

# Uraniumletter INTERNATIONAL

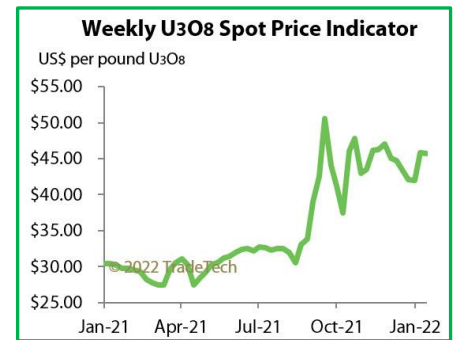
the international independent information and advice bulletin for uranium resource investments

January 2022

## Overviews as at January 31, 2022



Marino G. Pieterse, publisher and editor



### ► Big gap between market valuation and shareholders' value makes 2022 a challenging year

#### OVERVIEW of U3O8 PRICES

|                     | Spot  | Long-term |                          | Spot  | Long-term |
|---------------------|-------|-----------|--------------------------|-------|-----------|
| <b>2022</b>         |       |           |                          |       |           |
| January 31, 2022    | 43.15 | 42.75     | ► Year-end 2018          | 28.70 | 32.00     |
| ► Year-end 2021     | 42.05 | 42.75     | November 30 (high)       | 29.10 | 31.25     |
| November 29         | 46.00 | 43.00     | October 29               | 27.95 | 31.25     |
| October 29          | 45.20 | 43.00     | September 24             | 27.35 | 31.75     |
| September 30        | 42.60 | 42.50     | August 27                | 26.20 | 31.50     |
| September 17 (high) | 50.50 | 34.25     | July 31                  | 25.70 | 31.50     |
| August 31           | 34.25 | 34.25     | June 30                  | 22.55 | 29.00     |
| July 30             | 32.50 | 33.50     | May 28                   | 22.75 | 29.00     |
| June 28             | 32.10 | 33.50     | April 30 (low)           | 21.00 | 29.00     |
| June 18 (high)      | 32.50 | 33.50     | March 26                 | 21.10 | 29.50     |
| April 30            | 28.90 | 33.75     | February 26              | 21.25 | 30.00     |
| March 26            | 30.50 | 33.75     | January 29               | 21.88 | 30.00     |
| February 26 (low)   | 27.98 | 33.75     | ► Year-end 2017          | 22.32 | 30.67     |
| ► Year-end 2020     | 30.40 | 35.00     | December 4 (high)        | 26.50 | 31.00     |
| November 30         | 29.35 | 35.00     | September 27             | 20.25 | 31.50     |
| October 30          | 29.70 | 35.00     | June 26                  | 20.10 | 32.50     |
| September 30        | 30.00 | 35.00     | May 29 (low)             | 19.25 | 32.50     |
| August 31           | 30.85 | 35.00     | ► May 1                  | 22.50 | 33.00     |
| July 31             | 32.70 | 35.50     | March 27                 | 24.50 | 33.99     |
| June 30             | 33.20 | 35.50     | February 28              | 22.25 | 32.50     |
| June 1 (high)       | 34.25 | 35.50     | February 6               | 26.00 | 32.50     |
| April 30            | 33.20 | 32.50     | January 31               | 24.50 | 32.50     |
| March 30            | 27.35 | 32.50     | ► Year-end 2016          | 20.25 | 30.00     |
| March 20 (low)      | 23.95 | 32.50     | ► November 28 (low)      | 18.00 | 33.00     |
| February 21         | 24.70 | 32.50     | ► October 31             | 18.75 | 35.50     |
| January 31          | 24.45 | 32.50     | September 26             | 23.75 | 38.00     |
| ► Year-end 2019     | 25.00 | 32.50     | June 27                  | 27.00 | 40.50     |
| November 29         | 26.05 | 32.50     | March 28                 | 29.15 | 43.50     |
| October 31          | 24.85 | 31.50     | Year-end 2015            | 34.23 | 44.00     |
| September 30        | 25.80 | 31.00     | May 31, 2015 (high)      | 39.50 | 50.00     |
| August 30           | 25.30 | 31.50     | Year-end 2014            | 35.50 | 49.50     |
| June 28             | 24.30 | 31.00     | May 14, 2014 (low)       | 28.25 | 49.00     |
| May 27 (low)        | 24.10 | 32.00     | Year-end 2013            | 34.50 | 50.00     |
| April 30            | 25.20 | 32.00     | Year-end 2012            | 43.50 | 56.50     |
| February 28         | 28.60 | 32.00     | Year-end 2011            | 61.75 | 64.00     |
| January 31 (high)   | 28.85 | 32.00     | ► Pre-Fukushima accident |       |           |
|                     |       |           | March 11, 2011           | 67.75 | 73.00     |

source:

UxC and Trade Tech; average month prices calculated by Cameco

## ► **COP26 Summit** in Glasgow failed to give nuclear energy formal support to tackle critical goal of limiting warming to 1.5° C.

At the **COP26 Summit** in Glasgow, the climate crisis deepening and the need to transition away from fossil fuels become urgent, attitudes are changing; “clean” – that is carbon-free energy – which already accounts for 25%.

To have even a 50/50 chance of capping global warming at 1.5 degrees Celsius above pre-industrial levels, the threshold for dangerous tipping points that could trigger runaway warming, global greenhouse emissions must be slashed by almost half within a decade, scientists say.

But things are still moving in the wrong direction. A recent report by the **International Energy Agency (IEA)** said emissions in 2021 are approaching record levels and could reach new highs by 2023. That is helping to refocus attention on nuclear.

At the **2015 COP** in Paris, nuclear was not welcome, said Callum Thomis head of recruitment firm for nuclear energy. “There was a belief it was not needed. Now many countries are looking at the feasibility, especially with the rise in gas prices”.

From the time he took the IAEA’s helm nearly two years ago, Rafael Grossi, an Argentine diplomat, has been a tireless advocate for the industry. At his first COP in March “he went in spite of the general assumption that nuclear would not be welcome”. On the contrary in Glasgow, where nearly 200 countries were supposed to put flesh on the bone of the 2015 Paris Agreement, he said “nuclear is not only welcome, but generating a lot of interest”.

Grossi argues that the technology can not only speed the transition away from fossil fuels, but also power research on technologies needed for adapting the climate impacts from finding drought-resistant crops to eradicating mosquitos.

With the meltdown of three reactors at Japan’s Fukushima power plant in March in 2011, following an earthquake and specifically tsunami, profoundly shook confidence in nuclear, and the industry to find a safe way to dispense of nuclear waste to deal with the remaining highly radioactive waste, Grossi said these issues are not disqualifying arguing that statistically the technology has few negative consequences than many other forms of energy.

“To be considered as a complement to renewables, nuclear energy goes on and on for the entire year, it never stops” he added. With many power plants designed to run for 40 years are now licensed for 60 years to go further up to 80 years under strict national safety standards supervised by the IEA.

The United Nation’s climate science advisory panel, the **IPCC**, has also given a thumbs up for nuclear in its models, even as it says that “deployment could be limited to by social preferences”.

While **New Zealand** and **Germany** are opposed, **India** is in discussion with **French energy giant EDF** to build what would be the largest nuclear plant in the world and the **UK**, **Canada** and the **United States** are next to **China** and **Russia** developing **SMRs** (small reactors).

“Countries see in smaller units a very interesting alternative, which is not in the range of billion but of hundreds of millions” Grossi said. “When it comes to energy projects, this is quite affordable”.

## ► Political debate EU on whether to include nuclear and gas in the taxonomy thwarted by Germany

**In the third week of December 2021, EU internal market commissioner Thierry Breton told five European newspapers that it is a lie that the EU can become CO2 neutral without nuclear power.**

French President Emmanuel Macron said that **France** and **Germany** will try to find a compromise on whether the EU should label nuclear and gas as green investments.

But on December 20, the German Greens, part of the new ruling German coalition, came out strongly against nuclear, reiterating their opposition to the inclusion of nuclear in the taxonomy and suited the action to the world by having pulled the plug on three of its last six nuclear power stations as at December 31, 2021, as another step towards completing its withdrawal from nuclear power. Having turned the focus to renewables, the last three power plants will be turned off by the end of 2022.

Meanwhile, the EU commission 31 December spelled out criteria for green investment in “taxonomy” rules including science-based gas and nuclear.

Later this month the plans will probably be presented.

With France taking a different path than Germany in the use of nuclear energy and other countries doing as well, this demonstrates the failure of the EU to develop a common strategy that meets the climate targets of the 2015 Paris Agreement for the period 2030 – 2050.

Six years later, science findings have proved that nuclear power is the steadiest, safest and long-term lowest-cost provider of clean energy, compared to renewable energy from wind and sun. This outcome is enhanced by innovations leading to extending the life of operating reactors from 60 to at least 80 years, and the construction of effective mobile low-cost small reactors (SMRs).

From this perspective, it should also be noticed that the bureaucratic structure of the **EU Commission** has faced backlash in the past from some of its members, including one of the signatories of the Petition, for allowing gas and nuclear to be considered in what was meant to be a science-led exercise.

This time the current **Sustainable Finance Platform**, a group of 57 NGOs, scientific and financial experts, will prevent a fruitful strategic solution.

## ► Thirteen members of the EU commission’s Technical Expert Group (TEG) put out a petition calling on nuclear energy not to be labeled as “green”

“We recommend that nuclear fission has no place on the EU taxonomy of sustainable activities”, the group led by Dawn Slevin, a financial expert and core member of the commission’s financial stability TEG wrote.

**Designing with the “do no significant harm” principle in the taxonomy**, they concluded nuclear may damage the environment due to the need to store it in underground bunkers for thousands of years, and “because of the risk of severe nuclear accident cannot be excluded, even in the best commercially available nuclear power plants”.

They also warn against polarization in the rules. Proponents of nuclear energy use the taxonomy to put a “scientific” stamp what is primarily a political position on nuclear fission energy “aiming to satisfy the new EU member states that wish to promote the associated technology”, the petition states.

**France** is spearheading an alliance of 10 member states that argue that nuclear fission and gas-fired power plants should be included in the taxonomy.

The TEG members point out that France and Finland are currently the only EU countries actively building nuclear facilities.

The group included Paolo Mason, a nuclear engineer and Eric Lases, a post-doctoral researcher specializing in atomic energy at the Technical University of Eindhoven, the Netherlands.

## ► Security fears in UK over **China** general nuclear involvement

In a battle to keep **China** out of its nuclear plants amid concerns about involvement of **China General Nuclear** in plans to build the £ 20 billion **Sizewell Nuclear Power Plant**, thereby getting access to key British infrastructure projects, UK ministers eye the plan to buy a stake in Sizewell C over security fears about outside investment, as emerged in ministers discussions in July 2021.

The UK Government is deciding whether to buy equity in Sizewell C or invite outside investors. Funding talks for the Sizewell plant are said to be ongoing with **Électricité de France (EDF)**, main company involved to the plans, but sources said all options remain on the table.

Concerns are also growing about China's approach to human rights following a major clampdown in Hong Kong and treatment of Uighur minorities in Xinjian, along with recent treatments to Taiwan.

Foreign Secretary Dominic Raab said already last year the UK could no longer conduct "business as usual" with Beijing. It follows the discussion to force Chinese telecoms equipment maker Huawei out of Britain's 5G network. But any more to limit China's role in nuclear energy is likely to provoke further tension.

## ► Poland plans to deploy up to 6 nuclear reactors by 2040

On December 30, 2021, it was announced that the Polskie Elektrownie Jądrowe (PEJ) – Polish Nuclear Power Plants, the government company responsible for plans to deploy **up to 6 reactors at multiple sites by 2040**, has selected the coastal location of Lubiatowo-Kopalino in the Choczewo commune in Poverania near Wyherowo for the first reactor.

In the first quarter of 2022, an environmental impact statement will be submitted to the General Director of Environmental Protection. The **Energy Policy assumes that the first nuclear power plant unit will be put into operation in 2033**.

'We are operating as planned and the choice of location confirms this. Poland needs nuclear energy, and the construction of the first power plant of this type in Poland is important for the entire country, both in terms of energy transformation and security of energy supply', said Anna Moskwa, Minister of Climate and Environment.

The study initially investigated 92 potential sites that were assessed on "factors such as land characteristics, cooling water available, location in relation to areas covered by forms of nature protection, including **Natura 2000** sites, and existing and expandable infrastructure elements, such as energy road and rail networks", **PEJ** noted.

**Natura 2000 is a coordinated network of protected habitats within the European Union.**

Under the Polish Nuclear Power programme **Poland** plans to build modern but proven and large pressurized water reactors. The **Polish Energy Policy 2040 assumes that in 2033 the first unit with a capacity of between 100 Mwe and 1600 Mwe will begin operation**. The next units will be implemented every two of three years.

**The programme involves the construction of 6 units with a capacity of up to 900 Mwe. The Polish government expects that any partner in the programme will take up 49% share in a special company and will provide adequate financing and will participate not only in the construction but also in the operation of the plants.**

- ▶ **Nuclear energy** as the world's largest clean electricity generation source is essential part of solution to lower global warming
- ▶ **EU "Green Deal" plan not feasible due to familiar controversies on the acceptance of nuclear as a clean energy source**

The overview below demonstrates that of the total number of 106 reactors operable, 87 are located in Western countries and 19 in Eastern European countries.

Looking ahead, only 2 reactors are under construction and one reactor is planned. For **Eastern Europe** these numbers are 2 and 6, respectively.

Furthermore, the overview attracts attention because of **Germany** and **Belgium** having decided to phase out nuclear energy, they are confronted with the impact of a strong increase of gas prices, which might lead to a change in strategy. From such a perspective it is also to be noticed that **the Netherlands** having turned against nuclear since having built only one operating reactor since 1973, is recently searching the options for building a second big reactor and two small reactors.

**As neighboring countries, in my view, the three countries should go for a joint strategic block, which would save the expenditure of billions of Euros compared to operating apart.**

| WORLD NUCLEAR POWER REACTORS & URANIUM REQUIRED (as at December 2021)  |                   |                             |                  |                                      |                       |                                  |                       |
|--|-------------------|-----------------------------|------------------|--------------------------------------|-----------------------|----------------------------------|-----------------------|
| Country  | Reactors operable | Reactors under construction | Reactors planned | Nuclear electricity generation (TWh) | in % total generation | Uranium required 2021 (tonnes U) | % in uranium required |
| <b>European Union</b>  |                   |                             |                  |                                      |                       |                                  |                       |
| ▶ <b>Western countries (7)</b>   |                   |                             |                  |                                      |                       |                                  |                       |
| France   | 56                | 1                           | 0                | 338.7                                | 70.6                  | 8,233                            |                       |
| Belgium  | 7                 | 0                           | 0                | 32.8                                 | 39.1                  | 790                              |                       |
| Spain  | 7                 | 0                           | 0                | 55.8                                 | 22.2                  | 1,221                            |                       |
| Sweden   | 6                 | 0                           | 0                | 47.4                                 | 29.8                  | 914                              |                       |
| Germany  | 6                 | 0                           | 0                | 60.9                                 | 11.3                  | 521                              |                       |
| Finland  | 4                 | 1                           | 1                | 22.4                                 | 33.9                  | 421                              |                       |
| Netherlands  | 1                 | 0                           | 0                | 3.9                                  | 3.3                   | 69                               |                       |
| <b>Subtotal</b>  | <b>87</b>         | <b>2</b>                    | <b>1</b>         | <b>561.9</b>                         |                       | <b>12,169</b>                    |                       |
| ▶ <b>Eastern Europe (6)</b>  |                   |                             |                  |                                      |                       |                                  |                       |
| Czech Republic   | 6                 | 0                           | 1                | 28.4                                 | 37.3                  | 706                              |                       |
| Slovakia   | 4                 | 2                           | 0                | 14.4                                 | 37.8                  | 359                              |                       |
| Hungary  | 4                 | 0                           | 2                | 15.2                                 | 48.0                  | 320                              |                       |
| Bulgaria   | 2                 | 0                           | 1                | 15.9                                 | 40.8                  | 322                              |                       |
| Romania  | 2                 | 0                           | 2                | 10.6                                 | 19.9                  | 185                              |                       |
| Slovenia   | 1                 | 0                           | 0                | 6.0                                  | 37.8                  | 127                              |                       |
| Poland   | 0                 | 0                           | 6                | --                                   | --                    | --                               |                       |
| <b>Subtotal</b>  | <b>19</b>         | <b>2</b>                    | <b>12</b>        | <b>79.5</b>                          |                       | <b>2,019</b>                     |                       |
| <b>Total EU</b>  | <b>106</b>        | <b>4</b>                    | <b>13</b>        | <b>6,414</b>                         |                       | <b>14,188</b>                    |                       |
| ▶ <b>Major nuclear power reactors outside EU</b>   |                   |                             |                  |                                      |                       |                                  |                       |
| USA  | 93                | 2                           | 3                | 789.9                                | 19.7                  | 17,587                           |                       |
| China  | 52                | 17                          | 37               | 344.7                                | 4.9                   | 9,563                            |                       |
| Russia   | 38                | 3                           | 3                | 201.8                                | 20.6                  | 5,925                            |                       |
| South Korea  | 24                | 4                           | 4                | 152.6                                | 29.6                  | 4,270                            |                       |
| India  | 23                | 8                           | 12               | 40.4                                 | 3.3                   | 977                              |                       |
| Canada   | 19                | 0                           | 0                | 92.2                                 | 14.6                  | 1,492                            |                       |
| Japan <sup>x</sup>   | 9                 | 2                           | 1                | 43.0                                 | 5.1                   | 1,396                            |                       |
| United Kingdom   | 15                | 2                           | 0                | 45.9                                 | 14.5                  | 1,259                            |                       |
| Ukraine  | 15                | 2                           |                  | 71.5                                 | 51.2                  | 1,876                            |                       |
| <b>Subtotal</b>  | <b>288</b>        | <b>40</b>                   | <b>60</b>        | <b>1,782.0</b>                       |                       | <b>44,345</b>                    |                       |
| <sup>x</sup> Japan's plan is to generate 20% of nuclear energy generation by 2030 from a depleted fleet since the Fukushima accident on March 11, 2011. Currently, 42 reactors are operable, with 10 having restarted since and 16 reactors currently in the process of restart approval |                   |                             |                  |                                      |                       |                                  |                       |
| <b>World total, of which:</b>  | <b>440</b>        | <b>56</b>                   | <b>99</b>        | <b>2,553.0</b>                       |                       | <b>62,496</b>                    |                       |
| <b>European Union in % world total</b>   | <b>24</b>         | <b>7</b>                    | <b>13</b>        | <b>641.4</b>                         | <b>25</b>             | <b>14,188</b>                    | <b>21.8</b>           |
| <b>major countries outside EU in % world total</b>   | <b>65</b>         | <b>87</b>                   | <b>60</b>        | <b>1,782.0</b>                       | <b>70</b>             | <b>44,345</b>                    | <b>70.9</b>           |
| <b>The reference scenario in the 2019 edition of the Nuclear Fuel Report has 154 reactors closing by 2040 and 289 new ones coming online</b>   |                   |                             |                  |                                      |                       |                                  |                       |
| source: WNA  |                   |                             |                  |                                      |                       |                                  |                       |

| <b>Top 10 global uranium producers by country</b> |                              |               |                         |
|---|------------------------------|---------------|-------------------------|
| <b>Country</b>                                    | <b>Production from mines</b> |               | <b>Uranium required</b> |
|   | <i>(tonnes U)</i>            |               | <i>(tonnes U)</i>       |
|   | <b>2020</b>                  | <b>2011</b>   | <b>2021</b>             |
| Kazakhstan  | 19,477                       | 19,451        | 0                       |
| Australia   | 6,203                        | 5,983         | 0                       |
| Nambia  | 5,413                        | 3,258         | 0                       |
| Canada  | 3,885                        | 9,145         | 1,492                   |
| Uzbekistan (est)                                  | 3,500                        | 2,500         | 0                       |
| Niger   | 2,991                        | 4,351         | 0                       |
| Russia  | 2,846                        | 2,993         | 5,925                   |
| China (est)                                       | 1,885                        | 885           | 9,563                   |
| Ukraine   | 400                          | 890           | 1,876                   |
| India (est)                                       | 400                          | 400           | 977                     |
| <b>Total Top 10</b>                               | <b>47,000</b>                | <b>49,856</b> | <b>19,833</b>           |
| <b>Total World</b>                                | <b>47,731</b>                | <b>53,493</b> | <b>62,496</b>           |
| <b>tonnes U3O8</b>                                | <b>56,287</b>                | <b>63,082</b> | <b>73,745</b>           |
| <b>% of World total</b>                           | <b>98</b>                    | <b>93</b>     | <b>32</b>               |
| <b>USA</b>  | <b>6</b>                     | <b>1,537</b>  | <b>17,587</b>           |
| <b>% of World total</b>                           | <b>0</b>                     | <b>2.9</b>    | <b>28</b>               |
| <b>Total required uranium, including USA</b>      |                              |               | <b>37,420</b>           |
| <b>% of total world 2020</b>                      |                              |               | <b>60</b>               |

source: WNA

| <b>World's largest uranium reserves</b> |             |             |
|---|-------------|-------------|
| <i>(in 1,000 metric tons)</i>           |             |             |
|   |             | <b>in %</b> |
| Kazakhstan                              | 304         | 24          |
| Canada                                  | 275         | 22          |
| South Africa                            | 168         | 13          |
| Brazil                                  | 156         | 12          |
| China                                   | 102         | 8           |
| United States                           | 80 *        | 6           |
| Mongolia                                | 50          | 4           |
| Ukraine                                 | 41          | 3           |
| Tanzania                                | 38          | 3           |
| Uzbekistan                              | 37          | 3           |
| Russia                                  | 25          | 2           |
| <b>Total</b>                            | <b>1276</b> | <b>100</b>  |

\* based on estimates U.S. Energy Information administration (EIA) by mine and property status mining methods and states at the end of 2020



## ► Shift in geological blocks dictates international uranium market

**China, Russia and India** together are currently accounting for 23 reactors under construction and 84 reactors planned, representing 51% and 76% respectively of the world total. With the required uranium to feed future operational reactors, this is broadly seen as the key driver of a strong uranium price recovery.

**It should be realized however, that China's and Russia's required uranium supply can be fully covered by long-term supply agreements, which in particular counts for Kazakhstan. These fixed agreements, besides Sprott Physical Uranium Trust countering the U3O8 spot market, are withholding an economically viable revival of the American uranium industry.**

Based on the current supply situation, with the **USA** with 93 reactors hosting 23% of the world's 440 operable reactors and in 2021 having required 17,587 tonnes uranium (28% of the world total of 62,496 tonnes), it is notable that **Russia** supplies approximately 38% of US imports of enriched uranium and **Canada** approximately 93% of natural uranium imports.

**This means that for the USA there is no urgent need to lower current imports of more than 95% of the uranium it uses for other than international political tensions.**

Considering that globalization is creating a new economic world order, it is noteworthy to follow from which countries future uranium supply comes from. This is of crucial importance for the course of uranium pricing, as it demonstrates that the long-awaited strong recovery to a pre-Fukushima price level of \$ 65-70/lb is not realistic and to be considered as wishful thinking.

**Anticipating a strong global growth of nuclear reactors under construction and of planned reactors, led by China, Russia and India, the market has to count from which countries supply of required uranium is available. These countries include Kazakhstan, Australia, Canada, Namibia and Niger.**

**According to WNA, in 2020, the total production surplus was 10,157 tonnes U3O8.**

**In 2021, as a result of physical buying in the spot market, Sprott Physical Uranium Trust had on year-end ~163.4 million units outstanding, representing a total position of 41.25 million pounds U3O8, valued at US\$ 1.76 billion.**

**Thanks to this physical buying initiative the spot price recovered from a low of \$ 27.98 on February 26, 2021 to a high of \$ 50.50 on September 17, 2021, but closed 2021 lower on \$ 42.10.**

From this perspective, I refer to my overview of geographical strategic blocks, which shows that Kazakhstan based on a production of 19,477 million pounds in 2020 (41% of the world's production), is by far the world's biggest uranium supplier and can easily fully feed the anticipated growing uranium market demand from Russia, without any effect on the uranium price.

In addition, part of the **USSR block, Kazakhstan and Russia** also are in a strategic position to trade uranium with other strategic blocks that are facing deficits in supply. In this respect, it is also of interest to know that uranium export to the USA is partly provided through **Canada** to escape an import ban of uranium supply from Russia. Also, there is a possibility to export uranium to the USA via **Cameco's** 40% interest in the **JV Inkai** and 60% owned by **Kazatomprom** as at January 1, 2018.

No reliable insight in current stocks exists for **Japan**, where required uranium from the anticipated restart of nuclear reactors probably to be fully met by still available reserves from before the Fukushima accident in March 2011. Currently, **Japan is operating 9 reactors** and 17 reactors are in the process of restart approval.

Concerning **South Korea**, the deficit of 4,594 tonnes uranium can be provided by different international sources. Noteworthy is the growing anti-nuclear sentiment in the country, which may result in a significant reduction of the current share of approximately 30% of total electricity generating.

**Europe** has no national sources of uranium supply. First production was expected to come from Berkeley Energia's Salamanca mine, Spain in 2021 and to export most of its nuclear energy to other EU countries.

However, on November 29, 2021, Berkeley received formal notification from the Ministry for Ecological Transition and the Democratic Challenge (“MITECO”) that it has rejected the authorization for construction of the uranium concentrate plant as a radioactive facility. The legally established procedure is strongly contested by Berkeley.

### Peer Group of the world's top-20 listed Uranium Companies

| January 31, 2022   |  | Trade symbol |        | Share price     |                  | Change<br>in % | 12 months   |             | Market cap.      |             |
|--|--|--------------|--------|-----------------|------------------|----------------|-------------|-------------|------------------|-------------|
|  |  |              |        | Jan. 31<br>2022 | Year-end<br>2021 |                | H           | L           | million<br>local | US\$        |
| <b>Location of trading</b>   |  |              |        |                 |                  |                |             |             |                  |             |
| <b>Kazakhstan (1)</b>  |  |              |        | <b>US\$</b>     | <b>US\$</b>      |                | <b>US\$</b> | <b>US\$</b> | <b>US\$</b>      | <b>US\$</b> |
|  |  | LSE          | KAP:LI | 31.30           | 36.75            | -15            | 32.10       | 16.30       | 6,050.6          | 6,050.6     |
| <b>Canada (9)</b>  |  |              |        | <b>C\$</b>      | <b>C\$</b>       |                | <b>C\$</b>  | <b>C\$</b>  | <b>C\$</b>       | <b>US\$</b> |
|  |  | 1) TSX       | CCO    | 24.71           | 27.58            | -10            | 35.47       | 16.00       | 9,836.0          | 7,672.1     |
|  |  | 2) TSX       | NXE    | 5.23            | 5.54             | -6             | 8.09        | 3.57        | 2,506.2          | 1,954.8     |
|  |  |              | DML    | 1.54            | 1.74             | -11            | 2.64        | 0.85        | 1,251.1          | 975.9       |
|  |  | 3) TSX.V     | GLO    | 3.53            | 4.19             | -16            | 4.84        | 1.41        | 616.9            | 481.2       |
|  |  |              | FCU    | 0.77            | 0.78             | -1             | 1.25        | 0.35        | 519.5            | 405.2       |
|  |  | 4) TSX.V     | ISO    | 3.50            | 3.74             | -6             | 6.61        | 1.87        | 370.7            | 289.1       |
|  |  | 5) TSX.V     | EU     | 1.41            | 1.60             | -12            | 2.27        | 0.90        | 418.4            | 326.3       |
|  |  |              | GXU    | 0.31            | 0.36             | -13            | 0.59        | 0.19        | 178.6            | 139.3       |
|  |  |              | UEX    | 0.33            | 0.37             | -12            | 0.60        | 0.25        | 176.8            | 137.9       |
| <b>Sub-total</b>   |  |              |        |                 |                  |                |             |             | <b>4,709.8</b>   |             |
| <b>United States (4)</b>   |  |              |        | <b>US\$</b>     | <b>US\$</b>      |                | <b>US\$</b> | <b>US\$</b> | <b>US\$</b>      | <b>US\$</b> |
|  |  | 6) NYSE MKT  | UUUU   | 6.17            | 7.63             | -19            | 11.39       | 3.73        | 964.1            | 964.1       |
|  |  |              | UEC    | 2.61            | 3.35             | -22            | 5.79        | 1.61        | 724.7            | 724.7       |
|  |  |              | URG    | 1.18            | 1.22             | -3             | 2.15        | 0.83        | 254.9            | 254.9       |
|  |  |              | PENMF  | 0.12            | 0.14             | -15            | 0.28        | 0.08        | 119.4            | 119.4       |
| <b>Sub-total</b>   |  |              |        |                 |                  |                |             |             | <b>2,063.1</b>   |             |
| <b>Australia (6)</b>   |  |              |        | <b>A\$</b>      | <b>A\$</b>       |                | <b>A\$</b>  | <b>A\$</b>  | <b>A\$</b>       | <b>US\$</b> |
|  |  | 7) ASX       | PDN    | 0.72            | 0.88             | -18            | 1.12        | 0.25        | 1,920.0          | 1,344.0     |
|  |  |              | ERA    | 0.32            | 0.34             | -6             | 0.58        | 0.18        | 1,180.0          | 826.0       |
|  |  | 8) ASX       | BOE    | 2.00            | 2.25             | -11            | 3.08        | 0.66        | 571.0            | 399.7       |
|  |  |              | LOT    | 0.25            | 0.31             | -21            | 0.38        | 0.11        | 294.6            | 206.2       |
|  |  | 9) ASX       | DYL    | 0.75            | 0.86             | -13            | 1.37        | 0.54        | 288.3            | 201.8       |
|  |  | 10) ASX      | BMN    | 0.23            | 0.27             | -17            | 0.44        | 0.10        | 277.1            | 194.0       |
| <b>Sub-total</b>   |  |              |        |                 |                  |                |             |             | <b>3,171.7</b>   |             |
| * featured as a <b>Special Situation</b> and included in <u>Shortlist of investment recommendations</u>  |  |              |        |                 |                  |                |             |             |                  |             |
| ► <b>Total market capitalization top listed uranium companies - January 31, 2022: US\$ 15,995.2 million</b>  |  |              |        |                 |                  |                |             |             |                  |             |
| 1) resumed production at <u>Cigar Lake</u> ; expects to produce up to 12 million pounds U3O8 on a 100% basis in 2021; sales/delivery volume uranium 23 to 25 million pounds U3O8   |  |              |        |                 |                  |                |             |             |                  |             |
| 2) holds 53% in <u>Iso Energy</u> from spin-off  |  |              |        |                 |                  |                |             |             |                  |             |
| 3) also 49% interest in producing zinc project in <u>Turkey</u>  |  |              |        |                 |                  |                |             |             |                  |             |
| 4) 53% held by Nexgen Energy   |  |              |        |                 |                  |                |             |             |                  |             |
| 5) announced on September 8, 2020 the acquisition of all of <u>Westwater Resources</u> ' United States uranium assets in enCore shares; announced on September 7, 2021 the acquisition of <u>Azarga Uranium</u> , completion expected by the end of 2021   |  |              |        |                 |                  |                |             |             |                  |             |
| 6) announced on July 15, 2021 a definitive asset sales agreement with <u>Consolidated Uranium Inc. (CUR)</u> to acquire a portfolio of conventional uranium projects located in <u>Utah</u> and <u>Colorado</u> for consideration of US\$ 8 million for a period of 3 years and 19.9% in outstanding CUR common shares |  |              |        |                 |                  |                |             |             |                  |             |
| 7) combined uranium-vanadium project   |  |              |        |                 |                  |                |             |             |                  |             |
| 8) holds 75% interest in flagship uranium-vanadium Langer Heinrich Mine in Namibia; <u>CNNC</u> of China holds 25% interest; also assets in <u>Canada</u> and <u>Australia</u> ; sold 85% interest in uranium mine in <u>Malawi</u> to <u>Lotus Resources</u>  |  |              |        |                 |                  |                |             |             |                  |             |
| 9) Nova Joint Venture with <u>JOGMEC</u> of <u>Japan</u> (owns 39.5% interest)   |  |              |        |                 |                  |                |             |             |                  |             |
| 10) name change from <u>Bannerman Resources</u> effective July 13, 2021  |  |              |        |                 |                  |                |             |             |                  |             |



## MARKET VALUATION OF THE WORLD'S LISTED URANIUM PRODUCERS and STANDBY PRODUCERS

(in US\$ million)

| Country focus | Company Name                |    | Jan. 31 2022 | Year-end 2021 | Change % 2022 / 2021 | Year-end 2020 | Year-end 2019 | Year-end 2018 | Year-end 2017 | Year-end 2016 | Year-end 2015 | Year-end 2014 | Year-end 2011 | Year-end 2010 | Change % 2020 / 2010 |
|---------------|-----------------------------|----|--------------|---------------|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------|
| Kazakhstan    | <b>Kazatomprom</b>          | 1) | 6050.6       | 6,821.9       | -11                  | 3,306.4       | 3,372         | 3,530         |               |               |               |               |               |               |                      |
| Canada        | <b>Cameco</b>               | 2) | 7672.1       | 8,563.1       | -10                  | 5,264.4       | 3,508         | 4,491         | 3,630         | 4,112         | 4,865         | 6,477         | 7,306         | 15,866        | -67                  |
| United States | <b>Energy Fuels</b>         | 3) | 964.1        | 1,190.0       | -19                  | 558.5         | 189           | 255           | 133           | 109           | 134           | 121           | 167           | 158           | 253                  |
|               | <b>Uranium Energy</b>       | 4) | 724.7        | 895.3         | -19                  | 350.4         | 169           | 222           | 276           | 132           | 105           | 160           | 253           | 421           | -17                  |
|               | <b>Ur-Energy</b>            | 5) | 254.9        | 263.5         | -3                   | 135.9         | 94            | 104           | 99            | 76            | 138           | 110           | 96            | 303           | -55                  |
|               | <b>Peninsula Energy</b>     | 6) | 119.4        | 141.6         | -16                  | 97.4          | 33            | 36            | 81            | 75            | 85            | 113           | 122           | 158           | -38                  |
| Australia     | <b>ERA</b>                  | 7) | 826          | 941.7         | -12                  | 877.8         | 62            | 91            | 367           | 164           | 136           | 549           | 663           | 2,165         | -59                  |
| Namibia       | <b>Paladin Energy</b>       | 8) | 1344         | 1,620.6       | -17                  | 432.6         | 142           | 230           | 67            | 111           | 300           | 489           | 1,118         | 3,649         | -88                  |
|               | <b>Total</b>                |    | 17,955.8     | 20,437.7      | -12                  | 11,023.4      | 7,569         | 8,959         | 4,653         | 4,779         | 5,763         | 8,019         | 9,725         | 22,720        | -51                  |
|               | <b>U3O8 spot price</b>      |    | 43.15        | 42.10         | 2                    | 33.40         | 25.00         | 28.70         | 22.32         | 20.25         | 34.23         | 35.50         | 51.75         | 62.50         | -47                  |
|               | <b>U3O8 long-term price</b> |    | 42.75        | 43.00         | -1                   | 35.00         | 32.50         | 31.25         | 30.67         | 30.00         | 44.00         | 49.50         | 64.00         | 65.00         | -46                  |

1) listed on London Stock Exchange) as at November 16, 2018 through an IPO offering of 15% of the Company's outstanding shares at a price of US\$ 11.60

2) producer; suspended production **McArthur Lake** began in February 2018 and **Cigar Lake** on April 13, 2020; resumed production at **Cigar Lake** in Q2 2021; expects to produce up to 12 million pounds U3O8 on a 100% basis in 2021

3) stand-by producer;; also vanadium recovery operations from company's **White Mesa Mill**, Utah

4) ISR production commencement in November 2010; stopped production since 2014; stand-by producer

5) ISR production commenced 1n August 2013

6) first ISR production commenced in December 2015

7) producer; A\$ 476 million fully underwritten renounceable entitlement offer closed successfully on February 18, 2020

8) stand-by producer; **CNNC Overseas Uranium Holding** of **China** holds 25% equity interest; in flagship **Langer Heinrich Mine**; also assets in **Canada** and **Australia**; sold 85% in **Kavalekera Mine**, Malawi to **Lotus Resources**; 15% owned by Malawi government

## MARKET VALUATION OF THE WORLD'S MOST ADVANCED LISTED URANIUM DEVELOPMENT COMPANIES

(commercial production target <5 years)

(in US\$ million)

| Country focus |                       |    | Jan. 31 2022 | Year-end 2021 | Change % 2022 / 2021 | Year-end 2020 | Year-end 2019 | Year-end 2018 | Year-end 2017 | Year-end 2016 | Year-end 2015 | Year-end 2014 | Year-end 2011 | Year-end 2010 | Change % 2020/2010 |
|---------------|-----------------------|----|--------------|---------------|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------------|
| Canada        | <b>Denison Mines</b>  |    | 975.9        | 1095.7        | -11                  | 444.1         | 247.7         | 272.1         | 305           | 276           | 261           | 491           | 464           | 1,248         | -64                |
|               | <b>UEX</b>            |    | 137.9        | 155.6         | -11                  | 91.7          | 43.9          | 48.9          | 89            | 54            | 27            | 58            | 145           | 456           | -80                |
| Australia     | <b>Boss Energy</b>    | 1) | 399.7        | 446.0         | -10                  | 124.0         | 55.7          | 66.8          | 42            | 38            | -             | -             | -             | -             |                    |
| Namibia       | <b>Deep Yellow</b>    | 2) | 201.8        | 244.4         | -17                  | 94.5          | 50.1          | 55.8          | 48            | 37            | 9             | 22            | 89            | 379           | -75 x              |
| Niger         | <b>Global Atomic</b>  | 3) | 481.2        | 564.5         | -15                  | 188.2         | 53.6          | 40.7          | -             | -             | -             | -             | -             | -             | x                  |
|               | <b>GoviEx Uranium</b> | 4) | 139.3        | 158.4         | -12                  | 85.3          | 52.0          | 43.5          | 70            | 35            | 5             | 39 *          | -             | -             |                    |
|               | <b>Total</b>          |    | 2,335.8      | 2,664.6       | -12                  | 1,027.8       | 503.0         | 527.8         | 554           | 440           | 302           | 610           | 698           | 2,083 x       | -73                |

x not included in year total

\* listing date June 20, 2014

1) also nick-el-copper project and gold project in **Sweden**

2) strategic earn-in agreement with JOGMEC of Japan effective March 2017 to earn a 39.5% interest in the Nova Venture within 4 years

3) also 49% interest in operating **zinc project** in **Turkey**

4) acquired **African uranium assets** in **Zambia**, **Mali** and **Namibia** from **Denison Mines** in consideration of 25% of GoviEx' shares; current equity interest 18.65%



**World's top 10 listed uranium exploration/development companies  
focused on traditional countries** (by market valuation)

|                                    | <b>Country<br/>focus</b> | <b>Trade symbol</b> |     | <b>Share price<br/>Jan.31<br/>2022</b> | <b>Share price<br/>Year-end<br/>2021</b> | <b>Share price<br/>Year-end<br/>2021</b> | <b>Change to<br/>Year-end<br/>2021 in %</b> | <b>Market<br/>valuation<br/>(US\$ million)</b> |
|------------------------------------|--------------------------|---------------------|-----|--|--|--|---|--|
| NexGen Energy                      | 1) Canada                | TSX.V               | NXE | C\$ 5.23                               | C\$ 5.54                                 |  | -6  | 1,954.8  |
| Denison Mines                      | Canada                   | TSX                 | DML | C\$ 1.54                               | C\$ 1.74                                 |  | -11   | 975.9  |
| Fission Uranium                    | Canada                   | TSX                 | FCU | C\$ 0.77                               | C\$ 0.78                                 |  | -1  | 405.2  |
| Boss Energy                        | 2) Australia             | ASX                 | BOE | A\$ 2.00                               | A\$ 2.25                                 |  | -11   | 399.7  |
| Encore Energy *                    | 3) USA                   | TSX.V               | EU  | C\$ 1.41                               | C\$ 1.60                                 |  | -12   | 326.3  |
| Iso Energy                         | Canada                   | TSX.V               | ISO | C\$ 3.50                               | C\$ 3.74                                 |  | -6  | 289.1  |
| Consolidated Uranium               | 4) USA                   | TSX.V               | CUR | C\$ 2.98                               | C\$ 2.87                                 |  | 4   | 166.5  |
| UEX                                | Canada                   | TSX                 | UEX | C\$ 0.33                               | C\$ 0.37                                 |  | -11   | 137.9  |
| Azarga Uranium                     | 5) USA                   | TSX.V               | AZZ | C\$ 0.54                               | C\$ 0.58                                 |  | -7  | 107.0  |
| Laramide Resources                 | USA/Australia            | TSX                 | LAM | C\$ 0.65                               | C\$ 0.71                                 |  | -8  | 99.5   |
| <b>Total market capitalization</b> |                          |                     |     |  |  |  |   | <b>4,861.9</b>                                 |

\* featured as a **Special Situation** and included in the **2021 Shortlist of investment recommendations**

1) holds 53% in Iso Energy from spin-off

2) name change from Boss Resources effective November 26, 2020; also nickel-copper project in Sweden and gold project in Senegal

3) entered into a binding agreement effective September 1, 2020 to acquire all of Westwater Resources' United States uranium assets; announced on September 7, 2021 a definitive arrangement agreement whereby the Company will acquire Azarga Uranium

4) announced on July 15, 2021 a definitive asset purchase agreement with Energy Fuels to acquire a portfolio of conventional uranium projects located in Utah and Colorado for consideration of US\$ 8 million over a period of 3 years and 19.9% in outstanding CUR common shares

5) announced on September 7, 2021 a definitive arrangement agreement whereby the Company will be acquired by enCore Energy

**World's top 10 listed uranium exploration/development companies  
focused on emerging countries** (by market valuation)

|                                    | <b>Country<br/>focus</b>      | <b>Trade symbol</b> |     | <b>Share price<br/>Jan. 31<br/>2022</b> | <b>Share price<br/>Year-end<br/>2021</b> | <b>Share price<br/>Year-end<br/>2021</b> | <b>Change to<br/>Year-end<br/>2021 in %</b> | <b>Market<br/>valuation<br/>(US\$ million)</b> |
|------------------------------------|-------------------------------|---------------------|-----|---|--|--|---|--|
| Global Atomic *                    | 1) Niger                      | TSX.V               | GLO | C\$ 3.53                                | C\$ 4.19                                 |  | -16   | 481.2  |
| Lotus Resources                    | 2) Malawi                     | ASX                 | LOT | A\$ 0.25                                | A\$ 0.31                                 |  | -19   | 206.2  |
| Deep Yellow *                      | Namibia                       | ASX                 | DYL | A\$ 0.75                                | A\$ 0.86                                 |  | -13   | 201.8  |
| Bannerman Energy                   | 3) Namibia                    | ASX                 | BMN | A\$ 0.23                                | A\$ 0.27                                 |  | -15   | 194.0  |
| GovEx *                            | Niger/other African countries | TSX.V               | GXU | C\$ 0.31                                | C\$ 0.36                                 |  | -14   | 139.3  |
| Forsys Metals                      | Namibia                       | TSX                 | FSY | C\$ 0.81                                | C\$ 0.85                                 |  | -5  | 123.3  |
| Aura Energy                        | 6) Mauritania                 | AIM                 | AEE | GBX 16.50                               | GBX 13.50                                |  | 22  | 93.4   |
| Elevate Uranium                    | 4) Namibia                    | ASX                 | EL8 | A\$ 0.45                                | A\$ 0.47                                 |  | -4  | 82.0   |
| Berkeley Energia                   | 5) Spain                      | ASX                 | BKY | A\$ 0.23                                | A\$ 0.23                                 |  | 0   | 70.2   |
| Blue Sky Uranium *                 | 7) Argentina                  | TSX                 | BSK | C\$ 0.19                                | C\$ 0.20                                 |  | -5  | 26.8   |
| <b>Total market capitalization</b> |                               |                     |     |   |  |  |   | <b>1,618.2</b>                                 |

\* featured as a **Special Situation** and included in the **2021 Shortlist of investment recommendations**

1) also 49% interest in operating zinc project in Turkey

3) name change from Bannerman Resources effective July 13, 2021

2) acquired 85% stake in major uranium project in Malawi from Paladin Energy; also cobalt project in NSW Australia

4) name change from Marenica Energy effective June 8, 2021

5) On November 19, 2021, the Company announced it has received notification from the Ministry for Ecological Transition and the Democratic Challenge ("MITCO") that it has rejected the Authorization for construction of its Salamanca deposit

6) also world-class vanadium and battery project in Sweden

7) uranium-vanadium project

## Overviews of worldwide uranium production and exploration companies by country

| January 31, 2022                  |    | Trade symbol |      | Share price     |                  | Change<br>in % | 12 months  |            | Market<br>capitalization<br>million |             |
|-----------------------------------|----|--------------|------|-----------------|------------------|----------------|------------|------------|-------------------------------------|-------------|
|                                   |    |              |      | Jan. 31<br>2022 | Year-end<br>2021 |                | H          | L          | C\$                                 | US\$        |
| <b>Canada - Athabasca Basin</b>   |    |              |      |                 |                  |                |            |            |                                     |             |
| <b>Producer:</b>                  |    |              |      | <b>C\$</b>      | <b>C\$</b>       |                | <b>C\$</b> | <b>C\$</b> | <b>C\$</b>                          | <b>US\$</b> |
| Cameco                            | 1) | TSX          | CCO  | 24.71           | 27.58            | -10            | 35.47      | 16.00      | 9,836.0                             | 7,672.1     |
| <b>Development / Exploration:</b> |    |              |      |                 |                  |                |            |            |                                     |             |
| NexGen Energy                     |    | TSX          | NXE  | 5.23            | 5.54             | -6             | 8.09       | 3.57       | 2,506.2                             | 1,954.8     |
| Denison Mines                     |    | TSX          | DML  | 1.54            | 1.74             | 3              | 2.64       | 0.85       | 1,251.1                             | 975.9       |
| Fission Uranium                   |    | TSX          | FCU  | 0.77            | 0.78             | -1             | 1.25       | 0.35       | 519.5                               | 405.2       |
| IsoEnergy                         |    | TSX.V        | ISO  | 3.50            | 3.74             | -6             | 6.61       | 1.87       | 370.7                               | 289.1       |
| UEX                               |    | TSX          | UEX  | 0.33            | 0.37             | -12            | 0.60       | 0.25       | 176.8                               | 137.9       |
| Skyharbour Resources              |    | TSX.V        | SYH  | 0.55            | 0.49             | 13             | 0.87       | 0.24       | 71.6                                | 55.8        |
| Baselode Energy                   |    | TSX.V        | FIND | 0.71            | 0.81             | -12            | 1.54       | 0.40       | 52.7                                | 41.1        |
| Fission 3.0                       |    | TSX.V        | FUU  | 0.16            | 0.22             | -30            | 0.30       | 0.08       | 35.4                                | 27.6        |
| CanAlaska Uranium *               |    | TSX.V        | CVV  | 0.44            | 0.44             | -1             | 0.84       | 0.39       | 34.4                                | 26.8        |
| Azincourt Energy                  | 2) | TSX.V        | AAZ  | 0.07            | 0.07             | -7             | 0.18       | 0.04       | 31.4                                | 24.5        |
| Purepoint Uranium Group           |    | TSX.V        | PTU  | 0.09            | 0.09             | 6              | 0.20       | 0.07       | 30.9                                | 24.1        |
| Track Uranium                     |    | CSE          | TRAC | 0.92            | 0.90             | 2              | 1.08       | 0.20       | 23.4                                | 18.2        |
| Eagle Plains Resources            |    | TSX.V        | EPL  | 0.18            | 0.17             | 3              | 0.19       | 0.14       | 17.9                                | 14.0        |
| ALX Resources                     |    | TSX.V        | AL   | 0.07            | 0.09             | -22            | 0.15       | 0.05       | 14.5                                | 11.3        |
| CAT Strategic Metals              |    | CSE          | CAT  | 0.04            | 0.04             | 0              | 0.10       | 0.03       | 7.6                                 | 5.9         |
| Uravan Minerals                   |    | TSX.V        | UVN  | 0.26            | 0.26             | 0              | 0.70       | 0.22       | 1.2                                 | 0.9         |
|                                   |    |              |      | <b>A\$</b>      | <b>A\$</b>       |                | <b>A\$</b> | <b>A\$</b> | <b>A\$</b>                          | <b>US\$</b> |
| 92 Energy                         |    | ASX          | 92E  | 0.50            | 0.68 x           |                | 1.15       | 0.22       | 38.2                                | 26.7        |

\* featured as a **Special Situation** and included in Shortlist of investment recommendations

x share price as of April 14, 2021

1) 40% interest in JV Inkai, Kazatomprom of Kazakhstan owning 60%; resumed production at Cigar Lake in Q2 2021; expects to produce up to 12 million pounds U3O8 on a 100% basis in 2021

2) also lithium joint venture in Canada and letters of intent to acquire lithium-uranium project in Peru and cobalt project in Ontario

## Overviews of worldwide uranium production and exploration companies by country

| January 31, 2022                  | Trade symbol |                | Share price     |                  | Change<br>in % | 12 months   |             | Market<br>capitalization<br>million |             |
|-----------------------------------|--------------|----------------|-----------------|------------------|----------------|-------------|-------------|-------------------------------------|-------------|
|                                   |              |                | Jan. 31<br>2022 | Year-end<br>2021 |                | H           | L           |                                     |             |
| <b>United States</b>              |              |                |                 |                  |                |             |             |                                     |             |
| <b>Stand-by producers:</b>        |              |                | <b>US\$</b>     | <b>US\$</b>      |                | <b>US\$</b> | <b>US\$</b> | <b>US\$</b>                         | <b>US\$</b> |
| Energy Fuels                      | 1)           | NYSE MKT UUUU  | 6.17            | 7.63             | -19            | 11.39       | 3.73        | 964.1                               | 964.1       |
| Uranium Energy                    |              | AMEX UEC       | 2.61            | 3.35             | -22            | 5.79        | 1.61        | 724.7                               | 724.7       |
| Ur-Energy                         |              | NYSE MKT URG   | 1.18            | 1.22             | -3             | 2.15        | 0.83        | 254.9                               | 254.9       |
| Peninsula Energy                  | 2)           | NYSE OTC PENMF | 0.12            | 0.14             | -15            | 0.28        | 0.08        | 119.4                               | 119.4       |
| <b>Development / Exploration:</b> |              |                | <b>C\$</b>      | <b>C\$</b>       |                | <b>C\$</b>  | <b>C\$</b>  | <b>C\$</b>                          | <b>US\$</b> |
| enCore Energy *                   | 3)           | TSX V EU       | 1.41            | 1.60             | -12            | 2.27        | 0.90        | 418.4                               | 326.3       |
| Consolidated Uranium              | 4)           | TSX V CUR      | 2.98            | 2.87             | 4              | 3.29        | 1.15        | 213.5                               | 166.5       |
| Azarga Uranium                    | 5)           | TSX AZZ        | 0.54            | 0.58             | -7             | 0.63        | 0.15        | 137.2                               | 107.0       |
| Laramide Resources                | 6)           | TSX LAM        | 0.65            | 0.71             | -8             | 1.12        | 0.30        | 127.5                               | 99.5        |
| Virginia Energy                   | 7)           | TSX V VUI      | 0.65            | 0.87             | -25            | 0.98        | 0.10        | 41.5                                | 32.4        |
| Anfield Energy                    |              | TSX V AEC      | 0.09            | 0.10             | -5             | 0.23        | 0.08        | 27.3                                | 21.3        |
| Standard Uranium                  |              | TSX V STND     | 0.20            | 0.22             | -9             | 0.51        | 0.15        | 23.3                                | 18.1        |

\* featured as a **Special Situation** and included in Shortlist of investment recommendations

1) leading US-based mining company; White Mesa Mill also to produce vanadium and capable to produce REEs

2) also uranium assets in South Africa

3) completed the acquisition of uranium assets of Westwater Resources in Texas and New Mexico in enCore shares; transaction closed on January 5, 2021

4) announced on July 15, 2021 a definitive asset purchase agreement with Energy Fuels to acquire a portfolio of conventional uranium projects located in Utah and Colorado for consideration of US\$ 8 million for a period of 3 years and 19.9% in outstanding CUR common shares;

5) acquired by Encore Energy effective as at January 4., 2022

6) also projects in Australia; uranium ban on major Westmoreland Project in Queensland, Australia

7) On September 30, 2021, the Company received notice that the Virginia Supreme Court had denied the Petition for Appeal on suing the State of Virginia on the uranium ban to access \$ 6 nbillion deposit

## Overviews of worldwide uranium production and exploration companies by country

| January 31, 2022                  | Trade symbol |         | Share price     |                  | Change<br>in % | 12 months  |            | Market<br>capitalization<br>million |             |
|-----------------------------------|--------------|---------|-----------------|------------------|----------------|------------|------------|-------------------------------------|-------------|
|                                   |              |         | Jan. 31<br>2022 | Year-end<br>2021 |                | H          | L          |                                     |             |
| <b>Australia</b>                  |              |         |                 |                  |                |            |            |                                     |             |
| <b>Producer:</b>                  |              |         | <b>A\$</b>      | <b>A\$</b>       |                | <b>A\$</b> | <b>A\$</b> | <b>A\$</b>                          | <b>US\$</b> |
| Energy Resources of Australia     |              | ASX ERA | 0.32            | 0.34             | -6             | 0.58       | 0.18       | 1,180.0                             | 826.0       |
| <b>Development / Exploration:</b> |              |         |                 |                  |                |            |            |                                     |             |
| Boss Energy                       |              | ASX BOE | 2.00            | 2.25             | -11            | 3.08       | 0.66       | 571.0                               | 399.7       |
| Alligator Energy                  |              | ASX AGE | 0.06            | 0.06             | 9              | 0.12       | 0.01       | 191.2                               | 133.8       |
| Vimy Resources                    |              | ASX VMY | 0.18            | 0.20             | -10            | 0.31       | 0.07       | 185.0                               | 129.5       |
| Havilah Resources                 | 1)           | ASX HAV | 0.18            | 0.18             | 0              | 0.30       | 0.16       | 54.2                                | 37.9        |
| Energy Metals Ltd.                |              | ASX EME | 0.26            | 0.27             | -6             | 0.54       | 0.12       | 53.5                                | 37.4        |
| Cauldron Energy                   | 2)           | ASX CXU | 0.02            | 0.03             | -31            | 0.05       | 0.02       | 10.8                                | 7.6         |

1) also uranium assets in Argentina

2) also gold project in Victoria State

## Overviews of worldwide uranium production and exploration companies by country

| January 31, 2022  | Trade symbol |       | Share price     |                  | Change<br>in % | 12 months   |             | Market<br>capitalization<br>million |             |         |
|---|--------------|-------|-----------------|------------------|----------------|-------------|-------------|-------------------------------------|-------------|---------|
|   |              |       | Jan. 31<br>2022 | Year-end<br>2021 |                | H           | L           |                                     |             |         |
| <b>CENTRAL ASIA</b>   |              |       |                 |                  |                |             |             |                                     |             |         |
| <b>Kazakhstan</b>   |              |       |                 |                  |                |             |             |                                     |             |         |
| <b>Producer:</b>  |              |       | <b>US\$</b>     | <b>US\$</b>      |                | <b>US\$</b> | <b>US\$</b> | <b>US\$</b>                         | <b>US\$</b> |         |
| Kazatomprom   | 1)           | LSE   | KAP:LI          | 31.30            | 36.75          | -15         | 32.10       | 16.30                               | 6,050.6     | 6,050.6 |
| <b>AFRICA</b>   |              |       |                 |                  |                |             |             |                                     |             |         |
| <b>Namibia</b>  |              |       |                 |                  |                |             |             |                                     |             |         |
| <b>Stand-by producer:</b>   |              |       | <b>A\$</b>      | <b>A\$</b>       |                | <b>A\$</b>  | <b>A\$</b>  | <b>A\$</b>                          | <b>US\$</b> |         |
| Paladin Energy  |              | ASX   | PDN             | 0.72             | 0.88           | -18         | 1.12        | 0.25                                | 1,920.0     | 1,344.0 |
| <b>Development / Exploration:</b>   |              |       | <b>A\$</b>      | <b>A\$</b>       |                | <b>A\$</b>  | <b>A\$</b>  | <b>A\$</b>                          | <b>US\$</b> |         |
| Deep Yellow *   | 2)           | ASX   | DYL             | 0.75             | 0.86           | -13         | 1.37        | 0.54                                | 288.3       | 201.8   |
| Bannerman Energy  | 3)           | ASX   | BMN             | 0.23             | 0.27           | -17         | 0.44        | 0.10                                | 277.1       | 194.0   |
| Elevate Uranium   | 4)           | ASX   | EL8             | 0.45             | 0.47           | -3          | 0.79        | 0.12                                | 117.2       | 82.0    |
|   |              |       | <b>C\$</b>      | <b>C\$</b>       |                | <b>C\$</b>  | <b>C\$</b>  | <b>C\$</b>                          | <b>US\$</b> |         |
| Forsys Metals   |              | TSX   | FSY             | 0.81             | 0.85           | -5          | 1.30        | 0.29                                | 158.1       | 123.3   |
| <b>Niger</b>  |              |       |                 |                  |                |             |             |                                     |             |         |
|   |              |       | <b>C\$</b>      | <b>C\$</b>       |                | <b>C\$</b>  | <b>C\$</b>  | <b>C\$</b>                          | <b>US\$</b> |         |
| Global Atomic *   | 5)           | TSX.V | GLO             | 3.53             | 4.19           | -16         | 4.84        | 1.41                                | 616.9       | 481.2   |
| GoviEx Uranium *  | 6)           | TSX.V | GXU             | 0.31             | 0.36           | -13         | 0.59        | 0.19                                | 178.6       | 139.3   |
| <b>Malawi</b>   |              |       |                 |                  |                |             |             |                                     |             |         |
|   |              |       | <b>A\$</b>      | <b>A\$</b>       |                | <b>A\$</b>  | <b>A\$</b>  | <b>A\$</b>                          | <b>US\$</b> |         |
| Lotus Resources   |              | ASX   | LOT             | 0.25             | 0.31           | -21         | 0.38        | 0.11                                | 294.6       | 206.2   |
| <b>Mauritania</b>   |              |       |                 |                  |                |             |             |                                     |             |         |
|   |              |       | <b>GBX</b>      | <b>GBX</b>       |                | <b>GBX</b>  | <b>GBX</b>  | <b>GBX</b>                          | <b>US\$</b> |         |
| Aura Energy   | 7)           | AIM   | AEE             | 16.50            | 13.50          | 22          | 23.00       | 4.03                                | 69.7        | 93.4    |
| * featured as a <b>Special Situation</b> and included in <u>Shortlist of investment recommendations</u>   |              |       |                 |                  |                |             |             |                                     |             |         |
| 1) listed on London Stock Exchange) as at November 16, 2018 through an IPO offering of 15% of the Company's outstanding shares at a price of US\$ 11.60 |              |       |                 |                  |                |             |             |                                     |             |         |
| 2) Nova Joint Venture project with JOGMEC of Japan, which company completed its 39.5% earn-in obligation through expenditures of A\$ 4.5 million        |              |       |                 |                  |                |             |             |                                     |             |         |
| 3) name change from <u>Bannerman Resources</u> effective July 13, 2021  |              |       |                 |                  |                |             |             |                                     |             |         |
| 4) name change from <u>Marenica Energy</u> effective June 8, 2021   |              |       |                 |                  |                |             |             |                                     |             |         |
| 5) also 49% interest in operating zinc project in <u>Turkey</u>   |              |       |                 |                  |                |             |             |                                     |             |         |
| 6) also major uranium <u>assets</u> in <u>Zambia</u> , and assets in <u>Mali</u> and <u>Namibia</u>   |              |       |                 |                  |                |             |             |                                     |             |         |
| 7) <u>also world-class vanadium and battery metal project</u> in <u>Sweden</u>  |              |       |                 |                  |                |             |             |                                     |             |         |



## Overviews of worldwide uranium production and exploration companies by country

| January 31, 2022               | Trade symbol |       | Share price     |                  | Change<br>in % | 12 months |             | Market<br>capitalization<br>million |             |              |
|--------------------------------|--------------|-------|-----------------|------------------|----------------|-----------|-------------|-------------------------------------|-------------|--------------|
|                                |              |       | Jan. 31<br>2022 | Year-end<br>2021 |                | H         | L           |                                     |             |              |
| <b>LATIN + CENTRAL AMERICA</b> |              |       |                 |                  |                |           |             |                                     |             |              |
| <b>Argentina</b>               |              |       |                 |                  |                |           |             |                                     |             |              |
| Blue Sky Uranium *             | 1)           | TSX.V | BSK             | C\$<br>0.19      | C\$<br>0.20    | -5        | C\$<br>0.37 | C\$<br>0.16                         | C\$<br>34.3 | US\$<br>26.8 |

1) uranium-vanadium project

\* featured as a **Special Situation** and included in [Shortlist of investment recommendations](#)

## Overviews of worldwide uranium production and exploration companies by country

| January 31, 2022               | Trade symbol |     | Share price     |                  | Change<br>in % | 12 months |             | Market<br>capitalization<br>million |              |              |
|--------------------------------|--------------|-----|-----------------|------------------|----------------|-----------|-------------|-------------------------------------|--------------|--------------|
|                                |              |     | Jan. 31<br>2022 | Year-end<br>2021 |                | H         | L           |                                     |              |              |
| <b>Other countries: EUROPE</b> |              |     |                 |                  |                |           |             |                                     |              |              |
| <b>Spain</b>                   |              |     |                 |                  |                |           |             |                                     |              |              |
| Berkeley Energia               | 1)           | ASX | BKY             | A\$<br>0.23      | A\$<br>0.23    | -2        | A\$<br>0.71 | A\$<br>0.14                         | A\$<br>100.3 | US\$<br>70.2 |

1) On November 19, 2021, the Company announced it has received notification from the Ministry for Ecological Transition and the Democratic Challenge ("MITCO") that it has rejected the Authorization for construction of its Salamanca deposit

## 2021 SHORTLIST OF URANIUM INVESTMENT RECOMMENDATIONS as at Year-end 2021

| Company                                      | Focus         | Trading symbol | Share price   |               | Change in % |       | Market capitalization |                  |
|--|---------------|----------------|---------------|---------------|-------------|-------|-----------------------|------------------|
|  |               |                | Year-end 2021 | Year-end 2020 | local       | US\$  | Year-end 2021         | Year-end 2020    |
| <b>Producers (1)</b>                         |               |                | <b>US\$</b>   | <b>US\$</b>   |             |       | <b>US\$ mln.</b>      | <b>US\$ mln.</b> |
| Kazatomprom                                  | Kazakhstan    | LSE KAP        | 36.75         | 18.00         | 104.2       | 104.2 | 6,821.9               | 3,306.4          |
| <b>Advanced development companies (4)</b>    |               |                | <b>C\$</b>    | <b>C\$</b>    |             |       |                       |                  |
| Global Atomic *                              | Niger         | GLO TSX.V      | 4.19          | 1.59          | 163.5       | 166.8 | 564.5                 | 188.2            |
| Boss Energy                                  | Australia     | BOE ASX        | 2.25          | 1.00          | 125.0       | 117.5 | 446.0                 | 124.0            |
| Deep Yellow *                                | Namibia       | DYL ASX        | 0.86          | 0.47          | 83.0        | 78.0  | 244.4                 | 94.5             |
| Berkeley Energia                             | Spain         | BKY ASX        | 0.23          | 0.72          | -68.1       | -64.0 | 78.1                  | 139.4            |
| <b>Exploration/development companies (9)</b> |               |                | <b>C\$</b>    | <b>C\$</b>    |             |       |                       |                  |
| EnCore Energy *                              | United States | EU TSX.V       | 1.60          | 0.94          | 70.2        | 71.6  | 251.2                 | 124.6            |
| GovEx Uranium *                              | Niger         | GXU TSX.V      | 0.36          | 0.23          | 56.5        | 57.7  | 158.4                 | 85.3             |
| Forsys Metals                                | Namibia       | FSY TSX.V      | 0.85          | 0.30          | 183.3       | 187.0 | 128.2                 | 39.1             |
| Azarga Uranium                               | United States | AZZ TSX        | 0.58          | 0.24          | 141.7       | 144.5 | 115.0                 | 43.2             |
| CanAlaska Uranium *                          | Canada        | CW TSX.V       | 0.44          | 0.49          | -10.2       | -10.4 | 27.1                  | 26.8             |
| Blue Sky Uranium *                           | Argentina     | BSK TSX.V      | 0.20          | 0.19          | 5.3         | 5.4   | 28.2                  | 17.3             |
| Azincourt Energy                             | Canada/Peru   | AAZ TSX.V      | 0.07          | 0.05          | 40.0        | 40.8  | 26.4                  | 7.0              |

\* featured as a **Special Situation**

| <b>Removed as at :</b> |         |         | 31/3/2021 | Year-end 2020 | Change US\$ in % |
|------------------------|---------|---------|-----------|---------------|------------------|
| Denison Mines          | Canada  | DML TSX | 1.37      | 0.84          | 63.1             |
| Paladin Energy         | Namibia | PDN ASX | 0.37      | 0.25          | 48.0             |
| Lotus Resources        | Malawi  | LOT ASX | 0.13      | 0.13          | 0                |

**Market performance 2021 Year-end: 67.3%**

**Market performance 2020 (in US\$): 117.1%**

**Market performance 2019 (in US\$): -15.6%**

**Market performance 2018 (in US\$): -1.7%**

**Market performance 2017 (in US\$): 13.7%**

**Market performance 2016 (in US\$): 30.5%**

|                             | Year-end 2021 | Year-end 2020 | Change %  | Year-end 2019 | Year-end 2018 | Change % Year-end 2019/18 | Change % 2017 | Change % 2018/17 | Year-end 2016 | Change % 2017/16 |
|-----------------------------|---------------|---------------|-----------|---------------|---------------|---------------------------|---------------|------------------|---------------|------------------|
| <b>U3O8 spot price</b>      | <b>42.10</b>  | <b>30.40</b>  | <b>38</b> | <b>28.70</b>  | <b>28.70</b>  | <b>6</b>                  | <b>22.32</b>  | <b>29</b>        | <b>20.25</b>  | <b>10</b>        |
| <b>U3O8 long-term price</b> | <b>43.00</b>  | <b>35.00</b>  | <b>23</b> | <b>32.00</b>  | <b>32.00</b>  | <b>9</b>                  | <b>30.67</b>  | <b>4</b>         | <b>30.00</b>  | <b>2</b>         |

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|                           |         |  |
|---------------------------|---------|--|
| April                     | 5 – 7   | <b>Mines and Money Online Connect</b>  |
| April                     | 6 – 8   | <b>Madrid Energy Conference (MEC 2022), Madrid, Spain</b>                      |
| May                       | 4 – 5   | <b>Mines &amp; Money London (Hybrid)</b>                                       |
| June                      | 13 – 15 | <b>PDAC 2022 – Toronto, Canada – in person</b>                                 |
| June                      | 14 – 16 | <b>DRC Mining Week – Lubumbashi, DRC</b>                                       |
| June                      | 14 – 16 | <b>Mines and Money Online Connect</b>  |
| June                      | 16 – 17 | <b>Lithium Latin America – Buenos Aires, Argentina</b>                         |
| June                      | 28 – 29 | <b>PDAC 2022 – Toronto, Canada – ONLINE</b>                                    |
| June                      | 28 – 30 | <b>Suriname Energy, Oil &amp; Gas Summit (SEOG 2022), Paramaribo, Suriname</b> |
| June dates to be set      |         | <b>M&amp;M APAC – Australia</b>  |
| August 30 – September 1   |         | <b>Mines and Money Online Connect</b>  |
| September                 | 14 – 16 | <b>Guyana Basins Summit – Georgetown, Guyana</b>                               |
| September dates to be set |         | <b>M&amp;M Asia – Hong Kong</b>  |
| October                   | 17 – 19 | <b>Int.Mining and Resource Conf. (IMARC) – Melbourne, Australia</b>            |
| November 29 – December 1  |         | <b>Mines and Money London</b>  |



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