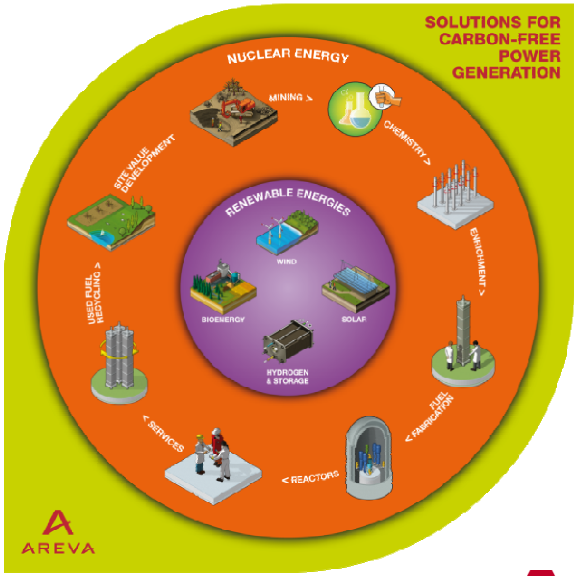
Fuel Cycle Executive Leadership
FCIX 2011

Sam Shakir

President & CEO

AREVA Enrichment Services, LLC



Why are we here today?

ANSWER: *the* ***economics*** *and environmental benefits of nuclear energy are overwhelmingly convincing*

- Cost of 1 kg of enriched fuel is about $2700
- This yields about 360,000 kWh of electricity
- Equivalent to 160 tons of steaming coal
- Cost of nuclear fuel is 0.75 cents/kWh

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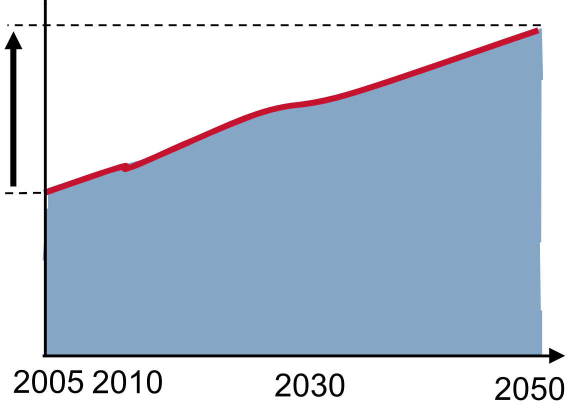
The world energy sector is facing 3 major challenges

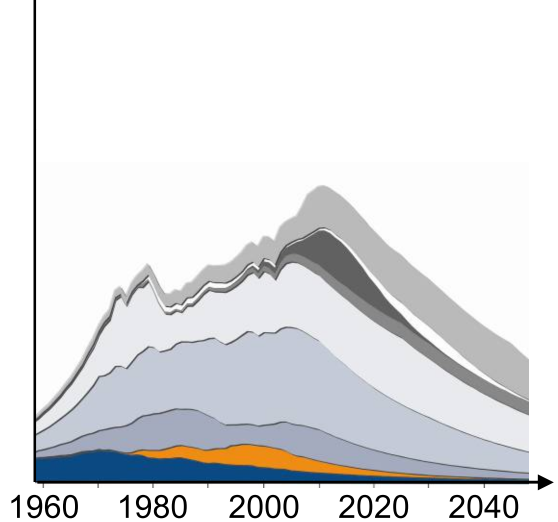
Energy demand

Double by 2050



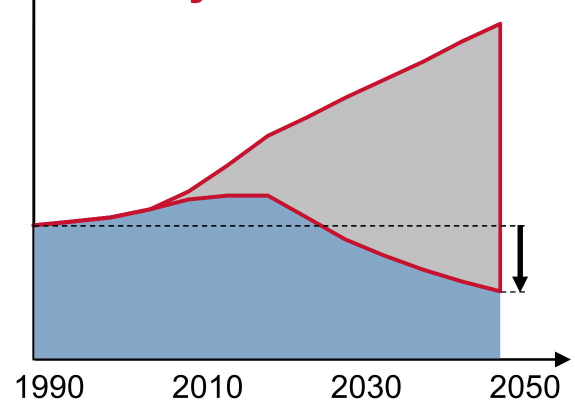
Oil & Gas availability

Declining fossil resources



GHG emissions

Must decrease by half by 2050



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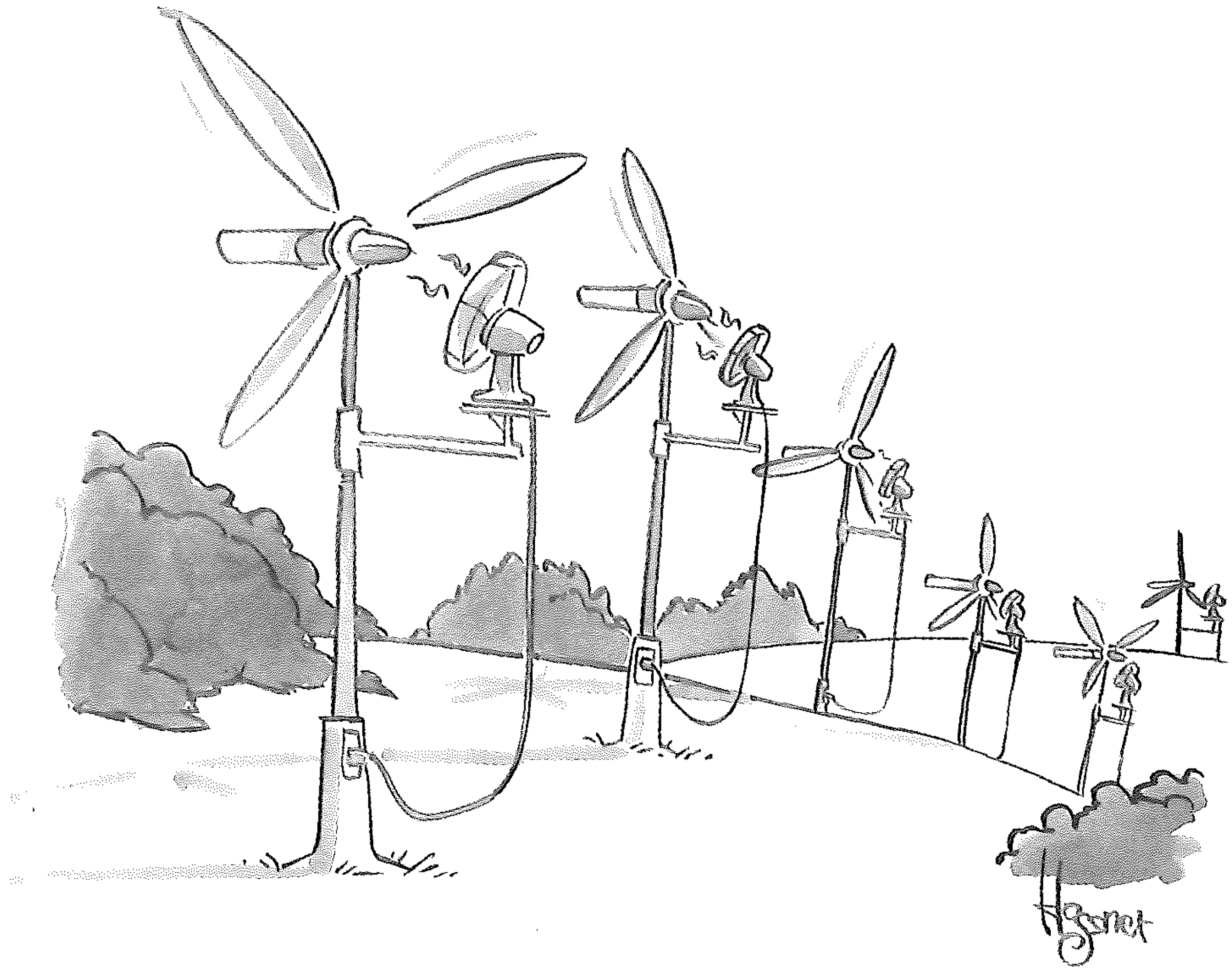
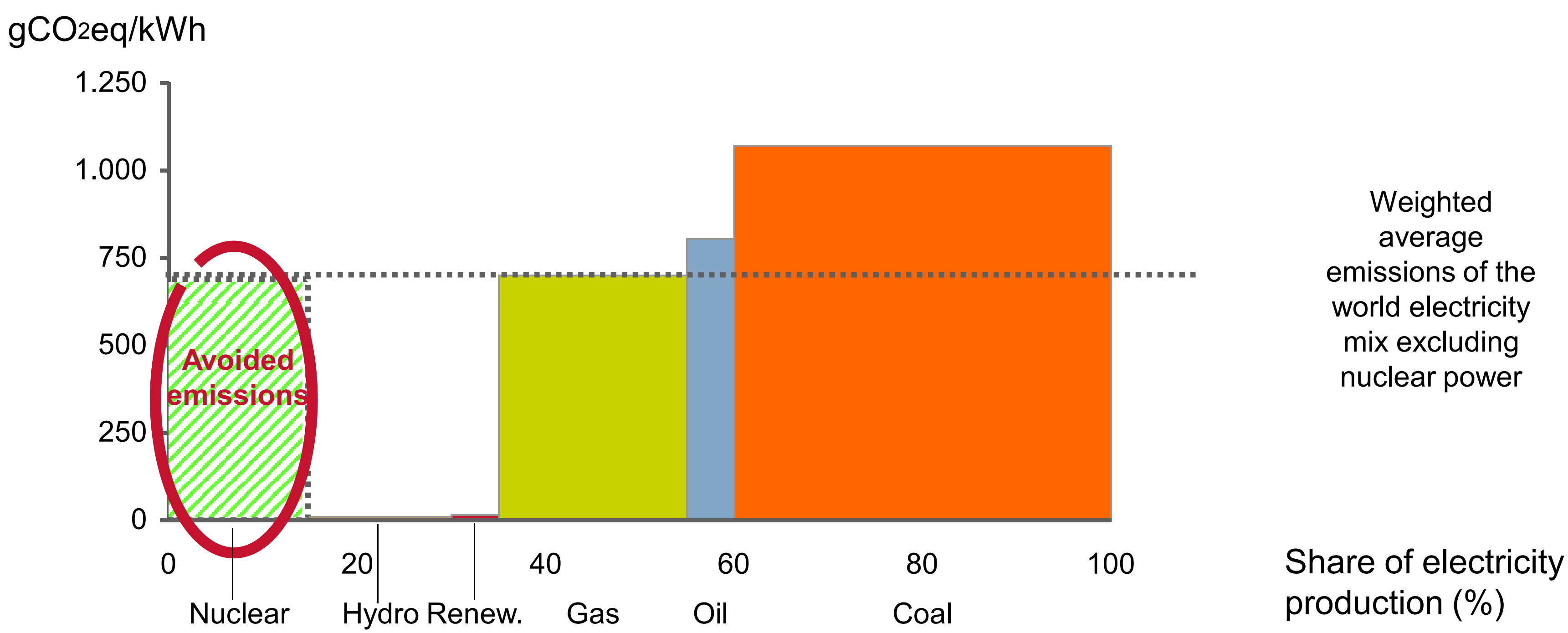
Renewables are not base load



Nuclear power prevents 20% of worldwide power sector emissions

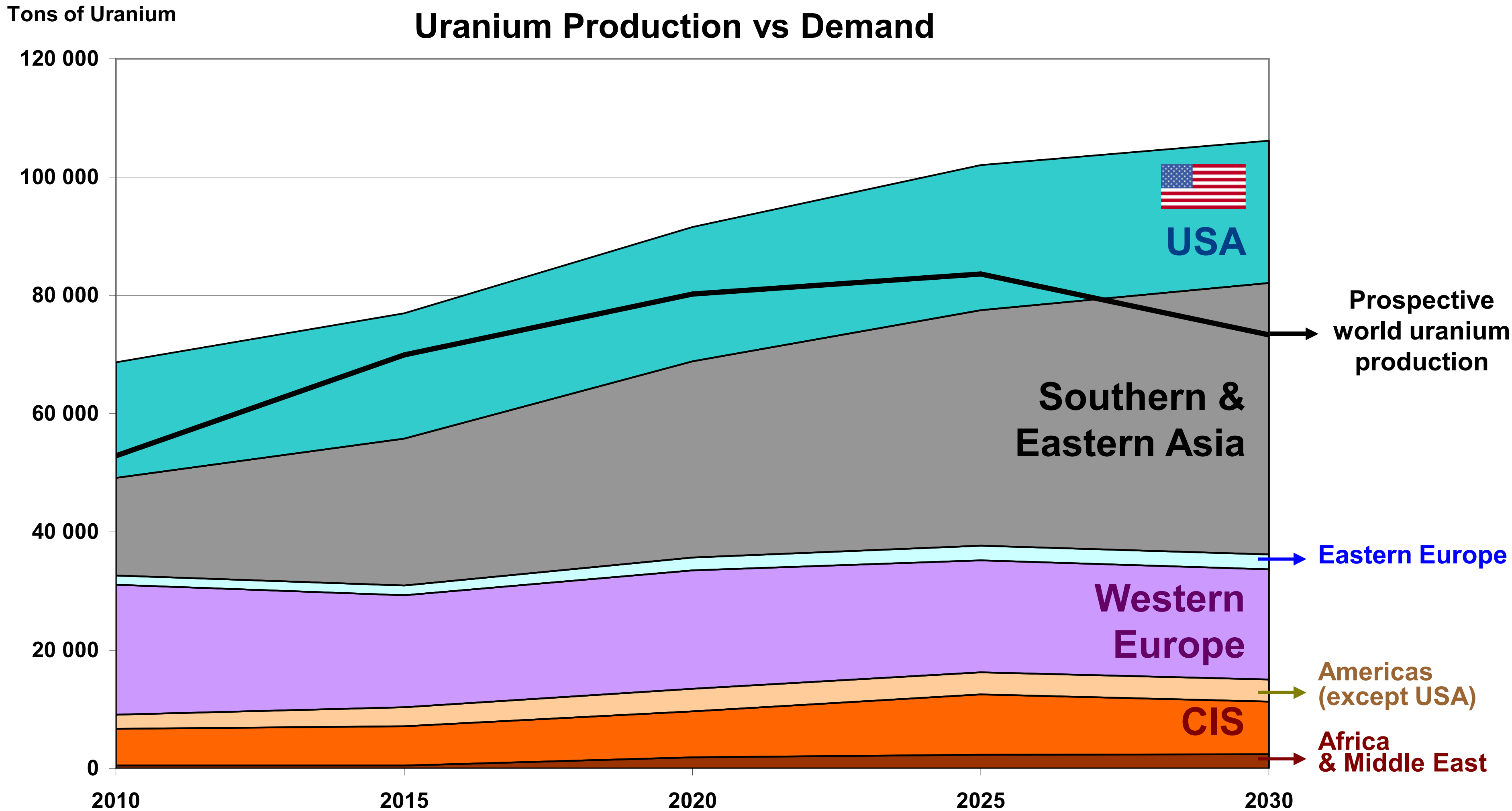
Worldwide greenhouse gas emissions from electricity generation



+ 2 000 Mt of CO_2 avoided each year by Nuclear power, equivalent to the emissions of the whole US transportation system

Source: AREVA analysis, World Energy Outlook 2007, International Transport Forum

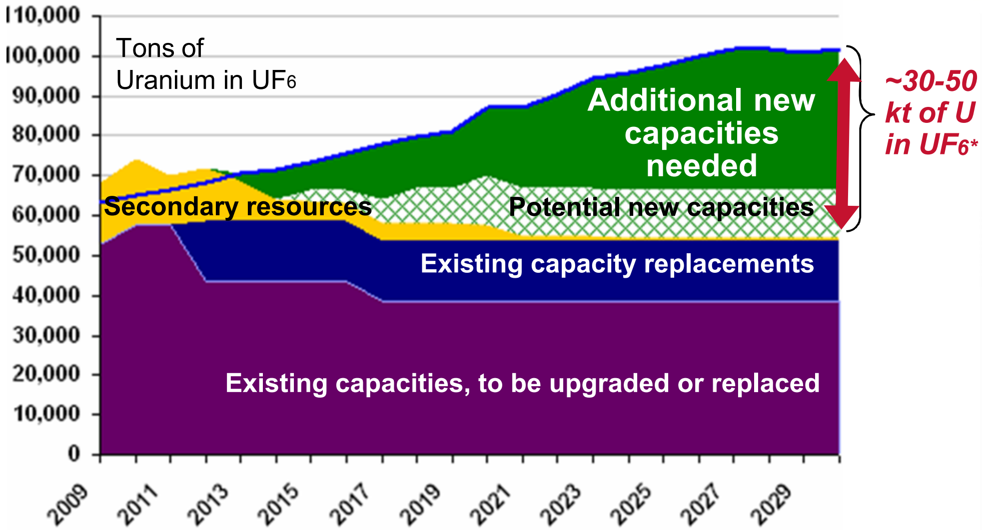
Market Outlook



WNA 2009, Uranium requirements by regions vs world uranium production, Ref. scenario

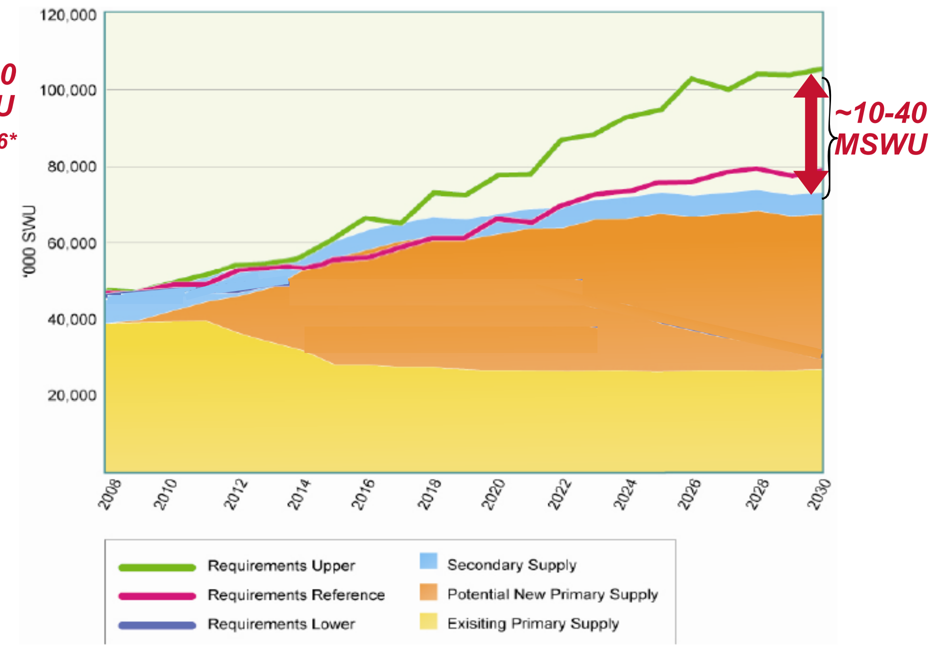
Market Outlook

Conversion Supply & Demand



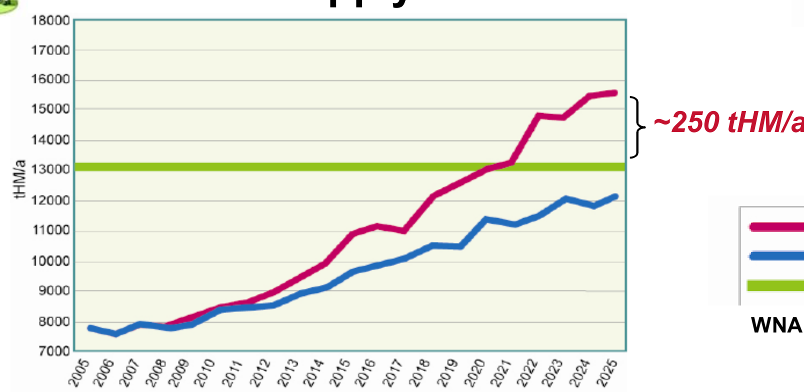
WNA 2009, Equivalent reactor needs, t of Uranium in UF6 Ref. scenario

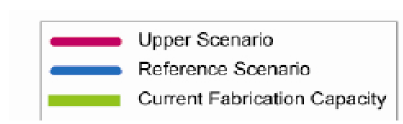
Enrichment Supply & Demand



WNA 2009, Enrichment Demand vs. Effective Capacity, '000 SWU

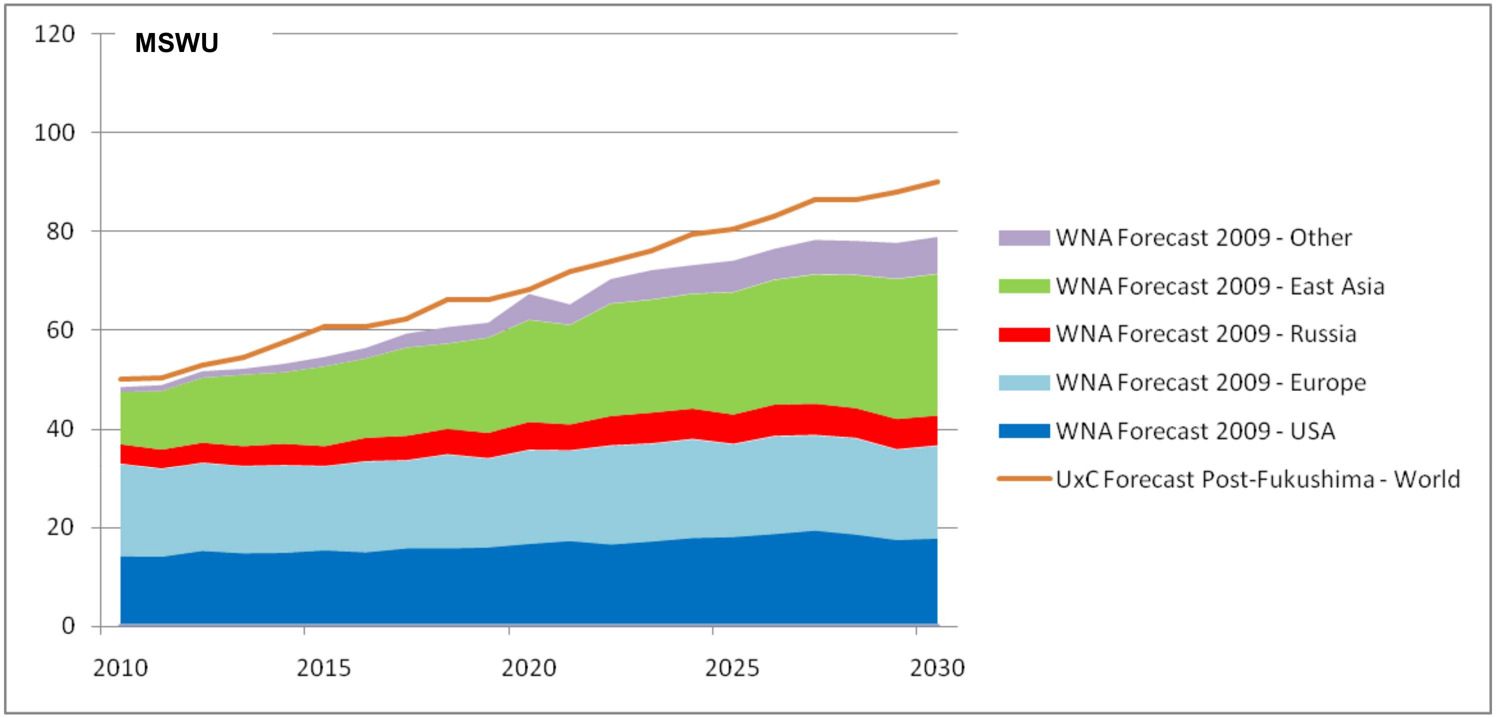
Fabrication Supply & Demand





WNA 2009, LWR fabrication demand, tHM/year

Enrichment Projections Post Fukushima

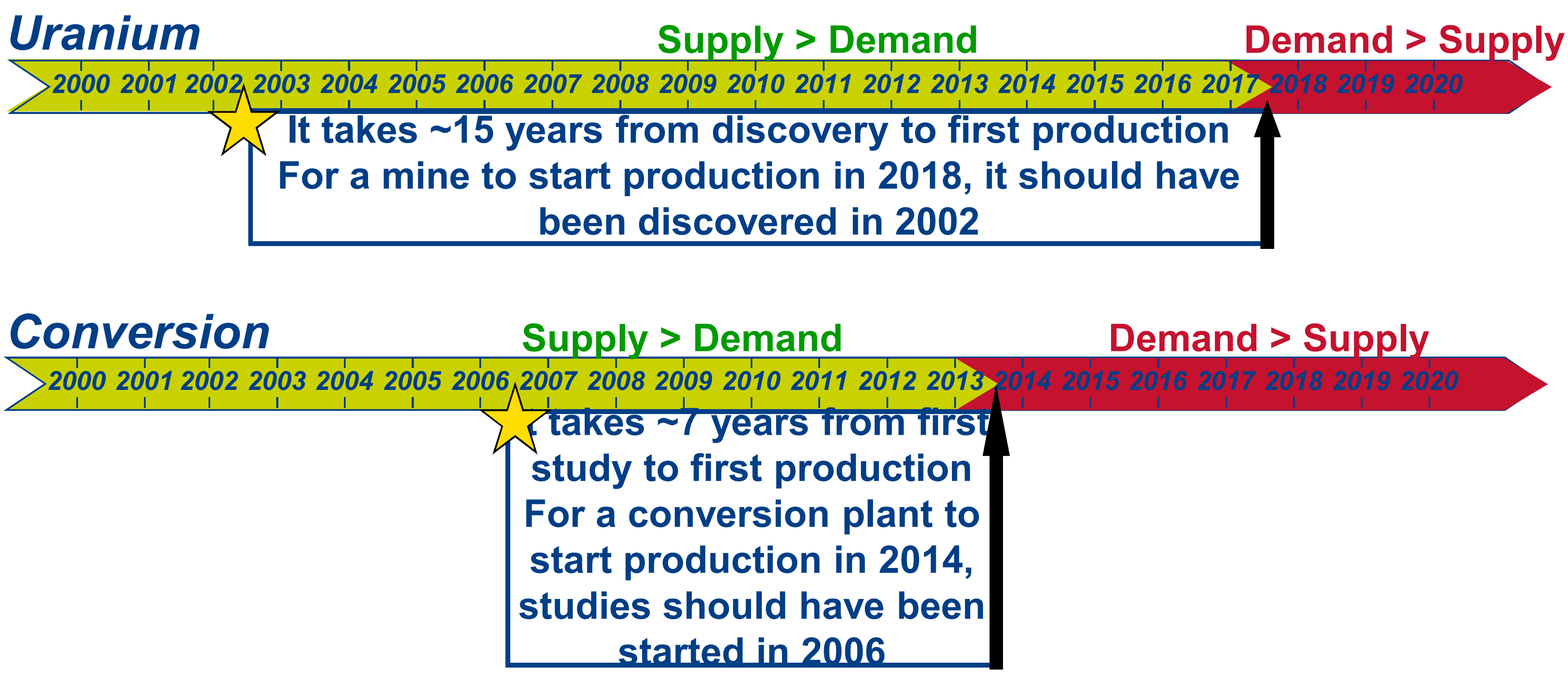


WNA 2009, Enrichment Demand – reference scenario

UxC 2011, Enrichment Demand – base case

- **Latest forecast, integrating the impact of Fukushima on enrichment demand, is higher than forecast as of 2009**

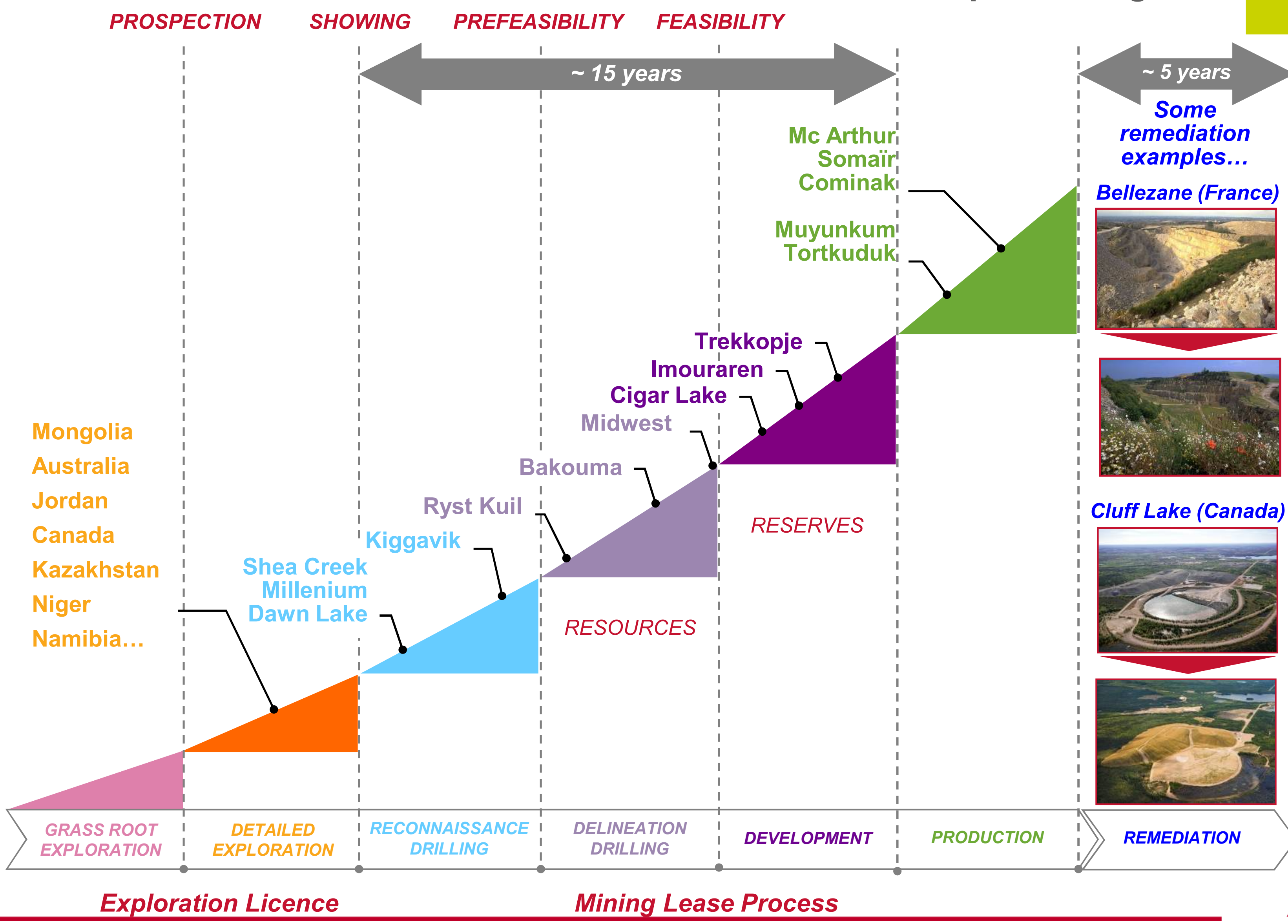
Security of supply: Timing is key



With regard to nuclear projects timeframe, future capacities should already be under construction

Uranium Mining

AREVA handles various mining projects at the same time and at different development stages…



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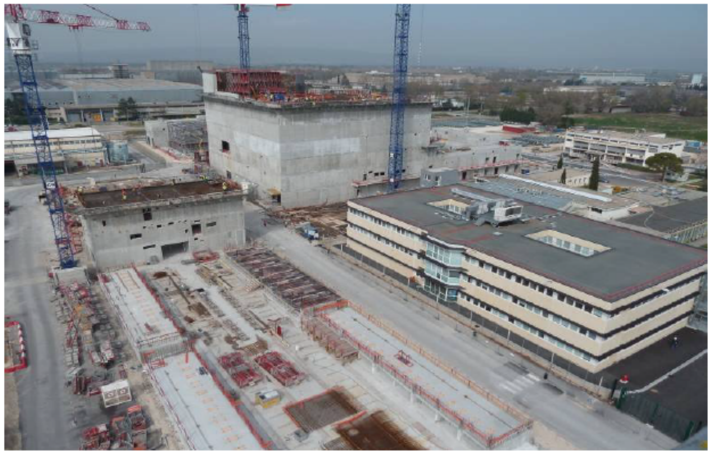
We are Investing

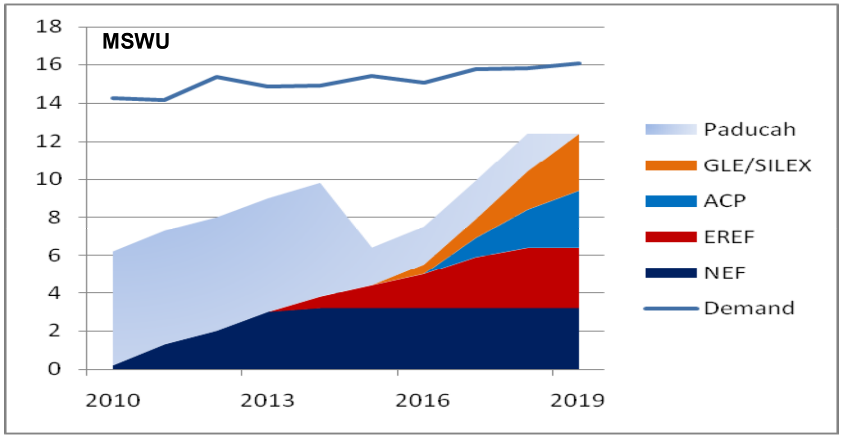


COMURHEX II construction

GBII: introduction of UF6

- **Conversion: COMURHEX II**
  - **Capacity:** 15,000 tU per year
  - **Investment:** > € 600M
  - **Planned production:** 2012
  - **Reach Full Capacity:** 2015
- **Enrichment: GBII**
  - **Capacity:** 7.5 million SWU per year
  - **Investment:** € 3 Billion
  - **Started UF6 operation:** Dec 2010
  - **Reach Full Capacity:** 2016

US Enrichment Capacity



Sources: WNA (reference scenario), UxConsulting

- Today 80% of enriched uranium is imported in the U.S.
- Current demand is about 12 million SWU
- Demand rises to 16.7 million SWU by 2020
- Multiple projects in various stages of planning and implementation
- Uncertainty around timing and success of projects

The Eagle Rock Enrichment Facility

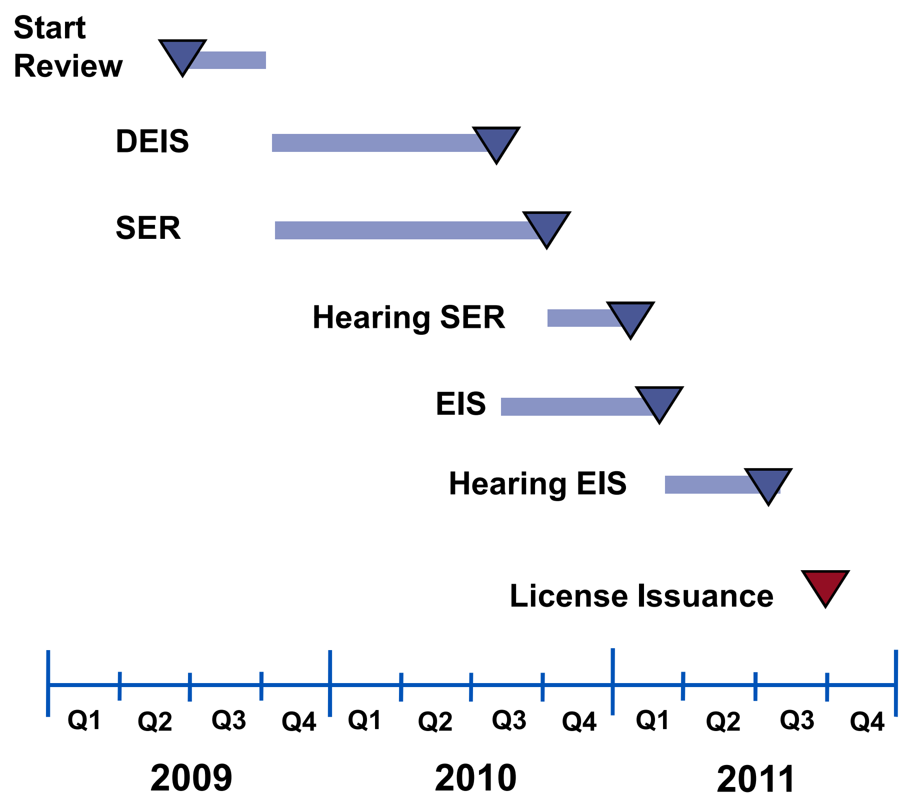
- State of the art gas centrifuge facility using the ETC centrifuge technology
- 18 Miles West of Idaho Falls, near the INL
- Initial build out to 3.2 MSWU
- COLA for 6.6 MSWU
- Strong US utility support with $5 billion in contracts
- Financing with a $2 billion DOE Loan Guarantee
- Substantial lessons learned from GBII

Licensing Process

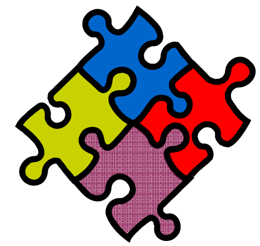
Public Hearing in Boise (August 2010)

Notable

- No contested hearing
- NRC approved QA program – graded quality
- NRC approved pre COL site works



Engineering, Procurement and Construction

	Cascades	Core Process	Balance of Plant	Coordination
				
Engineering	*ETC*	*AREVA*	*NTS*	*AREVA*
Procurement	*ETC*	*AREVA*	*URS*	*URS*
Construction / Manufacturing	*ETC*	*AREVA*	*URS*	*URS*
Site Installation	*ETC*	*URS*	*URS*	*URS*
Cold Commissioning	*ETC*	*AREVA*	*URS*	*AREVA*
Hot Commissioning	*ETC*	*AREVA*	*AREVA*	*AREVA*

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Securing the Fuel Supply

- Multiple supply sources both domestic and international enhances the security of supply
- Large investments are needed to maintain a healthy supply chain. Financing such investments is critical
- Projects take an average of a decade to go from a board room decision to commercial operation
- Disruptions to supply can cause extreme harm to the industry and result in significant fluctuations in pricing
- AREVA is investing globally to strengthen our supply chain in conversion, enrichment, and fuel fabrication
- Our strategy in the U.S. is to be a domestic supplier of both enrichment and fuel