

May 9, 2001

MEMORANDUM TO: Chairman Meserve
Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan
Commissioner Merrifield

FROM: Dennis K. Rathbun, Director **/RA/**
Office of Congressional Affairs

SUBJECT: HEARING BEFORE SENATE ENERGY COMMITTEE
AND SENATE APPROPRIATIONS' ENERGY AND
WATER DEVELOPMENT SUBCOMMITTEE, 5/3/01

A joint hearing was conducted by the Senate Energy and Natural Resources Committee and the Senate Appropriations Committee's Energy and Water Development Subcommittee to examine the state of the nuclear industry and its future in a comprehensive energy strategy; the panels were favorably inclined to nuclear power. Witnesses consisting of Chairman Meserve, Corbin McNeill for Exelon, former Commissioner Asselstine, former Chairman Ahearne, Mr. Rhodes, a Pulitzer prize winning author of Nuclear Renewal, and Heather MacLean, a nuclear engineering graduate student, testified. Testimony is available in OCA.

Senator Murkowski (R-AK) noted that nuclear energy had been taken for granted despite being a significant, efficient, and reliable source of domestic energy. Senator Domenici (R-NM) said the theme of the hearing should be, "How Things Have Changed," since there was little interest in nuclear power just a few years ago. Referencing the NRC's work on and Congress' codification of Part 52 in the Energy Policy Act, Senator Bingaman (D-NM) stated that nuclear power had been thwarted in recent years due to economic reasons and the changing structure of the electricity market rather than due to the regulatory regime. He advocated maintaining research funding, reauthorizing the Price-Anderson Act, encouraging students to pursue nuclear engineering careers, and having the NRC remain a credible and vigilant regulator. Senator Landrieu (D-LA) said that nuclear must be a component in increasing our domestic energy supply, adding that electricity transmission was a challenge to be addressed.

Senator Domenici complimented Chairman Meserve for the work of the NRC in the last few years, noting that the Agency's assets were now where they needed to be. He commended him for an excellent job and thanked him for his work. Chairman Meserve stated his appreciation for the Senator's remarks, while stressing that he had the benefit of working with very capable colleagues on the Commission and in the staff. The Chairman testified as to the NRC's initiatives to maintain safety while improving the efficiency and effectiveness of the regulatory system.

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Mr. McNeill made five points: (1) the nuclear industry was sound, (2) the outlook for existing plants was good, (3) nuclear can address the shortage of energy capacity, (4) there are new nuclear technologies approved by the NRC as well as emerging ones on the horizon, and (5) some outdated legislative and regulatory areas needed to be updated. He also described the Pebble Bed Modular Reactor (PBMR) project, of which Exelon is a participant, stating that it answered every criticism of nuclear power except one: nuclear waste storage. Mr. McNeill added that he was confident that nuclear waste will be addressed by Congress by "this time next year." Additionally, he encouraged the consideration of government funding for staff development at the NRC to deal with first-of-its-kind reactors such as the PBMR.

Former Commissioner Asselstine, now a managing director at Lehman Brothers, provided the perspective of a financial analyst on the nuclear industry. He stated that nuclear assets have significant value based on (1) restructuring in states which allow the recovery of stranded and decommissioning costs; (2) nuclear economics (favorable operating costs compared with other fuels); (3) improved operating performance; (4) positive regulatory changes from the NRC (reactor oversight program, processing of license transfers and renewals); and (5) industry consolidation. He suggested accelerated depreciation for the large capital investments of constructing nuclear or coal-fired plants to redirect the private sector from gas-fired plants. Dr. Ahearne stressed the importance of maintaining viable research programs both at NRC and DOE and described waste as the industry's Achilles' heel.

Mr. Rhodes testified that there was a strong anti-nuclear bias in the American media that should be confronted. He argued that coal kills more Americans (through lung disease) and emits more radioactivity per megawatt than does nuclear power. Heather MacLean said that although it was encouraging to hear government leaders speak well of the industry, words were not enough to address the human capital challenge. New nuclear engineering students needed to be attracted, young PhDs should be encouraged to teach, and the industry needed to operate in an environment such that graduates would want to work there. A DOE nuclear engineering fellowship allowed her to stay in school; otherwise, she might have pursued another career path.

Senator Murkowski questioned Mr. McNeill on why the next step for the industry should be with PBMR, an unproven technology, rather than with a more conventional design such as a light water reactor. Mr. McNeill replied that the PBMR was evolutionary, not revolutionary. He added that the investment risk was less than with other designs and said that Exelon hoped to have a combined construction permit/operating license (CP/OL) application to the NRC in 2003. The Senator asked Exelon to advise the Committee if anything other than normal government review was needed as the project advanced.

Senator Domenici asked how many nuclear plants were under construction around the world; Chairman Meserve committed to providing a response for the record. The Senator commended the low-dose radiation effects study and criticized DOE's budget for its lack of attention to nuclear resources. Senator Craig (R-ID) asked whether the national labs should be involved in Generation IV reactors and reactor research other than the PBMR. Mr. McNeill commented that Exelon's near-term interests were more commercial-based than the long-term focus of national labs. The Senator then inquired what role the Office of Research should have, particularly with regard to new designs. Chairman Meserve described the current comprehensive evaluation of the NRC's research program which should provide insights to strengthen the program.

Doubting reports of the amount of new capacity needed to replace retiring nuclear capacity, Senator Bingaman asked Chairman Meserve how many plants were likely to seek license renewal; he responded that, informally, 85-100% might. The Senator then asked, with responsibilities in such areas as license renewal and review of new technologies -- both increasing since the NRC's budget was assembled -- how much additional resources does the NRC need? Chairman Meserve noted that the Commission is in the process of evaluating the changes, and said he would submit that information for the record. Senator Bingaman asked how long it would take to issue a CP/OL; Chairman Meserve replied that the Commission had put in place a process to get as many regulatory decisions made as early as possible, but since the process had not been exercised yet, he was reluctant to give an estimate. Mr. McNeill offered that 27 months would be a "favorable" timeline, and 18 months would be better.

Senator Domenici asked what had changed to create a positive environment for nuclear power. Mr. Asselstine replied that the large costs of building reactors in the past were no longer fresh in peoples' minds, that there is a need for additional capacity, and that NRC's Part 52 had reduced regulatory uncertainty. Mr. McNeill added that smaller plants with shorter construction times and better quality control due to factory construction fit well in the current deregulated environment. Mr. Rhodes stated that the public health advantages of nuclear power should be touted; he commented that some utilities were hesitant to do this because they also had coal-fired plants. He advocated the creation of a world database of health effects of various energy sources and criticized wind and solar energy for the pollution created by their construction materials.

Senator Murkowski said he hoped to take up Price-Anderson reauthorization before July 4, depending upon the work of the President's Energy Task Force, and he is debating whether to move the bill separately or as part of a comprehensive bill. Describing the PBMR as producing one-tenth the power of a typical reactor, Mr. McNeill advocated proportionate Price-Anderson payments based on size. Chairman Meserve noted that the NRC was reevaluating its recommendation to increase the amount of premiums since the number of plants does not appear to be declining as previously anticipated.

Senator Domenici asked for a status of the Administration's efforts to deal with dual regulation in developing a repository standard. Chairman Meserve replied that discussions involving EPA, NRC, and DOE were ongoing and that there did seem to be an effort to find a resolution. The Senator said that he will try to take care of NRC's possibly increasing resource needs in the appropriations bill.

cc: SECY
 OGC
 OGC/Cyr
 EDO
 NRR
 NMSS
 RES
 OIP
 OCAA
 OPA
 OIG
 CFO

May 3, 2001 Witness List

Joint hearing to conduct oversight on the state of the nuclear power industry and the future of the industry in a comprehensive energy strategy.

Richard Meserve, Chairman, U.S. Nuclear Regulatory Commission, Rockville, MD

Corbin McNeill, Jr., Chairman & Co-CEO, Exelon Corporation, Chicago, IL

James Asselstine, Managing Director, Lehman Brothers, New York, NY

John Ahearne, Adjunct Professor, Duke University, Durham, NC

Richard Rhodes, Author, Madison, CT

Heather MacLean, Graduate Student, Nuclear Engineering, Massachusetts Institute of Technology, Cambridge, MA