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# Uranium Market from a Global Perspective or Secondary Supplies: The Gift that keeps on Giving

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We will not update this information unless required to by law.





- About NUKEM
- Perspectives of the International Uranium Market
  - Fundamentals on Supply and Demand
  - Demand & Primary Supplies (WNA Reference Scenario)
  - Breakdown of Secondaries
  - Global Picture on Supply and Demand
- Uranium Spot & Term Market



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## NUKEM Group at a Glance Over 50 Years Experience in the Nuclear Sector

### Headquarters:

 Nukem GmbH, Alzenau (Germany) & Nukem Inc., Danbury (USA)

### **Representative Offices:**

- Moscow
- Tashkent (Uzbekistan)
- Ust Kamenogorsk (Kazakhstan)

### **Key Figures**

### Financial Year 2012

- Sales
- € 470 million

**30** \*)

Employees



\*) Full time equivalents



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# Components and Services in the Fuel Cycle Service

#### **Suppliers**

- Producers
- Governments
- Intermediaries
- Funds
- Utilities

#### **Buyers**

- Utilities
- Producers
- Intermediaries
- Funds

#### **Products / Services**

- Natural Uranium (U<sub>3</sub>O<sub>8</sub>, UF<sub>6</sub>)
- Conversion
- Enrichment (< 5%)
- Residue Recovery

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### **Type of Transactions**

- Sales Purchases (Spot / Long-term)
- Uranium Loans
- Sale-Buy-Back
- Buy and Hold
- Swaps

### Logistics

- Transport
- Storage
- Swaps

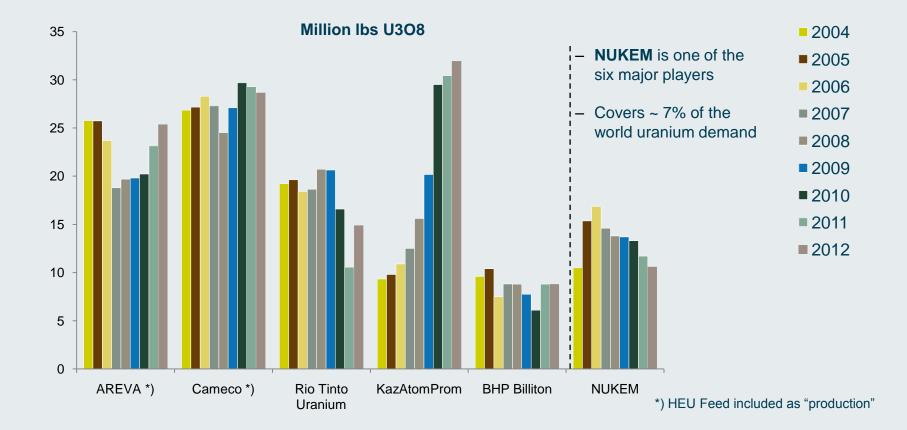
### Finance

- Foreign Exchange Transactions
- Inventory Financing
- Forfaiting
- Supplier Credits



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# NUKEM Delivery Commitments vs. Uranium Production of the Major Producers







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# Demand & Supply Fundamentals at a Glance Major elements

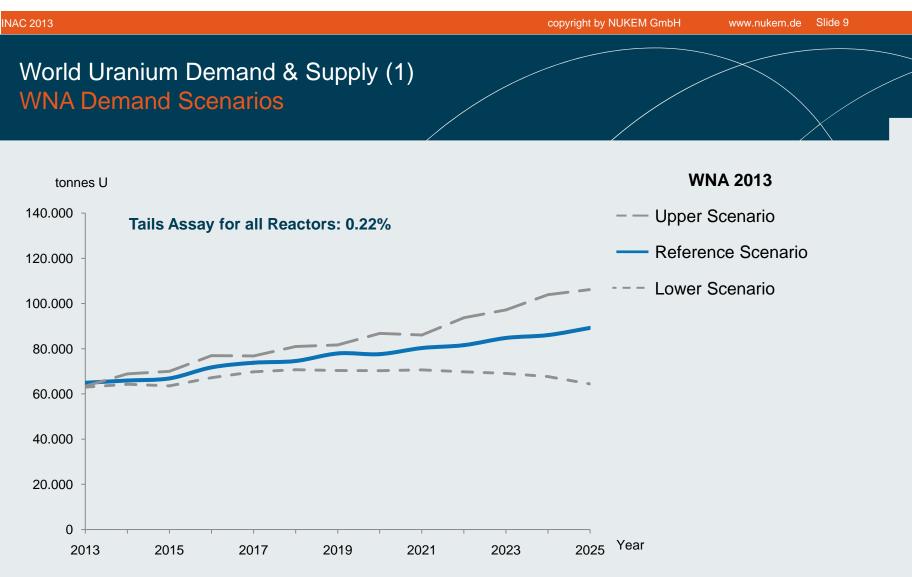
### Demand

- 430 operating nuclear reactors worldwide in 2013 (~390 GWe)
- 69 reactors currently under construction (~70 Gwe)
- Major new-builds in China, Russia, India and South Africa
- Reactor retirements expected in Russia, Germany, Japan and Canada
- 510 GWe generating capacity expected by 2022

### Supply

- Down-blending of Russian HEU ending 2013;
- Secondary supplies continuing beyond 2013, but on a lower level than before 2013
- New big uranium production projects suspended/postponed, in part indefinitely



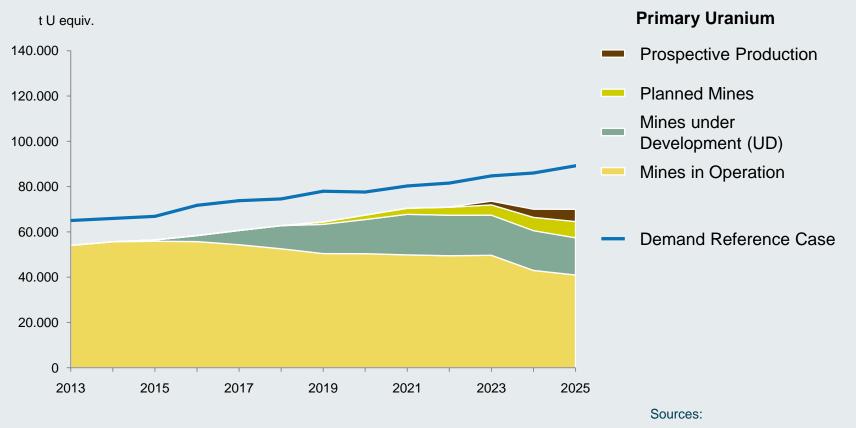


Source: WNA Market Report Sep 2013



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## World Uranium Supply & Demand (2) Primary Supplies - WNA Reference Scenario

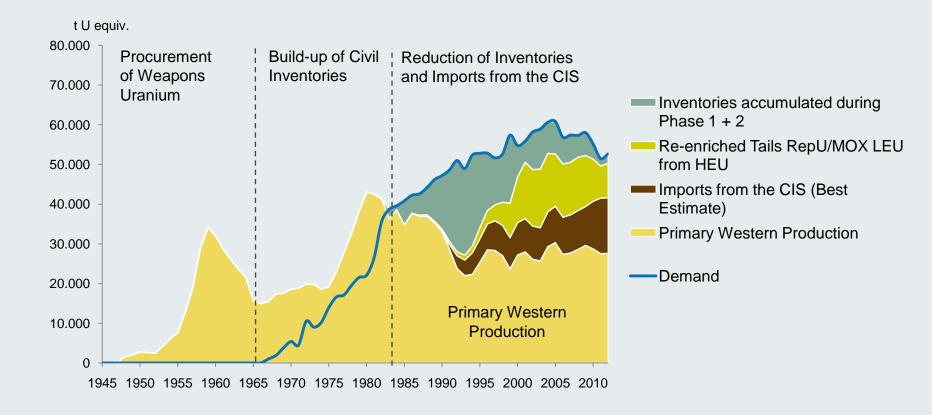


WNA Market Report Sep 2013



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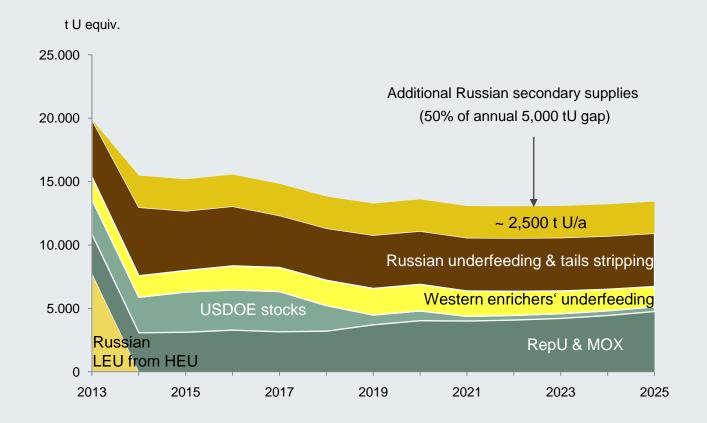
## World Uranium Supply & Demand (3) Inventory Build-up and Supply Gap Coverage in the West since the Mid-eighties





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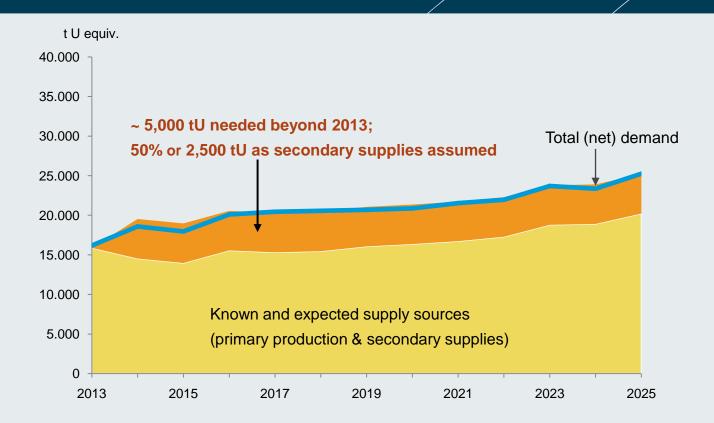
# World Uranium Supply & Demand (4) Uranium from Secondary Supplies - WNA Reference Scenario





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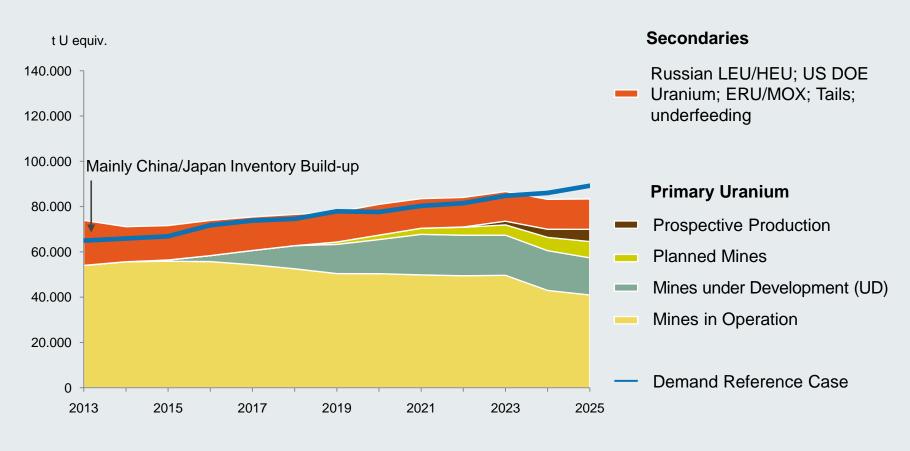
# World Uranium Supply & Demand (5) Russian Supply/Demand Analysis – Additional Material Needs





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### World Uranium Supply & Demand (6) Global Supply/Demand – WNA Reference Scenario



Sources: WNA Market Report Sep 2013



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World Uranium Supply & Demand (7) Conclusion and Outlook

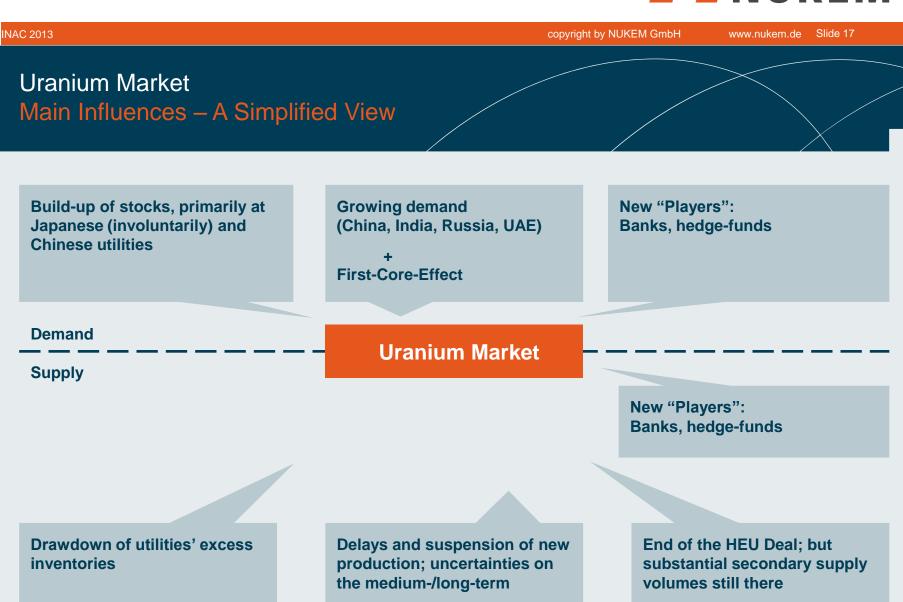
- Important message to take home: Secondary supplies, the gift that keeps on giving
- Near-term: The build-up of inventories in nuclear emerging countries, particularly in China, reduces the obvious oversupply to an acceptable level
- Medium-/Long-term: Good balance between supply & demand through 2023 within the assumptions made
- Additional secondary supplies possible, due to
  - Draw-down of inventories
  - Re-enrichment of US high-assay tails
  - HEU inventories





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15

Jan-04

Sep.04

May-04

Sep.05

Van.05 May.05

Van.06 May 06

Sep.06

191-02 May.02

**Spot Market Prices** 

Source: UxC Weekly Reports <sup>1)</sup> Base prices are given for the month of

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Mai 73

33 Seg

contract conclusion

Sep 11

Van 77 May, 77

Jan 12 SI TON





Million lbs U<sub>3</sub>O<sub>8</sub>

