

## Why a New Age of Nuclear Energy Is About to Dawn

And four ways for investors to get in on it.



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The Fiscal Times

May 19, 2015

In a move that could signal trouble ahead for the anti-nuke crowd, uranium prices have posted remarkable strength in the past several weeks, trading close to \$40 per pound in the spot market. That's up sharply from lows of \$28 last summer. More importantly, it reverses a grinding three-year decline that seemed to signal the end of the nuclear era following the horrible 2011 disaster at Fukushima, Japan.

Is this just a typical bear market rally that will peter out? Or is the recent strength in uranium a sign of a new nuclear era ahead that will drive uranium prices and mining stocks even higher?

It's probably the latter. That will disappoint opponents of nuclear energy, but if you are an investor with a Warren Buffett-like timeframe of at least five years, it means it's time to buy the uranium miners that will benefit from some big trends creating a looming supply-demand imbalance that could make the controversial metal double from here over the next four years.

Be warned, though: A lot of smart people think forecasts of a bull market in uranium are just bull, and we'll get to the bear case in a second. But global population growth will be so big over the next two decades, electricity is such a nice convenience and alternative sources of energy are either so dirty (coal) or inconsistent (wind and solar) that it seems a fair bet that nuclear power will play a much bigger role.

"Uranium offers a rare growth opportunity in metals and mining," says Morningstar analyst David Wang, who recently penned a bullish report on the metal. The global reactor fleet should grow 37 percent by 2025, which will drive 40 percent growth in uranium demand over the same time frame, predicts Wang.

Because power plants buy several years' worth of supply in advance, uranium prices could start to move significantly higher as soon as 2017. He thinks the spot price of uranium could hit \$75 a pound in 2019 in real terms (adjusted for inflation), for a 100 percent-plus gain from recent levels of \$36. "We expect new reactor capacity to drive the strongest uranium demand growth in decades," he says.

If so, this will take a lot of analysts by surprise, because they are too focused on the current glut of uranium.

Let's take a closer look at the trends that may catch them off guard.

### A Global Population Boom

The United Nations predicts world population will grow to 8.7 billion by 2035 from about 7.3 billion now. Those newcomers are going to want electricity. The growth of the middle class in developing countries will compound the demand growth. The bottom line: There may be 81 percent demand growth for electricity by 2035 from 2011, according to the Organization for Economic Cooperation and Development.

That's big. So big that a lot of this electricity may have to come from nuclear generation. As good as renewable sources of energy are for the environment, they are intermittent because they depend on sunshine or wind. They can't yet provide the massive amount of daily electricity, known as base load, the way nuclear energy or coal can. Elon Musk at Tesla Motors (TSLA) and others are working hard to develop next-generation batteries that will store enough energy to help make intermittent renewable energy sources more viable. But so far, no cigar. And the problem with coal-fired power plants is that they create too much pollution — as China well knows.

That leaves nuclear power.

### **China Going Nuclear**

China's coal-related pollution problem has gotten so bad, for example, the country is turning to nuclear power in a big way. The number of nuclear reactors there will grow from 23 to 86 over the next decade, predicts Wang. Its annual uranium demand will grow 167 percent, to 16,800 tons from 6,296 tons.

China is not alone. South Korea, India and Russia are also going to be backing away from coal and adding nuclear power in a big way to meet demand. Together, these three countries will increase their nuclear generating capacity by 54 percent over the next 10 years. Their annual demand for uranium will rise to 17,580 tons from 11,390 tons last year, says Wang.

The United Arab Emirates, Turkey, Belarus, Saudi Arabia, Vietnam, Bangladesh, Poland and Jordan also plan to add plants. The U.S., currently the biggest world producer, with 100 reactors as of last summer, has five plants under construction.

Big picture, there are 71 new reactors under construction, 174 planned or on order and 301 proposed, all on top of the 436 reactors in operation worldwide as of last October, according to the World Nuclear Association.

All of this means that annual global uranium demand will grow 61 percent to 238 million pounds by 2025, up from 173 million pounds last year, according to UXC Consulting, which tracks uranium trends.

### **Dwindling Supply**

That's a lot of growth, considering that supplies have been drying up. Given the weakness in uranium prices, companies have been taking mines off line and not investing in new ones. UXC projects a nearly 49 million pound gap between global demand for reactors and mining production by 2019.

A lot of that could be filled by new mines — but it takes awhile to start them up. Another source, the conversion of enriched uranium in nuclear warheads and military inventories left over from the Cold War, is also in decline. That's because a U.S.-Russia agreement to do this ended in 2013.

Ironically, for environmentalists who oppose nukes, concerns about global warming may work against them. The Environmental Protection Agency recently announced proposed rules that would require U.S. utilities to cut carbon emissions by 30 percent by 2030. Utilities are likely to turn to nuclear energy to meet these targets.

### **A Putin Play?**

A wild card might also put a floor under uranium: Vladimir Putin. Kazakhstan is the world's largest producer, at 58 million pounds annually, or about 38 percent of global production. But the mines there are controlled by Russia, Tom Winmill, a commodities expert and a portfolio manager at Midas Fund (MIDSX), points out. What if Putin retaliated against Western trade sanctions on Russia by cutting off uranium supplies from Kazakhstan? That would send utilities into a buying frenzy to build buffer supplies. "It could get a little crazy," says Winmill.

### **If Uranium Gets Hot**

If you buy the bull case for uranium, the "safest" way to get exposure is via the **Global X Uranium Exchange Traded Fund (URA)**, a collection of uranium miners. If you like to play individual stocks, **Cameco (CCJ)** looks interesting because it's a big player, providing 16 percent of global production, with good growth potential. Cameco is also one of the lowest-cost producers around. It has mines in Canada, which means there's minimal political risk. Morningstar analyst Daniel Rohr thinks Cameco's uranium production will grow by more than 50 percent by 2019. Another option is **BHP Billiton (BHP)**, a natural resources and energy company which has a huge uranium mine in Australia. Uranium accounts for only a small portion of its revenue now, but the company could ramp up production at its Olympic Dam mine in Australia if uranium prices shoot up. BHP Billiton pays a nice 4.9 percent yield to boot.

Next, insiders have been buying recently at tiny **Uranium Energy (UEC)**, which has uranium projects in the U.S. and Paraguay. Insiders bought in the \$1.50 to \$2.40 range, which might serve as a good guide for entries, give or take a dime or so. The stock recently traded just below \$2.70.

### **The Bear Case**

Keep in mind, some very smart analysts reject the bull case for uranium. Canaccord Genuity analyst Gary Lampard thinks the global uranium glut will last through 2022, citing high inventories. T. Rowe Price metals and mining analyst Rick de Los Reyes thinks the Fukushima

disaster has turned public opinion so negative on nuclear energy that it's caused "permanent demand destruction" for uranium. Germany, for example, plans to take all its reactors off line by 2022.

Don't count on a bid from Japan boosting uranium prices any time soon, either. No, not because Japan isn't turning its reactors on again. Ultimately, that's probably going to happen, because the cost of imported fuel to generate electricity is so high. That weighs heavily on the economy, which bugs Prime Minister Shinzō Abe, points out Lawrence McDonald, head of U.S. macro strategy, at Societe Generale.

Instead, the real problem for uranium bulls is that Japan has kept on buying uranium since the 2011 Fukushima disaster, making good on its contracts. Now it has a huge surplus inventory. This means it probably won't be back in the market for uranium until 2024, says Morningstar's Wang. Still, when the day comes, news that Japan is turning its reactors back on (the decision is currently tied up in the courts) would be a positive for uranium since it would boost investor confidence that nuclear power does have a viable future.

Given the string of terrible and scary disasters over the years, from Three Mile Island to Chernobyl to Fukushima, that will be a turn few expected.

*At the time of publication, Michael Brush had no positions in any stocks mentioned in this column. Brush is a Manhattan-based financial writer who publishes the stock newsletter [Brush Up on Stocks](#). Brush has covered business for The New York Times and The Economist group, and he attended Columbia Business School in the Knight-Bagehot program.*

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