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NOV 14 1983

THE SECRETARY OF ENERGY
WASHINGTON, D.C. 20585

October 3, 1983

MEMORANDUM FOR HONORABLE KENNETH M. DUBERSTEIN
Assistant to the President for
Legislative Affairs
The White House

Attached is a draft of a letter from the President to Appropriations Subcommittee Chairman Tom Bevill reaffirming our support for the Clinch River project. Although as I write it is uncertain as to exactly which legislative strategy Chairman Bevill and his colleagues will agree to, I'd greatly appreciate your help in getting the letter expedited so that it will be ready when and if it is needed which could be tomorrow or Wednesday.

Many thanks.

A handwritten signature in black ink, appearing to read "Don", is positioned above the typed name.

DONALD PAUL HODEL

Attachment

cc: Honorable Edwin Meese, III
Honorable Craig L. Fuller

DRAFT
10/3/83

Presidential Letter to Chairman Bevill

A more abundant, affordable and secure energy future for all Americans is an objective that I am sure we all share. Safe commercial nuclear power is a reality in this country and offers one of the best potential sources of new electrical energy supplies in the decades ahead.

Beyond the current generation of power reactors is the prospect of an essentially inexhaustible energy source through breeder reactor technology. The U.S. breeder reactor program has been underway for over 30 years, but for a variety of reasons, the U.S. technological lead has been surrendered to other industrial nations. This profoundly affects our role in international civilian nuclear commerce, and our ability to shape world nonproliferation policy. Moreover, what is at stake is the stability of our commitment in complex, long-term technology development.

We are faced in the next several days with a decision which will profoundly test our degree of commitment as a Nation. The Clinch River Breeder Reactor Plant (CRBRP) project has been put on hold by the Congress while increased private fiscal participation has been sought. Substantial support has been forthcoming and a financing plan has been forwarded to the Congress. It will provide \$1 billion or 40 percent of the remaining cost to complete the CRBRP project, significantly reducing Federal spending, without increasing rates to the consumer. It has my strong personal support.

I believe that completion of the Clinch River Project through implementation of the Alternative Financing Plan would be in the best interest of the Nation and I urge you to lend your personal support to this effort.

With warm personal regards,

RONALD REAGAN

cc: Honorable John T. Myers



Nuclear Report

A report to the officers and members of the American Nuclear Society of the energy attitudes and the political environment in the capital, prepared by the Washington Representative of the American Nuclear Society

Vol. VI, No. 7
August 4, 1983

Ronald Reagan pledges full support for Clinch River, and will personally lobby Members of Congress for the passage of funding proposal that will come before both houses late in September. The pledge came in a July 21 meeting in the White House between the President and several breeder advocates, including the immediate past president of the American Nuclear Society, Manning Muntzing. The group had solicited the meeting with the President so it could present him with a copy of "Nuclear Power Assembly: Agenda for the 80s" (See NR of May 5). The session planned was to include solicitations for presidential support for the major points raised in the agenda document---a need for better public understanding of the benefits of nuclear power; implementation of the Nuclear Waste Policy Act of 1982; licensing reform; and Clinch River. The discussion, however, seems to have been somewhat one-sided with the President doing most of the talking. He reasserted his well known position of solid support for nuclear power, and said he firmly believes that the Clinch River demonstration breeder should be built as part of an urgent requirement to keep a world leadership role for the United States in this and other important areas of high technology. This open and positive statement by President Reagan added considerable new optimism to the breeder-advocacy camp, which had been hearing rumors that the administration was paying only lip-service support for the continuation of the CRBR project and that the President was being shielded from this issue by White House staffers who view it as a possible political albatross.

A "Renaissance Event" with Dave Stockman on board. Following the brief session with the President, the breeder advocates conducted detailed discussions about CRBR legislative strategies with top White House advisers and the Secretary of Energy, Donald Hodel. The group from the White House included the President's personal counselor, Edwin Meese, science adviser, George Keyworth, and OMB energy deputy, Frederick Khedouri. Meese chaired the session and called it a "Renaissance Event," in which all members of the administration are in consonance with representatives of industry, labor, and the scientific community (the American Nuclear Society). Khedouri was introduced by Meese as being a "recent convert" to the philosophy of continuing CRBR. These remarks were seen as carrying considerable weight, because it has been widely stated, especially by breeder opponents, that Khedouri and his boss OMB Director David Stockman want nothing more than to see the CRBR project scuttled. In a press conference immediately following the White House meeting, an enthusiastic Hodel said the event had been "a more positive session" than he had anticipated. When asked by a member of the press if the President will lobby Congress for CRBR, making personal telephone calls as he has done in the past on important issues, Hodel said "yes." When asked about where Stockman stands on the new CRBR financial plan, Hodel said: "I can assure you that Dave Stockman is now on board."

Hodel sent the CRBR alternative financial proposal to Capitol Hill on August 1, in time for it to be available to all Members of Congress, giving them an opportunity to discuss it with their constituents during the summer congressional recess, which begins this week and ends after Labor Day. (See NR of July 6 for a more detailed discussion of the proposal). The current strategy is to have the plan before the Congress for a suitable period, with public hearings on it scheduled for the middle of September. The proposal's legislative vehicle will be the continuing resolution to be prepared by the appropriations committees and submitted during the last few days of this fiscal year (before October 1) to appropriate FY-1984 money for ongoing programs not covered by previously enacted appropriations bills. A full appropriation of about \$1.4 billion to cover seven years of construction (to project completion) will be offered in the continuing resolution. The CRBR item, most probably, will first be voted up or down in the Senate, where a scant majority in favor of project completion is believed to exist. Such a maneuver could seek to avoid a vote in the House, where "closed" rules often preclude votes on individual items in continuing resolutions.

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Even the continuing controversy over Clinch River, however, it is quite unlikely that the breeder strategists can avoid a major floor debate and crucial vote in the House on this issue.

It will take a lot of jawboning and arm twisting by Ronald Reagan to win the Battle of Clinch River in a decisive manner. It's easy for him to order his subordinates Stockman and Khedouri into line, but he may have more trouble with members of his own party on Capitol Hill, where Republican Senator Gordon Humphrey (NH) and Rep. Claudine Schneider (RI) lead the fight against the project. In the last House vote on FY-83 appropriations for the project (December 14), 79 of the 192 Republicans voted to stop further funding. These naysayers included such Republican ideologues as Jack Kemp (NY), Guy Vander Jagt (MI), Mickey Edwards (OK), Newt Gingrich (AL), and Phil Gramm (TX, then a Democrat).

Breeder advocates will need about 75 new votes to win in the House. Thus, their prime targets are freshmen and wavering Republicans, who see cutting CRBR funds as a positive step toward reducing budget deficits. A major factor compounds the advocates' problems: Some 50 Members who voted in support of the project in December are no longer in Congress. These lost votes plus the 20 odd majority for the opposition (217-196) must be overcome if the project is to survive. The Reagan support plus his personal appeal to Members of his own party (and to some conservative Democrats) are obviously of paramount importance on this issue. The President's first job, it would seem, will be to solidify support for CRBR within the Republican House leadership, where past voting records on the project have been spotty. Minority Leader Bob Michel (IL) has always given solid support along with Chief Deputy Whip Tom Loeffler (TX). Minority Whip Trent Lott, who jumped ship for political reasons understood only to himself to vote against CRBR in December, is now back on board. Deputy Whip Olympia Snowe (ME) has never supported the project. Here are the December 14 votes for all regional Republican whips.

¶ **Republican Whips, New England and Mid-Atlantic States:** Courter (NJ), Martin (NY), and Gregg (NH) voted against the project, Solomon (NY) voted for it, and Schulze (PA) didn't vote.

¶ **Republican Whips, Southern & Border States:** Gingrich (GA) voted against the project, and Livingston (LA), Coleman (MO), Bliley (VA), and Campbell (SC) voted for it.

¶ **Republican Whips, Midwestern States:** Weber (MN), Wylie (OH), Martin (IL), and Pursell (MI) voted against the project, and Strangeland (MN) voted for it.

¶ **Republican Whips, Western & Plains States:** Edwards (OK) and Brown (CO) voted against the project, and Lujan (NM), Hunter (CA), and Morrison (WA) voted for it.

The bottom line: Constituent opinion. Breeder advocates and Members of Congress who support Clinch River say it will take more than a strong presidential appeal to win this final vote on Clinch River. They say it will also take significant constituency support. If, in these days while in their home districts, they find solid support for the nation maintaining a strong technical leadership role in the world, with Clinch River projected as a key element in this role, then wavering Members will vote that support. The advocates say these same Members will likely vote against Clinch River if they find strong constituency sentiments advocating fiscal conservatism with urgent public pleas to cut the federal budget.

Russian and French breeder programs continue aggressively as these and other industrialized nations move into dominant leadership roles in this area of advanced nuclear technology. France, with its 233-MW Phenix breeder operational and its 1,200-MW Superphenix ready for a 1984 startup, continues to lead the western world in advocating this advanced concept for generating electricity. The Russians, with one 300-MW and one 600-MW breeder operational, say they will build several breeder plants of both loop and pool configurations before deciding which design will become the national generator of the future. A group of U.S. power-generation executives, visiting Russia at the invitation of the Ministry of Electricity and Power, has returned recently to report on the

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NVAP-CEPP

THE WHITE HOUSE

WASHINGTON

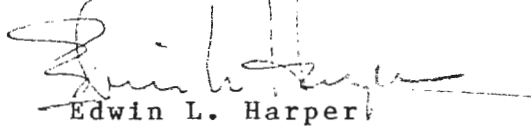
July 8, 1982

Dear Mr. Roe:

Thank you for your letter of June 21 outlining possible new funding proposals for the Clinch River Breeder Reactor. The Administration has supported this project in each budget since assuming office, and we continue to support the project. I am encouraged by the possibility of additional private funding which will both improve congressional reception of the project, and move the financing of the project more closely into line with other aspects of the Administration's energy policy.

I have been in close touch with Secretary Hodel as the new financing ideas have been developed, and I can assure you that his efforts have full Administration support.

Sincerely Yours,



Edwin L. Harper
Assistant to the President
for Policy Development

Mr. Randall B. Roe
Vice President
Burns and Roe, Inc.
1850 K Street, N.W.
Suite 220
Washington, D.C. 20006

Bc-995



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET

WASHINGTON, D.C. 20503

June 21, 1983

NVAP - Clinch River

MEMORANDUM FOR EDWIN MEESE III

FROM: FRED KHEDOURI *FK*

SUBJECT: Clinch River Strategy Meeting

Current Situation:

- FY1983 appropriations bill funded CRBR but directed DOE to develop an industry cost-sharing plan to finance balance of project (about \$2.4 billion estimated remaining construction).
- After much labor, the DOE-industry panel devised a proposal with the following elements:
 - ° \$1.4 billion appropriated Federal share
 - ° \$800 million utility share funded through bonds; Federal guarantee of revenues to service bonds
 - ° \$150 million "equity" contribution from utilities that is derived from tax benefits associated with project.
- House appropriations bill for FY1984 contains no funding for Clinch River as passed.
- Senate version contains no funding as reported from Subcommittee.
- Prospects for a successful McClure effort on the Senate floor to enact the DOE-industry plan have been assessed as weak but not unattainable.
- Prospects for House adoption if the provision is a part of the regular appropriation bill are very poor, in part because of procedural situation.
- Under House rules, the first vote would occur on a motion to instruct the House conferees to reject the Senate language.
- This motion would include not just Clinch River, but two water projects (Garrison and Stonewall Jackson dam) that were deleted from the bill on the House floor earlier this month by almost 2-1 votes.
- A vote on a package of this kind would be almost impossible to win.

Strategy Alternatives:

- The Administration has at least four major alternatives available:

Option 1: All-out White House effort in support of McClure effort to enact DOE-industry funding plan.

- Would satisfy McClure request and fulfill public commitments to support CRBR.
- Runs significant risk of defeat and possible eventual loss of "base" breeder research program along with Clinch River.
- Requires Administration to support DOE-industry plan, which is itself undesirable from a policy standpoint because of Federal guarantees and apparent lack of willingness by utilities to share risks.
- Only option that has any real chance of ensuring that Clinch River is funded this year.

Option 2: Limited effort by DOE to support McClure

- Would permit McClure to blame Administration for defeat on Clinch River.
- Would be perceived by nuclear industry as lack of genuine commitment.
- Avoids necessity for major investment of President's and senior staff time.
- Avoids eventual "bidding war" to enlist votes that might jeopardize high priority objectives in other areas.

Option 3: Announce end of Administration support for Clinch River because of apparent unwillingness of utility industry to support project and evident lack of long-term congressional support.

- Eliminates major source of criticism of Administration for energy policy inconsistency.
- Saves at least \$1.4 billion, possible substantially more if Federal guarantees on utility bonds are called.
- Provides best chance of preserving stable on-going breeder research effort to meet long-term needs.

Option 4: Retain current position of support for full appropriated funding as proposed in President's budget.

- No chance of favorable congressional action; will result in termination of Clinch River.
- Will not meet McClure request.
- Would require explicit rejection of DOE-industry cost-sharing plan and thereby be characterized as back door effort to kill Clinch River.

KEY VOTES NEEDED FOR CRBR

- If chosen strategy is for a major White House push in support of Clinch River, we will face the following series of key votes.
- Each vote will require a large-scale lobbying effort, including calls and meetings involving the President and senior staff.

Using Regular FY1984 Energy and Water Appropriations as Vehicle:

- 1) Vote on McClure amendment to add CRBR: Full Senate floor vote.
- 2) Vote on Conte/ Coughlin motion to instruct House conferees to reject Senate funding for CRBR, Garrison, and Stonewall Jackson: Full House floor vote.
- 3) Vote in House/Senate appropriations conference committee: majority of each house must vote to accept Senate language in conference agreement.
- 4) Vote in House on provisions reported in technical disagreement (rules provide for separate vote on parts of conference report): Full House floor vote.
- 5) Vote on final passage of conference report: Full House and Full Senate.

Summary: 2 votes on Senate floor
3 votes on House floor
1 vote by conferees representing each body in House/ Senate conference

Using FY1984 Continuing Resolution:

- 1) Vote in House appropriations subcommittee to insert provisions.
- 2) Vote in full House Committee on amendment to delete.
- 3) Vote in full House on amendment to delete.
- 4) Vote in Senate subcommittee to delete (or add, if deleted in House)
- 5) Vote in full Senate committee to delete.
- 6) Vote in full Senate to delete.
- 7) Vote in full House on motion to instruct House conferees.
- 8) Vote by each body in conference committee to accept.
- 9) Vote in House on language in technical disagreement (if added in Senate after loss in House).
- 10) Vote on final passage: floor of House and Senate.

Summary: 2 votes on Senate floor
3 votes on House floor
6 votes in House and Senate Appropriations Committees

MEMORANDUM

THE WHITE HOUSE

WASHINGTON

October 22, 1982

FILED
CRP

Call to FA.
Covers
11/8

FOR: DANNY BOGGS

FROM: JUDY JOHNSTON

SUBJECT: Attached Correspondence

WH Correspondence would like approval of the attached draft to the President of Edison Electric Institute.

Would you please look the letter over and return it to me with any changes.

Thank you.

THE WHITE HOUSE
WASHINGTON

ANNE HIGGINS
Special Assistant to the
President and Director
of Correspondence
Room 94, x7610

10-22-82

To: Judy Johnston
any problem with
our doing this?



Department of Energy
Washington, D.C. 20585

October 21, 1982

MEMORANDUM FOR: ANNE HIGGINS
Special Assistant to the President
and Director of Correspondence
The White House

FROM: ROBERT C. ODLE, JR.
Assistant Secretary for Congressional,
Intergovernmental and Public Affairs

SUBJECT: Letter for Signature of the President

William McCollam, the President of the Edison Electric Institute, wrote the President in September to commend the Administration's stand in support of the Clinch River Breeder Reactor (CRBR). The letter was referred to the Department of Energy for direct reply.

The funding of the CRBR will be challenged again in the upcoming "lame-duck" session. A response to Mr. McCollam's letter signed by the President will be of great significance in our effort to defend the funding for the project.

Therefore, I request that the reply to Mr. McCollam's letter be signed by the President. A draft response is attached.

Attachment

cc: Wayne Valis, ATTN: Sandy Farrow
Sally Kelly, White House Correspondence

A handwritten signature, likely "R. Odle", is written in dark ink to the right of the distribution list.

Mr. William McCollam, Jr.
President
Edison Electric Institute
1111 Nineteenth Street, N.W.
Washington, D.C. 20036

Dear Bill:

Thank you for your letter of September 15, 1982, reiterating your strong support for commercial nuclear power and the Clinch River Breeder Reactor Plant (CRBR) project. Because of the high potential of the breeder to assure the Nation of an abundant, economic, and secure supply of energy, the project is a high priority of my Administration.

I am particularly gratified with the progress made on this project in the last year. We have reorganized and strengthened the project management, made significant progress in project licensing, continued progress towards design completion, maintained a vigorous pace in hardware procurement and fabrication, and most importantly, on September 22, 1982, we began site preparation activities. These accomplishments have placed us in a position where we can now proceed into the construction phase with great assurance that we will meet our cost, schedule, and technical goals for this project.

The CRBR is an excellent example of how Government and industry can work together to assure a secure energy future. With the steadfast support that you and the utility industry provide, we are confident that we will achieve our objectives of expeditiously completing the CRBR and successfully demonstrating this important technology.

Sincerely,

Ronald Reagan

THE WHITE HOUSE
Office of the Press Secretary

For Immediate Release

October 8, 1981

STATEMENT BY THE PRESIDENT

A more abundant, affordable, and secure energy future for all Americans is a critical element of this Administration's economic recovery program. While homeowners and business firms have shown remarkable ingenuity and resourcefulness in meeting their energy needs at lower cost through conservation, it is evident that sustained economic growth over the decades ahead will require additional energy supplies. This is particularly true of electricity, which will supply an increasing share of our energy.

If we are to meet this need for new energy supplies, we must move rapidly to eliminate unnecessary government barriers to efficient utilization of our abundant, economical resources of coal and uranium. It is equally vital that the utilities -- investor-owned, public, and co-ops -- be able to develop new generating capacity that will permit them to supply their customers at the lowest cost, be it coal, nuclear, hydro, or new technologies such as fuel cells.

One of the best potential sources of new electrical energy supplies in the coming decades is nuclear power. The U.S. has developed a strong technological base in the production of electricity from nuclear energy. Unfortunately, the Federal Government has created a regulatory environment that is forcing many utilities to rule out nuclear power as a source of new generating capacity, even when their consumers may face unnecessarily high electric rates as a result. Nuclear power has become entangled in a morass of regulations that do not enhance safety but that do cause extensive licensing delays and economic uncertainty. Government has also failed in meeting its responsibility to work with industry to develop an acceptable system for commercial waste disposal, which has further hampered nuclear power development.

To correct present government deficiencies and to enable nuclear power to make its essential contribution to our future energy needs, I am announcing today a series of policy initiatives:

(1) I am directing the Secretary of Energy to give immediate priority attention to recommending improvements in the nuclear regulatory and licensing process. I anticipate that the Chairman of the Nuclear Regulatory Commission will take steps to facilitate the licensing of plants under construction and those awaiting licenses. Consistent with public health and safety, we must remove unnecessary obstacles to deployment of the current generation of nuclear power reactors. The time involved to proceed from the planning stage to an operating license for new nuclear power plants has more than doubled since the mid-1970s and is presently some 10-14 years. This process must be streamlined, with the objective of shortening the time involved to 6-8 years, as is typical in some other countries.

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(2) I am directing that government agencies proceed with the demonstration of breeder reactor technology, including completion of the Clinch River Breeder Reactor. This is essential to ensure our preparedness for longer-term nuclear power needs.

(3) I am lifting the indefinite ban which previous Administrations placed on commercial reprocessing activities in the United States. In addition, we will pursue consistent, long-term policies concerning reprocessing of spent fuel from nuclear power reactors and eliminate regulatory impediments to commercial interest in this technology, while ensuring adequate safeguards.

It is important that the private sector take the lead in developing commercial reprocessing services. Thus I am also requesting the Director of the Office of Science and Technology Policy, working with the Secretary of Energy, to undertake a study of the feasibility of obtaining economical plutonium supplies for the Department of Energy by means of a competitive procurement. By encouraging private firms to supply fuel for the breeder program at a cost that does not exceed that of government-produced plutonium, we may be able to provide a stable market for private sector reprocessing, and simultaneously reduce the funding needs of the U.S. breeder demonstration program.

(4) I am instructing the Secretary of Energy, working closely with industry and state governments, to proceed swiftly toward deployment of means of storing and disposing of commercial high-level radioactive waste. We must take steps now to accomplish this objective and demonstrate to the public that problems associated with management of nuclear waste can be resolved.

(5) I recognize that some of the problems besetting the nuclear option are of a deep-seated nature and may not be quickly resolved. Therefore, I am directing the Secretary of Energy and the Director of the Office of Science and Technology Policy to meet with representatives from the universities, private industry and the utilities and requesting them to report to me on the obstacles which stand in the way of increased use of nuclear energy and the steps needed to overcome them in order to assure the continued availability of nuclear power to meet America's future energy needs not later than September 30, 1982.

Eliminating the regulatory problems that have burdened nuclear power will be of little use if the utility sector cannot raise the capital necessary to fund construction of new generating facilities. We have already taken significant steps to improve the climate for capital formation with the passage of my program for economic recovery. The tax bill contains substantial incentives designed to attract new capital into industry.

Safe, commercial nuclear power can help meet America's future energy needs. The policies and actions that I am announcing today will permit a revitalization of the U.S. industry's efforts to develop nuclear power. In this way, native American genius -- not arbitrary federal policy -- will be free to provide for our energy future.

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THE WHITE HOUSE OFFICE

REFERRAL

SEPTEMBER 28, 1982

TO: DEPARTMENT OF ENERGY

ACTION REQUESTED:

DIRECT REPLY, FURNISH INFO COPY

DESCRIPTION OF INCOMING:

ID: 099509

MEDIA: LETTER, DATED SEPTEMBER 15, 1982

TO: PRESIDENT REAGAN

FROM: MR. WILLIAM MCCOLLAM JR.
PRESIDENT
EDISON ELECTRIC INSTITUTE
1111 19TH STREET, NW
WASHINGTON DC 20036

SUBJECT: SUPPORTS EFFORTS TO REVITALIZE THE NUCLEAR
INDUSTRY AND URGES THE PRESIDENT TO PUSH
AHEAD WITH THE CLINCH RIVER PROJECT AS A
POSITIVE STEP TOWARD ENERGY SECURITY

PROMPT ACTION IS ESSENTIAL -- IF REQUIRED ACTION HAS NOT BEEN
TAKEN WITHIN 9 WORKING DAYS OF RECEIPT, PLEASE TELEPHONE THE
UNDERSIGNED AT 456-7486.

RETURN CORRESPONDENCE, WORKSHEET AND COPY OF RESPONSE

(OR DRAFT) TO:

AGENCY LIAISON, ROOM 91, THE WHITE HOUSE

SALLY KELLEY
DIRECTOR OF AGENCY LIAISON
PRESIDENTIAL CORRESPONDENCE

01-624

ID # 099509
UT

WHITE HOUSE CORRESPONDENCE TRACKING WORKSHEET

☐ O - OUTGOING

☐ H - INTERNAL

☒ I - INCOMING

Date Correspondence
Received (YY/MM/DD)

82109116

Name of Correspondent: William M. Callaway, Jr.

☒ MI Mail Report

User Codes: (A) _____ (B) _____ (C) _____

Subject: Supports efforts to revitalize the
minerals industry and urges the President to catch
up with the Alaska River Project as a
positive step toward energy security.

ROUTE TO:

ACTION

DISPOSITION

Office/Agency (Staff Name)	Action Code	Tracking Date YY/MM/DD	Type of Response	Code	Completion Date YY/MM/DD
<u>✓ PZ Valie</u>	ORIGINATOR	<u>82109116</u>			<u>1 1</u>
<u>10/08</u>	Referral Note:	<u>R 82109116</u>			<u>1 1</u>
<u>Wayne Valie, Mr. Dole</u>	Referral Note:				<u>1 1</u>
<u>456-6737</u>	Referral Note:				<u>1 1</u>
	Referral Note:				<u>1 1</u>
	Referral Note:				<u>1 1</u>

ACTION CODES:

A - Appropriate Action
C - Comment/Recommendation
D - Draft Response
F - Furnish Fact Sheet
to be used as Enclosure

I - Info Copy Only/No Action Necessary
R - Direct Reply w/Copy
S - For Signature
X - Interim Reply

DISPOSITION CODES:

A - Answered C - Completed
B - Non-Special Referral S - Suspended

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Type of Response = Initials of Signer
Code = "A"
Completion Date = Date of Outgoing

Comments: _____

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EDISON ELECTRIC INSTITUTE

The association of electric companies

1111 19th Street, N.W.
Washington, D.C. 20036
Tel: (202) 828-7400

099509

September 15, 1982

The President
The White House
Washington, D.C. 20500

Dear Mr. President:

We commend you for your unwavering support of commercial nuclear power and one of its essential elements -- the Clinch River Breeder Reactor Project. Recent developments confirm that your support is justified.

On August 5, the Nuclear Regulatory Commission voted to allow preparation of the Clinch River plant site. Since the Project is well advanced in design, component fabrication and construction planning, this positive action saves taxpayer dollars and demonstrates that your philosophy of eliminating excessive regulation while preserving public health and safety is viable and on track.

The General Accounting Office has completed another analysis on the Liquid Metal Fast Breeder Reactor program and the importance of the Clinch River Project. GAO has reaffirmed its longstanding position that "a strong LMFBR program is needed if nuclear fission is to be a long term energy source" and that "a Clinch River-type demonstration project is a necessary step in developing the breeder option." GAO concluded that "continuing the present program provides the best assurance that breeders will be available when needed."

Another recent study affirmed the competence and dedication of the Project's integrated management team. In a thorough audit of the Project released in July, 1982 the Inspector General of the Department of Energy reached this conclusion: "Rather than being poorly managed and loosely controlled, we found the opposite. Systems and procedures had been implemented throughout the Project that enabled the Project Director to exercise effective control over the work done by the various Project participants."

Mr. President, the Edison Electric Institute shares your optimism about the future of our economy. Electricity will continue to increase its share of the nation's energy, making inevitable the need

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The President
September 14, 1982
Page Two

for new generating capacity. We pledge to support your efforts to revitalize the nuclear industry and urge you to push ahead with the Clinch River Project as a positive step toward energy security.

Sincerely yours,


William McCollam, Jr.

WM:fds



Department of Energy
Washington, D.C. 20585

September 9, 1982

Mr. Burleigh Leonard
Senior Staff Member
Office of Policy Development
The White House
Washington, D.C. 20500

Dear Burleigh:

Enclosed is a short paper prepared by the staff of the Assistant Secretary for Nuclear Energy on the legal status of the Clinch River Breeder Reactor. I believe Ed Harper had expressed an interest in the situation.

As you know from my weekly report to Ken Duberstein, we expect challenges to continued funding of the breeder on the House and Senate floors, probably the week of September 27. CRBR critics often point out that despite the federal funds invested "not a shovel of dirt has been turned."

It is our thought that if we can turn that shovel of dirt before the votes, we can give wavering Members the reasons they need to support the President's budget request for FY '83 funding of the breeder. In addition, we feel we need to demonstrate once again Administration support, because our critics often allege that "the White House doesn't really support the breeder."

It occurred to us that having the Vice President preside over a groundbreaking ceremony would help on both points, and he has accepted our invitation for Saturday the 25th at 1:30 p.m. We've also informally notified other interested parties such as Majority Leader Baker, Energy Chairman McClure, key Members of the Tennessee delegation, Lamar Alexander, Jim Broyhill, our Appropriations Subcommittee Chairman, etc. Naturally, we don't plan to do anything formal in terms of planning, or extend written invitations, unless and until the court acts favorably after the 15th. If the Court of Appeals rules against us, there will be no ceremony.

In addition to the many things we're doing here at DOE to gain support for the President's position, particularly in the House, we need, in my view, to use the White House, as President Carter did in his fight against the breeder, to demonstrate this Administration's support.

Towards that end, I've asked Ken Duberstein to let us use the State Dining Room one morning this month for a briefing of perhaps 75 "undecided" House Members. Naturally, we'd like the President to do a very brief drop-by, but what we really want to do is lay out the technical and scientific reasons for the breeder in a White House setting. I'll be following up on this request with Ken in a few days.

Please let me know if there's anything else you need.

With best wishes,

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Odle'.

Robert C. Odle, Jr.
Assistant Secretary for
Congressional, Intergovernmental
and Public Affairs

Enclosure

cc: Shelby T. Brewer
Assistant Secretary for
Nuclear Energy

CRBRP Status of Legal Challenges

There currently exists two legal challenges to DOE's proceeding with site preparation activities for CRBRP as approved by the NRC on August 17, 1982.

1. Appeal to the U.S. Court of Appeals for the District of Columbia Circuit
Court of Appeals of the NRC decision to allow site work to proceed

- o Suit filed on August 18, 1982
- o Government and utility response filed August 26, 1982
- o NRDC suit contends that NRC's approval was improper from a procedural point of view and that a stay should be issued pending the court's review of the NRC decision.
- o Court was notified on September 1, 1982, that DOE planned to proceed with site clearing on September 3, 1982. Court took no action upon receipt of this notice.
- o NRDC requested on September 3, 1982, that the Court defer any action on their motion since a stay had been granted in the U.S. District Court in Atlanta.
- o Decision from the Court of Appeals is expected by September 30, 1982.
- o On September 9, 1982, Government notified Court that 11th Circuit had granted updated appeal, and that if injunction overturned, work would start on September 20, 1982.

2. Appeal to the U.S. District Court in Atlanta of the grant of a water
discharge agreement between DOE and EPA

- o NRDC filed suit in Atlanta on August 23, 1982, requesting that site preparation be stayed while the Court reviewed the propriety of a DOE/EPA agreement on pollution abatement measures to be implemented during site preparation.
- o The District Court issued an injunction on September 3, 1982, restraining site preparation until EIS is complete and final permit is issued.
- o District Court held that agreement issued under EPA regulations permitting site preparation violated NEPA and the EPR regulation.
- o DOE and its utility partners appealed the decision of the District Court to the 11th Circuit Court of Appeals in Atlanta on September 7, 1982. DOE and utility appeals include request for expedited review and a decision by December 18, 1982.

- o On September 8, 1982, the 11th Circuit Court of Appeals issued an order granting utility motion for and scheduling oral argument on September 15, 1982.

Overall Analysis

- o Case in District of Columbia Circuit Court emphasizes procedural points, and seeks remedy of a stay of NRC's order. We believe that NRC's order was procedurally and substantively correct.
- o District Court decision in Atlanta is legally incorrect, and we are optimistic that 11th Circuit will overturn it.
- o The site work contract requires that the excavation contractor be mobilized on site by September 20, 1982. Any delay past this date will result in the payment of delay charges.
- o DOE intends to have a decision from both Courts and to be able to proceed with construction on September 20, 1982.

extent of it. There was no firm evidence that senior Communist intelligence services in the Soviet Union, China or Eastern Europe ever made any active attempt to incite American dissidents, the report said.

Moreover, the data in the report indicate that the Cubans and the North Vietnamese gave relatively little tangible support. The only cash donation mentioned was \$5,000 from an American living in China.

There is no indication in the report that the bureau or other intelligence services ever established that weapons, communications equipment or espionage tools had been fed to the antiwar radicals by the Communists.

Several bureau agents have said privately that they believe the report might be helpful to John Kearney, a former bureau official under indictment in connection with the Weathermen investigation.

But Justice Department lawyers resisted turning it over to Mr. Kearney on the ground, as one of them put it, that it was a "classic red herring—it has absolutely no relevance to any available defense."

"The question of whether a particular target is a foreign agent or a collaborator with a foreign power is relevant only to the question of whether the President or his alter ego for such matters, the Attorney General, may constitutionally bypass the Fourth Amendment's warrant requirement in permitting an electronic surveillance of such a target," a Government plea in court said.

EKOJI BUDDHIST TEMPLE TO BE DEDICATED ON SUNDAY

Mr. MATSUNAGA, Mr. President, one of the hundreds of religions in this great country of ours, where freedom of worship is a fact of life, is the Jodo-shinshu Hongwanji sect of Buddhism, which will be celebrating a most historic event this coming weekend—the official dedication of its first temple in our Nation's Capital.

Judo-shinsu Hongwanji is considered to be the largest of the Buddhist sects emanating from Japan. It was first introduced into the United States in 1868 by Japanese immigrants who arrived as laborers to help build our Nation's railroads and expanding industries. Since then, the sect has quietly grown in the United States and now has 300,000 actively practicing members and 135 temples and branches. In my State of Hawaii alone, there are about 200,000 adherents. Despite the spread of Jodo-shinshu Hongwanji throughout the United States, there has not been a temple in the Nation's Capital; that is, of course, not until this weekend.

The story of the establishment of this temple is a truly inspiring one, involving considerable faith and more than just a little bit of luck. Since the mid-1940's members of the sect who live in Washington, D.C., have been meeting together to practice their religious beliefs. In those early days, a small band of dedicated Buddhists from the area would make the long trip to the New York Buddhist Church as often as possible.

Then, in 1959 the Reverend Shoji Honda and his wife, June, moved from New York to Washington, D.C. Since their arrival, the Buddhist community in the Washington area has been flourishing and has left its mark on our Nation's Capital. It was under his leadership that the Jodo-shinshu Hongwanji members established a Sangha, or "brotherhood," an informal group which

met regularly at the Honda home, at individual members' homes, and at the Unitarian Church.

The Reverend Shoji Honda also participated in another event of historic importance which has special meaning to me. In 1965, Reverend Honda conducted a Buddhist ceremony in the Prayer Room for our Congressional Members in the Capitol to commemorate the first anniversary of the death of my father, Kingoro Matsunaga. This was the first and, I might add, the only time that a Buddhist ceremony was conducted in the Capitol chapel.

Finally in 1979, members of the Washington, D.C., Sangha, led by Ken and Nori Nakamura, established a Dharma School, primarily for the purpose of instructing their children in the tenets of Buddhism. They were greatly encouraged and helped in this endeavor by the then Bishop of the Buddhist Churches in America (BCA) the Reverend Kenryu Tsuji. This school was the direct predecessor of the new temple.

Although members of the Washington, D.C., Sangha had long dreamed about having a temple in the Nation's Capital, it would never have been possible without the generous financial assistance of a stranger to them, Mr. Yehan Numata. Mr. Numata is a Japanese industrialist and the founder of the Bukkyo Dendo Kyokai (Society for the Advancement of Buddhist Understanding). The son of a Shinshu Buddhist priest, he is a graduate of the University of California at Berkeley. It was while he was working his way through college, more than 50 years ago, that Mr. Numata decided to dedicate his life to the propagation of Buddhism, even though he had already set his sights on a career in business. Working as a dishwasher and cook, he suffered a serious illness shortly after he enrolled at Berkeley. Recalling those years, Mr. Numata has said:

In a foreign country, with no friends or money, living poorly as an animal, I imagined that if I should die . . . nobody would pay any attention to me and my body would be left lying in the field somewhere. It grieved me deeply to think of this, but the words of Shinran Shonin saved me when I was in such a miserable and sad state.

Today, Mr. Numata is the president of Mitutoyo, the world's largest manufacturer of micrometers. A multimillionaire, he has given much of his fortune and time to the activities of the Bukkyo Dendo Kyokai.

Mr. Numata met Kenryu Tsuji, the future Buddhist Bishop of the BCA during a postwar tour of the United States and Canada. In 1979, the bishop renewed his acquaintance with the businessman during a visit to Japan. Bishop Tsuji had only recently met with Shig Sugiyama and other young members of the Washington, D.C., Sangha to help them organize their school, and, during his conversation with Mr. Numata, he just happened to mention the Sangha's deep desire to establish a temple in the capital city of the United States.

"That is a great challenge," Mr. Numata exclaimed.

After that, things moved very quickly. When Bishop Tsuji retired last year

from his post as bishop of the Buddhist Churches of America, he was invited to become the minister of the new temple, to be named "Ekoji," or "Temple of the Gift of Light." Bishop Tsuji promptly accepted the position. The building itself was completed last month.

The Ekoji Buddhist Temple, which is located in Springfield, Va., will be officially dedicated on Sunday, November 8, 1981. His eminence Kosho Otani, Monshu Emeritus of the Jodo-shinshu Hongwanji in Kyoto, Japan, and the Lady Yoshiko Otani are expected to participate in the ceremony with the able assistance of the Reverend Tsuji and the Reverend Honda. Mr. Numata and representatives from Hawaii, Canada and Europe will also be in attendance.

In reflecting on the importance of this historic dedication, I think it is appropriate to consider the words Mr. Yehan Numata recently wrote in a letter to Mr. Shigugiyama, chairman of the board of directors, regarding his efforts in establishing the Ekoji Buddhist Temple. The letter said, in part:

. . . I was very happy that I could help a little in establishing Ekoji in Washington, D.C., the capital of the U.S.A. . . . I had been taught in the United States while I was young. To help to establish Ekoji is, therefore, a kind of my duty. I sincerely hope that Ekoji could be a Center for spreading the Teaching and Compassion of the Buddha not only among American people who have had no chance to know Buddhism, but also among other races so that the temple will contribute to the establishment of peace and happiness of mankind. I would like to express my deep gratitude to you and the members of Washington, D.C. Sangha Dharma School who have cooperated and devoted their efforts to establish Ekoji.

I know that my colleagues will join me in congratulating Mr. Yehan Numata, Reverend Tsuji, Reverend Honda, Shigugiyama, Ken Nakamura and all the members of the new Ekoji Buddhist Temple on the historic occasion of its establishment in our Nation's Capital.

THE CLINCH RIVER BREEDER REACTOR

Mr. HAYAKAWA, Mr. President, I was wavering yesterday about the funding of the Clinch River breeder reactor. I would like to report to my colleagues on a conversation I had just last night with Dr. Edward Teller, the great nuclear scientist.

I feel, as he does, that the Clinch River project has been and will continue to be very expensive and time consuming. However, after a long conversation yesterday with my friend of many years, Dr. Edward Teller, I am convinced that the Clinch River breeder reactor is integral to this Nation's energy needs, and more importantly to the nuclear industry which our country cannot afford to lose.

The nuclear industry is in a critical state. Capital expenditures have become three fourths of the cost of nuclear electricity. The licensing progress has dragged the building of nuclear plants out even further, and the long-term effects add more costs to the consumers. Dr. Teller tells me that we must stream-

line this process, and this can be done through proper reform of the Nuclear Regulatory Commission. However, this alone cannot save the industry, or solve our energy needs completely. To quote Dr. Teller:

No single prescription exists for a solution to the energy problem. Energy conservation is not enough. Petroleum is not enough. Coal is not enough. Nuclear energy is not enough. Solar energy and geothermal energy are not enough. New ideas and developments will not be enough by themselves. Only the proper combination of all of these will suffice.

We have been working on all of these alternatives, but we have not given enough attention to new ideas and to future technologies. We will need to find sources of energy for the indefinite future, not just the immediate future. The fast breeder is not the best, but it is a start.

We are developing better mining techniques to extract uranium more effectively and to get uranium from poorer ores. Dr. Teller tells me that another possibility that we have not as yet investigated fully is the use of thorium. Thorium is being used today, for example, in the Canadian Deuterium reactor known as Candu. This reactor uses thorium. Thorium can supply our long-range needs and at a smaller cost.

We also need to look into the possibility of combining thorium and uranium—this can be done in a hybrid reactor which combines fusion and fission.

Dr. Teller made an interesting observation. He said:

Clinch River cannot be stopped. I have ceased my efforts to stop it. I am for it. It is the only game in town.

I would like to see a study of these various types of reactors. I think we should finish Clinch River, and learn from it. We have already spent \$1 billion. Let us not throw that away. But let us look into what comes after Clinch River, and not close our eyes to what will happen after the year 2000. Our Nation has the capability to be once again the world leader industrially, but this can only happen through a combined effort on our part to make an energy policy that will provide for this country's increasing energy needs.

A SIGNIFICANT ACCOMPLISHMENT

Mr. PELL. Mr. President, I wish to mark a significant accomplishment in the world of individual and team sports, and one which has special meaning to me. Stephen Binns, a freshman at Providence College, in Rhode Island, set a new meet record in winning the individual IC 4A cross-country running championship on November 2. His time over the 5-mile course at Van Courtlandt Park in New York City was 23 minutes, 52.5 seconds.

In addition, Providence College took the team championship with 5 runners in the top 13 finishers. The individual and team accomplishments reflect the extraordinary skills of Providence coach, Bob Amato, whose teams have not lost a cross-country meet since 1973.

When I was a college student some 40 years ago, I too ran cross country, and I once competed in a meet over the same course as this championship race. Needless to say, I did not cover it under 24 minutes. But I did enjoy running, and I still do. As one runner to another, I congratulate Mr. Binns and his teammates. And I commend Coach Amato for sustaining such a strong program at Providence College for so many years. I am sure that my colleagues in the Chamber join me in these good wishes.

HAPPY BIRTHDAY TO W. AVERELL HARRIMAN

Mr. PELL. Mr. President, I wish to extend a happy birthday to Averell Harriman who will shortly be 90 and with whom I know many of us here look forward to sharing his birthday celebration. His has been a full, varied life marked by a profound sense of service.

It was 29 years ago that I resigned from the Foreign Service to be deputy director of his campaign for the Democratic Presidential nomination. That campaign was a happy, imaginative one and, although we did not win, it left me with a profound regard for Averell's prescience, kindheartedness and tough-mindedness.

Illustrating these qualities are two articles that appeared in yesterday's press—one by Averell Harriman himself in the Washington Post and the other by James Reston in the New York Times and I ask unanimous consent that they be printed in the RECORD at this point.

There being no objection, the articles were ordered to be printed in the RECORD, as follows:

[From the Washington Post, Nov. 4, 1981]

THE WINDOW OF OPPORTUNITY

(By W. Averell Harriman)

We are in danger of ceding our destiny to the whims of nuclear weapons, trusting to good fortune to see us through the nuclear arms race when we should be trusting ourselves.

The strategic forces of the United States and the Soviet Union carry explosive power more than 100,000 times greater than the Hiroshima bomb. Far from saying "enough," both nations are increasing these forces.

We are moving to deploy thousands of nuclear-armed cruise missiles, by their nature difficult to count because of their small size. These missiles—unverifiable—will make existing agreements to reduce the numbers of nuclear arms obsolete and future agreements impossible. We are allowing the seduction of a momentary technological advantage to foreclose future limits on Soviet forces.

Today there are five nations that have tested nuclear weapons; in 10 years there could be 10 more, as well as terrorists adding nuclear explosives to their menace. Yet our policy to prevent the spread of these weapons now features promotion of the exports and technologies that could be fashioned to destroy us.

The SALT II treaty, which put a cap on the strategic arms race and placed significant limits on Soviet military power, has been abandoned. In place of the "real arms control" we were promised a year ago, we have only the promise of endless talks on nuclear arms in Europe and no talks at all on strategic arms until next year.

The results: a restive, divided NATO alli-

ance that questions our competence to lead in a nuclear world, a progressive weakening of the negotiated restraints that can bound Soviet nuclear power and an emphasis on nuclear forces that are unusable in countering the Soviet challenge around the globe.

As we become more remote from the horrors of Hiroshima, there are doctrines of war fighting based on the fantasy of using nuclear destruction for some "rational" end. These doctrines blur the vital distinction between nuclear and non-nuclear weapons. And they encourage the nuclear choice by telling all nations that nuclear weapons are just another instrument of military power.

The truth is that nuclear weapons exist for one purpose only—to deter nuclear war. Once used, they will be instruments of mass destruction, consuming the destroyer as well as the destroyed.

If all Americans should be concerned about these developments, so should we be angered by those who weave a myth of America as a second-rate nuclear power, inferior to the Soviet Union. This myth demoralizes our friends, and it could tempt the Soviet Union to test our power when testing that power could have catastrophic consequences.

The nuclear arms race has a simple, unchanging rule: without limits, without verifiable negotiated restrictions, the United States can add to its nuclear forces, but so can the Soviet Union. For this reason, the MX missile and the B1 bomber are inadequate measures for American security. They merely attempt to match the Soviet military threat; they cannot reduce it. And they do nothing to reduce the risk of nuclear war.

Rather than seeking to close a false "window of vulnerability," America must take advantage of the window of opportunity it now has to limit nuclear arms. Without decisive leadership, suspicion and the weapons both nations are developing will see that this opportunity recedes perhaps forever beyond the reach of humanity. This means serious negotiations with the Soviet Union and mutual restraint while we negotiate. The objective should be major, equitable and verifiable reductions of nuclear arms, coupled with limits on the introduction of new weapons systems.

I emphasize the word "serious," for many in both nations will counsel proposals designed to be rejected by the other side but useful as an excuse for doing nothing.

Negotiations to limit nuclear arms and reduce the risk of war are hardheaded exercises to improve our national security. They signal no approval of other Soviet actions, such as Afghanistan—no more than do sales of American grain to the Soviet Union. They seek, despite the irreconcilable ideologies of our two nations, the common goal that nuclear weapons have made a necessity—the prevention of nuclear war.

In our short time on Earth, we have a choice about the kind of world we leave behind. With nuclear weapons in our custody, our generation carries a heavy obligation. There will be no historian to record one day that we failed on our watch.

[From the New York Times]

HARRIMAN AT 90

(By James Reston)

WASHINGTON, November 3.—Averell Harriman, former Governor of New York, Secretary of Commerce, Ambassador to London and Moscow, among many other things, will be 90 in a few days, and he reminds us not of how old he is but of how young this Republic is.

He has lived for almost half the life of our history as an independent nation. He was born on Nov. 15, 1891, when Benjamin Harrison was President. He has survived 16 more Presidents since then, and plans to stick it

gation above Monroe on the Ouachita threatens hunting and fishing. Sportsmen and conservationists in that area have been extremely concerned about going in and taking the curves out of the river, widening it, perhaps taking out some of the timber, and ruining, as they see it, the present natural state. What the Senator's amendment does is lay the groundwork for eliminating or drastically minimizing any of that work that would need to be done.

He actually thought of the creative solution of having two barges side by side, and I understand that the corps is rather enthusiastic about it as a solution. So I am personally deeply indebted to him, as are the people in the region; and we accept the amendment, with thanks.

Mr. PRYOR. Mr. President, I appreciate the remarks of the Senator from Louisiana.

I say, further, that this particular amendment does not indicate that Congress is backing away in any way from the navigation channel on the Black and Ouachita Rivers. It only indicates that we would like to look at one further option before any real realignment efforts are made on the Ouachita River project, a project that is going to be meaningful in the field of navigation for our part of the country.

I appreciate the remarks of the Senator from Louisiana and the manager of the bill, the Senator from Oregon (Mr. HATFIELD.)

The PRESIDING OFFICER. The question is on agreeing to the amendment.

The amendment (UP No. 581) was agreed to.

Mr. HATFIELD. Mr. President, I move to reconsider the vote by which the amendment was agreed to.

Mr. JOHNSTON. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. HATFIELD. Mr. President, I ask unanimous consent that the committee amendments be set aside temporarily in order that the Senator from Arkansas may have an opportunity to offer an amendment.

The PRESIDING OFFICER. Without objection, it is so ordered.

The Senator from Arkansas is recognized.

UP AMENDMENT NO. 582

(Purpose: To terminate funding for the Clinch River breeder reactor project)

Mr. BUMPERS. Mr. President, I send an amendment to the desk.

The PRESIDING OFFICER. The amendment will be stated.

The assistant legislative clerk read as follows:

The Senator from Arkansas (Mr. BUMPERS), for himself and Mr. HUMPHREY, proposes an unprinted amendment numbered 582.

Mr. BUMPERS. Mr. President, I ask unanimous consent that reading of the amendment be dispensed with.

The PRESIDING OFFICER. Without objection, it is so ordered.

The amendment is as follows:

On page 19, lines 2 and 3, strike out "\$1,970,119,000, to remain available until expended:" and insert in lieu thereof "\$1,790,119,000, to remain available until expended: Provided, That none of the funds provided herein shall be expended for the purpose of the Clinch River Breeder Reactor Project except as are necessary for the sole purpose of terminating such Project:".

Mr. BUMPERS. Mr. President, this amendment simply provides that the funds that are appropriated in this bill for 1982 for the Clinch River breeder project, sometimes known as the liquid metal fast breeder reactor, be used only to terminate the project.

This project has been around for about 12 years now. It was authorized in 1970. It was not particularly controversial the first 3 or 4 years, but since that time it has been undergoing intense scrutiny by the Senate, by the House, and by physicists and engineers across the country. But it is like Rasputin: It seems to have about 10 lives. It is difficult to kill it.

Yet, I think everybody agrees that there is a good possibility that the Clinch River Breeder is not ever going to be built, that it is an obsolete technology, and that the best thing we can finally do is which breeder technology is the best. Certainly, it is not this technology.

I emphasize at the beginning, for those who in the past have seen this debate as being for or against nuclear power, that this amendment has nothing to do with whether you are for nuclear power or against nuclear power. It has nothing to do with whether you are for breeder reactors or against breeder reactors. What it involves is this: What is the technology of this particular breeder? Is it a technology that is in the best interests of this country to build? What are the costs of termination, and what are the costs of continuing it? What are the benefits to the country in case we terminate it, and what are the benefits to the country in case we continue it? How does it affect our future uranium supplies?

I devoutly hope that this amendment and the debate on it will be confined to the hard questions of cost-benefit ratios, of the technology, and of what our future uranium supplies are and what they are likely to be when we go forward with this particular technology, as opposed to the so-called gas-cooled breeder reactor.

Let me review the history of this particular breeder. It happens to be the only one that this country is planning to build at this moment. As I said, it was authorized in 1970. In 1969, when it was first under discussion, it was projected to cost \$669 million. That was 12 years ago—\$669 million. By 1974, the cost had risen to \$1.736 billion. By 1975, 1 year later, the project cost was \$1.95 billion, almost \$2 billion. Last year, in 1980, the projected cost of this project was \$3.3 billion.

Mr. President, I do not think anybody here actually believes that this project can be completed even for \$3.3 billion, even if you compute it in 1980 dollars.

I point out that this project is not going to be completed until at least 1990. We already have spent \$1.3 billion on this project, and the first spade of dirt has not yet been turned.

President Carter tried to terminate this project in 1977, but because some deal was cut, some money was put back into it, and all we have been doing is spending hundreds of millions of dollars every year and standing still.

The \$3.3 billion cost I am talking about does not include the possibility of having to move the project from Clinch River. That move would cost another \$1.7 billion.

This is one of the key points, Mr. President: One of the key points is that in the beginning, the private nuclear power industry in this country, understandably, thought that breeders were the wave of the future, and they were anxious to put their own money into it. It was generally agreed here that the private sector was going to put up 40 to 50 percent of the money for this breeder. In the years that have followed, however, the same thing has happened to the private utilities that has happened to Congress: They lost their enthusiasm for it. Have they ever lost their enthusiasm for it!

Let me give some statistics as to where we have come in the spending on an annual basis, what the Government has been putting up and what the private sector has been putting up.

Far from being a 50-50 project, by the end of this fiscal year 1981, the Federal Government had put \$1.31 billion into it, and the cumulative total from the private sector was \$118.6 million.

Instead of being 50-50; it is 10 to 1. Why? Well, private companies are not going to put their money where their heart is not, and they do not have their heart in it. The reason they do not have their heart in it is that they know it is a technological disaster.

The PRESIDING OFFICER. If the Senator from Arkansas will indulge the Chair, the Chair is informed by the Parliamentarian, after an opportunity to examine the amendment, that there is a slight technical matter.

The Senator from Arkansas is endeavoring to amend both the committee amendment and the House text. This would require unanimous consent, before we proceed to the amendment.

"Does the Chair understand the Senator from Arkansas to place before the Senate such a request?"

Mr. BUMPERS. I do, Mr. President.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. JOHNSTON. Mr. President, I should like to reserve the right to object at this point and allow the Senator to proceed with the debate. The distinguished Senator from Oregon is not on the floor, and we would like a chance to look at the amendment.

The PRESIDING OFFICER. Very well. The Chair rules the Senator may proceed with the stipulation that this will be brought up as soon as possible by the managers of the bill.

The Chair regrets the interruption of the Senator from Arkansas.

Mr. BUMPERS. Mr. President, I thank the Chair.

Incidentally, I understand this same request was made of Senator Percy's amendment just immediately preceding this one, and there was no objection. I

hope there will not be one in this case and we can get a vote on it.

Mr. President, in 1974 the U.S. Government put up \$21.8 million and the private sector put up \$8 million. We kept going. And in 1975 the private sector put up about 50 percent of the money. \$138 million against \$166 million. In 1976 the Government put up \$153 million and the private sector put up \$86 million, and they continued to put up anywhere from 30 to 40 percent until 1978 when we put up \$491 million and they put up \$99 million. In other words, the contribution of the private sector had dropped 20 percent. Then last year, in 1980, we put up \$189 million in 1980, and the private sector put up \$6 million. In 1979, the year before, we put up \$175 million and they put up \$5 million.

I would like to entice the Government into a deal. I have several things in mind. I would like to go into a cooperative venture with the Government if they are that easy.

This kind of reminds me of Lucy holding the ball for Charlie Brown every fall saying, "This time I really mean it. I am not going to pull it out from under you."

Here we have been proceeding on the happy assumption that the private sector loves breeder reactors as much as we do, and then we get the statistics out and we start looking and not since 1976 have they come up with their 50-percent share. On the contrary, since that time their share has steadily declined until now they are putting up less than 3 percent of a project which is scheduled to cost \$3.3 billion, and that is a very conservative estimate.

In the Energy Committee, on which I sit, we hear the debate periodically that we are going to fall behind the French. The French are the leaders in breeder reactors. The French are now beginning to decide that they may be ahead but they do not want to proceed down the road they have started. They built the Phenix breeder, and the Phenix was completed in 1974 and started operations in 1974, but it is a better technology. It was a better technology when it went on stream in 1974 than the Clinch River project will be when it goes on stream in 1990. In other words, in 1990 when this breeder is finished and put on stream, if it is, the Phenix breeder, which is its French counterpart, will have been operating 16 years, and it is a better technology right now than the Clinch River breeder is. If we are behind, that is a good way to stay behind.

After the French completed the Phenix in 1974, they did exactly what we are planning to do. They followed it with a commercial demonstration that is called Super Phenix. The Super Phenix is supposed to be a commercial operation of a breeder reactor as a part of the French public power electrical base. They were going to build six of them.

No. 1, the Super Phenix will be completed in the fall of 1983, and the French have already announced that they are not about to build five more like it.

They also project that right now as to the power that comes out of their second breeder, the one that is supposed to prove conclusively the economics, the re-

liability of breeders, they have already concluded that the power cost from that breeder will be two to three times higher than the power from a light water reactor.

So no wonder the French, no wonder the French are saying, "We are not going to build the next five."

I am no fan of Dr. Edward Teller. I assume that he is a very competent physicist and certainly he is a real hawk, but he has called the Clinch River breeder technologically obsolete.

He also said it is inconsistent to build it, that to build it is inconsistent with badly-needed economy in Government.

When it comes to an economist, here is what our fearless guru, David Stockman, said about it when he was a Member of the House of Representatives. He said:

Government should not become involved in the provision of subsidies for the commercialization of new energy technologies that cannot pass the market test of competitiveness with alternatives on a price basis. The breeder reactor will not pass this test until well into the next century, if ever.

That is what David Stockman said in 1977. He was dead right in 1977, and if he was right in 1977, he is right in spades now, because the cost has continued to escalate.

Secretary Edwards came over before our committee to testify about breeders and other alternative energy sources through our traditional petroleum, gas, and coal, and his justification for zapping virtually all the research projects in the energy budget was as follows. He said that the energy budget was intended to support only long-term, high-risk technologies.

He also testified that the French are depending upon breeder reactors to provide for their additional demand for power by the end of the decade, so breeder technologies must not be long term or high risk.

And, incidentally, at this time Secretary Edwards did not realize that the French were already giving up on breeders.

Mr. President, at one time everyone thought we could not make it through the century without breeders. We were estimating that the increased demand for power in this country was going to continue apace at 7 percent a year. That is what it was in 1970. We were increasing our electrical demand by 7 percent a year. And today we are increasing our electrical demand by 1 percent.

It was originally projected in 1974 that nuclear power by the year 2000 would provide this country with 2,000 gigawatts, and now, 7 years later, DOE has cut that projection to between 160 and 200.

We debated this matter rather extensively 2 years ago or 3 years ago—we pick up a few votes every year, and I hope we have picked up enough this year to finally stop this project—we then thought we had a shortage of uranium in this country, that we did not have nearly enough uranium to see us through the century, and now DOE says that we have enough uranium proven reserves to supply 400 light water reactors an entire lifetime.

A reactor has a 30-to-40-year life. We have 72 in operation. We only have 72 others that are in various stages of

planning and production, and if every one of them went into production we would still have enough uranium to see us almost to the middle of the next century.

Mr. President, there is one other point that should be made about breeders and, as I say, I want to make this point right now. I should have said this before I said anything else. When I was talking about this not being an antibreeder amendment or a probreeder amendment, I should have pointed out that in addition to the \$180 million in here for the Clinch River breeder there are almost \$400 million in addition in this budget for other kinds of basic breeder research.

I am happy to vote for it. I am happy to vote for that other \$400 million because I know there are better fuel cycles. I know there are safer reactor designs coming. So anybody who says, "Well, I wouldn't mind terminating this particular project but I would like to see the money go someplace else for other breeder research," bear in mind there is \$400 million in here for other kinds of research.

Let me return to this particular project. The House had a subcommittee staff go down to check the Clinch River breeder and find out what was wrong. There seemed to be a lot of things wrong. The project was on dead center. They were wondering why there were cost overruns, and the investigatory staff questioned the project director about allegations of fraud and abuse. He said he had no knowledge of any such allegations even though he had spoken to the FBI about one case just the preceding week.

Competitive bidding for steam generators was canceled when Foster, Wheeler's bid of \$23 million proved to be lower than the bid of Atomic International for \$26.4 million, and the contract was awarded to Atomic International on a noncompetitive basis, which cost \$6 million more.

Now, the contract price has grown on that to \$143 million, and not even the first prototype has been delivered.

The House investigators said they were stonewalled by DOE officials who were either unable or unwilling to produce requested documents. They found that a Westinghouse employee had apparently been using the DOE computer for his own personal business use, and rather than refer this to the DOE Inspector General, as directed by the Secretary, the project director asked a project manager corporation employee to investigate it, and that employee found nothing wrong. But then it was discovered that he and the Westinghouse employee, supposedly under investigation, were close friends.

The Atomic International employees set up dummy corporations and awarded contracts to themselves at inflated levels. They had been fired, but the FBI is still investigating it.

Just this morning, the Wall Street Journal reported in a headline that "Clinch River Project Is Hit by Shakeup of Top Management. Head of Troubled \$3.2 Billion Breeder Reactor Program Quits, Aide Is Reassigned."

Mr. President, I ask unanimous consent that the article in the Wall Street

Journal be printed in the RECORD immediately following my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 1.)

Mr. BUMPERS. Burns and Roe were the engineers on this project. As early as 1973—although this did not surface until about 1978—an internal memorandum was written by Burns and Roe, by one of their employees, who was a consultant to them, saying, in effect, "We had better get out of this mess before it is too late."

Here are some of the things that internal memo said:

Most actions on the project are out of our control, and it is already clear that the project results will be extremely poor.

Somebody ought to give that guy a Congressional Medal. He saw it in 1973.

What has become so painfully apparent and obvious to even a Wall Street Journal reporter now is what is contained in this memo. He went on to say:

The PMC organization has lost much of its desire and determination to manage the project and perhaps the ability to do so.

Finally it states:

The Clinch River site selected for the LMFBR demonstration plant is one of the worst sites ever selected for a nuclear powerplant based on its topography and rock conditions.

Those are not my quotes, those are quotes from the project's consultants, Burns and Roe, the project engineers.

Mr. President, are we really behind the French? Is that what is bothering people? I hardly think so. Our Fast Flux Test Facility in Washington went critical last May and the only thing that keeps it from generating power right now is, it does not have turbines on it. The heat from it is just going up into the air. But it is there, it is a good facility and, perhaps, we can learn something from it.

But let me tell you what is really critical in this argument. There are two things: Despite the fact that DOE has now found we probably have 3.6 million tons of uranium, much, much more than we originally thought, the most important point we can make is it does not make any difference as to how many tons we have. We ought to use it in the most efficient way possible.

You would have to have, incidentally—and DOE has backed this up—uranium at \$200 a pound—the current price is \$25 a pound—before a liquid metal fast breeder reactor would be as cost efficient as a light water reactor. You cannot think of any more inefficient, system than that.

I want to finally say there may be a few Senators around here who still remember the debate about how the French and British were going to get ahead of us with the Concorde, and that debate was so like AWACS here last week, and everybody just thought the United States was going to lose all the prestige it ever built up if we did not build a supersonic transport. The Boeing Corp. had practically a prototype ready to go, and there were a lot of people who were concerned about it because of the cost; a lot of people were concerned about

it because of the use of energy. Finally, I believe by a single vote, this body voted not to proceed with the supersonic transport. That is one of the wisest decisions the U.S. Senate ever made.

The British and French thought they were going to own the world with that Concorde. The rest is history. The French and the British are spending over \$100 million a year subsidizing 16 airplanes. They built the first 16, never got an order for another one, and had to use them themselves.

Now, Mr. President, surely there comes a time when this body is willing to face up to something not in a knee-jerk way but in an honest, objective way. This project is probably not ever going to be built. If this amendment is not adopted today, I doubt seriously if this project will ever be built, and if it is built, you can depend on it costing somewhere between \$5 billion and \$10 billion, completed sometime within 1990 and 1995, and obsolete the day it is finished because it is obsolete right now.

Mr. President, I yield to the Senator from New Hampshire.

EXHIBIT 1

[From the Wall Street Journal, Nov. 4, 1981]
SENS. BAKER, STENNIS LEAD FORCES IN BID TO PROVIDE FUNDING FOR TWO PET PROJECTS

(By Albert R. Hunt)

WASHINGTON.—During this year's budget battles, Senate Majority Leader Howard Baker was amazingly effective in persuading colleagues to shun parochial politics and accept difficult spending cuts.

Today, however, the Tennessee Republican will be leading the charge for what even some proponents acknowledge is a parochial project: continued federal funds for the controversial Clinch River breeder reactor.

As part of the energy and water appropriations bill, the Senate today also will vote on another huge project with a political pork barrel reputation: the Tennessee-Tombigbee waterway in Alabama and Mississippi. These forces also will be led by a powerful proponent, Sen. John Stennis, a Mississippi Democrat.

UNLIKELY ALLIES

Battling these influential lawmakers, on both issues, is an unusual coalition of liberal environmentalists and fiscal conservatives. Inside the Senate the fight against Clinch River is being led by Sen. Gordon Humphrey, a hardline conservative Republican from New Hampshire, and Sen. Dale Bumpers, a moderate Arkansas Democrat. The effort to kill the Tennessee-Tombigbee waterway is supported by such unlikely allies as liberal Sen. Daniel P. Moynihan (D., N.Y.) and conservative Sen. Robert Jepsen R., Iowa).

In fiscal 1982, the cost for Clinch River would be \$254 million, while the appropriation for the waterway project is \$189 million. But it is estimated that the breeder reactor will need more than \$2 billion in additional federal funds if it is completed, and Tennessee-Tombigbee could require as much as \$1.6 billion more. Thus, today's tests offer classic clashes pitting the pork-barrel politics of powerful Senators against the general politics of budget cutting.

The fights are expected to be close, although Senate insiders predict both projects, especially Clinch River, are slight favorites to survive.

SHOULDN'T STOP SPENDING

Adding to the irony here is that the budget-conscious Reagan administration is siding with the spenders in these fights today. Even before he took office, President Reagan,

in an effort to cultivate support from Sens. Bakers and Stennis, agreed to support both the Clinch River and the Tennessee-Tombigbee waterway. The administration's support probably made the difference when both measures narrowly squeezed through the House this summer.

Proponents argue it would be counterproductive to stop either project as the federal government already has sunk more than \$1 billion into each. Clinch River advocates say the power plant holds the key to nuclear development in this country. And the champions of Tennessee-Tombigbee argue it will provide a vital commercial link from the Tennessee River to the Gulf of Mexico.

But both projects have been plagued by controversies and studies suggesting they are inefficient. Congressional investigations this year found improper procurement practices at the Clinch River plant. Last summer a federal court halted construction on part of the waterway project after finding that the Army Corps of Engineers had "blatantly" violated federal environmental rules.

CLINCH RIVER PROJECT IS HIT BY SHAKE UP OF TOP MANAGEMENT

(By John R. Emshwiller)

(Head of troubled \$3.2 billion breeder reactor program quits, aide is reassigned.)

On the eve of a potentially tough appropriations fight in the Senate, the troubled \$3.2 billion Clinch River Breeder Reactor Project was hit by a shake up of top management.

The project's director resigned and the assistant director for engineering was reassigned to a job with fewer responsibilities.

The management changes promise to fuel the controversy over Clinch River, which is to be built near Oak Ridge, Tenn. The project is supposed to test the feasibility of breeder reactors, a type of nuclear power plant that produces more fuel than it consumes and thus holds the promise of virtually limitless energy supplies.

The project, however, is more than a decade behind schedule and several times its original cost estimate. Critics contend the project has been hurt by serious mismanagement, ranging from sloppy record keeping to poorly drawn contracts to an overwillingness of federal officials to accommodate private industry. Project officials deny such allegations.

Project director Lochin Caffey informed his staff late last week of his intention to resign, according to officials at the Energy Department, which is in charge of Clinch River. Mr. Caffey declined to comment.

Thomas Dillon, executive director of the Energy Department's office of assistant secretary for nuclear energy, declined to say whether the department asked Mr. Caffey to resign. "We've been taking a top-to-bottom look at the project," which included discussions with Mr. Caffey, he said. "Out of those discussions, Mr. Caffey decided to resign," Mr. Dillon said.

The review of the project also led to the decision to reassign Donald Riley, assistant director for engineering, he said. Mr. Riley has been offered a post as technical adviser to the project, Mr. Dillon said. Mr. Riley couldn't be reached for comment.

Mr. HUMPHREY. Mr. President, I thank my colleague from Arkansas for yielding. Certainly he is right in making the point about the Concorde SST.

As a former airline pilot for 12 years I can underscore and back up what he has to say. I do not think there is a pilot in the world whose heart is not stirred by the sight of the Concorde. It is a magnificent airplane. It is a beautiful airplane. Its speed, its ability to fly high,

far above the weather, it is a magnificent thing.

There is just one problem, passengers do not like it nearly as well in terms of the cost of flying aboard it, and the owners do not like it either for that very same reason. So it has become a super-sonic white elephant able to continue flying only because it receives government subsidies; an airplane which has failed in the marketplace, and would not be flying today were it not for those subsidies.

So it is a valid point to raise when the proponents of Clinch River in an emotional way suggest, lacking other sound reasons for their project, that we ought to build Clinch River because the French are building a nuclear breeder reactor.

Mr. President, I want for my part to emphasize that this is not an antinuclear amendment. The Senator from New Hampshire supports nuclear power, he supports the efforts of the Reagan administration to make some sense out of the regulatory morass that is the licensing procedure of today, and which has held back our efforts, particularly in the area of conventional nuclear reactors.

I am not opposed to breeder reactor technology R. & D., but I am opposed to this single project, this project called the Clinch River liquid metal fast breeder reactor. The essential problem of Clinch River is that it makes no economic sense. It is an uneconomical project. It is uneconomical today, and it will be even more so if and when it is built, and I point out, as did the Senator from Arkansas, that we have yet to break ground, notwithstanding having spent over \$0.5 billion on this project.

Mr. President, if this amendment succeeds and funds for Clinch River are eliminated from the energy and water appropriations bill, what will we lose? Well, we will lose the Clinch River breeder reactor project in the sense that it will not be built, but the R. & D., about 85 percent of which is complete as of this date, will not be lost.

I would also point out to my colleagues—and I think this is a very important point—that the Clinch River effort is not the totality of our effort in breeder reactor R. & D. in 1982 or the out years. In fact, the totals involved in 1982 for Clinch River represent only about one-third of our effort in the area of breeder reactor research and development.

What will we gain? Well, we will gain \$180 million that we are proposing to eliminate from this appropriation for fiscal year 1982, a year in which it is crucial to find every possible savings if we are to bring down the deficit and, with it, high-interest rates.

We will gain over the next 10 years \$2 billion, and probably more—probably more—because the costs have been consistently underestimated and understated. Implicit in the \$3.1 billion total figure anticipated for this program, implicit in that is the anticipation that Clinch River will be licensable without considerable delays.

I shall delve into that aspect a little later. It is quite likely, in fact, that Clinch River cannot be licensed as presently de-

signed or perhaps even on that location without waiving some of the licensing provisions. It is ironic that the administration or the proponents would begin to talk about, as they are, waiving the licensing requirements when one of the stated purposes of this project is to demonstrate the licensability in a utility environment of breeder reactor technology.

Mr. President, one of the virtues of this administration, which particularly warms my heart, is its free market approach to energy. There are some who say that this administration does not have an energy policy, but they are so wrong because they are used to looking at draconian Government policies and programs for everything under the sun. We do have an energy policy. It is one that lets the marketplace make the choices, and that is the most enlightened kind of energy policy a nation could possibly have, one which stood us in good stead until we became confused decades ago and began to substitute Government decisions and dictates for the choices of the marketplace. The Clinch River breeder reactor does not fit, in any sense of the word, into the free market approach to energy, which is the cornerstone of this administration's energy policy and which I so enthusiastically support.

A little background, Mr. President. Some of this will overlap what my colleague from Arkansas has already addressed.

The stated purposes of the Clinch River breeder nuclear reactor project, when it was first authorized 10 years ago, was to demonstrate a liquid metal fast breeder reactor to be licensed and operated in a utility setting. It was first authorized in 1970. It will not be complete until approximately 1990, and even that date is not firm because of the potential licensing problems to which I alluded earlier and to which I will allude in some greater detail later in my remarks.

In the early days, this project was estimated to cost \$600 or \$700 million, a small figure by Federal standards, and it sounded like a good investment. Surely no one could be faulted, no Member of the Congress could be faulted for supporting that investment 10 years ago and perhaps for a number of years after that, because it was relatively small investment that promised a high return.

The deal was sweetened, much, I am sure, to the pleasure of free market advocates, by the agreement of a consortium of utilities to share costs 50-50 with the Federal Government, or perhaps I should say the taxpayers. That was 20 years ago.

In the intervening time, all of that has changed. The cost has skyrocketed from \$500 or \$600 million to \$3.2 billion today and still climbing. \$1 billion has been spent to date—over \$1 billion; \$1.1 billion—and ground has yet to be broken.

And the clincher in the Clinch deal, if you will, Mr. President, is that the utilities who agreed to share the costs on a 50-50 basis long ago reneged on that deal. In fact, they stipulated that their maximum investment would be \$257 million, irrespective of the final costs.

And so they reduced their participation, effectively, from 50-50 to something in the neighborhood of 10 percent. And to make matters worse, of that \$257 million contribution which was promised, they made good only on \$110 million. And if you do the mathematics, \$110 million, the money contributed to date—and they show no indication or no interest in contributing more—amounts to approximately 3 percent of the anticipated costs and much less in the event of overruns.

There were a number of fundamental assumptions which formed the bases of the logic behind the Clinch River project when it was first begun, assumptions which, unfortunately, for everyone involved, have proven to be false and highly inaccurate.

One of those assumptions was that breeder reactor technology would be needed by the turn of the century for the generation of electricity in this country. That, in turn, was based on the assumption that demand for electricity would continue to rise rapidly, as it had in previous decades, by a rate of 7 percent per year, consumption doubling every 10 years. And based on that assumption, it was assumed that uranium would grow scarce and very expensive. All of that has changed in 10 years. We have found that those assumptions were wildly inaccurate, however well intentioned.

In 1970, when Clinch River was first authorized, the Edison Electric Institute, the professional of the industry organizations of utilities, projected growth at 7 percent. Edison Electric Institute today projects growth in the coming decades at 3 to 3½ percent, at least a 50-percent reduction in assumed growth, and it will probably be more based on trends.

In 1970, when Clinch River was first authorized, the Atomic Energy Commission projected a requirement of 200 gigawatts of nuclear generating capacity by the year 2000. That was 10 years ago. That has changed. Today, the Department of Energy projects a need for nuclear generating capability of 180 gigawatts, which is 15 percent of the assumption on which Clinch River was based.

In 1970, when Clinch River was first authorized, the Atomic Energy Commission estimated uranium reserves at 1,800,000 tons. Today, the Department of Energy estimates reserves at 3.2 million tons, at a minimum, a very considerable increase, almost a doubling of supply.

The supply has expanded, not shrunk, and, not surprisingly, the cost of uranium has gone down, not up. Two years ago the price of uranium was \$40 a pound, and today it is \$25.

So, Mr. President, in light of the changed facts versus assumptions, in light of the fact that assumptions turned out to be so wrong, there is today no economic justification for continuing with this project. The premises turned out to be incorrect. It is no one's fault. But surely, for that reason, it would be foolish for us to spend another \$2 billion or more after having spent \$1 billion already for a project which makes no economic sense, which will not be competitive when it is finished, which no utility

or consortium of utilities will seek to license or to commercialize. It will sit there on the shelf, unwanted, outdated, and regretted.

This opportunity, Mr. President, will probably be our last to terminate the Clinch River project before ground is broken and the undertaking becomes institutionalized. There is no reason to go forward today, except perhaps pressure from contractors and interests.

Let me read, Mr. President, an editorial from the Wall Street Journal, hardly an antinuclear publication, which addresses the points I have just made. This appeared in the February 13, 1981, edition, entitled "Plutonium Follies."

Nearly four years ago, President Carter announced the curtailment of nuclear-energy programs designed to use high-grade plutonium to fuel power plants. He scrapped a plutonium reprocessing plant at Barnwell, S.C., and eventually cut off funds for a demonstration breeder reactor at Clinch River, Tenn. Mr. Carter took the decision in hopes of slowing the international spread of bomb-making nuclear material. We agreed with the President's decision then; whatever the foreign policy arguments, these programs made no economic sense.

Energy Secretary James Edwards, saying "We have got to get nuclear on the move again," interrupted budget cutting Tuesday to say that the administration will seek "substantial" funding to revive the projects. Just as the programs were uneconomical then, so they remain today.

Several recent studies, done both in the U.S. and abroad, conclude that conventional nuclear power generation is far less expensive than either reprocessing or breeder technology. According to one study, uranium prices would have to double before reprocessing spent fuel would break even, and then reprocessing would only save about 2.5 percent on the cost of generating electricity. While the sources of new uranium supplies remain plentiful—and no one can foresee when they'll run out—reprocessing spent fuel is simply a waste of money.

For the breeder reactor to become commercially feasible, uranium prices would have to rise about sevenfold, though breeder technology would provide a larger cost savings than using plutonium in conventional light-water reactors. France, probably the world leader in the breeder, cannot even get its own utilities to buy the breeder because of the high expense. The main virtue of the American breeder seems to be that it is located in Senate Majority Leader Baker's home state.

Mr. President, that is the Wall Street Journal speaking, not the Senator from New Hampshire.

We agree with Mr. Edwards that the administration should give fresh impetus to nuclear power, especially in solving the technically easy but politically difficult problem of waste disposal. But plutonium energy technology won't become economically feasible until the year 2030 or so; we can wait ten or twenty years to see if uranium starts to run out. There is no need and no excuse for new subsidies for its development in the midst of a budget emergency.

The fact is, Mr. President, that Clinch River is not only not a step forward, but it is a step backward. It is actually not a positive contribution; it is an impediment in the sense that money spent on Clinch River or to be spent can much better be used elsewhere in our economy and certainly better used in our energy program.

The Department of Energy has on the drawing boards, and I understand that work is well along, a 1,000-megawatt design for a breeder reactor generating station. This is much more advanced than the Clinch River design and much larger by a factor of about three. It would be much likelier to be licensed and commercialized by utilities if it were built.

So, if anything, we are building the wrong design. If we must build prematurely, decades prematurely, let us at least build the latest design.

Mr. President, I reiterate the central fact of the matter, which is that Clinch River is an uneconomic and uncompetitive design and will be if built, licensed, and commercialized. As a matter of fact, one can determine that easily from the documents available through the Department of Energy. The Department of Energy commissioned a study completed in 1981, the spring of this year, by the Los Alamos Laboratories, which underscores the argument that the price of uranium would have to rise by a factor of 6 or 7 before breeder reactors would become competitive with current or conventional reactors.

There were five questions put to the Los Alamos Labs, the fifth of which is, "At what point is the liquid metal fast breeder reactor cost-effective?"

The conclusion of the study in response to that question is:

An equilibrium LMFBR fuel cycle system is more expensive than the current once-through cycle until U_3O_8 prices are more than approximately \$165 per pound.

I remind my colleagues that the price of uranium today is \$25 per pound.

I ask unanimous consent, Mr. President, to have printed in the RECORD at this point the relevant portion of the analysis conducted by the Los Alamos National Laboratories.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

ANALYSIS OF NUCLEAR POWER ECONOMICS CONCLUSIONS

- (1) The capital cost contributes about 75 percent to the total cost of nuclear power.
- (2) Electricity from new nuclear power plants would be less expensive than new coal power plants if coal is more than approximately 25 dollars per ton.
- (3) The most leverage regarding the cost of nuclear power is in the capital cost.
- (4) Reducing the design and construction period from 10 years to 6 years would reduce the total cost of nuclear power by approximately 3 mills per kWh (ignoring inflation), but other considerations are important.
- (5) At today's uranium prices, reprocessing spent fuel for thermal reactor recycle is marginally cost effective.
- (6) An equilibrium LMFBR fuel cycle system is more expensive than the current once-through cycle until U_3O_8 prices are more than approximately \$165 per lb. Timing estimates were not made.

Mr. HUMPHREY. Mr. President, I want to read highlights from a letter on this subject from William J. Dircks, Executive Director for Operations of the Nuclear Regulatory Commission, addressed to James L. Howard, Associate Director of the General Accounting Office, dated June 25, 1981.

The relevant portion is this:

We estimate that it would require about three years to issue a Construction Permit for Clinch River under the best of conditions. This is based on the assumptions that Congress would exempt certain NEPA issues related to the CRBR site from the licensing process and that additional NRC staffing and funding would be made available to cover anticipated requirements.

Mr. President, several times earlier I addressed the matter of licensing the Clinch River breeder reactor. I underline once again that one of the fundamental reasons for Clinch River in the first place was to demonstrate the licensability in a utility environment of a breeder reactor. It turns out, however, that Clinch River will have some considerable difficulties in that regard, such that if we are to make the 1990 target date, it is quite likely that these licensing requirements will have to be waived, that is, some of them.

It is ironic, is it not, that we are building a \$3.1 billion plus project to demonstrate the licensability of a fast breeder reactor and now we are proposing to waive some of those licensing requirements?

There it is, right from the administration. In order to meet the deadline, Congress is going to be asked to waive certain licensing procedures and the NRC is going to ask Congress to provide funds to increase staffing to expedite this licensing process, even when it involves the waiving of certain criteria.

Mr. President, I ask unanimous consent that the letter of Mr. Dircks be printed in the RECORD at this point.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

NUCLEAR REGULATORY COMMISSION,
Washington, D.C., June 25, 1981.

MR. JAMES L. HOWARD,
Associate Director, U.S. General Accounting
Office, Washington, D.C.

DEAR MR. HOWARD: This is in response to your June 11 questions regarding the time and costs associated with the licensing process for the Clinch River Breeder Reactor (CRBR) project. As you suggested, we discussed your request with Mr. Cliff Fowler of your staff.

We estimate that it would require about three years to issue a Construction Permit for Clinch River under the best of conditions. This is based on the assumptions that Congress would exempt certain NEPA issues related to the CRBR site from the licensing process and that additional NRC staffing and funding would be made available to cover anticipated requirements. I must emphasize that this latter assumption concerning the availability of resources is critical. Our current request for FY 1982 does not contain adequate funding or staffing to process the CRBR license. Furthermore, since many of the critical staff skills required to process a CRBR license are currently engaged in processing a large backlog of light water reactor license applications, assembling a CRBR licensing team without further impacting other areas may prove difficult.

A minimum of three months will be necessary to establish a new licensing team. Between 50 and 60 staff years and approximately \$4.0 million for technical assistance are required to issue a Safety Evaluation Report and to complete the hearing process. Further, although not directly associated with the licensing process for CRBR, between \$8.0 and \$21.0 million would be required annually for safety research in support of CRBR and a broader-based national breeder program.

The uncertainty in this NRC research estimate is largely the result of not knowing the extent to which DOE will provide an adequate breeder research base.

In your letter, you asked us to confirm that the licensing process would not have to start with a completely new application. That is correct. The NRC staff estimates that its technical review was about 60 percent complete when the review was suspended. Whether substantial re-review will be required in some areas depends on the nature of the applicant's response to the open issues, and assumes that the new design changes will not significantly affect the previous review provided by the applicant in responding to a number of questions which were then outstanding. We have assumed that the majority of the review that was previously conducted remains valid and that only the open issues identified in 1978, the TMI-related issues, and other new requirements will need to be resolved.

We are currently updating our resource estimates for CRBR and will continue to refine them as the present Administration position is articulated.

We hope that this will provide you adequate support to answer Representative Schneider's questions. Please let us know if we can be of further help.

Sincerely,

WILLIAM J. DIRCKS,
Executive Director for Operations.

Mr. HUMPHREY. Mr. President, again on the point of licensability and the possibility of waiving that licensing for Clinch River, I read a short part of an article from the Wall Street Journal of Friday, July 17, 1981:

One longtime goal for Clinch River was to prove that breeders could meet federal health and safety requirements by getting the plant licensed just like any other facility. Now, however, supporters are rethinking that objective. "We want to concentrate on getting the project going. If we don't go through licensing we can still justify the project," says John Kearney, a senior vice president of the Edison Electric Institute, the electric utility industry's main trade group.

Getting a license from the federal Nuclear Regulatory Commission could pose problems, including the possibility of having to build the facility at a more remote site for safety reasons. Such a move could add \$1.6 billion to the cost of Clinch River and delay the project by 43 months, according to federal officials.

If that turns out to be the case, Mr. President, we will not be seeing Clinch River go on line until 1994 or 1995 and the cost will not be \$3.1 billion plus, but \$4.7 or \$5 billion.

I ask unanimous consent that the article be printed in the Record at this point.

There being no objection, the article was ordered to be printed in the Record, as follows:

THE STAYING POWER OF THE CLINCH RIVER BREEDER

(By John R. Emshwiller)

Sometime next week Congress is expected to vote on appropriating about \$250 million for the Clinch River Breeder Reactor project, which will eventually cost the federal government \$3 billion or more. Here are some things taxpayers will get for that money:

An electric power plant that might begin producing power in 1990, 11 years behind its original schedule and at more than four times its original cost. The electricity it generates will be so expensive it will have to be sold at far below cost.

A plant that might have to circumvent federal safety and environmental rules because its backers are in a hurry to finish the project.

The chance to spend billions of dollars more on an even larger breeder still on the drawing boards.

The possibility that after all this effort there might be a commercial market for breeders sometime in the next century.

Some have concluded that Clinch River, which is billed as a nuclear demonstration project, is a demonstrably bad buy. As President Jimmy Carter tried to kill Clinch River. As a Congressman, so did David Stockman. In a 1977 letter to fellow House members, which is still considered one of the most forceful and detailed attacks on the project, Mr. Stockman maintained that "no further subsidization of the Clinch River Program . . . can be justified."

But the project has an impressive staying power as shown by the current budget battle in Congress. Opponents nearly killed it in the House, but funding was eventually included, thanks partly to strong backing from Senate Majority Leader Howard Baker, whose home state of Tennessee would be home to the project.

A less enthusiastic but stranger bedfellow lately has been Mr. Stockman, who has written letters in support of Clinch River. Mr. Stockman, of course, is now a top aide to President Reagan. And Mr. Reagan is a backer of the breeder.

Opponents' last hope this year for stopping Clinch River apparently lies on the floor of the House where an effort is being mounted to keep any money from actually being appropriated.

The project's endurance is due partly to the seemingly magical promise it holds out. Breeder reactors are designed to produce more nuclear fuel than they consume by transforming a relatively useless but common form of uranium into plutonium. Thus, breeders have the potential to vastly multiply the amount of energy available from the atom.

Nuclear advocates have been pursuing that dream since the beginning of the atomic age. Clinch River is the latest and most ambitious stage of an effort to develop breeders that dates back to the late 1940s.

Clinch River itself was born in the early 1970s when experts were predicting the U.S. would be panting for nuclear-produced electricity before the end of the century, that uranium supplies for conventional reactors would be dried up and the breeder would be the only possible alternative. But the sharp slowdown in energy demand growth in recent years and the even sharper drop in demand for conventional nuclear plants have badly tarnished the breeder's glitter. For instance, in the early 1970s government and industry studies predicted about 1,000 nuclear plants would be operating in the U.S. by the year 2000. Current Energy Department estimates are as low as about 170 reactors.

If the need for breeders is a bit fuzzy, so is the purpose of Clinch River. Backers maintain that by building and operating a relatively large-scale breeder, the government will help demonstrate to utilities the attractiveness of someday buying their own breeders. However, at least by some measures, Clinch River might well scare away prospective customers.

At an estimated price of about \$3.2 billion for a 375,000-kilowatt plant, Clinch River ranks as possibly the most expensive power project ever. The Tennessee Valley Authority will be the initial purchaser of Clinch River electricity but will pay a price pegged to TVA's other plants rather than the breeder itself.

But Clinch River "was never intended to demonstrate the economics of breeders," says Wallace Behnke, chairman of

Project Management Corp., which represents a consortium of 753 utilities taking part in the breeder project. Future breeder reactors should be more economical because they won't have to bear the research and development costs associated with Clinch River and will also hopefully avoid some of the costly delays and political battles the project has encountered, Mr. Behnke says. However, Mr. Behnke concedes nobody yet has reliable cost projections for future breeders.

One longtime goal for Clinch River was to prove that breeders could meet federal health and safety requirements by getting the plant licensed just like any other facility. Now, however, supporters are rethinking that objective. "We want to concentrate on getting the project going. If we don't go through licensing we can still justify the project," says John Kearney, a senior vice president of the Edison Electric Institute, the electric utility industry's main trade group.

Getting a license from the federal Nuclear Regulatory Commission could pose problems, including the possibility of having to build the facility at a more remote site for safety reasons. Such a move could add \$1.6 billion to the cost of Clinch River and delay the project by 43 months, according to federal officials.

Since nobody expects Clinch River, by itself, to convince utilities to buy breeders, the Energy Department is laying plans for another demonstration plant about three times larger. The current schedule aims to get this larger breeder operating as little as three years after Clinch River starts running, says John Longenecker, director of plant development in the Energy Department's office of reactor research and technology. The current cost estimate for that plant is \$3.2 billion. But that doesn't allow for inflation, adds Mr. Longenecker.

Mr. HUMPHREY. Mr. President, David Stockman is a man with—until now, at least—a great deal of credibility in the area of the functioning of the marketplace. Let us hope that his record will remain unblemished. Let me read a number of things that David Stockman had to say about the Clinch River breeder reactor when he was a Member of Congress in 1977. These remarks are excerpted from what is, in my opinion, a brilliant critical analysis of the project. According to David Stockman:

We will not need nor be able to afford the indiscriminate commercialization of every technology or process which promises to produce useable energy forms. Indeed, no technology should take its place in the energy supply system until it meets the test of competitiveness with prevailing energy prices in the marketplace.

The breeder variant of the nuclear fuel cycle will almost certainly meet this test at some point in the future; but will not do so within the time horizon contemplated in the Clinch River Development Program.

He went on to say:

The result of this premature commercialization (of the CRBR) will be billions of dollars in irretrievable loss to the economy. During the next three decades the breeder will not be the least-cost alternative for generating electricity, yet it will be the one given the overwhelming competitive advantage by virtue of having been selected as the government's choice.

That is the problem with this budget, Mr. President. It is being introduced and forced along before it is able to meet the test of competitiveness. It will not be able to compete against conventional nuclear reactors for decades and decades to come.

I reiterate that I am pronuclear. In fact, I have supported the Clinch River

breeder reactor program in the past. However, having taken a fresh and comprehensive look at it, I can no longer justify it on any grounds.

Before I conclude, I wish to address several of the principal arguments of the proponents.

The first is that we need Clinch River to take advantage of the very large reserve of energy which is represented by the uranium tailings. It certainly is salutary for us to be thinking about ways to recover energy from sources where it has not been fully recovered. But if we are going to spend \$2 billion, \$3 billion, \$4 billion, or perhaps \$5 billion for recovering energy from uranium tailings, why not spend a similar amount, a similar massive amount, on recovering the huge quantities of oil which still lie in the ground, in wells where those oil reserves are difficult to extract? Why not spend several billion dollars fostering conservation in this country which represents a means of producing energy, in a sense? Of course, the answer to the question is that we should leave these matters to the marketplace.

Likewise, we should reserve to the marketplace the matter of extracting remaining energy from enrichment tailings.

Another argument made is that we should continue Clinch River because if we were to stop it now, we would compromise the long-range goals of breeder reactor research. This is not so at all. I read from a memorandum prepared by Westinghouse in 1979 for the Department of Energy's conceptual design statement:

If CRBR is, in fact, cancelled a 1000 MWe developmental plant must still be the choice for the next plant.

Parenthetically, I point out that that is the superior design to which I referred earlier, on which a great deal of research and development has already been completed.

I continue reading:

A 1,000 MWe plant, without CRBR, will present a greater technical risk, but this risk is considered to be reasonable in view of the overall objective of developing a deployable energy option. This report should not be construed as recommending the elimination of CRBR as an important step in the progression toward the target plant. . . .

The point is that the argument that we would compromise our research and development in the area of breeder reactors is not true, because we can leapfrog to the next generation with a risk that is considered reasonable by Westinghouse, one of the primary vendors involved in Clinch River.

Another argument is that when we stop Clinch River, we will break up the R. & D. staff. That is not true, either. I read from a letter to the editor of Popular Science magazine from Robert Staker, who was or is the Director of the Office of Reactor Research and Technology at the Department of Energy:

From my own viewpoint, as a reactor technologist, it would be comforting to have the CRBR designed, constructed, and operating prior to the design of a larger plant; but proceeding down that path would not assure continuity of industry's key LMFBR design staff. This situation exists because the

CRBR engineering design is 80 percent complete—

Parenthetically, I point out that this is 2 years ago, and it is further along at this point. I continue reading:

and if we proceeded only with the CRBR project, the key systems and component designers would complete their work in the very near term and the bulk of the future money spent would be on brick and mortar.

That is where we are today, Mr. President. If we go forward from this point, we will be spending money not so much on R. & D. but on brick and mortar, which does very little to advance the generation of electricity in this country.

To summarize and to conclude, the economic assumptions were wrong. The demand for electricity is not nearly as great as it was. The supply and price of uranium is great and low, respectively—that is, the supply is greater than anticipated, and the price is much lower.

There is no point in building a demonstration unit which no one will seek to license or commercialize for decades. This is a waste of scarce resources. It is unsupportable on the basis of research, in that it is outdated energy policy.

Mr. President, I will conclude by addressing one or two misconceptions. I reiterate that this is not an antinuclear amendment. I read from the May 7, 1981, New York Times editorial.

The annual vote on Clinch River has wrongly assumed a symbolic importance far beyond the merits. It is not a vote for or against nuclear power. One can favor the use of conventional nuclear reactors as part of a balanced energy system, as we do, without wanting to build Clinch River. It is not even a vote for or against breeder reactors; there is plenty of money for breeder research.

The only real issue is waste. Rarely is there better reason for both conservatives and liberals to vote against a costly project; rarely will there be more reason to remember those who vote for it.

Finally, one of the proponents of Clinch River who has circulated a "Dear Colleague" letter has asserted that the cost of terminating the project would, during the project lifetime, exceed the cost of completing it. We respectfully challenge that assertion, and I hope a case will be made for that. But, in any case, the real criterion is the cost to the economy, and on that score we are going to be wasting \$1 billion, probably \$4 billion or \$5 billion, which could be used better elsewhere.

As a matter of fact, with regard to terminating costs and the effect on the project, the House Science and Technology Committee recently concluded that the termination costs of Clinch River would be about \$44.5 million.

One last point—the matter of the technology involved: It has been stated by some, and I support this position, that Clinch River represents at this point outdated technology, that we have a better design on the drawing board. As a matter of fact, no less an enthusiastic supporter of nuclear power than Dr. Edward Teller as much as stated so in a telegram he sent to Representative CLAUDINE SCHNEIDER of the House of Representatives. I read in part from the telegram:

I continue to urge congressional support and encouragement of the American nuclear

power program as it continues its development into one of the most secure, safe, and economical portions of national energy supply. However, Clinch River is technically obsolescent, and its small scale and large cost make it thoroughly inconsistent with badly needed economy in Government.

Mr. President, I ask unanimous consent that Dr. Teller's telegram be printed in the RECORD.

There being no objection, the telegram was ordered to be printed in the RECORD, as follows:

MAY 11, 1981.

HON. CLAUDINE SCHNEIDER,
U.S. House of Representatives,
Washington, D.C.

Congratulations on the initial success of your initiative to deauthorize the Clinch River fast breeder project. I continue to urge congressional support and encouragement of the American nuclear power program, as it continues its development into one of the most secure, safe and economical portions of national energy supply. However, Clinch River is technically obsolescent, and its small scale and large cost make it thoroughly inconsistent with badly needed economy in government.

Through review of the most effective and least expensive modern nuclear power alternatives could provide a base for congressional decisions as early as next year, emphasizing the best long-term approaches, with respect to expedited licensing and planning, nuclear power merits full congressional support. My best wishes for continued success of your present efforts to put the U.S. nuclear power program on a more sound basis:

EDWARD TELLER,
Stanford University.

Mr. HUMPHREY. Mr. President, I ask unanimous consent to have editorials published in the New York Times and the Washington Post printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

[From the New York Times, July 22, 1981]

DISPENSABLE PORK

* After cutting funds for food stamps, youth employment, Medicaid and a host of other social programs, the Reagan Administration endorsed two highly questionable multibillion-dollar construction projects of particular interest to powerful legislators—the Clinch River breeder reactor and the Tennessee-Tombigbee Waterway.

This week the House has a chance to derail both of them. It should. An Administration and Congress asking everyone to make do with less have no right to cling to such blatant pork barrels.

The Clinch River breeder reactor, which is to be built in Tennessee, is championed by that state's Senator Baker, the majority leader. It is supposed to demonstrate the breeder's potential for using nuclear fuel more efficiently than conventional reactors. But this \$3.2 billion project is apt to wind up a technological turkey. Some consider the relatively small reactor obsolescent; it might also fall short of Federal safety and environmental requirements. A House subcommittee staff recently concluded that projected costs are soaring because of lax management. And the need for even a well-conceived breeder is diminishing as demand for electricity falls and estimates of uranium supplies rise.

The Tennessee-Tombigbee Waterway, in Mississippi and Alabama, would link the Tennessee River with an existing waterway that leads south to the Gulf of Mexico. It has powerful supporters on the Appropriations Committee in two Mississippians, Jamie Whitten and Tom Bevill. About \$1.1

billion has already been spent on construction over the last decade, more than half the total estimated cost.

Even so, there may be good reason to halt the project. Tenn-Tom will create a bottleneck on the waterway to the south, and easing that problem would cost another \$1 billion. Moreover, both the General Accounting Office and the Congressional Research Service question predictions that enough barge traffic will materialize to justify the linkup.

The economic case against both projects was forcefully stated by President Reagan's own budget director, David Stockman, while he was still a Congressman. Financing Clinch River, he warned, would encourage "a never-ending stream of outstretched palms" for Federal subsidies. He suggested that if Congress paid for marginal enterprises like Tenn-Tom, it ought to "go whole hog" and build a pyramid in every state. The House should give both projects a pharaoh's burial.

[From the Washington Post, July 21, 1981]
THREE THAT DESERVE TO LOSE

Three very large government projects—the Tennessee-Tombigbee Waterway, the Clinch River breeder reactor and SRC I (the solvent refined coal project)—come before Congress this week. All richly deserve to be defeated.

What else do these projects—a canal connecting the Tennessee to the Gulf of Mexico, a breeder reactor demonstration plant, and a plant to make solid and liquid fuels from coal—have in common? All three are to be paid for entirely or largely from federal government funds. All have incurred immense cost overruns beyond expenses due to delay and inflation. All are way behind schedule. All are extremely expensive—between \$3 billion and \$4.5 billion. And none of the three makes economic sense.

It took 25 years from the time the Tenn-Tom was first authorized for Congress to become sufficiently persuaded of its merit to appropriate money for it. Congress was right the first 25 times. The canal's cost has ballooned from about \$300 million a decade ago to \$3.5 billion, but less than 20 percent of its projected benefits for the last five years actually materialized. Nearly everything else about the project is uncertain, including where the canal could sensibly end, which direction barge traffic on it will travel, who would use it and for what, and whether the benefits would ever exceed the costs of construction.

Since Clinch River was first proposed, the rationale for plutonium breeders has evaporated. Only a large and growing number of traditional nuclear electric plants, using up the available uranium fuel, would offset the breeder's greater cost and make it economically competitive. But in the last few years projected nuclear demand has plummeted, estimates of uranium availability have risen sharply, and the price of uranium has dropped. Meanwhile, the cost of the Clinch River plant alone has risen fivefold—to \$3 billion—and construction has not even begun. Utilities lobby strongly on Clinch River's behalf, but do not put their money behind it: the private share of the cost is now down to 9 percent. European breeder programs, including the most ambitious in France, are on hold or being reevaluated.

The SRC I project is the youngest of the three, but it may already have set the record for cost overruns: up 99.8 percent in 18 months. As in the case of Clinch River, the government would bear most of the costs—up to 97 percent, depending on how successful the project is. The revenues now being projected by the principal contractor assume that the solid and low-grade liquid products will sell at the equivalent of oil priced at \$76 a barrel, which is very unlikely. The

project suffers from a number of basic design flaws.

None of these projects will yield benefits commensurate to the government's investment. Some may yield none at all. Termination would be the best choice even if there were plenty of money available. But at a time when badly needed government programs are being cut to the bone, their presence in the budget is an affront.

(The following occurred during Mr. HUMPHREY's remarks:)

Mr. HUMPHREY. Mr. President, without losing my right to the floor, I yield to the Senator from Arizona (Mr. DECONCINI).

Mr. DECONCINI. Mr. President, will the Senator from New Hampshire yield to me about 5 minutes in support of his position?

Mr. HUMPHREY. Mr. President, I ask unanimous consent that I may yield to the Senator from Arizona without losing my right to the floor.

The PRESIDING OFFICER. Before putting that question, I wish to remind the manager that there is still a unanimous-consent request to be made.

Mr. BUMPERS. Mr. President, I renew my unanimous-consent request that the amendment be in order.

The PRESIDING OFFICER. The Senator from Arkansas has renewed his request. The Chair addresses the inquiry to the Senate: Is there objection?

Without objection, it is so ordered.

The Senator from New Hampshire has a request.

Mr. HUMPHREY. Mr. President, I ask unanimous consent that I may yield to the Senator from Arizona for 5 minutes without losing my right to the floor.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. DECONCINI. Mr. President, it is time to make some tough but realistic decisions regarding the Clinch River breeder reactor project in Tennessee.

I have supported the committee's funding of the Clinch River breeder reactor in previous bills. The promise of an electric powerplant designed to produce more nuclear fuel than it consumes, leading to unlimited future energy supplies is a worthy one. That promise justified in my mind the investment of public moneys for a research and development project.

However, we must base our decisions on available information and continuous reassessment of the costs, risks, and potential benefits. With the limited funds we have to work with, we have to decide what is practical and what is not.

Mr. President, I have previously recommended to the committee that it eliminate the requested \$228 million budgeted for the Clinch River project, and designate less than half of that sum, approximately \$111 million, to solar and renewable resources programs at the levels approved by the House. Although the numbers have changed through committee action, the transfer of Clinch River funds to solar programs is still a good idea.

Mr. President, as my colleagues consider the arguments made both in favor and in opposition to continuing the project, I would have them take a good hard look at the one single overriding factor that has changed my mind—cost. The

project costs are now estimated at more than \$3.2 billion—a 450-percent increase from the original \$669 million. That makes some of the overrides in defense expenditures look like nothing, and the ground has not even been broken.

The question is not on the breeder technology but on the economics and planning of this particular project. The issue is not only \$180 million this year, but hundreds of millions of dollars in 1983, hundreds of millions of dollars in 1984, hundreds of millions of dollars in 1985, hundreds of millions of dollars in 1986, and so on, and so forth. We all know further increases in these estimates are inevitable.

Also, even if this 375 megawatt project is completed by 1990—again, construction has not yet started as has been pointed out by the Senator from Arkansas and others—there will still be a demand for a 1,000 megawatt demonstration plant, as the next stage of development. This will take another decade, and certainly billions more, with no guarantee of private sector support.

Mr. President, for a small fraction of this cost and with much greater private investment we can firmly establish a solar and renewable energy industry in this country. We can attain, with a fraction of these costs, renewable resources sufficient to meet the 1- to 3-percent growth in electricity demand through the 1980's and 1990's.

Mr. President, I know the distinguished floor manager has tried to bring to the floor a bill which represents the concerns of the entire committee. This has been a difficult year to be a subcommittee chairman and I commend him for the courageous job he has done. I would have offered this amendment in the full Committee markup, but was unable to attend because of a previous commitment to my distinguished colleague, the senior Senator from Arizona (Mr. GOLDWATER).

However, this is a matter which requires the attention of the entire Senate, and although I have supported this technology, I believe the time has come to simply stop the project and sincerely demonstrate to the American people that we are serious in our efforts to end the waste of public funds.

Mr. President, I thank the Senator from New Hampshire.

(Conclusion of proceedings during Mr. HUMPHREY's earlier remarks.)

Mr. HUMPHREY. Mr. President, I yield to the Senator from Massachusetts.

UP AMENDMENT NO. 583

(Purpose: To set funding for the Clinch River breeder reactor project at \$90,000,000 for fiscal year 1982)

Mr. TSONGAS. Mr. President, I have an amendment in the second degree which I send to the desk and I ask for its immediate consideration.

The PRESIDING OFFICER. The amendment will be stated.

The legislative clerk read as follows:

The Senator from Massachusetts (Mr. TSONGAS), for himself and Mr. DURENBERGER, proposes an unprinted amendment numbered 583 to the Bumpers amendment UP 582:

At the end of the amendment add the following:

Notwithstanding any other provision of this amendment "\$1,890,119,000 shall remain available until expended: *Provided*, That not to exceed \$90,000,000 of the funds herein provided shall be expended for the purpose of carrying out the Clinch River Breeder Reactor Project".

Mr. TSONGAS. Mr. President, my amendment is really quite simple. The appropriation in the bill calls for \$180 million to proceed with the Clinch River breeder reactor. My amendment cuts that in half, and I hope to make clear through the discussion that the purpose is to reinstitute the original concept of Clinch River, namely, cost sharing, that by the amendment the Senate would serve notice on the private sector that we intend for it to make a decision as to whether the Clinch River breeder reactor is worthwhile and should be proceeded with.

Let me state at the outset my own position on the issue. First of all, I am not antinuclear power, as most Senators know. Indeed, I have received some heat from environmentalists for that position. But that is my position.

Second, I have consistently voted for the appropriations and authorization for alternative breeder technology R. & D., which I think is important and must continue.

Finally, I am the author on the Senate side of the Magnetic Fusion Engineering Act, which passed the Senate last year and which is now the law of the land, which calls for a timetable for the development of the magnetic fusion process.

So I think that I cannot be accused of being antinuclear either in terms of the first generation light water reactor or the more advanced technologies, the breeder and particularly fusion.

The issue here is very simple, and that is that when the Clinch River project first got underway under Public Law 19-273 the project was to be a cooperative arrangement, between the private sector and the Federal Government.

The law read as follows:

That such assistance that the Commission—

This is the AEC—

undertakes specifically for this demonstration plant shall not exceed 50 percent of the estimated capital cost of such plant.

The issue that I am raising is the issue of what role the private sector has to play in making decisions.

The Wall Street Journal, as we all know, editorialized recently and said the best way to solve the energy issue is to let the free marketplace prevail and get Government out of the energy issue.

Is Clinch River worthwhile or is it not? And the debate will rage on today as it has in the past.

The argument raised in 1981 is that the best place to make that decision is in the private sector and let the marketplace prevail.

What my amendment does is very simple. It says if the marketplace, the utilities, and the various companies that produce this equipment are committed to this project, they shall cost share. If they feel it is worthwhile, if they are persuaded by those who support Clinch

River, then they will put the money up as the original law intended.

If they feel that Clinch River is not worthwhile, if they prefer, for example, gas-cooled fast reactors, if they feel that light water breeders are better or heavy water breeders or even the advanced converter reactor, if they believe, as the Assistant Secretary for Nuclear Energy said, that backfittable improvements to extend nuclear fuel burned up will reduce uranium use by 23 percent, they would come to a different conclusion.

In essence, what I am asking is that we have a marketplace decision on the Clinch River breeder reactor, that Government will recognize its role and the private sector will as well.

The history has been pointed out, and that is that the 50-percent requirement that was in the original bill has been removed. And what has the industry done? The industry pledged \$257 million, and yet what has remained is the actual contribution at \$110 million, one-tenth of the project cost, and apparently little likelihood that they will go ahead with their involvement as long as the public sector is willing to pay for the whole thing.

There is a larger question here, and that is that we have around the country, not only in terms of the Wall Street Journal but a number of editorials, which I will have printed in the Record at the end of my remarks, an awareness that there is abroad in the land the notion that the private sector has a role to play and this body has been in the forefront of making that argument.

What I am giving to my colleagues is the chance to vote in support of that notion. To vote against it, to say that the private sector shall not participate, the private sector has no decisionmaking role to play violates the statements, the commitments made by most Members of this body.

If Clinch River's advocates say it is, then that must be shared obviously by the industry that will utilize it.

So what I am asking is that we go back to the 50-percent cost sharing that was contained in the original law Public Law 91-273.

There is going to be a lot of debate as to where we should put our energy dollar. Some prefer voltaics. Others prefer nuclear power, or whatever. It seems to me to be consistent with the statements made throughout this year the best place to make the argument and the best place to have it decided is in the private sector.

One of the concerns that propelled me into this amendment was the fear that in essence we are putting all our eggs into this basket. There are a number of us who feel that the Federal energy dollar, most particularly in the field of nuclear power, could better be spent on alternative breeder technology and indeed on the various nuclear fusion processes and that by putting this enormous amount of money into Clinch River we have precluded the effective use of other options and the best way, in essence, to have a determination as to what is the best alternative is, in fact, to let those people decide who are the most knowledgeable in the field.

There was a quote by Edward Teller made earlier, and let me add mine. This is a letter to Congress dated May 28 of this year in which Edward Teller said:

If the Clinch River breeder reactor and its successor reactors do not turn out to be the best way to insure perpetual availability of nuclear fuel, having chosen a less than optimum approach, the future cost to the Nation may amount to hundreds of billions of dollars.

I happen to believe that if the private sector is allowed to make a decision as to which nuclear process it wishes to pursue it will come up with a process that is for more likely to be commercialized than one which survives this body because of pressures which have nothing to do with the marketplace.

This amendment gives each Member of this body an opportunity to match by his vote and her vote the statements which we have been making for the past year: Let the marketplace prevail. Let the marketplace be the decisionmaking process and that, indeed, is consistent with what the administration has been saying and most Members of this body have been saying.

However one feels about Clinch River, whether one supports it or one is opposed to it, I think my amendment is a commonsense compromise that provides the input for the private sector that I think is so essential.

Mr. President, the amendment is co-sponsored by Senator DURENBERGER of Minnesota. He has not yet arrived, so I would request—I would at this point yield the floor with the understanding that when he comes he may be given the opportunity to speak in its behalf.

Mr. JOHNSTON addressed the Chair. Mr. HUMPHREY. Mr. President, parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. HUMPHREY. Who has the floor? The PRESIDING OFFICER. The Chair recognizes the Senator from Louisiana.

Mr. HUMPHREY. I believe the Senator from New Hampshire had the floor and yielded to the Senator from Massachusetts.

Mr. TSONGAS. The Senator is correct. The PRESIDING OFFICER. The Senator from Louisiana will refrain for a moment while I consult with the Parliamentarian.

The Chair wishes to inquire of the Senator from New Hampshire, since the Parliamentarian was not present at the time recognition was given to the Senator from Massachusetts, did the Senator from New Hampshire yield for the purpose of the Senator from Massachusetts presenting the amendment? I recollect he did it to the Senator from Arkansas, but I do not have a recollection of it having been done for the Senator from Massachusetts.

Mr. HUMPHREY. In any case, Mr. President, I yield the floor.

The PRESIDING OFFICER. The Senator from Louisiana.

Mr. TSONGAS. Mr. President, will the Senator from Louisiana yield for 1 second? I ask for the yeas and nays on my and Senator DURENBERGER's amendment.

The PRESIDING OFFICER. Is there a sufficient second? There is a sufficient second.

The yeas and nays were ordered.

Mr. TSONGAS. I thank the Chair.

Mr. JOHNSTON. Mr. President, when the issue of Clinch River is finally laid to rest, hopefully by dedicating that marvelous and technically proficient machine, it will be as if we have laid in the grave an old friend whom we have gotten to know very well, because this issue has come up each and every year as it has progressed since I have been in the Senate.

The arguments are always the same, the result is always the same. We have won this; those of us who believe, I believe, the issue is progress—those of us who believe in that progress have won by a margin of about 2 to 1 in most instances, and in some instances it has been perhaps closer. Even when the President of the United States and his Secretary of Energy strongly opposed the project we have maintained it in both Houses. I suspect the outcome is going to be essentially the same today.

Mr. President, this is not obsolete technology. The breeder reactor is recognized by all industrial countries as being on the edge of technological development. The recent IFCE, International Fuel Cycle Evaluation, from Vienna, with the International Atomic Energy Agency, all those countries made a finding that the breeder reactor is important technology.

The question is what kind of breeder, Mr. President? There are a number that can be considered. There is, for example, the gas-cooled breeder reactor. This Congress recently went on record as slashing the funding for the gas-cooled breeder reactor on the ground that its technology is not right, and we have, in effect, already chosen the right technology.

There are water-cooled breeder reactors. But, Mr. President, those are a long way from being as developed as the liquid metal fast breeder reactor. Indeed, all of the countries which are making choices for breeder reactors are going to liquid metal, that is to say, sodium-cooled breeder reactor. That is what Clinch River is, a sodium-cooled breeder reactor.

There are those who say, Mr. President, that it is obsolete because it is only 375 megawatts, and that we ought to leapfrog up to 1,200 megawatts, as the French have done in their Super Phenix program.

But, Mr. President, the French went first not from the Rhapsodie, which was 40 megawatts, to Super Phenix, 1,200, but they went to the intermediate step of Phenix which was, I recall, 260 megawatts.

Why do we and why did the French and why did the Soviets go to an intermediate-sized reactor? Because, Mr. President, the persuasive scientific view is that to scale up that far in technology is not sound scientifically or from an engineering standpoint, that you need a two-step process to go all the way to the optimum-sized breeder reactor of something over 1,000 megawatts, perhaps 1,200 as in the case of the French Super Phenix.

Mr. President, I guess, as I say, it is not obsolete, it is not as obsolete as sodium technology. The small incremental changes in heat exchangers and in pumps and in valves and in that kind of small technology, those are small incremental changes which, indeed, are learned by doing. It is only by getting this breeder reactor in operation that we learn how to improve it. It is not a whole generation of difference in technology that goes from here to 1,200; it is not different in kind. It is different only in size, and according to all of the persuasive scientific opinion we need to take this step, this intermediate step.

In the final analysis, Mr. President, I guess it is the same kind of question as we had in the SRC-1 question. In effect, are we going to eat our scientific seed corn? Do we as the United States want to continue to be on the edge of technological development or have we so lost that American spirit that says we want to lead the world that we are willing, even intentionally, to stop a program in midstream because we are too timid to commit what really in terms of the technology involved are modest dollars, to complete an ongoing project in which over \$1 billion has been spent?

We have some recent examples, Mr. President, of what it means not to make those kinds of technological investments. Look at the automobile industry. Is there anybody who doubts that Japan has gotten ahead of the United States in automobiles? Look at the sales figures. Out of all the loyalty that Americans have they still rush out to buy Japanese cars and German cars. Is that because the Japanese or Germans are smarter than Americans? Oh, no. It is because they have invested in their technology, and that investment puts them ahead of us.

We saw the same thing happen in the steel industry—no investment, therefore, they are more efficient than we are.

We have seen the same thing happen with television sets. They tell me there are no radios made in the United States, none, no radios made, whatever it is, Motorola or all the rest. They are made out of the country. We let them get that technological leap on us.

In communications the same thing is true.

Now we still lead in a few areas, Mr. President. We still lead in space satellites, we still lead in computers, we still lead in aircraft, in jet engines. I mean it is the 727 that flies the world, and the Boeing 747, and all of us are thrilled when we take those rare and occasional trips abroad to see American technology in the form of aircraft.

And, you know, there is another area in which we lead, and that is nuclear power. Most of the nuclear reactors around the world are what we call the Westinghouse PWR. Some of them are licensed by the French company Farnotone, but they are American technology developed here and being sold abroad.

We are losing some orders now on the light water reactor, but we are still leading in that technology. We are falling vastly behind in breeder technology. You know we are not the only country out

there in breeder technology. The French are there, the British are there, the Germans are there. They are all cooperating in a reactor much larger than this. The Russians are there with a reactor much larger than this.

This is not going to catch us up, but this keeps us in the ball game, and at least it says that America is not so timid as to withdraw from the race altogether.

I hope, Mr. President, that we will have guts enough in an age of budgetary stringency to face up to the fact that if this country is going to stay great, if we are going to stay on the top edge of technology and not fall behind, as we have in autos and radios and televisions and steel and what is becoming a long list of technologies, if we do not do that, Mr. President, we will stay on top and we will perhaps regain our lead.

We have the spirit, we have the people, and we have the brains. The question is do we have the will.

Mr. President, as I say, this is verse 5 or 10 of this same refrain. We have to go through and say the same arguments over and over again. I think the Senate is ready to vote on this matter.

So, Mr. President, if no one else absolutely insists, I am prepared to move to table the amendment.

Mr. DURENBERGER addressed the Chair.

Mr. McCLURE. Will the Senator yield briefly to me?

The PRESIDING OFFICER. The Senator from Minnesota also seeks recognition.

Mr. JOHNSTON. Mr. President, I have not yielded the floor, but I will yield the floor. This could go on all night.

Mr. President, I ask unanimous consent, therefore, to be recognized after the Senator from Minnesota and the Senator from Idaho have been recognized for the purpose of making a motion to table.

Mr. TSONGAS. I object.

The PRESIDING OFFICER. There is an objection.

Mr. JOHNSTON. Mr. President, if there is an objection, I really think, at 6 o'clock at night—we have scores of Senators who want to talk. We have discussed this for over an hour. I think the issue is ripe, Mr. President.

Mr. McCLURE. Mr. President, will the Senator yield without losing his right to the floor?

Mr. JOHNSTON. Yes.

Mr. McCLURE. Mr. President, it has been discussed all afternoon. I have been waiting for one of two people who have been talking for the last hour and a half to take a deep breath so I would have a chance to get in here. And this is the first time you breathed deeply.

Mr. JOHNSTON. Not I.

Mr. McCLURE. I would hope we would have the opportunity to at least express our opposition to the pending amendment and in support of the Senator's position.

Mr. JOHNSTON. Mr. President, I am not one to press. If the Senate wants to, at 6 p.m., continue to debate for another couple of hours, I am not going to move to table.

I yield the floor.

Several Senators addressed the Chair. The PRESIDING OFFICER. The Senator from Minnesota.

Mr. DURENBERGER. Mr. President, I rise to support the amendment that would limit the appropriation for the Clinch River breeder reactor to \$90 million in fiscal year 1982. The concept behind this amendment is a good one, and although not fully implemented by the actual language of the amendment, it is one that the Senate ought to use to resolve the debate over the Clinch River project.

When the Clinch River breeder reactor project was originally conceived the Federal Government did not intend to be the primary source of funds. Rather the project was to be a partnership between the Federal Government and private industry to demonstrate this new technology. As you well know and have heard in the debate, the Federal Government was to limit its financial participation to one-half of the cost of the project. Over the years, the nature of the project has changed a good deal. It has become much more expensive to complete and it appears that the Government is now expected to put up almost the full cost of \$3.2 billion. Financial contributions from the nuclear industry to date and in the long run are less than one-tenth the Government contribution.

The amendment that we consider today would move us in the other direction. It would allow Clinch River to go forward, but only if the nuclear industry would share a substantial portion of the cost of completing the project. And after all, that is the test that this administration would have us apply to all near-term energy technologies. The new energy policy, the policy initiated in the reconciliation process and reflected in this appropriations bill, says that whether the technology be alcohol plants, windmills, solar collectors, conservation retrofits, or breeder reactors, if it is near term the decision to employ it should be left to the marketplace. All that we ask in this amendment is that the policy be applied equitably to all technologies.

The breeder reactor is a near-term technology. The Federal Government has for many years supported the research and development that led to the plans for Clinch River. CRBR is a commercial demonstration of a technology that is ready for a marketplace decision. Breeder reactors are currently under construction in other nations. In these respects, breeder reactors are no different than alcohol plants or wind generators. If we are not going to provide loan guarantees for alcohol fuels, if we are not going to provide tax credits for the use of solar, wind, and other renewable resources, if we are going to leave all of these choices on our energy future to the marketplace, then we have no business paying 90 percent of the cost for a breeder reactor.

Last fall the Federal Government made many commitments to small companies to provide financial support for new plants that would produce new fuel resources from renewable feedstocks. The administration has done its very best to back out of every commitment that it

could. I do not think that was right. These projects and the Federal participation were authorized by an act of Congress, the Energy Security Act. The Carter administration made commitments—signed contracts—with many of these producers and they risked substantial amounts of their own equity to begin planning and construction. I am doing what I can to make sure that these commitments are honored.

I think that we should do the same for the breeder reactor. We originally committed to 50 percent of the cost of this project. It is a commitment that we ought to fulfill. The Federal Government has already spent over \$1 billion on the CRBR project. We could fulfill our commitment with modest outlays over the next several years. But we ought not to fund the entire cost of the plant. We ought to make it as clear as we can at the next opportunity to consider the authorization for Clinch River that the Government's role in financing this project will be limited. That if the project is to go forward it will take a substantial commitment from the nuclear industry—a substantial dollar commitment—to get the project finished. Only in that way can we be sure that the choice of breeders over solar or biomass or synthetic fuels is justified by the economics of each fuel resource.

Mr. President, the reason for my opposition to this issue is relatively simple. I have supported Clinch River in the previous two opportunities that I have had to speak to this issue and to vote on this issue. But today we are faced with quite a different approach to energy policy in this country. And to the degree that the administration's policy becomes the policy of this country, I think the position that we take on the Federal role in financing the Clinch River project ought to reflect that policy whether we agree with it or not.

Mr. President, I am not entirely in support of this administration's marketplace approach to energy policy. I do not believe that there is a marketplace out there that can decide between fuel resources and when they should be brought into production. In fact, there is in a sense no marketplace at all. The price of oil determines what will and will not be our energy future, because oil is such a large part of our current consumption. And the price of oil is set by Saudi Arabia and the cartel of OPEC nations. So long as we remain primarily dependent on oil and so long as we import such a large portion of our consumption, we are not—the marketplace is not—in control of our energy future. Rather we are dependent on political events in foreign nations which are completely unpredictable. In those circumstances I think it would be better to use the revenues from the windfall profit tax to subsidize near-term technologies—fuel resources that are slightly more expensive than oil now but which will be much cheaper in the long run. That policy which includes tax credits for solar and renewables, loan guarantees for synthetic fuels and projects like CRBR could insulate our Nation from future oil shocks.

But, Mr. President, that is not our policy. Our policy is to let the market-

place choose among the near term technologies. And if that is our policy we should apply it to all fuel resources including breeder reactors. So I would encourage my colleagues to vote for this amendment and to limit the role of the Government in Clinch River as we are limiting it for all other future energy resources.

Mr. McCLURE addressed the Chair.

The PRESIDING OFFICER. The Senator from Idaho.

Mr. McCLURE. Mr. President, I shall be very brief. I will make only one comment with respect to the remarks that have just been made by my good friend from Minnesota.

If, as a matter of fact, we are going to apply that test, let us apply it across the board. Let us start talking about photovoltaics, let us talk about the investment in conservation, let us talk about the investment across the board in all the energy initiatives. If, as a matter of fact, we are going to just allow the marketplace to do it, as the Senator suggests, then I would suggest to you to let us take a look at what we are going to be doing in the authorizing legislation and I will assure you there will be some changes in that authorizing legislation. I mean that very sincerely and very forcefully. Because if, as a matter of fact, we are going to adopt a segmented rationale with respect to governmental research and development on technologies that obviously have no near-term payoff, then I am going to try to apply some consistency to that argument.

Mr. President, I rise in strong opposition to the Bumpers-Humphrey amendment. I do so with all due respect for my two distinguished colleagues and friends and their obvious good intentions. But I must speak candidly and forcefully against their amendment. And, I must do so as I have had to do every year since 1976.

It is an interesting historical perspective, Mr. President, that we have been voting at least once, and often twice, a year on this project. In 1977, the main theme was President Carter's new emphasis on nuclear nonproliferation and how Clinch River, a wholly domestic energy supply project in the world's leading nuclear weapons state, would destroy the Carter nonproliferation policy.

In 1978, the main arguments reemphasized nonproliferation, but curiously started including the cost issue, suggesting dependence on foreign breeder projects. Then in 1979, after the Three Mile Island incident, the opponents of the project and the White House seized on the nuclear safety issue—even developing a White House so-called "White Paper" to document the safety issue. Next in 1980, we suffered the electricity demand reduction, decreased nuclear future and increased uranium resource arguments from the opponents and the Carter White House.

In 1978 and 1979, we were promised the magic of a so-called conceptual design study or CDS of a prototype large breeder reactor which would again prove that we did not need CRBR, but should go directly to its successor project the PLBR and would give us a design of PLBR. The CDS was to be completed

early this year, but, lo and behold, we found out that the Carter White House and Energy Department made certain that there really was not a PLBR design. Along the way, we have been told that the nonproliferation alternative systems assessment program (NASAP) in the Energy Department and the International Nuclear Fuel Cycle Evaluation (INFCE) with 66 participating nations both would prove domestically and internationally that there was no continued rationale for Clinch River or the breeder program.

We even found a year ago that the Carter White House was planning actively and secretly for an effective end to the entire breeder program, if there were a second Carter administration. So today's debate is yet another chapter in the continuing saga of Clinch River.

I must commend the Senator from Arkansas for his tenacity on this issue. He has led the opposition year after year. His work in coordination with the Carter White House against the project was never ending. In reviewing the Dear Colleague from the Senator from Arkansas and the Senator from New Hampshire, I am struck that the letter is a compendium of past arguments recycled, so to speak, to fit into today's rhetoric of fiscal austerity and free market principles.

I, also, am struck that the fiscal austerity argument regarding budgets and costs reflects the nearly 5 years delay in construction activity which has resulted directly from the opposition of the Carter White House, in concert with opponents of Clinch River in the Congress. We would not be here today debating appropriations to proceed with construction, if the Carter administration in the spring of 1977 had not derailed licensing and stopped the project. And, we would not be here today, on the other hand, if this Senate and this Congress had not defeated the several predecessor amendments of the Senator from Arkansas over the past 5 years.

For the last 4 years, the Congress rejected the Carter administration's recommendations to terminate the project. The House in considering its fiscal year 1980 DOE authorization bill (H.R. 3000) on July 26, 1979 overwhelmingly rejected (237 to 182) an attempt to kill CRBR. Similarly, on September 27, 1979 when the full Senate was given the opportunity to vote on a proposal by Senator DALE BUMPERS, Democrat of Arkansas, to delete CRBR funding from a continuing appropriations resolution (H.J. Res. 404), it was tabled by a significant 64 to 33 margin. More recently, both House and Senate versions of the Omnibus Reconciliation Act of 1981 included authorization to continue funding of the Clinch River breeder reactor project. Furthermore, in action on the fiscal year 1982 energy and water development appropriations bill, the full House voted 206 to 186 against an amendment offered by Representative LAWRENCE COUGHLIN, Republican of Pennsylvania, to delete funds for the Clinch River project; and in the Senate Appropriations Committee an amendment by Senator BUMPERS, Democrat of Arkansas, to delete CRBR funding was defeated 9 to 6.

So here we are again for yet another reconsideration and review of Clinch River, with most of the opponent's arguments premised on their success, with the Carter administration, in slowing the project and stopping construction over the last 4 years. Let us make that review, Mr. President, and I am convinced we can still show the project merits the funds in this bill.

The Reagan administration supports the project and accordingly requested \$254 million in the DOE fiscal year 1982 authorization bill for its continuation. David Stockman, Director of OMB, reiterated this support in a recent letter—attached—to DOE Secretary Edwards. Mr. Stockman left no doubt that the administration strongly believes CRBR is compatible with President Reagan's free-market approach to energy. He said that:

The Clinch River breeder reactor should be constructed and operated—not as a commercialization activity or as an economical power generator—but rather as the logical next step in breeder research and development.

This position was also conveyed by Mr. Stockman in letters dated March 1981 and May 1981 to Senator EDWARD KENNEDY and Congressman LARRY WINN respectively.

The President has said as late as yesterday:

NOVEMBER 3, 1981.

DEAR HOWARD: I am concerned that efforts may be made to eliminate funding for the Clinch River Breeder Reactor when the Energy and Water Development Appropriation bill comes before the Senate. After years of indecision, it is particularly important for our nation to proceed with this demonstration of breeder reactor technology. We have already invested over \$1 billion in design and fabrication of components for the Clinch River Breeder Reactor. By completing this important project, we will gain the necessary technical information for making a sound decision on future commercial use of breeder reactors to supply electricity.

I strongly support full funding of Clinch River and would urge all of your colleagues in the Senate to support continuation of the project.

Sincerely,

RON.

THE ENERGY VALUE OF BREEDER REACTORS

Breeder reactors represent a tremendous source of energy. They can extend our uranium resources by a factor of about 60 times. The energy value of uranium already mined and above ground—the byproduct of our enrichment operations—that can only be used in breeders—is roughly equal to our total unmined coal resources or at least three times the total OPEC oil resources.

To walk away from demonstration of this vital energy source would be a clear signal to energy consumers and other nations that we are not serious about pursuing increased energy production to reduce worldwide shortages and to reduce our perilous and costly dependence on foreign energy sources, such as the OPEC nations.

Almost every other industrialized nation is actively engaged in a strong breeder research and development program centered on an intermediate scale demonstration plant. These nations fully recognize the dramatic resource utiliza-

tion potential of breeders compared to light water reactors (60 fold increase). France, Britain, and Russia are currently operating CRBR scale plants, and the recently completed 66-nation International Nuclear Fuel Cycle Evaluation (INFCE) study strongly endorsed moving ahead with breeder development.

GENERAL ACCOUNTING OFFICE VIEW

On May 7, 1979, the General Accounting Office issued a detailed report entitled "The Clinch River Breeder Reactor—Should the Congress Continue to Fund It?" Some of its highlights are:

The Clinch River Project is not technically obsolete, and its intermediate size is a logical and prudent step in developing liquid metal fast breeder reactor technology.

Terminating the Clinch River Project accomplishes very little in the area of non-proliferation.

If the Clinch River Project is terminated, much of the \$1 billion already spent on it will be wasted.

It will be difficult at best and perhaps impossible to maintain a strong liquid metal fast breeder reactor program without building the Clinch River Project.

On May 11, 1979, the Carter administration released a white paper detailing its criticism of the CRBR plant. GAO was asked to do an analysis of this document and issued its report entitled "Comments on the Administration's White Paper—The Clinch River Breeder Reactor—An End to the Impasse" concluding: GAO found that the (Carter) administration's presentation of several key issues and facts could have been more balanced and informative.

In reference to the White House paper, the GAO report is replete with words such as "misrepresentation," "omission of facts," "invalid assumption," and "highly questionable."

The GAO has not changed its view since 1979.

THE CHALLENGES TO CLINCH RIVER

A number of the allegations which have been made by opponents of the CRBR demonstration plant should be kept in perspective:

CLINCH RIVER IS THE RIGHT PLANT

After 4 years of rigorous licensing review by the Nuclear Regulatory Commission, the CRBR design has been updated to reflect safety standards consistent with conventional nuclear plants. CRBR represents a prudent 2½ times scale-up beyond the fast flux test facility and is a necessary low technological risk, high-confidence step in the development of breeder technology. The CRBR technology is advanced well beyond the capability of other international programs in many areas, such as the steam generator, primary sodium pump and the intermediate exchanger. Thirteen independent Government reviews since 1975 have confirmed that Clinch River is not technologically obsolete.

Moreover, in a June 2, 1981 letter, the technical accomplishments of the project were strongly reaffirmed by a group of 17 renowned scientists representing Scientists and Engineers for Secure Energy. Many new technological advances are being incorporated into the CRBR design such as the new heterogeneous core. Additionally, the abundant flexibility in the reactor provides the opportunity for U.S.

leadership in demonstrating the practicability of various fuel cycles.

CLINCH RIVER WILL BE OPERATING AT THE RIGHT TIME

Experience in licensing, building, and operating an intermediate scale breeder demonstration plant will be needed in the early 1990's if prudent decisions are to be made by utilities about the long-term need for inexhaustible energy from breeders. Even if one were to accept the argument that commercialized breeders would not be needed before 2020, as maintained by many opponents of the program, we are already late with progress on CRBR.

CLINCH RIVER CAN BE BUILT AT THE RIGHT COST

More than \$1 billion has already been spent on CRBR. It has been estimated that, if canceled, the cost of CRBR to the American taxpayer would be more than \$1.2 billion. This compares to an estimated completion cost for the project of less than \$2.2 billion in year of expenditure dollars. The more than half a billion dollars' worth of components, prototypes and test items that have been ordered represent more than 60 percent of the estimated cost of the major equipment procurement for the project. Scraping Clinch River and starting over on a new plant will undoubtedly cost a great deal more. The utility contribution to Clinch River is the largest commitment ever made by the industry at large, 753 utilities participating. Cancellation of the project would jeopardize the possibility of any future joint ventures involving private funds.

CLINCH RIVER IS THE RIGHT PLACE

As a result of extensive review by the Nuclear Regulatory Commission, the Clinch River site was given approval as suitable from both a public health and safety and an environmental impact standpoint. The hearings, suspended by the Carter administration, will provide the opportunity for full weighing of any remaining public concerns regarding the plant and its operation.

Mr. President, these facts would lead this Senator and has led this administration to the following conclusions:

First, From the evaluations by NASAP and INFCE of the need, timing and economics of the LMFBR, it is clear that there is the need in the major industrialized nations to be in a position to deploy the breeder around the end of the century.

Second, The U.S. LMFBR program requires an orderly development program and the CRBR is a key part of that program. The CRBR design is current, incorporating many United States and foreign technological advances. The CRBR size is an appropriate scaleup from the fast flux test facility (FFTF) and other pilot plants and represents a prudent balance of risk, cost and schedule. It can accommodate changes required to demonstrate the LMFBR system, including fuel systems. Throughout its development, the CRBR has been supported by, and has been an integral part of, a broadly based LMFBR technology program.

Third, Construction and operation of the Clinch River Plant will provide the comprehensive, sound technical base needed to move the breeder technology forward toward the goal of being able to deploy breeders around the turn of the century. The major, if not the prime, component in the technology learning curve is the experience gained in the construction and operation of complete interacting and interfacing components in total systems, such as the Clinch River breeder reactor.

The director of OMB, Mr. Stockman, has laid out the administration's strategy in his letter of June 23, 1981, to Secretary Edwards as follows:

HON. JAMES B. EDWARDS,
Secretary of Energy,
Washington, D.C.

DEAR JIM: Thank you for your June 10, 1981, letter discussing key aspects of the current breeder program strategy. I agree that we must assure that Congress is fully informed as to the purpose of the CRBR Project and its role in the current strategy. My letters to Members of Congress have affirmed that the Administration's commitment to the economical and safe development of nuclear energy includes assuring that breeder technology is advanced sufficiently to permit the private sector to make market decisions regarding its future commercial development.

Projections of electricity demand growth have decreased substantially since the development of the original breeder commercialization program by the Atomic Energy Commission in the early 1970's. In light of this, the Reagan Administration has developed a new breeder strategy that will place full responsibility for commercialization in the private sector.

In line with this new strategy, the Administration needs to move forward with the necessary research and development work to permit a resolution of the technical uncertainties that would otherwise prevent the private sector from judging the commercial feasibility of the liquid metal fast breeder reactor.

The current breeder program as proposed by the Department of Energy is in total accord with this approach. The Clinch River Breeder Reactor should be constructed and operated—not as a commercialization activity or as an economical power generator—but rather as the logical next step in breeder research and development.

In summary, the current breeder program strategy should be clearly focused on advancing the technology *only* to the stage that permits market forces to determine future commercial deployment.

I look forward to working with you to assure that Congress is fully advised regarding the overall breeder strategy and the importance of proceeding with the Clinch River project.

Sincerely,

DAVID A. STOCKMAN,
Director.

So in the end, Mr. President it is time to finally end this issue by defeating again the Bumpers amendment before us.

Mr. JOHNSTON. Mr. President, again I hesitate to move to table, but all good things must come to an end.

Mr. TSONGAS. Mr. President, will the Senator yield?

Mr. JOHNSTON. Mr. President, I ask for the yeas and nays on the Humphrey amendment at this point, the Bumpers-Humphrey amendment.

The PRESIDING OFFICER (Mr. RUDDMAN). Is there objection to ordering the yeas and nays on the underlying amendment? Without objection, it is so ordered.

Mr. JOHNSTON. Mr. President, I ask for the yeas and nays.

The PRESIDING OFFICER. Is there a sufficient second? There is a sufficient second.

The yeas and nays were ordered.

Mr. TSONGAS. Will the Senator yield?

Mr. JOHNSTON. If I may yield for 2 minutes without losing my right to the floor. Mr. President, I ask unanimous consent that I be allowed to yield for 2 minutes to the distinguished Senator from Massachusetts, at the conclusion of which I will again be recognized.

Mr. QUAYLE. Mr. President, will the Senator yield?

The PRESIDING OFFICER. Is there objection to the request of the Senator from Louisiana? Without objection, it is so ordered.

The Senator from Massachusetts.

Mr. TSONGAS. Mr. President, I want to make clear that the issue we are going to vote on first is the cost-share amendment. It is not up or down on Clinch River. It is the amendment offered by myself and Senator DURENBERGER, cost-sharing. There has been no rebuttal to the issue of costsharing. The rebuttal by my distinguished colleague from Louisiana never mentioned costsharing.

How do we come up with it? It was in the original bill. The argument is used that Clinch River is not obsolete, but what we say very simply is let the private sector decide that.

The question is raised, what kind of a breeder? We say let the private sector decide that as well.

The question is raised about the forefront of technology, what about Federal tests?

What we are saying is that consistent with the original bill, the original concept, and the discussions in 1981 about the private sector, our amendment reduces the appropriation in half and calls upon the private sector to provide the other half consistent with the original intent of the Congress.

I want to make sure that the Members understand that what they are voting on right now is not Clinch River up or down, but the larger question of cost sharing, which is important not only vis-a-vis Clinch River, but the entire argument about what the role of the private sector is in the energy issue in this day and age.

I thank the Senator from Louisiana for yielding.

Mr. QUAYLE. Will the Senator yield for a brief moment?

Mr. JOHNSTON. I will yield for a brief moment without losing my right to the floor.

Mr. QUAYLE. Mr. President, I want to commend my colleagues Mr. HUMPHREY, Mr. BUMPERS, Mr. TSONGAS, and Mr. DURENBERGER for raising this extremely important issue before the Senate. We have considered the question of the Clinch River breeder reactor many times

before, and I hope we can settle the issue definitively this year. The project has unfortunately proceeded very slowly since its inception more than a decade ago, and a variety of budgetary and economic circumstances has made it imperative to again review the wisdom of continuing this demonstration project. Mr. President, I feel that these changed circumstances indicate that the Clinch River projects should be terminated.

Before addressing the specific reasons for opposing Clinch River, I would like to emphasize that a vote against this project is not a vote against nuclear power in general nor breeder technology in particular. Along with many of my colleagues who oppose this project, I applaud the recent initiatives by the President and Secretary Edwards to renew America's nuclear industry.

I might add that the distinguished chairman of the Energy Committee, Mr. McCURE, also deserves commendation for proposing much needed changes in line with the President's initiatives. The nuclear industry has been shackled too long by complex and time-consuming regulatory procedures. Given the 10- to 14-year lead time needed to bring a nuclear plant on line under current licensing procedures, and given the high cost of money in today's markets, an investment in a nuclear plant has become prohibitively expensive.

In the past few months we have seen a disheartening succession of plant cancellations, plants being mothballed, and huge cost overruns on construction. A major reason for these setbacks is simply the time needed to license a plant and meet the changing regulatory climate. Each day of delay in a nuclear plant now adds almost \$1 million a day in interest costs alone.

So I welcome the initiatives of the Reagan administration as a start toward alleviating the problems of the nuclear industry. Regulatory streamlining should go far to cut the ruinously expensive costs facing utility investors in nuclear plants. A rational nuclear waste policy will allow utilities to operate in a more certain long-term regulatory environment. And continuing research on both current and advanced generations of nuclear plants will provide us with a variety of options for improving the fuel efficiency and costs of nuclear power.

Even though we must continue to pursue our nuclear option vigorously, I am not convinced that the Clinch River breeder reactor is a necessary part of this policy. The arguments made 15 years ago by proponents of Clinch River simply do not hold up in 1981, and will not hold up in the foreseeable future.

My colleague from New Hampshire has admirably presented the economic arguments for terminating Clinch River, so I will not belabor this point. Let me just emphasize that continuation of the project will result in yearly appropriation requests that will strain an already overburdened budget. Clinch River itself will cost at least \$2.2 billion over the next 8 years, and the normal cost overruns and inflation will probably increase this figure considerably. After the project is completed we will face much larger requests for the 1,000-mega-

watt demonstration project which must be undertaken before private industry will begin to invest in breeder reactors.

Mr. President, we are all painfully aware of the dimensions of the budget deficits which face us this year and in coming years. In these conditions committing ourselves to untold billions of dollars for breeder demonstration plants can only be undertaken if the technology is economically and technically sound and is necessary to achieve the goal of energy independence. I do not believe Clinch River meets any of these criteria for funding in a time of budgetary restraint.

First, breeder technology is not economically competitive and probably will not be for at least 50 years. A study by the Los Alamos Scientific Laboratory this spring estimates that breeder technology will not be competitive with that of light water reactors or coal until the middle of the next century. We would achieve a greater return on our investments in energy if we were to emphasize improvements in light water reactors, improved coal generating plants, or in conservation.

Second, the Clinch River project does not use state-of-the-art technology. By the time the liquid metal fast breeder technology used at Clinch River is commercially proved, the technology will be 30 or 40 years old. The French and British are already building more advanced reactors. Termination of Clinch River, furthermore, would not in any way signal an end to our breeder program. Another \$400 million in breeder research is included in this bill. This research should prepare us adequately to be able to move quickly to demonstration of the technology when it is really needed.

Third, the argument that breeder reactors are needed to replenish our diminishing supplies of fissile uranium and plutonium is no longer valid. In place of the uranium shortage predicted just 4 years ago, we now have a uranium glut. We now have enough proven uranium resources for 10 times the number of light water reactors that will be on line in the 1990's. Improvements in the current generation of light water reactors could extend our uranium supply at least until the end of the next century, if not longer.

Fourth, breeder reactors are not a panacea for producing energy independence. We import liquid fuels, not electricity. In fact, America has ample capacity to produce electricity using existing technologies and domestic energy resources. We have abundant supplies of coal, geothermal energy and hydropower to generate electricity. If we ever decontrol natural gas, I expect to see a rapidly increasing supply of this versatile resource. Additionally, we have great potential to make our buildings and factories more energy efficient. The Office of Technology Assessment estimates that cost-effective conservation investments could save us over 3 quads of energy, enough to offset the need for 50 large nuclear plants.

Mr. President, Clinch River would make more sense if we were moving more rapidly toward an electricity-based energy supply system. If more Americans were heating their homes with electricity,

if we were using electricity to produce synthetic fuels such as methanol from coal or hydrogen from water, then Clinch River would represent a rational policy option. But the fact is that we are not moving in that direction.

The rate of growth of electricity consumption has halved in the last 8 years. The ratio of energy growth to GNP growth has fallen from 1.1 to 1 in the 1960's to 0.4 to 1 in the 1970's. The facts are that we are using energy more efficiently and that we can meet any need for increased generating capacity in the foreseeable future with existing technologies. Breeders simply are not needed at the present time.

Finally, Mr. President, I would like to comment on the Clinch River project as a part of our overall energy policy. The United States has been blessed with a variety of abundant energy resources which can provide us with a balanced energy supply system. We should pursue all of our promising energy options. We should continue our efforts to find environmentally sound ways to burn coal and to convert coal to liquid fuels. We should continue to pursue means to achieve greater energy efficiency in our buildings and factories. We should continue our efforts to perfect geothermal, solar and wind technologies. And finally we should continue to explore ways of improving conventional nuclear technologies as well as advanced light water reactors and fusion energy.

Mr. President, my concern is that by investing so heavily in breeder technology at a time of budgetary restraint, we will foreclose some of our other energy options. The bill we are now discussing contains a reduction in research on conventional nuclear reactors. We also are cutting in half our solar and geothermal programs. Last week in the Interior appropriations bill we drastically cut our research on advanced, clean-burning coal combustion technologies and on conservation.

My concern is not that we must cut energy research programs. We must do this to meet our budgetary goals and some of the research is merely a subsidy to uneconomic technologies anyway. My concern is that we will not be able to pursue all of our promising energy supply options. If we go ahead with Clinch River and the follow-on 1,000-megawatt breeder demonstration we will be committing ourselves to one technology inevitably at the expense of others.

I have already argued that breeders are not cost effective and are not really needed at this time. Our limited budget dollars would be better spent on technologies that better meet our short- or medium-term energy needs in a more cost-effective way.

I, therefore, think we should terminate this project so that in the future we can have the budgetary flexibility to pursue those energy supply options which best suit our needs. We might choose breeder reactors in the distant future, Mr. President, but in the immediate future we have much cheaper and much more appropriate options before us. Our budget simply cannot take massive investments in technologies which will not be useful for 20 years and will not be cost effective for half a century.

Mr. JOHNSTON. Mr. President, I move to table the Bumpers-Humphrey—

Mr. BUMPERS. Will the Senator yield before he moves to table?

Mr. JOHNSTON. For what purpose?

Mr. BUMPERS. Why does the Senator object to an up-or-down vote?

Mr. JOHNSTON. For one reason: it saves us two votes and, for another—

Mr. BUMPERS. You are going to move to table the Humphrey-Bumpers amendment?

Mr. JOHNSTON. Yes.

Mr. President, I move to table the amendment.

Mr. TSONGAS. A parliamentary inquiry, Mr. President.

The PRESIDING OFFICER. The Senator will state it.

Mr. TSONGAS. What is the pending business?

The PRESIDING OFFICER. The pending question is the amendment of the Senator from Massachusetts to the amendment of the Senator from Arkansas. The Senator from Louisiana has the floor.

Mr. JOHNSTON. Mr. President, I move to table the Bumpers-Humphrey amendment.

Mr. GLENN. Will the Senator withhold that request? I have a statement I wish to make. I understand a motion to table is not debatable. Is that correct?

The PRESIDING OFFICER. Does the Senator withhold his motion to table?

Mr. JOHNSTON. Mr. President, this keeps going on and on. We had 2½ hours this morning. We have been on this amendment for 2 hours this afternoon. It is after 6 o'clock. If the Senator insists, I will not move to table. I beg him not to insist. I beg him to put his statement into the RECORD. A number of Senators have said, "Please move to table."

I will put it in the Senator's hands, if he insists.

Mr. HATFIELD. If the Senator would yield for a moment, let me underscore what this Senator said a moment ago. As manager of the bill, for 2½ hours we begged this amendment to come to the floor this morning. The proponents of this amendment did not bring it to the floor. We have had 2½ hours that we sat here as managers of the bill under a continuing quorum call. At this hour of night, I think we have given ample time for consideration.

I happen to be on the side of the Senator from Arkansas, but I want to say in all deference to the other Senators who were ready to do business today, this amendment was not offered and we were asking for amendments to be offered all morning long.

Mr. GLENN. If I might make a short statement, we all have our responsibilities. I spent all morning in the Foreign Relations Committee with Secretary Haig discussing some of our foreign policy matters. I had lunch with King Hussein and came back from meeting with the King for another hour and a half just now.

It is not that I have been sitting around all day delaying things. I do not know what the problem was in bringing it up.

Mr. JOHNSTON. Maybe we can get a

unanimous consent. How much time does the Senator want?

Mr. GLENN. Let me make a summary statement for 5 minutes.

Basically, my statement is this: the scale of technology that we are talking about with Clinch River is a scale of technology that several other nations have seen fit to bypass.

The PRESIDING OFFICER. Will the Senator be in order? Does the Senator from Louisiana yield the floor?

Mr. JOHNSTON. Mr. President, I ask unanimous consent that I might be allowed to yield to the Senator from Ohio for not to exceed 5 minutes, retaining my right to the floor.

The PRESIDING OFFICER. Is there objection? Without objection, it is so ordered.

The Senator from Ohio.

Mr. GLENN. In summary let me state that while we have continued with Clinch River, other nations have gone from a smaller reactor and then gone to a large reactor. Clinch River is basically a move from a small reactor to a medium-sized reactor which other nations, quite a number of them, have seen fit to bypass.

There is no reason why we should go ahead and waste money on a scale technology that has already had its demonstration elsewhere. Rather we should move directly to the larger near-commercial scale, if we wish to continue in this particular direction.

While I am very much more in favor of breeder reactor research, I am not for the Clinch River breeder reactor because we do not need it. It is a waste of money.

If we are really going to be serious about commercializing the breeder reactor, let us go to 1,200-megawatt reactors instead of the 375-megawatt size for this one at Clinch River. We can bypass this step as the United Kingdom has planned to, and a number of other nations including France have done.

Mr. President, I think we have been pouring money down a rathole. We have talked to a number of nuclear scientists who have indicated that if we are going this route we should not be going with the Clinch River breeder reactor, we should be going to a bigger one, one that really means business. We do not need this intermediate step.

While I would have preferred to do away with all funding for Clinch River through the Bumpers amendment as it was presented, I think that, perhaps, the amendment of the distinguished Senator from Massachusetts will have the effect of doing the same thing, because, as I understand it, the scale of participation that has been asked of the commercial interests of this country is unlikely to be met; indeed, it is not even close to being met. If we ask them to meet 50 percent of the costs of this project, it will put them on line. If they want this reactor they can help fund it. If they do not want it, then we can move onto a decent-sized breeder reactor or a bigger breeder reactor. That is the same pattern that is followed by other nations that have gone ahead of us, and I think that will be a practical way to go.

Mr. President, I appreciate the Senator from Louisiana yielding time on this. I urge my colleagues to vote with the distinguished Senator from Massachusetts on his 50-percent participation amendment.

● Mr. LEAHY. Mr. President, for a number of years I have been opposed to the building of the Clinch River breeder reactor because I believe this program presents an unreasonable risk to the public health and safety, and because this facility is a waste of the taxpayers' money.

The point I will make today is simple. The Clinch River breeder reactor is the latest in a long series of nuclear white elephants which have cost the taxpayers of this Nation billions of dollars but have never provided any measurable benefits to our citizens.

During this year, we have spent more effort on reducing waste in the Federal budget than ever before. We have cut programs to fund basic human needs. We have cut scientific development. The President has asked us to slash the funding for alternative energy sources such as solar energy and energy conservation which are so important to the people of my State. Yet, while the President has been asking everyone to tighten his belt, he has increased Federal spending for nuclear power by 30 percent.

The nuclear power industry is obviously in trouble. But the nuclear industry's, cannot and should not be solved by throwing the taxpayers' money at the problem.

Over the past three decades, the Federal Government has given the development of nuclear technology the most aggressive support of any new technology ever supported by the Federal Government. Unfortunately, in its enthusiasm to develop every aspect of nuclear technology, the Federal Government has not tempered its enthusiasm with equal fiscal vigilance. In fact, for many years, billions of dollars have been wasted by projects which appeared technologically attractive and intellectually exciting but which, again and again, have turned out to be expensive white elephants. The Clinch River breeder reactor is the latest in the long series of such projects.

To put its development in perspective, I would like to review a few of the projects which the Federal Government has funded in past years in this area.

The first of these was the nuclear-powered airplane. The concept behind this program was that the heat from a nuclear reactor could be used to provide jet propulsion. Year after year, Congress was warned that the Russians were ahead in this vital area; and year after year the Congress authorized millions to support the project.

It was soon recognized that the nuclear jet plane suffered from an insurmountable problem. If enough lead shielding were placed on the plane to protect the passengers from the radiation produced by the engine, the plane would be too heavy to get off the ground.

At one point, the Atomic Energy Commission proposed using old pilots in the planes. Since they had a shorter time to

live, a little extra radiation would do less harm.

In what would have been the most star-crossed technological combination imaginable, it was even proposed that nuclear jet engines be placed on the C-5A cargo plane.

The C-5A had the unfortunate habit of dropping engines in flight. The core of a nuclear jet engine—in a single year—would be more radioactive than a Hiroshima bomb. Imagine if the C-5A had dropped a nuclear jet engine?

This program has now been abandoned by us and the Russians, yet the American taxpayers spent over \$1.5-billion supporting this project over 11 years.

Then there was the nuclear-powered buzz bomb. It was designed to use a nuclear-powered rocket to send atomic bombs on our enemies. Unfortunately, the nuclear rocket engine spewed millions of curies of radioactivity over friendly territory on its way to its target.

It, too, was abandoned—but not until after hundreds of millions were wasted.

If not a jet, if not a rocket—perhaps then a nuclear-powered spaceship. It was an intriguing idea—the ship could fly forever. It was even proposed that it could "intercept potentially hostile space vehicles." The principal problem in space flight, unfortunately, is not flying forever but getting off the ground in the first place.

Never mind that NASA thought the program was a waste of money. Over \$1.5 billion in taxpayers money was wasted on this project as well. By the way, that engine was tested at a site called Jackass Flats, Nev.

If not in the air—perhaps on the sea. The idea—build a nuclear-powered merchant ship which could steam forever. Never mind that merchant ships want to call at port regularly to unload their cargo. Over \$100 million was spent on this program before it was abandoned.

And then there was the proposal to use radiation to preserve food. It was abandoned after scores of millions were spent.

And then there was Project Plowshare. Nuclear bombs would be used to excavate canals and release natural gas. Over \$150 million was spent on this project before it also was abandoned.

But my favorite is plutonium-powered long-johns developed to keep deep sea divers warm. Let me quote from the Atomic Energy Commission's press release:

The device . . . warms a garment of the "long john" type worn under the diver's suit. . . . The water is warmed in a bottle-shaped heat exchanger . . . which contains four capsules of plutonium 238 fuel.

I do not know how much was wasted on plutonium-powered long johns, but there is no record they were ever popular with divers.

When all the other arguments have fallen by the wayside, it is argued that we must continue spending these huge amounts of money on breeder reactors because the French are doing it. Why our program is more expensive than the combined French, British, German, and Japanese program is never explained.

Nevertheless, Mr. President, it is argued, we cannot lose out to the French.

I did not understand the French attitude to the breeder program—which will obviously be an economic failure—until I studied the French decision to build the Panama Canal in the course of our debate on that matter.

Because Ferdinand de Lessups had built a sea-level canal at the Suez, he decided that the glory of France demanded a sea-level canal be built at Panama. Of course, there was a mountain in the way in Panama. You have all seen the pictures of the hulks of the rusting French heavy equipment which they left when they abandoned the project.

And we all know the story of how the United States—using a more practical plan—succeeded and, with this project, established its place in the world as a major economic power.

The breeder decision is really the same type of decision. We can spend our very tight research dollars to build better, more efficient uranium-powered reactors and coal plants or gamble billions on a whole new type of reactor which will be twice as expensive as our present powerplants.

The French made that gamble with their sea-level canal and lost to the United States. The French gambled on the SST and again lost to the U.S. jumbo jets.

Let them gamble again on a "white elephant" breeder while we concentrate on building more efficient coal and uranium plants. They will surely lose again.

The only purpose of a breeder reactor is to create electricity. The United States has 400 years of coal and 100 years of uranium supplies—all of which can be used to generate electricity. It makes no energy or economic sense to spend billions more to develop a substitute for coal and uranium, our most abundant domestic fuels.

In summary, Mr. President, from Jackass Flats, to the nuclear-powered C-5A, to the plutonium-powered long johns, the nuclear research program has been a parade of nuclear white elephants. I think it is time to stop making the taxpayers finance the parade. I support the cancellation of the Clinch River breeder reactor.

Mr. KENNEDY. Mr. President, I support the amendment offered by the Senator from Massachusetts.

The administration proposal for \$254 million for the Clinch River breeder reactor is a classic example of its misguided energy policy.

It is a policy that cuts promising programs by over 60 percent—like solar research—that will reduce our dependence on imported oil and increases funding for programs that will do little or nothing to reduce our energy dependence—like Clinch River—by 14 percent.

It is a policy of oil price decontrol at a cost to Massachusetts consumers of \$25 billion during this decade while providing \$3 billion for the Clinch River project.

The administration justifies its drastic budget cuts for solar, and other renewable sources by placing increased reli-

ance on private market forces. What I fail to understand is why an administration that claims so deep a commitment to the free market continues to countenance vast Federal subsidies for nuclear projects like Clinch River.

Not too long ago, the present Director of OMB wrote to his Republican House colleagues to oppose funds for Clinch River. Mr. Stockman said at the time that the \$3 billion Clinch River project is "totally incompatible with a free market approach to energy policy." Apparently Mr. Stockman's faith in the free market has been shaken in recent months.

This amendment walks a middle road between total elimination of the Clinch River project and full Federal funding.

If Clinch River has commercial potential, it is not unreasonable to ask private industry to shoulder half the cost.

An administration that would cut 70 percent of the solar and conservation because it believes the private sector can take over should apply the same reasoning to Clinch River.

Mr. President, the issue posed by this amendment is one of fundamental fairness. Fiscal restraint is needed but it must be fair—an administration that wants reductions for CETA job training for unemployed workers in depressed industries and inner cities should not be advocating what Mr. Stockman once termed "a large, uneconomic subsidy" that is nothing more than a CETA program for nuclear engineers.

Mr. President, I urge my colleagues to support this amendment.

Mr. BAKER. Mr. President, once again we are engaged in a debate over the future of the Clinch River Breeder reactor project. And if the script and principals in the debate have a familiar quality, it should not surprise us, because we have been through the essential arguments many times.

For at least 4 years, the Clinch River project has been attacked with a variety of arguments for termination, arguments which have, one by one, been dismissed by a resolute Congress. The Clinch River breeder reactor is a technologically advanced, necessary, and prudent step in the development of this country's breeder reactor option. It is a technology demonstration plant, and it is clearly a proper role for the Federal Government to continue its support for development of this new technology.

Since the final cost estimates were presented in early 1975, the cost escalation in the Clinch River plant has marginally exceeded the cost escalation which all of us have felt in the Consumer Price Index, and I might add, it has been a much smaller escalation than the general inflation in energy prices during that period.

More than \$1 billion has been spent on the project, a project which has matured to the point of 85 percent completion in design, \$500 million worth of equipment on order, and \$125 million in completed components awaiting construction. The net cost of terminating the project would, over the project lifetime, exceed the cost of completing it.

Mr. President, this project can be completed by the late 1980's, according to DOE estimates, at an additional cost equivalent to 10 days of imported oil. Consider that, my friends. For the price of 10 days imported oil, this country can maintain the only proven technology capable of supplying our energy needs into the 21st century and beyond. That is a key point that we should not dismiss lightly. Some have suggested that the United States might purchase French breeder technology, but these arguments fail to deal with the fact that the French design does not currently meet U.S. licensing standards.

Mr. President, in view of the commitment which this Nation has made and will continue to make in the LMFBR program, it would be folly not to proceed with construction of a technology demonstration facility in concert with our basic research program.

Mr. President, it serves little purpose to summarize again all of the technical considerations in support of the Clinch River breeder reactor. The question I wish to discuss now is not the detail of whether the steam generator technology is the most advanced in the world—many believe it is. Nor do I wish to debate whether the loop design is better than the French pool design—most observers point out that both designs have their merits and demerits. Nor do I wish to press the point of the advanced core design which was developed during the 4-year hiatus of the past administration, even though that design was considered such a leap ahead that it prompted a French physicist to refer to the American innovation with resigned admiration as "our second Waterloo."

Mr. President, I doubt that one can find a single, high-technology issue of this nature on which experts will not disagree on one point or another. I would only point out that the substantial majority of experts in LMFBR technology continue to believe that the Clinch River breeder is an entirely appropriate step in the American development of LMFBR technology. And when distinguished panels of scientists meet, deliberate, and reach a consensus conclusion on such issues, I believe it is imperative that we listen.

I would remind my distinguished colleagues of the conclusions of the International Nuclear Fuel Cycle Evaluation Conference of 66 nations—66 nations whose experts on nuclear power in 1980 strongly reaffirmed the need for continued worldwide development of the liquid metal fast breeder reactor. The INFCE report noted that the breeder reactor has better health, environmental, and safety prospects than today's nuclear powerplants, and that the economic prospects are comparable to today's generation of plants. Scientists and engineers for secure energy, whose roster lists 900 distinguished scientists and 8 Nobel Prize winners has noted recently that—

In view of recent political developments in certain western countries, particularly France, the Clinch River breeder project may become the only reliable technological undertaking of its kind in the free world.

Mr. President, this Nation has wisely, I believe, made a commitment to the development of LMFBR system, a commitment which France, Great Britain, Germany, Japan, and the Soviet Union have also made. They are actively and vigorously pursuing this process while we have temporized, redesigned, debated, and in the end, done nothing. I am pleased to note that the President has, in his recent policy statement committed this administration to reactivation and reinvigoration of the U.S. LMFBR program. The President has urged the rapid completion of the Clinch River demonstration plant as a key element in that program.

Mr. President, if this Nation wants to continue an LMFBR development program, then the question of economics argues in favor of the demonstration project in question. The main uncertainties concerning the LMFBR are not technical, as is the case with unproven technologies such as fusion. They are economic, but not in the sense that my distinguished colleagues who argue against this project would have us believe; because this is a technology demonstration, and an important economic demonstration. The economic questions for the LMFBR fuel cycle can only be answered by developing real-world experience in the assembly and operation of such a plant, by experiencing the actual duty cycles, observing the operation and reliability of plant components, and finally and importantly, by gaining experience with the entire breeder reactor fuel cycle.

This administration has wisely, in my judgment, committed itself to such a program. It has rededicated this country to the pursuit of all energy options now within our grasp. I believe that decision today is as wise as it was 10 years ago when the Clinch River reactor project was conceived, and I urge my colleagues to stand by this commitment and to see this project to immediate construction and rapid completion.

Mr. TSONGAS. Mr. President, I say to the Senator from Louisiana that the motion to table affects two amendments. If the motion to table succeeds, I shall come back later and raise the same question over again and take much more time. So I ask that the motion to table be withdrawn so we can have two votes on the cost-sharing amendment by myself and the Senator from Minnesota; should that fail, then the amendment by the Senators from New Hampshire and Arkansas. Should the Senator from Louisiana decide not to do it, I fully intend to bring it back and have a full discussion of the issue at that point.

It is not meant as a threat, Mr. President, but I want a clear vote on the issue of cost sharing. The Senator from Louisiana can have it now or have it with more extended debate later this evening.

Mr. JOHNSTON. Mr. President, in view of the comments of the distinguished Senator from Massachusetts, I move to lay on the table the amendment of the Senator from Massachusetts and ask for the yeas and nays.

The PRESIDING OFFICER. Is there

a sufficient second? There is a sufficient second.

The yeas and nays were ordered.

Mr. JOHNSTON. Mr. President, I ask unanimous consent that it be in order to then have an immediate vote on the motion to table the Bumpers-Humphrey amendment and that those votes be separated but back to back. Mr. President, let me withhold the request for the yeas and nays.

Mr. President, I shall not make this request now, but I should like to explain it to give Senators a chance to object.

I would ask unanimous consent that we have back-to-back votes on motions to table, first, the Tsongas amendment and, second, the Bumpers-Humphrey amendment; that there be no intervening debate; and that both be 15-minute roll-calls. I shall not ask for the yeas and nays until we get it cleared through the majority leader.

Mr. BUMPERS. If the Senator will yield, why not make the second rollcall a 10-minute rollcall? Everybody will be here.

Mr. JOHNSTON. I think that is a good idea. I would not want to ask it unless the leadership agrees on that.

Mr. President, I understand that it is now cleared by the majority leader, so I ask unanimous consent that the motions to table the two amendments, with votes of 15 minutes and 10 minutes respectively, occur back to back with no intervening debate.

The PRESIDING OFFICER. Is there objection to the request by the Senator from Louisiana?

Mr. JOHNSTON. Mr. President, I ask for the yeas and nays on the motion to table.

The PRESIDING OFFICER. The yeas and nays have been ordered on the motion to table the amendment by the Senator from Massachusetts.

Mr. JOHNSTON. I ask for the yeas and nays on the other motion to table.

The PRESIDING OFFICER. It will take unanimous consent to make the motion to table the first-degree amendment.

Mr. BUMPERS. Mr. President, just a minute; I object.

The PRESIDING OFFICER. There is objection.

Mr. JOHNSTON. Mr. President, we had just gotten unanimous consent to have the two votes back to back on the motion to table.

The PRESIDING OFFICER. But the yeas and nays had not been ordered, not requested nor ordered, on the second request; only on the first request.

Mr. JOHNSTON. It is only to the question of yeas and nays that the objection was interjected. Is that right, Mr. President?

The PRESIDING OFFICER. That is correct.

Mr. BUMPERS. Mr. President, in that case, I withdraw my objection.

A parliamentary inquiry, Mr. President.

The PRESIDING OFFICER. The Chair wishes to pose a question.

Is there objection to ordering the yeas and nays on the motion of the Senator from Arkansas at this time?

Mr. BUMPERS. Mr. President, reserving the right to object, what is the par-

liamentary situation if the motion to table the amendment of the Senator from Massachusetts fails? At that point, what would be the pending business?

The PRESIDING OFFICER. At that point, the Senator will be recognized to move to table the underlying amendment by the Senator from Arkansas.

Mr. BUMPERS. Further reserving the right to object, Mr. President, as I understand the parliamentary situation at this point, the vote will be on a motion to table the Tsongas amendment.

The PRESIDING OFFICER. The Senator is correct.

Mr. BUMPERS. A motion at this time, or the request for the yeas and nays at this time on a motion to table the underlying amendment is not in order except by unanimous consent?

The PRESIDING OFFICER. The Senator is correct.

Mr. BUMPERS. But, Mr. President, was the preceding unanimous-consent request to table both on back-to-back votes agreed to?

The PRESIDING OFFICER. The Senator is correct, it was agreed to.

Mr. BUMPERS. Then my question is this: If the Tsongas amendment is tabled, then the unanimous-consent request would control and the motion to table the Bumpers amendment would be in order, but the yeas and nays would not.

The PRESIDING OFFICER. They would have to be requested at that time.

Mr. BUMPERS. And they could be requested by anybody; is that correct?

The PRESIDING OFFICER. The Senator is correct.

Mr. BUMPERS. Then I object to the second part of it.

The PRESIDING OFFICER. The objection to the second part of the request has been heard.

Mr. JOHNSTON. Mr. President, I renew my motion to table the Tsongas amendment.

The PRESIDING OFFICER. The question is on agreeing to the motion to table the amendment of the Senator from Massachusetts. On this question the yeas and nays have been ordered, and the clerk will call the roll.

The assistant legislative clerk called the roll.

Mr. BAKER. I announce that the Senator from Arizona (Mr. GOLDWATER) and the Senator from Connecticut (Mr. WEICKER) are necessarily absent.

I also announce that the Senator from Alaska (Mr. STEVENS) is absent due to death in the family.

Mr. CRANSTON. I announce that the Senator from Oklahoma (Mr. BOREN), the Senator from Nevada (Mr. CANNON), and the Senator from New York (Mr. MOYNIHAN) are necessarily absent.

The PRESIDING OFFICER. Are there any other Senators in the Chamber who desire to vote?

The result was announced—yeas 43, nays 51, as follows:

[Rollcall Vote No. 354 Leg.]

YEAS—43

Abdnor	Cochran	Domenici
Andrews	D'Amato	East
Baker	Danforth	Garn
Bentsen	Denton	Gorton
Burdick	Dole	Grassley

Hawkins	Long	Stafford
Hayakawa	Mathias	Stennis
Heflin	Mattingly	Symms
Helms	McClure	Thurmond
Huddleston	Murkowski	Tower
Jackson	Pressler	Wallop
Johnston	Sasser	Warner
Kasten	Schmitt	Zorinsky
Laxalt	Simpson	
	Specter	

NAYS—51

Armstrong	Exon	Mitchell
Baucus	Ford	Nickles
Biden	Glenn	Numm
Boschwitz	Hart	Packwood
Bradley	Hatch	Pell
Bumpers	Hatfield	Percy
Byrd	Hollings	Proxmire
Harry F., Jr.	Humphrey	Pryor
Byrd, Robert C.	Inouye	Quayle
Chafee	Jepsen	Randolph
Chiles	Kassebaum	Riegle
Cohen	Kennedy	Roth
Cranston	Leahy	Rudman
DeConcini	Levin	Sarbanes
Dixon	Lugar	Tsongas
Dodd	Matunaga	Williams
Durenberger	Meicher	
Eagleton	Metzenbaum	

NOT VOTING—8

Boren	Goldwater	Stevens
Cannon	Moynihan	Weicker

So the motion to table the amendment (UP No. 583) of the Senator from Massachusetts was rejected.

Mr. JOHNSTON addressed the Chair.

Mr. BAKER. Mr. President, I ask unanimous consent to proceed for 1 minute.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and it is so ordered.

Mr. BAKER. Mr. President, if I understand the order that was entered previously, it was for back-to-back tabling motions. Since this motion to table was not agreed to, it would appear to me that the orderly procedure would be to go ahead and have a vote now on the Tsongas amendment. I am perfectly willing for my part to do that on a voice vote, and then we can proceed with a motion to table the Bumpers-Humphrey amendment. Mr. President, I make that request.

The PRESIDING OFFICER. Is there objection?

Mr. DeCONCINI. I object.

The PRESIDING OFFICER. Objection is heard.

Mr. BAKER. What I am trying to do is just facilitate the adoption of the Tsongas amendment. There is no parliamentary device involved here. I am perfectly willing to go on with the tabling motion. But it seems to me that a voice vote in 30 seconds will dispose of this and get us to the prime issue, which is the Bumpers amendment.

Mr. TSONGAS. Mr. President, will the Senator yield?

Mr. BAKER. Yes.

Mr. TSONGAS. If the Senator agrees to a voice vote on my amendment, and my amendment becomes in essence the Bumpers-Humphrey amendment, we would then have a motion to table which will be identical in fact to what we have just voted upon.

Mr. BAKER. No, it is not identical. It would be an amendment to the Bumpers-Humphrey amendment, but it would be the Bumpers-Humphrey amendment to be tabled. We are going to have a vote on that anyway because it has already been ordered.

Mr. TSONGAS. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. TSONGAS. If there is a voice vote on my amendment, does not my amendment now modify the Bumpers-Humphrey amendment?

The PRESIDING OFFICER. The amendment of the Senator from Massachusetts is a perfecting amendment to the amendment by the Senator from Arkansas and the Senator from New Hampshire.

Mr. TSONGAS. If that amendment is agreed to, then a vote on Bumpers-Humphrey is, in fact, a vote on my amendment, which is just exactly what we did.

Mr. BAKER. Mr. President, parliamentary inquiry. Is it not true that this amendment was an add-on to the Bumpers-Humphrey amendment, an addition to it?

The PRESIDING OFFICER. The Senator is correct.

Mr. BAKER. It is not an identical vote. It will contain the identical material, but the tabling motion against the Bumpers amendment would include both the Bumpers-Humphrey language and the language adopted in Tsongas.

I do not press the point. We are taking more time arguing about it than we would save by doing it, so I withdraw the request, Mr. President.

Mr. JOHNSTON. Mr. President, I move to table the Bumpers-Humphrey amendment and ask for the yeas and nays.

The PRESIDING OFFICER. Is there a sufficient second? There is a sufficient second.

The yeas and nays were ordered.

The PRESIDING OFFICER. Under the previous order, the question now is on agreeing to the motion—

Mr. TSONGAS. Mr. President, parliamentary inquiry.

The PRESIDING OFFICER. The Senator from Massachusetts will state it.

Mr. TSONGAS. Could the Chair state what differences there are, in effect, between the upcoming vote and that which we have just voted upon?

The PRESIDING OFFICER. The Chair cannot interpret the legislative result of each vote. The Chair can only state the parliamentary situation on each vote as it occurs.

Mr. TSONGAS. Further parliamentary inquiry, Mr. President, is it not true that the vote that is going to take place now is exactly the same as the vote which just took place, which was the vote on the Tsongas amendment?

The PRESIDING OFFICER. It is the same as the Humphrey-Bumpers amendment. The Chair cannot interpret the result of the forthcoming vote. The Chair can only state that the vote at this time will be on the motion of the Senator from Louisiana to table the amendment offered by the Senator from Arkansas and the Senator from New Hampshire.

Mr. TSONGAS. As amended by—

The PRESIDING OFFICER. Will the Senator withhold?

Mr. McCLURE. Mr. President, I wonder if—

The PRESIDING OFFICER. I would like to have the Senate in order. Will

Senators please clear the aisles and take their seats since we must answer specifically parliamentary inquiries, and the Chair is unable to hear the inquiry.

The Senator from Idaho.

Mr. McCURE. Mr. President, I think I have a copy of the Tsongas amendment, and I hope that the copy I have is the same as the one at the desk.

Is it not correct that the Tsongas amendment provides that "at the end of the amendment add the following," and that it is an addition to and not a substitution for the Bumpers-Humphrey amendment?

The PRESIDING OFFICER. The Senator has correctly stated the procedural status of the amendment.

Mr. McCURE. The question before us then is the composite of the two, the Humphrey-Bumpers as amended by the Tsongas amendment which added language to it.

The PRESIDING OFFICER. The question is on agreeing to a motion to table the first degree amendment, the amendment offered by the Senator from Arkansas.

Several Senators addressed the Chair.

Mr. GLENN. Mr. President, parliamentary inquiry.

Mr. BUMPERS. Mr. President, I would like to make a unanimous-consent request, and I hope the leader and the distinguished floor manager will agree to it. It would essentially vitiate the previous unanimous-consent request, because I think the objection to the voice vote on Tsongas has been withdrawn.

I ask unanimous consent that we voice vote the Tsongas amendment, and then allow a tabling motion on the Bumpers amendment.

Mr. BAKER. Mr. President, I would urge that the Senate do that. That is going to get us out of this predicament, and that is precisely the way it ought to go, in my judgment.

The PRESIDING OFFICER. Is there objection?

Mr. GLENN. Mr. President, reserving the right to object, would it be in order to have the amendment read that we are going to vote on?

The PRESIDING OFFICER. This will be the Bumpers amendment—will the Senator state precisely what he would like to say?

Mr. GLENN. The motion to table has been defeated, we have not taken any action on the amendment of the Senator from Massachusetts, is that correct?

Mr. BAKER. Mr. President, what we propose in the request, as I understand by the Senator from Arkansas, and which I heartily support, is that the Tsongas amendment, which was not tabled, now be adopted by voice vote, and then that the Senate proceed to vote on a motion to table the Bumpers-Humphrey amendment, as amended.

Mr. GLENN. That would take care of my objection. I was concerned about not taking any action on the Tsongas amendment.

The PRESIDING OFFICER. Is there objection to that request? The Chair hears none, and it is so ordered.

Mr. BAKER. Now, Mr. President, is there a tabling motion pending?

The PRESIDING OFFICER. The question would now be on agreeing to the amendment of the Senator from Massachusetts (putting the question).

The amendment (UP No. 583) was agreed to.

The PRESIDING OFFICER. The question now is on agreeing to the motion to lay on the table the amendment of the Senator from Arkansas, as amended by the amendment proposed by the Senator from Massachusetts.

Mr. BUMPERS. Mr. President, parliamentary inquiry. Will this be a 10-minute rollcall as provided for?

The PRESIDING OFFICER. The Senator is correct.

Mr. BAKER. Mr. President, are the yeas and nays ordered?

The PRESIDING OFFICER. They have not been ordered.

Mr. BAKER. I ask for the yeas and nays.

The PRESIDING OFFICER. Is there a sufficient second? There is a sufficient second.

The yeas and nays were ordered.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk called the roll.

Mr. BAKER. I announce that the Senator from Arizona (Mr. GOLDWATER) and the Senator from Connecticut (Mr. WEICKER) are necessarily absent.

I also announce that the Senator from Alaska (Mr. STEVENS) is absent due to a death in the family.

Mr. CRANSTON. I announce that the Senator from Oklahoma (Mr. BOREN), the Senator from Nevada (Mr. CANNON), and the Senator from New York (Mr. MOYNIHAN) are necessarily absent.

I further announce that, if present and voting, the Senator from Nevada (Mr. CANNON) would vote "yea."

The PRESIDING OFFICER. Are there any other Senators in the Chamber wishing to vote?

The result was announced—yeas 48, nays 46, as follows:

[Rollcall Vote No. 355 Leg.]

YEAS—48

Abdnor	Hatch	Packwood
Andrews	Hawkins	Presler
Baker	Hayakawa	Randolph
Bentsen	Heilin	Rudman
Burdick	Heinz	Sasser
Cochran	Helms	Schmitt
D'Amato	Huddleston	Simpson
Danforth	Jackson	Specter
Denton	Johnston	Stafford
Dole	Kasten	Stennis
Domestic	Lavett	Symms
East	Long	Thurmond
Ford	Mathias	Tower
Garn	Mattlingly	Wallace
Gorton	McClure	Warner
Grassley	Murkowski	Zorinsky

NAYS—46

Armstrong	Durenberger	Melcher
Baucus	Eagleton	Metzenbaum
Biden	Exon	Mitchell
Boschwitz	Glenn	Nickles
Bradley	Hart	Numa
Bumpers	Hatfield	Pell
Byrd	Hollings	Percy
Harry F., Jr.	Humphrey	Proxmire
Byrd, Robert C.	Inouye	Pryor
Chafee	Jepsen	Quayle
Chiles	Kassebaum	Riegle
Cohen	Kennedy	Roth
Cranston	Leahy	Sarbanes
DeConcini	Levin	Tsongas
Dixon	Lugar	Williams
Dodd	Matsunaga	

NOT VOTING—8

Boren Cannon Goldwater Moynihan Stevens Weicker

So the motion to lay on the table UP amendment No. 582 was agreed to.

The PRESIDING OFFICER. The Senator from Tennessee.

Mr. BAKER. Mr. President, there will be no more votes this evening.

Mr. President, I move to reconsider the vote by which the motion was agreed to.

Mr. JOHNSTON. Mr. President, I move to lay that motion on the table.

Mr. BUMPERS. Mr. President, a motion to reconsider is debatable, is that not correct?

Mr. BAKER. The motion to table is.

Mr. BUMPERS. Mr. President, you recognized the majority leader and he moved to reconsider. I ask, is that not debatable?

The PRESIDING OFFICER. The Chair will inform the Senator that the motion to reconsider a vote on a non-debatable issue is nondebatable.

Mr. JOHNSTON. Mr. President, I move to lay that motion to reconsider, if it is in order, on the table.

Mr. BUMPERS. Mr. President, I ask for the yeas and nays.

The PRESIDING OFFICER. Is there a sufficient second? There is a sufficient second.

The yeas and nays were ordered.

Mr. BAKER. Mr. President, I have already indicated that there will be no more votes tonight.

THE BARNWELL NUCLEAR FUEL PLANT

Mr. THURMOND. Mr. President, today the Senate is considering an important appropriations bill, H.R. 4144, the energy and water development appropriations bill for fiscal year 1982. I am pleased to note that the bill contains \$10 million for research and development activities of the Barnwell Nuclear Fuel Plant located near Barnwell, S.C.

As most of my colleagues are aware, the Barnwell plant is the Nation's first largescale commercial reprocessing plant. It was never utilized, however, to reprocess spent light water reactor fuel because of President Carter's decision in April 1977 to indefinitely defer commercial reprocessing. Since that time, Congress has each fiscal year provided a modest amount in research funds to keep this facility from being closed.

These funds, in my opinion, have been well spent. Valuable research programs have been and are being conducted at the Barnwell plant. We have kept open the possibility of one day utilizing this national resource for its intended purpose—reprocessing of commercial spent fuel.

The time for decisionmaking with regard to the future of the Barnwell facility is at hand, however, and the convergence of several factors indicates that a decision will soon be made. President Reagan, in his policy statement on nuclear power issued on October 8 of this year, officially lifted the ban on commercial reprocessing activities in the United States. The administration has stopped short of involving the Federal Government in such reprocessing activ-