

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Title: BRIEFING ON STATUS OF TVA NUCLEAR PROGRAM

Location: ROCKVILLE, MARYLAND

Date: JANUARY 25, 1994

Pages: 64 PAGES

SECRETARIAT RECORD COPY

NEAL R. GROSS AND CO., INC.

COURT REPORTERS AND TRANSCRIBERS
1323 Rhode Island Avenue, Northwest
Washington, D.C. 20005
(202) 234-4433

DISCLAIMER

This is an unofficial transcript of a meeting of the United States Nuclear Regulatory Commission held on January 25, 1994, in the Commission's office at One White Flint North, Rockville, Maryland. The meeting was open to public attendance and observation. This transcript has not been reviewed, corrected or edited, and it may contain inaccuracies.

The transcript is intended solely for general informational purposes. As provided by 10 CFR 9.103, it is not part of the formal or informal record of decision of the matters discussed. Expressions of opinion in this transcript do not necessarily reflect final determination or beliefs. No pleading or other paper may be filed with the Commission in any proceeding as the result of, or addressed to, any statement or argument contained herein, except as the Commission may authorize.

NEAL R. GROSS
COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

- - - -

BRIEFING ON STATUS OF TVA NUCLEAR PROGRAM

- - - -

PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland

Tuesday, January 25, 1994

The Commission met in open session,
pursuant to notice, at 10:00 a.m., Ivan Selin,
Chairman, presiding.

COMMISSIONERS PRESENT:

IVAN SELIN, Chairman of the Commission
KENNETH C. ROGERS, Commissioner
FORREST J. REMICK, Commissioner
E. GAIL de PLANQUE, Commissioner

NEAL R. GROSS
COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

ANDREW BATES, Office of the Secretary

KAREN CYR, Office of the General Counsel

OLIVER KINGSLEY, JR., President, TVA Nuclear and Chief Nuclear Officer, TVA

OSWALD ZERINGUE, Senior Vice President, Nuclear Operations, TVA

WILLIAM MALEC, Executive Vice President and Chief Financial Officer, TVA

MARK MEDFORD, Vice President, Technical Support, TVA

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

P-R-O-C-E-E-D-I-N-G-S

10:00 a.m.

1
2
3 CHAIRMAN SELIN: Good morning, ladies and
4 gentlemen.

5 The Commission is pleased to welcome
6 representatives from the Tennessee Valley Authority to
7 brief us on the status of their nuclear program. It's
8 been quite awhile since we've had the Authority here.

9 Mr. Kingsley, we're pleased to have you
10 here.

11 This is important to the Commission first
12 of all because of the size of the TVA nuclear program
13 and the impact that TVA's performance has on NRC
14 resources. We have been encouraged by the actions
15 taken by the Board of Directors to exercise leadership
16 in the area of the nuclear program to improve the
17 performance of the program. We're very interested in
18 your presentation today.

19 Copies of the viewgraphs are available.

20 Commissioners?

21 Mr. Kingsley, the floor is yours.

22 MR. KINGSLEY: Thank you very much, Mr.
23 Chairman.

24 I'd like to introduce our team. We have
25 our Executive Vice President, Bill Malec, Chief

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 Financial Officer, who will be talking about finances
2 on our plants. We have Ike Zeringue, our Senior Vice
3 President of Nuclear Operations. He'll be talking
4 about staffing and detailed questions about the
5 operation of our plants. Mark Medford, our Vice
6 President of Technical Support, will be talking
7 specifically about the Watts Bar plant status and
8 employee concerns.

9 (Slide) We do intend to brief you this
10 morning on a number of key aspects of our nuclear
11 program. Such matters as our -- if I could get the
12 agenda on the slide, please. Thank you.

13 Our sequencing of our nuclear plants, our
14 projected load growth, our actual load growth, what
15 we've experienced, our staffing plans, our
16 performance, financial matters associated with
17 bringing these plants back in, key aspects of doing
18 engineering first, followed by construction. Then
19 last but certainly not least, initiatives we've taken
20 with the Watts Bar plant and our employee concerns.

21 CHAIRMAN SELIN: Thank you.

22 MR. KINGSLEY: (Slide) If I could have
23 the next slide.

24 TVA's future is literally tied to our
25 nuclear power program. It's the key to our being

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 competitive. It has been a key to our being able to
2 hold our rates constant since 1988 so far in our
3 plants, and it's a key to our going forward over the
4 next four years.

5 The proper, safe, reliable operation of
6 our Sequoyah nuclear power plant and our Browns Ferry
7 Unit 2 are the top priorities for the Tennessee Valley
8 Authority. Our Sequoyah plant has been a very
9 expensive lesson and we intend to talk to you about
10 that and proper operation later in our presentation.

11 Our Watts Bar Nuclear Unit 1 and our
12 Browns Ferry Unit 3 are actually needed now in
13 supplying sufficient power to the Tennessee Valley
14 Authority system. If you look at our generation
15 record, we set an all-time generation record on the
16 TVA system in the summer of 1992. It's slightly over
17 23,000 megawatts. That's out of a capacity of a
18 little over 25,000 megawatts, summertime rating. We
19 set a new summer peak on our system this summer of
20 23,900 megawatts, higher than we had ever peaked in
21 the summer. We set an all-time winter peak last week
22 on our system, on Tuesday night, of almost 25,000
23 megawatts. Then on Wednesday morning, we interrupted
24 somewhere between 1500 and 1800 megawatts of power on
25 our limited interruptable schedules and on our economy

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 surplus schedules. Had we not done that, we feel like
2 that we would have almost reached 26,000 megawatts.
3 So, you can certainly see the need for these plants,
4 particularly when you figure in desired reserves.

5 During these summer peaks and during this
6 winter peak, we were purchasing approximately 3,000
7 megawatts of power. We were selling some of that
8 power to the north where it was very tight on systems
9 like American Electric Power, the Virginia systems and
10 that type thing that you people are well familiar
11 with, but a net purchase of over 2,000 megawatts.
12 During our summer peak, we did not have either one of
13 our Sequoyah units. During our winter peak, we did
14 not have Sequoyah 1, nor did we have our Cumberland 1,
15 which is our last plant. Actually, our Cumberland 1
16 and 2 are a little over 1300 megawatts. But we had a
17 blade throw event back in December and will not return
18 that unit to service until April of this year.

19 Our Board is committed to making nuclear
20 even better. They've shown this commitment by recent
21 reorganization, rededicating me full-time to nuclear
22 power, something that I had suggested to the Board
23 back in July, and certainly they're going to support
24 us with resources. In fact, we have a full financial
25 plan out through the year 2000 with sufficient monies

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 for operation and maintenance expense and capital and
2 Mr. Malec will address that.

3 (Slide) Could I have the second slide,
4 slide 3, please?

5 This slide is fairly busy, but there are
6 a number of key points on the slide. First, as I
7 mentioned in my introductory remarks, it does
8 highlight the sequencing of our plants. It shows that
9 across the top where we do an engineering first
10 approach. Only work on no more than two plants from
11 an engineering standpoint at one time and then finish
12 construction. We've paid a terrible price in the past
13 for being hand to mouth in engineering and not being
14 ready for construction. We're essentially out of that
15 though on our Browns Ferry 3 plant and we're out of
16 that on our Watts Bar 1 plant.

17 If you look at the blue lines, they are
18 the requirements on the TVA system. This includes our
19 projected load growth. You can see though that the
20 projection for 1994 kind of missed the mark here.
21 It's a little bit short in what our system was
22 predicted to grow. It does include reserve margin of
23 approximately 15 percent. We are evaluating the
24 reserve margin on a continuing basis as we improve the
25 reliability of our system because that does mean money

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 and when we bring plants back in.

2 We are growing and the load growth rate
3 projections are at 2.3 percent energy growth on our
4 system. For the last five years, we have actually
5 grown at 2.3 percent over this five year period of
6 time. Our summer peaks over this five year period of
7 time, weather adjusted, have increased at 2.5 percent.
8 Our winter peaks, and this is strictly preliminary
9 because we do adjust this for the weather, is
10 approximately three percent, going back. You actually
11 have to throw the very cold weather in 1989 out of the
12 equation and get kind of a best fit curve in there.

13 Our major growth drivers are in our
14 commercial sector at approximately 2.9 percent. Our
15 industrial is growing at approximately 3.1 percent.
16 That's our direct serve and our industrial customers
17 that we serve through our 160 distributors on the TVA
18 system.

19 Our economic forecast is slightly above
20 the national average, some 3.2 percent real growth and
21 some versus a national average projection of 2.6
22 percent. We have no plans for any additional fossil
23 capacity on our system at this time. We are upgrading
24 our hydroelectric plants, a program that former
25 Chairman Runyon started some three and a half years

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 ago, and we will add approximately 300 megawatts as we
2 go through and upgrade our hydroplants over this
3 period of time and modernize them because they do have
4 an average age of approximately 55 years.

5 COMMISSIONER REMICK: Oliver, two
6 questions. Isn't the 15 percent reserve margin on the
7 low side or is that because you're so large and have
8 diverse plants? I thought at one time it used to be
9 22 percent and then more recently people saying 17
10 percent.

11 MR. KINGSLEY: Well, it is a little bit
12 low, but we have been able to operate satisfactorily
13 with that because of our fossil plants. In fact, we
14 at one time were looking at 22 percent. Then we
15 dropped that down to 18. Our fossil system had such
16 a poor reliability record, which we have now gotten
17 above the national average in the last three years.
18 So, we've been able to lower that. So, we continue to
19 look at that. We also have operating reserves of our
20 largest unit plus 500 or 600 megawatts. We've been
21 able to make it so far with that. We've also upgraded
22 all of our combustion turbines, spent well over \$100
23 million upgrading those, which we did not have those
24 in operable fashion. So, we've been able to operate
25 satisfactorily. But the proof will have to be in the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 pudding how we actually do. It is a number that we're
2 not going below until we have a much better track
3 record.

4 COMMISSIONER REMICK: And the second
5 question, what is the load on the gaseous diffusion
6 plants compared to what it was a few years ago or what
7 you project?

8 MR. KINGSLEY: It's extremely small right
9 now and we don't serve any of those directly. We do
10 serve through a subsidiary on the plant in Kentucky,
11 but we don't serve any of that. We actually reached
12 a settlement and I believe we have, Bill, one more
13 year?

14 MR. MALEC: One more year.

15 MR. KINGSLEY: On receiving those payments
16 from the Department of Energy.

17 COMMISSIONER REMICK: I see. Okay.

18 MR. KINGSLEY: (Slide) Could I have slide
19 4, please?

20 This slide is to highlight what nuclear
21 means to the TVA system, some 13 percent of our
22 capacity. That will rise to some 32 percent, assuming
23 all of our plants are completed in the year 2006.

24 (Slide) Slide 5.

25 COMMISSIONER REMICK: What is the reason

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 you do not plan to add anymore fossil plants or coal
2 plants at least?

3 MR. KINGSLEY: The reason that we don't
4 have any plans right now from a new plant standpoint
5 is, one, we have so much money invested in our nuclear
6 plants that when you look at cost to complete, that
7 becomes a low-cost option. It also would take us some
8 ten years to site and license a new fossil plant. We
9 have our clear air program mapped out for phase 1
10 fully. We need all those plants. The only thing that
11 we would look at currently would be some type of
12 repowering on some of our very old plants such as our
13 Shawnee plant in Kentucky, our New Johnsonville plant,
14 which was our first fossil plant, and those types of
15 things. But no build from scratch at the current
16 time.

17 On slide 5, this simply shows how much
18 energy we would get out of our plants. It shows the
19 contribution from our fossil, our hydroelectric, our
20 gas turbines and that should be gross energy instead
21 of net. We actually had almost 127,000 megawatt hours
22 of power requirements on our system for 1993.

23 (Slide) Slide 6.

24 COMMISSIONER REMICK: How do your fossil
25 plants rate from a heat rate standpoint nationally?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 MR. KINGSLEY: We have on the TVA system
2 the absolute best fossil plant in the United States,
3 our Bull Run plant, which runs at about 8600 BTUs per
4 kilowatt. And then we have some of the very worst
5 fossil plants in the United States in some of our very
6 old plants, which do not have reheat and some of those
7 things, which run almost 11,000. They're very small
8 units, 90, 110 megawatts. So, those are some of the
9 plants that we would look at from a repowering
10 standpoint down the road. But we have not done that
11 as of this time.

12 COMMISSIONER REMICK: What type of plant
13 is your best performing plant?

14 MR. KINGSLEY: It's a Combustion
15 Engineering combined cycle, pressurized furnish.

16 COMMISSIONER REMICK: Oh, I see.

17 MR. KINGSLEY: Yes. 890 megawatt. We've
18 just overhauled that unit and made tremendous
19 improvement in the efficiency on it, the first time
20 that had ever been done on our system.

21 I'd like to invite your attention now to
22 the slide 6, which talks about the integrated resource
23 plan. The Energy Policy Act passed in October of 1992
24 requires that the Tennessee Valley Authority have an
25 integrated resource plan. We have been developing

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 that process for the last year. We have studied a
2 number of integrated resource plans from other
3 utilities, tried to take the best points and the worst
4 points, combine that. It does have a number of
5 facets. First, we have to remain competitive. But
6 the three main facets, that it will look at all of our
7 supply side options, it will look at our customer
8 requirements, our customer interfaces. It will
9 involve a new series of what we call technologies.
10 Technologies could be electric cars, could be
11 different types of energy involvement with a
12 manufacturing process or that type of thing. It also
13 involves a full spectrum on demand-side management
14 that we're in the process of rolling out. We had
15 stopped that program back some four years ago and
16 we're in the process of reinstituting that now. That
17 will all be rolled out.

18 You can see on the slide that we will
19 publish a notice of intent here within the next month.
20 Then we'll go forward through a series of public
21 meetings which we have already had close interaction
22 with our customers, both direct serve, our
23 distributors, with the environmental community. We're
24 in the process of establishing an advisory board for
25 our system. This will all culminate in a draft plan

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 come summer of 1995 and then hopefully be approved by
2 the Board in December of 1995. We've put a great deal
3 of work into this plan and certainly intend to roll it
4 out and try to do the right thing. It will not have
5 a certain set answer. Our job in the nuclear program
6 is to give our nuclear plants the very best chance and
7 you can see that the Bellefonte plant is included in
8 the integrated resource plan. The Watts Bar Unit 2 is
9 included and Browns Ferry Unit 1 is included. So,
10 there will be a rigorous cost benefit on bringing
11 these plants back and operating these plants. Our
12 Watts Bar Unit 1 and our Browns Ferry Unit 3 will be
13 included in the integrated resource plan.

14 COMMISSIONER REMICK: Oliver, it sounds
15 like it's a forward-looking plan of additions, but not
16 what you plan to do with existing facilities including
17 fossil and hydro and so forth?

18 MR. KINGSLEY: No, it will look at all of
19 that. It will look at such things as our hydro
20 modernization. Now, we don't expect to stop that, but
21 we do have a number of environmental considerations in
22 the plan such as what we're doing with our dams. We
23 have done a complete model on the TVA system for
24 global warming, acid rain. So, we'll certainly have
25 to look at CO2 and those types of things in the plan.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 COMMISSIONER REMICK: Well, it appears
2 that leaving out of the plan are, it appears at least,
3 existing units and units that you feel are about ready
4 to come on-line. That's why I thought perhaps -- the
5 ones you've mentioned are all future plants. So,
6 that's why I thought perhaps this is looking ahead at
7 future planning and not the total system.

8 MR. KINGSLEY: It is actually looking at
9 both, but we're so close to completing a plant like
10 Watts Bar.

11 COMMISSIONER REMICK: Right.

12 MR. KINGSLEY: So, we're taking that as we
13 will definitely finish that plant. We'll definitely
14 bring back Browns Ferry Unit 3. But it will look at
15 current TVA plants say from an environmental
16 standpoint. I would expect that we would have to
17 relook at phase 2 of the Clear Air Act as a part of
18 this, particularly in light -- if there were
19 legislation involving some type of CO2 limit or global
20 warming limit in that. So, it includes all of that.

21 COMMISSIONER REMICK: I see. Okay.

22 COMMISSIONER ROGERS: So the slide is not
23 correct then? It says will not -- Watts Bar 1 and
24 Browns Ferry 3 will not be included. You just said
25 they will be included.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 MR. KINGSLEY: No, they will not be
2 included. Those two units will not be, but the other
3 four nuclear plants, Watts Bar 2, all of Bellefonte
4 plant and Browns Ferry 1 will be included.

5 COMMISSIONER ROGERS: Okay.

6 MR. KINGSLEY: Any questions about
7 integrated resource plan?

8 COMMISSIONER REMICK: What was
9 congressional intent? I'm still lacking and I must
10 admit it's incidental to our interest, but just out of
11 curiosity. What's the purpose because I'm still a
12 little bit confused of why you're saying some plants
13 are out and other plants are in. So, I'm at a loss.
14 What is the overall purpose of the resource plan?

15 MR. KINGSLEY: The overall purpose of the
16 integrated resource plan was to ensure from a
17 congressional standpoint that TVA actually did that,
18 that there was proper public interaction, that
19 environmental considerations were actually in the
20 plan. We had stopped our conservation program. We
21 have reoriented that to ensure we had that. So, it
22 was making sure that we covered the whole nine yards.

23 COMMISSIONER REMICK: I see.

24 MR. KINGSLEY: That's why that was put in
25 the Energy Policy Act.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 COMMISSIONER REMICK: I see. Okay.

2 MR. KINGSLEY: (Slide) Slide 7.

3 I'd like to just show you what our SALP
4 reports are. They're mixed at best and they're
5 certainly consistent with what our assessments are.
6 We're going to talk about that.

7 (Slide) Slide 8.

8 We have had significant progress on our
9 Browns Ferry Nuclear Power Plant, simply a
10 manifestation of what good clear expectations and good
11 fundamental work practices can bring about. We did an
12 exceptionally good job on our refueling outage, which
13 we started January a year ago, almost to the day,
14 where we are today, and brought that plant back. We
15 didn't have any events. The largest outage I've ever
16 been associated with, well over 200 design changes,
17 and for the first time that anything I know about the
18 Browns Ferry plant, we meet all NRC requirements on
19 that plant. We had gone back to the middle 1970s and
20 not kept up from the fire, Three Mile Island. So, we
21 are now up to date on that. We are also putting all
22 of that in on our Browns Ferry Unit 3 when we bring
23 that back.

24 On our Watts Bar plant, we shut down
25 construction actually in December of 1990. We kept

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 that construction shut down throughout the year 1991.
2 We did restart in the first half of 1992 on a limited
3 but controlled basis. We've had good quality work on
4 the plant since then. We've had little rework. Our
5 schedule does support fuel loading sometime later this
6 year, but we are not putting a schedule out until we
7 see how we do. We've had three schedules on that
8 plant and none of them have we met, due to not having
9 the work identified, due to not being able to
10 effectively manage the work. So, our next milestone
11 is our hot functional testing and then once we get
12 through that we'll look at our track record and we'll
13 actually put a schedule out. I would say it would be
14 sometime in the last quarter if things go well on that
15 plant. But quality is the watch word there and not
16 how fast we get there. We actually have the resources
17 controlled on the plant, head count caps and we've
18 seen much improvement.

19 COMMISSIONER REMICK: A few years ago you
20 folks placed a lot of emphasis on the need and I
21 forget the language, but improving efficiency of
22 activities, output and so forth. How have you come
23 with that? Have you been able to improve it? I think
24 it was a concern on your part.

25 MR. KINGSLEY: Yes. We have made,

1 Commissioner Remick, some big improvements in that
2 area. Actually about 25 percent improvement in our
3 productivity on all of our plants. It is still not as
4 high as we would like it, but it is much better. Our
5 Watts Bar plant has a rigorous series of controls and
6 it actually has our lowest productivity and our
7 highest unit for units rates simply because of all the
8 checks and the procedures and the training that we've
9 had to put in on that plant.

10 COMMISSIONER REMICK: Okay.

11 MR. KINGSLEY: We do have the plant
12 staffed. We are completing our training. We're going
13 to six shifts this next month on our operating side.
14 We have also stabilized the site staff there so that
15 we are out of the massive downsizings and hopefully we
16 can carry that staff into our Unit 2 work.

17 On our Sequoyah plant, we've seen a marked
18 improvement in our balance of plant condition. We
19 have actually worked over 15,000 work orders on the
20 Sequoyah plant since we shut the plant down in early
21 March of last year. We have dedicated teams working
22 on our backlogs, something that we had taken care of
23 on our Browns Ferry plant and we are taking care of on
24 our Watts Bar plant. We've made significant
25 improvement in our identification and correction of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 problems. But certainly there's much improvement
2 still needed at our Sequoyah plant.

3 (Slide) Slide 9.

4 COMMISSIONER REMICK: As you go from
5 operating existing plants to starting up or restarting
6 other plants, how do you assure that you -- and if you
7 transfer personnel from one plant to another, that
8 you're going to maintain the -- I don't want to say
9 productivity, but the safe operation of the plant.
10 You've made some changes on Browns Ferry 2, major
11 changes, and that plant has done very well. How do
12 you assure yourself that with those changes you're not
13 going to lose that performance?

14 MR. KINGSLEY: Well, we have a standard
15 way of doing business at our Browns Ferry plant and at
16 our Watts Bar plant. We are putting that in place at
17 our Sequoyah plant, some restart requirements on the
18 Browns Ferry plant that we're now putting into place,
19 such as closing out all the work, tracking the work
20 better on our Sequoyah plant. We also have, I think,
21 an extremely good management team at our Browns Ferry
22 plant in our plant manager, Rick Machon, and in the
23 other team. Ike here was able to bring in a large
24 number of people and we have several people who are
25 capable, I think, of managing that plant that we've

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 actually trained and developed over the last five
2 years. So, I feel very good about the Browns Ferry
3 plant and I continue to challenge the staff that let's
4 show the NRC that we're not going to slip and they've
5 been very good at responding to that challenge.

6 COMMISSIONER REMICK: There's certainly
7 been more than one occasion or examples where in the
8 past people have had a good operating unit and they've
9 taken some of their better people and moved it on to
10 another unit and then that plant that had been doing
11 very well went downhill over time.

12 MR. KINGSLEY: Right here.

13 COMMISSIONER REMICK: That's what I was --

14 MR. ZERINGUE: Our intent was to assure
15 that we have adequate management systems, programs and
16 processes in place to support the men in the field
17 doing the work such that the organizational
18 performance is not dependent upon the qualifications
19 of an individual, but upon the staff as a whole.

20 COMMISSIONER REMICK: Well, I certainly
21 agree with that, but sometimes a difference seems to
22 be in individuals. Even in the same structure,
23 sometimes the individuals can make a considerable
24 difference in carrying out what was the intent of the
25 procedures and the structure.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 MR. KINGSLEY: Slide 9.

2 From an overall standpoint, we have, I
3 think, three key areas that are less than satisfactory
4 from our standards. First is in our fundamental work
5 practices and performance expectations to our line
6 worker, that you are responsible. We're expecting you
7 to follow procedures. We're expecting you to carry
8 out the work. We have some improvement to make in
9 that. It was, I think, a root cause of some of the
10 shutdowns and we have made some progress, but it's
11 still not sufficient.

12 A second area that we have to work on is
13 to clearly identify and track all of our work, in the
14 operations area, in the maintenance area, in the
15 technical work. We've done an exceptionally good job
16 at Browns Ferry and actually have that as a way of
17 life, that we do not let the backlogs get up, that we
18 close the process. But we have not done that at our
19 other plants or at our Sequoyah plant. Then you have
20 to make sure that you manage that work, you actually
21 do it. And last, we must ensure that we do not have
22 a Sequoyah situation ever reoccur on the TVA system
23 and that we start Watts Bar Unit 1 up correctly and so
24 that we make this as a way of life.

25 So, these are three things that we see

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 from an overall standpoint that we need to continue to
2 work on.

3 (Slide) If we move to slide 10, I'd like
4 to talk specifically about the individual plants,
5 where we need to improve.

6 On our Browns Ferry plant, we need to
7 continue to work on our personal involvement, to
8 ensure some process improvement, efficiency
9 improvement. We're still not as simple as other
10 plants. We have put in a number of Band-Aids and
11 tourniquets over the years to take care of those
12 issues with personnel performance. We've got to build
13 on our success. We are not still to the top standards
14 of some of the best run plants in the country. We
15 worry about complacency on that plant. We've got to
16 show that we can operate Unit 2 and then successfully
17 bring back Unit 3 at the same time. We are making
18 progress. We've finished our engineering on the
19 plant, but those are the challenges that I see at that
20 plant, in addition the management changes that we
21 talked about earlier.

22 On the Watts Bar plant, we've got to
23 continue to emphasize the quality of the work. We
24 have had some problems with that. Not in the worker
25 out in the field, but clearly identifying in some of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 the corrective action programs things that need to be
2 incorporated in the work plans. We've been back
3 through. We think we've caught all that and we've
4 actually had a good track record for the last two and
5 a half to three months with doing the work correctly.

6 Last but not least, we have to demonstrate
7 that we can put that plant in an operational
8 condition. The staff, even though a number of them
9 are new, a number of people are from outside, have not
10 operated a plant for a very long period of time. On
11 our Sequoyah plant, very simply we're missing some
12 operation and maintenance fundamentals. You can see
13 it in the SALP report. It goes back in time in some
14 areas, it is current in time in others, such things as
15 configuration control, such things as having the
16 proper engineering involvement in the balance of
17 plant, such things as having the proper engineering
18 calculations on the balance of plant. We did not have
19 those on the Sequoyah plant. We had literally two
20 standards, one for the primary plant and second for
21 the secondary plant. You can't operate a power plant
22 like that. We had large numbers of hourly workers
23 that we have moved out of our system who are working
24 on systems there. As I said earlier, 15,000 work
25 orders. That's a tremendous amount of work just to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 bring that plant up to what I'll call an average
2 condition right now. We did have problems in our
3 start-up, three shutdowns over that period of time
4 which we're not satisfied that we did a thorough and
5 complete job on the restart, but we are putting that
6 in our lessons learned.

7 COMMISSIONER ROGERS: What really happened
8 at Sequoyah? The Sequoyah story seems to have gone
9 back for years and years. When I first came on the
10 Commission six years ago Sequoyah was a concern and
11 all kinds of efforts were being made to get it on its
12 feet and so on and so forth. What's your analysis of
13 the root cause? These are things that have to get
14 fixed, but they're not root causes.

15 MR. KINGSLEY: One of the -- there are a
16 number of root causes. If you take the operations
17 area, such things as the basic configuration control
18 being incorporated in the procedures, that was not in
19 place. Such things as having the proper expectations
20 laid out and the good conduct of operations. That was
21 not laid out properly.

22 If you look at the maintenance area, the
23 dual standard between safety-related equipment and
24 non-safety related. We did track the backlogs, but we
25 were unsuccessful in working them down. We didn't

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 have the proper standards on the balance of plant,
2 what was really wrong with the plant. We were living
3 with marginal operations.

4 The Sequoyah plant is fairly complex from
5 a number of shared systems. You have to have all four
6 diesels as an example. We now know that periodically
7 we're going to have to shut both Sequoyah plants down
8 at the same time in order to do the proper
9 maintenance. You just can't operate them together.
10 So, we'll have to dovetail a unit shutdown in with a
11 refueling in order to do the maintenance.

12 If you compare it to the Browns Ferry Unit
13 2 start-up, there are a number of what I call
14 completely closed loop processes that were put in
15 Browns Ferry, such as the engineering paper was
16 totally closed on Browns Ferry. All the procedures
17 were totally updated. Those were not put in place.
18 Then there was simply a relaxation of some of the
19 proper standards over the five years that I've been
20 here. So, there's a whole series of problems with
21 that plant. We had a large number of NRC commitments
22 that we have satisfied, some 850 over this five year
23 period. We've done a good job meeting those, but at
24 the same time we should have put additional attention
25 on kind of the basics of operating a nuclear power

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 plant, particularly from the power side of the house.
2 Some of the instrumentation on the turbine generator
3 had never been calibrated that we found. When you say
4 we did over 200 design changes, some 85 percent of
5 them during this shutdown all on the balance of plant.
6 We didn't have the proper calculations for flows,
7 pressures. We didn't have proper configuration
8 control on the balance of plant. The pipe rupture
9 actually had a wetted steam line coming out of an
10 excess vent on a moisture separator that went into an
11 extraction line that was not on the prints. So,
12 therefore, that was not put in the proper computer
13 codes. Therefore the line ruptured. We didn't have
14 the proper steel in a number of lines. So, it just
15 goes on and on. We didn't have the right standards
16 for the switchyard, as evidenced by the trip. So,
17 there are just a series of problems on that plant that
18 we have made a lot of effort to correct, but it's
19 still not exactly where it should be.

20 (Slide) I'd like to go now to slide 11
21 and talk a little bit about a recent reorganization.

22 We did announce two weeks ago a
23 reorganization. This will be effective on February 7.
24 We are dividing the principal parts of the Tennessee
25 Valley Authority management to a nuclear entity. I

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 will head that up. We have a Chief Operating Officer
2 who will take our fossil and hydro, our customer
3 group, which is our transmission distribution, our
4 interface with our customers and our resource group,
5 and then we have all of our administrative functions
6 will be headed under one function with the Chief
7 Financial Officer, Mr. Malec, reporting directly in.
8 Then we're going to study over the next year making
9 this nuclear entity a totally separate organization.
10 We'll look at all the support facets and look at
11 whether we bring them in or not, rigorous cost
12 benefit, seeing how we do that now, can we do it
13 better. Totally aim though that nuclear is different,
14 supporting nuclear fully. I have full commitment of
15 all three directors, including our chairman, to
16 support nuclear. This is what we're about. We would
17 expect to keep you fully informed of what our studies
18 are showing.

19 We've also made some other organizational
20 moves. Ike Zeringue here heading up our operating
21 plants. We have all of our support under Doctor
22 Medford in one organization. This was part of our
23 root cause on our Sequoyah shutdown, who is
24 responsible for various programs. So, this is where
25 we're headed with our organization. Any questions

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 about that?

2 COMMISSIONER ROGERS: Yes. What's the
3 role of the nuclear advisor?

4 MR. KINGSLEY: The nuclear advisor has
5 been a position that came about during the shutdown
6 period for the Board of Directors where the Board was
7 not fully informed on the nuclear plants. We have had
8 that position since then. It actually operates
9 independent of my organization, goes to the plants,
10 deals directly with the Board of Directors, deals
11 directly with me, and it's strictly in there to ensure
12 that the Board has an independent pulse of the
13 organization.

14 COMMISSIONER REMICK: Just a matter of
15 curiosity. Could you explain the dashed line going
16 down the diversity, education and training?

17 MR. KINGSLEY: Yes, I can explain that.
18 The Tennessee Valley Authority has needed a conscience
19 in the diversity area. So, in order to do that,
20 Chairman Runyon created a position reporting directly
21 to the Board of Directors to look at our equal
22 opportunity, affirmative action, deal with minority
23 communities. So, we want to ensure that the Board is
24 fully informed on that. So, that's why that position
25 is so organized.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 COMMISSIONER REMICK: I see. So, it is a
2 person that fills that position?

3 MR. KINGSLEY: Yes, right.

4 I'd now like to turn it over to Bill Malec
5 and he'll talk about our capital and O&M budget plans.

6 MR. MALEC: Thank you very much.

7 I'd like to just take a couple moments of
8 your time, and obviously if you have questions feel
9 free to ask them, to discuss the relationship of the
10 nuclear program to the overall ability of the TVA to
11 finance and support that nuclear program. I've
12 prepared a few slides which I think illustrate that.

13 (Slide) The first shows the levels of
14 capital expenditures for all of TVA to nuclear
15 expenditures. As you can see from a rough inspection
16 of the chart, the nuclear expenditures, while large,
17 do not constitute even the majority of the capital
18 expenditures of the Tennessee Valley Authority. I
19 think it's indicative from that that while nuclear is
20 an important vital part of the TVA and one that we
21 intend to fully support and have the financial
22 capability to support, it is not the largest part of
23 the capital expenditures that we anticipate for the
24 next -- on through the year 2000.

25 COMMISSIONER REMICK: Total capital

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 expenditures, are those limited to the energy sector
2 of TVA or total TVA?

3 MR. MALEC: Yes. What we're showing here
4 is the total power side of the business.

5 COMMISSIONER REMICK: Okay.

6 MR. MALEC: The resource development side
7 of the business is a relatively small part of the
8 total, less than two percent of the total
9 expenditures.

10 TVA will need to raise new funds in the
11 capital markets and obviously has done so successfully
12 in the past. As a matter of fact, our level of
13 external funding requirements over the next five years
14 or through the year 2000, I guess, actually for the
15 next six years, is somewhat less than what we have
16 done in prior years. As Mr. Kingsley has indicated,
17 we have been able to, since 1987, continue our program
18 without any rate increases and we have had certainly
19 good access to the financial markets and we are an
20 agency borrower similar to Sally Mae, Freddie Mac and
21 so on. I anticipate no problems in that arena. We
22 have had the ability to raise any amount of money that
23 we need to in the external capital markets.

24 CHAIRMAN SELIN: But you've gone over \$30
25 billion of debt now with your offerings this last

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 summer. Is that --

2 MR. MALEC: No, that's not correct. We
3 have an overall capital limitation by Congress that
4 was established in 1979 of \$30 billion. For purposes
5 of our debt ceiling, we have approximately, round
6 numbers, \$25 billion outstanding now. We wouldn't
7 anticipate that we would have to go back to the
8 Congress until after the year 2000 for an increase in
9 the debt limitation.

10 CHAIRMAN SELIN: Mr. Malec, what's the
11 interaction between integrated resource plan and the
12 financial planning?

13 MR. MALEC: The integrated resource plan
14 is a total examination of the sources that will be
15 required or the generation of sources that are going
16 to be required in the future. It will, of course, go
17 to the lowest cost and producing the lowest cost
18 generation or incremental generation for the Tennessee
19 Valley Authority. So, it is intertwined in that
20 manner. The forecasts that we're showing you here are
21 the planning that we have now. If the integrated
22 resource plan was to produce a lower cost of
23 generation from some source, then these numbers would
24 be improved.

25 CHAIRMAN SELIN: And the related question

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 is what is the public input to the IRP?

2 MR. MALEC: There will be extensive public
3 meetings over a period of a year and a half.
4 Throughout the valley there will be consistencies of
5 all types who will be invited to participate in an
6 open and public process which will be indeed a part of
7 the integrated resource plan process.

8 (Slide) Finally, I've prepared a slide
9 here that -- if you would focus on the total level of
10 nuclear operation and maintenance expense. While
11 these numbers are very large obviously for all of us,
12 \$400 or \$500 million is a lot of money, if you'll look
13 down at the bottom of that chart you'll see the
14 overall level of revenue for TVA. That is \$5.4
15 billion, for example, in fiscal year 1994. It is a
16 very small part of the total revenues of the TVA that
17 are needed to support the nuclear program. TVA is
18 committed to its support of the nuclear program, Mr.
19 Kingsley and his team, and has the financial
20 capability to do so.

21 COMMISSIONER ROGERS: When one looks at
22 O&M cost on a comparative basis, they're usually
23 reduced to a per kilowatt hour generated or something
24 like that to put them on the same footing. Roughly
25 where does TVA's O&M cost per kilowatt hour generated

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 stand with respect to national picture of other
2 nuclear plants? Is it projected to go up or down?

3 MR. ZERINGUE: In 1992, the per kilowatt
4 expenditures were consistent with industry average.
5 Because of the long planned outage at Browns Ferry 2
6 this year and the four shutdowns at Sequoyah, then
7 those were kilowatt hours quite high. It was in the
8 high teens. We've looked at our expenditures, our
9 staffing levels and our generation potential and we
10 expect to bring those numbers down below 9, those per
11 kilowatt hour.

12 COMMISSIONER REMICK: Are the dollar
13 figures constant dollars on the chart or inflated
14 dollars?

15 MR. MALEC: Well, they are -- what we do,
16 the process increases the -- for example, the labor
17 wages are increased by an increment of salary
18 increases anticipated and so on. So, they are
19 escalated in that manner, but they're not escalated in
20 a straight line basis. It's on a for each commodity
21 basis.

22 COMMISSIONER REMICK: I see.

23 CHAIRMAN SELIN: But they're still current
24 year dollars?

25 MR. MALEC: Yes. At this point, if there

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 are no additional questions on the financial, I'd like
2 to turn it over to Ike Zeringue to talk about staffing
3 plans.

4 CHAIRMAN SELIN: The basic story from
5 financial is that these resources are well within the
6 funding capability of the Authority?

7 MR. MALEC: Yes, well within the funding
8 capability.

9 MR. ZERINGUE: Good morning. I'll go
10 ahead and speak to management and staffing plans.

11 Nuclear Power has taken an integrated
12 approach to evaluating current and future staffing
13 needs. The three integrated elements are work force
14 planning, succession planning and targeted recruiting.
15 The intent of the process is to ensure that we have
16 the right people in the right places.

17 (Slide) Next slide.

18 The first element, work force planning,
19 was used to specifically define current and future
20 staffing requirements at each nuclear location for
21 each skilled classification, such as reactor
22 operators, nuclear engineers, or I&C technicians. We
23 then compare our existing skilled resources to
24 projected resource requirements to determine future
25 staffing needs. These staffing needs are met through

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 a combination of succession planning and targeted
2 recruiting. The process looks forward five years and
3 is updated each year at each location and then
4 integrated at a corporate level.

5 COMMISSIONER ROGERS: Just on that point.
6 In terms of your new hires, particularly say for
7 engineers and nuclear engineers, what are the
8 prospects of the sources of those being able to
9 produce the kinds of people and the numbers of people
10 that you think you'll need? University programs in
11 engineering and nuclear engineering, health physics,
12 whatever.

13 MR. ZERINGUE: Let me go through the
14 presentation. We discuss recruiting later on and
15 address new engineer hires at that point.

16 COMMISSIONER ROGERS: Fine.

17 MR. ZERINGUE: The second element is
18 succession planning. The process is to ensure that we
19 develop and maintain adequate management, supervisory
20 and technical depth. Requirement for each management
21 position or supervisory position are specifically
22 defined and subdivided into three categories. First
23 is education and training. The second is experience,
24 both amount of time and type of experience. And the
25 last is specific behavioral skills, such as coaching,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 feedback, leadership, communications, skills that
2 would foster better management-employee interactions.

3 Four candidates, replacement candidates
4 are identified for each position. Each candidate is
5 evaluated against the position requirements. Based on
6 this evaluation, detailed developmental plans are
7 established which focus on preparing the individual
8 for the targeted position within a specific time
9 frame. These developmental plans may include
10 rotational assignments, formalized classroom training,
11 SRO licensing or certification, or specific external
12 training programs. Examples of internal development
13 through the succession planning process are Senior
14 Vice President Nuclear Operations, Senior Operations
15 Vice President -- or, excuse me, the Site Operations
16 Vice President at Watts Bar, the General Manager of
17 Nuclear Assurance, and our Engineering Manager at the
18 Sequoyah facility.

19 MR. KINGSLEY: I made him put that in
20 there about himself.

21 COMMISSIONER REMICK: It sounded somewhat
22 like a systematic approach to development that you
23 have. You're basically identifying what people should
24 have and then how are you going to see that they get
25 the training or the education or the experience or

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 what.

2 MR. ZERINGUE: Yes. That's our intent.
3 In going through this evaluation process, we've
4 determined that we're quite good technocrats. It's in
5 the people management area that we need additional
6 training and support.

7 The third element is recruiting. Since
8 November 1988, we've recruited 89 senior level
9 personnel, 24 at Browns Ferry, 13 at Sequoyah, 23 at
10 Watts Bar, 5 at Bellefonte and 24 at corporate. This
11 has substantially strengthened our overall nuclear
12 management team, has given us greater management
13 stability and has reduced our dependence on external
14 recruiting at the senior level.

15 In 1993, we utilized our recruiting
16 efforts to establish a resource pool. We focused on
17 mid-level management, on operations and on
18 maintenance. To date we've hired 23 mid-level
19 managements and of the 23, 14 were shift supervisors
20 or assistant shift supervisors from a plant with a
21 SALP 1 rating in operations.

22 Again in the operations area, we've
23 brought on 14 auxiliary operators. Of the 14, 13 were
24 again from a power plant with a SALP 1 rating in
25 operations. In May of 1992, Browns Ferry initiated

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 two auxiliary operator training classes. Twenty-five
2 of the students were ex-Navy operators. An additional
3 20 had completed college level work equivalent to
4 associate degree. So, you can see they were
5 substantially upgraded in the auxiliary operator area.
6 In addition in '92 at Browns Ferry, we began
7 apprentice classes in the electrical maintenance and
8 I&C maintenance area.

9 COMMISSIONER REMICK: If I recall
10 correctly, at one time wasn't TVA limited in placing
11 educational requirements for new positions in the
12 operator area?

13 MR. KINGSLEY: That's correct. We have
14 since changed that. In fact, we did that in 1990. We
15 put in in our apprentice program that we actually
16 reinstated or started from scratch a two year degree
17 requirement for I&C, hopefully a degree for an
18 electrician, same similar type. We also have access
19 now to the MAS and POS test that EEI has. We're
20 administering those tests as part of the entrance
21 requirement and we're doing similar with our operator
22 training program. But we had no requirements. In
23 fact, we couldn't even require a high school education
24 at one time.

25 COMMISSIONER REMICK: Right. That's what

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 I remember.

2 MR. KINGSLEY: We were prohibited from
3 doing that, but we've gotten that changed.

4 COMMISSIONER REMICK: By law was it?

5 MR. KINGSLEY: Well, it was kind of,
6 Doctor Remick, one of those things that was just there
7 and I felt so strongly that we were able to work with
8 the labor unions and work with our corporate human
9 resources because we just weren't meeting the mark in
10 that area.

11 COMMISSIONER REMICK: Thank you.

12 MR. ZERINGUE: In addition that, we've
13 established four year degree programs at Sequoyah and
14 Browns Ferry, degrees in nuclear technology. These
15 are certified degrees.

16 COMMISSIONER REMICK: Who is supplying
17 that?

18 MR. ZERINGUE: I believe it's American
19 Technical Institute.

20 COMMISSIONER REMICK: In Memphis?

21 MR. KINGSLEY: Yes.

22 MR. ZERINGUE: Yes, Memphis State program.

23 We've also undertaken efforts to recruit
24 college engineering graduates to meet future demand.
25 To date we've hired 11 engineers. The individuals are

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 placed in a development program. They'll do work at
2 both the corporate office and at the sites. These
3 assignments will prepare the individuals to assume
4 positions to support our future needs in this area.

5 MR. KINGSLEY: We haven't had any problem
6 recruiting. In fact, there's actually a surplus of
7 young people needing jobs and wanting jobs. So, we've
8 been very successful.

9 COMMISSIONER de PLANQUE: Do you expect
10 that to last very long? What do you project five, six
11 years out?

12 MR. KINGSLEY: I don't really know. Maybe
13 Ike knows.

14 MR. ZERINGUE: Our major concern is
15 obviously in the nuclear engineering area with the
16 cutbacks from so many colleges in that program.

17 COMMISSIONER de PLANQUE: Are most of your
18 college hires from local colleges or is it across the
19 country?

20 MR. ZERINGUE: Generally it's from the
21 Southeast and somewhat in the Southwest.

22 To answer your previous question with
23 regard to chemistry technicians, rad con technicians--

24 COMMISSIONER ROGERS: Health physics.

25 MR. ZERINGUE: -- health physics people,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 when we look out and compare our existing staffing
2 levels to where we need to go, especially considering
3 the fact that at Browns Ferry we're doing a lot of
4 work on Unit 3 in the recovery area, in radiological
5 controlled areas, we have more than sufficient
6 staffing in those technical skills areas.

7 (Slide) Last slide.

8 Nuclear power staffing plans support the
9 existing sites as well as the addition of new sites.
10 We're building strength internally. The recent
11 movement of internal candidates into the Operations
12 Vice President position at Watts Bar and the Browns
13 Ferry plant manager position is an indication of our
14 depth. We're recruiting only when necessary to meet
15 specific needs, yet our recruitment of highly
16 qualified individuals for the Browns Ferry operations
17 manager and Sequoyah plant manager positions
18 demonstrate our ability to recruit experienced
19 personnel from the outside. The recruitment of five
20 shift operations supervisors and nine assistant shift
21 operations supervisors from a SALP 1 facility provides
22 operational depth for our existing plants and provides
23 a foundation for future sites.

24 TVA is well prepared to meet today's
25 challenges and to anticipate future staffing needs.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 Are there any questions?

2 CHAIRMAN SELIN: This is quite a different
3 report from the one that we got about a year, a year
4 and a half ago as far as recruiting. There really has
5 been a marked improvement, I take it, in your ability
6 to attract senior and mid-level people.

7 MR. ZERINGUE: Mr. Medford will discuss
8 Watts Bar status and our employee concerns program.

9 DOCTOR MEDFORD: Thank you.

10 (Slide) Slide 19.

11 As is indicated here, base engineering was
12 completed on Watts Bar Unit 1 in June of last year.
13 The systems completion status is as follows. We've
14 completed the engineering work on all of the systems
15 for Watts Bar 1. Modifications have been completed on
16 a little over two-thirds of the systems. We've
17 completed start-up testing and have turned systems
18 over to the plant for a little over a third of the
19 systems.

20 The schedule for hot functional testing is
21 March of this year and hot functional testing is
22 scheduled to take about two months. As Mr. Kingsley
23 indicated earlier, we are not at this time putting
24 forth a schedule for fuel load. We will do that once
25 we've completed hot functional testing and have a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 better track record to base that on.

2 There are limited technical issues
3 remaining for Watts Bar. Basically those are
4 completion of resolving the fire wrap issues. TVA has
5 done substantial work with regard to Thermo-Lag and
6 we're very near the end, resolving Thermo-Lag concerns
7 and we're currently doing some testing of our own
8 relative to 3-M.

9 We have one remaining civil seismic issue
10 and that has to do with U bolt supports for piping
11 systems.

12 Finally, we have submitted previously a
13 probabilistic risk assessment for Watts Bar. We are
14 in the process of revising that PRA and will be
15 submitting that to the staff next month and working
16 with the staff to complete their review.

17 COMMISSIONER REMICK: What about IPE?

18 DOCTOR MEDFORD: Our IPE is based on that
19 PRA.

20 COMMISSIONER REMICK: On that PRA.

21 DOCTOR MEDFORD: That's right.

22 COMMISSIONER REMICK: So, when you say
23 PRA, it's the PRA for the IPE program.

24 DOCTOR MEDFORD: That's correct.

25 COMMISSIONER REMICK: I see.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 MR. KINGSLEY: Correct.

2 DOCTOR MEDFORD: (Slide) Okay. I'd now
3 like to turn to the area of employee concerns.

4 One of the primary focuses of TVA nuclear
5 management is the creation of a working environment
6 where employees feel free to express concerns. It's
7 our position that the preferred path to resolving
8 employee concerns is through direct interaction with
9 their line management. But we recognize that that's
10 not always going to occur and therefore we've put in
11 place what we call the concerns resolution program.
12 In the slides that follow this one, I think I'll be
13 able to show you some substantial improvement in our
14 performance in this area. We've listed on this page
15 several of the reasons why we think we've achieved
16 that improvement.

17 First and foremost is line management
18 attention and sensitivity to the importance of hearing
19 and addressing employee issues.

20 Secondly, we have a substantial dedicated
21 concerns resolution staff. We have a total of 15
22 people throughout the Valley and we have folks on-site
23 at each of the three major sites.

24 Third is a proactive approach to emerging
25 issues. Clearly, not only do we need to hear and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 understand employees' concerns, but we need to address
2 them quickly. We follow very closely our performance
3 in this area. We prepare monthly a report that
4 summarizes how we're doing in this area. That's
5 reviewed by both site senior management and corporate
6 senior management.

7 The fifth bullet is also one of the most
8 important. That is that clearly where you have a work
9 force that has good morale, you're going to have a
10 work force that tends to deal with their line
11 management and has less need of the kind of program
12 I've talked about.

13 (Slide) Slide 21.

14 This slide shows for the years 1986
15 through 1993 the concerns expressed to both the TVA
16 concerns resolution program and to the similar
17 programs that our contractors have. I'd like to make
18 the point that the overall trend here is very
19 positive. You'll note over the last several years
20 there's been a growth in the contractor component.
21 That's primarily a result of the fact that in the
22 early years of this chart the contractors, or very few
23 of them, had independent programs of their own. The
24 contractors relied on our program to meet this need.

25 I should point out even with substantial

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 contractor programs in place now, contractor employees
2 always have the right to come to the TVA program. We
3 now have in the '92, '93 time frame all of our major
4 contractors, the architect-engineer contractor at each
5 site for example, have their own independent programs.

6 While I observed earlier that the overall
7 trend for this graph is positive, you'll note a slight
8 upturn in 1993 for the total. That's largely the
9 result of a high level of activity at each of the
10 sites in '93 compared with '92. We had the long
11 outage at Browns Ferry that has been discussed
12 previously. We had the two unit shutdown at Sequoyah
13 and we were in the process of completing engineering
14 for Watts Bar. All of these things result in a fair
15 number of people leaving the sites. We offer an exit
16 interview to every employee, be that contractor or a
17 TVA employee who leaves a site. That tends to result
18 in the generation of a larger number of issues. So,
19 I don't attach any special significance to the upturn
20 in '93. I'd say overall our performance in those two
21 years was about the same in this area.

22 (Slide) Turning now to slide 22.

23 What this slide shows is the rate of
24 concerns expressed to the TVA program per 1,000
25 employees. The purpose of this slide is to assure

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 that the absolute numbers are not masked by changes in
2 employee base. As you can see here, even the rate is
3 coming down substantially. As I indicated earlier,
4 the '92-'93 numbers are pretty similar.

5 COMMISSIONER de PLANQUE: And this is for
6 TVA, not contractors?

7 DOCTOR MEDFORD: That's correct. I didn't
8 have -- the reason it's done this way, I think that
9 would show something similar. We didn't have good
10 numbers on the total contract employee rolls.

11 (Slide) I'd like now to turn to page 23.

12 If you have declining numbers in a program
13 like our concerns resolution program it means one of
14 two things. Either you're doing --

15 CHAIRMAN SELIN: It's good or it's bad.

16 DOCTOR MEDFORD: We wanted to test which
17 one of those two things this might mean. The best
18 data we have for that is to look at other complaint
19 mechanisms. What we've looked at here, the first bar
20 for each year is the TVA program. The second bar for
21 each year is the aggregate of a number of other
22 programs such as union grievances, EEO complaints, et
23 cetera. Then the third bar are DOL complaints. By
24 the way, we don't plot it here because we don't have
25 hard data. To the extent we can follow NRC

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 allegations, we follow that as well and the
2 conclusions would be largely similar to what I've
3 shown or will talk about.

4 As you can see, the overall trend for all
5 of these programs is in the right direction. So, we
6 think that's telling us that we're not seeing folks
7 shying away from using the employee concerns program
8 when they otherwise would. We continue to have an
9 effective concerns resolution program and the fact
10 that the numbers are going down means the line
11 management is doing a better job.

12 I'd now like to turn to --

13 COMMISSIONER REMICK: In categorizing
14 these as complaints, is that correct or are some of
15 these -- concerns sometimes cannot be a complaint.
16 You might just have an observation.

17 DOCTOR MEDFORD: That's correct, and
18 particularly when you're talking about the concerns
19 resolution program that's true. For DOL and for this
20 other category, I think the complaints is descriptive.

21 COMMISSIONER REMICK: Okay.

22 DOCTOR MEDFORD: You're right.

23 (Slide) I'd like now to turn to slide 24.

24 Up until now, my discussion has addressed
25 TVA generally. On this last slide, I'd like to talk

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 about the concerns resolution program at Watts Bar.

2 1994 is going to be a very interesting
3 year for Watts Bar. It's going to be one of intense
4 activity. We recognize that. Typically when you get
5 to the end of a project you have more activity in the
6 employee concerns area than you otherwise would. So,
7 we've identified on this slide a number of initiatives
8 undertaken to do what we can to address that problem.

9 The first thing is we've got a look-back
10 project that's well underway, to go back and look at
11 closed employee concerns to ensure that we have
12 addressed the fundamental concern. In theory, given
13 that the file is closed, that should be the case and
14 indeed that's what we're finding. But we wanted to
15 have that additional level of assurance that we
16 haven't missed something. We're doing that, by the
17 way, for the 1986 concerns, the original large block
18 of concerns. We're doing that for all of those. For
19 the more recent concerns, the ongoing program since
20 '86, we're doing that on a sampling basis. As I
21 indicated earlier, what we've seen so far is extremely
22 favorable.

23 In addition we've got an enhanced
24 communications plan. The site vice president is
25 having meetings at least monthly and in some cases

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 more frequently with the employee base. Oliver has
2 participated in some of those meetings and he will
3 participate in others through the course of 1994. In
4 addition, the Site Vice President has small group
5 meetings.

6 Supervisor training. I mentioned the
7 period of intense activity on which we're embarked.
8 It's a challenging period from the standpoint that
9 we're asking the most of our supervision and at the
10 same time there may be a little more likely than usual
11 to have employees coming to them with concerns. This
12 training which is provided by our human resources
13 folks and our concerns resolution program personnel,
14 the purpose of that is primarily to let supervision --
15 remind supervision of the support available to them.
16 Don't let a concern sit idle. If they can deal with
17 it effectively, deal with it. If they can't, here's
18 the array of assistance that's available to them.

19 In addition, we've established an employee
20 concerns task force. The membership of that is the
21 Site Vice President or his designee, the concerns
22 resolution program manager for the site, the human
23 resources manager for the site and a representative of
24 the Office of the General Counsel. The purpose of
25 this group is to tackle employee concerns of special

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 significance, again toward the aim of assuring that
2 they're addressed promptly.

3 Finally, we've added two or will be adding
4 two additional personnel to the existing site staff of
5 four.

6 With that, I'd like to turn it back over
7 to Oliver.

8 MR. KINGSLEY: This concludes our formal
9 presentation. We certainly appreciate the
10 opportunity, Doctor Selin, Chairman Selin, to come
11 before you and present where TVA is. We take this
12 challenge of operating these plants very seriously and
13 we'd now be happy to answer any questions that you
14 might have about our presentation or about the
15 Tennessee Valley Authority.

16 CHAIRMAN SELIN: Okay. First of all, we'd
17 like to thank you for having come. It was a very good
18 presentation. You hit most of the points of concern
19 to the Commission and have a plausible answer to each
20 of them. As you've said, you need to see what happens
21 in the next few months as far as executing them.

22 I'd like to go back to your demand
23 projections. That's something new. We've never seen
24 a demand projection in a TVA presentation in the past.
25 Could you talk a little bit about what they're based

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 on? Are these economic models or are these straight
2 extrapolations of what you've seen recently? Can you
3 talk a little bit about that?

4 MR. KINGSLEY: You're talking about the
5 load projection?

6 CHAIRMAN SELIN: Yes.

7 MR. KINGSLEY: It is based on an economic
8 model. It's based on actual experience. We actually
9 break that down and look at different sectors of our
10 energy growth, our residential growth as an example.
11 We're projecting that to grow at about 1.6 percent.
12 Now, I mentioned commercial, manufacturing. Our
13 direct serve we would anticipate growing at about two
14 percent. Federal actually past the year 2000 goes
15 negative in the growth because we see a complete
16 downturn in the federal sector.

17 So, we do a detailed analysis of each one
18 of the load segments. We then compare that, according
19 to my understanding, to the regional --

20 CHAIRMAN SELIN: Economic.

21 MR. KINGSLEY: -- product growth out there
22 compared to the national average. Then we update this
23 on a six month basis.

24 CHAIRMAN SELIN: The reason I asked is the
25 numbers seem a little high. Each of the components is

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 two percent or less. You've said that you're
2 reinstituting a demand management program, but I don't
3 think that -- that doesn't sound as if that's been
4 worked into the --

5 MR. KINGSLEY: It has not been worked into
6 any of the numbers that we showed you. We have
7 projected with some four programs which have been
8 preliminarily reviewed by the Board of Directors and
9 will be made an integral part of our integrated
10 resources planning, anywhere from a winter demand of
11 right at 850 megawatts of DSM to about 700 megawatts
12 of summer demand, which we would expect to eliminate
13 or not have occur. Then that would penetrate out
14 through the year 2010, assuming these programs were
15 successful, to as much as 2500 megawatts on a winter
16 demand and about 2100 megawatts on a summer demand.
17 But we do not have those programs in place and it
18 would be unfair for me to commit for the Board, but
19 they have had preliminary reviews and it's my
20 understanding they are moving to signing off on those
21 programs.

22 CHAIRMAN SELIN: Well, that just really
23 makes the point. I was taking a look at the demand
24 projections and the point at which the reactors would
25 come on-line. It seemed to me that the demand is

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 probably still going to be less than you've got
2 projected, either because of the demand side
3 management or because of a more detailed look. The
4 real question that concerns us is in terms of
5 allocating our resources and looking at the adequacy
6 of the management is if those demand projections
7 represent an upper bound as opposed to a best guess,
8 and my sense is that is true, although I'm sure you
9 want to take another look at that, what happens to
10 your nuclear program? Do you phase out some of the
11 fossil and keep the nuclear program? Do you slip out
12 the nuclear programs coming on-line or am I just wrong
13 in my hypothesis?

14 MR. KINGSLEY: No, you're not wrong at
15 all. When Doctor Remick asked the question about the
16 fossil plants, we have really not looked at those.
17 There are a number of questions involving phase 2 of
18 the Clean Air Act, the heat rate. Those units,
19 particularly the older ones, have not had a lot of
20 money put into them for them to be reliable. We'll
21 have to do that. So, there's a natural question of
22 what do you do with those plants. We've literally
23 been in the position of needing every fossil unit that
24 we've had for the last seven years on our system and
25 we will look at that as a part of the integrated

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 resource planning. As also a part of global warming
2 and everything. There are questions about that. CO2
3 limit. We are part of the voluntary program. We had
4 not established what that limit will be, but we've
5 been working with Secretary O'Leary on that.

6 So, I think your questions are very good.
7 If you were to take, say, the area of DSM and assume
8 that we would put that 800 megawatts in, that would
9 essentially delay one of our units two full years and
10 the whole program would move if that were to be the
11 case because of the 2.3 percent. It's somewhere
12 between 450 and 500. So, for ballpark purposes, that
13 would move out.

14 COMMISSIONER REMICK: Am I correct,
15 Oliver, you did have a DSM program in the past?

16 MR. KINGSLEY: Yes. We had one of the
17 larger DSM programs of loans, insulation, energy
18 audits, what have you.

19 COMMISSIONER REMICK: How effective was
20 that?

21 MR. KINGSLEY: It was very effective and
22 it was also very expensive. We had a large stuff.
23 The Board felt that it needed to be relooked at and
24 that was stopped in either 1989 or '90.

25 Bill, do you remember the year?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 MR. MALEC: Yes. I think it was 1989.
2 Let me add to what Oliver had to say because the
3 numbers that we've shown you here in terms of the
4 demand projections are what we consider our middle
5 range. We forecasted a low load range and a high load
6 range. Because of the size of the system, even if we
7 had significant -- and so we're taking it at what we
8 expect the level to be, not in an optimistic or a
9 pessimistic as we view it. A higher level of growth
10 which, if one hypothesized a higher level of growth,
11 we'd need to bring -- we need capacity sooner. DSM
12 relative to the size of the system also is relatively
13 small. Even if you were talking about a thousand
14 megawatts on a 25,000 megawatt system, it's still a
15 relatively small part. As Oliver indicated, you're
16 probably talking about shifting in time more than
17 resources.

18 CHAIRMAN SELIN: But we're not really
19 trying to predict pieces, but we have three
20 responsibilities. The first is to make sure that our
21 resources are set appropriately and your schedule for
22 bringing on nuclear plants is very central to that.
23 The second, although it's an indirect responsibility,
24 is at some point we do have to make a judgment as to
25 whether TVA resources, including management and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 personnel, are adequate to the size of the program and
2 that's certainly there. The third is that there are
3 environmental impact statements which include economic
4 review of the -- review of the economic alternatives
5 that are involved in licensing and in major issues.

6 So, although it's not our central
7 responsibility, it is important to us. As I look at
8 your numbers and as I hear you talk, and perhaps not
9 in a statistical sense but in a sense of what are the
10 likely things that might happen between now and then,
11 most of them seem to lead to lesser demand, not
12 greater demand, a tougher Clean Air Act, some higher
13 pricing, good and effective demand side management
14 program, et cetera. Do we just wait for your
15 integrated resource planning to see that or will you
16 be doing some further work in this area, both of
17 projecting demand and of thinking about the what ifs?
18 The clear what if is do you look for higher margins,
19 do you cut back -- do you slow down the nuclear
20 program further, do you cut back on some of the old
21 fossil plants which are likely to be more expensive to
22 clean up than at first?

23 MR. KINGSLEY: We've a group or the old
24 generating group to look at just what you're saying.
25 We intend to continue that. It is one of our key

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 missions that I have in the nuclear program, looking
2 at the various alternatives. You take as an example
3 our doing the engineering first on Watts Bar. We're
4 certainly going to do a detailed lessons learned on
5 Watts Bar 2, is there a better way, is there a better
6 way to do the design engineering. Certainly we're
7 doing a full test program. I think that will take at
8 least one year and then we're going to be very tight.
9 So, that schedule on bringing Watts Bar 2 would be
10 optimistic.

11 CHAIRMAN SELIN: I see.

12 MR. KINGSLEY: We have a group looking at
13 the older fossil plants. We also have in this same
14 group someone looking at our phase 2. I think you're
15 exactly right, that it's not as much as a crap shoot
16 on what's going to happen out there in the future, but
17 you can look back over our demand and it is not in a
18 straight smooth line. It kind of comes up, it leveled
19 off in '91 and '92 and then it came right back up
20 again. So, if we level off again, we're not going to
21 need these plants to come in.

22 CHAIRMAN SELIN: But you're also saying
23 that you wouldn't mind -- the odds are you wouldn't
24 mind the extra time when it came to this.

25 MR. KINGSLEY: Not a bit, no.

1 CHAIRMAN SELIN: All right. Thank you.

2 Commissioner Rogers?

3 COMMISSIONER ROGERS: I don't have any
4 questions. I just wanted to thank you very much for
5 a very illuminating presentation.

6 CHAIRMAN SELIN: Commissioner Remick?

7 COMMISSIONER REMICK: Just two, one a
8 question.

9 If you had your druthers right now, would
10 you increase the reserve margin from 15 percent up to
11 17 or 18 or not?

12 MR. KINGSLEY: I think in certain times of
13 the year we would absolutely do that. We have a
14 lessons learned group that we actually formed late
15 last week on our fossil system and because of such
16 things as frozen coal, we had a lessons learned in
17 1989, but this was a storm that kind of whipped up on
18 that. So, we definitely need that. When you see
19 entire hoppers and I forget how many tons we're having
20 to actually take out of our Paradise steam plant today
21 to get that plant back in. But it is a real
22 manifestation that these large fossil plants are not
23 made for zero degree weather. So, we're going to need
24 additional margin in some of those areas.

25 Our hydro did exceptionally well, set a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 new record. Our combustion turbines did exceptionally
2 well. Our nuclear plants ran straight through, no
3 problems whatsoever. But there was very few fossil
4 plants out of that 59 units that we didn't have some
5 problem or some de-rate in that. If you were to carry
6 that for a two or three week period of time, it would
7 have gotten worse instead of getting better.

8 COMMISSIONER REMICK: I think the key to
9 your projections and so forth is the realization that
10 we have to plan our resources to meet your needs. We
11 certainly want to be responsive in your plant. So,
12 it's important that you keep us informed if things do
13 change in your schedules and so forth because it does
14 reflect back on our own planning and our resources.
15 So, I think that's the key.

16 MR. KINGSLEY: The Commission has been
17 very responsive and in the short-term I think that's
18 fairly well laid out. But when you go back to Doctor
19 Selin's question, in the longer term it is not crystal
20 clear.

21 COMMISSIONER REMICK: I'm sure it's not
22 clear to anybody. Not only in TVA, but for others.

23 I'd also like to say that I really
24 appreciate the presentation. I think it was
25 encouraging and I greatly appreciate again this which

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 is a characteristic of yours, which I greatly
2 appreciate.

3 MR. KINGSLEY: Thank you.

4 CHAIRMAN SELIN: Commissioner de Planque?

5 COMMISSIONER de PLANQUE: I have just two
6 questions. Can you tell me what the current
7 percentage of contractor employees are versus TVA
8 employees? Where do you see that trend going given
9 your current plans?

10 MR. KINGSLEY: The current percentage is--

11 COMMISSIONER de PLANQUE: Ballpark will
12 do.

13 MR. KINGSLEY: -- a little about 50/50.
14 We've got about 5400 TVA employees today and we've got
15 slightly more than that from a contractor standpoint.
16 That is largely driven by the large hourly work force
17 on our Watts Bar, our Browns Ferry 3 recovery and
18 ongoing work at our Sequoyah plant. We do have a
19 significant number of design engineers. We're looking
20 at pulling some of that back in now that we've kind of
21 reestablished some engineering credibility. So, I
22 don't see that number of contractors increasing at
23 all, particularly in light of our engineering first
24 and then working on just a small number of plants at
25 one time.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 COMMISSIONER de PLANQUE: Okay.

2 MR. KINGSLEY: So I think that's kept.

3 COMMISSIONER de PLANQUE: Okay. The other
4 one is kind of a curiosity. I think I heard you say
5 that your estimate for siting and licensing a fossil
6 plant would be about a ten year period.

7 MR. KINGSLEY: Yes.

8 COMMISSIONER de PLANQUE: Did you do the
9 same estimate for nuclear, if you were to go for a new
10 nuclear plant?

11 MR. KINGSLEY: It's about 30 to 40 percent
12 longer than that, Commissioner de Planque.

13 COMMISSIONER de PLANQUE: Okay.

14 MR. KINGSLEY: We have some sites, but
15 we're not venturing to look at those.

16 COMMISSIONER de PLANQUE: Just curious if
17 you'd done the experiment.

18 MR. KINGSLEY: Yes, we've looked at that.
19 It is longer than that.

20 COMMISSIONER de PLANQUE: Okay. With
21 that, I would also add my thanks to the others. It's
22 been a very interesting briefing. Thank you.

23 MR. KINGSLEY: Thank you.

24 CHAIRMAN SELIN: Thank you.

25 Just one other observation. When we're

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 talking about our resources, remember you're 100
2 percent of the nation's construction program now. So,
3 although you may only be five percent of the nuclear
4 generation, in terms of our ability to monitor and
5 license construction programs, this has a very big
6 impact on the NRC. It's not just one more or one
7 fewer operating plant which would be a relatively
8 small impact on our inspection team. We're not loaded
9 with people who are still experienced in construction
10 inspection, et cetera.

11 MR. KINGSLEY: Yes, sir.

12 CHAIRMAN SELIN: So, for all the other
13 reasons, but that one especially, we do appreciate
14 your communication and hope you'll keep in close touch
15 as your plans evolve there.

16 Thank you very much for the presentation
17 and the discussion.

18 MR. KINGSLEY: Thank you.

19 (Whereupon, at 11:27 a.m., the above-
20 entitled matter was concluded.)

21
22
23
24
25

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

CERTIFICATE OF TRANSCRIBER

This is to certify that the attached events of a meeting
of the United States Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING ON STATUS OF TVA NUCLEAR PROGRAM

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: JANUARY 25, 1994

were transcribed by me. I further certify that said transcription
is accurate and complete, to the best of my ability, and that the
transcript is a true and accurate record of the foregoing events.



Reporter's name: Peter Lynch

NEAL R. GROSS
COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

Status of TVA Nuclear Program

Nuclear Regulatory Commission Briefing

January 25, 1994



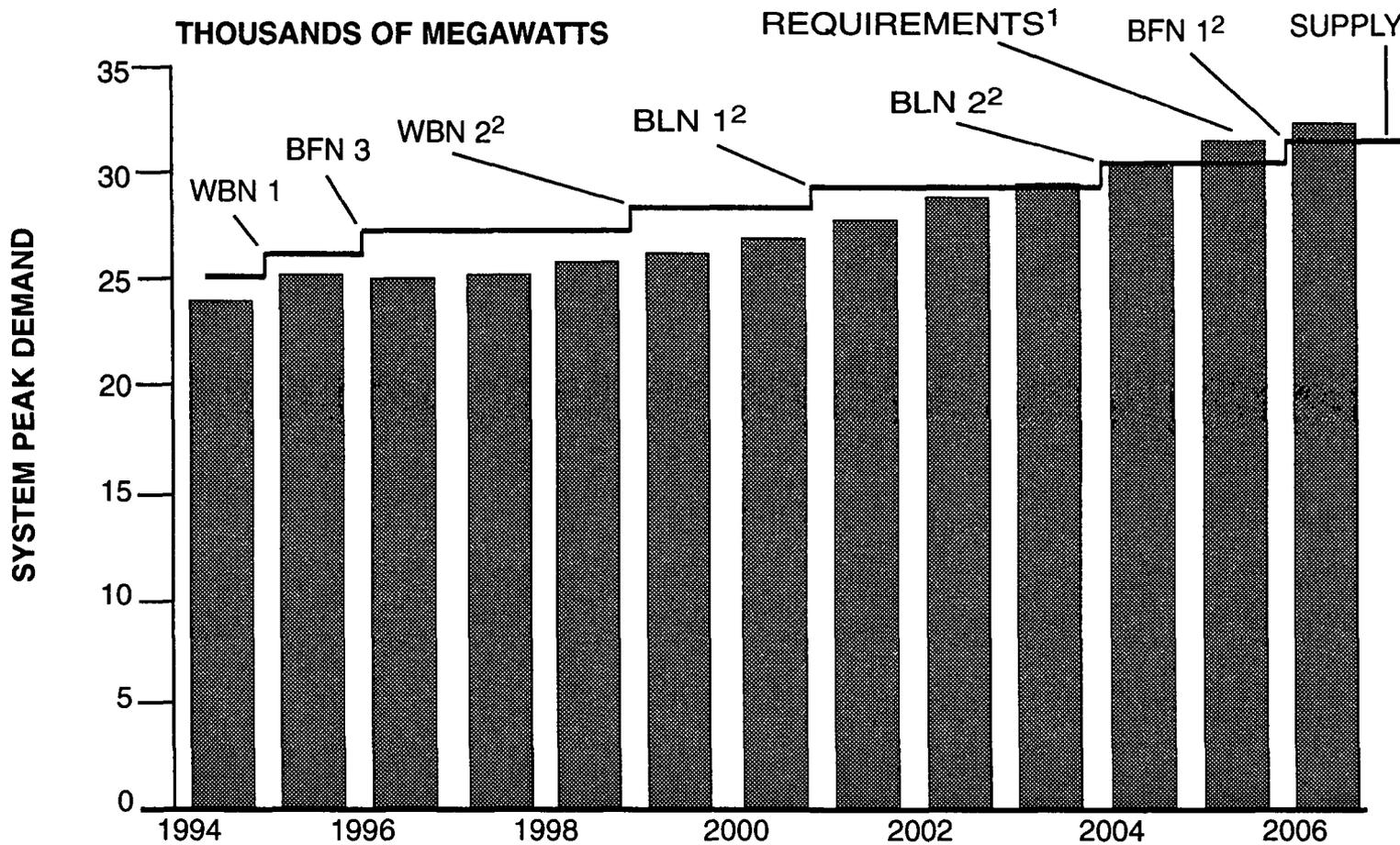
AGENDA

- Introduction O. D. Kingsley, Jr.
- Nuclear Plans and Load Growth Projection O. D. Kingsley, Jr.
- Recent TVA Performance O. D. Kingsley, Jr.
- TVA and Nuclear Power Organization O. D. Kingsley, Jr.
- O&M/Capital Expenditures W. F. Malec
- Management and Staffing O. J. Zeringue
- Watts Bar Status M. O. Medford
- Employee Concerns Issues M. O. Medford
- Closing Remarks O. D. Kingsley, Jr.

NUCLEAR COMMITMENT KEY TO TVA'S FUTURE

- TVA's future is intimately tied to success in its nuclear program
- Watts Bar Unit 1 and Browns Ferry Unit 3 needed to meet TVA near term power needs
- Additional resources to meet TVA's longer term needs will be addressed through the Integrated Resource Plan
- TVA Board will devote resources needed to support nuclear power
- Creation of TVA Nuclear

NUCLEAR PLANS MEET LONG-TERM NEEDS



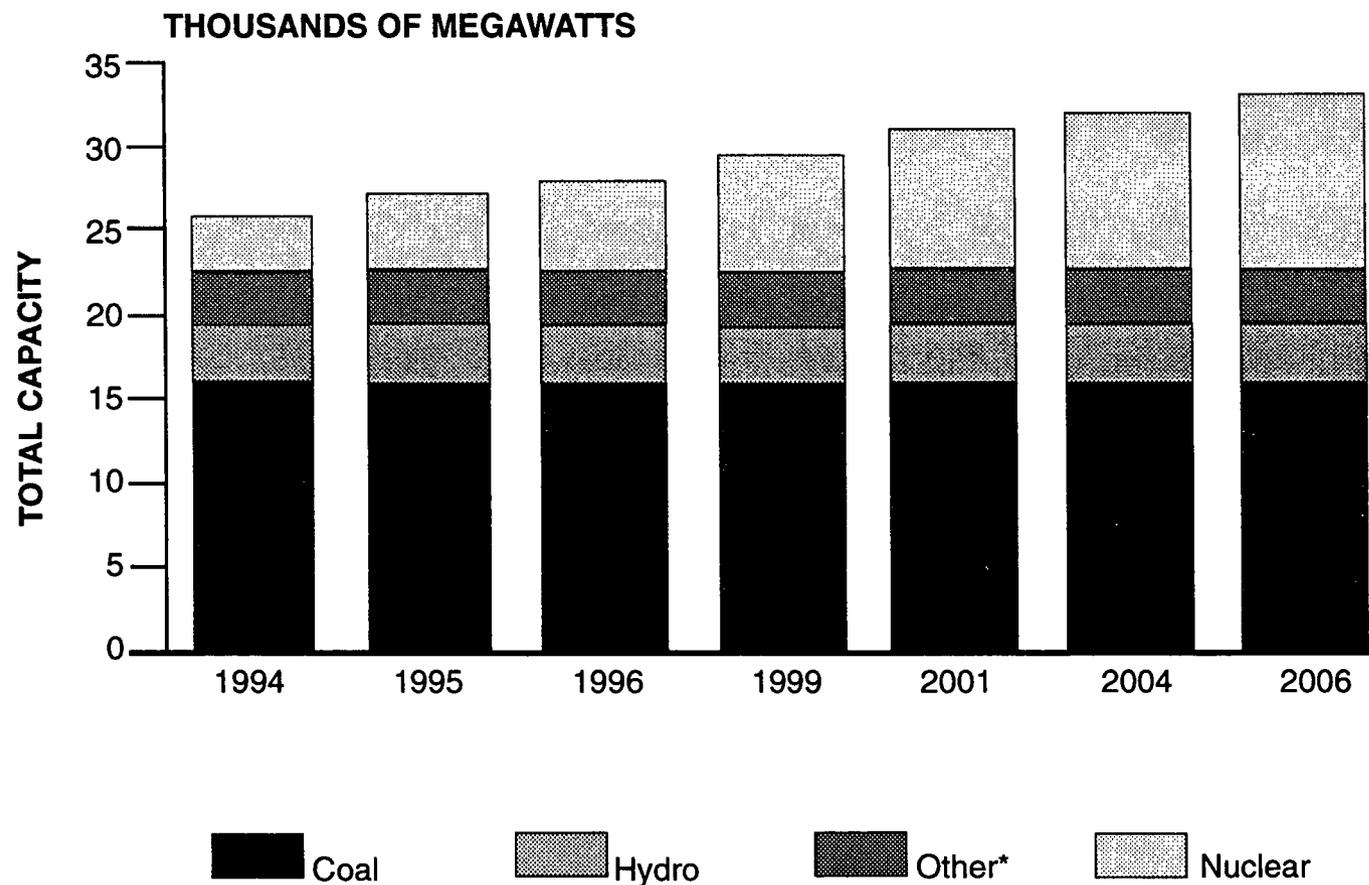
NOTES:

1 Requirements = Peak Load + Desired Reserves

2 Plans subject to confirmation through Integrated Resource Plan

TVA COMMITTED TO NUCLEAR POWER

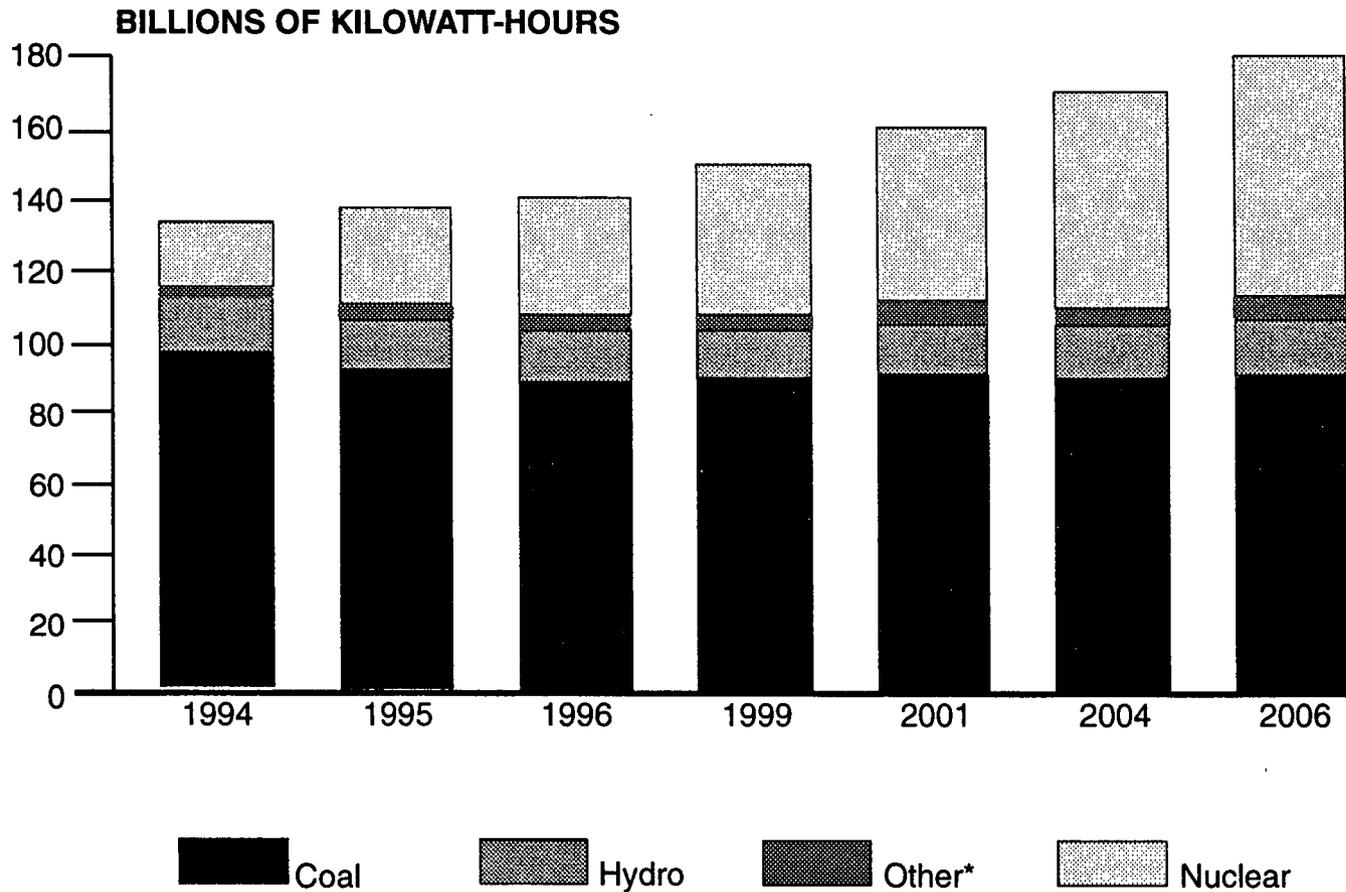
NET CAPACITY



*Other = Pumped Storage + Combustion Turbines

TVA COMMITTED TO NUCLEAR POWER

NET ENERGY



INTEGRATED RESOURCE PLAN

- Notice of intent scheduled for early February 1994
- Series of public meetings to be held May through November 1994
- Draft scheduled for June 1995
- Watts Bar Unit 1 and Browns Ferry Unit 3 will not be included
- Watts Bar Unit 2, Browns Ferry Unit 1 and Bellefonte Units 1 & 2 will be included

TVA NUCLEAR PERFORMANCE

• SALP category	BFN	SQN
- Engineering	2	2
- Plant support	1	1
- Maintenance	2	3
- Operations	1	3
	WBN	
- Piping systems	2	
- Auxiliary systems	1	
- Elect. equipment	2	
- Engr/tech support	2	
- Safety assess./quality verif.	3	
- Preoperational testing	2	

RECENT RESULTS SHOW PROGRESS

- Browns Ferry
 - Unit 2 overall performance
 - Performance during last Unit 2 refueling outage
- Watts Bar
 - Restart of construction with high quality field work
 - Construction schedule supports 1994 fuel load
 - Plant staffed and completing training
 - Stabilization of site staff
- Sequoyah
 - Identification of plant material condition
 - Enhancement to balance of plant standards
 - Dedicated backlog reduction process
 - Enhanced focus on technical programs
 - Clearer identification, ownership, and resolutions of problems

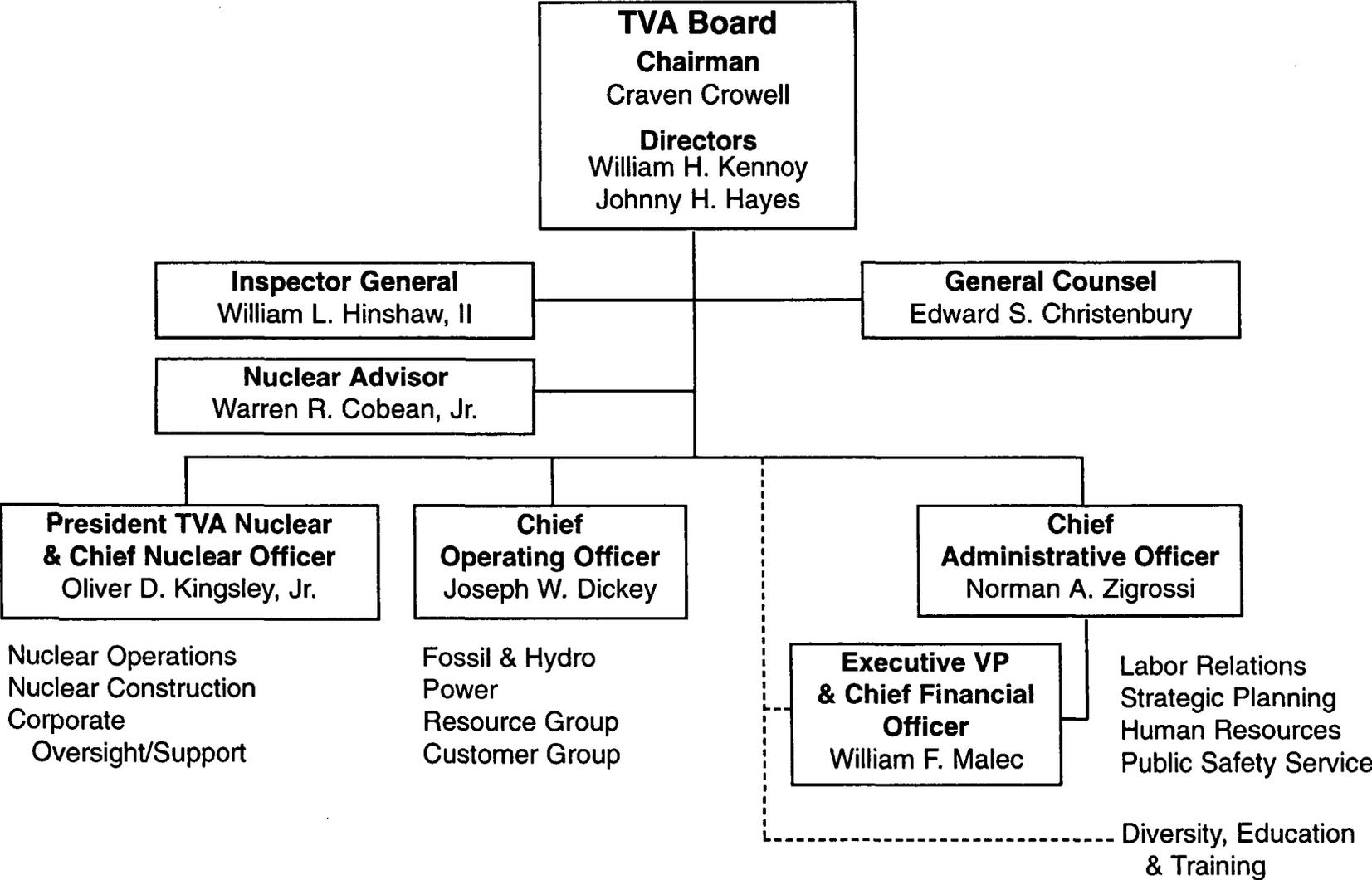
AREAS FOR IMPROVEMENT HAVE BEEN IDENTIFIED THROUGHOUT TVA NUCLEAR POWER

- Fundamental work practices and expectations
 - Ownership and responsibility paramount to good operations
 - Necessary work identified. . . managed effectively
- Management oversight/involvement

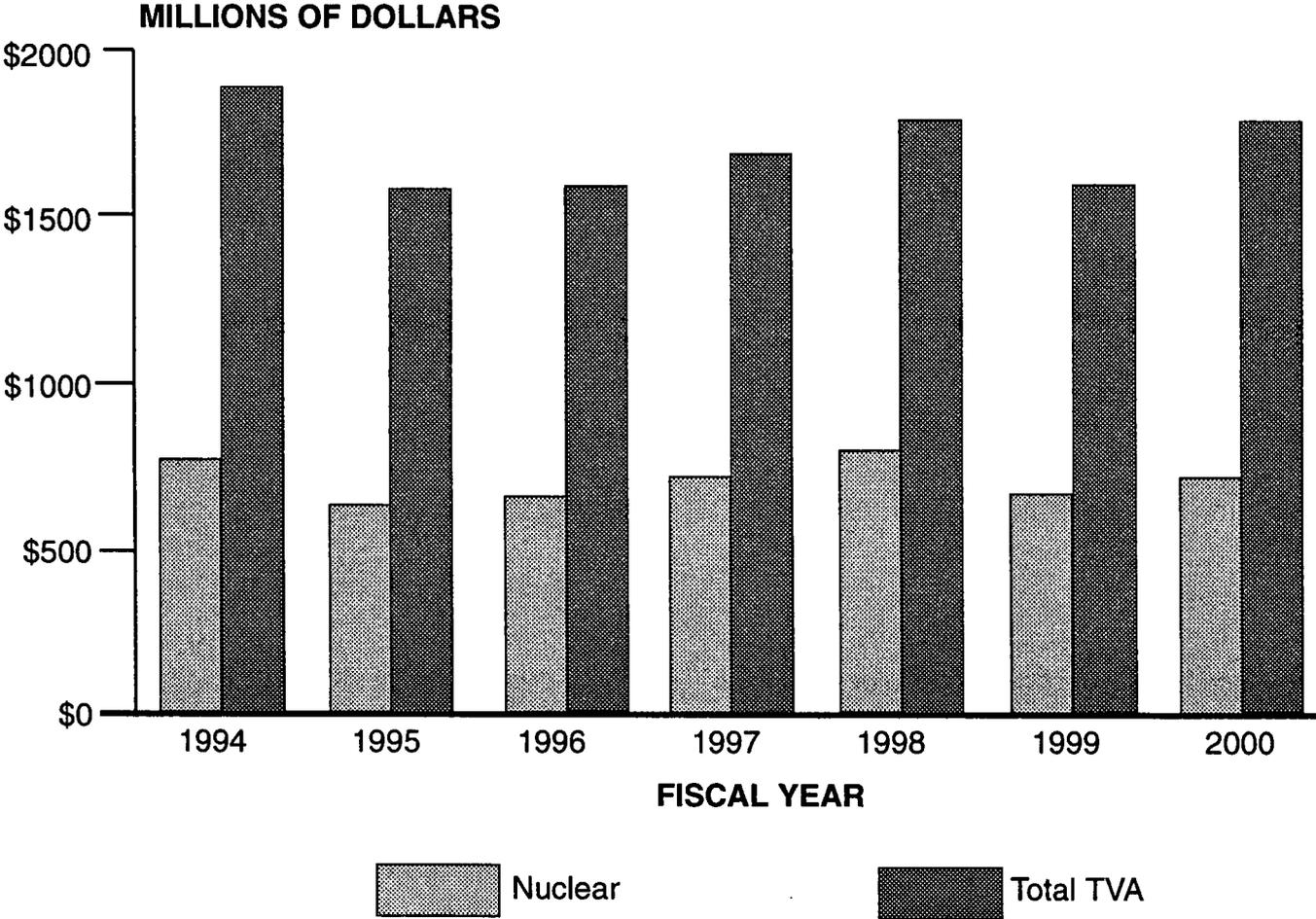
AREAS FOR IMPROVEMENT HAVE BEEN IDENTIFIED AT INDIVIDUAL PLANTS

- Browns Ferry
 - Increased personal ownership
 - Build on gains in performance
 - Process improvements through employee involvement
- Watts Bar
 - Acceptance of quality ownership
 - Problem identification
 - Preoperational testing program improvements
 - Operational readiness
- Sequoyah
 - Operations and maintenance fundamentals
 - Work planning/execution
 - Balance of plant reliability
 - Engineering work processes

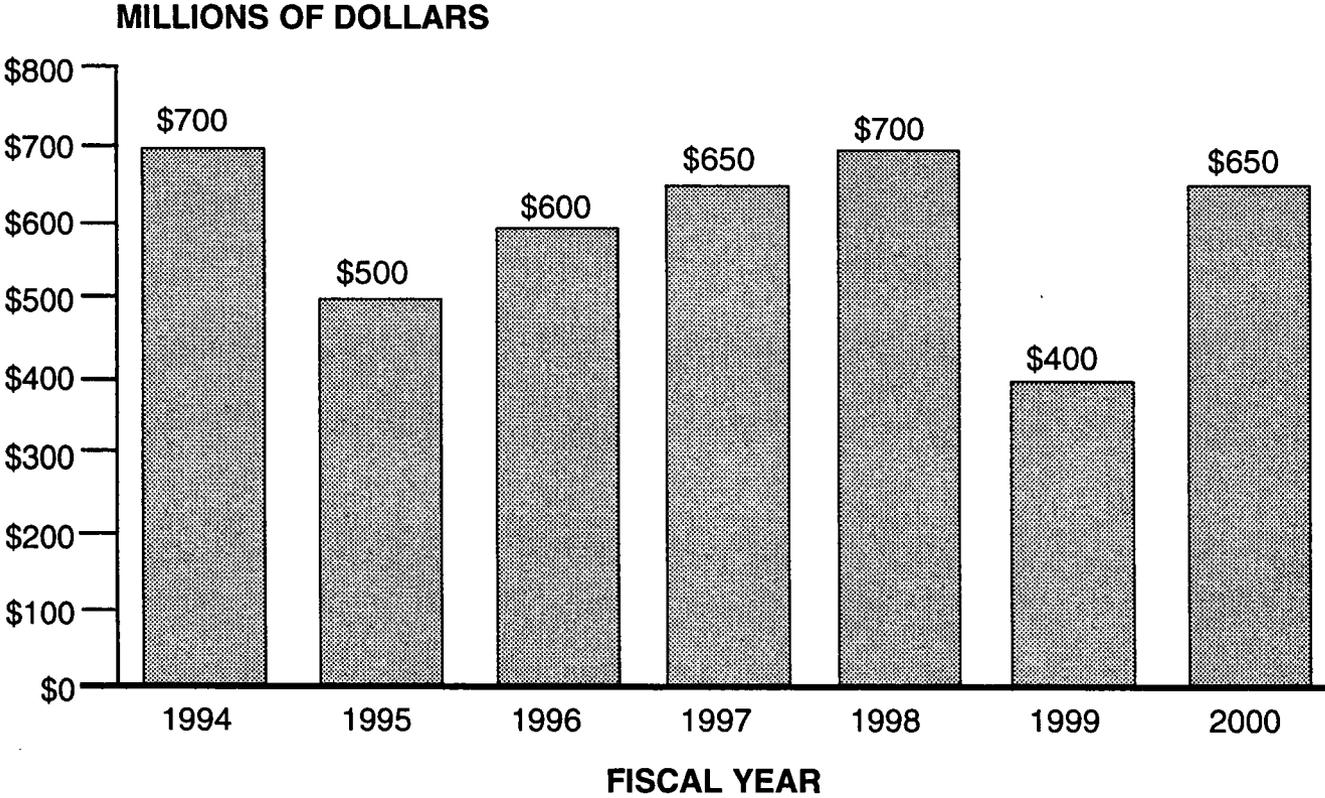
TVA REORGANIZED FOR IMPROVEMENT



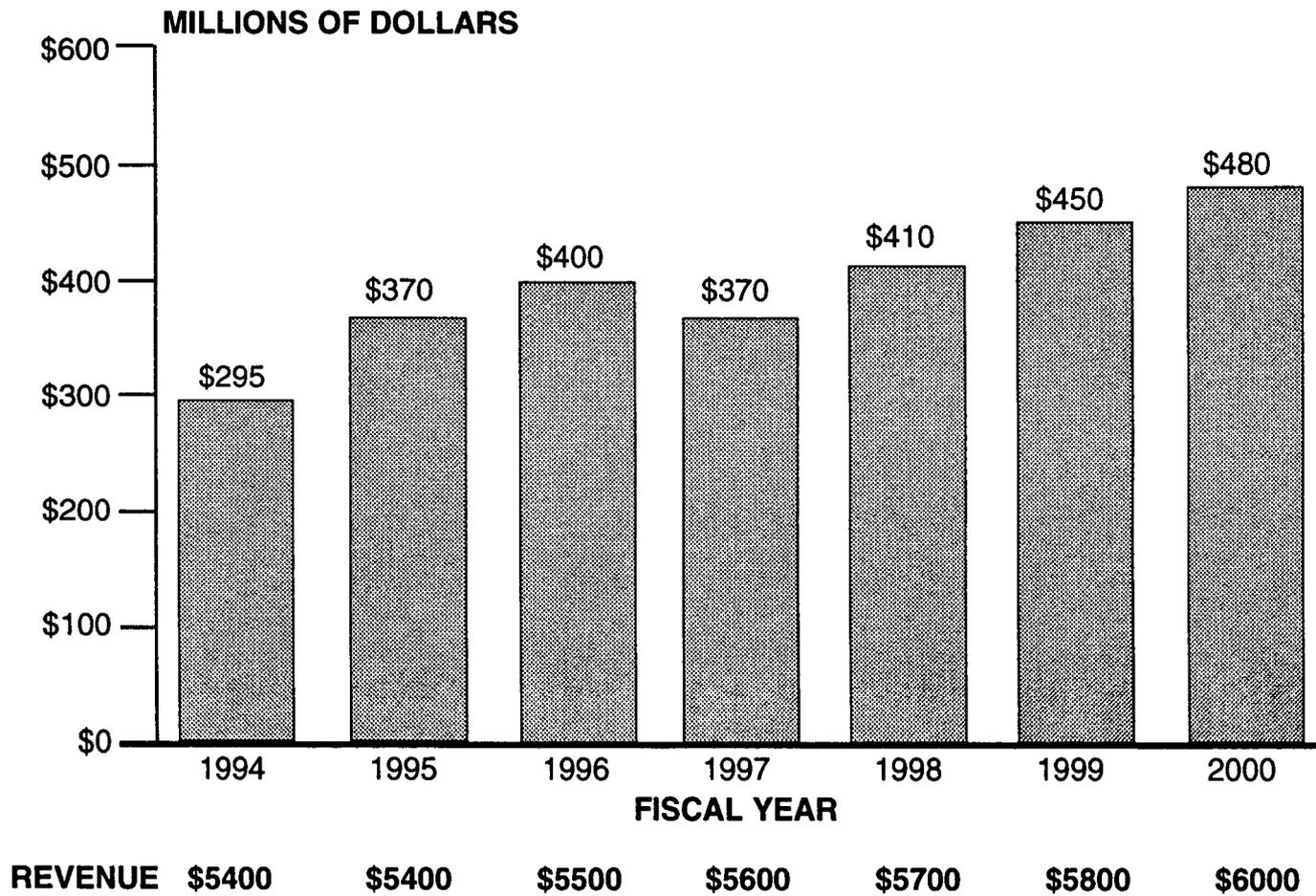
NUCLEAR vs TOTAL CAPITAL EXPENDITURES



TVA NEW BORROWING



TVA NUCLEAR O&M



STAFFING PLANS FORWARD LOOKING

- Workforce planning
 - System designed to look forward 5 years, assess projected needs, and staff accordingly
 - Plan updated each fiscal year
 - Implemented through succession planning and recruiting of new hires

STAFFING PLANS FORWARD LOOKING

- Succession planning
 - Define position requirements
 - Identify replacement candidates
 - Define developmental activities

Examples of internal development:

Senior Vice President Nuclear Operations

Site Operations Vice President, WBN

General Manager Nuclear Assurance

Engineering Manager, SQN

STAFFING PLANS FORWARD LOOKING

- Management strength/stabilization
 - External recruiting since November 1988
 - Total of 89 senior level external recruits
 - Substantially stronger management
 - Greater management stability
 - Reduced dependency on external recruiting
 - A pool of resources created to fill future needs
 - College recruitment reinitiated

STAFFING ACTIVITIES SUPPORT CONTINUING IMPROVEMENT AND EXPANDED NUCLEAR SYSTEM

- Staffing plans support operating and construction sites
- Building strength internally
- Recruiting only when necessary
- TVA prepared to meet today's challenges and anticipate future staffing needs

WATTS BAR UNIT 1 – CURRENT STATUS

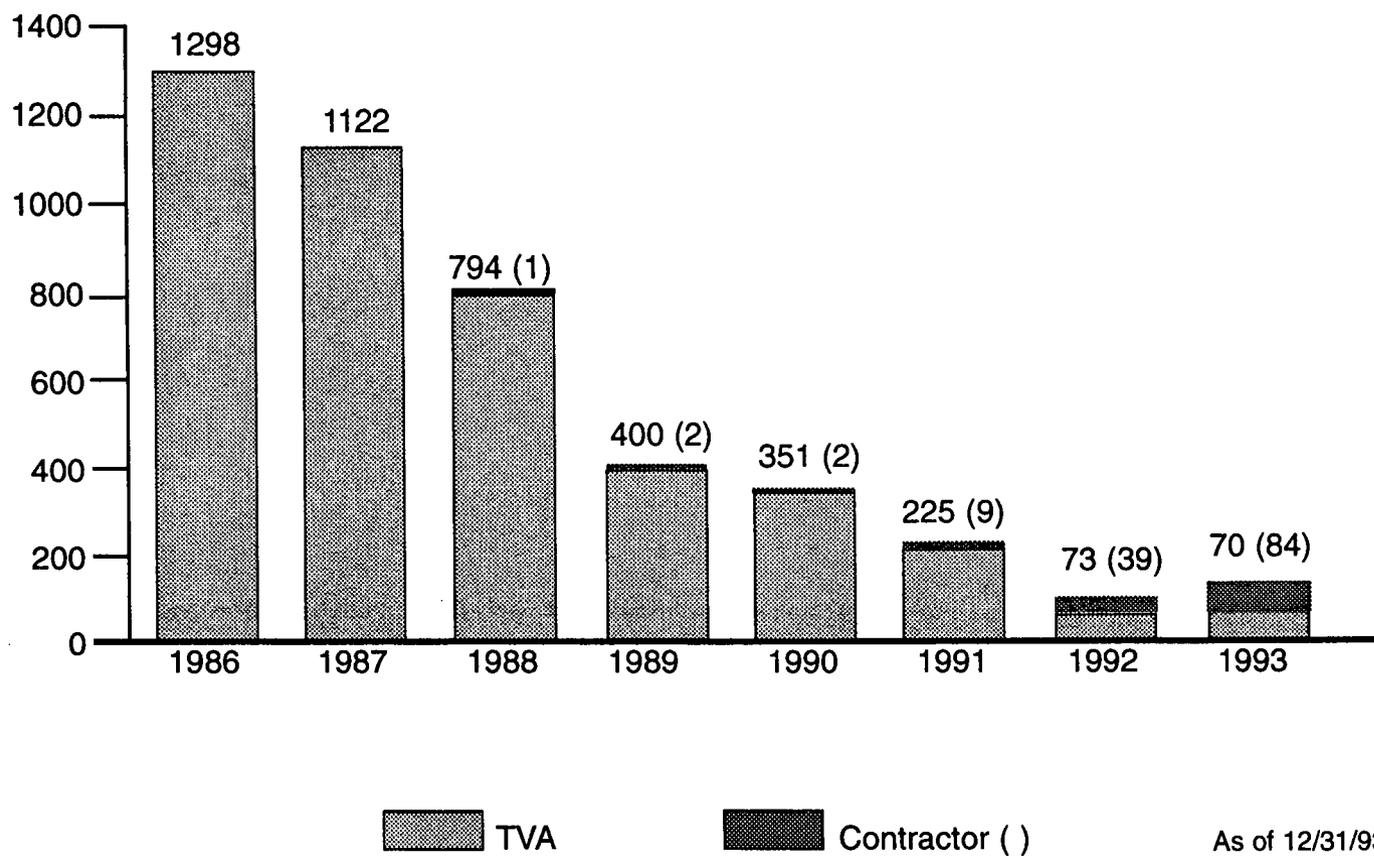
- Base engineering complete
- Systems completion status
 - Engineering 135 of 135 complete
 - Modifications 93 of 135 complete
 - Startup 47 of 135 complete
- Schedule
 - Hot functional testing – March 1994
 - Fuel load – finalize schedule after hot functional testing
- Limited remaining technical issues

TVA IS FOCUSED ON ISSUES OF CONCERN TO EMPLOYEES

- Line management attention
- Dedicated Concerns Resolution staff
- Proactive approach to emerging issues
- Performance measurement and reporting
- Continue to improve employee morale

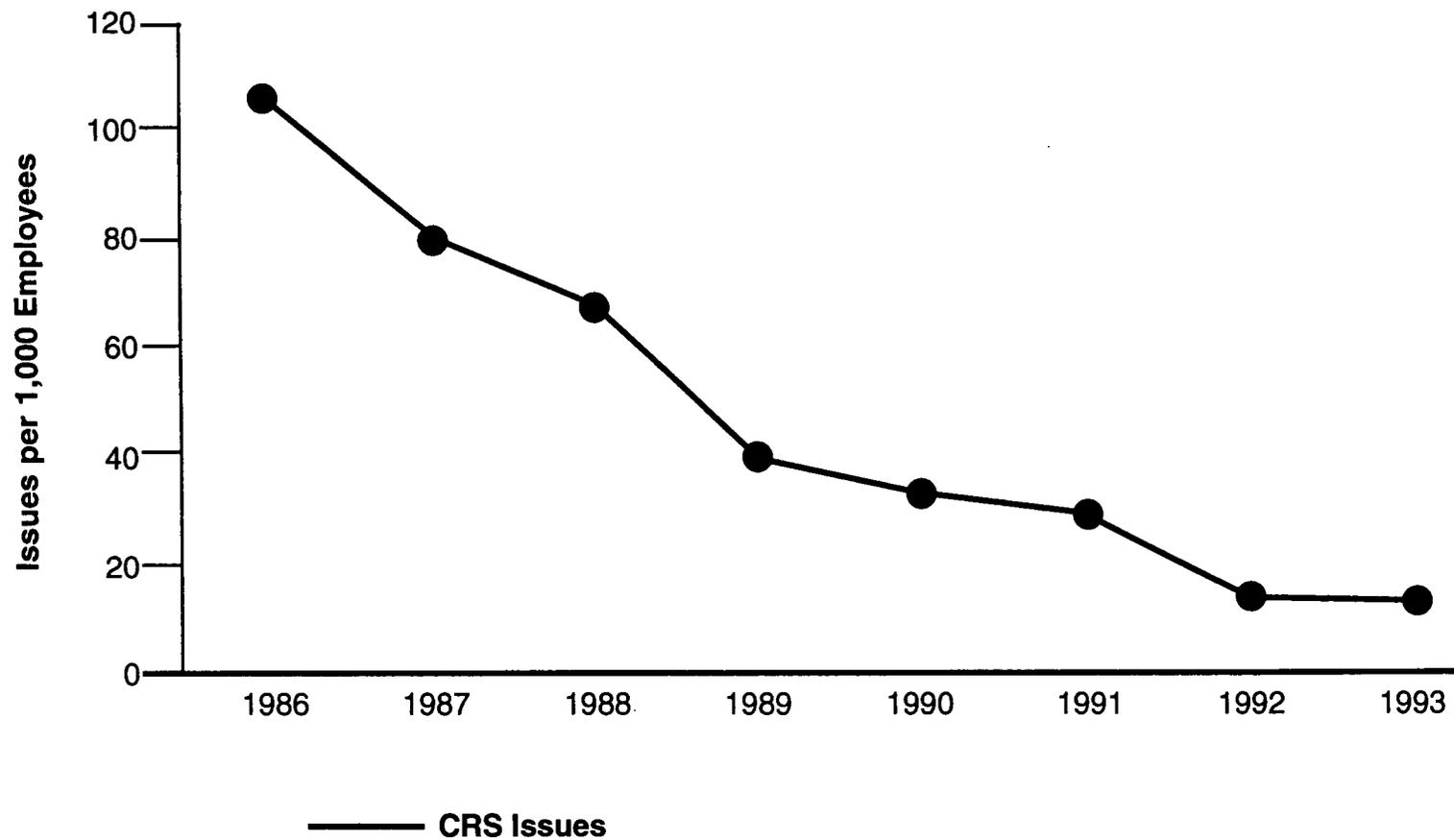
CONCERNS RESOLUTION ISSUES

TVA AND CONTRACTOR



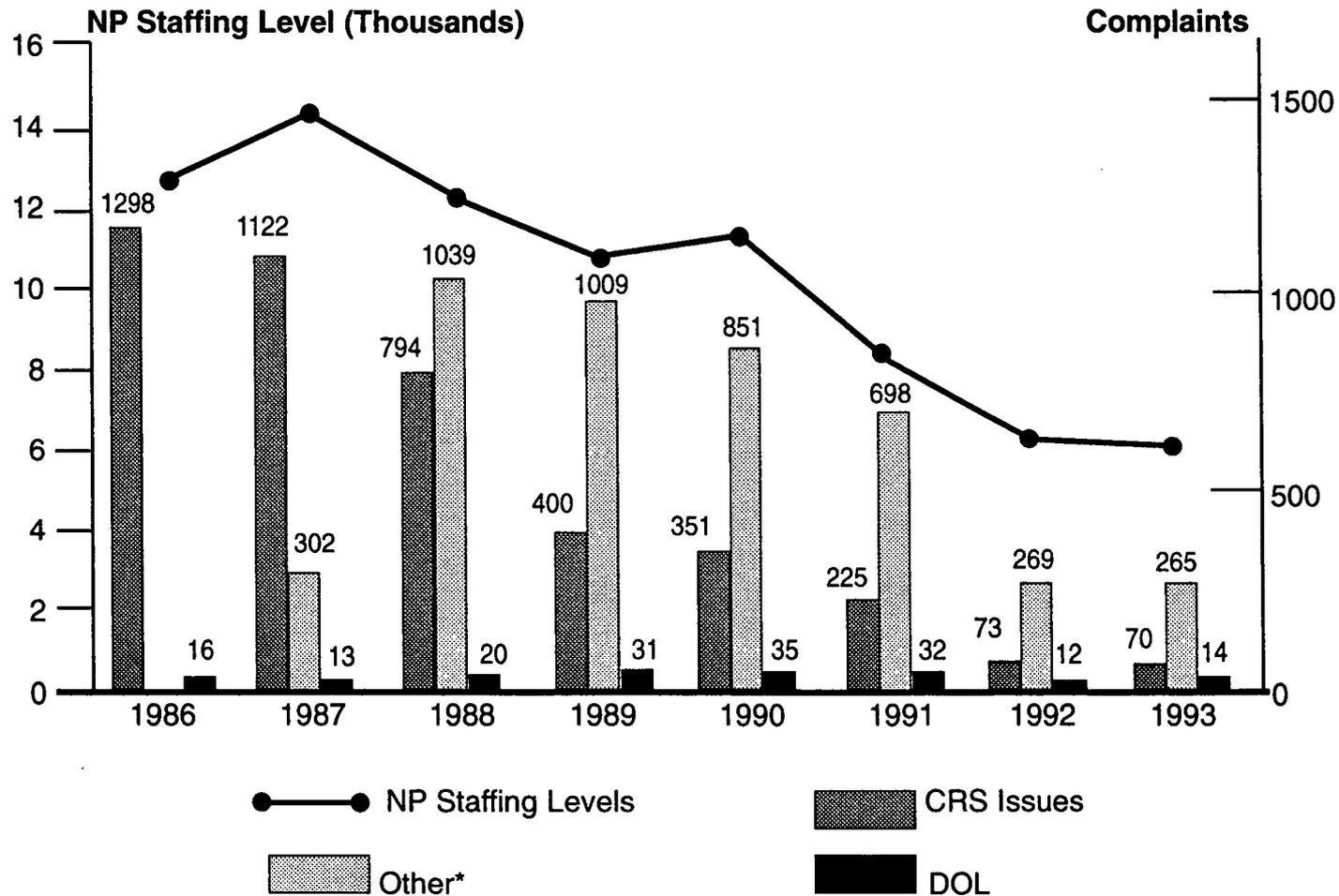
TRENDS AND PERFORMANCE

TOTAL CRS ISSUES PER 1,000 EMPLOYEES



TRENDS AND PERFORMANCES

TOTAL COMPLAINTS – ALL REPORTING SYSTEMS



*Data not available for 1986

As of 12/31/93

PROACTIVE APPROACH BEING TAKEN AT WATTS BAR

- Lookback project in progress
- Communications plan
- Supervisor training
- Employee Concerns Task Force
- Strengthen Watts Bar Concerns Resolution staff