

**Integrating NEPA into Long-Term Planning at DOE**  
*NEPA at 40 Conference*

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**March 23, 2009**

The Department of Energy (DOE) has had extensive experience in the use of the National Environmental Policy Act (NEPA) process to support its long-term planning. This is demonstrated by the fact that DOE has prepared more than 50 programmatic environmental impact statements (PEISs) covering major activities, such as the management of the nuclear weapons complex, the demonstration of new clean coal technologies, DOE-wide radioactive waste treatment, storage and disposal plans, and the continued operation of large, multi-purpose DOE sites. (See attached Exhibit 1.)

DOE uses the term “programmatic EIS” to refer to a broad EIS that addresses:

- strategic planning,
- a new program,
- related or similar actions proposed at multiple sites,
- technology development, and
- site-wide EISs that cover all activities at certain large multiple facility sites.

While a project-specific EIS may address long-term issues and impacts and therefore may be integrated with long-term planning, a programmatic EIS is likely to be broader in perspective and more suitable for integration with long-term planning.

In preparing a programmatic EIS, the Department usually begins by looking at the big picture. Before embarking on a new direction or undertaking a major program

initiative, DOE takes a broad look at the long-term consequences of such action, before resources are committed and detailed plans are developed. Just as it makes sense to consider the cost, schedule and technical issues when charting a new course (or even when proposing to stay the course), so too it is prudent to consider both the immediate and the long-term environmental ramifications of significant actions.

Preparing a programmatic EIS takes considerable time, effort and resources. The median cost for DOE's PEISs in the past decade is about \$5 million; although some PEISs have cost far less, a few have cost \$30 million and more. The median time to complete a PEIS at DOE is about 35 months, although many are done in two years or less. An investment of this magnitude demands tangible results and enduring payback. To reap the maximum benefits from a programmatic EIS, thoughtful upfront planning and a long-term planning perspective are essential. A programmatic EIS with built-in flexibility, i.e., the ability to respond to potentially changing conditions, will have a longer shelf-life and therefore continue to produce dividends.

For example, DOE issued its Final Waste Management Programmatic EIS (DOE/EIS-0200) in 1997, after nearly seven years of effort and with a total cost of \$35 million (Exhibit 2). This was a very complex, technically difficult, and politically sensitive undertaking. The PEIS was prepared to support long-term national planning and ultimate implementation of activities for the treatment, storage, and disposal of five radioactive waste types. DOE included extensive public involvement in the identification and analysis of reasonable alternative sites, decentralized vs. centralized strategies, disposal capacities, transportation issues and technology options. Initially, four major Records of Decision (RODs) were issued: Treatment and Storage of Transuranic Waste

ROD (1998); Non-wastewater Hazardous Waste ROD (1998); Storage of High-Level Radioactive Waste ROD (1999); and Treatment and Disposal of Low-Level Waste and Mixed Low-Level Waste ROD (2000). These basic RODs were followed by three Supplement Analyses (a brief analysis that DOE uses to determine whether a Supplemental EIS is required) that supported six Amended RODs, the most recent in March 2008. Further, multiple site-specific EISs, e.g., at the Hanford Site, Nevada Test Site, and Savannah River Site, were tiered from the programmatic EIS. The initial programmatic EIS is still relied upon today as DOE continues to implement the waste management decisions.

Another example of a major DOE programmatic EIS for long-term planning is the Complex Transformation Supplemental Programmatic EIS (DOE/EIS-0236-S4), completed in October 2008. This Supplemental PEIS was built on an earlier strategic planning EIS, the Stockpile Stewardship and Management PEIS that was issued in 1996 as well as several site-wide EISs (Exhibit 3). The Supplemental PEIS addresses most of the major functions of the U.S. nuclear weapons complex involving facilities in six states. Alternatives assumed different nuclear weapon stockpile sizes and many different facility configurations. The preparation of this PEIS was fully integrated with program planning, including technical analyses, enterprise modeling and business case studies (Exhibit 4).

The strategy of preparing a programmatic EIS often involves the subsequent preparation of a narrower or project-specific EIS or environmental assessment (EA). A tiered EIS or EA incorporates by reference the general discussions in the PEIS and focuses on the specific project or proposal. Such tiering helps avoid duplication and delay, and is a way to integrate the NEPA process with the overall planning and decision

making process (Exhibit 5). Generally, one would expect a small number of broad-scope programmatic EISs and more tiered project-specific EAs and EISs.

An example of a major DOE PEIS that illustrates the role of tiering is the Tritium Programmatic EIS (DOE/EIS-0161), completed in 1995. That PEIS provided broad strategic analysis and decisions, and spawned three project-specific EISs in 1999: Accelerator Production of Tritium at the Savannah River Site (DOE/EIS-0270); Production of Tritium in a Commercial Light Water Reactor (DOE/EIS-0288); and Construction and Operation of the Tritium Extraction Facility at the Savannah River Site (DOE/EIS-0271) (Exhibit 6).

#### Lessons Learned

What has DOE learned from these experiences? First, it may be useful to compare and contrast the various aspects of NEPA analysis for a project vs. a program (Exhibit 7). By its nature, a programmatic EIS is broader in scope and likely covers a longer time horizon than a project-specific EIS. The programmatic EIS is intended to have broader utility related to multiple projects and, if well planned, is likely to remain useful for a longer period of time. As such, the proposed action and alternatives would be broad and the impact analyses would be less detailed and more qualitative. Impacts in a programmatic EIS may be discussed on a national or regional scale, rather than with respect to a specific site. There may be more uncertainty in the projection of impacts, perhaps due to timing, the maturity of the technology, or the inability to project impacts with specificity far into the future.

In terms of long-term planning, cumulative impacts may be very important in a programmatic EIS. For example, in considering the impacts of greenhouse gas emissions

on global climate change, incremental impacts may be indiscernible in a project-specific EIS analysis, but cumulative impacts may be more effectively and efficiently considered in a PEIS.

Overall, the most important lesson with respect to using NEPA analysis for long-term planning is to tailor the NEPA strategy to the decision making needs. The timing and the scope of the programmatic EIS need to be in sync with the needs of the decision maker. In this regard, it is necessary to carefully plan the structure of the PEIS. The document may become complicated as different combinations and permutations of the programmatic elements are developed and analyzed.

To maximize the ability to respond to changing circumstances and to enhance the shelf-life of the programmatic analysis, it is usually better to be inclusive rather than exclusive. Alternatives should be defined broadly so that they can encompass small changes over time. Alternatives that may appear to be impractical because of current policy assumptions, but that would otherwise be reasonable, should be included. It is prudent to consider whether economic or technical factors might change over time such that an alternative that appears infeasible today might become feasible in the future and vice versa.

With respect to NEPA litigation, DOE's PEISs have withstood legal challenge. For example, in *Natural Resources Defense Council et al. v. DOE*, a case involving the Stockpile Stewardship and Management PEIS, plaintiffs alleged that the scope of the PEIS was too narrow and that a supplemental EIS should be prepared based on new information. The U.S. District Court for the District of Columbia dismissed the case in 1998, stating that none of the issues raised by the plaintiffs was ripe for review.

In another case involving the 2002 EIS on a proposed railroad to serve the Yucca Mountain Repository, DOE's use of tiering withstood legal challenge (*State of Nevada v. DOE*, 2006). The U.S. Court of Appeals for the District of Columbia agreed with DOE's NEPA strategy, i.e., considering broad rail *corridors* in a programmatic EIS and specific rail *alignments* within the selected corridor in a subsequent project-specific EIS.

In conclusion, for DOE-- in general and in the long run-- PEISs appear to be worthwhile. If the timing and scope of a PEIS are consistent with the overall timing and scope of planning and decision making, maximum benefits are possible. Moreover, a PEIS process that includes good public involvement may serve to garner public support and forge consensus, resulting in sustainable decisions.

What challenges lie ahead? The focus at DOE today is on the American Recovery and Reinvestment Act and on getting projects launched as quickly as possible. The need to expedite NEPA reviews so that actions may be taken to stimulate the economy does not appear to allow time for reflective, long-term planning. Moreover, some program managers have expressed concern that if they initiate a programmatic EIS, then individual projects will have to await completion of the programmatic review. While the provisions of 1506.1 of the Council on Environmental Quality NEPA regulations must be honored (justified independently of the program, accompanied by its own NEPA document, will not prejudice the ultimate decision on the program), in many cases such "interim actions" can proceed while the PEIS is in preparation. The challenge is to keep NEPA part of the long-term planning process while we move quickly to address the near-term imperatives.

