



NRC Challenges in a Dynamic Fuel Cycle Industry

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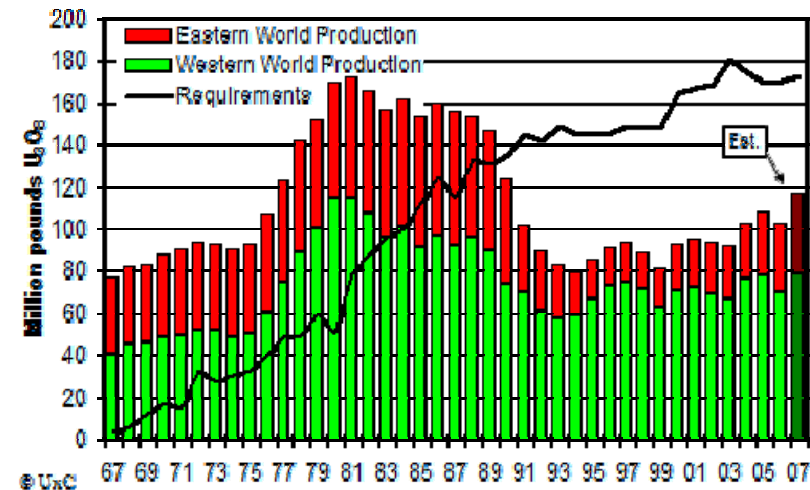
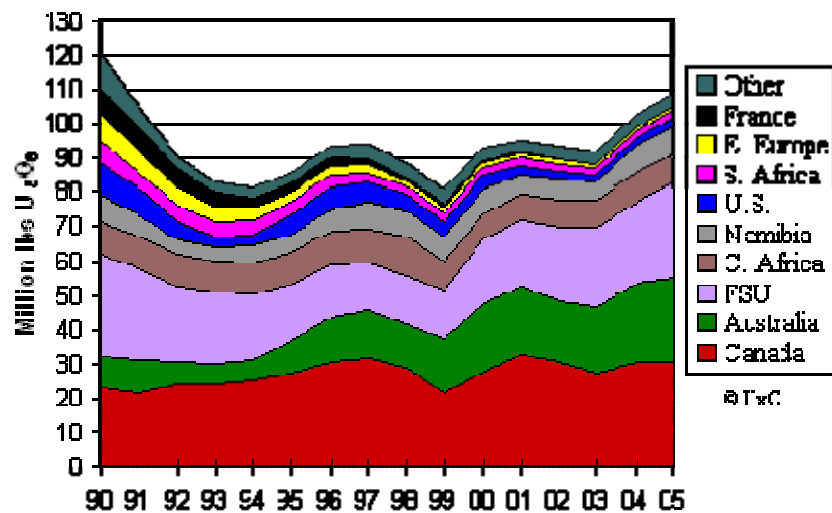
Changes since last year...



	one year ago	today
<u>U₃O₈ spot market price</u>	~ \$50/lb	~ \$130/lb
<u>Uranium Recovery (NRC licensed/new applications/restarts)</u>	2 operating ISLs 8 new applications 3 restarts	2 operating ISLs + amendment reviews 14 new applications 4 restarts
<u>Conversion facilities</u>	1 operating 13,000 MT/yr	1 operating 15,000 MT/yr



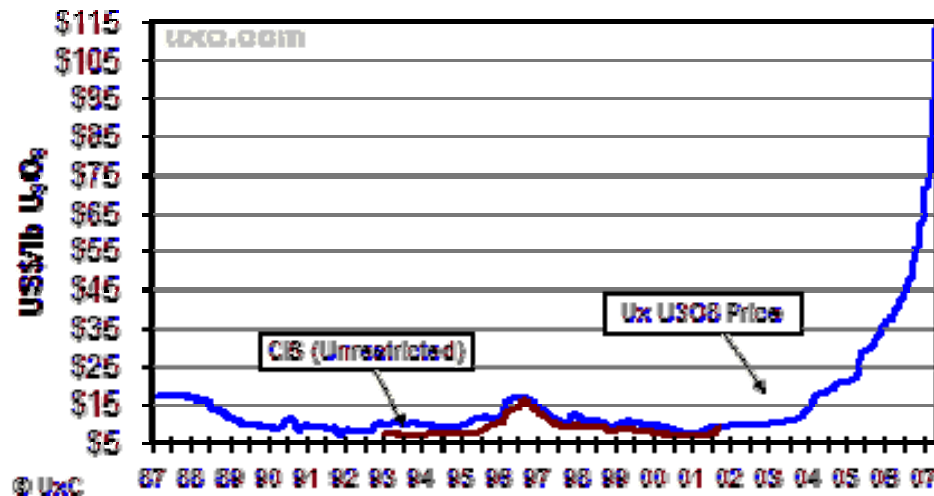
Significant gap between worldwide demand for uranium and primary supplies—U.S. supplies a relatively small fraction



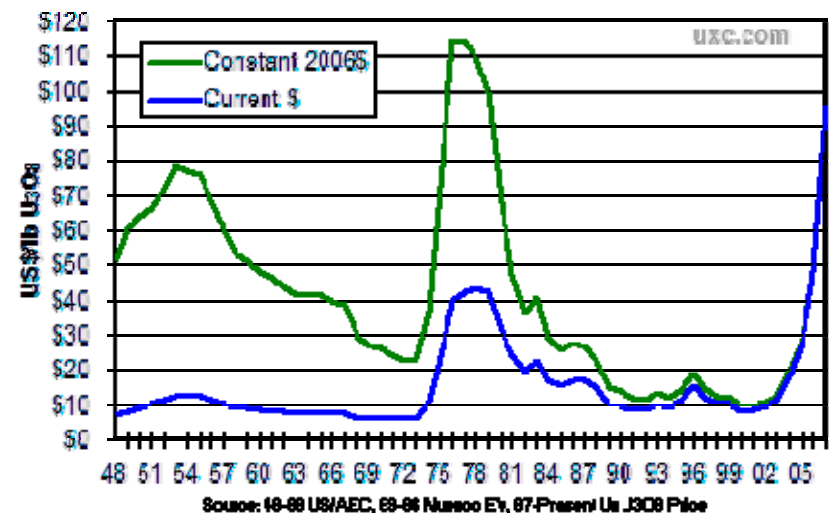
Excess mine
production from
1960's, 1970's and
Downblended HEU



Uranium prices rose dramatically resulting in further activity in uranium recovery



- Historic high levels in real terms
- Relatively low, but increasingly significant increase in the overall cost of nuclear-generated electricity.



Uranium conversion continues to be a “choke point” in the U.S. fuel cycle industry



- ❑ Honeywell facility is increasing output
 - Added capacity
 - reducing downtime
 - lower tails assays
- ❑ NRC regulatory oversight of conversion facilities



Changes since last year...



	one year ago	today
<u>Enrichment facilities</u>	■ 1 gaseous diffusion plant operating/1 cold standby ■ 1 gas centrifuge facility licensed ■ 1 undergoing licensing review	■ 1 gaseous diffusion plant operating/1 cold standby ■ 2 gas centrifuge facilities under construction ■ Additional license applications anticipated

Uranium Enrichment



- National Enrichment Facility (near Eunice, NM) License issued (LES) on June 23, 2006
- USEC American Centrifuge Plant (near Piketon, Ohio) License Issued on April 13, 2007
- GE to submit a license amendment for SILEX test loop in June 2007 and a full scale facility in CY 2008



Changes since last year...



	one year ago	today
<u>Fuel fabrication facilities</u>	ISA summary reviews on-going	Most ISA summaries complete or near completion
<u>MOX</u>	Waiting for license application	Reviewing license application; heavy construction anticipated for August 2007
<u>GNEP</u>	Technology demonstration program	Industry-focused approach

Fuel Manufacturing Facilities



■ Companies

- ❑ Areva
- ❑ Global Nuclear Fuel
- ❑ Westinghouse

■ Capacity

- ❑ Operating below capacity
- ❑ Could handle fuel requirements for a small number of additional reactors

■ Problems

- ❑ Capacity issues if many new reactors come online
- ❑ May not be equipped to make fuel for new (non-LWR) technology reactors



MOX Fuel Fabrication Facility



- License application review on-going
- Monitoring Congressional appropriations
- Anticipate start of heavy construction in August 2007



Current GNEP Status



- DOE partnering with industry on reprocessing facility and burner reactor
 - \$60M for FY07 and FY08

- DOE working on Programmatic EIS
 - 11 site characterization reports

- Significant international support

- NRC SECY-07-0081



Some lessons learned from recent licensing reviews

- More emphasis in SRP on reviewing license applications with less than complete design information may have been helpful to some staff
- Greater reinforcement of “realistic conservatism” and “reasonable assurance”
- A high quality license application that closely follows the staff guidance greatly speeds up the reviews
- Promptly raising issues to management facilitated early resolution

Challenges



- Ensuring adequate resources to support timely, high quality licensing reviews while ensuring continued safe operation of existing facilities
- Developing core of expertise in areas of new and evolving technology (e.g., GNEP and SILEX)
- Ensuring regulatory infrastructure that supports a stable and predictable regulatory environment
- Continuous improvement—maximizing organizational capacity



Questions?