last few years. The first
31 condition reduced supply relative to demand, the second led to increased

¹¹ Airline Fares, Consumer Price Index, All Urban Consumers (CPI - U), U. S. City Average, 1982-84 = 100.

¹² Airline Cost Index, Air Transport Association, First Quarter 1997, Washington, D. C. 1982 = 100. Note the slight difference in the base year for this index vs. the CPI.

1 demand. Preliminary figures suggest that the spread between costs and prices
 2 has widened even further in 1997.¹³
 3

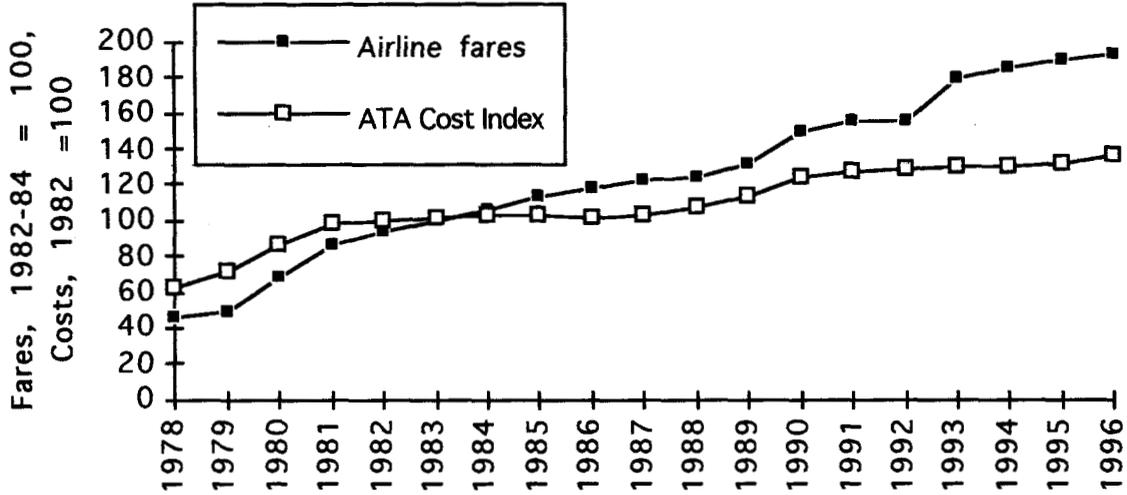


Figure 1.

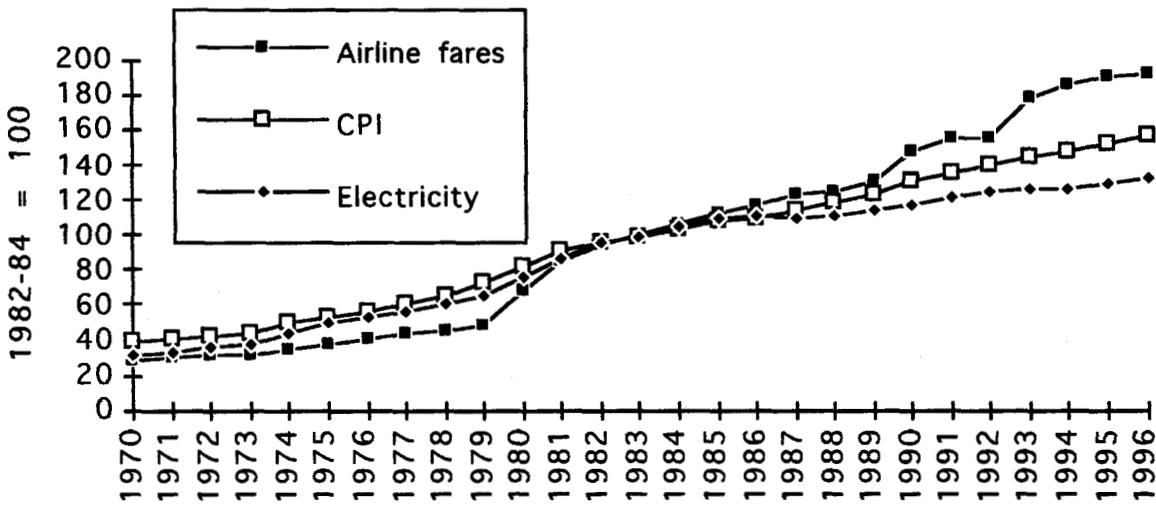


Figure 2.

¹³ Although it is off this point, Figure 2 is supplied to show the relationship of airline fares to electricity prices and the consumer price index. All data in Figure 2 is from Bureau of Labor Statistics indices for Airfares, Electricity, (U. S. City average) and for All Items. Base of 1982-84 in each case.

4
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12

1

2

3 Q. Can you explain why prices and costs diverge?

4

5 A. Yes. Prices are higher than costs when the vendor is able to charge higher
6 prices. Let me explain. First I will make a distinction between average cost and
7 marginal cost, and I will limit my context to generation plant. My goal here is to
8 advance the discussion rather than to give an economist's technically precise
9 definitions. Marginal cost we can crudely define as the cost of the output from
10 the next low cost unit to be added to the grid. Average cost is the cost of
11 production of a kilowatt hour from all the plants supplying the grid.

12

13 Against the background of this definition we can see that the idea found in
14 the section of the Stranded Cost Working Group Report supporting the "Net
15 Revenues Lost" approach is a profound misconception. The passage I refer to
16 says

17

18 The "Net Revenues Lost" approach is a top-down quantification
19 method that compares the expected future annual revenue requirements
20 for the affected utility's generation business under traditional cost-based
21 regulation with the annual revenues expected to be recovered in a
22 competitive generation market with prices based on marginal cost.¹⁴
(emphasis added)

23

24 It is not really possible for prices in the electric generation business to
25 equal marginal cost.¹⁵ For if marginal cost is lower than average cost, setting
26 price equal to marginal cost means you lose money on every unit sold!

27

28 Q. Doesn't economic theory tell us, however, that when price is higher than
29 Marginal Cost new entrants will come in to drive price down?

30

31 A. The modern branch of economics called Game Theory offers a much richer
32 explanation of pricing in an industry with the cost characteristics of electric

¹⁴ Report, page 20.

¹⁵ I acknowledge that the words are "prices based on marginal cost," not "prices equal to marginal cost." If the intended meaning of the former phrase is not the latter, clarification is required.

1 generation. A leading theorist from the University of Chicago, Professor Lester
2 G. Telser, writes:

3
4 One of the principal conclusions from these applications of core
5 theory to economics is the central importance of the nature of the cost
6 conditions. Unless the firms in the industry are small and numerous, a
7 neoclassical perfectly competitive equilibrium cannot exist. Specialization,
8 fixed costs, and indivisibilities give a stable equilibrium only with
9 restrictions on which coalitions may form.¹⁶

10
11 In contrast with perhaps most economists, the leading game theorists
12 recognize that in an industry with huge capital requirements relative to revenue,
13 as electric generation is, "competition" in the simple textbook sense cannot work
14 to produce economic efficiency. Many of these theorists advocate relaxing anti-
15 trust laws to make collusion legal in such industries.

16
17 Q. Do you have a recommendation for the Commission in connection with
18 this?

19
20 A. Yes. The Commission needs to look beyond the theory offered in
21 beginning texts and consider what will actually unfold in the electric power.
22 ~~What is in prospect is oligopoly pricing. There is about 156,000 mW of capacity~~
23 available at the time of the summer peak in the Western System Coordinating
24 Council (WSCC).¹⁷ New CCCT plants are discussed in the 400 mW size range.
25 The cost of such a plant at today's distressed prices might be \$400-\$550/kW, or
26 more, plus an additional amount for transmission connection to the grid. I will
27 use a number of \$550/kW, including transmission for purposes of illustrating my
28 point.

29
30 A 400 mW plant, at \$550/kW, would cost \$220,000,000. Adding a 400 mW
31 plant is not likely to affect the price of electricity in the West. Adding ten such
32 plants, at a cost of \$2,200,000,000, i. e. 2.2 billion dollars would be only an

¹⁶ Economic Theory and the Core, Lester G. Telser, Univ. of Chicago Press, Chicago, 1978, page 90.

¹⁷ See Economic Analysis Subcommittee Report to the Public Service Commission of Utah, Docket No. 96-999-01, September 4, 1997, p. 25.

1 addition of less than 3% to the total capacity in the WSCC. Such an investment
2 would not have a significant impact on the price of electricity in the West.

3

4 Q. What are the implications of your numerical discussion?

5

6 A. The price of electric power is not going to be driven down to the cost of
7 the output from "the most cost-effective technology available." Consequently
8 calculating stranded cost by comparing the cost of output from an existing plant
9 to the cost from the most cost-effective technology available would substantially
10 overstate the stranded cost and hence be unfair to those burdened with paying
11 any stranded cost.

12

13 Q. Won't competition among the owners of existing power plants drive
14 prices down?

15

16 A. That remains to be seen. There will be companies in financial distress, or
17 close to it, which will find it necessary to sell power at any price that will cover
18 out of pocket expense plus a little more as a contribution to overhead costs. The
19 rule here is that it is better to lose some of your overhead costs on each kWh sold
20 than to lose all of it by not selling the kWhs. On the other hand, it is in no
21 vendor's interest to participate in a price war, and after some (perhaps brief)
22 period of shakeout, power plants will come into stronger hands and prices will
23 be stabilized at a profitable level. The Commission must compare this level to
24 the costs of the utilities under its jurisdiction in the calculation of stranded costs.

25

26 A recent real-world reflection that the market may unfold differently than
27 the textbook description is found in a Montana Power Company press release.
28 The Montana Power Company announced on December 9, 1997 an offer to sell its
29 Montana generation. Mr. Robert P. Gannon, Montana Power's chief executive
30 officer and chairman-elect discussed factors leading to the decision to sell in the
31 Company's press release:

32

33 "We also believe that the size and geographic presence necessary to
34 compete successfully in the dynamic, evolving competitive generation
35 market means that only the larger companies will have a sustainable
36 competitive advantage, despite our earned reputation as a relatively low-

1 cost generator or electricity. So Montana Power will focus even more on
2 its core strength of customer service.

3
4 Finally, energy prices in the future will be determined by competition and
5 may be more or less than the actual costs of generation; that risk is better
6 taken by larger companies who are concentrating on generation."¹⁸

7
8 Q. What inference do you draw from Mr. Gannon's remarks?

9
10 A. I believe the quote shows that he recognizes that prices for electric power
11 are not going to be determined by simple textbook "competition" but rather by
12 the interaction of powerful players as they accommodate to each other.

13
14 In my view an expectation of oligopoly pricing must be a factor in the
15 calculation of stranded cost.

16
17 Q., You say that the "Net Revenues Lost" approach has serious problems,
18 both theoretical and practical. Please discuss the "Net Revenues Lost" approach.

19
20 A. The biggest problem with this approach is that it is based on a profound
21 misunderstanding of utility regulation. This method starts with developing the
22 revenues that the utility would have received under continued regulation over
23 the life of the assets in question. This approach assumes that there would have
24 been no changes in the economy, technology, society, etc., over a long period of
25 years.

26
27 When the Commission permits rates intended to afford the utility an
28 opportunity to earn a fair return, it takes into account the cost of capital, both
29 debt and equity as I earlier discussed. For both of these components of the
30 utilities capital structure there is a risk premium in the figure allowed by the
31 Commission. The mortgage bond lenders are not guaranteed that the bonds will
32 be sound over their life of perhaps thirty years. The bond buyers take a risk that
33 the industry will be viable and that they will collect the interest and principal
34 that hope for. Similarly the owners of common shares take a risk that the

¹⁸ From Montana Power at WWW.mtpower.com.

1 company -- and the industry -- will continue to be healthy. They are paid to take
2 that risk. The "Net Revenues Lost" approach proposes to absolve them of that
3 risk.

4

5 I earlier talked about how investors have long been concerned about risk
6 in this industry. Other solid industries have shrunk or disappeared. The most
7 common example is the street railway industry, once thought to be very solid. It
8 seems to me that now making the assumption that there was no risk of major
9 changes over the life of long-lived assets is a mistake.

10

11 Beyond the industry risks, there is the risk, to take an obvious example, of
12 a failure at a nuclear plant, either catastrophic or not. Nuclear units have been
13 closed well before their original expected life because the required investment to
14 keep them economically viable was too high. Such plants are no longer "used
15 and useful." The "Net Revenues Lost" approach assumes away such problems
16 and would pay "stranded cost" over the assumed life of an asset for which there
17 is no assurance of reaching that life.

18

19 Q. Is it not possible to make adjustments for the problem you have
20 discussed?

21

22 A. It is, but then you are simply starting with a figure and making arbitrary
23 and obviously controversial judgments about how to adjust. I recommend that
24 this approach not be used.

25

26 Q. Please discuss the market-based approaches.

27

28 A. The market based approaches have the distinct appeal of producing an
29 actual transaction, in contrast with the with what the Report calls
30 "administrative. But the appeal is to a great extent superficial.

31

32 The more attractive market approach is the "auction and divestiture,"
33 under which the generating assets would actually be put on the market for bids,
34 and sold. A clear price would be paid by a "willing buyer," a valuation method
35 which has strong support. Some plants have already been auctioned in New
36 England and California and have brought very strong prices. The high prices

1 (compared with book value) lead to the notion that perhaps stranded costs,
2 particularly non-nuclear, are not significant after all. But special circumstances in
3 each case offer caution. New England is a region with a capacity constraint
4 because of nuclear problems, and the California auction may have brought
5 higher than normal prices because of "must run" rules and the prospect of
6 nuclear retirements in the relatively near future. Other considerations are that
7 these early sales may bring high prices but that later one will not. Much remains
8 to be sorted out, and theorized about how future auctions will unfold, but the
9 auction approach does have significant appeal.

10
11 One supposed attribute of the "auction and divestiture" approach is that it
12 will, in addition, reduce or eliminate market power. My own view is that this is
13 an unlikely benefit. The plants will go into strong hands which will eventually
14 reach an accommodation with other financially solid power producers.
15 Concentrated ownership is not the only way to reach market power. The airlines
16 post their tariffs and tariff changes in a centralized with similarities to the
17 California Power Exchange, and thus communicate in a way that the Wall Street
18 Journal opines reduces competitive pricing:

19
20 "Competitive pressures aren't likely to drive business fares down, thanks
21 to Airline Tariff Publishing Co. ... ATPCO is owned by a group of 24
22 international airlines, including the seven largest U. S. carriers.

23 ATPCO says its two mainframe computers create a perfect
24 marketplace, akin to a gas-station owner being able to watch prices his
25 competitor posts across the street."¹⁹

26
27
28 Q. Would you address the "stock market valuation approach"?

29
30 A. Yes. This is described on page 26 of the Report. Utilities would be
31 required to split their common stock into two new classes. Each existing share
32 would be exchanged for one share of each new class, A and B. Class A shares
33 would have the traditional stockholder rights and Class B shares would be a
34 claim against any stranded costs. At some appointed date the stranded costs

¹⁹ The Wall Street Journal, Nov. 3, 190097.

1 would be computed by subtracting the market value of the Class A shares from
2 the Net Book Value of the Company. A glaring problem is the assumption that
3 the price of a share equals the book value. Utility shares often trade at a value
4 above book, and sometimes at a value below book. In addition, how the stock
5 market in the future will value stand-alone distribution and/or transmission
6 utilities remains to be seen.

7
8 This is a complicated financial approach which might not generate results
9 which would be widely accepted. Another clear problem with this is the single
10 moment in time on the stock market at which value would be revealed. Trading
11 might be thin, or non-existent, and many external factors, including, for example
12 interest rates, or problems in Asia might play an outsized role in the value on a
13 particular day. I recommend that this approach be rejected.

14
15 Q. Are there still other factors that need to be included in a calculation of
16 stranded cost?

17
18 A. Yes. Transmission rules and constraints need to be incorporated into the
19 analysis. For purposes of reliability and voltage support some plants may be
20 designated as "must run." There will be financial compensation associated with
21 such a designation. This clearly was a factor in the California auction. A plant
22 near a large load center may be worth more because of that fact than a similar
23 plant located more remote from load. A specific study is required of the Arizona
24 transmission system to determine if "must run" plants exist and whether the
25 owners will enjoy a higher value as a result.

26
27 Finally, to the extent that existing transmission opens up new
28 opportunities in the unregulated market, the gains from that should be taken as a
29 mitigation for stranded cost.

30
31
32 **Issue 4. Should there be a limitation on the time frame over which**
33 **"stranded costs" are calculated?**

34

1 Q. Should there be a limitation on the time frame over which "stranded costs"
2 are calculated?

3

4 A. I take this question to be related to a specific methodology, the "Net
5 Revenues Lost" approach which I discussed in addressing Issue 3. The Staff's
6 position, as discussed on pages 29 and 30 of the Report, is that the calculation
7 horizon should stretch out to include all the years -- perhaps twenty or thirty
8 years from now -- that a utility expected a generating asset to be producing
9 energy for the market. I have already given my reasons for rejecting that
10 approach. To briefly recapitulate, the risk of new technologies -- very small scale
11 self-generation possibilities -- have always been an investor risk. The advent of
12 technology which might shift the energy source for industry, commercial
13 buildings, and the home, away from electricity has always been a threat to the
14 utility investor and no Commission could, would, or should protect against it. If
15 an agricultural pumper shifted from electricity to diesel or natural gas pumping,
16 the Staff position would call the costs stranded and make other ratepayers make
17 the utility whole. This assumes that utility investments were guaranteed by
18 the ratepayers to be risk free! No such guarantee can be legitimately asserted.
19 The Kyoto conference on global climate change and a possible Treaty casts a
20 shadow over the long future the Staff position embraces.

21

22 Q. ~~Would you address the question more broadly, not only with respect to~~
23 ~~the single methodology?~~

24

25 A. Yes. There is a tension between competing needs here that I want to bring
26 out. The first need is for the Commission to consider a fairly extended time
27 horizon as it watches developments in the industry. This time horizon is not
28 related to the long-lived assets mentioned previously. The steady stream of
29 mergers, acquisitions, auctions, and decisions in nearby and distant states, and
30 the potential for Federal legislation shows the industry to be in a very uncertain
31 period. Finalizing policy decisions is problematic in a time of flux like this one. I
32 emphasize again, as well, the need to have estimates of stranded costs from the
33 Affected Utilities prior to adopting policy. All this suggests a fairly extended
34 time horizon for the Commission to consider.

35

1 The competing element in this tension is the need to limit the time over
2 which "stranded costs" are calculated because in a fairly short time it will become
3 difficult to sort out the effects on asset prices of changing the regulatory regime
4 from the effects of general economic changes and technological developments.
5

6 In addition to all the other elements the Commission must grapple with, a
7 new one has now come into financial discourse. Chairman Greenspan of the
8 Federal Reserve recently spoke of the possibility of deflation in our economy. He
9 said, in part,

10
11 Even if deflation is not considered a significant near-term risk for the
12 economy, the increasing discussion of it could be clearer in defining the
13 circumstance. Regrettably, the term deflation is being used to describe
14 several different states that are not necessarily depicting similar economic
15 conditions. One use of the term refers to an ongoing fall in the prices of
16 existing assets. Asset prices are inherently volatile, in part because
17 expected returns from real assets can vary for a wide variety of reasons,
18 some of which may be only tangentially related to the state of the
19 economy and monetary policy.

20 Nonetheless, a drop in the prices of existing assets can feed back
21 onto real economic activity, not only by changing incentives to consume
22 and invest, but also by impairing the health of financial intermediaries--as
23 we experienced in the early 1990s and many Asian countries are learning
24 now. But historically, it has been very rapid asset price declines--in equity
25 and real estate, especially--that have held the potential to be a virulently
26 negative force in the economy.

27 I emphasize rapid declines because, in most circumstances, slowly
28 deflating asset prices probably can be absorbed without the marked
29 economic disruptions that frequently accompany sharp corrections. The
30 severe economic contraction of the early 1930s, and the associated
31 persistent declines in product prices, could probably not have occurred
32 apart from the steep asset price deflation that started in 1929.²⁰
33

²⁰ Remarks by Federal Reserve Chairman Alan Greenspan at the Annual Meeting of the American Economic Association and the American Finance Association, Chicago, January 3, 1998. The Wall Street Journal Interactive Edition -- January 3, 1998

1 A drop in the prices of existing assets stemming from deflation will be
2 difficult to separate from a drop caused by changes in technology, a drop caused
3 by investors perceptions of the future market for electricity, and a drop from a
4 change in the regulatory regime.

5
6 If the value of assets generally fall (for example peoples' homes and other
7 real estate, office buildings and ranches, and so on, including utility generating
8 assets) that cannot be considered as giving rise to "stranded cost." For this
9 reason the Commission should put a clear limitation on the time over which
10 stranded costs are calculated, so that the analysis does not get confused with
11 changes in the general price level.

12
13 **Issue 5. Should there be a limitation on the recovery time frame for**
14 **"stranded costs"?**

15
16 Q. Should there be a limitation on the recovery time frame for "stranded
17 costs"?

18
19 A. Resolution on this question should be deferred until the affected utilities
20 have filed their estimates of what stranded costs will be. If the estimated costs
21 are asserted to be large, then rates might have to go up as a result of the
22 proposed change in regulation. If restructuring is going to require that
23 consumers pay higher rates, the Commission should know that. The
24 Commission should not lock itself into a policy without a clear understanding of
25 the implications of its actions.

26
27 Q. Why would rates rise because of restructuring?

28
29 A. Current rates include, each month, the cost of depreciating the generating
30 plant over its useful life. If the Commission now shortens the collection of that
31 depreciation to, say five years, the monthly payment might jump. Similarly with
32 other categories of stranded assets, if the period of collection is shortened.

33

1 Q. California initiated on January 1, 1998, a 10% rate reduction for residential
2 and small commercial customers, and the rates for other customers are expected
3 to decline as well. Why shouldn't Arizona expect rates to decline in similar
4 fashion?

5
6 A. In California rates are frozen at a high level for small commercial and
7 residential customers, except for the 10% rate reduction which the customers are
8 forced to finance themselves. Rates would have declined more over this freeze
9 period if restructuring had not been undertaken. There were significant drops in
10 the costs of the regulated utilities clearly to be expected that would have resulted
11 in lower rates. Rates would have dropped in California as the Commission
12 adjusted them to the lower costs.

13
14 Moody's Investors Service recognized the unique situation in California in
15 a Special Report:

16
17 "We believe that California's plan for recovery of approximately \$21
18 billion in potential stranded assets is not exportable to most other states.
19 In California, the three major investor-owned utilities, rated A1 and A2,
20 have similar risk profiles. Their stranded cost exposure originates largely
21 in high-cost, state-mandated purchased power contracts. These contracts
22 ~~start to expire in 1997 and 1998, and the companies' costs will decrease as~~
23 a result. The California legislation, AB 1890, freezes the companies' rates
24 at current levels, minus a 10% discount for residential and small
25 commercial customers, and allows the companies to use excess cash flow
26 created by the difference between those rates and their lower future costs
27 to pay down a goodly portion of the their above- market-priced fixed
28 obligations. The situation elsewhere in the country is different. In other
29 states, cost structures may not be trending downward as they are in
30 California. Therefore, there will not be large amounts of excess cash
31 available to pay down stranded investments.²¹

32
33 Q. Please explain more fully the implications in setting the time frame for
34 recovering "stranded costs."

²¹ Special Report, Moody's Investors Service, February 28, 1997, page 1.

1

2 A. In my view the Commission must fully take into consideration the impact
3 on customers if and when it sets a time frame for the recovery of "stranded costs."
4 This issue has political dimensions.

5

6 In spite of the favorable cost situation for dealing with stranded costs in
7 California, there is a consumer and political backlash growing against the actions
8 of the California Public Utilities Commission and the state legislature. An
9 initiative movement is underway to afford even lower rates for residential and
10 small commercial customers. In addition, new legislation has been introduced
11 by one of the leaders in passing AB 1890 who now wants to significantly revise
12 the electric restructuring in California.

13

14 Q. The California legislation, AB 1890, also included a provision for
15 "securatizing" stranded costs through a bond issue. Cannot securitization assure
16 a rate reduction for all customers?

17

18 A. That depends on the mix of the dollar amount of stranded cost, the time
19 period set for the recovery of stranded cost, and the length of the securitization
20 bonds on which the customers are obligated to pay principal and interest.
21 Payments can be lowered by stretching out the period. An analogy with a home
22 mortgage is useful. The monthly payments on a 30 year mortgage are lower,
23 other things being equal, than on a 15 year mortgage.

24

25 What is going on with securitization is a two step dance in which the
26 Commission accelerates the stranded cost from the normal depreciation period
27 and then decelerates the payment by stretching it out over the life of the new
28 bonds. The longer the life of the bonds, the higher the total burden on the
29 customers. (And, most likely, the higher the interest rate that must be paid.) It is
30 not clear, moreover, that the term of the securitization bonds can be stretched to
31 any length necessary to finance a rate reduction. That is an empirical question.

32

33 Q. Do you have additional remarks on the issue of the recovery time frame
34 for "stranded costs"?

35

1 A. In setting a time frame, customers will be better off if the payments are
2 spread over a longer period. Those advocating a top-down approach to
3 determining stranded costs would base their calculations of what the utilities
4 would have earned over the expected life of the plant and equipment. Those
5 advocates would be consistent in asking that customers pay the stranded cost
6 over the same time period, which could be twenty or thirty years, with
7 payments declining over time. At first glance that appears to minimize the
8 customers burden, and adds some generational equity.

9

10 Q. What do you mean by "generational equity"?

11

12 A. If the stranded cost burden were set to be collected in a short period of
13 time, the payments would be large each month until the end of that period.
14 Consider a senior citizen who might make those large payments and then die.
15 Such a customer would have paid off the stranded cost but not lived long enough
16 to get any benefits that are supposed to flow from this restructuring.

17

18 Q. Is there a reason to consider not stretching the recovery time over the long
19 number of years associated with the useful life of the assets being stranded?

20

21 A. Yes, two practical ones. We can expect any utility, confronted some years
22 from now with new adverse circumstances will be back for another bite at
23 stranded costs. I discussed this earlier in raising the possibility of deflation. To
24 protect customers there should be a limit on the recovery period. On the utilities'
25 side of the issue, a long, stretched out, period adds to the risk and thus to the
26 cost.

27

28 Q. Please summarize your recommendation on this issue?

29

30 A. My recommendation is that this question should not be resolved by the
31 Commission until after the affected utilities have made their filings on stranded
32 costs and the Commission can get a sense of the impacts on customers of the
33 policy being considered. In addition, the issue of securitization needs
34 exploration and resolution.

35

1 **Issue 6. How and who should pay for "stranded costs" and who, if anyone,**
2 **should be excluded from paying for stranded costs?**

3
4 Q. Who should be excluded from paying for "stranded costs"?

5
6 A. Customers who had a right, prior to the restructuring of the industry, to
7 purchase power from another supplier should be excluded from paying for
8 "stranded costs."

9 Q. How should stranded costs be paid for?

10
11 A. If there is a finding of positive stranded costs that customers must pay for,
12 the costs should be paid in a kilowatt hour charge. Great care must be taken to
13 ensure that the adoption of a payment mechanism for stranded costs does not
14 result in cost shifting between classes. A customer or other fixed charge should
15 be avoided, lest cost shifting occur as a result.

16
17 In a cost allocation proceeding each class might get a different allocation
18 of the costs of generation, of transmission and of distribution rate base and
19 expenses. The largest industrial customers, for example, served at transmission
20 voltage, are not allocated a share of distribution costs. As a result, in the cost
21 allocation process the smaller customers get a greater percentage of total costs
22 than the share of generation costs assigned to them. Since for the most part
23 "stranded costs" are associated with generation plant, the interaction of the cost
24 allocation methodology with stranded cost responsibility should be reviewed for
25 fairness.

26
27 Q. What is your recommendation with respect to cost allocation of stranded
28 costs?

29
30 A. The stranded cost Working Group reached what I feel is the correct
31 position on the allocation of stranded costs. The recommendation appears on
32 page 37 of the Report:

33
34 Stranded costs should be allocated to jurisdictions and classes in a
35 manner consistent with the specific company's current rate treatment of
36 the stranded asset in order to effect a recovery of stranded costs that is in

1 substantially the same proportion as the recovery of similar costs from
2 customers or customers classes under current rates. (For example,
3 stranded generation assets should be allocated using the demand
4 allocation method used for production plant.) Updated rate design to
5 correct flaws in current design would be acceptable.²²
6

7 Q. One of the issues before the Working Group was whether interruptible
8 customers should bear a share of stranded costs. What is your view on that?
9

10 A. Interruptible customers should pay a full share of any "stranded costs."
11 The theory behind offering interruptible rates is that, while the system has excess
12 capacity, it is better to sell power even if it does not produce revenues equal to
13 the full cost of production. It is better to get something as a contribution to
14 overhead than to get nothing. At the same time, however, a system rationally
15 planned and engineered strives over time to bring capacity into balance with
16 demand, so that each kilowatt hour could be sold at a price fully remunerative.
17 Thus, over time, interruptible rates might be eliminated as excess capacity was
18 eliminated. Against this background we can see that over time the interruptible
19 customers might be paying a full share of the cost of capacity, and hence a full
20 share of any "stranded costs."
21

22 **Issue 7. Should there be a true-up mechanism and, if so, how would it**
23 **operate?**
24

25 Q. Should there be a true-up mechanism?
26

27 A. Yes, there should be a true-up mechanism.
28

29 Q. How would a true up mechanism operate?
30

31 A. Design of a true-up mechanism must await a Commission decision on
32 other issues in this proceeding. The design of a true-up mechanism should be
33 among the last decisions the Commission makes on stranded cost.
34

²² Report, page 37.

1 Q. Why do you recommend a true-up mechanism?

2

3 A. As I describe elsewhere in my testimony, there are significant
4 uncertainties about whether there will be stranded costs for any utility, and
5 certainly uncertainties about the amount of stranded costs for all utilities.
6 Among other things, forecasts of the price of natural gas, and ultimately of a
7 market clearing price, must be revised from time to time. For this reason there
8 should be a true-up mechanism designed to ensure fairness as the passage of
9 time permits a clearer understanding of the factors influencing stranded costs
10 and the final dimensions of the problem.

11

12 Q. Please elaborate on why a decision about a true-up mechanism should be
13 among the last of the Commissions findings on stranded cost?

14

15 A. One issue the Commission asked parties to address here is the question
16 about a rate freeze and/or a price cap. If either is put in place, and, during a
17 true-up period it is found that additional revenues were needed to cover
18 stranded cost, rates could not be raised because of the freeze or the price cap.

19

20 That problem then makes us face the issue of a termination period for the
21 collection of "stranded costs." If there is an end date, that will inter-play with the
22 rate freeze/price cap, so that if the true-up mechanism showed that additional
23 revenues were needed, and the freeze/price cap prevented the immediate
24 collection, the termination date would prevent the eventual collection.

25

26 The design of a true-up mechanism must take into account these other
27 decisions that will be made by the Commission. The goal of a true-up
28 mechanism, of course, is to adjust the amount paid for stranded cost so that all
29 parties are treated fairly. For example, if an upward adjustment in what
30 customers should pay is required, and if one element of the Commission's
31 decision, say a price cap, prevents an immediate upward adjustment in
32 collections, then something else must give way. In this example what might be
33 changed if the true-up mechanism called for an upward adjustment in collections
34 would be the end date of the recovery period. The point is that until these inter-
35 acting elements have been decided, design of the true-up mechanism should be
36 deferred.

1

2

3 **Issue 8. Should there be price caps or a rate freeze imposed as part of the**
4 **development of a stranded cost recovery program and if so, how should it**
5 **be calculated?**

6

7 Q. Should a rate freeze be imposed as part of the development of a stranded
8 cost recovery program?

9

10 A. No. A rate freeze can't help recover stranded costs unless rates are
11 already unjustly high or a drop in utility costs is about to occur, or both.

12

13 A rate freeze carries the implication that rates are currently higher than a
14 reasonable level, so that current rates generate an excess with which to "recover
15 stranded costs." In California, a rate freeze was adopted by the Commission
16 because of the general knowledge that costs for the utilities were dropping
17 sharply, and that the frozen rates would in fact generate a large surplus to cover
18 "stranded costs" in the course of a few short years.

19

20 Arizona utilities have yet to file estimates of stranded costs. I am not
21 aware that costs for Arizona utilities are or were going to drop sharply to
22 provide funding for the recovery of stranded costs. If rates are set now at a fair
23 level, those rates cannot provide any "excess" dollars for the recovery of stranded
24 costs.

25

26 I recommend that a rate freeze not be adopted. If a rate freeze were to be
27 adopted, the adoption should be conditioned on the Commission first holding a
28 full rate case for each affected utility so that an up-to-date benchmark for
29 reasonable rates is established.

30

31 The cost of capital, for example, may be found to be dropping sharply at
32 this time, and that and other factors might be lowering costs. Ordinarily a drop
33 in costs would afford a drop in rates. If these are the conditions found after a
34 rate case for each utility, the Commission would know how much cash a freeze at
35 the existing rates would provide for the recovery of stranded costs. In this way

1 the excess funds generated by a rate freeze would be clearly set and a time for the
2 termination of the rate freeze could be established.

3

4 The deregulation of generation is based on the hope that the price of
5 electricity will fall. A rate freeze prevents prices from falling. A policy change
6 ought to be predicated on a clear understanding that there will be benefits to the
7 public and a clear understanding of when those benefits will be delivered.

8

9 Q. Should price caps be imposed as part of the development of a stranded
10 cost recovery program?

11

12 A. A price cap is more reasonable than a rate freeze because it carries the
13 suggestion that prices can't go up (i. e. are capped) but might go down. Price
14 caps, however, have significant problems of their own.

15

16 Q. What are the problems that price cap regulation present?

17

18 A. A price cap regimen generally carries an indexed price ceiling, so that
19 prices are adjusted from time to time based on a formula that reflects changes in
20 general price levels and then subtracts a factor based on the idea that the utility
21 should become more efficient every year. Thus, to give an example, prices might
22 be set and then adjusted by multiplying by changes in the Consumer Price Index
23 (CPI) minus X, where X is a Commission determined factor by which prices
24 ought to drop annually.

25

26 Q. What is wrong with using such an approach?

27

28 A. One problem is that, once in place, it is subject to the recontracting
29 argument. If, for example, it becomes clear that the use of the formula has
30 resulted in excess profits, for whatever reason, and the Commission wants to
31 adjust prices to provide the opportunity for a fair return, but no more, the
32 utilities can (and will) argue that they had a contract, and that revisiting the
33 contract will take away their incentive to be efficient.²³

34

²³ This is a false argument, as can be shown, but that is beside the point.

1 One reason for such a high rate of profits could be extraordinary efforts on
2 the part of management to be efficient. On the other hand, drops in fuel prices,
3 drops in the cost of capital, wage increases smaller than projected, and so on,
4 may be the drivers. Under traditional regulation rates and profits would be
5 based on the cost of service, but the connection between costs and prices is
6 severed or severely weakened under a price cap regime.

7
8 In the end, furthermore, it is recognized that price caps need to be
9 adjusted from time to time to bring the cap in line with the cost of service.
10 Ultimately a price cap is a formal built-in regulatory lag, where the cap is set for
11 a significant number of years before adjustment. It is better policy to simply
12 regulate on a cost of service basis without a formal and long regulatory lag.

13
14 Q. Is there another problem with price caps?

15
16 A. Yes. In my view this is an even more important reason to be very careful
17 in establishing a price cap regulatory regime. One of the reasons regulation of
18 electric utilities exists is to provide for "Just, reasonable, and non-discriminatory
19 rates."²⁴

20
21 Under a price cap regime a utility is free to reduce rates, but not increase
22 them. The proponents argue that reductions in rates should be without
23 Commission oversight, so that management is free to make changes for
24 efficiency. The problem with leaving the utility free to lower rates at its
25 discretion is that it can use drops in its costs to unfairly discriminate among
26 customer classes.

27
28 Professor Bonbright, addressing the criteria of a sound rate structure
29 wrote:

30
31 Public utility counsel have sometimes argued that once a
32 company's total revenue entitlements have been determined by a
33 commission, the choice of a pattern of rates that will yield the allowed

²⁴ The "non-discriminatory" phrase is usually interpreted as "not unduly discriminatory," meaning that rates can be different for different customers, but the differences must be based on cost differences.

1 revenues should be left to the discretion of the management, which will
2 then be in an impartial position to make a fair apportionment of burdens
3 among its different classes of customers. This is only a half-truth
4 argument: among other reasons, because a utility company is concerned
5 not just to secure rates that will presently yield the approved "fair rate of
6 return," but to develop a pattern of rates that will promote growth of
7 earnings and that will protect these earnings against business depressions.
8 The better the utility management, the greater is this long-run concern.²⁵
9

10 In the unregulated market for energy vendors will not be constrained
11 against discrimination among customers. We can already see multiple product
12 offers and can confidently expect cream-skimming and red-lining of customers.²⁶
13 Marketers will be free to offer price deals to those seen as attractive customers, to
14 offer tie-in sales, e. g. burglar alarm service plus electricity at a single package
15 price, and at the same time to avoid expensive marketing to those deemed less
16 desirable.
17

18 Price cap regulation would allow regulated prices to be segmented in
19 similar fashion.²⁷ Customers would lose their right to "just, reasonable, and non-
20 discriminatory rates." Utilities might argue that as long as prices are not raised to
21 any customers no one has been harmed. But if a utility is free to use any cost
22 savings to cut prices on a selective basis, then even customers whose prices have
23 not gone up may be harmed because their prices would have gone down under a
24 cost of service regime rather than a price cap regime. Cross-subsidization must
25 be constrained by Commission oversight and control.
26

27 The Goldwater Institute, in its comments on the Report of the Stranded
28 Cost Working Group, remarked that "Cost allocations are essentially politically
29 guided price discrimination."²⁸ But price discrimination should be politically
30 guided. The role of the Commission in setting cost allocations and then,

²⁵ Principles of Public Utility Rates, James C. Bonbright, Columbia Univ. Press, New York, 1961, p. 287, footnote 1.

²⁶ "Redlining" will take the form of avoiding specific customers based on credit histories, energy consumption and income, rather than by neighborhood.

²⁷ "segmenting markets" to some is the same as discrimination to others.

²⁸ "Comments on the Final Report of the Stranded Cost Working Group" submitted by the Goldwater Institute, second page.

1 subsequently, rate designs, is in fact a political one. The Commission is charged
2 with the political duty of protecting the public interest. And that is to the good,
3 for the Commission's role is protecting the public interest.

4
5 Q. Please summarize your recommendation with respect to the question of
6 rate freezes and price caps?

7
8 A. A rate freeze should not be adopted. A price cap should only be adopted
9 if the Commission retains control of individual tariffs. A price cap should only
10 function to be an upper bound on rates, with a clear plan in place to revisit the
11 ceiling and to end it as conditions warrant.

12
13
14 **Issue 9. What factors should be considered for "mitigation" of stranded**
15 **costs?**

16
17 Q. What should the Commission consider in the "mitigation" of stranded
18 costs?

19
20 A. Let me repeat, first, that the Commission should consider "mitigable"
21 along with "mitigated" in dealing with stranded costs. The Commission should
22 reserve the right to compel the utilities to actually mitigate stranded costs to the
23 maximum extent, or to penalize them if they do not. I have also already
24 mentioned in an earlier answer, at the end of the discussion of Issue 3, my view
25 that new opportunities to profit from transmission transactions occurring as the
26 result of restructuring should be used to mitigate stranded cost. And, finally, in
27 the section on Issue 1, about the modification of the rules, I urged that Rule R14-
28 2-1607 not be modified in a way that limit the scope of the Arizona Corporation
29 Commission's review of utility enterprise. I emphasized that it is important for
30 the Commission to be able to review and respond to the other business
31 enterprises of the regulated utilities to save customers from harm, and that might
32 capture, as appropriate, gains from non-utility enterprises.

33
34 There are, furthermore, additional factors that will mitigate stranded costs
35 that must be taken into consideration by the Commission.

1

2 Q. What are these additional factors?

3

4 A. Restructuring changes the value of the generation assets, and the change is
5 generally assumed to be downward. This drop in value is a good part of the
6 costs being discussed in this Docket. But restructuring changes, at the same time,
7 the value of the transmission system and, separately, the value of the distribution
8 system. Both of these changes we can be confident will be an increase in value.
9 Because the increase in value will take place as part of the restructuring, the
10 increase should be used to mitigate stranded costs occurring as part of the same
11 restructuring.

12

13 Q. How does restructuring increase the value of the transmission system and
14 the distribution system?

15

16 A. It is generally accepted that the risk involved for an investor is less for
17 transmission and for distribution than is the risk involved in an investment in
18 generation. At the moment of restructuring, therefore, as generation is
19 effectively separated, the cost of capital for transmission and distribution will
20 drop. That drop means that there is a corresponding rise in the value of the
21 transmission and distribution systems. That rise in value should be used to
22 mitigate the stranded costs on the generation side which arise from the same
23 source, i. e. the restructuring itself.

24

25 Q. Why do you say that it is generally accepted that risk is lower on the
26 transmission and distribution systems?

27

28 A. We observe that the Federal Energy Regulatory Commission (FERC), by
29 setting the collection of stranded costs on the transmission tariffs, expects the
30 transmission business to be solid enough to deliver the extra burden over time.
31 In addition, the California "rate reduction bonds," for which the payment will
32 come from a charge on the distribution system, were given a AAA rating,
33 suggesting that investors believe that the distribution system itself is a low risk
34 business.

35

1 Q. Are there other ways in which restructuring, per se, increases the value of
2 the Distribution system?

3

4 A. Yes. The distribution system becomes the key to "owning" customers and
5 is believed by many, including myself, to be the high profit area of the electric
6 power business in the future.

7

8 Q. What do you mean by "owning customers"?

9

10 A. New marketers of electricity, including Enron, for example, speak of
11 "owning customers" in the sense of having the customer know the brand and
12 logo of the marketer and having some loyalty to that brand and logo. Quite large
13 sums are now being spent in California and elsewhere by the new marketers
14 trying to attract customers away from the utility. In California the utility
15 became, under AB 1890, the default provider and in that sense "owns" the
16 customers. It is generally recognized, based on the experience in
17 telecommunications and elsewhere, that consumers have considerable inertia
18 with respect to changing providers.

19

20 In California, in spite of large outlays by new marketers and an \$80
21 million educational effort sponsored by the CPUC to tell customers that they
22 now have a "choice" of providers, very few customers have switched from the
23 incumbent default provider. The Wall Street Journal reports that San Diego Gas
24 & Electric Company had received requests from only 915 customers to sign with
25 a new energy provider, and less than half of those are residential customers.²⁹
26 The same article reported that for Pacific Gas & Electric, only 10,827 out of 4.6
27 million customers had asked to switch, and that only about 1,500 residential
28 customers are included in that total.

29

30 Q. What is the significance for mitigating stranded cost of the distribution
31 utility retaining customers?

32

33 A. My point is that the distribution business has the potential of becoming
34 much more profitable in the future, if the incumbent retains the customers. The

²⁹ The Wall Street Journal, December 31, 1997.

1 new marketing is going to bundle other products with electric energy, and
2 owning the customers is the gateway to tying other sales to the energy sale.
3 Selling bundled products such as home security alarm systems, cable TV,
4 telecommunications, and even mortgage servicing is much more profitable when
5 the customer already takes energy and receives a monthly mailing from the
6 utility.

7

8 Q. Are you saying that the profits from burglar alarms and other new
9 ventures should be used to mitigate "stranded costs"?

10

11 A. I am making a different point. I am saying that the distribution system
12 will have extra profit potential because of restructuring, particularly if the
13 incumbent utility is the default provider. This profit potential arises precisely
14 because of restructuring. The gain in the value of the distribution system should
15 be used to mitigate any drop in the value of the generation assets arising from
16 the same Commission action to restructure.

17

18 Q. What else should be used to mitigate "stranded costs"?

19

20 A. Regardless of whether or not there are stranded costs, every corporate
21 management should be aggressive in attempting to lower costs. The
22 Commission should condition any collection of stranded costs on good
23 performances by the utility managements. One step recently taken by the Salt
24 River Project (SRP) is an example of cost cutting that should be expected
25 regardless of whether there are stranded costs or not. It was recently reported
26 that the SRP re negotiated a contract with Pittsburg & Midway that reduces fuel
27 costs to make a generating station more competitive.³⁰ Finding and taking such
28 measures should be a condition that the Commission places on the collection of
29 stranded costs.

30

31

32 **Issue 10. The recommended calculation methodology and assumptions**
33 **made including any determination of the market clearing price.**

34

³⁰ Coal Daily, Jan. 7, 1998.

1 Q. You addressed the calculation methodology earlier, in response to issue 3.
2 Do you have anything to add on that subject ?

3

4 A. No.

5

6 Q. What is your recommendation on the determination of the market clearing
7 price?

8

9 A. A great deal of information gathering and study, as well as theorizing is
10 necessary before a solid estimate of the market clearing price can be made. Using
11 a proxy such as the Dow Jones Palo Verde Index trivializes what is a very
12 complex question.

13

14 Q. Why do you say that the question of a market clearing price is complex?

15

16 A. Many, if not most of the utilities in the Western United States are asserting
17 that they have stranded costs. This is a situation something like that found at
18 Lake Woebegone, where all the children are above average. This mysterious
19 situation, where each utility has positive stranded generation assets, raises the
20 question of from where is the low price power coming that strands the
21 generation of all the others.

22

23 To find a market clearing price that can be a solid basis for developing
24 reasonable estimates of stranded cost requires answering a number of questions,
25 including:

26

27 • What are the transmission paths and constraints under which
28 power from a low-cost source can move into an area to undercut a higher priced
29 source?

30

31 • What will be the transmission rules, including those of any ISO,
32 with respect to "must-run" units? Some units will be given secure payments to
33 serve as must-run for purposes of voltage support, VAR support, and for
34 complying with concerns of the Nuclear Regulatory Commission. (NRC)³¹

³¹ In a copyright report, Energy Central recently noted that the NRC is concerned that nuclear plants be protected with respect to sales of non-nuclear generating units. The NRC wants

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- What is the level of ownership concentration with respect to generating capacity in the relevant market? Is concentration high enough to reasonably expect that prices will be administered rather than be driven to the level of the running cost of the last unit dispatched?

- How rapidly will demand for electricity grow in the Western U. S. and how soon will excess capacity be absorbed?

- What will be the running cost of the last unit dispatched each hour during the 8,760 hours of the year?

- What units, where, and under whose ownership will not be dispatched in the new world of unregulated generation?

- What are the plans, and the timing of the plans of the new owners of the California power plants that have been auctioned recently? Will those plants be retired, replaced, or repowered?

- Will new power plants be built in the Western U. S.? When? What kind?

- Will some plants, e. g. Mohave, be forced to retrofit for environmental reasons? Will such plants be retrofitted or retired or replaced?

- What impact with EPA rules with respect to non-attainment areas have on the market clearing price in the Western U. S.?

- Will some or all units of California nuclear plants be closed after the collection of associated stranded costs? If so, what will be the impact on the market clearing price?

assurance of adequate protection in the event of a grid blackout, and potentially could intervene in a non-nuclear asset sale to be sure of grid protection.

1 • What will happen in the Pacific Northwest with respect to
2 protection of the salmon fisheries and how will that impact the market clearing
3 price?
4

5 • Will Federal legislation on restructuring be passed, and if so, what
6 will it require?
7

8 • Will Congress adopt changes with respect to the Bonneville Power
9 Administration and other federal power marketing agencies that impact the
10 market clearing price? If so, when?
11

12 • Will a climate treaty be ratified, and if so, when would its impact be
13 felt?
14

15 Q. Do you have answers to these questions?
16

17 A. No. It is outside the scope of my testimony to try to answer these
18 questions. The point is that an attempt to find a definitive market clearing price
19 without considering questions like these, and perhaps additional ones, is
20 premature.
21

22

23 **Issue 11. The implications of the Statement of Financial Accounting**
24 **Standards No. 71 resulting from the recommended stranded cost**
25 **calculation and recovery methodology.**
26

27 Q. Do you have any comment on the implications of the Statement of
28 Financial Accounting Standards No. 71 resulting from the recommended
29 stranded cost calculation and recovery methodology.
30

31 A. No.
32

33 Q. Does that complete your prepared testimony?
34

35 A. Yes.