

SITING PROVISIONS OF THE U. S. NUCLEAR WASTE POLICY ACT

VERSUS

RELATED EXPERIENCE IN OTHER COUNTRIES

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ABSTRACT

This paper is based on a report prepared by International Energy Associates Limited (IEAL) under contract to the Department of Energy. The report, whose title is the same as that of this paper, was submitted to DOE a little over one year ago. In that report, the relevant provisions of the Nuclear Waste Policy Act of 1982 setting forth the procedures for obtaining local acceptance of sites for nuclear waste facilities were compared with the corresponding procedures of fifteen foreign countries also trying to locate sites for nuclear waste facilities. In this paper, the major points on which the Nuclear Waste Policy Act is or is not in keeping with lessons learned in other countries are discussed as well as some general and specific observations related to siting acceptance problems and how the Act addresses them.

BACKGROUND

During the past few years, a series of surveys has been conducted by International Energy Associates Limited (IEAL) for the U.S. Department of Energy, documenting the approaches and progress in other democracies in dealing with the problems of obtaining siting approvals for nuclear waste facilities. (See IEAL-158, IEAL-232, and IEAL-318.)

Many of these countries are further along in this process than the U.S., and therefore, the objective of the previous surveys was to make available to those responsible for U.S. nuclear waste policy the lessons learned by others which appeared to have potential applicability within the U.S. political system. This objective was accomplished through distribution of the survey results to various members of Congress and through ensuing discussions with staff during the period when the Nuclear Waste Policy Act was being drafted.

Now that the Act has been passed into law, it has been possible to compare its provisions in their final form with the lessons learned from the surveys. It was felt that such a comparison could be useful, not only in identifying those siting provisions of the Act which were, or were not in keeping with the lessons learned, but also by calling attention to areas which may not have been given the degree of emphasis that experience in other countries would indicate as desirable.

It should be pointed out that the report on which this paper is based is not a critique of the Act as a whole. Its focus is on the problems of getting state and local acceptance for federal waste management facilities. Only those provisions in the Act which deal with activities between the U.S. Government and the state/local governments are addressed. Those aspects of the Act which spell out policies and procedures internal to the U.S. Government are not discussed in this paper, although one exception has been made: the provision in the Act which calls for the program to be administered by a presidential appointee, although a

matter internal to the U.S. Government, has sufficient potential affect on the external relationships that this provision is singled out for discussion.

The report was prepared under the direction of the DOE's Office of Civilian Radioactive Waste Management. The findings presented are solely those of the authors and have been neither approved nor disapproved by DOE.

IMPORTANT POINTS ON WHICH THE ACT IS IN KEEPING WITH LESSONS LEARNED FROM OTHER COUNTRIES

- Recognizes the essentiality of establishing national nuclear waste management policy and procedures, and provides these through federal law.
- Recognizes the national legislature as the one body that can deal with states' vetos. Assigns this responsibility to Congress and involves it in a procedure for dealing with such vetos.
- Establishes the leadership responsibility (DOE) and the roles of other participants: Congress, the Administration, independent agencies, states, utilities, public, etc.
- Recognizes the importance of and establishes requirements for openness, including public hearings, and for "consultation and cooperation" with the states.
- Recognizes the essentiality of in-depth RD&D in providing for technical evaluations (of prospective sites) such that efforts to discredit the technical feasibility of such sites can be withstood. Establishes requirements and authorizations intended to provide for this in-depth RD&D.
- Provides that those who use nuclear power pay for the management of its wastes.
- Recognizes that national policy must call for permanent disposal, but also that the concept of "permanence" greatly increases the difficulty of obtaining site-specific acceptance. Provides for

consideration of a back-up to the repositories in the form of monitored retrievable storage -- a concept that does not carry the stigma (to the locals) of permanence, that has been well accepted in other countries, that can be implemented relatively quickly, and that can fill the need for many decades.

- Curtails intervenors' ability to delay the site approval process in the courts, or in hearings, without good cause.
- Recognizes political infeasibility of accepting for disposal, or even storage, spent fuel from other countries,
- Recognizes advantages and provides for consideration of at-reactor dry storage (casks, etc.), a concept with growing support in other countries.

Recognizes the desirability of spreading the political burden by requiring more than one repository.

IMPORTANT POINTS ON WHICH THE ACT IS NOT IN KEEPING WITH LESSONS LEARNED FROM OTHER COUNTRIES

- The Act's tight and legally binding schedules tend to create pressures at odds with two of the most important lessons learned. These are the essentiality of: (1) a technical evaluation that can withstand all efforts to discredit it, and (2) an unhurried, deliberate (even extended) process of consultation and cooperation with those affected. Other countries also have serious commitments to established timetables but these are not enacted into statutory requirements, thus allowing some flexibility for unforeseeable developments.

- The Act's provision that the program is to be administered by a presidential appointee within DOE, and the funding subject to Congressional control, is not in keeping with the emphasis on stability and continuity found elsewhere. Waste management responsibility in other countries resides with senior career civil servants or heads of permanent waste management companies. These managers are subject to replacement for incompetence, but the stability of their positions and the funding of their programs are not affected by their nation's politics.

DOE, only recently created under the Carter Administration, has already been a target for extinction by the Reagan Administration; and presidential appointees, with an average life in office of less than three years, offer even less promise of stability and continuity. Section 303 of the Act, calling for a study of alternative financing and management approaches, provides the one opportunity for these serious flaws in the Act to be addressed.

- The concept of a generic (as opposed to a site-specific) test and evaluation facility (TEF) is not keeping with the practice in other countries. In all countries surveyed successful results from an in-situ TEF is mandatory before the decision is finalized on a candidate site.

It is recognized that the Act does allow DOE the possibility of locating TEF's at candidate repository sites, but the concept that a TEF in one location could provide appropriate data for a candidate site in another location (as the wording of the Act seems to imply) is foreign to the thinking

in any other country. Most countries require that the TEF be collocated with the repository, and be built first as the only means for assurance that the candidate site will be suitable.

- No other country has anything comparable to the degree of procedural detail contained in the Act. The process leading to two operational repositories is likely to take decades. Detailed instructions enacted today could be counterproductive in the 2000's.

IMPORTANT OMISSION FROM THE ACT PER LESSONS LEARNED

The degree of emphasis on obtaining site acceptance by the local communities falls far short of that indicated by experience in other countries. The Act is focussed largely on obtaining acceptance at the state level, but obtaining local acceptance can be at least as important. In those democracies where storage/disposal decisions have reached the site-specific phase it has been found that if the local community is sufficiently determined not to accept the facility, it is politically infeasible (for the federal or state governments) to force it on them. If the local community really wants the facility it would be difficult for the state to prevent it.

OBSERVATIONS

General

It has been observed that of the 40 or so approaches and policies being employed in different countries to deal with the siting problem, most are directed at trying to bring about one or more of the following three conditions which were found to be necessary in combination before a nation can successfully site a national nuclear storage or disposal facility. These are:

- A technical evaluation that can withstand every effort to discredit it.
- Concurrence of elected regional/state officials having jurisdiction over the proposed site -- or a feasible mechanism to override their veto.
- Willingness of the local community to accept the facility.

These three conditions are, in effect, the goals of the siting effort. Additionally, two elements were found to be essential in achieving and maintaining these three conditions.

- The first, essential to achieving these goals, is a set of policies and practices which allows the process ample time: time for careful planning; for appropriate review and comment; for deliberate, unpressured negotiation with state and local officials; for obtaining all necessary supporting data; and possibly most important, time for concerned citizens or intervenors to raise newer and more urgent issues and the time to address them.
- The second, essential to maintaining acceptance of a site long enough for full implementation of a repository, is sustained political will. It is likely to take decades to complete all the necessary technical steps and to obtain all the required political approvals, but the government officials who must oversee these activities change every few years. The ability to maintain a sustained

national commitment long enough (through several changes of government) to achieve an operating repository has yet to be demonstrated by any country.

Although each of the democracies visited has a somewhat different political structure, and varied considerably in the degree of autonomy of their central governments, most of their lessons learned appeared to have applicability within the U.S. system.

Observations Specific To The Act

- Re the Act's tight schedules, target dates projecting a sense of urgency are, of course, essential, but many of those in the Act are not realistic. If unrealistic dates are enforced, the quality of the work must suffer. If they are enacted into law by the nation's highest legislative body, but not enforced, the credibility of the federal government is impaired.
- Re the Act's provision for the funding and management of the program, lack of continuity and consistency has been the hallmark of the U.S. program, and to place the responsibility in a government agency whose future existence is uncertain, and to have the person in charge there a presidential appointee (one of the shortest time-in-office positions in government), appear, along with having a Congressional handle on the funding valve, to be steps in the wrong direction.
- Re the Act's lack of emphasis on obtaining local, as well as state acceptance, the federal government cannot depend on state officials to obtain local acceptances. The interests and concerns of the two are likely to be quite different, and it is interesting to note that the local community is not infrequently more receptive than the state. If the local community really wants the facility, and the site selection process has met all technical and procedural requirements, it has been shown to be difficult for the state to block it.
- Of the 15 countries surveyed, in no other country does the federal government (as the Act requires) supply the state or local governments with financial support for the consultation process, nor fund independent reviews and surveillance of the federal government's plans and programs. Whether or not this will facilitate obtaining the necessary acceptances remains to be seen.
- The Act does not provide for the formation of a separate company responsible for the back end of the fuel cycle. Although some countries have done this and feel it is important to providing continuity and consistency, other countries are achieving this through stable management in government agencies. If a separate company could help the U.S. program maintain continuity and consistency over the years ahead it would appear to merit serious consideration as called for in the Act.
- In countries where the political price of making site-related decisions has appeared to be too high, it has become a successful practice to postpone such decisions "awaiting additional data". This time-honored principle of practical politics, adopted openly by the U.K. and de facto in many other countries, has so far allowed current governments to duck the bullet and leave its biting to future

governments. There being no clear and present danger as long as the spent fuel continues to be carefully managed, it would seem this practice could be continued for some time to come. The important thing appears to be to have an accepted plan and to be diligent in its implementation. The U.S. is now in such a posture.

- As protracted and contentious as a nation's process may have been in arriving at waste management siting decisions, if the statutory procedures have been scrupulously followed, and if all parties have had a fair hearing, the government's decisions have been accepted even by those most affected. Subsequent opposition has generally originated from the professional intervenor community rather than from the locals.

CONCLUSIONS

- In terms of removing potential obstacles to the development of nuclear power in the U.S., the Act is the most significant piece of nuclear legislation since the Price-Anderson Act of 1957.
 - In its provisions for dealing with the problems of siting storage and disposal facilities the Act is, with a few important exceptions, in keeping with the lessons learned from other countries' nuclear waste disposal programs.
 - Of those aspects of the Act not in keeping with successful practices elsewhere, the statutory deadlines enacted into law are of particular concern. DOE, caught between the necessity for full compliance with the extremely detailed technical and procedural requirements of the Act vs meeting its demanding schedules, will find itself having to either take short cuts or miss schedules. The strong message from the experience in other countries indicates that faced with this choice, DOE must give priority to the thoroughness of its work. The credibility established by such thoroughness has been found to be of much greater importance to the ultimate success of the program than the credibility associated with meeting dates.
- It is essential that DOE establish an understanding with the Congress on this important point as soon as possible.
- Of at least equal concern are the Act's provisions for the financing and management of the program. An excellent opportunity to address this problem is provided by the study called for in Section 303 of the Act. It is hoped that this study on alternative approaches to financing and managing the program, will be able to recommend, and get acceptance for, a financing and management structure which will provide the program with the stability and continuity which is essential to its long-term success.
 - The third point on which the Act is not in keeping with the policies of other countries, i.e., the concept of a generic, as opposed to a site-specific, TEF is noteworthy but not particularly serious. This is because the Act, although it does not require DOE to place the TEF's at candidate sites, does allow it to do so. Although DOE may well plan to do this (or face an impossible situation in getting local siting acceptance), the real problem comes back again to the statutory

dates in the Act. There is not sufficient time in the Act's schedules for constructing and conducting appropriate tests in TEF's at candidate sites before the final dates decreed for site selection of the two repositories.

The fourth important point of variance, the lack of emphasis in the Act on the importance of obtaining local, as opposed to state, siting acceptance, is also one which DOE, although not so directed in the Act, does have latitude to deal with appropriately. The importance and power of the local community cannot be over emphasized. The key to obtaining local acceptance, and in some cases even generating enthusiasm, has been found to lie in a combination

of high creditability on the safety issue and a generous (but sensitively handled) economic package.

The provision in the Act requiring consideration for the use of monitored retrievable storage would appear, from the experience in other countries, to be one of the Act's most important provisions. This approach, used or being planned in France, U.K. and Sweden, offers many advantages: buying time to deal with the natural sensitivity of the locals to the concepts of "permanence" and "ultimate"; time for completion of thorough and defensible evaluations of candidate sites; and time for development of improved technology for geological disposal.