

Recent Pu-238 Supply Developments

Briefing for
Nuclear Energy Advisory Committee

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U.S. DEPARTMENT OF
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Status Update on Pu-238 Supply

- DOE's FY 2010 Congressional budget request includes \$30 million to reestablish a domestic Pu-238 production capability
 - NE is making plans for FY2010 should the project get funded
- Russian fuel shipment received in December 2008
 - NE is continuing negotiations for the remaining shipments
- National Research Council study concluded that need to reestablish Pu-238 production is urgent
 - Specific findings and recommendations follow

NRC Study on Radioisotope Power Systems

- Title: “Radioisotope Power Systems – An Imperative for Maintaining U.S. Leadership in Space Exploration”
- Study requested by Congress and NASA to support continued availability of radioisotope power systems (RPSs) for space exploration
 - Pu-238 supply was key focus of report
 - Other findings addressed RPS technology and infrastructure readiness
- Study committee meetings held between Sept 2008 and Jan 2009; report completed in May 2009

NRC Study – Key Findings

- RPSs have been, are now, and will continue to be essential to U.S. space science and exploration
- Pu-238 is the only isotope suitable as an RPS fuel for long-duration space missions
- An assured Pu-238 supply is required
- NASA is already making mission-limiting decisions based on the short supply of Pu-238
- Even if funding for reestablishing Pu-238 supply is provided in FY 2010, some of NASA's future demand will not be met
 - Continued funding delays will increase projected shortfall

NRC Study – High Priority Recommendation

- FY 2010 budget should fund DOE to reestablish Pu-238 production
 - DOE and OMB should request – and Congress should provide – adequate funds to produce 5 kg of Pu-238 per year
 - NASA should issue annual letters to DOE defining future demand for Pu-238