

Before

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THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

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In re: R-80051196-Pennsylvania Public Utility Commission,
et al. versus Metropolitan Edison Company Investigation
into a requested \$76.5 million dollar rate increase.

C-80072105-Metropolitan Edison Company versus
Pennsylvania Public Utility Commission Complaint
against temporary base rates fixed by the Commission
in its Order of May 23, 1980 at I-79040308.

R-80051197-Pennsylvania Public Utility Commission,
et al. versus Pennsylvania Electric Company
Intestigation into a requested \$67.4 million dollar
rate increase.

C-80072106-Pennsylvania Electric Company versus
Pennsylvania Public Utility Commission Complaint
against temporary base rates fixed by the Commission
in its Order of May 23, 1980 at I-79040308.

Hearings.

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Harrisburg, Pennsylvania

November 13, 1980

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Pages 348 to 493

MOHRBACH & MARSHAL, INC.
27 North Lockwillow Avenue
Harrisburg, Pennsylvania
17112

Before

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Hearings.

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Stenographic report of hearing held
in Hearing Room No. 1, North Office
Building, Harrisburg, Pennsylvania,

Thursday,
November 13, 1980
at 10:10 o'clock a.m.

--oOo--

JOSEPH P. MATUSCHAK, ADMINISTRATIVE LAW JUDGE

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INDEX TO WITNESSES

WITNESS:	<u>Direct</u>	<u>Cross</u>
Marvin Raber	426	431
Walter T. Hood	434	434
Robert C. Arnold	359	365

INDEX TO EXHIBITSMET-EDIDENTIFIED

No. C-33	- Document entitled Typical Bill Comparisons, Penelec and Met-Ed Compared to other Pennsylvania Utilities	353
No. C-34	- Document entitled Request for Support of the \$9 Application Fee made at an informal conference with Pa PUC Staff on 10/16/80	353
No. C-35	- Document entitled NT 75	353
No. C-36	- Document entitled NT 70	353
No. C-37	- Document entitled NT 75	354
No. E-27	- Document entitled GPU Stockholder Survey 1980	354
No. F-23	- Document entitled Agreement of Settlement and Compromise	354
No. F-24	- Document entitled Opinion No. 97 FERC	354
No. G-22	- Document entitled Response to Prosecutory Staff Valuation Interrogatory No. 6	354

INDEX TO EXHIBITS
(Continued)

MET-EDIDENTIFIED

- No. G-23 - Document entitled Response to
Prosecutory Staff Valuation Inter-
rogatory No. 7 354
- No. G-24 - Document entitled Response to Prosecutory
Staff Valuation Interrogatory No. 8 . . . 354
- No. G-25 - Document entitled Response to Prosecutory
Staff Valuation Interrogatory No. 9 . . . 354
- No. G-26 - Document entitled Response to Prosecutory
Staff Valuation Interrogatory No. 10 . . . 354

PENELEG

- No. I-28 - Document entitled Response to Inter-
rogatory No. 15 by Abex Corp., et al. . . . 354
- No. I-29 - Document entitled Response to Inter-
rogatory No. 107 of Set Four of
Consumer Advocate Interrogatories . . . 354
- No. E-23 - Document entitled GPU Stockholder
Survey 1980 355
- No. G-1 - Document entitled Rate Base-Original
Cost and Trended Cost at Future Test
Year End, March 31, 1981 355
- No. G-2 - Document entitled Rate Base-Original
Cost and Trended Cost at Historic Test
Year End, March 31, 1980 355
- No. G-3 - Document entitled Original Cost
Functional Plant and Depreciation
Reserves at Future Test Year End,
March 31, 1981 355
- No. G-4 - Document entitled Original Cost and
Trended Original Cost Functional Plant
and Depreciation Reserves at Future Test
Year End 3/31/81 355

INDEX TO EXHIBITS

(Continued)

PENELECIDENTIFIED

No. G- 6	- Document entitled Original Cost Functional Plant and Depreciation Reserves Activity for Future Year Ending 3/31/81	355
No. G-8	- Document entitled Trended Cost-Plant and Depreciation Reserves Activity Updated from 9/30/79 through 3/31/80.	355
No. G-9	- Document entitled Calculation of Depreciation Accrual on Data at 3/31/81	355
No. G-10	- Document entitled Calculation of Depreciation Accrual Eliminations on Data at 3/31/81	355
No. G-12	- Document entitled Original Cost Functional Plant and Depreciation Reserves at Historical Test Year End 3/31/80	355
No. G-13	- Document entitled Original Cost and Trended Original Cost Functional Plant and Depreciation Reserves at Historical Test Year End 3/31/80	356
No. G-15	- Document entitled Original Cost Functional Plant and Depreciation Reserves Updated With Activity from 9/30/79 to 3/31/80	356
No. G-17	- Document entitled Calculation of Depreciation Accrual on Data at 3/31/80	356
No. G-18	- Document entitled Calculation of Depreciation Accrual Eliminations on Data at 3/31/80	356
No. G-19	- Document entitled Capital Recovery Study Report on Plant Investments at 9/30/79 Volume 1 and Volume 2	356

1 THE ADMINISTRATIVE LAW JUDGE: Before we get
2 started, we have a joint hearing today and we'll have a
3 number of joint hearings involving both Metropolitan Edison
4 Company and Penelec.

5 The question arises as to the nature of the
6 transcript, as to the page numbers. It appears that as of
7 this moment, the page numbers of Penelec are higher than
8 Met-Ed. We will continue paging the joint hearings in
9 accordance with the pages of Penelec. If they don't coincide
10 with Met-Ed, we will leave those pages blank so that anyone
11 looking at the transcript will be looking at the same page
12 numbers in either case. Do you Counsel understand? We will
13 follow the paging of Penelec. If the page numbers of
14 Met-Ed do not coincide, for instance, if there is a 5 page
15 difference, we will leave those blank and continue on with
16 the same page numbers in both cases so if you have the
17 transcript, you can refer to either case and it will be the
18 same page number. Otherwise, there will be a lot of
19 confusion.

20 Is there any preliminary matters?

21 MR. OGDEN: Your Honor, we have distributed
22 some exhibits this morning. I marked them for identification
23 at this point in time?

24 THE ADMINISTRATIVE LAW JUDGE: Very well.

25 MR. OGDEN: We have distributed to the

1 parties and handed to the reporters 3 copies of the following
2 exhibits: C-33 through C-37, E-27, and I am sorry, this is in
3 Met-Ed., F-23 and F-24, G-22 through G-26, I-28 and I-29.

4 In addition, in Met-Ed we have distributed
5 to the parties responses to several rate structure and rate
6 of return interrogatories. We have not had those marked for
7 the record at this time.

8 In the Penelec proceeding we have handed to
9 the parties and to the reporter copies of Exhibit E-23, I-28,
10 I-29 and the following substitute pages for exhibits in the
11 G series.

12 I might note that Mr. Garland will be here
13 tomorrow and will be presenting some testimony as to the
14 reason for these substitute pages.

15 They consist of Exhibit G-1, page 2; G-2,
16 page 2; G-3, pages 2 and 3; G-4, page 2; G-6, page 2; G-8,
17 pages 1 and 2; G-9, page 1; G-10, pages 1 and 2; G-12,
18 pages 2 and 3; G-13, page 2; G-15, page 2; G-17, page 1;
19 G-18, pages 1 and 2; G-19, Volume 1 substitute pages for some
20 of sections 1, 2A 2B and 2C and Volume 2 of Exhibit G-19,
21 some substitute pages for certain sections 1A, 1B, 3C, 3E and
22 4B.

23 I just might note for the reporter's benefit
24 I have a typewritten sheet of the various changes and I would
25 be glad to make that available to the reporter or any of the

1 parties if any desire to have it.

2 Your Honor, in addition for both cases, I
3 mentioned there were certain responses in the rate of return
4 area. Let me identify what requests were responded to.
5 Responses to the Consumer Advocate rate of return
6 interrogatories which are being made available for inspection
7 and copying today are numbers 41, 43, 49, 52, 53, 54, 55 and
8 56.

9 Responses to the Consumer Advocate rate of
10 return interrogatories which were distributed to the active
11 parties include number 40, 42, 44, 45, 46, 47, 48, 50 and 51.

12 I think that concludes the marking of the
13 exhibits.

14
15 (The following documents were produced and
16 marked for identification as follows:

17 (A document entitled Typical bill comparisons,
18 Penelec and Met-Ed compared to other
Pennsylvania Utilities was marked Met-Ed
Exhibit C-33 for identification)

19 (A document entitled request for support of
20 the \$9 application fee made at an informal
conference with PAPUC Staff on 10/16/80
21 was marked Met-Ed Exhibit C-34 for
identification.)

22 (A document entitled NT75 was marked Met-Ed
23 Exhibit C-35 for identification.)

24 (A document entitled NT70 was marked Met-Ed
25 Exhibit C-36 for identification.)

1 (A document entitled N.T. 75 was marked
2 Met-Ed Exhibit C-37 for identification.)

3 (A document entitled GPU Stockholder Survey
4 1980 was marked Met-Ed Exhibit E-27 for
5 identification.)

6 (A document entitled Agreement of Settlement
7 and Compromise was marked Met-Ed Exhibit
8 F-23 for identification.)

9 (A document entitled opinion number 97 FERC
10 was marked Met-Ed Exhibit No. F-24 for
11 identification.)

12 (A document entitled Response to Prosecutory
13 Staff Valuation Interrogatory No. 6 was marked
14 Met-Ed Exhibit G-22 for identification.)

15 (A document entitled Response to Prosecutory
16 Staff Valuation Interrogatory No. 7 was
17 marked Met-Ed Exhibit G-23 for identification.)

18 (A document entitled Response to Prosecutory
19 Staff Valuation Interrogatory No. 8 was
20 marked Met-Ed Exhibit G-24 for
21 identification.)

22 (A document entitled Response to Prosecutory
23 Staff Valuation Interrogatory No. 9 was
24 marked Met-Ed Exhibit G-25 for
25 identification.)

(A document entitled Response to Prosecutory
Staff Valuation Interrogatory No. 10 was
marked Met-Ed Exhibit G-26 for
identification.)

(A document entitled Response to
Interrogatory No. 15 by Abex Corporation,
et al. was marked Penelec Exhibit I-28 for
identification.)

(A document entitled Response to
Interrogatory No. 107 of Set Four of the
Consumer Advocate Interrogatories was
marked Penelec Exhibit I-29 for
identification.)

- 1 (A document entitled GPU Stockholder Survey
2 1980 was marked Penelec Exhibit E-23 for
3 identification.)
- 4 (A document entitled Rate Base-Original Cost
5 and Trended Cost at Future Test Year End,
6 March 31, 1981 was marked Penelec Exhibit
7 G-1 for identification.)
- 8 (A document entitled Rate Base-Original Cost
9 and Trended Cost at Historic Test Year End,
10 March 31, 1980 was marked Penelec Exhibit
11 G-2 for identification.)
- 12 (A document entitled Original Cost Functional
13 Plant and Depreciation Reserves at Future
14 Test Year End, March 31, 1981 was marked
15 Penelec Exhibit G-3 for identification.)
- 16 (A document entitled Original Cost and
17 Trended Original Cost Functional Plant and
18 Depreciation Reserves at Future Test Year
19 End 3/31/81 was marked Penelec Exhibit G-4
20 for identification.)
- 21 (A document entitled Original Cost Functional
22 Plant and Depreciation Reserves Activity
23 for Future Year Ending 3/31/81 was marked
24 Penelec Exhibit G-6 for identification.)
- 25 (A document entitled Trended Cost-Plant and
Depreciation Reserves Activity Updated from
9/30/79 through 3/31/80 was marked Penelec
Exhibit G-8 for identification.)
- (A document entitled Calculation of
Depreciation Accrual on Data at 3/31/81
was marked Penelec Exhibit G-9 for
identification.)
- (A document entitled Calculation of
Depreciation Accrual Eliminations on Data
at 3/31/81 was marked Penelec Exhibit G-10
for identification.)
- (A document entitled Original Cost Functional
Plant and Depreciation Reserves at Historical
Test Year End 3/31/80 was marked Penelec
Exhibit G-12 for identification.)

1 (A document entitled Original Cost and
2 Trended Original Cost Functional Plant and
3 Depreciation Reserves at Historical Test
Year End 3/31/80 was marked Penelec Exhibit
G-13 for identification.)

4 (A document entitled Original Cost Functional
5 Plant and Depreciation Reserves Updated
6 With Activity from 9/30/79 to 3/31/80 was
marked Penelec Exhibit G-15 for identifica-
tion.)

7 (A document entitled Calculation of
8 Depreciation Accrual on Data at 3/31/80 was
9 marked Penelec Exhibit G-17 for identifica-
tion.)

10 (A document entitled Calculation of
11 Depreciation Accrual Eliminations on Data
at 3/31/80 was marked Penelec Exhibit G-18
for identification.)

12 (A document entitled Capital Recovery Study
13 Report on Plant Investments at 9/30/79,
14 volume 1 and volume 2 was marked G-19 for
identification.)

15 THE ADMINISTRATIVE LAW JUDGE: Is there any
16 other preliminary matters?

17 MR. SPEICHER: My name is John Speicher. I
18 am with Merkel, Spang and Weidner in Reading, Pennsylvania
19 and we represent the American Society of Utility Industrials.
20 Our client is a non-profit corporation whose members at this
21 time exceed 3300 people, all of whom are common stock share-
22 holders in GPU. This morning I have filed a petition to
23 intervene in these matters and have also filed three formal
24 complaints, two complaints are against the Public Utility
25 Commission and one is against Metropolitan Edison, all dealing

1 with the matters presently before Your Honor.

2 It is our clients' position that through
3 these three complaints and the petition to intervene we
4 would like to formally intervene in the present matters. We
5 would be willing, of course, to accept the record of all
6 these hearings as they presently exist and ask that Your Honor
7 consider these matters at your earliest possible time.

8 THE ADMINISTRATIVE LAW JUDGE: You want to
9 intervene in both cases?

10 MR. SPEICHER: Yes, we do.

11 THE ADMINISTRATIVE LAW JUDGE: Any objections?

12 MR. BARASCH: I would like to review this
13 complaint and petition for intervention before we state
14 whether we have an objection or not.

15 MR. McCLAREN: I will join in that.

16 THE ADMINISTRATIVE LAW JUDGE: We will defer
17 ruling on your petition for the time being, Mr. Speicher.

18 MR. WISE: Your Honor, will copies of the
19 petition to intervene be made available to active parties?

20 THE ADMINISTRATIVE LAW JUDGE: I believe
21 Mr. Speicher indicated he had some.

22 MR. SPEICHER: I have some available copies
23 of the petition. I can also bring more tomorrow morning if
24 the parties would like. I could get a head count. I could
25 have all available copies tomorrow morning.

1 THE ADMINISTRATIVE LAW JUDGE: Very well.

2 There is another petition to intervene by the
3 Hammermill Paper Company which is a customer of Penelec. They
4 wish to intervene in the Penelec case.

5 Any objections to the petition of Hammermill
6 Paper Company to intervene?

7 MR. SUFFIAN: No objection.

8 THE ADMINISTRATIVE LAW JUDGE: The petition
9 indicates that Hammermill Paper Company is a customer of
10 Penelec which purchases large amounts of power.

11 MR. BARASCH: We would have no objection
12 based on that allegation.

13 THE ADMINISTRATIVE LAW JUDGE: Very well.
14 The petition of Hammermill Paper Company to intervene is
15 granted.

16 MR. BARASCH: At whatever point we are
17 finished with preliminary matters, before we see the first
18 witness, I would like to request a two minute recess before
19 we get to that point.

20 THE ADMINISTRATIVE LAW JUDGE: Are there any
21 other preliminary matters? Let's take a short recess.

22 (Whereupon, a short recess was taken.)
23
24
25

1 ROBERT C. ARNOLD, called as a witness on
2 behalf of the Respondents, having been duly sworn according
3 to law, was examined and testified as follows:

4
5 DIRECT EXAMINATION

6 BY MR. STRAHN:

7 Q Please state your full name for the record.

8 A My name is Robert C. Arnold.

9 Q What is your business address?

10 A 100 Interpace Parkway, Parsippany, New
11 Jersey.

12 Q By whom are you employed and in what
13 capacity?

14 A I am employed by the GPU Service Corporation
15 and I am in charge of all of the nuclear activities of the
16 General Public Utilities System, and in that capacity I am
17 an officer of the GPU Service Corporation, Vice-President,
18 and I am also a Senior Vice-President of Metropolitan
19 Edison Company and Jersey Central Power and Light Company.

20 I currently am located full time at Three
21 Mile Island and provide direct management and overall
22 supervision of all activities related to Three Mile Island.

23 Q Mr. Arnold, what is the purpose for your
24 appearing today?

25 A I am here to respond to questions and sub-

1 questions of the Public Advocate, specifically Public Advocate
2 Interrogatory Question 9 and three subquestions to that,
3 Questions 9A, 9B and 9C.

4 MR. STRAHN: I would note for the record that
5 Mr. Arnold is referring to Consumer Advocate Interrogatory
6 No. 9 in the Met-Ed case and Consumer Advocate Interrogatory
7 No. 8 in the Penelec case, the first sets of interrogatories
8 from the Consumer Advocate in those respective cases.

9 BY MR. STRAHN:

10 Q Mr. Arnold, referring to the interrogatory,
11 the first part of it begins: Provide the most recent estimate
12 for the return of TMI-1 to service including an identification
13 of the various regulatory steps required to return the unit
14 to service and the anticipated schedule for the completion
15 of these steps.

16 Can you give us a response to that, please?

17 A Yes, sir. The schedule for return of TMI-1
18 to service will be determined by the schedule of the Atomic
19 Safety and Licensing Board, normally referred as the ASLB,
20 hearings and the resultant Nuclear Regulatory Commission
21 decisions.

22 Our most likely estimate for return of full
23 power service is the fourth quarter of 1981.

24 This assumes that the restart of TMI-1 will
25 be authorized before the end of the third quarter followed

1 by two to three months of start-up testing and ascension to
2 full power.

3 The NRC proceedings can be grouped into three
4 general steps.

5 Step one is an initial prehearing, discovery
6 and written testimony phase.

7 Step two is the conduct of the hearings them-
8 selves and the issuance by the ASLB of a recommended decision.

9 Step three is a formal NRC review of the
10 ASLB's recommended decision and an order authorizing restart.

11 In the Nuclear Regulatory Commission's
12 August 9, 1979 order, 180 days were tentatively allocated
13 for step one, 155 days for step two, and 35 days were assumed
14 for step three.

15 This schedule would have meant the start of
16 the ASLB hearings in February 1980, two months of hearings
17 followed by a recommended ASLB decision in July 1980, and a
18 Commission order by September 1980.

19 The actual start of hearings occurred on
20 October 15, 1980 and there appears to be no possibility that
21 the hearings will be completed in less than five or six
22 months from that date.

23 Q Thank you. Now I direct your attention to
24 sub-Paragraph A of the interrogatory where it states:

25 For each regulatory step indicate the

1 responsible regulatory body, the steps required to be
2 completed before each body will complete its approval for
3 the return to service, and the relevant jurisdiction of each
4 body over return to service and operation of TMI-1.

5 Can you give us a response to that, please?

6 A Yes, sir. For all the regulatory steps the
7 NRC retains primary jurisdiction. For one hearing issue the
8 Federal Emergency Management Agency also retains a regulatory
9 approval jurisdiction over state and local emergency plans.

10 These steps required to be completed by the
11 NRC are identified in the answer to Question 9.

12 The Federal Energy Management Agency must
13 complete its review and approval of state and local emergency
14 plans prior to the restart of TMI-1.

15 Q Sub-Paragraph B asks that you provide the
16 assumptions made in determining the anticipated schedule
17 for completion of each of the regulatory steps required prior
18 to the return of TMI-1 to service.

19 Could you give us those major assumptions,
20 please?

21 A There are five major assumptions underlying
22 the anticipated return to service schedule.

23 The first one is that the ASLB hearing
24 will not exceed six months.

25 The second is that the Nuclear Regulatory

1 Commission will promptly decide whether the issue of
2 psychological distress is to be considered in the restart
3 hearing, and, if so, that hearings on the issue can be
4 accommodated within the six months hearing time.

5 Third, that TMI-1 plant modifications required
6 prior to restart will not differ significantly from the short-
7 term items identified in the Commission's August 9, 1979
8 order and that TMI-1 will not be required to meet longer
9 term requirements prior to restart, which at the time of
10 restart have not been required for other operating nuclear
11 power plants.

12 Fourth, that by the time of the ASLE recommended
13 decision TMI-1 will have completed all actions required by
14 that decision to be completed prior to restart, that the
15 Director of Nuclear Reactor Regulation will promptly certify
16 such completion to the Commission, and that in accordance
17 with Section 6 of the Commission's August 9, 1979 order the
18 Commission will within 35 days lift the suspension of TMI-1's
19 operating authority currently in effect.

20 Fifth is that the Commission will modify
21 its August 9, 1979 order so as to permit prior to restart
22 authorization the conduct of hot functional testing of plant
23 systems with heat generated solely from the reactor coolant
24 pumps and with the reactor remaining fully shut down and non-
25 critical.

1 A request for modification of the August 9,
2 1979 order is being prepared by Met-Ed.

3 Q I direct your attention to sub-Paragraph C
4 of the interrogatory where it asks whether or not the company
5 anticipates that there will be appeals from a possible NRC
6 decision to the Federal Court system and indicate what
7 time has been allowed for such appeals in the TMI-1 return
8 schedule.

9 Can you respond to that, please?

10 A Yes, sir, the question of whether appeals
11 from a possible NRC decision will be made to the Federal
12 Court system is highly speculative as is the question whether
13 the courts might stay the NRC decision pending determination
14 of the appeal.

15 We would hope and anticipate that the ASLB
16 hearing would provide a clear concise record which will lead
17 to a favorable order for restart.

18 While we have no factual knowledge of appeals
19 that may be filed, it is our understanding that one intervenor,
20 the Union of Concerned Scientists, has indicated a potential
21 appeal to the courts on the issue of post-accident hydrogen
22 control within containment.

23 We cannot verify whether this or other
24 appeals will in fact be filed. No time has been allowed
25 for delay due to such appeals in the TMI-1 restart schedule.

1 MR. STRAHN: Thank you. That is all we have
2 of the witness, Your Honor.

3 THE ADMINISTRATIVE LAW JUDGE: Does the
4 Commission staff have any cross-examination?

5 MR. SUFFIAN: Yes, we do, Your Honor.

6
7 CROSS-EXAMINATION

8 BY MR. SUFFIAN:

9 Q Mr. Arnold, I would ask you to pardon me if
10 I cover some of the things you have just stated a few moments
11 ago. We have not had time to review that. We just heard
12 that now.

13 A Yes, sir.

14 Q I believe you stated that you expect TMI-1
15 to be in service in the fourth quarter of 1981 and that it
16 will be authorized to restart in the third quarter, is that
17 correct?

18 A I don't believe that in my response I used
19 the terminology of in service and I think some discussion
20 of that would be necessary to identify which of the dates
21 should be called in service.

22 What I testified to is that we would anticipate
23 authorization to resume operation of the unit in the third
24 quarter, and if that is done, we would expect to be through
25 the start-up testing program that will be necessary to the

1 point of return to full power operation during the fourth
2 quarter.

3 Q Have you stated in your testimony whether
4 this authorization in the third quarter and start-up in the
5 fourth quarter will depend upon the hearings before the ASLB
6 and the decision of the NRC and when it takes place?

7 A Yes.

8 Q How certain is the schedule that you have
9 set forth for the different activities before the ASLB and
10 the NRC that they will adhere to the time limit set forth
11 that you testified to?

12 A I don't think that I can quantify that
13 certainty. In a qualitative sense I have described it as
14 a most likely estimate, and if I might stand on that some-
15 what, the estimated time for the duration of the hearings
16 provided with the August 9, 1979 order was 60 days.

17 As we have gone through the prehearing
18 processes it seems clear to us that it will not be complete
19 in 60 days and our best estimate right now of how long they
20 will take, given the contentions that have been admitted
21 into the hearings, is six months.

22 In terms of the balance of the schedule for
23 the hearing process, that is, the post-hearing development
24 of the recommendations of the ASLB, the opportunities for
25 filings by the various parties to the hearings, and the

1 submission of a recommended decision to the NRC by the ASLB
2 should not, in my judgment, be significantly longer because
3 the hearing was longer.

4 I think that the time allowed of approximately
5 90 days for that in the August 9, 1979 order is still an
6 appropriate assumption for the current schedule estimate.

7 Q Then you are saying that even with these
8 new developments you expect start-up to be in the fourth
9 quarter of 1981, that these won't change your estimate that
10 you have testified to?

11 A No, I think my testimony is that I expect
12 start-up to occur in the third quarter --

13 Q I thought that was authorization in the
14 third quarter?

15 A And we would anticipate that we would be
16 at the point to go immediately into, or within a matter of
17 a very few weeks, perhaps two or three weeks, to go into the
18 start-up of the reactor once we have received authorization.

19 Q Now have you testified that you expect
20 return to full power of TMI-1 in the fourth quarter of 1981?

21 A Yes.

22 Q In the fourth quarter of 1981?

23 A Yes, sir.

24 Q Will that also include return to commercial
25 service in the fourth quarter of 1981?

1 A I think commercial service is an accounting
2 distinction not an operational distinction. As far as I
3 know, from an accounting standpoint the unit is still in
4 service even though it is not recognized in rate base for
5 rates set by the Pennsylvania and the New Jersey Commissions.

6 So I don't know, frankly, how to answer that
7 question from an accounting standpoint. We would be producing
8 power and delivering that power to our customers about the
9 end of the third quarter, beginning of the fourth quarter of
10 1981 with our present schedule, and we would have escalated
11 through the power ascension testing we anticipate by the end
12 of the fourth quarter.

13 Q Then are you saying that the return to full
14 power would be equated with being capable of serving the
15 commercial customers fully?

16 A No, I would not make that distinction. I
17 guess from an operational standpoint I would expect that
18 once the unit is synchronized with the grid and starting to
19 generate energy, that as we have handled units returning
20 from long outages in the past, that effectively commences
21 return to operation.

22 Q Let me see if I understand your answer. I
23 am not quite sure. When the unit returns fully to service,
24 at full power, will the unit be able to fully serve the
25 needs of commercial customers?

1 A I hope I don't appear to be difficult, but
2 when you put in the qualifiers to fully serve the needs of
3 customers I am just not sure.

4 When we come back on line, while there is a
5 power escalation period in which we do testing, that is not
6 different than the process that we go through with other units,
7 both fossil and nuclear, although the scope of the program
8 varies, and we do restrict the scheduling of the operation
9 of the unit during that start-up testing in terms of its
10 dispatching from the system operators, so that in the sense
11 of having it available unrestricted for the dispatching of
12 its operation or service to our customers, that would occur
13 with the completion of the testing and that completion would
14 not be achieved until we had gone to full power.

15 Q So when you do go to full power then you
16 will be able to meet the needs of the commercial customers
17 with Unit 1?

18 A Unit 1 will be able to make its full
19 contribution to meeting those needs.

20 Q Mr. Arnold, are you saying that the energy
21 from TMI-1 will be available to the dispatcher for commercial
22 purposes when TMI-1 is restarted and when it is at full power?

23 A I think as I would understand the question,
24 the way in which the energy from the unit is handled from an
25 accounting standpoint, that energy is available to the

1 dispatchers for commercial application, that is, service to
2 our customers, as soon as the unit is synchronized with the
3 grid and prior to going to full power.

4 There is really no other place to put the
5 power but into the grid and supply the customers with it.

6 Q Mr. Arnold, how long is the testing stage
7 for TMI-1?

8 A We anticipate the start-up testing program
9 will take two to four months.

10 Q And when will that commence?

11 A In the third quarter under the schedule that
12 we have and subject to the assumptions that I have identified
13 in my testimony.

14 Q So you are stating that the test energy
15 during the testing stage will be able to fully meet commercial
16 needs and you will be at full power during the testing stage,
17 during that two to three-month period which starts in the
18 third quarter?

19 A No, sir, I am not. I am saying that during
20 that two, three, perhaps four-month period in which we are
21 doing the start-up testing we will be operating at less than
22 full power until toward the end of that period. The energy
23 that is developed from the time we synchronize the generator
24 with the grid on up through the time that the generator is
25 loaded at the maximum capability of the unit as a whole, is

1 being delivered into the grid.

2 Q And that is in the fourth quarter that that
3 would take place?

4 A It will, we believe, occur partially in the
5 third quarter and partially in the fourth quarter, with the
6 full power output being at the latter part of that period in
7 the fourth quarter.

8 Q How is the test energy treated? Is it
9 capitalized? Is it expensed during the fourth quarter?

10 A I think Mr. Huff is probably going to be the
11 one to respond to that.

12 Q How do you expect the station to operate
13 once it reaches full power?

14 A We expect it to be a base loaded unit and
15 to be operating at the full capability of the unit on an hour-
16 to-hour basis, with the exception of forced or scheduled
17 shutdowns.

18 The dispatching cost element for the unit
19 is such that it is one of the least incremental cost units
20 available for the grid, consequently it invariably operates
21 to the maximum extent that it is currently capable of doing.

22 Q What do you expect the capacity factor to be
23 during the initial weeks of operation?

24 A Our experience with TMI-1 prior to the
25 accident is that outside of scheduled shutdown it experienced

1 about an 85, 86 percent capacity factor.

2 I believe for energy projection considerations
3 that is about the capacity factor we assume, but I would have
4 to check the records to verify that.

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6 (Transcript continues on next page.)
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1 Q And that is during the initial weeks of
2 operation that will be 85 days, 60 percent capacity factor?

3 A No. Perhaps I misunderstood your question.
4 That was for after we had completed the testing program and
5 it was available for dispatching in accordance with system
6 needs. During the testing program this capacity factor
7 depends upon the experience during the testing program
8 obviously, but I would expect it would be on the order over
9 the two to four months period of 30 percent to 60 percent.

10 Q So during that testing period it will be
11 30 percent to 60 percent, you say?

12 A Yes.

13 Q And then after it is fully synchronized and
14 your full power output, it will be at the 85 percent to
15 86 percent level?

16 A It is fully synchronized upon initial
17 synchronization, but other than that, I think your statement
18 is correct, that after we have completed the test program and
19 have released the unit to the dispatchers for dispatching in
20 accordance with system need, I would anticipate that we would
21 add about 85 percent capacity factor. I am just not sure if
22 that is what we used as the assumption for energy output in
23 our generation forecast.

24 Q Would it continue at that 85 percent to
25 86 percent level during the first full year of operation?

1 Would that be the average capacity factor during the first
2 full year of operation that you estimate?

3 A Based upon the experience that we had prior
4 to unit one's shutdown for refueling before the accident,
5 that was our experience. During the period of scheduled
6 operations. I would expect that that period would be more
7 like 10 months rather than 12 months before we would be
8 shutting down for subsequent refueling after completion of
9 the test program.

10 Q How long would that take, the subsequent
11 refueling?

12 A I think you may find that first refueling
13 will need to be somewhat longer than routine refuelings
14 because of some of the modifications that we would have to
15 complete during the first refueling. I think that right
16 now, 8 to 10 weeks refueling shutdown is reasonable. That
17 compares with what we would hope to do during the routine
18 shutdown of about six weeks.

19 Q What modification would take place during
20 the refueling?

21 A Let me see if I can sort of generalize on
22 the answer and meet your needs. If not, we can perhaps look
23 at them item by item, but as a result of the various reviews
24 and investigations done relative to the TMI-2 accident, a
25 number of corrective actions were identified by the Nuclear

1 Regulatory Commission as being required to improve the level
2 of safety of the operations of nuclear stations. Some of
3 those were identified as short-term items, some were identified
4 as long-term items.

5 The Nuclear Regulatory Commissions' order of
6 August 9, 1979 required us to complete all short-term items
7 prior to restart of the unit and to complete, or excuse me,
8 to make reasonable progress on the long-term items. The
9 number of long-term items has expanded since the August 9, 1979
10 order and the schedule for the original long-term items and
11 the items have been modified by the NRC over the last year or
12 so, so that the ones that we would be doing during the first
13 refueling after return to normal operations would be those
14 long-term items that we were not able to complete prior to
15 the restart of the unit.

16 Q Does that account for the longer shutdown
17 for the refueling for the first year? You say 6 to 8 weeks
18 for the first year you anticipate for shutdown while the
19 average is 6 weeks.

20 A I think I said 8 to 10, but it is anticipat-
21 ing that those modifications will impact on the schedule that
22 I am forecasting somewhat longer than normal shutdown. I do
23 not know of any other work in the way of maintenance, for
24 example, that we will have to do during that shutdown that
25 would tend to extend us beyond the 6 week period.

1 Q Do you expect any other reason to cause a
2 shutdown during the first year of operations besides the
3 refueling?

4 A I think the industry's experience, as well as
5 that unit experience, is that there are occasional unscheduled
6 shutdowns to accomplish maintenance or because of malfunction-
7 ing of systems that shut the unit down automatically and
8 which have to be corrected prior to returning the unit to
9 service. That is it is to account for those experiences that
10 I forecast or project in the 85 percent capacity factor during
11 the period of scheduled operation instead of 100 percent
12 capacity during that period, so I am in effect forecasting
13 about 15 percent reduction in unit output from its
14 theoretical capability from those types of experiences.

15 Q Could you tell me whether the refueling
16 will be done annually?

17 A Well, there may be some variations in that
18 scheduling. Our present plan is to conduct refuelings
19 basically on an annual basis.

20 Q When did you expect to ask the licensing
21 board to turn TMI-1 back on or have you already asked them
22 to turn it back on?

23 A The licensing board does not have the
24 authority to turn TMI back on or to give us permission to
25 start up. In the NRC's order of August 9, 1979, or else the

1 July 2, 1979 order--I don't recall for sure which one now--
2 specifically states that the Commission itself would make
3 that decision.

4 Q To turn it back on?

5 A Yes.

6 Q Or whether it should be turned back on?

7 A Whether or not TMI-1 will return to service.

8 Q The NRC makes the decision when it is
9 returned to service and whether or not it returns to service,
10 is that correct?

11 A Yes,

12 Q Okay. Have you requested of the NRC that
13 TMI-1 be returned to service?

14 A I think the most meaningful answer to that
15 is yes, and let me explain some of the history in terms of
16 background for that answer.

17 Shortly after the accident, we notified the
18 NRC in writing that TMI-1 was currently in cold shutdown
19 condition and we would not take it out of cold shutdown
20 without ample notification to the Nuclear Regulatory
21 Commission of our plans for doing that.

22 In June of 1979 we identified to the
23 Nuclear Regulatory Commission those corrective actions which
24 we intended to complete prior to the return of unit 1 to
25 service. Those included the items identified by the Commission

1 at that time as being required for our utility nuclear plant
2 and some items that we unilaterally decided that we would
3 complete prior to restart. That letter was in effect announcing
4 our intention to restart and was in effect superceded by the
5 July and August orders of the NRC.

6 Prior to the NRC issuing the August 9, 1979
7 order, we called for evidentiary hearings that are in progress
8 that I described. We presented--I am not sure of the right
9 technical term--but in effect briefs or petitions to the NRC
10 providing our arguments or opinions or judgements as to why
11 it was both unnecessary and inappropriate for evidentiary
12 hearings to be required to be completed before restart.

13 The Nuclear Regulatory Commission ordered
14 the contrary to those positions on our part and put us on the
15 path we are currently following. We have identified in letters
16 to the Nuclear Regulatory Commission since then the company's
17 concerns still with that process and we are currently in the
18 process of drafting another letter for reviewing the situation
19 as to whether or not another appeal might not be appropriate
20 to the Nuclear Regulatory Commission as to the hearing process
21 and whether or not that process can be shortened.

22 Q Am I correct in understanding that a letter
23 was drafted to the NRC requesting that TMI be taken out of
24 cold storage and permitted to be placed in service after
25 certain conditions were met, certain conditions which were

1 specified by the NRC, is that correct? Did you just testify
2 to that in the beginning of your answer?

3 A Yes.

4 Q Could we have a copy of that letter?

5 A Yes. It has been entered in other proceedings
6 before this Commission, but we would be happy to supply it.

7 Q Okay. Am I also correct in understanding,
8 I think you said prior to the July and August 1979 orders a
9 petition was filed with the NRC requesting that hearings not
10 take place and that TMI be permitted to be placed in service
11 because those conditions, which the NRC had dictated, had been
12 met. Did you also just testify to that?

13 A No, I didn't. What I said was that we
14 presented positions that argued for not requiring evidentiary
15 hearings prior to restart.

16 Q Okay.

17 A We argued that the options existed for less
18 formal proceedings which would not be as time consuming, and
19 options also existed for evidentiary hearings but not as a
20 prerequisite to the restart.

21 Q Was it in a letter to the NRC that you
22 specifically requested that TMI-1 be permitted to be
23 placed back in service because the conditions had been met
24 that the NRC dictated?

25 A Well, in the interest of being precise, the

1 June letter informed them of our intent to return the unit to
2 service. It presumed we had the authority to do so upon
3 fulfilling all our licensed conditions. Those licensed
4 conditions, in our opinion, included conformance with the
5 orders and bulletins issued at that time by the NRC to all
6 operating plants, as well as some items that we identified
7 ourselves as being important to the safety of operations.

8 Q Okay, so it was in the June 1979 letter to
9 the NRC that you specified or you stated your intent to
10 return TMI-1 to service having complied with the NRC's
11 conditions?

12 A Yes.

13 Q Have you any letter or correspondence
14 specifically requesting of the NRC that TMI-1 be placed back
15 in service or have you asked them for a date when TMI-1 can
16 be placed back in service?

17 A I guess as I understand the thrust of your
18 question, the answer would be no. However, the whole order
19 process and the hearing process have been the subject of
20 many discussions, correspondence between us and the Commission
21 and our desire to return the unit to service as soon as we can,
22 consistent with the safety of operations, has manifested it
23 to the Commission.

24 Q When did you actually expect at any time to
25 ask the NRC to have the TMI-1 returned to service?

1 A I think that my answer is still that in my
2 judgment, we have a continuous request before the NRC to do
3 so and we are reviewing whether or not there are additional
4 arguments that can be advanced for changing the requirements
5 imposed by the NRC prior to restart based upon the experience
6 of everyone over the last 18 months.

7 Q Okay, but there has been no formal request
8 of the NRC that TMI-1 be turned back on? I mean it is the
9 understanding between the parties, but there has been no
10 formal request?

11 A And I consider that to be a formal request.

12 Q The implicit understanding?

13 A It is quite explicit in the documentation.

14 Q If it were not for the hearings apparently
15 in progress which you set forth in your testimony earlier,
16 how long would you expect it to take before TMI-1 could be
17 placed back in service?

18 A From where we are right now, with the work
19 we have in progress, which one has to understand we have the
20 plant to some extent taken apart as we put into place the
21 modifications, I would estimate that we could have the plant
22 back on line in about 4 months if the requirements that we
23 had to fulfill were the same as the requirements that other
24 plants have to fulfill.

25 MR. SUFFIAN: Thank you, Mr. Arnold. Staff

1 has no further cross-examination.

2 THE ADMINISTRATIVE LAW JUDGE: Consumer
3 Advocate?

4 MR. BARASCH: Thank you, Your Honor.

5 BY MR. BARASCH:

6 Q Good morning, Mr. Arnold.

7 A Good morning, sir.

8 Q This may be a little disjointed. I am going
9 to try not to have it disjointed. Now in Phase II of the
10 litigation that we were conducting in the earlier part of this
11 year that led to the decision in May of 1980, you testified
12 in that regarding the possibility of TMI-1's restart, didn't
13 you, sir?

14 A Yes, sir.

15 Q And to my memory, and correct me if I am
16 wrong, in those proceedings you basically testified that
17 GPU expected the NRC to conclude their deliberations such
18 that you would be able to bring the plant back January 1, 1981.
19 is that correct?

20 A Well, the record will speak for itself on
21 that. The schedule has been modified through the last year
22 fairly substantially.

23 Q I understand that, but I think at the time
24 we were presenting testimony for that proceedings, you
25 referred to the beginning of 1981 as your forecast at the

1 time and even more specifically, as I recall the proceedings,
2 and I am not really asking you to tell me what the record
3 says, but tell me what your understanding of the problem was.

4 As we move back in time a year or ten
5 months, my memory is that initially the company, through you,
6 was indicating a return towards the end of 1980 and that by
7 the time that we got to the end of those proceedings, the
8 company was saying, admitting the delays in the hearing
9 process, that we would expect to return to power generation
10 the middle of 1981, is that basically a correct description
11 of your testimony?

12 A Yes, I think that is accurate.

13 Q Now in May of 1980, this Commission removed
14 TMI-1 from rate base, correct?

15 A Yes, sir.

16 Q And at that time the plant was not
17 generating any power, is that correct?

18 A Yes, sir.

19 Q And to the best of what you understand, the
20 Commission was of the opinion that based upon the evidence
21 before them that the return of that plant was neither
22 imminent in terms of time nor certain in terms of outcome,
23 is that correct, sir?

24 A I don't think I would want to offer a
25 judgment as to the basis for the Commission's decision and

1 what was contained in the order.

2 Q Have you read that order, sir?

3 A Yes, I have.

4 Q Are you familiar with the words or concepts
5 that I just described to you?

6 A It has been six months or so since I read the
7 order, but I don't recall anything inconsistent with what you
8 are saying.

9 Q At the present time TMI-1 isn't generating
10 any kilowatt hours of electricity, is it?

11 A No, sir.

12 Q And under the trial of this case, we can
13 expect the Commission will be making a decision in this case
14 no later than April of 1981, is that correct, sir?

15 Under the nine month filing requirement, if
16 we went the full length, you would have the final decision in
17 April of 1981?

18 A Yes, sir. I would hope it would be advanced
19 from that somewhat.

20 Q But at the very least, you are guaranteed
21 you will get the full amount of your rate relief on the
22 Commission decision by the end of April, 1981?

23 A That is my understanding of the procedural
24 limitations.

25 Q Okay. Now I think you just testified here

1 that you expect the company to reach full power generation in
2 the fourth quarter of 1981, is that correct, sir?

3 A Yes.

4 Q And is it fair to say, now you are talking in
5 terms of quarters, and I am talking in terms of months, but
6 we are really talking about a period that at a minimum would
7 be six to eight months after the latest possible data decision
8 could be made in this case.

9 A For a full power operation that is probably
10 correct.

11 Q And a couple months earlier for the beginning
12 of the test generation?

13 A Yes.

14 Q Now, other than the passage of the six some
15 odd months that have gone by between the Commission's decision
16 in May and appearance here today, you have no more definite
17 information in the form of an order or a letter or any other
18 directive from the NRC that you, in fact, are going to be
19 permitted to start that plant, do you?

20 A I don't agree with that, no. Well, perhaps
21 we don't have the examples you give, but I think we have
22 significantly more information now than we had six or eight
23 months ago. We have, first of all, the scope of the hearings
24 defined. We have the issues identified in those hearings or
25 that will be the subject of those hearings and I think we are

1 now in the position where we can state with a very high degree
2 of confidence that those issues that are currently the subject
3 of this hearing, the Atomic Safety and Licensing Board
4 hearings, with the exception of financial capability are
5 within the control of the company to take those actions
6 identified as being necessary to satisfy whatever concerns
7 come out of the hearings.

8 Q Now can I stop you there for a second? You
9 mentioned the financial capabilities. Isn't it also true you
10 have a question mark over psychological stress area as well?

11 A We have a question mark over that as to
12 whether the NRC is going to permit it to be the subject of the
13 hearings.

14 Q Well if we assume for the sake of argument
15 that they made that determination, you would not characterize
16 psychological stress issues as being one the company has much
17 control over, would you?

18 A I think, as I read the Atomic Safety and
19 Licensing Board's recommendation to the Commission and the
20 argument that is presented in that recommendation for
21 admitting psychological stress as an issue in the hearing, my
22 answer would be yes, because as I read that recommendation,
23 what the ASLB is saying is that while one cannot expect to
24 be able to quantify psychological stress to the extent a
25 judgment could be made that would make yet a "go-no go" issue,

1 the board could take testimony and could make judgments as to
2 these actions which could be taken which would reduce the
3 level of stress that would constructively address that issue
4 and I think that many of those things would fall to the
5 company to accomplish. There may be some that would fall to
6 the state or fall to the local government or fall to the
7 federal government which obviously wouldn't have any control,
8 but I think the major jeopardy to the process, the major
9 vulnerability that we have with regard to psychological
10 stress is the possibility of it extending the hearing
11 schedule, not determining the final outcome.

12 Q I don't really want to get into that aspect
13 of it, but just sticking with the question of what concrete
14 directives, orders, letters do you have from the Commission
15 that would indicate that the outcome of the proceeding is
16 any more clear now, I am speaking to outcome not timing, than
17 it was back in May of this year.

18 A Well, as I understood your initial question,
19 it had to do with the information that influenced the
20 judgments on that outcome.

21 Q Perhaps we misunderstood each other. If I
22 could take you back, I was trying to ask you initially what,
23 I said information, but I guess what I meant to say was what
24 communications in any substantive fashion have you had from
25 the tryers of the fact in this case, the people who will make

1 this determination, that would give you reason to believe that
2 the ultimate outcome is any more certain now in favor of a
3 favorable decision from the NRC as to restart than it was in
4 April of this year when you were also in the midst of trying to
5 get the hearing process off the ground?

6 A Well, I think the hearing process, setting up
7 the Board, the assignment to the Board, makes it unrealistic
8 to expect the Nuclear Regulatory Commission, regardless of
9 their judgments on it, would be issuing any such document.

10 No, we do not have any subsequent documents
11 from the Commission itself that would address what decision
12 they are going to make based upon the the ASLB's record and
13 recommendations.

14 I might say, though, in terms of having it
15 on a relative basis, relative to six or eight months ago, it
16 was my judgment even then that the outcome on the restart of
17 unit one would be in the affirmative because the whole history
18 of the industry is that two or three exceptions which had very
19 special circumstances associated with them was that the
20 corrections necessary or the additional action necessary to
21 be taken to satisfy the Commission on safety of operation are
22 capable of being done. There is no fatal flaws in the issues
23 that were raised by the NRC's orders that I am aware of with
24 the possible exception of financial capability.

25 If I could add perhaps just one additional.

1 comment to that, while the decision is made by the Commission
2 and the Atomic Safety and Licensing Board is required to
3 develop the record and make the recommendation, the NRC staff
4 is required to evaluate the issues raised and provide
5 testimony as to the circumstances relative to those issues,
6 the judgment of the Commission as to whether or not those
7 issues have been adequately addressed by the company for the
8 ASLB hearings. They issue a safety evaluation report and
9 while they have some open items/^{yet}in that process, the staff
10 has issued a safety evaluation report which affirms the
11 progress that the company is making on the items and does not
12 identify any issues which they feel would prohibit the ability
13 to restart the unit.

14 Q Mr. Arnold, earlier this morning I believe
15 you made a statement about a series of assumptions that lie
16 behind the conclusions that you have given us about restart
17 dates and I would like to discuss some of those assumptions
18 with you. This is going from my notes which obviously may not
19 be precisely what you said.

20 As I understand it, it is your testimony that
21 one of your basic assumptions in terms of timing is that the
22 ASLB hearings should not exceed a period of time of five or
23 six months, is that correct?

24 A I specifically did state that the assumption
25 was, that the assumption one was that the ASLB hearing time

1 will not exceed six months.

2 Q Now they start in mid-October of this year.
3 Now I believe that is what you testified so I am going with
4 your assumptions building it up that would mean that you
5 would expect hearing to come to an end by mid-April of 1981,
6 is that correct?

7 A Yes, sir.

8 Q Now then how much time have you allotted to
9 your schedule between the conclusion of the hearings by the
10 ASLB and the issuance of an ASLB order?

11 A The ASLB will not be issuing an order. The
12 ASLB issues a decision or recommendation.

13 Q Fine. The schedule provides approximately
14 three months with that same time period which was identified
15 in the target schedule published by the Nuclear Regulatory
16 Commission with their August 9, 1979 order, so that would
17 mean the issue would be framed in such a fashion to be
18 presented to the NRC for ultimate determination by July 15,
19 1981?

20 A Approximately, yes.

21 Q And then if I would remember correctly, you
22 are assuming a period of about 30 days between the time the
23 NRC has the recommendations of the ASLB in front of it and
24 the issuance of an order, is that correct?

25 A I think we allowed actually five weeks, 35

1 days.

2 Q Now at the present time would you describe
3 the hearings as being on schedule, that is on the revised
4 schedule?

5 A Yes, sir. The ASLB did not identify the
6 specific date as far as I can recall for dealing with specific
7 contingents that they scheduled in your initial parts of the
8 hearing. They scheduled the sequence of them basically but I
9 think the progress we are making on those issues is consistent
10 with the six month time period we have allowed in this
11 schedule.

12 Q Wasn't GPU supposed to file some testimony
13 regarding its financial liability in these proceedings?
14 Isn't that one of the matters that the company was supposed
15 to present the evidence on?

16 A In the Atomic Safety and Licensing Board
17 proceedings?

18 Q Yes, sir.

19 A Yes.

20 Q And wasn't that testimony initially due about
21 two weeks ago and I will ask the second question, isn't it
22 true to this date that the company has not presented the
23 testimony on financial liability?

24 A Mr. Barasch, I think there is some
25 misunderstanding, to the best of my knowledge, and as confirmed

1 by my licensing engineer that is supporting the ASLB hearing
 2 effort, we have not been given a schedule date by the ASLB
 3 for submittal of our testimony on financial qualifications.
 4 We have been providing to the NRC staff fairly frequently
 5 financial information update on previous information.
 6 Financial qualification issue is one of the last ones in the
 7 sequence schedule for the hearings and none of the parties,
 8 to my knowledge, have been asked yet to provide their
 9 testimony on it.

(Testimony continued on next page.)

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1 Q In other words, to the best of your knowledge
2 you are not aware of the fact that Mr. Graham and Mr. Hafer
3 were supposed to be appearing and present evidence on the
4 NRC question of financial viability a week or two ago and
5 that in fact because testimony was not prepared at that time
6 that aspect of the proceeding was delayed?

7 A I am very confident that the ASLB did not
8 have those two gentlemen scheduled for witnesses.

9 Q And that they were not expected to present
10 testimony to the Commission a week or two ago?

11 A They were not expected to present testimony
12 to the Atomic Safety and Licensing Board in any of the
13 hearing --

14 Q I am not talking about an appearance on the
15 stand. I am talking about the submission of exhibits or
16 testimony in advance of appearance on the stand.

17 A Yes, and that is the way I initially under-
18 stood the question and my answer is the same for that, that
19 they had not been scheduled by the Atomic Safety and Licensing
20 Board to provide their written testimony on those issues.

21 Mr. Barasch, I thought maybe I could find
22 some information that might help clear up what the misunder-
23 standing is.

24 Q I will pursue it a little further and see
25 where it leads. Was there any other information that Mr.

1 Graham and Mr. Hafer, that basically the financial people
2 were supposed to be providing to the Commission a week or
3 two ago that in fact was never provided due to inability to
4 perform the work?

5 A Again, my understanding is that you are
6 talking about the Board --

7 Q That is right.

8 A Not the Commission.

9 Q Well, was there anything that was supposed to
10 be provided to the NRC? I am assuming that everything goes
11 to the ASLB before it goes to the NRC and maybe that is an
12 erroneous assumption.

13 A That is correct. The Board is the one that
14 develops the record and for the hearing issues the information
15 is provided to the Board. I am not aware of any information
16 requested or submitted by the company to provide on its own
17 initiative to the Commission.

18 We are obligated to provide information and
19 have been providing information to the Commission staff.

20 Q Is this in the nature of discovery?

21 A I guess it is analogous. It is not quite
22 the same process as discovery proceedings, but we are
23 obligated and are interacting with Commission staff to
24 provide them with the financial information that let's them
25 do their evaluation and develop their testimony on financial

1 capability.

2 I am not aware of any commitments to the
3 Commission staff which we have failed to fulfill in either
4 timing or content.

5 Q Perhaps I am interested in a different
6 subject. I assume you must have overall responsibility
7 within GPU for the positioning of the company in the NRC
8 proceedings -- obviously not as a lawyer -- but as the person
9 in charge of the presentation of GPU's case.

10 A Yes.

11 Q Are you aware of any internal deadlines for
12 the filing of drafts of testimony or the like within the
13 company which Mr. Hafer and Mr. Graham have passed deadlines
14 upon?

15 A No, I am not, but I might well not be aware
16 if that had happened.

17 Q I wonder on that last question perhaps you
18 don't have the information but maybe your assistant does and
19 you can consult with him.

20 THE ADMINISTRATIVE LAW JUDGE: Will you be
21 very long, Mr. Barasch?

22 MR. BARASCH: I have got quite a bit more,
23 Your Honor.

24 THE ADMINISTRATIVE LAW JUDGE: Let's take a
25 ten-minute recess.

1 (Short recess.)

2 ROBERT C. ARNOLD, resumed.

3 THE ADMINISTRATIVE LAW JUDGE: You may
4 proceed with your increased speaking volume, Mr. Barasch.

5 MR. BARASCH: Thank you, Your Honor.

6 BY MR. BARASCH:

7 Q Mr. Arnold, another one of the assumptions
8 that were set forth by you this morning as I paraphrase it
9 from my notes was that the NRC would promptly decide whether
10 psychological stress was going to be considered as an issue
11 in the proceedings. Do you recall that, sir?

12 A Yes, sir.

13 Q Now maybe you could enlighten me. This is
14 a matter that was determined by the ASLB and then was
15 certified to the NRC for a final decision as to whether or
16 not the issue should be included? How is this issue before
17 the NRC today?

18 A In the NRC's August 9 order --

19 Q Mr. Arnold, before you answer the question,
20 I see you have a document in front of you. Is that document
21 the August 9th order or is that document some other --

22 A The document is one which has a copy of
23 the August 9 order and I am reading directly from the August
24 9 order.

25 Q Thanks.

1 A "While real and substantial concern attaches
2 to issues such as psychological stress and others arising
3 from the continuing impact of aspects of the Three Mile Island
4 accident unrelated directly to exposure to radiation on the
5 part of the citizens living near the plant, the Commission
6 has not determined whether such issues can legally be
7 relevant to this proceeding. Any party wishing to raise
8 such subjects as contentions or as aspects of separate
9 contentions should brief the Atomic Energy Act and National
10 Environmental Policy Act issues he believes appropriate to
11 the Board as part of the contention acceptance process set
12 out in the Commission's regulations. The Board should then
13 certify such issues to the Commission for a final decision
14 prior to the issuance of its prehearing conference order
15 pursuant to 10 CFR 2.752(C), either with or without its
16 recommendation on such issue as it deems appropriate under
17 the circumstances."

18 Q So we have been through the contention
19 process now, correct?

20 A Yes.

21 Q And in fact the ASLE did submit that
22 question up to the NRC for determination?

23 A Yes.

24 Q What date was that done on, sir?

25 A I don't have the exact date with me, Mr.

1 Barasch. My recollection is that was about May or June of
2 this year.

3 Q And that recommendation by the ASLB, I think
4 we kind of got to this obliquely a minute ago, was that the
5 issue in fact should be part of the proceeding, isn't that
6 correct, sir?

7 A Yes.

8 Q It did make an affirmative recommendation
9 to the NRC not merely certifying the question up without
10 expressing an opinion?

11 A Yes, sir, that is correct.

12 Q So it was probably May or June, as you say.
13 So a period of about five or six months has gone by since
14 that issue was certified to the Commission for a decision?

15 A To the best of my recollection, yes, sir.
16 It has been a significant period of time.

17 Q Now in view of that significant period of
18 time, what is the basis for your opinion and/or assumption
19 that the NRC is going to promptly dispose of that question
20 of psychological stress so that it will not impact the hear-
21 ing schedule? Six months have already gone by and there
22 hasn't been any action, right?

23 A I don't know that I would agree that there
24 has been no action. Six months or so have passed since the
25 certification by the Board to the NRC of that issue.

1 We have to make some assumptions as to how
2 those regulatory processes will proceed both as to outcome
3 and as to timing, and we have identified that as a major
4 assumption underlying our schedule, that there will be a
5 decision in the very near future by the NRC on that issue,
6 and if that decision is to admit the issue into contention
7 in the hearings, that such admission will not lead to an
8 extension of the hearings beyond the six-month duration.

9 Q I would like to pursue that particular
10 matter with you a couple steps. As an observer of the
11 proceedings before the NRC, what conclusions, if any, have
12 you drawn from the fact that the Commission so far has taken
13 six months to determine this issue? Do you have any
14 information at all as to why the process has taken that long?

15 Let me continue, as a kind of a multi-part
16 question, have you received any indication that the matter
17 has ever come up to the Commission for determination and
18 they were unable to reach a decision? Is it that they have
19 not issued any staff reports to the full Commission? Do you
20 have any idea why it is it has taken them six months to make
21 a determination on that matter?

22 A Other than the information provided to the
23 Commission by the Atomic Safety and Licensing Board which is
24 part of the public record we do not get documents that may
25 be being utilized by the NRC in their consideration of this.

1 There has been on the agenda for a closed
2 meeting of the Commission this subject on three occasions
3 that we are aware of. As to what the discussions were that
4 took place during those meetings, we do not have information.

5 My own judgment is that the implication of
6 it taking this long to decide is that the most likely outcome
7 is that it will be denied.

8 Q But as you just said, your speculation as to
9 the passage of time and what that means as to the ultimate
10 outcome, is not based on any substantive knowledge at all
11 of what is going on in that room, is that correct, sir?

12 A Yes, that is correct. But, on the other
13 hand, I think that the Commission did indicate in their
14 original order very clearly that they wanted the issues
15 presented before the Board addressed in an aggressive and
16 timely manner.

17 They identified a schedule that they would
18 like the Board to attempt to meet which is much shorter than
19 the actual experience.

20 So I think the Commission's attitude toward
21 timely resolution of these issues is quite well documented
22 in the public record.

23 Q Do you know when the approximately three
24 occasions were that the NRC had this matter on their agenda
25 in a closed-door session?

1 A I don't know the specific dates. The
2 recollection of my staff member is that it has been within
3 the last two or three months.

4 Q The NRC at the present time has four
5 commissioners, is that correct, sir?

6 A Yes.

7 Q And there is a fifth commissioner whose
8 appointment had been made by the President of the United
9 States and was pending before the Senate before the election,
10 is that correct?

11 A Yes, sir.

12 Q Now when you described that assumption in
13 terms of a prompt decision, I assume that you are talking
14 prospectively. You are saying promptly in terms of hopefully
15 soon after today the Commission will make a decision? It is
16 not because you would describe the six-month delay as being
17 prompt?

18 A Your presumption is correct.

19 Q Now at what point, looking ahead from today,
20 would an NRC decision no longer be prompt, in your opinion,
21 in terms of what this assumption presumes?

22 A If it is longer than one month from now that
23 the decision comes from the NRC and the decision is to admit
24 that issue into contention, then I think that it would
25 jeopardize completing hearings on that issue by mid-April

1 of 1981.

2 Q Thank you very much. I believe you also
3 indicated that another assumption was that the TMI adjustments
4 retrofits, whatever might be required by the NRC at the end
5 of this proceeding, it is your assumption that they will not
6 be significantly different from the items already identified
7 by the NRC in their letter of August 9, 1979, is that
8 correct? That was one of your premises, right?

9 A The premise applies to the short-term items
10 as they are termed in the August 9th order.

11 Q The ones that would be necessary prior to
12 restart?

13 A Yes, sir.

14 Q Is it also implicit in your assumptions that
15 TMI-1 will not be required to meet any short-term requirements
16 beyond those being expected of other nuclear plants in the
17 United States?

18 A To the best of my knowledge, all of the
19 corrections, modifications, upgradings that are identified
20 as short-term items are required of everyone and the full
21 scope of them, to the extent that they are applicable to a
22 particular facility, is required.

23 Q I understand that, but looking at the question
24 the other way around, is it also implicit in your assumptions
25 that any requirements placed upon GPU at the end of the NRC

1 proceedings would not result in further pre-start adjustments,
2 if you will, beyond those being required of every other nuclear
3 facility in the United States, or should I say every similarly
4 engineered nuclear facility in the United States?

5 A As I understand the question, Mr. Barasch, I
6 think that is the assumption, and I think it is the issue that
7 I was addressing the second part of my Assumption No. 3 in
8 which I stated that TMI-1 will not be required to meet longer
9 term requirements prior to restart, which at the time of re-
10 start have not been required for other operating nuclear power
11 plants.

12 Q It was that part of your statement that I was
13 not sure I heard. Now you have also assumed that any short-
14 term modifications, changes in your operations that would be
15 required would be completed by the time that the NRC comes
16 up with a hypothetically favorable decision on restart, is
17 that correct, sir?

18 A That is correct. The one qualification I
19 would add to that is that some of the short-term issues have
20 over the intervening time been given additional clarification
21 or additional specificity, which has made the schedule for
22 fulfilling those short-term items longer for everyone.

23 I think that all of the short-term items
24 as they are currently understood to be imposed, we anticipate
25 would be complete by the time a decision was made or a

1 recommendation was made by the Atomic Safety and Licensing
2 Board and would be able to be so certified by the Director
3 of Nuclear Reactor Regulation.

4 Q And that no further restrictions or requests
5 for modifications would come out of or appear as a condition
6 in a final NRC order?

7 A Yes.

8 Q That includes, I assume, an assumption that
9 the NRC, when and if it were to order you that you could
10 begin to bring the plant back, would not be placing you under
11 any operating restrictions such as saying, okay, you are
12 going to be permitted to return TMI-1 to service but that
13 for a period of -- this is totally hypothetical -- for a
14 period of several years we don't want you operating that
15 plant beyond 70 percent of its rated capacity, something
16 like that?

17 A That is correct. The only assumption as to
18 operating restrictions that would even relate to that question
19 I think is that, as has been done with plants recently issued
20 operating licenses, the initial authorization to begin
21 operation has usually had, for example, a 5 percent power
22 level limitation pending review of the results of that
23 operation up until that point by the Director of Nuclear
24 Reactor Regulation and his approval of proceeding beyond
25 5 percent level of operation.

1 I think we may very well -- in fact I think
2 it is going to be appropriate in terms of concerns in the
3 communities around Three Mile Island that we have that sort
4 of review of the experience during the start-up program by
5 the Nuclear Regulatory Commission, and that we pre-establish
6 certain power levels and milestones during the restart tests
7 at which additional operation would not occur until the NRC
8 had independently reviewed and agreed that we were ready to
9 proceed beyond that point.

10 Q And you fully expect that the NRC would
11 probably require some sort of series of triggers, safety
12 triggers along the line?

13 A Not necessarily. It has only been done for
14 the 5 percent level previously, to my knowledge, because of
15 a general uncertainty. There have sometimes been occasions
16 where there was a specific issue that needed to be resolved
17 before going above some power level that was determined by
18 the issue.

19 But the approach that I am describing has
20 not been the practice of the NRC and we are proposing it to
21 them.

22 Q We kind of went through a very complicated
23 question and answer here. I think put simply, you are
24 operating under the assumption that at the end of the test-
25 ing program the NRC would basically have given you permission

1 to operate this plant at its full rated capacity and there
2 would not be any forward-looking restriction upon the amount
3 of generation that you would be permitted to produce at that
4 plant?

5 A That is correct, Mr. Barasch.

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7 (Transcript continues on next page.)
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1 Q Now you were down for refueling from this
2 accident and in your opinion, and it is not your idle
3 opinion, based on the reviews of the numerous documents and
4 correspondence with the NRC, do you have any reason to believe
5 that the NRC ordered TMI-1 shutdown because from an engineering
6 point of view that plant was unable to operate or to continue
7 to be shut down?

8 A Could I have the question read back or
9 rephrased?

10 Q I will rephrase it. Based upon your
11 conversations with the NRC and communication with the NRC,
12 many of which I believe are in this record or previous
13 records in this proceeding, do you have any indication or
14 reason to believe that the reason why TMI-1 was kept in
15 shutdown position after the accident was due to concern about
16 the mechanical or engineering safety of that plant or in the
17 alternative is it much more related to the fact that GPU was
18 operating another nuclear facility a couple hundred yards away
19 that had a very serious nuclear accident?

20 A I would like to again quote from the
21 August 9th order since I think that is the best source for
22 the information on the issue that you are addressing.

23 "As a result of a preliminary review of the
24 Three Mile Island Unit number 2 accident chronology, the NRC
25 staff initially identified several human errors that had

1 occurred in the accident and contributed significantly to its
2 severity. All holders of operating licenses, except
3 Metropolitan Edison Company, whose plants were already shut
4 down were subsequently instructed to take a number of
5 immediate actions to avoid repetition of error in accordance
6 with bulletins issued by the Commission's Office of Inspection
7 and Enforcement.

8 In addition, the NRC staff began an
9 immediate reevaluation of the designed features of the
10 B & W reactor to determine whether additional safety corrections
11 or improvements were necessary with respect to these reactors.
12 This evaluation involved numerous meetings with B & W and
13 certain of the effected licensees. The evaluation identified
14 design features, as discussed above, which indicated the
15 B & W designed reactors are unusually sensitive to certain
16 off normal transient conditions originating in the secondary
17 system.

18 As a result, an additional bulletin was
19 issued by I.E."--parenthetically, the office of Enforcement
20 and Inspection--"which instructed holders of operating
21 licenses for B & W designed reactors to take further action
22 including immediate changes to decrease the reactor high
23 pressure trip point and increase the pressurizer pilot
24 operated relief valve setting."

25 Also, as a result of this evaluation, the

1 NRC staff identified certain other safety concerns and it goes
2 on to refer to those.

3 Dropping down a little further in the order
4 it says: "In addition to the items identified for other
5 B & W reactors, the unique circumstances at TMI require that
6 additional safety concerns identified by the NRC staff be
7 resolved prior to restart."

8 They then go on to list some four items which
9 are generalizations of the specific ones that they then make
10 the subject of the specific order, so my conclusion is that
11 it was more related to the company being the one that had the
12 accident and that the existence of the damaged plant on the
13 same site were the reasons for treating us uniquely, that the
14 technical issues raised by the accident were not sufficient
15 to require the unit to remain shutdown.

16 Q If I could ask Counsel, is that already an
17 exhibit in this case?

18 MR. STRAHN: I don't believe it is. We can
19 make a copy of it available if you would like to.

20 THE WITNESS: We could certainly provide the
21 reference to its existence in other cases.

22 MR. BARASCH: Well, if we did that, perhaps
23 we would incorporate that specific exhibit from the previous
24 proceedings, which I think would be Phase II.

25 THE ADMINISTRATIVE LAW JUDGE: If you want it

1 as an exhibit in this case, you better have it and mark it and
2 either the company or you can mark it as an exhibit. I don't
3 want to be put in a position of having to dig out some other
4 cases that I was not involved in.

5 MR. BARASCH: If you could, provide that as
6 a data request in this proceeding.

7 BY MR. BARASCH:

8 Q Mr. Arnold, charging the subject a little bit,
9 I gather you are aware of the fact that Penelec and Met-Ed
10 have made filings for 1981 energy cost rate before this
11 commission. Are you aware of those filings, sir?

12 A I am aware of the filings having been made,
13 but I am not very familiar with the back-up information that
14 supports them.

15 Q Did you have any discussions with those
16 persons at CPU, Met-Ed or Penelec that were responsible for
17 making that filing relative to that filing before it was
18 made?

19 MR. STRAHN: Your Honor, this is getting
20 outside of the scope of Mr. Arnold's direct testimony.

21 MR. BARASCH: I think it isn't and I think we
22 will get there in about one more question.

23 THE ADMINISTRATIVE LAW JUDGE: We will over-
24 rule the objection for the time being and see where we are
25 going.

1 THE WITNESS: I think the extent of my
2 interaction on that is that my staff was responsible for
3 developing the forecast of energy output and timing of that
4 energy output from Three Mile Island Unit Number 1 which I
5 would anticipate was part of the basis for the filing that
6 was made.

7 BY MR. BARASCH:

8 Q In developing the millage charge that was
9 placed in the file?

10 A Yes.

11 Q Do you know what your staff gave to the
12 people, I believe it would be Mr. Carter who ultimately made
13 that decision, as far as a date for the beginning of the
14 generation at TMI?

15 Mr. Arnold, if you don't know the answer,
16 then an answer that you don't know is just fine with me.

17 A I don't have that data with me.

18 Q Are you aware of the fact that Metropolitan
19 Edison and Penelec's ECR filings are premised on the fact
20 that TMI-1 will not be producing any electricity during 1981
21 and that, in fact, the millage rates assume that TMI-1 does
22 not produce any power for Met-Ed or Penelec until 1982?

23 A No, I am not aware of that specific feature
24 of it.

25 Q And if that were the case, would you agree

1 that that is inconsistent with the testimony that you are
2 giving here as far as what you believe to be the time when
3 this plant will begin to produce any power?

4 MR. STRAHN: Well, Your Honor, I don't know
5 that is a proper question.

6 THE ADMINISTRATIVE LAW JUDGE: Yes, that is
7 argumentative. You can reach that conclusion.

8 MR. BARASCH: I could perhaps restate the
9 question.

10 THE ADMINISTRATIVE LAW JUDGE: You may restate
11 it if you like.

12 BY MR. BARASCH:

13 Q You are testifying in the third and fourth
14 quarter of this year TMI-1 will be producing power, a net
15 flow of power out of that plant, aren't you sir?

16 A Yes. That is the schedule we projected for
17 test start-up energy to be available during the latter part of
18 the third quarter and the end of the fourth quarter.

19 Q And is it fair to say that every kilowatt
20 hour of electricity that is generated from TMI that flows
21 into your system will reduce the amount of power the company
22 will have to purchase from elsewhere?

23 A I think that is the effect of generation of
24 TMI, yes.

25 Q I would like to turn your attention,

1 Mr. Arnold, to another area of concern regarding TMI-2.

2 What is your understanding at the present time of the present
3 estimated clean-up and restoration costs at TMI-2?

4 MR. STRAHN: Your Honor, this is outside the
5 scope of his direct testimony. I object.

6 THE ADMINISTRATIVE LAW JUDGE: Will you
7 respond to that objection?

8 MR. BARASCH: Well, I just asked a simple
9 question. If Mr. Arnold is not going to be the witness for
10 the company to testify to matters relating to TMI-2, I would
11 just like to know who is. I will put the question to the
12 appropriate witness.

13 MR. OGDEN: Your Honor, what is the purpose
14 of getting into TMI-2 in this proceeding anyway? It is
15 irrelevant.

16 BY MR. BARASCH:

17 If I could ask, Your Honor, is it the
18 company's contention that TMI-2 has nothing to do with the
19 base rate case in this case?

20 THE ADMINISTRATIVE LAW JUDGE: You can ask
21 Counsel.

22 MR. STRAHN: There is no claim being made
23 for TMI-2 in rate base.

24 THE ADMINISTRATIVE LAW JUDGE: I think it
25 not relevant in the context of this rate proceeding. I don't

1 believe the company is making any claim for any--

2 MR. BARASCH: Your Honor, if I could. I
3 believe there are several issues in this proceeding that
4 relate to TMI-2. The company is making a series of
5 assumptions about the capital needs and the needs to go into
6 the capital market and I assume that the need to address TMI
7 clean-up costs is going to have something to do with the
8 company's need for further financing in the near future as
9 well as subsequent rate cases we may see coming down the pike.

10 THE ADMINISTRATIVE LAW JUDGE: Couldn't the
11 cost of financing the clean-up of TMI-2 have an effect on the
12 ^{to} costs/support that financing in this rate case?

13 MR. STRAHN: Well, I would think that that
14 might be the case, Your Honor, yes.

15 THE ADMINISTRATIVE LAW JUDGE: In that event,
16 we will overrrule the objection.

17 BY MR. BARASCH:

18 Q The question simply is the latest estimate
19 of the clean-up and restoration costs of TMI-2, the
20 that the company is now operating on, something in the
21 vicinity of \$900,000,000 in the fall, I am not sure.

22 MR. STRAHN: I think in fairness to
23 Mr. Arnold, the intention of having him here today was to
24 testify on TMI-1 restart proceedings.

25 THE ADMINISTRATIVE LAW JUDGE: If he can't

1 answer it now, he can submit the information later.

2 MR. BARASCH: I will take all these questions
3 and answers as data requests if the company wants to do it
4 that way. I just didn't know at what other point we would
5 be seeing Mr. Arnold.

6 THE WITNESS: I would like to summarize or
7 generalize perhaps is a better word, on our costing schedule
8 estimates on Unit 2 and if that does not provide sufficient
9 information, then we can provide a more detailed response
10 later.

11 From about November of 1979 through June of
12 1980 we had a very intense effort to identify the schedule
13 for the sequence of events that had to be carried out to
14 accomplish the clean-up of the station and some effort,
15 although not nearly as detailed as to what would be involved
16 in rebuilding the station for return to service, that resulted
17 in an estimate for the clean-up cost from the beginning of
18 1980 through the decontamination of the plant of \$500 million
19 in 1980 dollars.

20 It forecast a cost to rebuild the station to
21 its original designed configuration including the provision
22 for a new core of \$260 million again in 1980 dollars. If one
23 adds to that the approximately \$95 million that was spent in
24 1979 subsequent to the accident, the total is about \$850 million
25 of those three elements. The \$850 million does not include

1 approximately \$15 million per year of equivalent normal
2 O and M costs.

3 In responding to the NRC's draft programmatic
4 environmental impact statement last week, we identified or
5 estimated that the difference in the progress of work to date
6 from what was contained in the base schedule that last
7 summer's cost estimate utilized would increase the cost of
8 the clean-up. Excuse me, that component plus additional
9 extensions we expected to incur because of the rate in which
10 the regulatory interfaces were taking place and the
11 presumption of a limitation on the funds that would be
12 available to the company with which to conduct the clean-up
13 would altogether lead to the extension of the schedule of
14 2 to 3 years and an increase in the cost in 1980 dollars of
15 about \$150 million, so if we added \$150 million to the
16 \$500 million of 1980 to completion of clean-up, that is
17 \$650 million and then if we add to that the 1979 expenses
18 that is approximately \$750 million in 1980 dollars. We
19 provided just for a kind of reference how we would see that
20 total growing from the effects of inflation by assuming a
21 10 percent per year inflation rate and that would take the
22 \$750 million to about \$1 billion that only covered the
23 clean-up costs. We did not make a revaluation of the cost
24 of rebuild which was \$260 million in 1980 dollars. That would
25 be over and above the approximately \$1 billion and real time

1 dollar flow for clean-up.

2 Q And there was another 2 to 3 years of delay
3 that would at least add as a consideration another 2 to 3
4 years of \$15 million per year for O and M for TMI?

5 A Yes.

6 Q What we are talking about here is this
7 derivative for or identical to the Bechtel study that we
8 have heard mentioned in the newspapers. Is that where these
9 numbers are coming from?

10 A I am not sure.

11 Q There have been some press releases of the
12 company at which time, as I recall, they say the estimate is
13 in the vicinity of \$1 billion. I am wondering if we are
14 talking about the same thing. There is a Bechtel study or
15 something that has been connected with the company.

16 A We have contracted with Bechtel Corporation
17 to be the major contractor for the decontamination of the
18 containment building and rebuilding of the unit. They had
19 a very substantial participation in the development of these
20 costs and schedule estimates. Their portion of it now is
21 pretty much limited to the containment building, decontamina-
22 tion and rebuild portion. Other parts would be outside the
23 scope of their contract for principally estimated by
24 General Public Utilities.

25 Q To make sure I understand this, your \$1 billion

1 number does not included any consideration of finance charges,
2 AFUDC related dollars that will eventually be capitalized,
3 is that correct?

4 A Well, again, I don't know how these expenses
5 will be treated from an accounting standpoint.

6 Q You are just talking about dollars of
7 expenditures, is that correct.

8 A That is correct. I am not including any
9 capital cost related elements.

10 Q One other question in regard to your last
11 answer. You had given us a set of numbers and you made a
12 statement, of course, this doesn't include \$15 million worth
13 of O and M expense. Are those amounts, that \$15 million
14 figure, in fact being spent by the company today and expected
15 to be spent over the up-coming years and merely not being
16 counted as a cost of clean-up and restoration or are those
17 dollars, in fact, the company is not spending?

18 A They are the former. They are dollars that
19 we are in fact spending them on activities that are
20 equivalent to normal O and M expenses and we have not
21 included them in the estimate of the cost for clean-up of the
22 station.

23 Q Finally, Mr. Arnold, how does GPU or you as
24 the person at GPU with responsibility for TMI plan to proceed
25 at TMI-2 with the clean-up and perhaps restoration in view of

1 this Commission's September 18th order.

2 A I believe it was limiting the use of rate
3 payer funds for clean-up. Well, it is my understanding,
4 expectation, that the order was not intended to prohibit
5 those activities which are necessary to maintain the plant
6 in a safe condition and prior to the assurance of that order
7 we had informed the Commission and the NRC of our intent to
8 reduce the level of effort on clean-up substantially because
9 of the limited funds that we had available and because of the
10 need to conserve the insurance coverage monies. It is clear
11 that we are going to have to have additional resources from
12 somewhere to accomplish the clean-up and I do not anticipate
13 pick-up in the level of effort from that that we have
14 identified as the current situation in which I believe is
15 only that necessary to keep the plant safe and address
16 relative immediate safety issues until those additional
17 resources for major clean-up activities had been identified.

18 (Testimony continued on next page.)
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1 Q Whether it be from a reversal of the
2 Commission's determination of September 18 or advancement
3 of money from other sources other than ratepayers, for
4 instance?

5 A Yes.

6 MR. BARASCH: That is all the questions I
7 have of the witness, Your Honor.

8 THE ADMINISTRATIVE LAW JUDGE: Let's recess
9 until quarter of two.

10 MR. STRAHN: Would it be possible, before we
11 recess, to determine whether anyone else has any interest in
12 questioning Mr. Arnold?

13 THE ADMINISTRATIVE LAW JUDGE: Is there any
14 further cross-examination of this witness?

15 MR. WISE: I anticipate none other than
16 would be covered by Mr. Kelly.

17 MR. KELLY: I have some questions, Your Honor.
18 I don't think it should take too long. I take it your interest
19 was finishing Mr. Arnold before lunch?

20 MR. STRAHN: Yes, if at all possible. He
21 has a very tight schedule.

22 MR. KELLY: I don't think I will take more
23 than ten minutes, if that.

24 THE ADMINISTRATIVE LAW JUDGE: Well, ask
25 your questions. I will defer adjourning until you conclude

1 your cross-examination.

2 MR. STRAHN: Thank you, Your Honor.

3 BY MR. KELLY:

4 Q Mr. Arnold, my name is Robert Kelly. A
5 couple points I would like to clear up if I could, first.

6 On the schedule I had somehow for Step 2
7 got a figure of 155 days and I think you said in response
8 to a question of Mr. Barasch 90 days. I am just curious as
9 to whether or not I made a mistake in writing down 155 or
10 whether I misheard you or what?

11 A Step 2 is the conduct of the hearings
12 themselves and the issuance by the ASLB of a recommended
13 decision.

14 The 155 days for that is made up of
15 basically 60 days of hearings and 90 days for post-hearing
16 process.

17 Q That was the original August 9 proposed
18 schedule?

19 A Yes, and what I identified to Mr. Barasch,
20 in response to Mr. Barasch's questions, is that the 90-day
21 segment of that is still the same time duration in our
22 present schedule.

23 Q The 60-day hearing schedule has been expanded
24 to six months, we know that for a fact, but you are assuming
25 then that the 90-day decision period or recommended decision

1 period will remain the same?

2 A Unfortunately, I don't think we know for
3 certain the duration of the hearings. Our schedule presumes
4 that it will be six months, but that the ASLB will still be
5 able to complete its post-hearing requirements to reach a
6 determination in the 90 days originally allocated.

7 Q Even though the hearing process has been
8 expanded from 60 days to six months?

9 A Yes, sir.

10 Q And another point I would like to clarify,
11 my understanding is that normally there is an intermediate
12 procedure or step between an ASLB decision and a Commission
13 decision, that being the Atomic Safety Appeals Board. Did
14 the August 9th order bypass that ASAB step? It has been
15 a while since I looked at the order. I frankly can't recall.

16 A Yes, sir, my understanding is it did. I
17 will look for the reference if you would like.

18 Q That is all right, I will look at it later
19 myself. So we don't have to worry about that step.

20 A That is correct at this time, sir.

21 Q Mr. Arnold, you indicated that -- well,
22 I don't believe you have indicated yet -- I am sorry, you
23 did indicate that if the psychological stress issues were
24 approved by the Commission, the NRC, that it would still fit
25 within your six-month time schedule, is that right?

1 A If that is what I said it was not intended
2 to be my testimony. I intended to say that our schedule made
3 the assumption that if we received a decision on that shortly
4 from the NRC it would still fit within the six-month duration.

5 Q Shortly being one month?

6 A That I think is as good a judgment as any.

7 Q Did I also understand you to say, in response
8 to a question from Mr. Barasch, that you are reading the
9 delay in the NRC in ruling on this question as being perhaps
10 a conclusion that they will not consider this issue? Did
11 you state that at one point?

12 A That is my judgment, Mr. Kelly.

13 Q Mr. Arnold, do you know if Met-Ed -- I guess
14 through your legal team -- in the NRC proceeding has prepared
15 your case on psychological distress?

16 A We have prepared substantial information
17 that will relate to psychological stress testimony, we
18 believe. Since we do not know what the contention would
19 actually be, we cannot prepare testimony at this time.

20 But we have engaged consultants with
21 expertise in that area and we have been attempting to do a
22 sufficient scope of work in that area that we will be ready
23 to proceed more or less immediately with drafting of testi-
24 mony.

25 Q Mr. Arnold, on the long-term items in the

1 August 9th order, to my knowledge you have not addressed the
2 question of what would happen if the Commission would include
3 one or more of those items as being required to be accomplished
4 before TMI-1 would be permitted to restart, is that correct?

5 A Some of the long-term action items have
6 schedules for everyone that would have them completed prior
7 to restart of Unit 1. Those we have presumed, or probably
8 more accurately it is portions of those items rather than the
9 full item, but those we have presumed that we would have to
10 complete as other plants do.

11 To the extent that long-term action items
12 have been given schedules that would go beyond our projected
13 restart date for other licensees, we have made the assumption
14 that the same criteria would be applied to us.

15 Q But no more than any other licensees through-
16 out the nation?

17 A With a couple minor exceptions, that is
18 correct.

19 Q But it is true that with regard to TMI-1
20 it has been treated differently by the Commission to date
21 from other plants?

22 A That is very much our judgment.

23 Q With regard to assumption number -- I am
24 it
24 sorry, I guess/is not one of the numbered assumptions, it is
25 a later one -- has Met-Ed prepared any timetable, assuming

1 there would be an appeal from the NRC decision?

2 A No, sir.

3 Q Can you give us any estimate if there would
4 be an appeal?

5 A I think anybody's estimate at this time
6 would be so speculative as to be of little value, frankly.
7 I don't have any idea.

8 Q You haven't discussed this matter with Mr.
9 Trowbridge or any of the attorneys handling the NRC matter?

10 A Yes, but from those discussions my conclusion
11 is that that is uncertain, first of all, as to whether or
12 not there would be an appeal.

13 The second uncertainty is as to whether even
14 if the courts in effect agree to hear testimony, take
15 testimony on such an appeal, they would stay the effective-
16 ness of an order of the Nuclear Regulatory Commission.

17 The third uncertainty, of course, is as to
18 the outcome of such a proceeding itself.

19 Q Let's put the first speculation aside.
20 Assuming there were an appeal, have you or have you not
21 developed a timetable that an appeal would take? Let's assume,
22 for the sake of argument, that there were an appeal.

23 A We have not developed such a timetable
24 because I think it would be extremely dependent upon the
25 issues that were being raised in the appeal.

1 Q An appeal of this nature is not an appeal
2 de novo, it is on the record established below, you are
3 aware of that, right?

4 A Yes.

5 Q So there is no need to develop a new record?

6 A That is correct, but it may not be an appeal
7 based upon all the issues in the record, either, or it may
8 encompass the total record.

9 Q We are not going to get anywhere on this,
10 but just to summarize, Met-Ed or GPU has not developed any
11 kind of timetable dealing with a possible appeal?

12 A I repeat my earlier testimony that no time
13 has been allowed for delay due to such appeals in the TMI-1
14 restart schedule.

15 Q I presume that you have entered into no
16 discussions with Mr. Trowbridge and other counsel in the NRC
17 proceeding regarding the likelihood of a stay should there
18 be an appeal?

19 A That is correct.

20 Q With regard to order items in the August 9th
21 order, Mr. Arnold, I think you indicated that in the SER,
22 the Safety Evaluation Report, the NRC staff has not dealt
23 with a couple of those items, is that correct?

24 A Yes. I don't know that I quantified it, but
25 there are some open issues --

1 Q Do you know which ones they are?

2 A They are listed in the document, if you
3 would like me to read them out from this Safety Evaluation
4 Report.

5 Q Fine.

6 A In NUREG 0680, short title, TMI-1 Restart,
7 on pages B-5 through B-10 are listed the order items. On
8 page B-5 of the table all items are listed as comply, which
9 means that the item is completed --

10 Q Let me ask on the two items I was trying to
11 get at. Has the NRC staff issued its SER on the financial
12 capability of the company?

13 A No, sir.

14 Q Is that still an open question?

15 A That is still an open question. There has
16 been a schedule, or perhaps a forecast would be better, of
17 the supplement to the SER dealing with financial capability
18 and emergency planning for January or early February.

19 Q How late is that forecast?

20 A About two weeks ago.

21 Q That means the staff would file its
22 recommendations by those dates and then the other parties
23 would then start working from that point? That would be the
24 initial filing by the staff, is that correct, in late
25 January or February?

1 A That is correct, but I don't think it is
2 quite correct to say that the intervenors would start their
3 work at that time.

4 Q I didn't mean to say that. These two items
5 you mentioned, financial and emergency planning, are those
6 two areas that I believe you earlier identified as being
7 perhaps the two most important areas beyond GPU or Met-Ed's
8 control, is that right?

9 A Yes, I think so.

10 MR. KELLY: That is all, Your Honor.

11 THE ADMINISTRATIVE LAW JUDGE: Any further
12 cross-examination of this witness?

13 MR. BARASCH: None, Your Honor.

14 MR. SUFFIAN: No.

15 THE ADMINISTRATIVE LAW JUDGE: Any redirect?

16 MR. STRAHN: No redirect, Your Honor.

17 THE ADMINISTRATIVE LAW JUDGE: Very well,
18 let's recess until 2:00. Do you want the witness excused?

19 MR. STRAHN: Could we have the witness
20 excused, please? We are finished with him.

21 THE ADMINISTRATIVE LAW JUDGE: Is there any
22 objection to excusing the witness at least for today?

23 MR. KELLY: No.

24 MR. BARASCH: No.

25 MR. SUFFIAN: No.

1 THE ADMINISTRATIVE LAW JUDGE: Very well,
2 Mr. Arnold, you go do your work.

3 THE WITNESS: Thank you, sir. I appreciate
4 your cooperation.

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7 (The hearing recessed at 12:55 o'clock p.m.)
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1 THE ADMINISTRATIVE LAW JUDGE: Are counsel
2 ready to proceed?

3 MR. SUFFLAN: Yes, Your Honor.

4
5 MARVIN RABER, having been first duly sworn,
6 was called as a witness and testified as follows:

7
8 DIRECT EXAMINATION

9 BY MR. SELTZER:

10 Q Mr. Raber, would you state your full name
11 and business address for the record?

12 A My name is Marvin Raber. My business
13 address is 100 Interpace Parkway, Parsippany, New Jersey.

14 Q Mr. Raber, by whom are you employed and
15 in what capacity, sir?

16 A I am employed by GPU Service Corporation
17 as Manager of Forecasting and Supply Planning.

18 Q Mr. Raber, would you briefly describe your
19 educational and professional background?

20 A My educational background includes a
21 Bachelor's Degree in Chemical Engineering from the Polytechnical
22 Institute of Brooklyn in 1958 and a Master's Degree in
23 Chemical Engineering from New York University in 1963.

24 I am a Registered Professional Engineer in
25 New York and in Maryland. I have taken continuing education

1 courses in finance, forecasting and decision making, CPM
2 Methodology and Management.

3 Prior to joining GPU Service Corporation,
4 I served as a nuclear and chemical engineer with the United
5 Nuclear Corporation and its predecessor organization Nuclear
6 Development Corporation of America.

7 From 1958 to 1966 my responsibilities
8 there included design and development of reactors, safety
9 and licensing support for fuel processing operations and
10 technology assessment and development.

11 From 1966 to 1970 I was a consultant with
12 the Hittman Corporation and was a Vice-President of the
13 subsidiary, Hittman Nuclear and Development Corporation.
14 My responsibilities there included design and development
15 of special purpose reactors, radioactive material shipping
16 casts, chemical processing plants. I performed consulting
17 services involving short and long-range market analyses,
18 transportation, economics and logistics, engineering methodology
19 development and procurement of nuclear fuel.

20 From 1970 to 1978 I was a senior staff
21 consultant and engineering manager at Combustion Engineering,
22 Inc., specifically the Nuclear Power Systems Division. My
23 responsibilities included reactor core design, integrated
24 projects and technical management of reload fuel projects,
25 and engineering services with operational flexibility and

1 performance improvements of nuclear power plants.

2 I joined GPU Service Corporation in 1978
3 as Manager of Forecasting and Supply Planning. My responsi-
4 bilities include development of 20-year kilowatt hour sales
5 and peak load forecasts for each of the three operating
6 companies and economic evaluation of supply alternatives
7 including new capacity, purchase options, retirements and
8 joint ventures.

9 I am also presently responsible for the
10 screening and evaluation of sites for new core-fired
11 capacity and for the planning and developmental aspects of
12 water resources for those hydroelectric stations and thermo-
13 power stations.

14 I have co-authored five papers and several
15 reports on nuclear technology and economics and I am a co-
16 holder of two patents in the nuclear power field.

17 I am a member of the National and New Jersey
18 Societies of Professional Engineers, the American Management
19 Association, the American Nuclear Society and the Association
20 of Energy Engineers.

21 Q Mr. Raber, let me direct your attention,
22 if I might, sir, to two documents that have been previously
23 marked in this proceeding as Met-Ed Statement I and Penelec
24 Statement I. Were these documents either prepared by you or
25 under your supervision?

1 A Yes, they were.

2 Q For purposes of the proceeding I will note
3 that those documents are marked as bearing the name
4 B. H. Cherry as witness. For purposes of this proceeding,
5 are you adopting those statements that we just referenced?

6 A Yes, I am.

7 Q Now if I were to ask you today the questions
8 that are contained in both of those statements, would your
9 answers be the same as those contained in those statements?

10 A Yes, they would.

11 Q With respect to the statements themselves,
12 do you have any corrections or additions to make to them at
13 this time?

14 A Yes, I have two. There is a correction to
15 be made to Exhibit I-9 for Penelec only. That exhibit
16 contains several columns of figures, many rows of figures.
17 The columns of figures are one for/each year and for the years
18 1980 through 1983 the entries for the top-most row should
19 appear on the second row and the entries shown now for the
20 second row should appear in the top-most row.

21 More specifically, the numbers there on the
22 magnitude of 2.4 million should all appear on the second row.
23 The numbers on the order of 800,000 should all appear on the
24 top row.

25 Q Let me direct your attention at this time to

1 the exhibits that have been previously marked in the
2 proceeding as Met-Ed exhibits I-1 through I-29 and Penelec
3 exhibits I-1 through I-29 inclusive and ask you if these
4 exhibits were prepared by you or under your supervision or
5 direction?

6 A Yes, they were.

7 Q And for purposes of this proceeding, am I
8 correct in stating that you are sponsoring or adopting those
9 particular exhibits which I also will note bear the name of
10 B. H. Cherry?

11 A That is correct.

12 (Testimony is continued on next page.)
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1 MR. SELTZER: Your Honor, that is all we
2 have of Mr. Raber at this time.

3 THE ADMINISTRATIVE LAW JUDGE: Is the
4 Commission prepared --

5 MR. SELTZER: Excuse me, Your Honor, I stand
6 corrected. Mr. Raber has indicated he has one other
7 correction he would like to make.

8 THE WITNESS: On both the Penelec and Met-Ed
9 Exhibits I-27 there is an identification of the forecast
10 which should be corrected to the April 1980 forecast.

11 MR. SUFFIAN: Pardon me, what page is that,
12 Mr. Raber?

13 THE WITNESS: It is on the very first page
14 of the exhibit, on the very last line of the response. The
15 phrase reads, based on the energy load forecast, and the
16 next word in the original is, October 1980, it should read
17 April 1980.

18 MR. SUFFIAN: Thank you.

19 MR. BARASCH: Your Honor, could we go off
20 the record for a second, please?

21 Is that a Penelec exhibit or Met-Ed exhibit
22 you are talking about?

23 MR. SELTZER: Penelec I-27.

24 THE WITNESS: I apologize, the Met-Ed
25 exhibit is phrased differently and that error does not appear

1 in the Met-Ed exhibit, strictly the Penelec exhibit.

2 THE ADMINISTRATIVE LAW JUDGE: It should
3 be April instead of October?

4 THE WITNESS: That is correct.

5 THE ADMINISTRATIVE LAW JUDGE: The staff may
6 proceed.

7
8 CROSS-EXAMINATION

9 BY MR. SUFFIAN:

10 Q Mr. Raber, on pages 2 of Penelec's and
11 Met-Ed's Statement I, I believe you testified that GPU
12 strategy for the 1980's will center on the load management
13 and conservation efforts which are defined in the conservation
14 and load management master plan which was previously supplied
15 to the Commission on March 28, 1980. Could you briefly
16 describe the type of load management and conservation
17 activities to be implemented by both Penelec and Met-Ed?

18 A There are a variety of them and the first
19 implementation plan, I believe, has also been submitted to
20 the Commission and/or the Commission staff.

21 The initial phases of implementation deal
22 with items such as storage water heaters which would be
23 provided under certain conditions to customers, coupled
24 with the use of time-of-day rates.

25 Q I take it there are several other specific

1 programs under the conservation plan?

2 A There are many programs outlined in the
3 original master plan document and the implementation of these
4 programs is intended to be a phased process.

5 It is necessary, I think, for us to get some
6 feedback from the Commission and its staff in order to formal-
7 ize and finalize these implementation plans.

8 Q Am I correct that you do have a time schedule
9 for the implementation of these specific programs in the load
10 management and conservation area?

11 A I believe there is one proposed, yes.

12 Q The one proposed, was that submitted to the
13 Commission, to the staff? Has that been submitted?

14 A May we go off the record for a moment, please?

15 THE ADMINISTRATIVE LAW JUDGE: We will go
16 off.

17 (Discussion off the record.)

18 THE WITNESS: The master plan and its
19 development are being conducted but within our Demand Planning
20 Department at GPU SC, not within my forecasting and supply
21 planning department, and I am not fully cognizant of all the
22 details at this moment that you are starting to ask for in
23 your questions.

24 If you like, I will attempt to get you the
25 answers to your questions or, alternatively, provide a witness.

1 BY MR. SUFFIAN:

2 Q Can you specify any one person who would be
3 in charge of implementing these plans?

4 A Yes, that person would be Mr. Walter Hood.

5 MR. SELTZER: Your Honor, Mr. Suffian, if
6 you please, as Mr. Raber has just indicated, his expertise
7 with respect to this is on a broad basis and has overall
8 responsibility. Mr. Hood is with us here, and if it would
9 more appropriately expedite response to the questions that
10 Mr. Suffian may have on this area, I would propose that we
11 swear in as a witness Mr. Hood and specific questions on
12 that could perhaps be handled right now.

13 THE ADMINISTRATIVE LAW JUDGE: Any objection?

14 MR. SUFFIAN: No objection by Trial Staff.

15 THE ADMINISTRATIVE LAW JUDGE: Bring the
16 witness here and we will swear him in and you can direct
17 your questions to whomever responds.

18 MR. SELTZER: At this time we would like to
19 call Mr. Hood.

20
21 WALTER T. HOOD, called as a witness on
22 behalf of Respondents, having been duly sworn according to
23 law, was examined and testified as follows:
24
25

DIRECT EXAMINATION

1
2 BY MR. SELTZER:

3 Q Mr. Hood, will you please state your name
4 and business address for the record, please?

5 A (Hood) My name is Walter T. Hood, and my
6 business address is 100 Interpace Parkway, Parsippany, New
7 Jersey.

8 Q By whom are you employed and in what capacity?

9 A (Hood) I am employed by GPU Service Corporation
10 as Manager of Demand Planning.

11 Q Within your job category is it your
12 responsibility at the present time to handle the implementation
13 of what has been referred to as the master plan?

14 A (Hood) Yes, it is.

15 Q And the implementation thereof?

16 A (Hood) Yes.

17 MR. SELTZER: That is all we have at this
18 time of Mr. Hood.

19 THE ADMINISTRATIVE LAW JUDGE: Very well,
20 Mr. Suffian, you can ask your questions, then, whichever
21 witness can respond can do so.

22 MR. SUFFIAN: Thank you, Your Honor.

CROSS-EXAMINATION

23
24 BY MR. SUFFIAN:

25 Q I would like to ask you if you could

1 describe the specific programs which would be included in
2 this master plan for load management and conservation
3 activities?

4 A (Hood) The overall master plan document or
5 concept is broken into two basic pieces of residential, and
6 a commercial and industrial piece.

7 The residential piece includes such things
8 as time-of-day rates, storage water heaters, storage space
9 heats, energy audit type analyses, and mandatory weatherization
10 standards for new homes.

11 The commercial and industrial sector includes
12 a whole variety of things including storage space and heat,
13 cooling, heat recovery systems, curtailable rates, co-
14 generation and an effort by the company to consult with the
15 various industrial and commercial customers to improve the
16 efficiency of their product lines and things like that.

17 Q What I would like to hone in on are the
18 specific programs that would apply to these two sectors
19 and they may be separate and they may be overlapping.

20 Could you describe those specific programs
21 for load management and conservation that would apply in
22 these two sectors that you say the master plan is divided
23 into?

24 A (Hood) Would you clarify that a little bit?

25 Q You say there is a master plan and under the

1 master plan you have two sectors, a separation between the
2 residential and commercial and industrial and what I would
3 like to focus on are the specific programs for load management
4 and conservation for these two sectors that you have.

5 A (Hood) I just identified those.

6 Q You identified the two sectors, the residential
7 sector under the master plan, and the commercial and
8 industrial sector. I would like details as to the specific
9 programs for conservation and load management. Could you go
10 into greater detail as to specific programs geared to con-
11 servation under the master plan?

12 A (Hood) Specific conservation or load manage-
13 ment?

14 Q Well, both --

15 THE ADMINISTRATIVE LAW JUDGE: Would counsel
16 and the witness keep their voice up so we can all hear?

17 BY MR. SUFFIAN:

18 Q We can begin with conservation and conclude
19 with load management.

20 A (Hood) As I just said, under the residential
21 program we are talking about time-of-day rates, storage
22 water heating, storage space heating, energy audits or
23 analyses, and mandatory weatherization for new homes.

24 Because it is a very comprehensive plan
25 involving a lot of things, we have chosen to move ahead

1 with various parts of it first.

2 Our first phase of the implementation plan --

3 Q Pardon me, I didn't catch what you just said.
4 (Hood)

5 A / Our first phase implementation plan which is
6 in the draft phase right now addresses for the residential
7 group time-of-day rates, storage water heating and energy
8 analysis.

9 Q You say the first phase implementation plan
10 is in the drafting stage now. Do you have any idea when the
11 drafts will be completed? When do you anticipate implement-
12 ing these plans?

13 (Hood)
14 A / You are aware that the Bureau of CEEP has
15 an informal investigation into the master plan?

16 Q Continue.
17 (Hood)

18 A / We are working with them on an informal
19 basis. We have submitted to them last week a preliminary
20 draft of the plan. We are hoping to have some sort of
21 regulatory go-ahead by early next year, 1981, to get moving
22 on some of these plans.

23 Q Once you get the regulatory okay to actually
24 implement the plans, how long after that will it take to
25 actually implement the plans?

26 A (Hood) We should be ready to go. I mean we
27 are budgeting for it next year. We are planning on doing it.

28 Q So after the go-ahead by CEEP, by the

1 Commission, then you will be ready immediately to institute
2 the plan?

3 A (Hood) Or very shortly thereafter.

4 Q Do you have any estimates of the current time
5 as to the cost of implementing these plans?

6 A (Hood) The master plan document contains some
7 detailed numbers as to the costs and I assume -- I don't think
8 it is in this docket.

9 MR. SELTZER: We have not introduced the
10 master plan document itself as an exhibit.

11 THE WITNESS: (Hood) It has been introduced
12 in prior dockets.

13 BY MR. SUFFLIAN:

14 Q Are you making any claim that you are aware
15 of in this rate case, in this proceeding, for the costs for
16 implementing that plan?

17 A (Hood) To the best of my knowledge we are not.

18 MR. SUFFLIAN: May we proceed? Are you look-
19 ing for it --

20 MR. SELTZER: I think we may have an answer
21 in a moment if you bear with us.

22 MR. SUFFLIAN: All right.

23 MR. OGDEN: In checking with Mr. Huff and
24 Mr. Carroll, the accounting witnesses in the case, there are
25 claims in both cases for certain residential conservation

1 measures. The confusion which may arise is that these are
2 not necessarily connected with the master plan as such.
3 These are claims for the companies' ongoing residential
4 conservation programs.

5 MR. SUFFIAN: So you are saying that the
6 claims for the master plan would be separate and in addition
7 to the claims that you have already noted for residential
8 conservation?

9 MR. OGDEN: Since I am not a witness I would
10 prefer to have one of the accounting witnesses, when they
11 are on the stand, identify that for you and answer the
12 question.

13 MR. SUFFIAN: Perhaps I can direct this
14 question to Messrs. Hood and Raber.

15 BY MR. SUFFIAN:

16 Q Referring to Met-Ed Exhibit B-1, Part 8,
17 on page 9, normalization adjustment number 7 -- do you have
18 that reference?

19 A (Raber) No, I am sorry I don't.

20 A (Hood) It is coming.

21 Q Under number five of the line numbers I
22 read, increased payroll expense due to personnel additions
23 for RCS -- I take it that is residential conservation service
24 energy audit?

25 A (Hood) Yes, sir.

1 Q That together with the normalization adjust-
2 ment number 8 which is noted on page 18, Schedule No. 6,
3 normalization adjustment number 9, both refer to the residential
4 conservation services program, is that true?

5 A (Hood) Yes.

6 Q That total is half a million dollars, I
7 believe, the \$284,000 for the RCS energy audit and the
8 \$216,000 for the normalizing adjustment, estimated costs
9 for the RCS program, would you agree with me, subject to
10 check, that that is what it would amount to?

11 A (Hood) Yes.

12 Q Are these costs, costs which would be claimed
13 for the mast plan, the type of costs incurred in the master
14 plan, or is this something separate?

15 A (Hood) The RCS program is something separate.
16 It is being totally handled by the individual operating
17 companies. These companies are totally separate from
18 anything related to the master plan.

19 Q There is still the possibility, then, that
20 there are other costs related to the master plan that are
21 claimed in this rate case but you are not the witnesses to
22 ask that question to?

23 A (Hood) I am not the witness, but to the best
24 of my knowledge there are.

25 MR. OGDEN: I think the accounting witnesses,

1 Mr. Suffian, would be the appropriate witnesses.

2 MR. SUFFIAN: Messrs. Huff and Carroll?

3 MR. OGDEN: Yes.

4 BY MR. SUFFIAN:

5 Q Could you tell me whether any of the costs
6 incurred in the RCS, residential conservation services energy
7 audit, or residential conservation services, whether any of
8 those costs might overlap or also be included in the master
9 plan?

10 A (Hood) Because of the potential problems
11 between the state and the federal government we are doing
12 our best to keep the RCS program completely separate from
13 the master plan, in concept and in actual accounting practices,
14 to keep those dollars separate.

15 Q They would be separate, discrete costs?

16 A (Hood) Yes.

17 Q Could you tell me whether the effects of
18 the implementation of the master plan have been reflected
19 in the energy sales of Met-Ed and Penelec?

20 A (Raber) They have not because of the time
21 lag involved in getting the regulatory approval and in
22 beginning the implementation of these plans. The impact
23 is expected to be rather small, at least through 1981.

24 To the extent that implementation may be
25 accelerated and a noticeable impact found, the sales forecast

1 should be reduced.

2 Q A few moments ago I believe that Mr. Hood
3 stated that you expect to have a Commission decision on this
4 matter in 1981.

5 A (Hood) We hope.

6 Q Do you know about when a decision is expected
7 in 1981? Could you be a little bit more specific, if you can?

8 A (Hood) No, I can't. We plan on working with
9 the Bureau of CEEP in evolving this document from a draft to
10 a final document. Hopefully that should only take about a
11 month or six weeks.

12 I think there is still a question up in the
13 air as to what sort of regulatory approval is actually
14 required, whether it is going to be a hearing or policy
15 statement or whatever.

16 Q You have already submitted the initial draft?

17 A (Hood) Yes.

18 Q And now you are estimating a month to six
19 weeks for Commission approval of the draft and then perhaps
20 further hearings and further regulatory process before --

21 A (Hood) A month to six weeks working with CEEP
22 and coming up with a final document that would go to the
23 Commission.

24 Q Once the plan has been implemented, hopefully
25 sometime in 1981, do you have a means of monitoring the plan

1 and the savings generated by the plan, the reduced sales
2 flowing from the plan?

3 A (Hood) We plan on doing a number of things
4 to try and monitor the impact of the plan, ranging from
5 interviews and questioning customers who have been affected
6 by the plan, doing actual load research on these customers,
7 monitoring them on their bills. and other things deemed
8 appropriate to try and monitor and get a handle on what the
9 impact of the plan is.

10 Q You have this actually built into the plan,
11 monitoring of monthly bills and interviews with customers?

12 A (Hood) Yes.

13 Q Over what period of time, I mean how often
14 will customers' bills be monitored, how often will the inter-
15 views take place, over what period of time will this occur?

16 A (Hood) We have not yet developed those
17 specifics, but it is my opinion that it should be a continuous
18 process.

19 Q Done on a daily basis, a monthly basis?

20 A (Hood) Maybe not continuous to the extent
21 of daily or monthly even, but it should not be done after
22 the first year and then forgotten about. Maybe every six
23 months you have to look at it again or every year you have
24 to look at it again.

25 Q Generally you are stating there is specified

1 in the plan a monitoring --

2 A (Hood) Yes.

3 Q -- device to determine just what the savings
4 are from the plan, but there are no specifics in the plan as
5 to how this takes place?

6 A (Hood) The plan calls out our intent to
7 monitor these programs.

8 Q Are you saying that eventually you will be
9 able to provide the Commission with a schedule showing the
10 savings resulting from this plan?

11 A (Hood) Yes, estimated savings.

12 Q Once the plan has been implemented and once
13 the decision is made that it is a viable working plan, do
14 you expect changes in the load characteristics of your
15 customers?

16 A (Hood) Yes.

17 Q What changes would you expect?

18 A (Hood) Are you talking about just the first
19 phase water heater or the total master plan?

20 Q I am talking about the total master plan.

21 A (Hood) Since the master plan contains a
22 variety of things in conservation and load management, I
23 would expect a variety of impacts on the load shape ranging
24 from pure conservation and general reduction in energy
25 requirement to some significant load shifting from daytime

1 peak periods to nighttime off peak periods.

2 Q Have you prepared a study indicating just
3 what you expect the changes in load characteristics to be
4 with the implementation of the plan?

5 A (Hood) Yes.

6 Q Could you provide staff with a copy of this?

7 A (Hood) That is contained in the initial
8 master plan document.

9 Q Thank you. Could either of you describe
10 what the planning is for the Forked River nuclear generating
11 station?

12 A (Raber) The Board of Directors has, I believe,
13 in effect canceled the plan.

14 Q Canceled the plan?

15 A (Raber) The plan to construct Forked River.
16 This is an ongoing issue within the Jersey Central rate
17 proceeding that is in progress at the moment. There was a
18 firm recommendation made to the Board of Directors to stop
19 construction of the plant and I believe that was adopted.

20 Q Then will you have any current plans for the
21 plant now that the plant has been canceled, for I think
22 introduction into service in 1986?

23 A (Raber)
24 / The plant as it stands now is in an early
25 phase of construction. There is equipment on site whose
disposition at the moment is uncertain.

1 There is proposed within the Jersey Central
2 case financial disposition of the investment, but I am not
3 in a position to describe the details of that.

4 Q Turning to Seward No. 7, do you anticipate
5 any delays in the in-service date of Seward?

6 A (Raber)
7 / Yes, relative to the date that is presented
8 in the load and capacity information in my pre-filed testimony.
9 The in-service date of Seward-7 has been officially delayed
for two years, to May of 1989.

10 Q Could you tell us what the status of the
11 construction is for Seward-7 at the present time?

12 A (Raber)
13 / I believe there has been very little if any
14 actual construction activity on the site. The licensing of
the plant is in progress and will continue to be pursued.

15 Q Mr. Raber, I believe you might be better
16 able to answer this. I would refer you to pages 6 of Penelec
17 and Met-Ed Statements I, and on page 6, I am quoting from
18 the testimony, economic conditions have changed which have
19 resulted in reduced near term sales and a slip in long-term
20 sales growth. These reductions have led to the preparation
21 of a revised May 23, 1980 load and capacity forecast.

22 Now were you also involved in the preparation
23 of the original load and capacity forecast?

24 A (Raber) You are referring to the original
25 1980 load and capacity forecast?

1 Q Correct.

2 A (Raber) Which is presented in the testimony
3 and dated October or thereabouts 1979. Yes, I was.

4 Q What specifically do you mean by economic
5 conditions haven't changed? Are these economic conditions
6 between your involvement in the preparation of the original
7 forecast and the revised forecast?

8 A (Raber) Yes.

9 Q What would these economic conditions be that
10 have changed which would lead to the revised forecast?

11 A (Raber) The original 1980 forecast, which
12 was actually prepared during June and July of 1979, was
13 predicated in part on an economic outlook that included a
14 slowdown in the economy in late 1979.

15 By early 1980 the outlook called for a
16 recovery from this slowdown.

17 This did not happen quite that way in
18 actuality. The economy basically slid sideways for the
19 latter portion of 1979 through the early portion of 1980.

20 The April 1980 forecast was predicated on
21 an economic outlook as of March 1980. That outlook also
22 called for a slowdown in the economy and our economic
23 consultants -- this is Data Resources, Inc. -- expressed
24 some sentiment for a mild technical recession at that point
25 in time or later in the year, really, but also some sentiment

1 for continued mild growth.

2 This economic outlook was then embodied in
3 the April 1980 forecast.

4 I would like to point out that the slowdown
5 or technical recession, if you will, that is embodied in the
6 basis for the April forecast, was a very mild one, and in
7 point of fact the actual sales for six months beyond the
8 April forecast have come in below those forecast levels,
9 particularly in the industrial sector.

10 This is indicative of a continuation of
11 conservation trends that were noted in the intervening
12 months, noted particularly in the intervening months between
13 the time that the original 1980 forecast was prepared and the
14 time that the April 1980 forecast was prepared.

15 Q Am I correct in understanding your testimony
16 to be that the original forecast in June and July of 1979
17 reflected a late 1979 slowdown with an early 1980 recovery
18 from the slowdown?

19 A (Raber) That is correct.

20 Q And that the March or April forecast of
21 1980 reflected a so-called mild technical recession and
22 continued mild growth? I think you stated it in that way.

23 A (Raber) At that point in time it was not
24 clear whether there would in fact be a slowdown of the
25 economy and both possibilities were offered by our consultants.

1 Q Then would you say that the revised budget
2 for April of 1980 was more recessionary, reflected more
3 recessionary effects, more impact of the recession than did
4 the original budget prepared in June and July of 1979?

5 A (Raber) Perhaps I should spend just a moment
6 to define what I mean by a recession when I talk about a
7 recession and perhaps more importantly we should examine
8 what is not included in the definition of the term, recession,
9 itself.

10 My dictionary defines recession as a slowing
11 down of commercial and industrial activity. In the economic
12 field the generally accepted definition is two consecutive
13 quarters of negative growth in the real gross national
14 product or GNP, and by real GNP I mean, of course, the GNP
15 as adjusted for inflation.

16 There is nothing in the term, recession, that
17 connotes magnitude of effect or magnitude of impact either
18 on the economy itself or on electricity sales.

19 Recessions can be very mild or they can be
20 rather severe. The slowdown in the economy that was reflected
21 in both of those forecasts I would characterize as very mild.
22 Their timing was different.

23 Q Would you say that the original forecast had
24 a more mild economic development reflected in that than did
25 the revised forecast?

1 A (Raber) For what specific time period?

2 Q Well, the original forecast -- they are both
3 for, are they not, 1980?

4 A (Raber) The forecasts covered the period
5 1980 but other periods as well. In the original forecast
6 1979 was still a part of the forecast.

7 Q I am focusing particularly and specifically
8 on the test year, the 12 months ended 3-31-81, so I am saying,
9 did the original forecast for sales reflect less in the way
10 of economic conditions, downturn in economic conditions, than
11 did the revised budget?

12 What I am referring to, it seems for
13 Metropolitan Edison the revised budget shows a drop in
14 kilowatt hour sales from the original budget forecast of
15 411 million kilowatt hours.

16
17 (Transcript continues on next page.)
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1 A (Raber) Yes, let me go back and answer your
2 first question, if I may. Let me characterize the test year
3 by the calendar year 1980 since I happen to have the numbers
4 conveniently available for the calendar year. The GMP
5 forecast for the calendar year 1980 was actually slightly
6 higher in the revised April 1980 forecast basis than in the
7 earlier one. The kilowatt hour sales obtained from the
8 amount forecast are instead lower than what was obtained from
9 the original 1980 forecast because of conservation trends
10 that were noted in each of the customer classes. These
11 trends really became markedly apparent in the intervening
12 months, the 9 months or so between the two forecasts and if
13 you look at the sales for those 9 months, you will find that
14 they are significantly below the levels forecast back in
15 July of 1979.

16 Q Then you are saying that conservation
17 measures, as well as economic conditions were considered in
18 your preparation of the revised budget vis-a-vis
19 your original forecast?

20 A (Raber) Yes.

21 Q I would like you to refer now to Exhibit I-27
22 for Met-Ed. Also please refer to C-1, Mr. Carter's exhibit.

23 Referring now to page 3 of Exhibit I-27,
24 and page 2 of C-1, column number 5 on page 2 of C-1, could
25 you explain the drop in residential megawatt hour sales from

1 2,663,782 shown for 1981 on I-27, page 3, 2,578,694 megawatt
2 hours of sales for the revised budget?

3 A (Raber) I am sorry. The numbers that you
4 are quoting from page 3 of 3 of I-27 are the sum of the
5 top five numbers?

6 Q Yes, per residential.

7 A (Raber) And the two years that you are
8 comparing here.

9 Q I am comparing the original budget and the
10 revised budget for 1981, 3/31/81.

11 A (Raber) Could you tell me again where on
12 C-1 you are looking?

13 Q On C-1 I am also looking on page 2 and I
14 am looking under column 5. The first 5 lines would be the
15 total residential appearing on line number 6 at 2.578
16 megawatt hours.

17 A (Raber) In effect you are asking--

18 Q I am asking could you explain the drop of
19 megawatt hour sales from the original budget to the revised
20 budget?

21 A (Raber) Surely.

22 Q And what portion of that would be
23 attributed to conservation?

24 A (Raber) I believe most of the drop is due to
25 conservation trends. These are trends that were observed in

1 late 1979 through the first quarter of 1980 and which are
2 captured in the short-term forecast methodology by a rolling
3 average technique.

4 Q Was it possible for you to separate the drop
5 in megawatt hour sales attributable to conservation as
6 opposed to the drop attributable to economic conditions?

7 A (Raber) No. I have no way to do that. I
8 can only observe the historic trends and project them into the
9 future.

10 Q Well, referring to the general service
11 customer category on I-27, page 3 of 3, the 1981 where you
12 see the number 3.367 million megawatt hour sales and this
13 drops for the revised forecast, revised budget by about
14 200,000 megawatt hours and if you add on C-1, page 2,
15 column 5, the amounts or the numbers on lines 7 through 11,
16 we find there is a revised budget megawatt hour sales of
17 3.60 million, approximately. Would you say that this
18 200,000 drop in megawatt hour sales is also attributable to
19 conservation?

20 A (Raber) These customers are primarily
21 commercial and industrial customers and the answer to your
22 question is yes. There are conservation trends noted in both
23 categories.

24 Q Would your explanation be the same for the
25 drop in megawatt hour sales for the customer classes LP and DP

1 between the original budget and the revised? Would that also
2 be due to conservation?

3 A (Raber) This is the area in which the
4 economic slow-down would probably be most visible.

5 Q So you are saying that the drop in megawatt
6 hour sales for LP and DP customers would not be due to
7 conservation measures, but rather to the economic slow-down?

8 A (Raber) Most likely.

9 Q Thank you very much. Now referring back to
10 my quotation on page 6, you have stated that economic
11 conditions have changed which resulted in reduced, near
12 term sales. What specific period of time are you referring to
13 for your near term sales? Are you referring to the test year
14 3/31/81?

15 A (Raber) That would be a good characterization,
16 yes. Actually, our short-term forecast extends two or three
17 years into the future from whatever point in time we make it.

18 Q Then does this extend further than the test
19 year? I am trying to hunt in what period of time your
20 reduced near term sales are for.

21 A (Raber) I believe that the amount forecast
22 will show lower sales for all periods of time that are
23 common to both that forecast and the previous one, the one
24 that was made in July of 1979.

25 Q Well, both forecasts were for the year ended

1 12/31/81, were they not?

2 A (Raber) That period of time is covered by
3 those forecasts.

4 Q Is a larger time period covered by some other
5 forecast that was submitted? They are limited to that period
6 of time, are they not? I was under the impression that the
7 forecast was for the test year ended 3/31/81.

8 A (Raber) For certain specified purposes, that
9 is true. We do forecast out for 20 years for other purposes.

10 Q What was the revised forecast for the May 23,
11 1980 load and capacity? Was that forecast extended beyond
12 the test year end 3/31/81?

13 A (Raber) In terms of megawatt hour sales?

14 Q In terms of sales, yes.

15 A (Raber) Yes, the forecast did extend beyond
16 that.

17 Q How far beyond that period did it extend?

18 A (Raber) Detailed sales were recast through
19 the end of 1982.

20 Q Now were the conditions that were considered
21 in that forecast for the 12 months ended 3/31/81, are they
22 expected to continue? Are they incorporated in that forecast
23 to continue until 1982, the date you just specified?

24 A (Raber) The period beyond the test year and
25 on into 1982 was anticipated to continue a very sluggish

1 growth trend that was projected to start earlier some time
2 within the test year.

3 Q Then are you saying that the economic
4 conditions will be somewhat different as incorporated in the
5 forecast after the test year, that although they might change
6 somewhere in the middle of the test year, they are expected
7 to continue after the test year into 1982 and they are not
8 reflected in the entire test year for March 31, 1981?

9 A (Raber) On an annual basis there is
10 expected to be very modest growth in the economy on a year-
11 to-year basis.

12 Q I don't think that answers it. The question
13 is are the economic conditions that were incorporated in the
14 forecast for the 12 months ended 3/31/81 the same conditions
15 that will be in that forecast post 3/31/81 and you seemed
16 to have indicated a moment ago in your testimony that some of
17 the conditions will change in the middle of 1981, in the
18 middle of the test year and will continue on to 1982, is that
19 so?

20 A (Raber) There is a sluggish growth trend
21 projected beyond the test year.

22 Q Could you tell me whether the revised load
23 and capacity forecast of May 23rd, 1980 was the same one
24 used by Mr. Carter in the development of normalized budget
25 operating revenues? I think that is Exhibit B-1, Part A.

1 Do you know the answer to that question?

2 A (Raber) I am not sure.

3 Q Well, your testimony states at page 6 that
4 this revised load and capacity forecast, May 23, 1980 forecast
5 was made available to Mr. Carter. Are you saying you don't
6 know Mr. Carter used it?

7 A (Raber) I cannot testify that he used it.
8 It was made available to him.

9 Q Okay. Now have you submitted a copy of this
10 revised May 23, 1980 forecast to the Commission?

11 A (Raber) I think the answer to that question
12 is yes, but I did not personally send the Commission a copy
13 of the load and capacity forecast document.

14 Q I would like to ask one of the attorneys
15 whether or not this revised forecast has been submitted.
16 Staff is unable to locate it.

17 MR. SELTZER: I am not aware that there is
18 any submission beyond what is in the various exhibits and
19 the testimony.

20 MR. SUFFIAN: Could you provide that for us?

21 THE WITNESS: Certainly. Pieces of it are
22 in here in terms of the loading capacity tables. They are
23 submitted. They are submitted as exhibits.

24 MR. SUFFIAN: Quite frankly, we are having a
25 bit of difficulty separating the original forecast and the

1 revised and that is why we are specifically requesting the
2 revised from you now. We haven't been able to locate that.

3 MR. SELTZER: If you take a look at I-24.

4 THE WITNESS: Perhaps I can assist you by
5 distinguishing from the two in the exhibits in the pre-filed
6 testimony. I believe that all exhibits prior to Exhibit I-23
7 pertain to the October 1979 load and capacity forecast,
8 exhibits I-23, I-24, I-25 and I-26 are for the May 1980 load
9 and capacity forecast.

10 MR. SUFFIAN: Thank you very much, Mr. Raber.

11 BY MR. SUFFIAN:

12 Q I would like to refer again to Exhibit C-1,
13 page 2 of 3, that you were looking at a few moments ago for
14 Met-Ed.

15 A (Raber) May I ask you if you still want the
16 load and forecast document?

17 Q I don't think we will need that. I think we
18 will refer to what you just referenced us.

19 Now again referring to column number 5,
20 budgeted usage and megawatt hours, on line 25, total company
21 7,889,171 megawatt hours. Was this the total revised sales
22 figure from your revised forecast? Is that what this reflects?

23 A (Raber) I am sorry. I don't know precisely
24 how Mr. Carter got to that number.

25 MR. SUFFIAN: Your Honor, that is all the

1 cross-examination Trial Staff has of Mr. Raber. However, we
2 would like to go off the record and make a data request to
3 the company with Your Honor's permission.

4 THE ADMINISTRATIVE LAW JUDGE: You don't want
5 to make it on the record?

6 MR. SUFFIAN: We prefer to make it off the
7 record. It is a bit complicated.

8 THE ADMINISTRATIVE LAW JUDGE: Very well.

9 (Whereupon, an off the record discussion was
10 held.)

11 MR. SUFFIAN: I believe off the record,
12 Staff discussed with the company a data request and I would
13 like to summarize that data request at this time on the record.

14 We are requesting the company, the respondent,
15 to provide us for, Penelec with a reconciliation of the
16 original budgeted sales shown on Exhibit I-27 with revised
17 budgeted sales used by Mr. Carter shown on Exhibit C-1 and
18 we are also asking respondent to reconcile this difference
19 with the megawatt hour sales shown in Exhibit B-1, Part 8,
20 page 3. Thank you, Your Honor.

21 THE ADMINISTRATIVE LAW JUDGE: Anything
22 further?

23 MR. SUFFIAN: No, Your Honor.

24 THE ADMINISTRATIVE LAW JUDGE: Let's take a
25 ten minute recess.

1 MARVIN RABER and WALTER T. HOOD, resumed.

2 BY MR. BARASCH:

3 Q Good afternoon, Mr. Raber. I am David
4 Barasch and I am with the Consumer Advocate office.

5 A (Raber) Good afternoon.

6 Q A couple questions I want to ask you follow-
7 ing up on some cross that Mr. Suffian was doing.

8 As I understand it, you were comparing an
9 average forecast with an April, 1980 forecast and you
10 described that forecast as showing basically a lower set
11 of sales levels for a period of time as opposed to the
12 original forecast, do you recall that, sir?

13 A (Raber) Yes.

14 Q I thought, to summarize, you were basically
15 saying there were two elements that were probably responsible
16 for the differences between the original forecast and the
17 new forecast. One would be a further greater recognition
18 of conservation impacts and the other being the impact of
19 the economic slowdown. Would you agree with that?

20 A (Raber) Let me recharacterize that just a
21 little bit. When we started to do the April 1980 forecast
22 we had actual sales data for a period of about nine months
23 to compare with the forecast that had been prepared in July
24 of 1979.

25 Q I thought it was October 1979.

1 A (Raber) The publication date was October.
2 The forecast was actually prepared in June and July.

3 Q Okay, fine.

4 A (Raber) So I have nine months of data and
5 those data show that the forecast was too high, in spite of
6 the fact that the economic slowdown that was implicit in the
7 July 1979 forecast did not materialize --

8 Q Not at that time but rather at a later point
9 in time?

10 A What I am trying to point out is that that
11 is pretty solid evidence of conservation trends.

12 Q Okay, but I just want to pursue that one
13 point. When you say it did not materialize, what you are
14 saying is it did not materialize at the time period that
15 you originally expected but rather was delayed by several
16 months.

17 A (Raber) In March the outlook at that point
18 in time for the future economic performance was that at
19 worse there would be a mild -- call it slowdown, call it a
20 technical recession -- at best there would be no such thing,
21 there would be a continuation of leways movement, perhaps,
22 with very slow growth. That was the thinking that was
23 embodied in the April 1980 forecast.

24 I would like to point out also that the
25 April 1980 forecast is also too high. It is lower than the

1 July 1979 forecast but still too high. It is above the
2 actuals that have accumulated for six months for which I
3 have data. This is through September.

4 Q I believe you already testified to that.
5 BY THE ADMINISTRATIVE LAW JUDGE:

6 Q What about the GNP for that period, was
7 that stationary? Did that increase?

8 A (Raber) Do you mean the gross national
9 product?

10 Q From July, yes.

11 A (Raber) No, there was a rather dramatic
12 drop in the second quarter of 1980. That dramatic drop
13 was not foreseen in March even though March was immediately
14 prior to the time when that drop occurred and that dramatic
15 drop has not been incorporated into the April forecast.

16 BY MR. BARASCH:

17 Q Not into the April forecast but I believe
18 you did testify --

19 MR. BARASCH: I am sorry, Judge, were you
20 going to pursue that?

21 THE ADMINISTRATIVE LAW JUDGE: No, go ahead,
22 that is all right.

23 BY MR. BARASCH:

24 Q I believe you testified in the six months
25 since the April 1980 forecast you have seen rather marked

1 sales levels below your forecast level, I believe that is
2 what you testified to just now and also in response to Mr.
3 Suffian, is that correct?

4 A (Raber) That is correct.

5 Q And I believe what you have said is that to
6 explain that difference we could look to -- and I may be
7 overly simplifying matters -- we could look to conservation
8 impact in the residential and commercial sectors and the
9 impact of a business slowdown in the industrial sector,
10 LP, is that what you testified to?

11 A (Raber) Substantially, yes.

12 Q I can take then from that and state logically
13 that if we were to factor out the impact of the business slow-
14 down on your industrial customers, however that might be
15 quantified, that we would see a smaller disparity between
16 actual and budget than we are seeing at the present time?
17 It is kind of a logically deductive statement is what I am
18 trying to ask as a question.

19 A (Raber) You are suggesting that at least on
20 a hypothetical basis if one could factor out the impact of
21 the observed slowdown relative to the slowdown that was
22 implied in the basis for the forecast, one might get "actual"
23 sales that were closer to what had been forecast, and I
24 suppose on a hypothetical basis that would be correct.

25 Q But even more than a hypothetical basis, on

1 a logical basis isn't that necessarily the result? If you
2 have two elements that make up the difference between your
3 budget and your actual and they both have a negative or
4 depressing effect upon sales if you take one out, isn't it
5 logically necessary that you are going to end up closer to
6 your budgeted level, to your forecasted level I should say?

7 A (Raber) Qualitatively, yes.

8 Q That is fine. Then there was another matter
9 that you were discussing with Mr. Suffian. I believe Mr.
10 Suffian was asking you about changes of conditions that were
11 occurring during the test year or in the midst of the future
12 test year in this case and that these factors were expected
13 not to continue after the end of the test year. He was asking
14 you a question along those lines. Do you remember that, sir?

15 A (Raber) I remember the line of questioning.

16 Q And I believe your answer to him was something
17 that, yes, when we look ahead we will see a period of sluggish
18 growth or something like that -- do you remember that answer,
19 sir?

20 A (Raber) Yes.

21 Q Now can I deduce from that answer that what
22 you are basically saying is that sluggish growth in the
23 future is something more than the growth levels indicated
24 in the test year? That sluggish is a more optimistic phrase
25 than the one you might use to describe the growth patterns

1 that actually did occur during the test year or expected to
2 occur during the future test year?

3 A (Raber) Let me answer that question by
4 referring to some projections of the gross national product
5 and simply using that to characterize the economy.

6 The outlook as seen today is for a gross
7 national product in calendar 1980 that is on the order of
8 1 percent below the level that had been foreseen back in
9 March when we were preparing for the April forecast.

10 The same kind of thing holds true for 1981.

11 The current outlook is for a gross national
12 product that is perhaps 1.8 percent below the level that had
13 been foreseen back in March of this year.

14 All in all, it is not likely that the
15 economic activity in 1980 or in 1981, and therefore by
16 implication in the normalized test year, will be as high
17 as had been implied in the April 1980 forecast.

18 Q I am having trouble. I don't think the
19 answer is responsive to the question. Maybe that is because
20 the question was not clear. But I don't think you have
21 answered the question.

22 A (Raber) Please restate your question.

23 Q You referred to a prediction for sluggish
24 growth characterizations, I assume KWH sales in these two
25 GPU service territories, in the period of time after the

1 end of the future test year. What I am trying to find out
2 is, when you characterize something as being marked by
3 sluggish growth, is that a higher or lower rate of growth
4 than the growth that actually was experienced during the
5 future test year or is expected to be experienced in the
6 future test year?

7 A (Raber) I am sorry, but I missed something
8 in the latter part of that.

9 Q Let me try stating it another way. We could
10 look at the various exhibits that you are sponsoring in this
11 proceeding and come up with a demand and KWH growth rate for
12 the year marked by the two end points of March 31, 1980 and
13 March 31, 1981 and we would come up with a rate. I believe
14 in the course of your cross-examination by Mr. Suffian you
15 were asked whether or not some of the events that contributed
16 to the experience in the future test year would be expected
17 to continue into the future and your response to that
18 question was -- I am doing this from memory -- no, we can
19 expect to see sluggish growth in the period of time after
20 the test year.

21 What I am trying to find out is, when we
22 start looking at 1982 versus 1981, 1983 versus 1982, are we
23 going to see growth rates that are higher or lower than the
24 difference between the end of the historic test year and the
25 end of the future test year in this case?

1 I am trying to understand what you mean by
2 the word, sluggish.

3 A (Raber) The growth rate for Penalec sales,
4 for example, for the test year ending March 1980 relative to
5 the test year ending March 1979 I have as about 1.3 percent.

6 The corresponding number for the test year
7 ending 1981 relative to the test year ending 1980 now is
8 2.3 percent.

9 Q Moving ahead.

10 A (Raber) Moving ahead one more year it is
11 close to 4 percent.

12 Q And moving beyond that?

13 A (Raber) I don't have that figure in front
14 of me.

15 Q But we can expect it to continue in the
16 vicinity of 4 percent or not?

17 A (Raber) My guess is that it will not, partly
18 because the master planning impact should be seen by then.

19 Q Turn your attention, please, to your Exhibit
20 I-15, page 1.

21 THE ADMINISTRATIVE LAW JUDGE: Which exhibit?

22 MR. BARASCH: It is the same exhibit in both
23 cases, Your Honor, so we can refer to either one.

24 BY MR. BARASCH:

25 Q There you provided a September 1979 winter

1 load capacity forecast for all the GPU subsidiaries, right?

2 A (Raber) That is correct.

3 Q And there it shows Forked River coming on
4 line in 1986, and as I understand your answer to a question
5 earlier today that is no longer a valid assumption.

6 A (Raber) That is correct.

7 Q Isn't it true that your New Jersey affiliate
8 has petitioned the New Jersey Public Service Commission to
9 abandon Forked River?

10 A (Raber) That is correct. I am hesitant
11 over the use of the word, abandon. Let's simply interpret
12 it loosely and I will accept it.

13 Q That is fair enough, and as I understood
14 your testimony, there is some consideration now as to how
15 the company might attempt to write that off or amortize it
16 off against the books of the company, is that correct?

17 A (Raber) That is an issue in the current
18 proceedings.

19 Q But it is one in which the Board of
20 Directors at least in principle has decided has to be done?

21 A (Raber) Yes.

22 Q If you will turn your attention to I-24,
23 there we are looking at your May 23, 1980 load and capacity
24 forecast and there I see that no longer is reflected Forked
25 River plant, correct?

1 A (Raber) That is correct.

2 Q I also notice that on I-24 is reflected a
3 firm purchase of 1,000 megawatts for Jersey Central Power and
4 Light in December of 1984. I wonder if you could tell me
5 what that is all about. Where is all that coming from and
6 what is the identity of it?

7 A (Raber) That is intended to portray a firm
8 purchase from Ontario Hydro to be obtained through an under-
9 water cable under Lake Erie.

10 Q Has anything occurred toward bringing that
11 power in yet? Has any construction started? Where are we
12 in that?

13 A (Raber) No construction has begun. The
14 negotiations with Ontario Hydro are still in progress and
15 I believe certain licensing activities are in progress.

16 Q Now looking at both I-15 and I-24, in both
17 of these load and capacity forecasts the company has included
18 the capacity from TMI-1 and TMI-2, that is correct, isn't it?

19 A (Raber) Those two units are retained on the
20 rolls of available capacity, yes.

21 Q Have you developed a forecast that would
22 produce a profile for the company under the assumption that
23 TMI-2 never returned to service?

24 A (Raber) I am not sure what you mean by a
25 forecast that I would have prepared. What specifically are

1 you looking for?

2 Q What has the company done in the way of
3 planning or projecting their needs out into the future on
4 the assumption that TMI-2 does not come back on line?

5 A (Raber) The needs of the company are better
6 characterized by the demand forecast. If TMI-2 were to be
7 not available to meet these needs at some point in the future,
8 then some substitute capacity would clearly be needed.

9 Q On a simplistic level, would it be fair to
10 say that you could kind of take your I-24 and just subtract
11 800 megawatts out or 880 megawatts out?

12 A (Raber) That would be one way to do it.

13 Q Our of your installed capacity?

14 A (Raber) That is correct, that would be one
15 way to do it.

16 Q If such a hypothetical assumption were made,
17 wouldn't the absence of some 800 to 900 megawatts of power
18 of TMI-2 cause GPU to have to revise its plans in terms of
19 meeting the overall demand needs of the system?

20 A (Raber) Substitute capacity might have to
21 be planned for depending somewhat on the degree of success
22 in the master plan activities.

23 Q Could it possibly have the impact of
24 altering in-service dates or some of their facilities
25 that GPU is presently attempting to bring on line in the next

1 five to ten years?

2 A (Raber) If you are thinking should these in-
3 service dates be moved closer to the present in time, I have
4 to answer that question with a no, because the present in-
5 service dates for major capacity units are constrained by
6 financing considerations.

7 Should those be relieved, then perhaps the
8 answer to your question would be yes.

9 Q Thank you. As I understand it, on page 2
10 of your testimony there is a suggestion that prudent planning
11 should assume that TMI-2 may not return. I guess in keeping
12 with that expression, that position, do you believe that it
13 is incumbent upon the company to at the present time begin
14 making provisions for meeting your capacity needs without
15 TMI-2?

16 A (Raber) I believe it would be prudent to
17 incorporate such a scenario in our planning, but let me
18 point out that I have testified a few minutes ago that
19 Seward-7 has been delayed relative to the information that
20 is presented in the pre-filed testimony.

21 Q Yes, I understand that.

22 A (Raber) We may lay plans but there is no
23 mechanism of implementing these plans without regulatory
24 recognition of the need to implement those plans, both in
25 a financial sense, a rate-making sense, and in a permitting

1 or licensing sense.

2 Both kinds of support from the regulatory
3 agencies are required.

4 Q I wonder if you could define for me what
5 load factor means when we are talking about generation, a
6 company's generation plant.

7 A (Raber) Are you referring to the ratio of
8 net system requirements, megawatt hours generated during a
9 year relative to what could be generated, given -- suppose
10 you tell me what you mean.

11 Q I think the definition you were starting to
12 give me, sir, was a definition of capacity factor. I think
13 what I am interested in talking to you about, I believe, is
14 the factor that would express the relationship between
15 average demand and peak demand. Are you familiar with that
16 concept, sir?

17 A (Raber) I think I can visualize what you are
18 saying, yes.

19 MR. SELTZER: If Your Honor please, I am
20 perhaps a little bit confused. It seems to me that this
21 pretty clearly may be an area that is not within Mr. Raber's--
22 okay.

23 BY MR. BARASCH:

24 Q Well, are you familiar with the term, load
25 factor?

1 A (Raber) Yes.

2 Q Or is that a phrase I am using out of context?

3 A (Raber) Yes, I am familiar with it.

4 Q The way I described it, does that match your
5 understanding of what that word means?

6 A (Raber) As I understand what you have said,
7 you are looking at the ratio of average demand expressed in
8 megawatts, this is a time average demand, over say a period
9 of a year, relative to peak demand --

10 Q For the system?

11 A (Raber) For the system.

12 Q Fine. Now if we assumed the load factor as
13 so defined for Met-Ed and Penelec, for each of them, is not
14 getting worse over the passage of time, wouldn't it be true
15 that KWH consumption would grow at at least the same rate
16 as KW demand grows?

17 A (Raber) It should be.

18

19 (Transcript continues on next page.)

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1 Q Now take a look over at I-24 again,
2 please, which as I understand, represents your latest load
3 and capacity forecast. Would you accept, subject to check,
4 that I-24 shows peak load growth for Penelec at a growth
5 rate of 2.9 percent in 1981 versus 1980 and 7.4 percent
6 growth between 1982 and 1981? Does that sound right to
7 you, sir?

8 A (Raber) You are looking now on page 1
9 of 6 of that exhibit?

10 Q That is correct.

11 A (Raber) Could you tell me which numbers
12 you are using to get those?

13 Q Well, we show a summer load for Penelec of
14 1760 versus a beginning number of 1710 which we compute at
15 at a rate of 2.9 percent, and in 1982 a figure of 1890
16 versus the 1760 or 7.4 percent. I am just asking you to
17 accept if those numbers are correct.

18 A (Raber) Subject to verification, I will
19 accept them.

20 Q Okay. The 1710 represents your projected
21 summer load for the summer of 1980, is that correct?

22 A (Raber) That is correct.

23 Q Now just turn the question slightly and
24 look at the Met-Ed figures shown there. Would you accept,
25 subject to check, that the 1981 summer peak that was 3.5 percent

1 above the 1980 peak and that the 1982 peak is 4.1 percent
2 above the 1981 peak?

3 A (Raber) Subject to verification, I will
4 accept that.

5 Q Would you turn your attention to I-23,
6 please? Would you accept, subject to check, that the
7 April 1980 forecast of net system requirements in Gigawatt
8 hours shows Met-Ed growing by 4 percent in 1981 and Penelec
9 growing by 3.9 percent in the same time?

10 A (Raber) I will accept that, too, subject to
11 verification.

12 Q Now, from your understanding of the forecast
13 and planning needs of these companies, particularly as
14 shown on I-24, if IMI-2 does not return to service, would
15 I be correct that Penelec would still have a positive
16 winter reserve margin at least through 1988, 1989 under your
17 May 1980 forecast?

18 A (Raber) You are skipping around a bit.
19 The numbers that we were reading before are from the summer
20 load capacity forecast and now you are addressing --

21 Q I am sorry. Let's stay with summer. I
22 misspoke. Just going back to the first page of I-24.

23 A (Raber) The percent reserves are indicated
24 right on that table.

25 Q Yes, I understand, and as I understand it

1 you would still have a positive reserve margin without
2 TMI-2 until we got out to about 1988, 1989?

3 A (Raber) That is possibly true for the
4 summer peak years.

5 Q Fine, but on the other hand, looking at
6 Met-Ed numbers, that would hardly be the case, would it?
7 In fact, they probably don't, excluding TMI-2, don't have
8 enough capacity at the present time?

9 A (Raber) I believe that is correct. If
10 you give me a moment, I would like to verify something. That
11 is correct. Met-Ed would be short of capacity in the late
12 1980's.

13 Q Met-Ed?

14 A (Raber) Excuse me, but I thought you
15 had asked me if Met-Ed would in effect be short of capacity
16 in the late 1980's.

17 Q I asked you if the situation is so much
18 worse they would be short of the capacity at the present time
19 without TMI-2.

20 A (Raber) Without TMI-2, they would be.

21 Q Okay, fine, and also, as I understand your
22 present forecast, that forecast does not call for Met-Ed
23 adding any capacity of its own until May of 1991. Am I
24 reading these exhibits correctly?

25 A (Raber) You are now back in I-24?

1 Q Yes, from which I don't think I have
2 strayed.

3 A (Raber) That is correct. The first
4 capacity addition for Met-Ed is shown in the year 1991.

5 Q What is that capacity?

6 A (Raber) It is a partial ownership of a
7 coal unit.

8 Q We don't even have a name for that plant
9 yet, do we?

10 A (Raber) That is correct. It is merely
11 identified as Coal One.

12 Q So then would it therefore be true to say
13 that Met-Ed will continue either to rely upon its own
14 more expensive units or on purchase power for a larger
15 portion of its energy needs in the future than it did prior
16 to March of 1979?

17 A (Raber) I am not sure what you mean by
18 relying on its own more expensive units. The Met-Ed units
19 are dispatched in conjunction with all the other units
20 within the PJM system and to the extent that the Met-Ed
21 units do not operate and provide energy needed by Met-Ed's
22 customers, purchases will be necessary, yes.

23 Q I guess the reason for that confusion is
24 if we had TMI-1, TMI-2 there would be Met-Ed units that would
25 either not be called upon to serve Met-Ed or there would be

1 hours of the day where Met-Ed would not feel the need to go
2 out and purchase power outside of their own needs both inside
3 the pool and outside the pool?

4 A (Raber) If TMI-1 or TMI-2 were available,
5 Met-Ed's purchases of energy from other utilities would
6 certainly be reduced.

7 Q I believe it would be fair to say that the
8 substantial increase in fuel costs that have been
9 experienced by Met-Ed as a consequence of the accident
10 will not decline during the 1980's unless TMI-1 and/or TMI-2
11 return to service?

12 A (Raber) I cannot offhand think of
13 another vehicle, but that does not mean for sure there isn't
14 one.

15 MR. BARASCH: That is all the questions
16 I have for the witness, Your Honor.

17 THE ADMINISTRATIVE LAW JUDGE: Any further
18 cross-examination?

19 MR. WISE: Yes, Your Honor.

20 BY MR. WISE:

21 Q Mr. Raber, my name is Kenneth Wise. How
22 do you do? Mr. Raber, you testified earlier concerning the
23 fact that a lot of the revised downturn in demand was because
24 of energy conservation. Do you recall that?

25 A (Raber) Yes, I did.

1 Q At least that was your reading from the
2 data?

3 A (Raber) Yes, that is correct.

4 Q And as I understand it, you can't really
5 quantify what portion is conservation and what portion is
6 downturn in the economy or stagnation in the economies?

7 A (Raber) It is difficult to separate those
8 two.

9 Q Does Met-Ed or Penelec or GPU have any
10 tests that they are going to run, customer surveys or the like
11 that would verify or quantify what portion is conservation?

12 A (Raber) Yes, we do surveys on a reasonably
13 regular basis. There was a survey completed within the
14 last few months that indicates such things as a heavy
15 penetration of wood burning stoves, particularly among
16 Penelec's all-electric customers. To some extent Met-Ed's
17 all-electric customers, those classes in particular.
18 Whether this can be converted into a precise quantification
19 of how much energy is saved is problematical, but we do
20 see from the surveys that we run that customers are taking
21 certain steps, that being one of them, and in the commercial
22 area the mandated thermostat settings for commercial
23 buildings, this was President Carter's mandate as of about
24 July of 1979 to set thermostats in commercial buildings back
25 to about 65 degrees or no higher than 65 degrees during the

1 heating season and no lower than 78 degrees during the
2 cooling season. That has produced a one time conservation
3 benefit in the commercial area, but again, I have no way
4 of firmly quantifying that.

5 Q I am a little lost, I am afraid. How are
6 you able to make growth estimates if you cannot quantify a
7 significant factor in your projections?

8 A (Raber) Well, in the residential area,
9 for instance, we can observe the time trends of use per
10 customer and the time trends of the number of customers in
11 both the all-electric class and in the non-total electric
12 classes and these can be projected into the future.

13 Q I don't know if that answers my question.
14 My question is -- Well, let me ask the question in a
15 little different way. Do you have any sort of mathematical
16 equation or anything of this sort to be able to identify
17 what effect conservation is having and will be having on
18 load growth?

19 A (Raber) At this point and time, I have
20 no mathematical equation that will tell me, that will
21 characterize these conservation trends in the way you suggest.

22 Q Are they entered at all into your load
23 growth projections?

24 A (Raber) Yes, by means of 12 month rolling
25 averages of the historical data. That would capture it to

1 the extent that the historical data can be projected into
2 the future. Obviously there is a certain amount of judgment
3 involved in making that projection.

4 Q Do you know what amount of judgment goes
5 into making that projection?

6 A (Raber) The best way I can answer that
7 question is to suggest that you look at the year-by-year
8 forecast of sales and that will tell you for each customer
9 class what we have in fact projected. In a qualitative sense
10 we have projected some of these trends will slow down.
11 We do not think that the penetration rate of these wood
12 burning stoves will continue at its recent past level for
13 very much longer. The thermostat setbacks that I mentioned
14 before get you a one time change basically and then you
15 revert back to something resembling the old growth rate.

16 Q Is it fair to say that over the past five
17 years the actual growth rate is somewhat under what Met-Ed's
18 projections have been for the years previous?

19 A (Raber) At least on a short-term basis
20 Met-Ed's forecasts have been pretty accurate and as I recall
21 some of them have been a bit too high and some of them have
22 been a bit too low.

23 Q Have the projections that Met-Ed has
24 as given us/part of its supporting data in the entire rate
25 relief request been above or below what has actually taken

1 place subsequently?

2 A (Raber) I don't personally have a knowledge
3 of what specifically was in the filings, but on a one-year
4 look ahead basis for the last five or so years ^I have gone
5 back and checked Met-Ed's sales forecast per se without any
6 adjustments being applied to them for purposes of rate filings
7 or anything of that nature. They have generally been
8 accurate to within about plus or minus two percent. As I
9 indicated before, sometimes a little on the high side and
10 sometimes a little on the low side.

11 Q I would like to direct your attention to
12 page 20 of the testimony which you sponsored. The direct
13 testimony. You mentioned that installed reserve should
14 average to be about 25 percent over a long period of time.
15 Do you see that, about a third of the way down the page?

16 A (Raber) Yes, that is correct on an order of
17 magnitude basis over a long period of time.

18 Q How was this figure arrived at?

19 A (Raber) Well, the process for computing
20 reserve margin organization is described in some detail on
21 the pre-filed testimony, especially in Exhibit I-1. Those
22 computations are done more or less on a year-by-year basis
23 into the future or alternatively may be done for selected
24 years and then an average use per planning purposes and that
25 is really what was done to arrive at the 25 percent figure.

1 A few selected calculations were performed. They were
2 roughly in the vicinity of 25 percent. For planning purposes
3 at that particular point in time we adopted the 25 percent.

4 Q Is this a PJM requirement?

5 A (Raber) The PJM contract requires this
6 computation to be done by PJM for all of its member companies
7 each year, but they only look ahead for three years. We use
8 that calculation, the same calculation methodology to project
9 further ahead than the three years for the purpose of
10 capacity planning.

11 Q But the margin of PJM is not GPU's?

12 A (Raber) Well, GPU has an obligation to
13 PJM and the 25 percent refers to GPU's obligation to PJM.

14 Q Do other companies have different margins?

15 A (Raber) Each of the operating companies
16 has a reserve operating margin to GPU or put it another way,
17 the GPU reserve margin obligation is allocated among the
18 three operating companies using essentially the same
19 methodology that is used to compute the GPU reserve margin
20 obligation to PJM.

21 Q Let's say for example Philadelphia
22 Electric, do they have the 25 percent reserve margin
23 obligation?

24 A (Raber) I do not offhand recall what
25 Philadelphia's Electric is. I will be happy to look it up

1 for you.

2 Q Would it be different from GPU?

3 A (Raber) In general, it would be different
4 from GPU's.

5 Q Are there other connecting systems where
6 the reserve capacity obligation is generally smaller than PJM's
7 system?

8 A (Raber) I will be happy to check on that
9 for you if you wish. My guess is that most other power pools
10 have reserve margin obligations for the pool as a whole that
11 are roughly comparable to PJM's pool as a whole obligation.
12 The reserve margin that PJM has set for itself as a pool
13 is 22 percent.

14 Q If I could refer you to Exhibit I-5, page 4,
15 it mentions under the heading use per customer model, first
16 item underneath that is marginal price of electricity. Do
17 you see that?

18 A (Raber) Yes, I do.

19 Q Would you explain that and define that
20 please?

21 A (Raber) Let me point out before I attempt
22 to answer your question that the methodology that is
23 discussed here pertains primarily to the long-term method-
24 ology as opposed to the discreet short-term methodology
25 used to generate near term sales. There is embodied in this

1 model, based on historic data going back 15 or 20 years,
2 a formulation that attempts to mathematically relate use per
3 customer to the price of electricity expressed in real terms,
4 of course, corrected for inflation. I don't know if that
5 answers your question. If you could be more specific as to
6 what you would like me to explain --

7 Q Well, I would like you to explain the
8 term responsive. You are referring to long-range costs, but
9 I don't think you have answered exactly what marginal price,
10 exactly what you are talking about. What is the marginal
11 price and what are you talking about?

12 A (Raber) The formulation that is included
13 in this model is really a typical bill or average bill
14 concept. The price that is required here is really the
15 price on a year-by-year basis to a typical customer who
16 utilizes 500 kilowatt hours per month of electricity. That
17 typical bill has been tracked over a historical period in
18 order to construct the model that we use to gauge a
19 customer's response on a long-term basis only to changes in
20 price.

21 Q Do you have a mathematical formulation
22 which is available or could you make it available in stating
23 the assumption that have gone into the model?

24 A (Raber) I hesitate to do that because the
25 documentations of these models in all honesty was interrupted

1 by the circumstances of the post-TMI environment. I do not
2 have a document that I can send to you that would describe
3 that model.

4 Q Are you saying the models have changed
5 since the accident of TMI?

6 A (Raber) No. It just isn't very well
7 documented.

8 Q Could you explain what you mean?

9 A (Raber) I don't have a report that I can
10 send you that describes the model.

11 Q Referring to the second item under this
12 which is real income, is that adjusted to real dollars?

13 A (Raber) Yes.

14 Q And is the marginal price of electricity
15 which you refer to in the line above based on in terms of
16 constant dollars?

17 A (Raber) Yes, the price of the electricity
18 is expressed in real terms. I believe it was indexed
19 probably to 1967 dollars.

20 Q I would like to refer you to Exhibit I-6,
21 page 2. You have an item in this graph on the near right-
22 hand side, internal price data, you have an arrow pointing to
23 a block within a semi-circle or a circle with the notation
24 non-weather sensitive. I assume that is non-weather
25 sensitive factors. Do you have equations for that?

1 A (Raber) The arrows on this chart as I
2 recall, are not specifically pointed at any one of the
3 football field shaped arrows. They are simply inputs to the
4 entire rectangular box.

5 Q Do you have equations that formulate that
6 function?

7 A (Raber) There are equations that constitute
8 the commercial model, yes.

9 Q Can you make those available?

10 A (Raber) I am afraid I have the same
11 documentation problem that I mentioned before. We really
12 were in the midst of an intensive three year program to
13 improve our forecasting methodology in our areas and we
14 had developed the mathematics and we had used these in
15 preparing the original 1980 long-term forecast, but
16 frankly, we have just not had the resources to do the
17 documentation.

18 Please understand, and I am sure you
19 appreciate this, that since the TMI accident, and
20 particularly more recently, the company has been operating
21 under a very severely constrained budget.

22 (Testimony continued on next page.)
23
24
25

1 Q What are your latest equations that are
2 available and can these be made available?

3 A (Raber) If you would be interested in a
4 discussion of forecasting methodology utilized by not only
5 GPU but other utilities within Pennsylvania, I can refer you
6 to a report that was assembled under the sponsorship of the
7 Governor's Energy Council, and I am referring to a report
8 that was assembled by a consulting firm known as Synergic
9 Resources, Inc.

10 The report is entitled Review of Energy
11 Models and Forecasts Applicable to Pennsylvania and was
12 published early this year, February or March.

13 Q I would like to next refer you to Exhibit I-7,
14 this would be page 1. You have on the third paragraph, it
15 states, industrial demand is modeled as a function of
16 regional output and relative energy prices.

17 What are relative energy prices?

18 A (Raber) The relative prices of electricity
19 and alternative fuels, specifically oil and/or natural gas.

20 Q Is this mathematical model available? Or
21 is your answer the same as --

22 A (Raber) The answer has to be the same. We
23 really did not do the documentation or carry the documentation
24 to the point where it would be releasable and understandable
25 outside the company.

1 Q I would like next to refer you to Exhibit I-21
2 which is a compendium, I guess, of excerpts from opinions of
3 this Commission. Can you briefly state for the benefit of
4 the Commission and me what is the purpose of these excerpts?

5 A (Raber) Yes, the first purpose was to help
6 dispel the notion that a utility all by itself can decide how
7 much capacity to build, what kind of capacity to build, and
8 where and when to build it.

9 As I had indicated in one of my statements
10 a little while ago, active involvement of regulators is
11 required for all of these kinds of construction decisions,
12 and in particular the PUC must provide, through rate making,
13 the financial means to implement these proposed construction
14 programs and other state and federal agencies must provide
15 licenses and permits of various types in order for these
16 construction programs to be implemented.

17 The excerpts that I have presented here in
18 the pre-filed testimony demonstrate that something more than
19 passive concurrence with utility plans has been displayed by
20 the PUC in the past. They demonstrate that the PUC has
21 provided considerable impetus to utility construction plans,
22 and in fact to the accomplishment of those plans in the 1970's.

23 They also demonstrate a past awareness by
24 the PUC of the need to consider customer needs on a long-
25 term basis, not only this week, next week, this year, next

1 year, but five years, ten years, 15 years into the future.

2 It is vital, I think, that this awareness
3 be continued and directed toward present and future rate-
4 making proceedings.

5 Also I would like to point out that history
6 has shown that there have been times when insufficient
7 capacity has been planned, and it is possible under certain
8 circumstances for such conditions to arise again in the
9 future.

10 Q Seward-7 in the GPU system would be the next
11 plant due to be completed?

12 A (Raber) Of any significance, yes. The load
13 and capacity forecast shows a couple of minor hydroelectric
14 plants to be installed before then. They are very small.

15 Q I think you testified that Seward-7 was only
16 in the initial planning stage and that GPU has not made a
17 significant financial contribution to date.

18 A (Raber) That is not quite what I said.
19 Seward-7 is well-planned, it is an advance stage of licensing.
20 The company is simply not in a financial position to implement
21 the construction on a schedule that we would probably like
22 to implement that construction.

23 Q Is that schedule for 1987 or 1989?

24 A (Raber) The data report is in the pre-filed
25 testimony say 1987. I indicated before that since this

1 testimony was filed the in-service date has been delayed to
2 1989. That is because of financial constraints.

3 MR. WISE: That is all I have, Your Honor.

4 THE ADMINISTRATIVE LAW JUDGE: We will
5 adjourn until tomorrow morning at 10:00 o'clock. Who are
6 the witnesses you have tomorrow?

7 MR. OGDEN: Your Honor, we intended to have
8 Mr. Garland and Mr. Newton here, Mr. Garland on depreciation
9 methodology, and as I understand it Mr. Newton on inter-
10 connection agreements and matters of joint interest with
11 both companies.

12 THE ADMINISTRATIVE LAW JUDGE: Very well.

13 MR. SELTZER: Your Honor, if you would excuse
14 us for one moment, may I speak to the witness and see if there
15 is any possible redirect?

16 MR. OGDEN: Your Honor, I might also state
17 for the record that Mr. Huff and Mr. Carroll and Mr. Carter
18 we expect to have here tomorrow as well, so to the extent
19 that we finish up with Messrs. Garland and Newton, if the
20 parties have any questions for any of those three witnesses,
21 perhaps they could prepared in those areas.

22 THE ADMINISTRATIVE LAW JUDGE: Counsel will
23 make a note of that.

24 MR. WISE: Huff, who and Carter?

25 MR. OGDEN: Mr. Huff, Mr. Carroll and Mr.

1 Carter.

2 MR. SELTZER: Your Honor, pardon us for the
3 delay. We have no further redirect. If I may make one state-
4 ment with respect to a data request that was summarized earlier
5 this afternoon by Mr. Suffian, that was posed to Mr. Raber
6 and his staff, during an afternoon recess we were able to
7 supply that information and it is my understanding that that
8 request is no longer outstanding.

9 MR. SUFFIAN: Yes, that is correct, Your Honor.
10 That problem has been settled and the company has provided us
11 with the information.

12 THE ADMINISTRATIVE LAW JUDGE: Is there
13 anything further with this witness?

14 MR. BARASCH: Your Honor, there is only one
15 problem. It was a formal request and we would like to be
16 advised as to the resolution of the matter.

17 MR. SUFFIAN: Could you provide that in
18 writing?

19 MR. SELTZER: Your Honor, may we go off the
20 record for a moment?

21 THE ADMINISTRATIVE LAW JUDGE: Yes.

22 (Discussion off the record.)

23 MR. SELTZER: We will provide an exhibit
24 which will be responsive to that data request to all parties.

25 MR. SUFFIAN: Thank you very much.

1 THE ADMINISTRATIVE LAW JUDGE: Very well.

2 We will adjourn now until tomorrow morning at 10:00 o'clock.

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4 (The hearing was adjourned at 4:50 o'clock p.m.)

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9 I hereby certify that the proceedings and
10 evidence are contained fully and accurately in the notes
11 taken by me during the hearing of the within cause, and that
12 this is a true and correct transcript of the same.

13 MC RBACH & MARSHAL, INC.

14
15 By

James P. O'Hara
JAMES P. O'HARA

16
17 By

Betty B. Marshal
BETTY B. MARSHAL

18 11-13-80

19
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