The original documents are located in Box 42, folder "Uranium Enrichment - Presidential Decisions (2)" of the John Marsh Files at the Gerald R. Ford Presidential Library.

THE WHITE HOUSE
WASHINGTON

FOR THE 2:00 MEETING

THE WHITE HOUSE

WASHINGTON

Take to mtg.

JUN 5 1975

THE WHITE HOUSE

WASHINGTON

DECISION

M

MEMORANDUM FOR: THE PRESIDENT

FROM: JIM CANNON

SUBJECT: PROVIDING ADDITIONAL U.S. URANIUM ENRICHMENT CAPACITY

The Issue

The narrow issue for your decision is whether to propose that the plant to provide the next increment of U.S. uranium enrichment capacity be:

1. A privately-owned diffusion plant financed, built and operated by a consortium, backed up by a Federal commitment to assume assets and liabilities of the project, if necessary and under stated conditions, prior to its commercial operation; or

2. A Government-owned diffusion plant added on to an existing ERDA plant.

In deciding this issue, you are also making broader determinations:

- Whether the emphasis on future U.S. production of enriched uranium will be by private enterprise, or by the Federal government.

- Whether, and how, the United States will maintain its leadership as the free world's supplier of enriched uranium.

Developments Since Your May 23rd Meeting

During your May 23rd meeting, you directed that discussions be held immediately with the UEA and that alternatives for a firm Administration commitment by June 30 for the next increment of enrichment capacity be presented to you for decision. This memorandum completes those actions.

-- UEA has submitted a substantially modified proposal for back-up Government support for their venture which provides a considerably improved basis for a legislative proposal covering this and future increments of capacity. This proposal (outlined below as Alternative #1) is generally responsive to the major objectives on which Zarb, Seamans, Connor and your other advisers all agree:

- An early commitment to build additional capacity so that the U.S. will be perceived as a reliable supplier of uranium enrichment services -- so that the Nation can retain a large share of the world market and leadership in the nuclear field.

- Early private commercial involvement in the expanding market for uranium enrichment services -- ending the current Government monopoly.

- Minimum Federal budgetary impact, short and long term.

- Adequate Federal control over the export of uranium enrichment services to satisfy national security and international energy policy objectives.

-- The new UEA proposal is novel and making it work will require care in presentation, effort in selling, and close oversight by the Government as it proceeds. The risks connected with it are:

- The question of acceptability to Congress.

- Some uncertainty that UEA can complete all the necessary arrangements, to make it a going concern.

- Some Congressional delay, compared to a Government plant.

However, the UEA proposal itself and the additional steps developed by ERDA would minimize these risks.

-- In view of the risks, there is also presented for your consideration the alternative (#2 below) of a Government add-on diffusion plant -- which reduces the risks but which also eliminates the chance of immediate private enrichment and increases the Federal budget impact. Preparations for this approach have been underway in ERDA for some time and can be continued as a contingency measure.

-- Your advisers have also agreed that:

- The Administration should not consider proposing that all future enrichment capacity be provided by the Government or a Government corporation because we must avoid perpetuating a Government monopoly. However, this alternative needs to be kept in mind because it undoubtedly will be considered by the Congress, and it provides a useful baseline for evaluating the two alternatives presented for your decision.

- The legislative proposal covering the next increment of capacity should also cover future follow-on increments built by industry, probably with Federal backup arrangements similar to those proposed for UEA. The legislation must not be applicable solely to UEA.

- ERDA's program to establish a competitive industry should be intensified to assure that several private firms will be ready to build subsequent plants using centrifuge technology, and should also be announced on June 30. (ERDA proposes to move promptly under either alternative on this follow-on activity.)

- A legislative proposal authorizing an increase in the price of ERDA's Government subsidized enrichment services to a level more nearly comparable to a commercial rate (from current $53 per unit to approximately $75) should be sent immediately to the Congress.

-- The alternatives have been discussed with selected members of Congress (Brief report on reactions at Tab A).

Considerations Bearing Upon Both Alternatives:

A number of considerations are essentially equal with respect to either alternative and need not be considered further here. These include:

- The date when the next increment of capacity must be on line (now estimated at 1983), and the likelihood that the capacity will be ready when needed.

- Nuclear materials safeguards (non-proliferation) in terms of both the physical security of the plant and continued Federal control over exports.

- Impact on the Government's stockpile of enriched uranium.

- Customers for the next increment of capacity which are expected to be predominately foreign.

- Opposition from nuclear power opponents -- who may try to prevent any new increment of capacity as another way of slowing nuclear power (but who will be vulnerable to the counter argument that failure to build means dependence on foreign sources of uranium enriched services).

- The ability to accommodate foreign investment in an enrichment plant on a non-discriminatory basis.

Alternatives

The principal features of the two alternatives are described below. Budgetary impacts are summarized at Tab B and a comparative timetable for the two alternatives is provided at Tab C.

. Alt. #1. UEA would construct a free-standing 9 million unit diffusion plant in Alabama. Both this alternative and Alt. #2 would be followed by industry construction of succeeding plants, probably using centrifuge technology, and with backup Government arrangements similar to those now proposed by UEA. Details of the alternative, including the new UEA proposal are at Tab D.

Briefly:

- UEA intends to build the plant at a cost of $3.5 billion in 1976 dollars ($2.75 billion in 1974 dollars) with full operation attained in 1983; sell 40% of the output to domestic utilities and 60% to foreign organizations on long term contracts; and finance the venture on an 85%-15% debt-equity ratio. Investment will be 40% domestic and 60% foreign but U.S. owners will have control through 55% of the voting rights.

- The Government would sell to UEA essential components which are produced exclusively by the Government; supply information on diffusion technology and warrant its operation; and agree to buy from or sell to UEA enriched uranium from the U.S. Government stockpile

to accommodate a start up date earlier or later than planned. The Government would be paid at cost for components and technical assistance and receive a royalty for the technology.

- UEA proposes that, prior to commercial operation, there be available authority through new legislation for the Government to assume assets and liabilities of the project if the venture threatened to fail -- at the call of UEA or the Government, and with compensation to UEA ranging from full reimbursement to total loss of its equity interest, depending upon circumstances leading to the threat of failure.

- If it became necessary to assume assets and liabilities, control of the multinational project would then rest with the Federal Government, much as it would if the enterprise had been launched as a Federal project.

ERDA has proposed several steps to minimize the risks of delays in UEA's completion of its organizational, financial and design steps, and help assure that a national commitment to new capacity is perceived by potential foreign customers -- because Congress may be slow to approve such a novel approach. ERDA proposes:

- A letter agreement with UEA, under existing authority to permit UEA to proceed about July 1 with preliminary design and with financial and other arrangements.

- Assurances (perhaps a Presidential statement) to domestic and foreign customers that orders placed with U.S. suppliers would result in assured U.S. supply -- either through a successful UEA project or through the U.S. Government.

- These steps be implemented only after consultation with the Joint Committee on Atomic Energy.

ERDA will look for additional steps that might be announced on June 30 to help assure industry an adequate market, so that the private centrifuge program moves ahead quickly.

Alt. #2. ERDA would construct a $1.2 billion diffusion plant with a capacity of up to 5 million units as an add-on to its existing 9 million unit plant at Portsmouth, Ohio. This would be followed by private industry construction of centrifuge plants, starting with competitive proposals from 3 or 4 firms. This alternative would involve a request to Congress for:

- authorization and appropriations (beginning in FY 76) for construction of the add-on diffusion plant.

- authorization for Government back-up arrangements for centrifuge plants similar to those proposed by UEA for the diffusion plant. (This facet would parallel the succeeding centifuge plant aspects of Alternative #1.)

This alternative is presented in more detail at Tab E.

Arguments

- Alternative #1: (Immediate privatization)

  - For

    . Explicitly maintains momentum built up over the past 3 years under an Executive Branch policy committed to having industry build the next increments of capacity.
    . Takes the major step necessary toward achieving the objective of a private, multi-firm enrichment industry; in effect "breaks trail" for subsequent private plants.
    . Minimizes the Federal budget impact in the next few years by avoiding a Government plant -- assuming takeover proves unnecessary. Budgetary impacts of the two alternatives are summarized at Tab B.
    . Provides an adequate signal to foreign customers of U.S. commitment to be a reliable supplier, and adequate control over exports to meet national security and international energy goals.
    . Constitutes a bold step, demonstrating innovative leadership and shows the Administration's intent of relying on private industry rather than Government for the large capital investments that will be needed for U.S. energy independence.

  - Against

    . If UEA fails, the Government would end up with a free-standing plant that is larger and more expensive than the add-on plant that we would start out with under the Government plant alternative.
    . Congressional approval will be more difficult to obtain than for a Government-owned plant, and will take longer (probably by at least 2 to 3 months).

- We will not know for another 7 to 10 months whether UEA will be successful in putting its deal together (getting foreign and domestic equity partners, debt financing and customers).
- UEA does not yet have an assured power supply and plans to use nuclear plants which may face uncertainty and delay.
- It will be viewed as favored treatment for one firm.
- UEA equity investor risks are minimal because:
  - little or no competition in short term;
  - return on investment guaranteed by cost-plus contracts with customers, and
  - limited incentives to construct and operate the plant more efficiently than planned
- UEA would have to obtain licenses that the Government would not have to obtain. If buy-out were required because UEA cannot obtain necessary licenses (e.g., because of environmental or safety problems) -- an event considered unlikely -- it is conceivable that the Government would choose not to override the objections and not proceed to operate the plant.

- Alternative #2 (Government Plant)

  - For

    - Better chance of early Congressional approval.
    - Better chance of being perceived abroad as a firm U.S. commitment to be a reliable supplier, and at an earlier date.
    - Smaller diffusion plant will reduce the likelihood of capturing part of the market that would otherwise be available for early starts on centrifuge plants.
    - Slightly easier to assure export controls necessary to achieve safeguards and international energy strategies.

  - Against

    - The major step that must be taken to achieve commercialization would be deferred and the policy of the past three years reversed, leaving doubt in industry as to whether any future Government attempts to privatize should be considered credible.

- Loss of momentum (UEA would fold). The opportunity for immediate private entry would be lost.
- Most obstacles and objections now being raised may reappear when the follow-on opportunity. Further, at that time, private entry will be even more difficult because of the need to use new technology (centrifuge).
- There is no assurance that a 5 million unit diffusion plant would be adequate to get us to the stage of centrifuge demonstration plants. If centrifuge commercialization is less successful than hoped, a larger Government plant would be needed.
- Domestic electric utilities have benefited from the existing Government monopoly. Commitment now to another Government plant would strengthen their hopes that the present Government monopoly can be perpetuated.
- Certain to have a significant Federal budget impact, particularly through 1981 (details at Tab B).
- Difficulties are expected in getting clean fuel and meeting environmental standards for the fossil fueled power supply needed for the Government plant.

Recommendations and Decision

Alternative #1. Immediate Privatization.

Connor
Friedersdorf
Greenspan
Hartmann
Lynn
Marsh
Seidman
Zarb

Alternative #2. Government plant.

Buchen
Kissinger (views at Tab F)
Seamans (views at Tab G)

Tab A

CONGRESSIONAL OUTLOOK

Members of the House and Senate are, for the most part, not familiar with the complex issues involved in the expansion of uranium enrichment facilities, thus reaction is mixed at this point.

A great deal of briefings and consultation should be undertaken before an Administration proposal is sent to the Hill.

There may be considerable opposition to any expansion of facilities -- partly because of environmental concerns, partly because of the fear of any proliferation of material that might be converted into nuclear explosives.

But members who are well informed about the importance of uranium enrichment facilities believe that production should be expanded as quickly as possible.

Here are comments from individual members:

Senator Baker indicated that he preferred building a Government enrichment plant now, essentially for reasons of speed. He said, however, that he would keep an open mind on the private approach and if the President chooses that option, he would review the details without prejudice. He indicated that expansion of a consortium may face some difficulties in the Joint Committee.

Congressman McCormack indicated that he could go along with the private approach, but that there were several caveats he wished to make. First, he suggested that some time down the road there might be a demand for nationalization of the entire nuclear fuel cycle. Second, he thought that it might be desirable to explore going ahead with both the UEA option and the building of additional Government capacities at Portsmouth. When it was pointed out that this might slow down the development of centrifuge technology, he indicated that perhaps it might not be necessary to do both, but still we ought to think about it.

Congressman Rhodes strongly supports the private Option, and felt that privatization would not be achieved unless it were achieved now.

Senator Pastore feels that the only way to proceed expeditiously is to undertake some form of federal funding. "If you go with private contracts, you face another Comsat filibuster by starry-eyed members of the Senate who will rip any private contract to shreds." Pastore suggests an informal meeting with members of the Joint Committee on Atomic Energy so they can sit around in private and let their hair down on the issue.

Senator Tower said we should develop our increase in production under private auspices, perhaps with some form of federal incentives.

Senator McClure would rather see the undertaking exclusively private, but the reality of situation is that private sector will not be able to come up with the tremendous investment required. Accordingly, he would support a combined funding by private sources, to the extent possible, and federal back-up to get the operation started.

Senator Fannin said we should push our efforts as strongly as possible in the private sector.

Senator Hugh Scott leans toward combination of private enterprise plus government.

Senator Curtis leans to private enterprise method for production.

Congressman Cederberg said the government should have some hand in production.

Congressman Price said he will talk with Chet Holifield and Craig Hosmer . . . they're the experts. Would not mind private control. Quasi-government control while business is being nursed into it. Must move immediately but business needs to be eased into the responsibility.

Congressman Bud Brown is inclined to go with private sector approach.

Congressman Conable agrees with acceleration of production. To meet capital requirements, the approach must be quasi-government easing toward private sector control.

Senator Abourezk said that development is at the bottom of his priorities because of waste disposal. He is very concerned about the environment, and does not favor exports. If there is an expanded program, he wants strong governmental control (ostensibly for national security reasons).

Senator Bartlett is in favor of expansion, and private sector development.

Senator Bumpers is cautious about nuclear power development and concerned about current safeguards. He probably would not oppose export to non-proliferation treaty signers.

Senator Church is quite favorable to development, perhaps because of provincial Idaho interest. His prime concerns are facility safety and waste disposal. His attitude is not clear on exports, but the Senator has expressed worry about shipments to the Near East. His feelings are mixed on sponsorship. If Government controls, he does not want to give public utilities free fuel.

Senator Glenn said he has not given the matter enough serious study for hard answers. However, he is concerned about exports, and would most likely be for quasi-governmental operation and against private.

Senator Hansen is very favorable. He is concerned about exports because of need to fill domestic needs. He is alert to balance of payment problems. Even though he is normally completely pro private sector, because of control necessities, he would tend toward quasi-governmental operation.

Senator Hatfield feels we should not add new foreign agreements (in addition to present ones). He does feel we should beef up our domestic capacity. He gave no firm response on sponsorship but does feel certain that Government will have to take the first step.

Senator Johnston felt it was strictly a private sector on fossil fuels, but is also concerned about safety problems.

Senator Stone wants more nuclear generation. He would be in sympathy, but has safety concerns.

Senator Metcalf is negative. He is concerned with the whole nuclear program and fears a monopoly like oil. His big worry is on safety. No to exports. He sees no need to answer questions on whom should run the program because there should not be a program. He wants concentration on "clean" energy production: geothermal, solar, wind, etc. He says it is a crying shame that Interior and ERDA have not pushed oil recycling.

Congressman Udall would probably favor private development with Government regulation.

Congressman Roncalio favors expanded uranium enrichment. He would probably like to see a mix between public and private development.

Congressman Steelman is undergoing a learning process and wants to remain open and uncommitted. He probably would favor expansion and private development with Government regulation.

Congressman Skubitz leans toward anti-nuclear development ever since the AEC tried to store nuclear waste in Kansas. He feels that ERDA is controlled by the same type of people who used to run AEC.

Congressman Symms would favor private development.

Congressman Miller (D-Calif.) seems to favor nuclear development and would support public development more than private.

Tab B

FEDERAL BUDGETARY IMPACT OF THE TWO ALTERNATIVES

SUMMARY

During the period through 1981:

- Alternative #1 (UEA plant) would likely cost the Government essentially nothing. The contingent requirement to assume UEA assets and liabilities may require about $1.4 billion of contract authority (BA) initially but the outlays would be expected to be zero.
- Alternative #2 (Government plant) would involve about $761 million in net outlays.

For the period through 1990 (about 8 years of operation):

- Alternative #1 could involve:
  - $300 million in outlays to purchase resalable uranium enrichment services from UEA for the Government stockpile which would be sold off about 1990.
  - revenues of about $570 million from royalty payments ($140 million) and UEA income tax payments ($430 million) during the period from 1984 through 1990.
- Alternative #2 would involve outlays of about $508 million.

Regardless of the alternative selected, the Federal Government will continue to receive considerable revenues from uranium enrichment services carried on in the 3 existing plants. These revenues will be increased if Congress approves the commercial charge legislation which is now being readied for transmittal. These revenues can be viewed as offsetting the cost of another Government plant or simply as additional Federal income.

The attached table shows the obligations, outlays and revenues by year through 1990 for the two alternatives and the revenues from the existing plants, assuming approval of the commercial charge legislation.

The table does not include:

- The expected revenues that would be received from income taxes and royalties under Alternative #1.
- The requirements for electrical power which:
  - under alternative #1, could involve an additional Government obligation for assumption of UEA long-term purchase agreements for power from 2 nuclear plants servicing UEA - if acquisition of UEA assets and liabilities became necessary, but power is resalable.
  - under alternative #2, the cost of power for the add-on plant.

June 2, 1975

Comparative Analysis of Budgetary Impact on ERDA of Uranium Enrichment Capacity Expansion Alternatives
(in millions of FY 1976 dollars)

	FY 1976	TQ	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	FY 1982	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	Total
A. Alternative 1 (ERDA assistance to the 9 million SWU venture, estimated by UEA to cost $3.5 billion)[1]																	
Obligations																	
1. Performance assurance, net of revenues ..	33	-3	-14	-20	-4	-8	-8	-31									-55
2. Stockpile backup/ load leveling[2][3]									60	60	60	60	60				300
3. Government buyout (contingent)[4] ...	See footnote 4 below																
Total		-3	-14	-20	-4	-8	-8	-31	60	60	60	60	60				245
Outlays																	
1. Performance assurance, net of revenues ..	-1	0	-1	-2	-4	-8	-8	-31									-55
2. Stockpile backup/ load leveling[2][3]									60	60	60	60	60				300
3. Government buyout (contingent)	See footnote 4 below																
Total	-1	0	-1	-2	-4	-8	-8	-31	60	60	60	60	60				245
B. Alternative 2 (Construction and operation of add-on 5 million SWU diffusion plant by ERDA, at estimated capital cost of at least $1.2 billion)																	
Obligations	16	21	109	169	269	289	247	165	158	160	150	150	150	150	150	150	2,503
Outlays	15	6	34	79	229	294	313	247	191	195	150	150	150	150	150	150	2,503
Revenues			-15	-50	-70	-55	-19				-161	-374	-253	-265	-400	-333	- 1,995
Net outlays	15	6	19	29	159	239	294	247	191	195	-11	-224	-103	-115	-250	-183	508
C. Net revenues(-) from 3 existing ERDA plants[5] (for reference only)	164	139	294	-41	-436	-820	-1,107	-1,222	-743	-1,053	-1,137	-1,053	-660	-990	-1,013	-984	-10,662[5]

Footnotes

Note:

a. All figures assume "most likely" case, rather than minimum or maximum estimates.

b. Follow-on increments of capacity in either alternative are expected to be provided by private industry (using centrifuge technology), with Government assistance (at least for the first few plants). The cost of such an assistance program is not yet known but would be essentially the same under both alternatives. However, such an assistance program might well occur a little later under Alt. 1.

1/ Includes about $800 million for certain business costs which would not be incurred in Alternative 2.

2/ Government costs would be recoverable through sale of these excess SWUs, probably in the late 1980's or beyond.

3/ Assumes excess uranium feed (yellow cake) available from ERDA stocks. If such feed must instead be purchased by ERDA at $30/lb. U_3O_8, an additional $500 million would be required. Furthermore, potential maximum obligation proposed by UEA could cost the Government $1.2 billion.

4/ Covers contingent buy-out of domestic share of UEA project by ERDA. Assuming UEA project cost of $3.5 billion (1976 dollars), this feature could cost the Government up to 40% of $3.5 billion, or $1.4 billion for domestic debt and equity. If the Government should be obligated only to buy domestic equity (15% of the domestic share), this feature would cost the Government up to $210 million. It would probably be necessary to seek BA initially unless Congress were willing to approve, and UEA were willing to accept, authorization of appropriation of "such amounts as may be necessary" when and if contingency arises. In any event, the "most likely" outlay projection would be zero.

5/ Assumes commercial-type charge for enrichment services and maintaining current contract schedules.

Tab L

COMPARATIVE TIMETABLE - ALTERNATIVES #1 AND #2

	Alt #1 UEA - Private Plant	Alt #2 Government Add-On Plant
o Conceptual design began	Jan 74	June 74
o Presidential meeting on alternatives	June 5, 75	June 5, 75
o Consultations, Legislation, message preparation, briefings, etc.	June 5-25, 75	June 5-25, 75
o Presidential message transmitting legislation	June 30, 75	June 30, 75
o U.S. intent to reopen order book clearly established	June 30, 75	June 30, 75
o Sign first letter agreement	July 5, 75	na
o Congressional approval	Nov 75	Sept 75
o Second letter agreement with UEA covering procurement and backup support	Dec 75	na
o Obtains commitment to supply electric power	Dec 75	Mar 76
o UEA has equity partners and foreign and domestic customers and financing - UEA ready to go	Mar 76	na
o UEA files first part (environmental report) of construction permit application with NRC	Jul 76	na
o ERDA files draft environmental impact statement	na	Mar 76*
o Complete UEA-Government agreement	Jul 76	na
o Site preparation begins	Jul 77	Mar 77
o Production begins	Jul 81	Apr 83
o Full production achieved	Jul 83	Jan 84

* Environmental import statement may be necessary before order book can be opened.

Tab D

SUMMARY: Working Paper re Uranium Enrichment Associates

UEA intends to:

1. Build as a private enterprise venture a 9 million SWU uranium enrichment facility in Alabama, estimated to cost $2,750,000,000 in 1974 dollars with full operation to be attained in 1983. Within reasonable limits the actual plant size will be determined by the market.

2. Sell to domestic utilities (40% of the output) and to foreign organizations (60% of the output) on long-term (25 year) contracts, at a price sufficient to pay all costs and provide an appropriate return to the investors.

3. Finance the 40% domestic capacity from normal commercial sources in US on an 85% debt - 15% equity ratio. Finance the 60% foreign sources on the credit of the foreign coustomers and with the same debt equity ratio.

USG has been requested to:

1. Supply, at cost, essential mechanical components, presently produced exclusively by USG.

2. Supply USG's diffusion technology and warrant its satisfactory operation.

3. Provide during first years of operation limited access to and from USG's stockpile of enriched material to balance significant start-up loading problems.

UEA proposes that:

1. Prior to commercial operation a standby USG financial backup lasting for the critical construction period plus one year is proposed to offset the current weak credit position of the U.S. utility industry and give confidence to commercial lenders. UEA may require USG to provide such financial backup if UEA cannot complete the plant or bring it into commercial operation, but such a call is at the risk of loss to UEA of its equity interest. USG at such call of UEA, has the right to acquire UEA's domestic equity position and the obligation to assume UEA's liabilities and debt.

2. USG may also require UEA to release the project to USG if the government's interest demands and thereby will be obligated to assume UEA's liabilities and debt.

3. The consideration for acquisition of UEA's domestic equity position in either case can range from loss of equity for uncorrected gross mismanagement of UEA to full fair compensation for causative outside UEA's reasonable control.

USG will have appropriate rights to approve certain matters to be agreed upon.

URANIUM
ENRICHMENT
ASSOCIATES

Address Replies to:
50 Beale Street
San Francisco, CA 94

May 30, 1975

Dr. Robert C. Seamans, Jr.
Administrator
Energy Research & Development Agency
Washington, D. C. 20545

Dear Bob:

Uranium Enrichment Associates has for two years been engaged in developing a privately financed, owned and operated uranium enrichment venture in response to the Government's invitation to do so. During that period, a great deal of work has been done and many tentative agreements have been reached. In the attached paper entitled "Working Paper Re Uranium Enrichment Associates" dated May 30, 1975 and in meetings conducted with the USG inter-agency group during the week, we have summarized our present situation and proposed a program of Government contingency back-up to the credit worthiness of United States utilities which we believe will enable us to successfully proceed with this undertaking.

The actions proposed anticipate no expenditure of Government funds unless our project cannot be completed in the private sector, an eventuality we believe most unlikely. If our project cannot be so completed, provision is made for Government possession and ownership of the facility and other assets, so that the national objective of providing enrichment capacity will be preserved. We believe the actions proposed for the Government will lead to provision of the next increment of enrichment capacity at the lowest possible involvement and cost to the Government and in a manner most consistent with national policy; and we, therefore, most urgently solicit early favorable decision.

To permit the project to proceed as expeditiously as possible under the general principles outlined in the attached paper, we urge that, in the event the Government favorably considers these

proposals, such action be confirmed in the form of a brief interim agreement to be effective while more definitive agreements are negotiated.

We are most anxious to bring other equity participants into the project, to advance negotiations with the customers who have shown interest and to move on all other of the complex management, financial and marketing undertakings necessary to assure completion of the venture.

We assure you of the interest and dedication of our parent organizations to UEA and to private enterprise and to this project; although in the limited time available and in view of the uncertainties of the Government's position, we have not yet obtained formal approval of the Boards of the participating companies to this specific proposal.

We stand ready to follow-up on this matter in any way we can and will be available to discuss the matter further at your convenience.

Very truly yours,

J. W. Komes

R. A. Jay

Attachments
(Working Paper)
(Summary)

WORKING PAPER RE URANIUM ENRICHMENT ASSOCIATES

Uranium Enrichment Associates (UEA) has been formed in response to the expressed policy of the United States Government (USG) to develop the first private enrichment plant in the United States following the CIP/CUP programs of ERDA. UEA is confident this can be accomplished with financing based upon long-term non-cancellable contracts with United States and foreign organizations who require enrichment services. Recent months, however, have demonstrated that the credit of U. S. utilities has deteriorated. To give confidence to investors, back-up assurances will be required from the United States Government. Such assurances would be compatible with the commitment of this country to be a continuing and reliable source of enrichment services.

The general plan for proceeding with a private uranium enrichment venture involves the construction and operation of a large gaseous diffusion enriching plant located on the Chattahoochee River in southeastern Alabama, where a site has been optioned.

A plant of 9 million SWU per year capacity is planned. Within reasonable limits the actual plant size will be determined by the market. A preliminary estimate of the cost of the 9 million SWU plant is $2,750,000,000 in 1974 dollars, with full operation to be attained in 1983. Power in the amount of about 2500 MWe is expected to be supplied from a dedicated nuclear power facility, to be financed differently.

Based on marketing efforts undertaken to date, about 40% of the plant capacity will be taken by domestic utilities, and the balance by non-US organizations. For both domestic and foreign customers, UEA will supply toll enrichment service under long-term (25 year) contract.

Each customer will be charged for its percentage of the total cost of operation of the facility on a "take or pay" basis and will supply and retain title to the required feed material.

Project financing utilizing an 85% debt, 15% equity ratio is contemplated both for the non-US share of the plant and for the domestic share of the plant.

As now foreseen, about 60% of the project will be contracted to foreign reactor needs. The UEA contracts with foreign customers will require that each such customer provide, on a firm basis, all of the capital investment proportional to each customer's subscription to the output from the enrichment plant. Such capital investments will include equity and debt and must be provided by the customer from its own sources of capital and the obligation of repayment rests with the customer. Prospective foreign customers understand these conditions and also understand that voting control (55%) will be in the hands of the United States investors.

The United States portion of the equity will be supplied by US investors who are expected to be a group of substantial industrial concerns acceptable to USG. U.S. debt financing during the construction period will be by interim

loans from commercial banks with final take-out financing from the U.S. commercial bond market. The security for long-term debt will be the firm contracts from the purchasers of the enrichment services.

UEA proposes to use all reasonable commercial back-up arrangements within the private sector in support of the project. A program of insurance has been developed which will provide substantial coverage from the risks of physical damage, business interruption, and general liability. Extended risk coverage to the limit of $1 billion, business interruption with a limit of $100 million and general liability insurance up to $50 million now have been assured.

It is also proposed to establish a contingency reserve fund which will accumulate from an addition to the unit cost of separative work performed for customers of the plant. The reserve fund is intended to provide protection against unforeseen financial requirements during the operation of the enrichment facility. Amounts unused in the reserve fund for such purpose and collected from U.S. customers will ultimately serve to offset their debt service through the latter years of debt obligation. Sufficient funds are expected to accumulate to permit this reserve fund to pay for debt service during the last 10 to 12 years of the debt obligation. At that point, the customer's cost of separative work would be reduced by elimination of payments to the reserve fund as well as of charges for debt service.

Under the contracts with the customers of the plant, the cost of separative work will provide full recovery of the total costs of owning, financing, operating, and maintaining the project, including provision for an after tax return on equity computed at 15% of initial equity investment with such adjustment as may be necessary to attract quality equity participants.

The above basic terms have been discussed at length with interested U.S. utilities and foreign customers, and they are in general agreement. These terms coupled with the following areas of government assistance will produce conditions which, in our opinion, will allow private entry into uranium enrichment.

It must be recognized that the technology and the key components of the gaseous diffusion process are classified government information not generally accessible to either the private investor or to the utility customer. Accordingly, the UEA plant will be founded on confidence in government supply of key components, government processes and government knowhow. USG will charge a royalty during the first 17 years of operation of the UEA plant.

Consequently, certain government assurances are reasonable to support the transition to private industry. UEA, therefore, requests the following assurances:

1. The supply by USG to UEA, at cost, of essential mechanical components of the plant such as barriers and seals which, for security reasons, are presently produced exclusively by USG;

2. Access to USG's stockpile of enriched material: 9 million SWU equivalent to be available from USG stockpile for lease or sale to UEA during start-up period to cushion against delays or interruption of plant operation and to assist UEA in matching capacity with orders during the first few years; and a commitment that USG will purchase from UEA enriching service up to 6 million SWU during the first 5 years of UEA operation, to balance over-capacity due to scheduling of first core loadings or other significant factors which affect the reasonable balance of production capacity and the then current demand. The quantity of USG material held in stockpile for UEA would be decreased annually after start-up of the UEA plant, so that after 5 years of operation no further requirement would exist.

Specific provisions defining the conditions under which material would be furnished from or to the USG stockpile as well as repayment arrangements, if any, prices, terms and other conditions will be negotiated on a mutually acceptable basis.

In addition to these transactions, UEA and ERDA will work out mutually acceptable arrangements for the exchange of SWU's to permit UEA to serve customers requiring highly enriched HTGR fuel and to assist an economical plant start-up.

3. The supply at cost of technical assistance and knowhow for the installation and operation of USG's diffusion process. USG will guarantee that the manufactured items and process technology will operate as expected and will accept the obligation to complete or cause completion of the plant if UEA is unable to satisfactorily complete because of a breach of USG's warranty. Such obligation shall continue until one year after demonstration of full-scale steady commercial operation.

4. An undertaking by USG to provide back-up support with respect to the financing of the plant and the obligations to complete and operate the plant which is anticipated to be through a "transfer of ownership" from UEA to USG, as outlined below.

This undertaking would provide the needed assurance, from a credit worthy source, that additional capital can be available to provide for completion of the project or that the investors have the opportunity to recover their investment if the project can not reasonably be brought into commercial operation.

"Transfer of ownership" would be the acquisition by USG of the owners' rights of the domestic holders of UEA equity and the control of UEA. USG will also thereby assume the liabilities and obligations, including responsibilities for repayment of the domestic debt, of UEA. Either UEA or USG could require a transfer of ownership; UEA, if in its opinion it were unable, for

any reason, to physically complete the plant or otherwise bring it into commercial operation, as agreed, despite its best efforts; or USG in its opinion for the same reasons, or if UEA has defaulted in meeting specified and agreed conditions. The right to require a transfer and the obligation to accept would terminate one year after the plant has achieved full-scale steady commercial operation.

The consideration to be paid by USG for the acquisition of the rights of the domestic holders of UEA's equity would be determined by reference to whether the reason for the transfer fell within one of three categories, but the consideration would, in any event, include assumption of liabilities. The three categories are:

FIRST, events caused by USG or otherwise beyond the reasonable control of UEA as listed below. In such cases UEA's domestic equity holders would be entitled to full compensation, that is, return of their original investment and additional compensation, as determined by USG, to reflect the results achieved to the date of transfer.

A. Failure of warranted USG technology to operate so as to permit the plant to achieve commercial operation within the agreed upon time period and costs, despite reasonable efforts of both UEA and USG.

B. Failure of governmental licenses to be obtained in a timely manner or the application of law or regulation so as to prevent the plant from achieving commercial operation within the agreed upon time period and costs, despite reasonable efforts of both UEA and USG.

C. Interposition by USG for reasons of national interest in the matter of contractual relationships between UEA and previously approved customers to a degree which significantly threatens the economic viability of the project.

D. The inability of UEA, because of lack of customer credit worthiness, to raise capital for construction or long-term financing despite reasonable efforts of UEA to do so.

E. Such other events as may be mutually agreed upon.

SECOND, events involving:

A. Gross mismanagement by UEA;

B. Wilful misconduct by UEA; or

C. Gross negligence by UEA,

which significantly threatens satisfactory completion and capacity of the project and for which UEA, after formal written request from USG, does not take reasonable steps toward correction. In such an event, no cash compensation would be paid for the rights of UEA's equity holders.

THIRD, events which do not fall within the first two categories. In such an event, appropriate compensation, if any, would be determined utilizing agreed formulas for the recognition of UEA's compliance with its commitments, the efforts of UEA and the degree of fault, if any, in foreseeing and dealing with the particular situation. The preliminary determination of compensation shall be made by USG and the basis thereof reviewed with UEA.

As noted, UEA's domestic financing obligations would be assumed by USG in the event of a transfer of ownership, which UEA understands will invoke the full faith and credit of the United States. UEA intends to assure that all its domestic debt will be callable, without premium, in case of a transfer of ownership.

UEA has proceeded on the basis that there will be a firm and continuing policy of the United States Government with reference to the participation of foreign investors in enrichment facilities located in the United States and in the sale of enriching services to foreign customers. It has been taken that the policy of the Government has been to encourage such international relationships, and it is expected that the present areas of doubt will be clarified with a strong and positive statement reexpressing the United States policy. UEA will continue to advise prospective foreign customers that their participation in UEA, either as an investor or client for enriching services, would be subject to U.S. laws, regulations and licenses. UEA intends in all respects to operate as a private industry venture using high quality standards of commercial procedure, practice and control.

In recognition of the USG guarantee of equipment, process and the like, UEA will develop the design of the plant in full cooperation with USG and permit USG full opportunity to be aware of, have access to and approval of the manner in which the process is engineered, installed in the plant and operated.

. . In recognition of USG interests and because of the USG support of the financial position of the project, UEA will arrange to have its procedures, practices and controls reviewed by an independent audit firm of recognized competence and secure and file with the USG their opinion of the adequacy of these elements. UEA will also obtain USG approval of actions and agreements to be undertaken by UEA which could significantly affect the interests of USG. UEA and USG will define the types of such actions and agreements and specify them to the extent possible.

Tab E

Description of the Government Plant Alternative (#2)

Alternative 2 is similar to Alternative 1 insofar as the development of private centrifuge enriching capacity is concerned; it differs only in the method of providing the needed early increment of Government diffusion capacity. Under Alternative 2 the Government would proceed promptly to undertake the construction of an add-on increment of capacity to the existing ERDA plant at Portsmouth, Ohio. While the increment would be sized nominally at 5 million-separative work units per year, the firming (within the next year or so) of future demand, and of plans of private centrifuge enrichers to supply enriching services, would permit some adjustment of this capacity target before major construction had begun. The add-on plant would be scheduled for completion by about 1983 assuming project authorization and initial funding in FY 1976. The add-on increment would be designed to be an integral part of the entire Government enriching complex; it could not operate independently to produce a nuclear power reactor grade product. Because of this it would utilize a single size of equipment, thus have a lower per SWU capital cost than would a "full gradient" plant. The total cost of the add-on plant is projected to be $1.2 billion in 1976 dollars.

Under Alternative 2, just as under Alternative 1, ERDA would launch concurrently an intensified program to assure that several firms will be ready to build subsequent private plants using the new centrifuge technology. The private centrifuge program envisages early ERDA issuance of a Request for Proposals (RFP) from the private sector to achieve several centrifuge projects in the 2-3 million SWU/year range in the mid-1980's. While such projects would likely commence with smaller modules, perhaps a tenth that size, the program would contemplate the smooth expansion of these projects to achieve the capacity at which further expansion could occur without Government assistance and in response to the need of the marketplace. Response to the RFP would be expected to identify the Government assistance required. This is likely to include similar provisions to those requested by UEA under Alternative 1 and would therefore require appropriate authorizing legislation. A period of negotiation with individual proposers is anticipated leading to firm contractual commitments to the program by several companies before the end of FY 1976.

Alternative 2 would achieve the objective of early resumption of firm U.S. contracting by ERDA promptly seeking (a) amendment by the Joint Committee on Atomic Energy of the criteria upon which it is now permitted to contract, and (b) formal Congressional authorization of and appropriations for the add-on project. Then firm contracting could resume.

Alternative 2, like Alternative 1, also contemplates the prompt request to the Congress for authority to charge for Government enriching services on a more nearly commercial basis. While this is justifiable in its own right, it has a corollary benefit with respect to stimulation of private enrichment projects and the willingness of utility customers to negotiate with private enrichers.

Tab F

TAB F

MEMORANDUM 3784

THE WHITE HOUSE

WASHINGTON

June 2, 1975

MEMORANDUM FOR: JIM CANNON

FROM: HENRY A. KISSINGER

SUBJECT: Views for the Uranium Enrichment Paper

The following are views that I would like to have incorporated in the decision paper on uranium enrichment.

It is difficult to overstate the decline, during the last year, in the foreign perception of the U.S. as the world's reliable supplier of nuclear fuel. We have moved from a position of nearly absolute leadership to one where our credibility is questioned in virtually every country pursuing the nuclear energy option. Not only are we losing significant nuclear trade, but the leverage that our nuclear position afforded us in achieving other energy objectives, and in guiding non-proliferation efforts, has been weakened.

This decline has resulted largely from our actions of closing the order book for enriched uranium a year ago, failing to take concrete steps to expand our enrichment capacity, and offering "conditional" enrichment contracts to some forty foreign customers, only to have the basis for firming up these contracts postponed for several years by regulatory action.

To rectify this state of affairs, it is imperative that we take immediate actions to allow firm U.S. enrichment contracts to be granted. In my view, this requires a commitment now to an add-on plant to the present government facilities. The other course of trying to establish UEA is far less certain of success, given the possibility of (1) Congressional disapproval after protracted debate, (2) failure of UEA after another year of marketing to obtain the customer commitment (presale of 80% of the output for 25-years) it requires before undertaking plant construction, or (3) intervention by environmentalist to block construction of a large new plant at a new site. These risks are not worth the limited potential gain of setting up a private enrichment company that is basically in a monopoly position. It seems better to deal forthrightly with our immediate problem of credibility by building the last gaseous diffusion plant as a government add-on, and looking to the several centrifuge companies to establish a competitive enrichment industry.

If you decide, however, to support the UEA approach, it is vital that as a first order of business we seek Congressional authority to guarantee the enrichment contracts that UEA negotiates. In the event of UEA failure to undertake plant construction, the government would then stand behind the contracts by building and supplying from a new facility.

Tab G

TAB G

UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

June 3, 1975

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

Dear Mr. President:

I have believed, from the beginning, that our essential national objectives for expanding U.S. enrichment capacity are to:

1. Get the U.S. order book open in a convincing way so as to maintain the U.S. leadership position in world supply, and to support growth of the utility industry in this country.

2. Establish a competitive private enrichment industry.

3. Commercialize our most competitive technology, centrifuge enrichment, at the earliest date.

I continue to believe that option #2 (minimum government gaseous diffusion plant and active pursuit of centrifuge commercialization) is the surest and most direct way to achieve our central objectives. Option #1 (UEA gaseous diffusion plant and centrifuge commercialization) is less sure of success because it requires more coordinated effort to implement and it presents more risk of Congressional rejection. In paying this price, option #1 provides two benefits:

1. Commercialization of the next increment of capacity. However, I believe putting a sole source into an old technology may draw criticism.

2. Lower Federal outlays in the near term. However, we would set a government price to recoup these outlays, with interest, over the life of the plant.

Although I support option #2, I believe option #1 is potentially workable, now that UEA has substantially modified their proposal. If we are to open the U.S. order book using option #1, we must immediately obtain agreement by the Joint Committee on Atomic Energy of the proposal, outlined in the decision memorandum. In addition, this option depends on:

1. A strong display of Administration support and the vigorous assistance of the Department of State with foreign customers.

2. An active follow-through on centrifuge commercialization to minimize the adverse consequences of seeming to support a single private firm as compared to a competitive industry. This requires the continuing support of FEA and OMB.

Consequently, if we are to proceed with option #1, the necessary State, OMB, and FEA support must be considered part of the decision.

I am, of course, prepared to pursue vigorously your decision on either option.

Respectfully yours,

Robert C. Seamans, Jr.
Administrator

THE WHITE HOUSE

WASHINGTON

June 6, 1975

FOR: MR. MARSH

FROM: JIM CANNON

Attached for your information. The work plan mentioned in paragraph five will be ready on Tuesday, June 10, 1975.

Attachment

THE WHITE HOUSE

WASHINGTON

June 6, 1975

MEMORANDUM FOR THE RECORD

BY: JIM CANNON

SUBJECT: PRESIDENT'S DECISION AND DIRECTION ON URANIUM ENRICHMENT

1. The President chose Option 1, the private enterprise alternative.

2. He wants the message and legislation worked out so that if the private enterprise group finds it cannot perform on schedule, then ERDA must be ready to proceed with its add-on diffusion plant so that no time is lost in reaching the increase in nuclear enrichment capacity.

3. He wants the enriched uranium team--White House, ERDA, FEA, OMB, etc.--to get going right away to advance this project.

4. This is a tremendous opportunity for this country--and so important to him that he may want to deliver a special message to a Joint Session of Congress on what this means to the future of the country.

   -- This would not be a dramatic appeal to the country, but a hard factual message designed to get the attention of the Members of the House and Senate, and to get results in Congress.

5. He wants the Domestic Council to prepare, by early next week, a work plan showing a schedule for all documents, all contacts, and all other efforts that need to be undertaken, with the responsibility for each element of the project is to be clearly established.

6. For those responsible, nothing else should have a higher priority.

cc:
Secretary Morton
Mr. Rumsfeld
Mr. Hartmann
Mr. Buchen
Mr. Marsh
Mr. Seidman
Mr. Friedersdorf
Mr. Lynn
Mr. Scowcroft
Mr. Connor
Mr. Zarb
Mr. Seamans
Mr. Dunham
Mr. Cavanaugh

JUN 7 1975

THE WHITE HOUSE

WASHINGTON

June 6, 1975

ADMINISTRATIVELY CONFIDENTIAL

MEMORANDUM FOR: JIM CANNON

FROM: JERRY H. JONES

SUBJECT: Providing Additional U.S. Uranium Enrichment Capacity

Your memorandum to the President on the above subject has been reviewed and Alternative #1 -- immediate privatization -- was approved.

Please follow-up with the appropriate action.

Thank you.

cc: Don Rumsfeld
Henry Kissinger
Phil Buchen
Jim Lynn
~~Jack~~ Marsh
Bill Seidman
Jim Connor
Alan Greenspan
Robert T. Hartmann
Max Friedersdorf