



AREVA

forward-looking energy

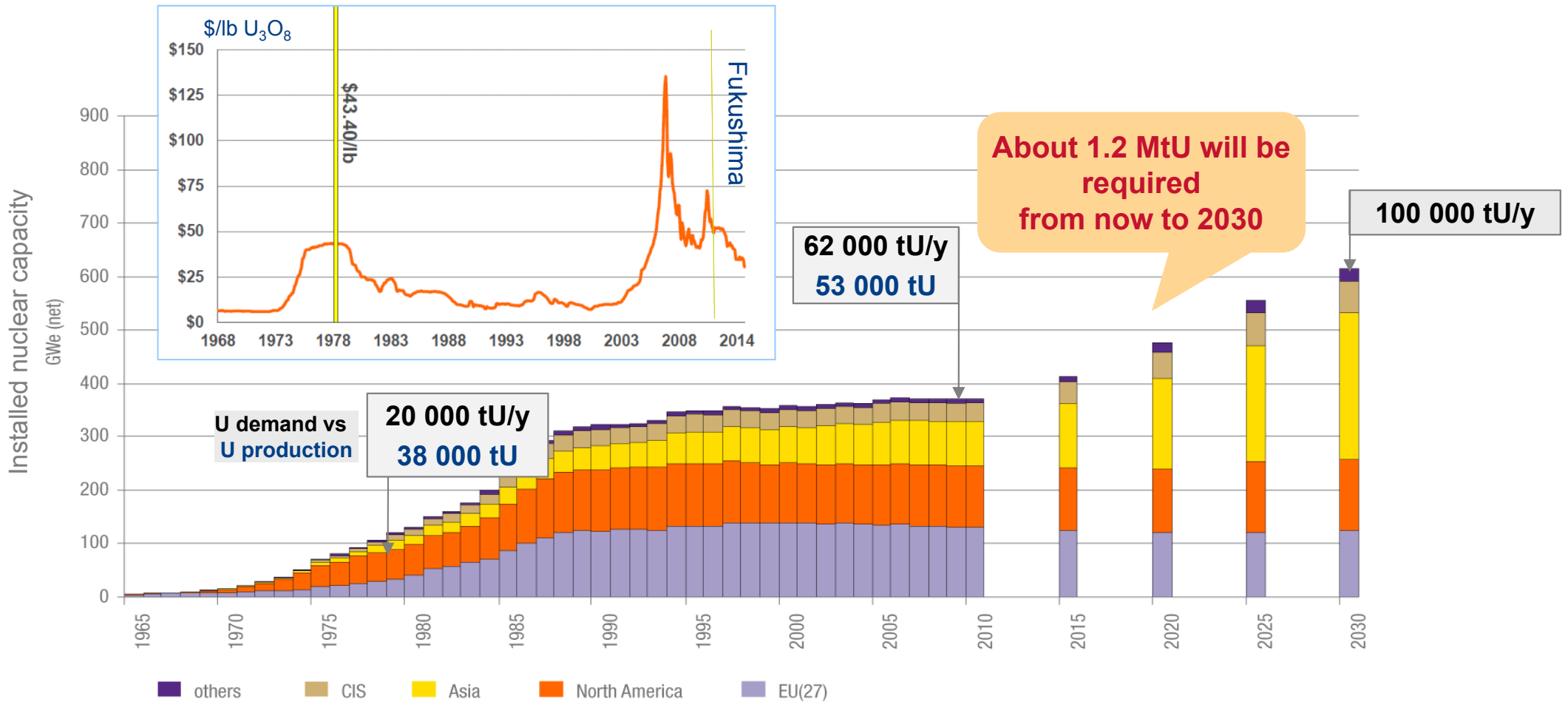


Uranium and Nuclear Market, the horizon post-Fukushima

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Uranium market history: the strong influence of anticipated world nuclear fleet evolution



Large stockpiling (production > requirements) in the 70s was followed by stockpile recycling in the 90s. From 2003 to 2007, expected Nuclear Renaissance induced again strong demand. Similar variations could occur in the future.

Source: data from WNA

Agenda

1 Post-Fukushima recent evolution and short-term outlook

2 Long-term view

3 Preparing the future

Change in installed nuclear capacity since 2011

▶ Shrinking installed fleet

◆ Fukushima linked decision

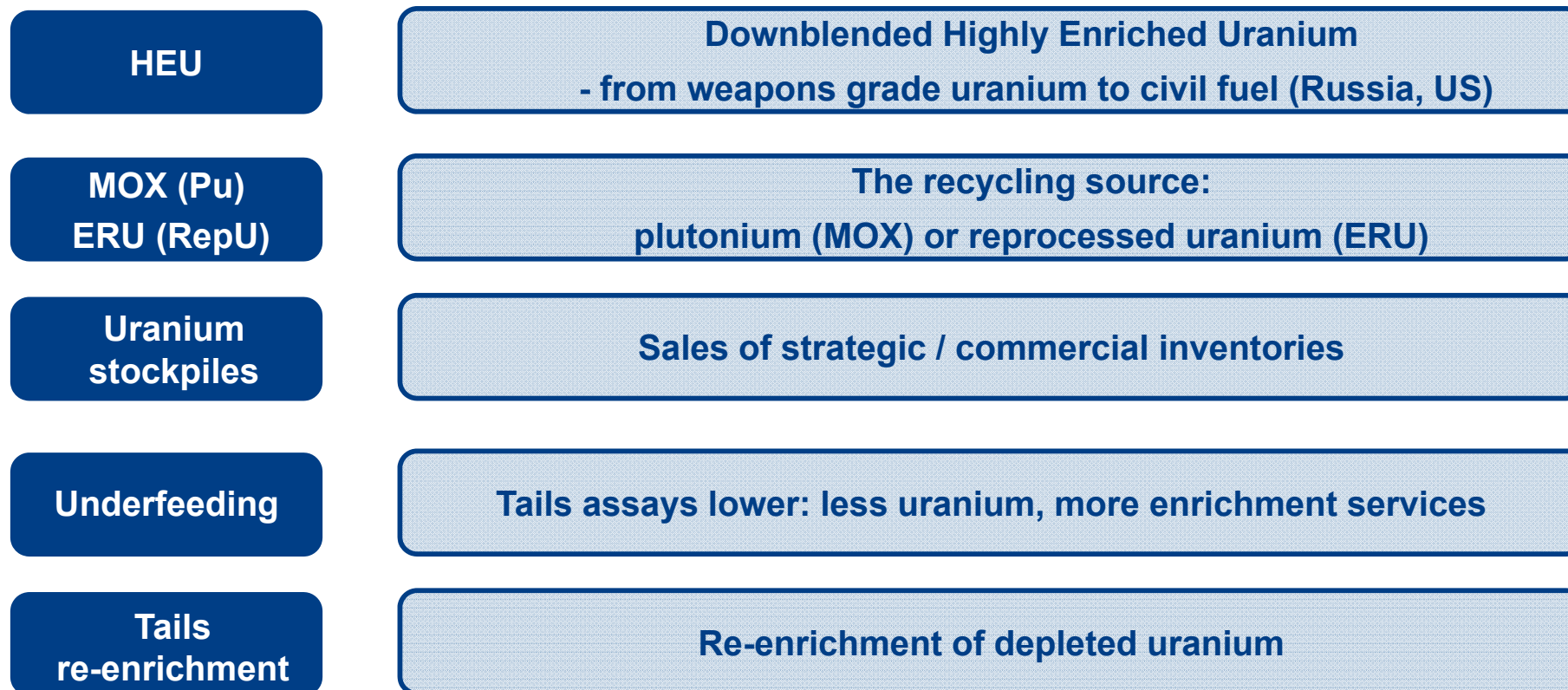
- **Germany:** phase out planned for 2022
- **Belgium:** government set dates for reactor closures (2015-2025)
- **Japan:** fleet shut down; nevertheless, safety reviews for restart
- **Switzerland:** new energy law draft, new build under question

◆ USA: 5 early shutdowns announcements in 2013-2014

▶ Some new build projects postponed

- ◆ **USA:** challenging under current electricity market conditions
- ◆ **Europe:** electricity prices and financing conditions are challenging in some countries (Bulgaria, Czech Rep,...)

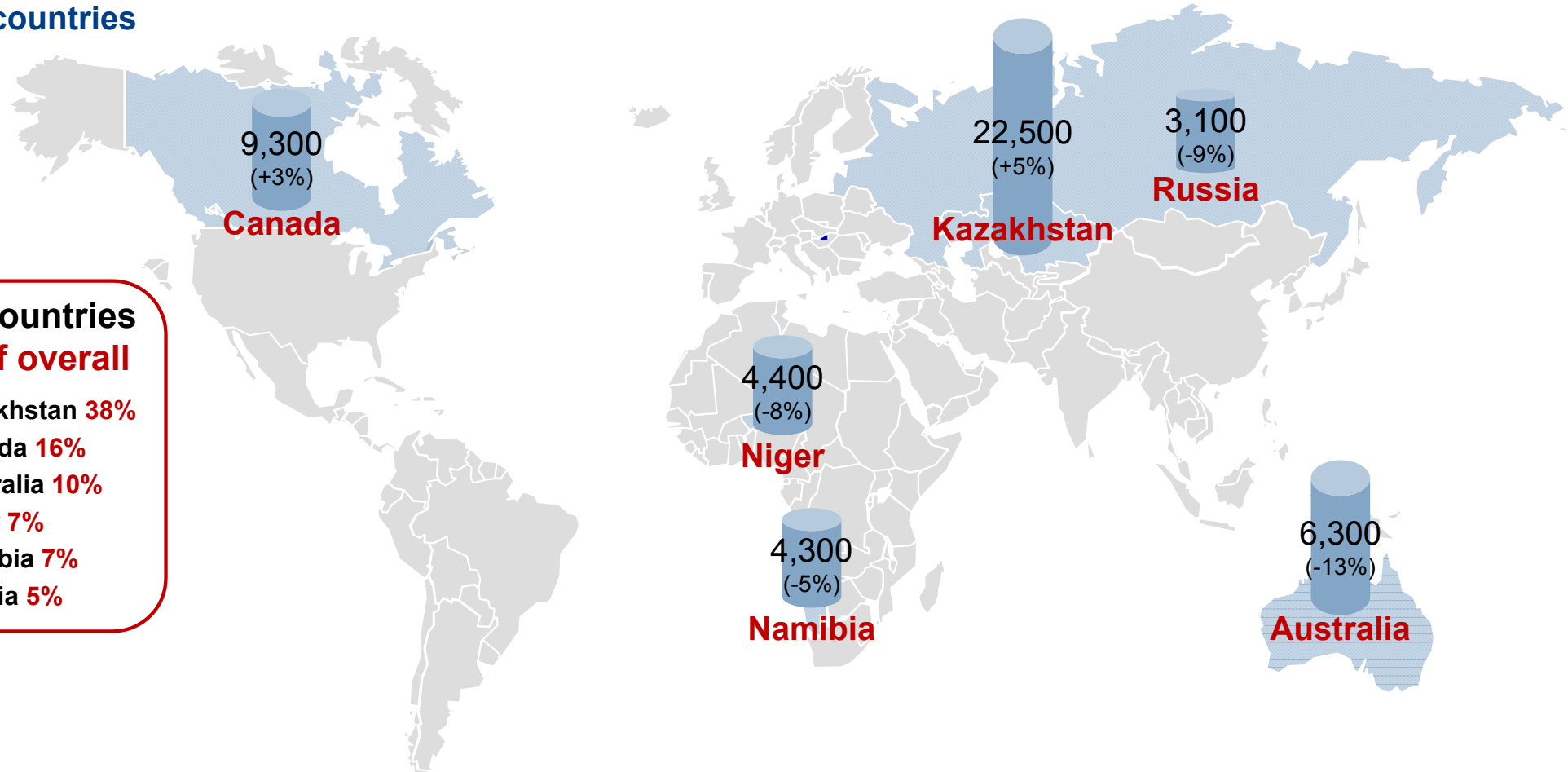
Uranium Supply from Secondary Sources



- HEU Russia-US agreement terminated in 2013
- Some sources are more easy to forecast – e.g. MOX or ERU (based on long term strategic/political decisions)
- Other are much more unpredictable – e.g. excess material disposition by governments (DOE, etc...)
- **About 19 ktU estimated uranium secondary supply in 2013 (WNA)**

2013 Uranium production

2013 U production (tU) and variations vs. 2012 (%)
Main countries



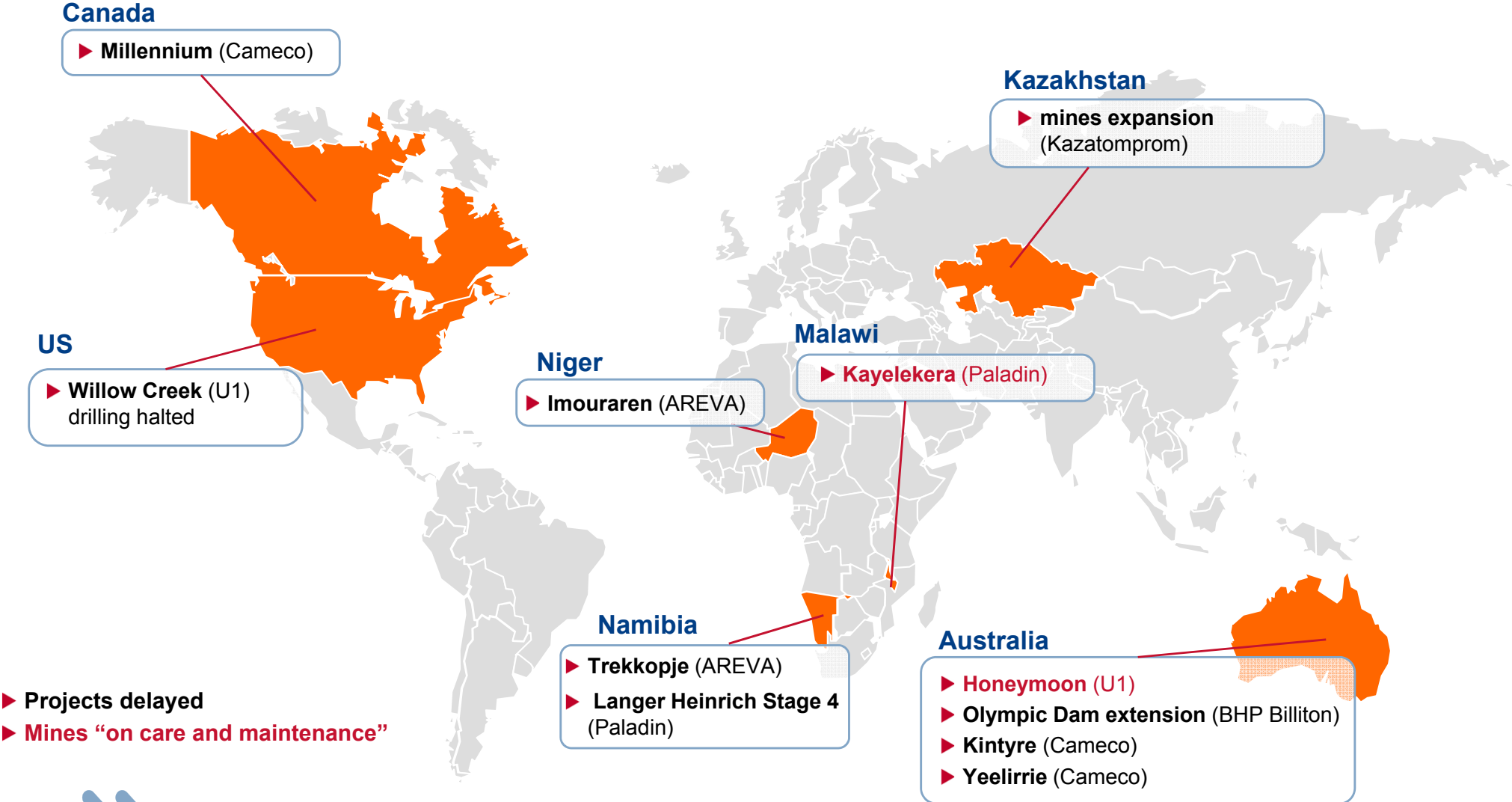
Top 6 countries 83 % of overall

1. Kazakhstan **38%**
2. Canada **16%**
3. Australia **10%**
4. Niger **7%**
5. Namibia **7%**
6. Russia **5%**

» Global uranium production at 59,000 tU in 2013 vs. 59,500tU in 2012, while it had grown +8% in 2012

Source: AREVA analysis based on publicly available data and AREVA estimates

Uranium producers adjusting supply to demand conditions



» Supply adjustments to adapt to low market prices

Agenda

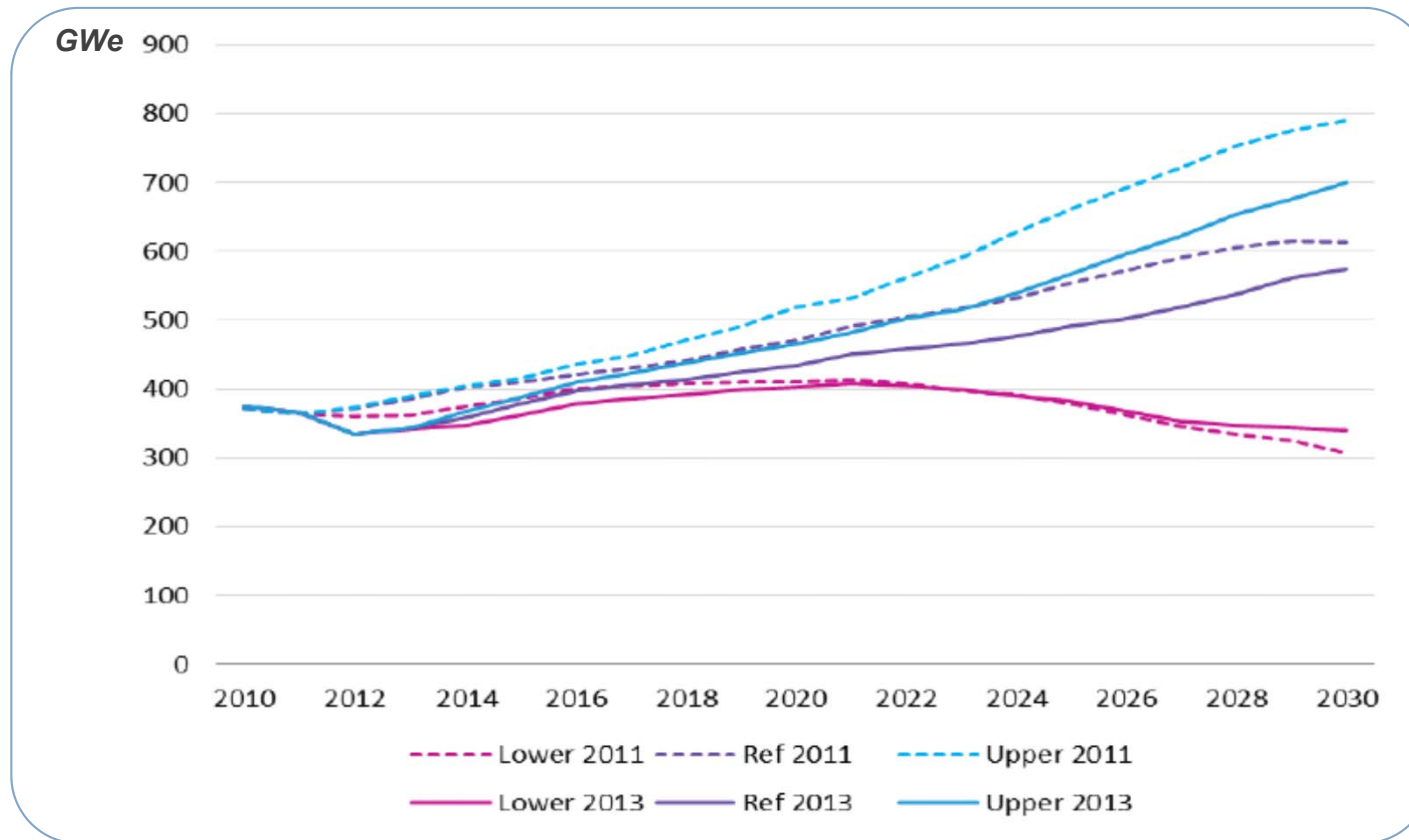
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Revised Nuclear Generation Projections

2013 vs 2011 projections of Nuclear generating capacity to 2030
(WNA Fuel Market report)



Upper and Reference scenario for nuclear capacity dropped by 11% and 6%
Reactor requirement projections adjusted accordingly

Current Rate of Construction close to 10 GW/year

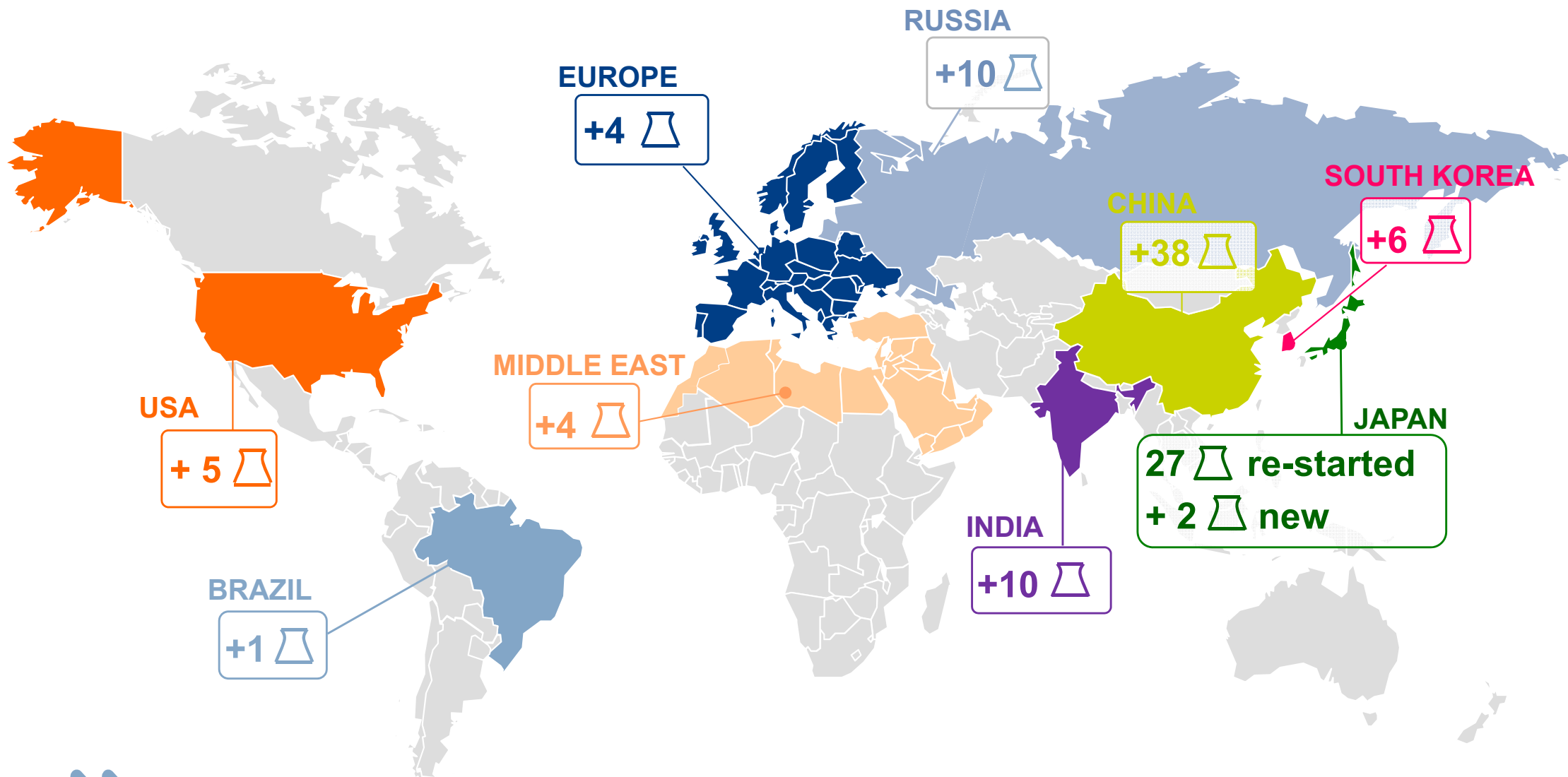


72 new reactors are currently under construction worldwide

Source : IAEA website, June 2014 – Retreated considering 1 research reactor in Argentina

World Nuclear Capacity set to Increase

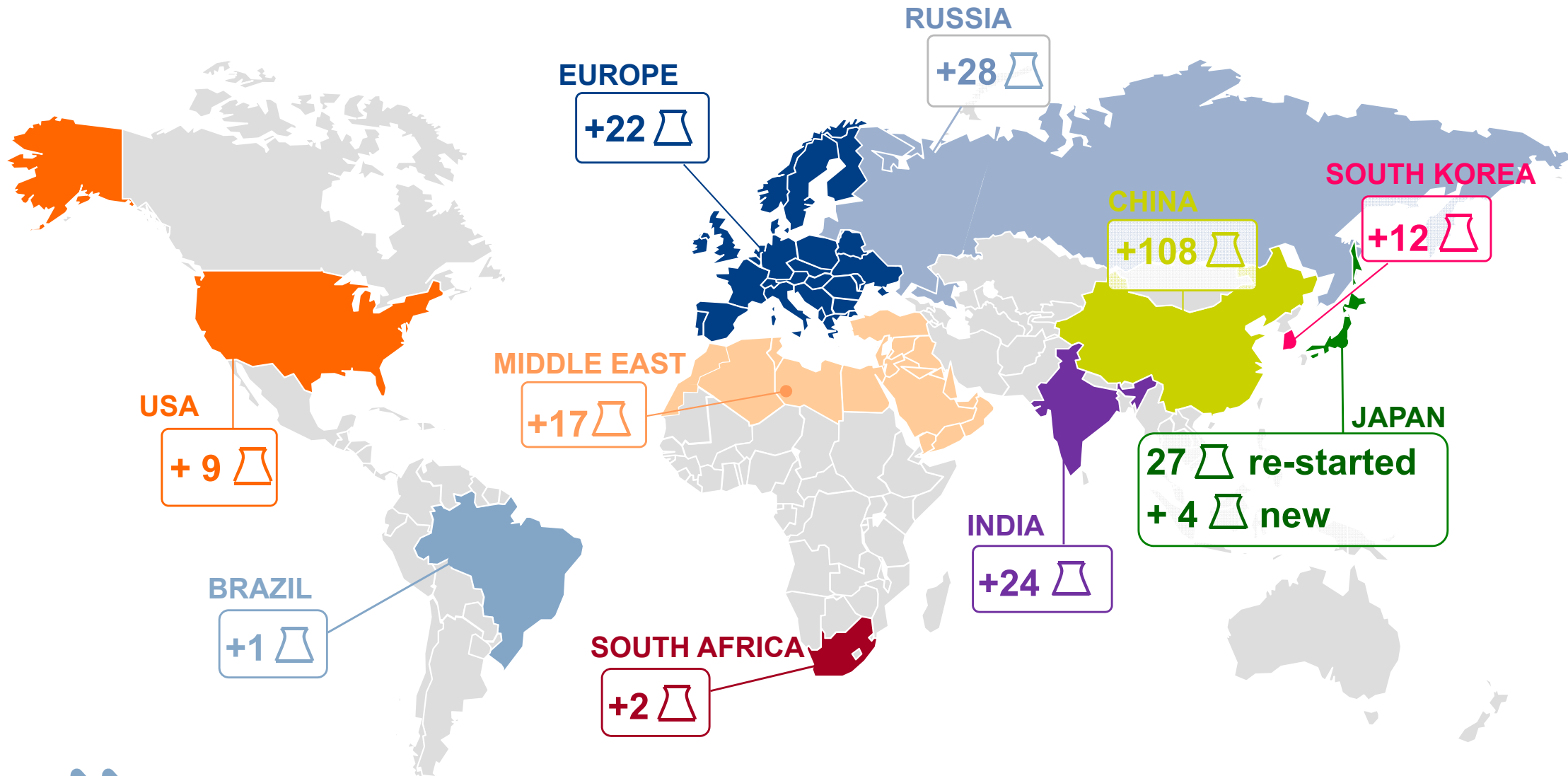
1. Number of reactors commissioned until 2020



» Nuclear capacity is projected to increase from ~330 GWe in 2012 to ~430 GWe in 2020 (WNA 2013 reference scenario)

World Nuclear Capacity set to Increase

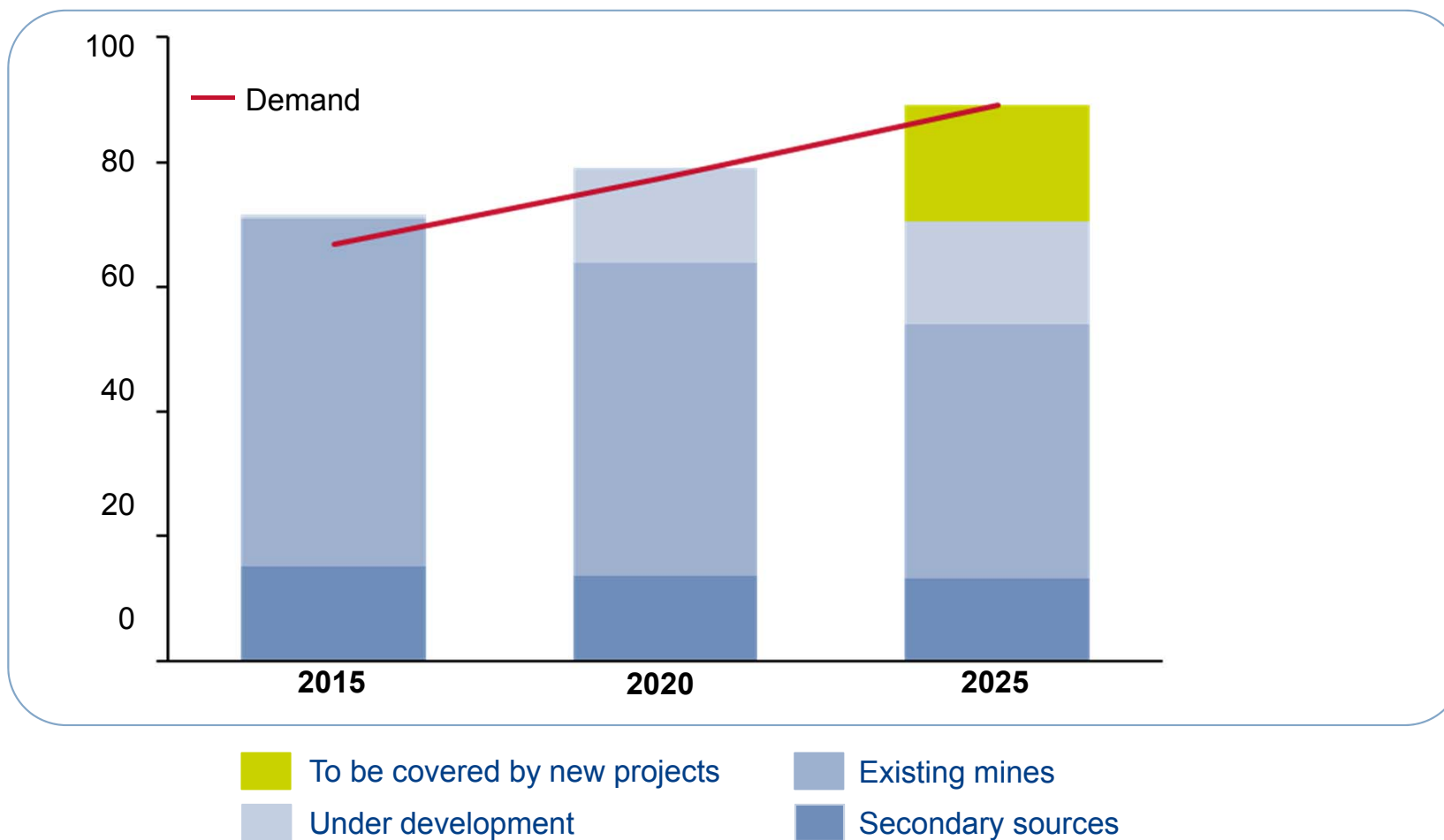
2. Number of reactors commissioned until 2030



» Nuclear capacity is projected to increase from ~330 GWe in 2012 to ~580 GWe in 2030 (WNA 2013 reference scenario)

Impact on future Uranium demand

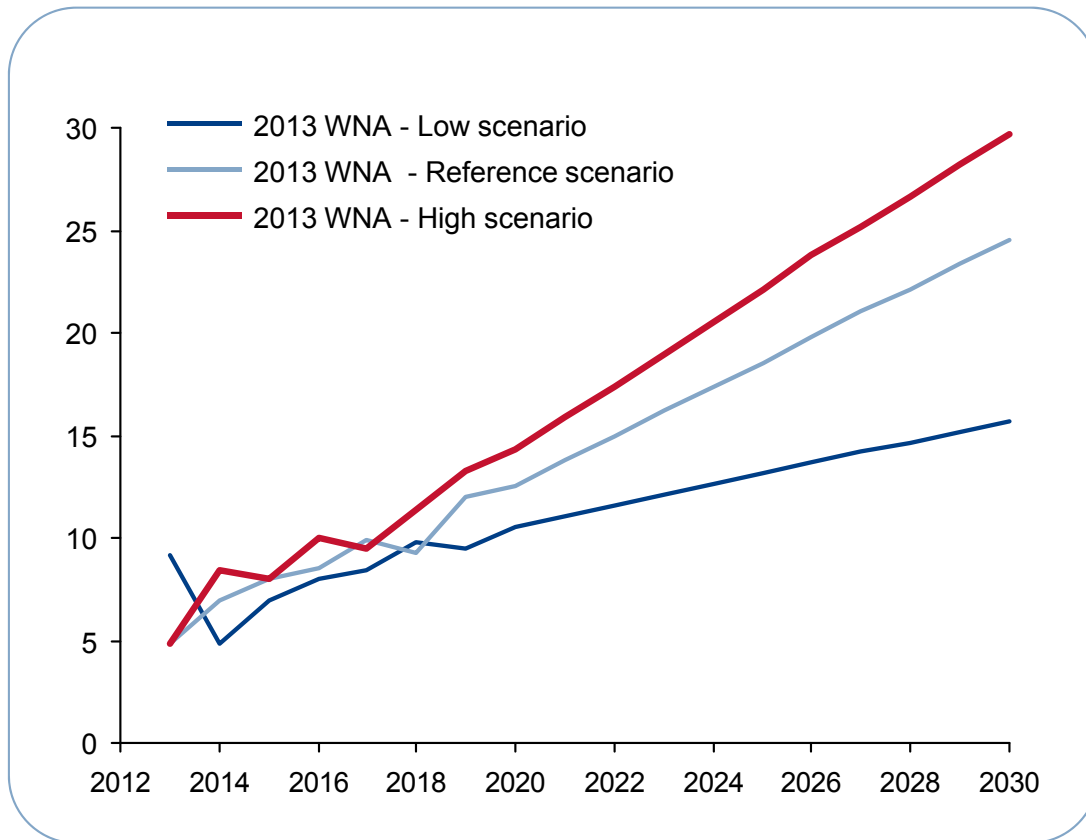
Uranium supply and demand equilibrium
(‘000 tU/yr)



Source : WNA 2013

Chinese market growing rapidly

China's Uranium reactors requirements (2013-2030, ktU)



China's uranium demand by 2030 may exceed ~1/4 of the global requirements

- Aggressive uranium supply strategy with 3 main sources:
1. mainland China production
 2. market purchases
 3. overseas production

Assumptions : tails assays at 0.22% in WNA model

2013 WNA Reference scenario assumed 58 GW by 2020 and 128 GW by 2030 for China's nuclear capacity

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Utilities are looking for reliable, sustainable suppliers

An adequate supply in quantity for today's and tomorrow's requirements

Respect of commercial commitments even in cases of production and delivery disruption

A guaranteed delivery of Uranium in due time

Safe & efficient transport with no negative image impact

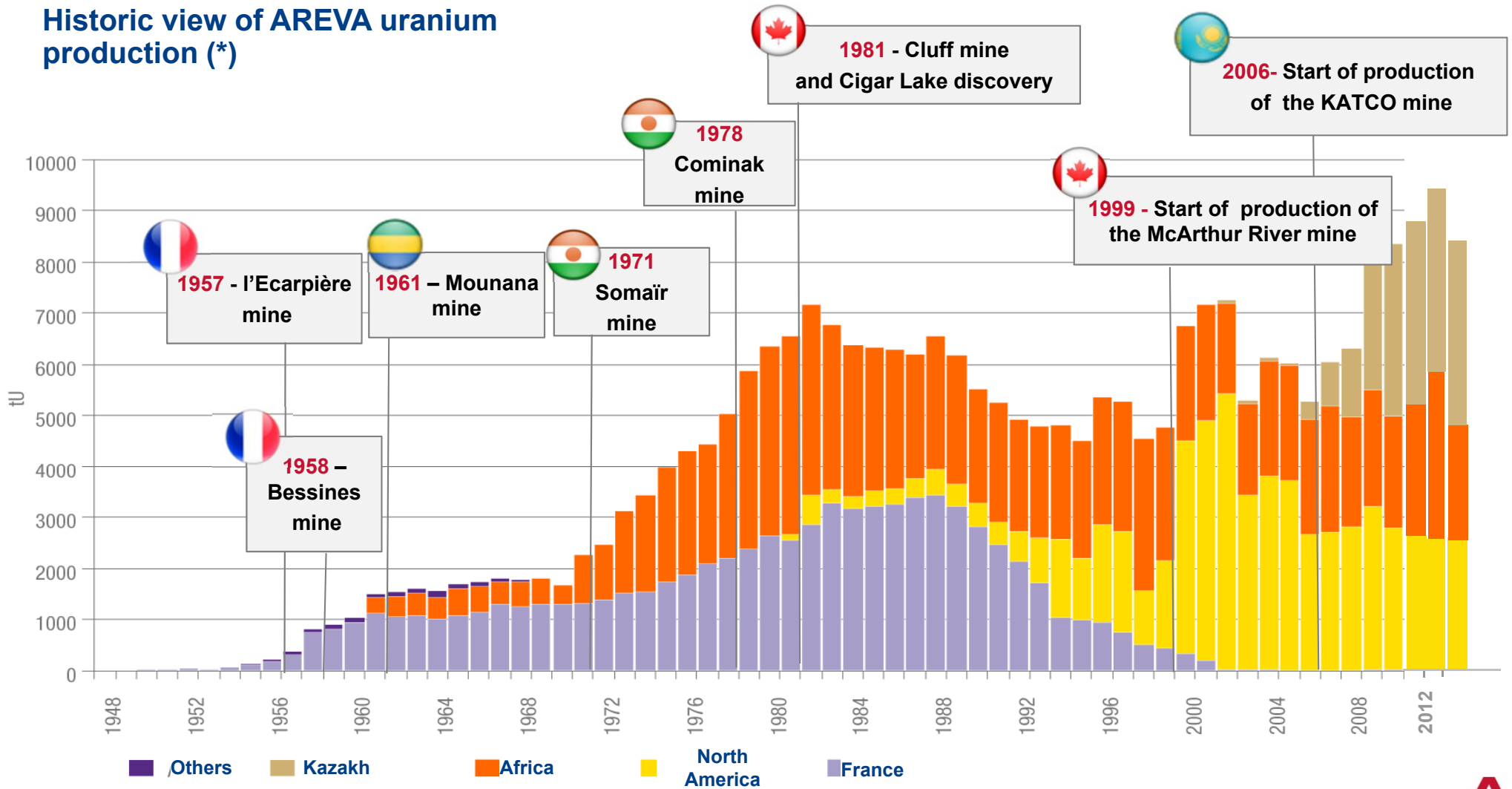
Competitive prices for fuel cycle products and services

Suppliers certifying respect of **environmental, social and governance** requirements



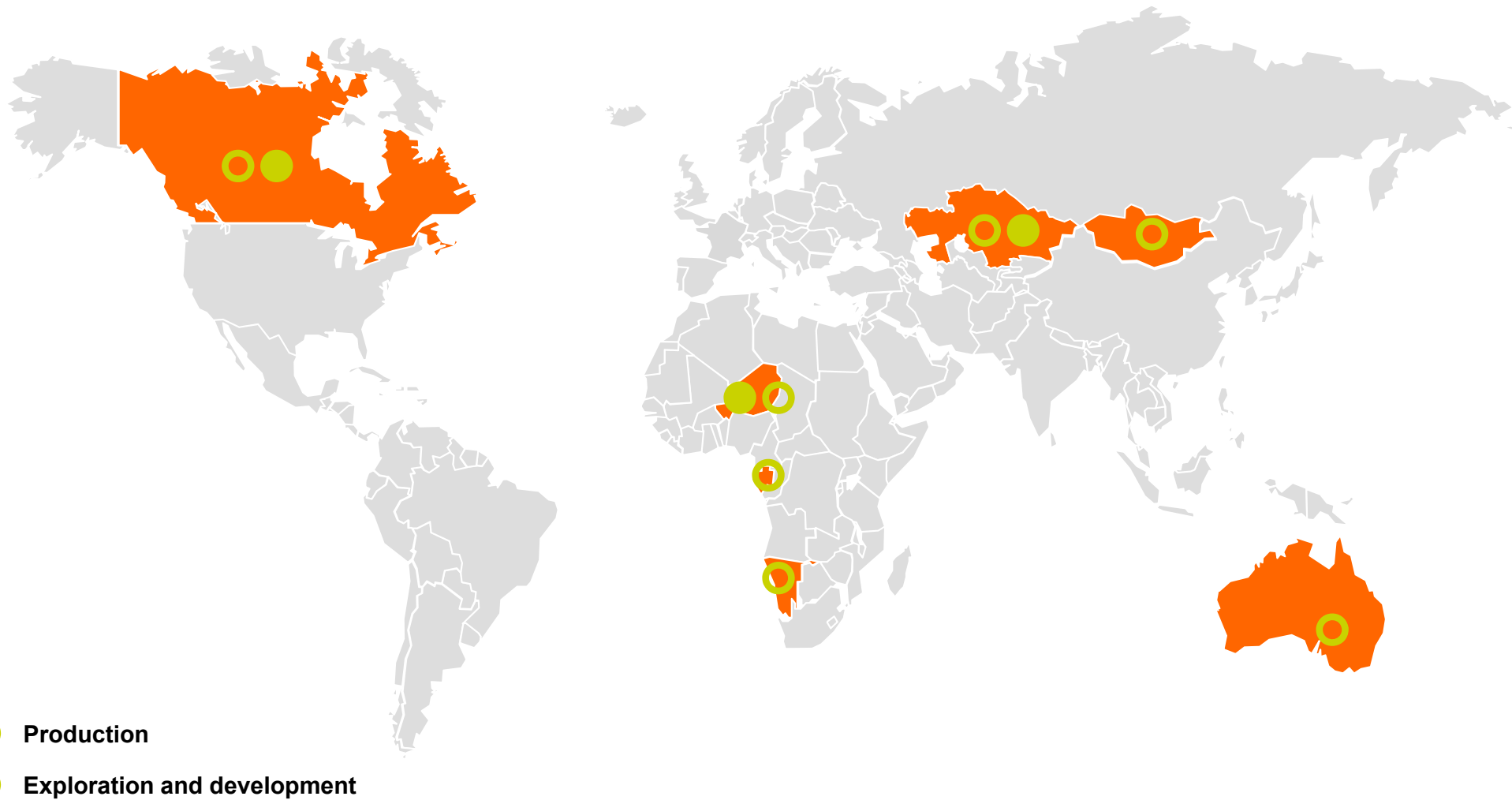
AREVA: 60-year history of Uranium supply

Historic view of AREVA uranium production (*)



(*) AREVA accessible share

Preparing the future: AREVA diversified portfolio of mining assets

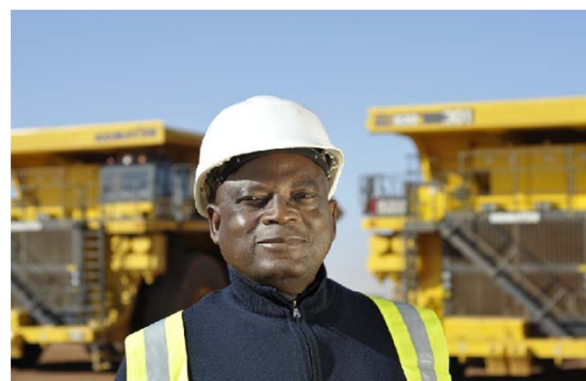


Five Factors Determine Mining Investment Decisions

- 1 Technical / Project ✓
- 2 Economics: ROI, duration of commitments ✓
- 3 Environment - Legal / Regulatory ✓
- 4 Stakeholders: local government & population ✓
- 5 Financing ✓

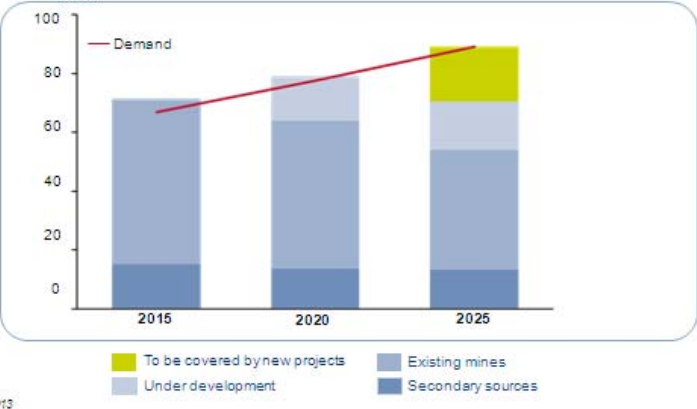
» AREVA investments for the next 40 years will be evaluated using these criteria

AREVA Mining activities: 5,200 people working for you



Impact on future Uranium demand

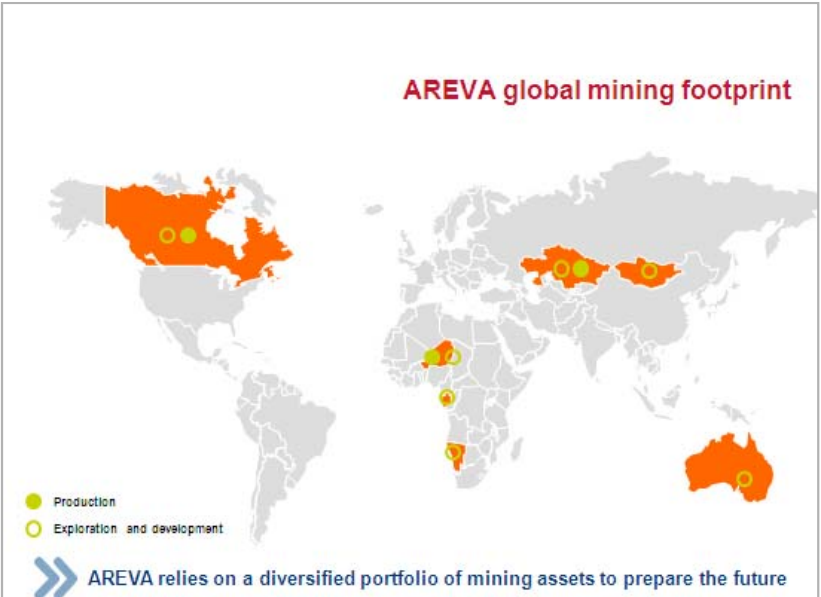
Uranium supply and demand equilibrium ('000 tU/yr)



Source : WNA 2013

Thank you for your attention!

AREVA global mining footprint



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AREVA investments for the next 40 years will be evaluated using these criteria