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# Japan's Ordeal And Ours

By Andrea Jennetta, Publisher

Since Friday, my stomach has been in knots.

My first reaction to the news about the devastating earthquake and tsunami that hit Japan? No. No, no, no, no, no. Then I started to worry about my colleagues and friends in the Japanese nuclear industry. Were they alive? Badly hurt? What about their families and friends?

After that, I visited the worldwide web for news about the aftermath—and almost wished I hadn't.

Other than the time and magnitude of the earthquake and tsunami, I found very little information on *THE REAL ISSUES* the people and government of Japan are wrestling with: hunger, inadequate supplies of safe drinking water, lack of electricity, heat and shelter, wrecked infrastructure, tens of thousands missing or dead.

What I found instead: every mainstream media site/news report ran screaming headlines about imminent doom for mankind due to lethal radiation, imminent core meltdown, and China syndrome occurrences—with NO exceptions. That includes you, NY Times, Washington Post, Wall Street Journal, BBC, USA Today, CNN, MSNBC, Bloomberg, AP, UPI, Reuters and the Huffington Post.

**Japan in Crisis** 

## U.K. to Carry Out Broad Nuclear Safety Review

By Roger Murray, Special Correspondent

In contrast to the near panic reaction by some European governments, the U.K. has adopted a more measured response to the unfolding events at Japan's Fukushima Daichi nuclear plant. On March 14, Prime Minister David Cameron announced a report on the safety implications for the U.K. nuclear sector.

While Cameron said the U.K. must "learn lessons," he made it clear that the country is not prone to seismic activity of the kind seen in Japan, while existing British nuclear plants do not use the same boiling water technology—nor is this technology being considered for new reactors.

Despite previous opposition to nuclear by the Liberal Democrats, junior partners in the coalition with the Conservatives, there are no indications yet that the Japanese nuclear crisis could lead to a split within the government over the U.K.'s ambitious £40 billion (\$64 billion) new-build program.

All but one of Britain's 16 existing nuclear reactors (Sizewell B) are currently scheduled to close by 2023 and eight sites have been identified by the government as suitable locations for a replacement fleet of new stations. France's EDF Energy and the U.K. utility Centrica plan to commission the nation's first new nuclear plant in 30 years at Hinkley Point, Somerset, in 2018, and two other consortia plan a further three plants.

Although a majority of MPs, including most Conservatives and Labor members, and some Liberal Democrats like Huhne, support nuclear new build, several have called for a rethink in light of the events in Japan. The Scottish National Party's Mike Weir said the U.K. should "pause for thought" over its nuclear plans while Labor MP Paul Flynn has urged ministers to "look again at our rush to nuclear," citing public concerns and the danger posed to nuclear plants by natural disasters and terrorist attacks.

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Special Issue: Japan



These sites also featured quotes on various apocalyptic scenarios from a veritable who's who of antinuclear professionals like Ed Lyman, Frank von Hippel, David Lochbaum, Arnie Gunderson, Tom Cochran and other "experts," giddy with glee that their opportunity to once and for all kill nuclear dead had finally, finally arrived.

## The Silver Lining

Believe it or not, though, there is some good news. Had the earthquake/tsunami happened even three years ago, I believe the nuclear industry would have acted as it has since Chernobyl and retreated further into its steel-lined concrete bunker. It would have avoided the press and the public, and allowed the professional antinuclear lobby to control the news, the facts and the messages.

But instead of rolling over, the nuclear community for once is mobilizing and fighting back. I am impressed at the efforts of various pronuclear activists, bloggers, advocates and professional organizations. In the U.S., I have to commend the Nuclear Energy Institute and American Nuclear Society, as well as a dedicated band of individuals first connected by social media and now forever bonded like soldiers in war, for being proactive in offering up an antidote to the poison spewed by the mainstream media and the antinuclear lobbyists.

Not surprisingly, I wrote more than a few belligerent emails to mainstream media reporters questioning their use of the David Lochbaums of the world when credible resources like the IAEA and NRC were answering the phone around the clock and over the weekend to provide factual, science-based information to help the public understand the events at Fukushima.

I also spent a fair bit of time trawling comments posted on the various media sites in response to coverage of what is happening at Daiichi. I was both encouraged and saddened by what I read. There are some people who really, really get it. But many more don't.

EVOLUTION MARKETS	Uranium Prices Term: April 2011 cob March 16, 2011	
	BID	OFFER
U3O8 (physical)	\$47.00	\$51.00
U3O8 (financial)	\$47.50	\$51.50
UF6 (physical)	\$134.00	\$144.00
Source: Evolution Markets Inc. www.evomarkets.com		+1 914.323.0252 <u>Disclaimen</u>

Still, as a measure of how far the industry has come, and how widely nuclear energy is now accepted—primarily because of climate change—various top-ranking officials in the Obama Administration, including the POTUS himself, have publicly stated that nuclear is safe and reaffirmed their commitment and support.

#### It's Not All Rainbows and Unicorns

Do I believe that all is well in the Land of Nuclear, and that the industry can expect to skip happily ever after with rainbows, unicorns and thousands of Gen III+ reactors dotting the land? Of course not.

The spot price is down \$20, the result of the one-two punch delivered by the Energy Department's latest uranium for cash scheme and the onslaught of hysterical MSM coverage on Fukushima. The value of global stock exchanges dropped, with the share prices of uranium producers and juniors hit hard.

Here at *FCW*, we don't expect either situation to last long. Market fundamentals have not changed, a well-documented supply shortfall is coming, and China is still building eleventy billion reactors.



#### Status Quo for New Build

As for new build, I genuinely believe that absolutely nothing has changed. That's right. N.O.T.H.I.N.G.

Yes, of course, countries around the world will review their siting requirements, seismic zone standards, and emergency response procedures, and the industry will react accordingly. There are always lessons to be learned in the aftermath of events like Fukushima. We will learn them, make our industry even safer, and move on.

In the Western world, with the exception of the U.K., the usual navel gazing and analysis-paralysis that prevents action on all urgent societal issues should continue, unabated.

Germany reacted right on schedule, ordering the eight reactors that were built before 1970 to shut down immediately while a safety review is conducted. Which is reasonable unless you consider how rabidly antinuclear that country's citizenry is. I really wonder if those units will be allowed to restart, and if last year's agreement to extend the operating lives of the rest of the German fleet will be upheld.

Other European countries with reactors will continue to operate them. New-build plans will be delayed. Those that are serious about new nuclear build will go right ahead; those that weren't will use Fukushima as cover. This means you, Sweden. As for Switzerland, well, I never believed those new-build plans.

Countries that were weighing brand new nuclear programs before Friday are still mulling them over today. Just because a government says it is interested in nuclear power doesn't mean it will follow through. Who knows what the Italians will do. My disdain for Turkey is well known. Who knows what will happen there—and who cares.

There's no reason to think that Brazil and Argentina won't move ahead with their programs. Unless and until Canada figures out what to do with AECL and the CANdon't, it will continue to be its indecisive—but extremely polite—self, and agonize over new build. Fukushima won't change that.

In the U.S. the four reactors that are under construction at Vogtle and Summer will proceed. (By the way, none of the four are BWRs.) Since there wasn't much hope that loan guarantees with affordable credit subsidy costs would be awarded to applicants in deregulated markets before March 11, there's no reason to assume any will suddenly appear now.

The United Kingdom, however, must build new reactors. The designs undergoing certifications, the AP1000 and EPR, are both PWRs. If the Brits don't follow through, either their baseload infrastructure collapses, or they go back to North Sea oil, which is limited, and dirty. If they let their baseload fall, forevermore it's pricy gas and electricity imports from Europe for them.

## China et al: All Systems Go

As for China, Russia, India, Korea and the Middle East, it is all systems go. Both the Chinese and Russian governments said as much earlier this week, after indicating they would, of course, review their safety rules. Given India's tumultuous politics, the government will have a fight on its hands with the antinuclear crowd in Parliament. Then again, India's government always has a fight on its hands. That's business as usual there.

Now at the end of the day, it could very well be that TEPCO is not telling the whole story and that the situation on the ground at Fukushima is indeed far worse than we know.

I'm sure you have all thought the exact same thing, knowing what you know about Japanese culture of respect for privacy, the history of nuclear accident coverups and the all-too-human characteristic of not wanting to admit mistakes. I am hoping for the best while preparing myself for the worst.

In the meantime, our prayers are with the people of Japan and the heroic workers at Fukushima. •



# ARMZ Pulls Plug On Mantra Takeover

By Roger Murray, Special Correspondent

In what is the first—and unlikely to be the last—consequence of the Japanese nuclear crisis, Russia's Atomredmetzoloto (ARMZ) has pulled it's A\$8.00 (\$8.00) per share all-cash bid for Australia's Mantra Resources (TSX:MRL), owner of the Mkuju river project, southern Tanzania. Analysts expect Mantra's share price to plunge, as it had been supported by the bid, which was agreed mid-December.

ARMZ notified the Australian explorer, whose sole asset is its Tanzania project, on March 15 that it believed "the recent serious events at the nuclear power plant in Fukushima, Japan are likely to have a material adverse effect on the business, results of operations, assets or liabilities, financial position or prospects of Mantra."

Effectively, ARMZ used a clause in the scheme implementation agreement to get out, as the condition of no material adverse change "is not capable of being satisfied."

#### Deal: Dead Duck

Although ARMZ told Mantra that it intends "to continue discussions" with the firm "in an effort to explore how the transaction between two companies may proceed by way of an alternative approach," the takeover deal is dead.

This also means Canada's Uranium One (TSX:UUU), which had a definitive put/call arrangement with ARMZ, won't have the option to buy Mantra. But if the climate for new yellowcake production deteriorates, should the uranium price not recover to pre-Japan levels for some time, the balance sheets of both ARMZ and Uranium One will be the beneficiaries.

This will worry any exploration junior with a good project hoping to find a willing buyer or development partner.

Mkuju was rated as a good project, despite inadequate infrastructure, by most analysts with a 101-million pound (45,800 tonne) U3O8 measured and indicated resource and prefeasibility study projected annual output of 3.7 million pounds (1,700 tonnes) U3O8.

# AIM-listed U-Explorers Suffer Widespread Sell-Offs

By Roger Murray, Special Correspondent

The slump in nuclear/uranium stocks this week has pummelled share prices of yellowcake explorers listed on London's Alternative Investment Market (AIM). After a rough day on Monday, most AIM-listed stocks suffered further losses on Tuesday as media reports of increased radioactive emissions from Japan's Fukushima-Daini nuclear plant further unsettled investors.

**Kalahari Minerals**, which owns 43% of Australia's **Extract Resources**, developer of Namibia's Husab project, was hammered (*FCW* #415, March 10). A fairly modest fall to £2.87 (\$4.62) on Monday had already taken the price below the £2.90 (\$4.67) per share "possible" cash offer that **China Guangdong Nuclear Power Co**. (CGNPC) announced a week earlier. By close of trading on Tuesday Kalahari had slumped 12% to £2.43 (\$3.91). This compares to its 52-week high/low of £3.01/£1.42 (\$4.85/\$2.29).

Shares fell to a £2.35 (\$3.78) low at one point in the day's trading; several large sales were made, including one, just as the market

closed, for 309,000 shares priced at £2.36 (\$3.80). There was some buying activity, indicating some investors see the share slide as an investment opportunity, but only for much smaller volumes.

In early trading on Wednesday shares in Kalahari ground staged a partial recovery over the previous two days' losses, climbing £0.12 (\$0.19) to £2.55 (\$4.11), up 5% on the previous day's close.

Other results include:

Berkeley Resources, developer of the Salamanca project, Spain: off 22%, to £0.63 (\$1.02) on Tuesday, compared to a 52 week high/low of £1.21/£0.56 (\$1.95-\$0.90).

Forte Resources, working in Mauritania and Guinea: down 13% at just under £0.06 (\$0.10).

**Niger Uranium**, which has just renamed itself **URU Metals**: 14% down also to £0.06. As well as exploring in Niger and South America, the company jointly owns a nickel exploration venture in Southern Africa.

**Uranium Resources**, Nyota project, Tanzania: fell 19% to just under £0.03 (\$0.05).



## Tragedy in Japan Tests U-Industry

By Nancy E. Roth, Managing Editor

Miners and producers speaking to *FCW* this week expressed pain and shock at the scope of the devastation in northeastern Japan, mingled with indignation and disappointment at how the nuclear energy industry has somehow found itself taking a central role in a crisis not of its own making.

Investors, persuaded that the tragedy will swing public and political opinion against nuclear energy, have fled the sector in droves, seeking greener pastures in solar and gas. Miners, explorers, enrichers, utilities and manufacturers all felt the downdraft.

Among producers, Cameco alone appeared unfazed (*see related story*, *p. 6*). Paladin put out a statement noting that it had no commercial relationships with Japanese utilities.

Meanwhile, Uranium One announced on Wednesday that its majority owner, Atomredmetzoloto (ARMZ), would back off its agreement to acquire Tanzania-based junior Mantra Resources due to the "material adverse effect" that the "serious events at the nuclear power plant in Fukushima are likely to have" (*see related story*, *p.* 4).

## **Temporary Downturn Still Hurts**

But among juniors struggling to bring their projects to production and finally realize revenue, it was a stunning turnaround.

"Not one thing about this changes the primary supply-demand balance we're working into," declared Gary Steele, vice president, marketing of Energy Fuels in Montrose County, Colorado. "We intend to keep moving our [Piñon Ridge] mill project forward."

Like many others *FCW* consulted, Steele did not think the downturn would last.

"We're going to undergo some period longer than days and less than months, before we reach equilibrium and climb our way out," he said. The worst part is the money. Plummeting share prices and uranium market prices mean juniors cannot raise the level of funding they need to push ahead on their projects. A large cluster of juniors went for financings when the uranium spot price turned upward late last year after months in the bargain basement.

Wyoming-based Uranerz Energy, for example, completed a \$20 million placement in December and early this month announced it had pulled in a tidy sum by accelerating the expiry date of a series of warrants, raising its treasury to \$47 million.

Energy Fuels, on the momentum of winning a state permit for its hard-fought uranium mill, the first new one in decades in the U.S., had just launched a private placement the previous week. It was not meant to be, however.

"That is going to be sidetracked," he noted ruefully. "We've lost close to a third of the our value."

The firm has abandoned the effort for now, he added.

Hathor Exploration CEO Mike Gunning told *FCW* he was "perplexed, disappointed and depressed" at how the international media were telling the story.

He noticed an initial report by CNN showing a visual of a burning gas plant in the background as a reporter described the events at Fukushima's nuclear plants. And the result for the Canadian explorer?

"We have lost half our market cap," said Gunning. "That limits our access to capital. We just spent \$9 million on exploration, and we go to market to replenish it."

But Gunning pointed out that the market fundamentals are so robust that even if no new plants are built, there is still a great deal of unsatisfied demand. Current annual world production amounts to 140 million pounds. The current fleet of reactors, with no new added new build, consumes 180 million pounds. When the secondary supply filling in the gap goes away, miners will need to step up to the job.

"We don't need China," Gunning said. "We are going to keep the drill turning. Saskatchewan is not going away."



## Cameco: Oasis of Calm In Gathering Storm

By Nancy E. Roth, Managing Editor

"Largely driven by emotion," is how Cameco CEO Jerry Grandey described the sharp fall of uranium producers' and explorers' share prices in global financial markets on Monday. He was speaking at a special conference call to discuss what a calamitous pair of natural phenomena, which damaged antiquated nuclear reactors in Japan, meant for Cameco.

His core message was that, over the long haul, Cameco did not expect much in the way of consequences for its business at all, despite the rapid falloff of Cameco's share value that began Monday and continued through close of business Wednesday.

He repeatedly emphasized that Cameco had cemented its relationships with its Japanese customers over a period of decades, with long-term supply contracts "designed to insulate us from market volatility and insure a solid base of earnings."

Grandey also thought the nuclear renaissance would survive the natural disaster. "We don't see a dramatic effect on the fundamentals of our uranium business," he noted. "The growth of nuclear capacity will continue in China, India, Korea and elsewhere. There is tremendous momentum and we expect it will continue."

Asked by an analyst how the shutdown of 11 reactors would play out with respect to fuel purchases, Grandey pointed out that in the context of the 54 reactors in Japan, the 11 units represented the equivalent of 3-4 million pounds, which was "not significant to Cameco."

He added that, as with the 1995 earthquake in Japan, the reactors taken off line would gradually return to service.

Grandey later said that TEPCO owned a 5% interest in production from Cigar Lake. Even when Cigar Lake was producing at its maximum annual capacity of 18 million pounds U3O8, he said, TEPCO's share would come to only 900,000 pounds.

Ken Seitz, Cameco's new senior vice president of marketing and business development, took questions related to the effect of the event on the market price of uranium.

"We've already seen the spot price move down in the last couple of weeks," as a result of the U.S. Department of Energy's recent announcement of a plan to barter more of its excess uranium inventory into the market (*FCW* #415, March 10).

"Given the events in Japan it could be that we'll see the market moving to sell more, further weakening the price," he said. "That said, there is a tight supply situation in the spot market. We expect volatility in coming weeks, but the tightness does remain."





# Japan Crisis Could Affect Some U.S. New Build

By Dan Yurman, Contributing Reporter

The nuclear crisis in Japan has sparked questions about the construction of nuclear plants in the U.S. Unlike energy-starved developing nations like China and India, which have national imperatives to build new reactors, the U.S. currently has an abundance of coal and natural gas to keep its economy going for hundreds of years. That is, of course, if you assume the other national imperative to reduce greenhouse gases, can safely be ignored for that period of time and that green politics will not force other, less-effective energy choices on utilities.

On Monday White House spokesman Jim Carney said President Obama continues to support nuclear energy and that the administration would incorporate lessons learned from Japan into U.S. regulation.

In budget hearings before two committees of the House this week Energy Secretary Steven Chu also testified that the Obama Administration believed the U.S. must "rely on a diverse set of energy sources, including...nuclear power." His budget request included up to \$36 billion in loan guarantee authority for nuclear reactors.

Still, some antinuclear House Democrats, including Rep. Henry Waxman of California and Rep. Ed Markey of Massachusetts, demanded a freeze on all new nuclear reactor construction, plus a rescission of NRC's recent decision to relicense Entergy's Vermont Yankee reactor.

An NRC spokesman cited the difficulty of issuing the paperwork while the agency was fixated on events in Japan. But this might turn out to be a thin fig leaf, if the commissioners reveal that they have had second thoughts.

But Energy & Commerce Committee Chairman Fred Upton (R-Mich.) said he was not going to allow any nuclear new-build witch-hunts based on events in Japan. Sen. Lamar Alexander (R-Tenn.) defended the safety record of the U.S. fleet and suggested that despite the current crisis, Japan will remain a leader in nuclear technology, while the U.S. has fallen behind.

*FCW* understands, however, that from a commercial perspective, the troubles in Japan's antiquated reactors at the Fukushima site

might make a compelling case for use of Generation III reactors, such as the Westinghouse AP1000 and GE-Hitachi's ESBWR, which have built-in passive-safety features.

"The situation in Japan relative to the new build in the U.S., will have a positive effect for the AP1000 and ESBWR," a retired utility executive told *FCW*. "Their passive safety measures will be seen as having more value."

The executive said the AREVA EPR, which relies on emergency diesel generators, might not fare as well in the new, super safety-conscious market.

But AREVA spokesman Jarrett Adams told *FCW* that the EPR could handle blackouts.

"The EPR has quadruple diesel generators, and any one of them can power the entire plant. They are protected in a separate concrete bunker, each with its own fuel supply," said Adams.

## **Lynchpin to Come Undone?**

Intense speculation has arisen in Texas about whether NRG's two proposed Japanese (Toshiba/Hitachi) reactors face new financial woes due to the situation in Japan. The utility executive told *FCW* that Japan's Export Bank might have to reallocate funds formerly set aside for loans and loan guarantees, to rebuild infrastructure at home. Because the two reactors were sourced in Japan, NRG had planned to obtain a loan for their construction.

More concerning is that Tokyo Electric Power (TEPCO), which owns and operates the stricken reactor complex at Fukushima, was an early investor in the South Texas Project. But its investment is contingent on NRG's ability to win a loan guarantee from the U.S. Department of Energy.

But now TEPCO is struggling to deal with its damaged reactor complex, and will soon need to replace lost generating capacity. That may make it hard for the utility to keep its \$275 million commitment. Even if TEPCO is able to use units 4, 5 and 6 again, the cost of replacing the power lost from the seawater-cooled units 1, 2 and 3, which will never run again, could eat into TEPCO's cash reserves. The six reactors together have supplied about 15% of Japan's electricity.

The Economist reported on Tuesday that Japan's government could be stretched thin in the reconstruction effort, noting, "Japanese sovereign debt is in a league all its own...Its gross-debt-to-GDP ratio may reach 228% this year—more than twice the ratio in America."



In Japan individual savers hold a lot of that debt, and as they withdraw it to rebuild their homes and businesses, it could put a cash squeeze on the government. That could make it hard to extend government support to TEPCO's reconstruction efforts, leaving the utility to fend for itself.

In short, Japanese institutions have served as the financial lynchpin for NRG's project. In seeking a government loan guarantee NRG was counting on the bona fides of these organizations to help it meet the stringent criteria of DOE's due diligence process, especially in regard to independent, unregulated merchant generators.

But the vastly changed financial scenario in Japan may undermine NRG's effort to secure the loan guarantee. Without it NRG officials have said the company would not proceed with the \$10 billion project.

### **Disaster Stalls Contract Negotiation**

In another blow to the South Texas Project, CPS Energy, a San Antonio utility, suspended contract negotiations to buy power from the planned reactor. Officials from both companies said they needed to halt discussions to assess the impact of Japan's nuclear crisis on U.S. new build.

"We need to have a better idea of what's going on," CPS spokesman Lisa Lewis said in a statement.

Barclays told Reuters on Monday that should NRG decide not to build the twin reactors at STP, they could in the short term write off their expenses, plus gain a long-term benefit of a better overall strategy for the company. Moody's agreed, noting that removing the uncertainty of massive cost overruns related to construction of the two reactors would stabilize investor confidence in the company.

NRG said in a statement that it would not engage in "speculation" about the project based on the crisis in Japan.

## Some U.S. Projects to Proceed

Not all the news is bad. The Nuclear Energy Institute (NEI), the industry's trade organization, asserted that U.S. plants are safe and that the crisis in Japan is not expected to affect U.S. nuclear expansion. Tony Pietrangelo, the chief nuclear officer at NEI, said in an interview with investor groups in New York that most U.S. new construction will be in the southeast, which has few if any active faults and no history of devastating seismic events.

The two U.S. projects most certain to reach the finish line at present are the Southern Company's two planned Westinghouse AP1000s at its Vogtle site and SCANA's two planned AP1000 units at its V.C. Summer power plant. Neither is near a coastline. TVA's reactor completion projects at Watts Bar and Bellefonte sites are also inland.

"New construction will be unaffected by this given where the plants are located," Pietrangelo told investors.

Plus, since September 11, 2001 NRC regulations require older plants to prepare more thoroughly for emergencies. For example, manage cooling of shut-down reactors under blackout conditions.

In a company statement it issued on Monday, Southern Company noted, "We do not anticipate that events in Japan will impact our constructions schedule or our ability to stay on budget."

In a public webcast on Tuesday, SCANA officials stressed that the AP1000 is a Pressurized Water Reactor, which, unlike the Boiling Water Reactors at Fukushima, do not require outside electricity for cooling down the core.

#### China Takes a Breather

By Dan Yurman

In a dramatic reversal, China's State Council announced on Wednesday that it had suspended the approval of nuclear projects until it could revise safety rules. The government said it took the action in light of the developments at Japan's Fukushima nuclear plant.

The State Council, chaired by Chinese Premier Wen Jiabao, also said the government would do safety reviews at current nuclear facilities and those under construction. Many of China's 9 GWe of nuclear power plants are Generation II designs.

The government has offered no indication, however, that it would halt its planned nuclear expansion in accordance with its most recent Five Year Plan, published earlier this month.

According to the Financial Times, the statement was probably aimed at reassuring an alarmed public that its nuclear program was producing safe facilities. The report also cited industry observers who thought China's Generation II CPR1000 reactors were the most likely to see the effects of new reviews.



SCANA President and COO Kevin Marsh said, "[W]e remain committed to the construction of two additional nuclear units [at V.C. Summer]."

### Mitsubishi Reactor Review Delayed

In a separate development, the U.S. Nuclear Regulatory Commission announced last week that it had postponed the license applications of Luminant and Dominion for new Mitsubishi Advanced Boiling Water Reactors. Luminant plans to build two 1,700 MWe Mitsubishi APWR reactors and Dominion plans to build at least one 1,500 MWe version of the same design.

The NRC had certified the design for use in the U.S. in 2008 but because the company had since made structural changes to the plan, NRC said it needed to do another seismic analysis. That pushes back the beginning of a safety review of Luminant's Comanche Peak project to June 2013, and of Dominion's North Anna project to July 2013.

A nuclear energy utility executive familiar with the license applications of both utilities told *FCW* the delay might not matter much to either utility. Neither, apparently, is in any hurry to build a new reactor.

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Energy and Climate Change Secretary of State Chris Huhne (a Liberal Democrat) confirmed that the U.K.'s chief nuclear inspector would assemble the report on the safety of Britain's existing and new nuclear plants, "in close cooperation internationally with other nuclear regulators."

Huhne cautioned against alarmism. "We take this incident (in Japan) extremely seriously even though there is no reason to expect a similar scale of seismic activity in the U.K.

"It is essential that we understand the full facts and their implications, both for existing nuclear reactors and any new program, as safety is always our number one concern," he added.

The U.K. Nuclear Industry Association (NIA) has backed the review. "We remain confident in the U.K.'s nuclear future and .... believe that this will be of great significance in ensuring that lessons are learned effectively from the ongoing events," said NIA chief executive Keith Parker.

He noted that: "The chances of a similar earthquake and tsunami happening in Northern Europe are thankfully extremely remote... the largest-ever recorded earthquake...is many thousand times smaller than the earthquake in Japan."

The future of U.K. nuclear policy was discussed by the cabinet on Tuesday against the backdrop of moves by some European countries for a review of expansion plans and a call by the European Union to "stress test" existing facilities.

### **Review to Cause Investment Delay?**

The most immediate concern is whether the safety review will cause a delay in the Generic Design Assessment of the safety of the AP1000 and EPR designs, due to be completed this June. Huhne did not address this issue directly, and a spokesperson for the Health and Safety Executive which is conducting the GDA said, "It is too early to say if there will be an impact on our new nuclear build regulatory work."

However, Huhne acknowledged that the review could affect how quickly planned investment in new build is firmed up. Investors will "make their assessment on the basis of costs and likely returns and that in part will be affected by the sorts of conclusions" made by the nuclear inspectorate, he told the House of Commons energy select committee.

Most energy analysts are predicting that whatever the outcome of the review, the Japanese crisis and resulting uncertainties will inevitably delay U.K. new build.

Arthur D Little energy director Nick White commented: "I think it's probably set the program back—it's bound to lead to a pause for reflection. The timetable was tight and it has just got worse."

He added: "On any rational basis, this shouldn't have any implications for a British nuclear program. We're not subject to earthquakes and tsunamis in the way that Japan is. The technology that will be used here is completely different. But on an emotional basis, there is bound to be a reaction."

The review comes at a critical time. The new build consortia are gearing up to initiate site preparation works, apply for site specific licenses and commit to final investment decisions by 2012.



However, work to build the required supply chain within the U.K. is continuing and only last week AREVA made global power systems group Rolls Royce its main British manufacturing partner. The March 11 agreement covers the manufacturing of complex components and will lead to the development of a joint plan for the construction of EPR reactors.

AREVA has also launched a joint venture with the government-backed, South Yorkshire-based National Advanced Manufacturing Research Centre to ensure U.K. manufacturers are qualified to work in the nuclear sector. To date AREVA says that 370 firms have applied to start the qualification process and under the joint venture it will guide companies through the meticulous education, safety and procedural requirements for approval.

### **Anti-Nuclear Groups Revitalized**

Anti-nuclear groups such as Greenpeace and Friends of the Earth (FoE) have been quick to seize on the Japan events as "proof" that nuclear is inherently dangerous and unsafe. Greenpeace's Steve Campbell said that Japan's nuclear plants "were built with the latest technology, specifically to withstand natural disasters, yet we still face potential meltdown."

Former FoE director Tony Juniper maintained that people's fears about nuclear power "are entirely rational." He insisted that "it is quite reasonable to conclude that nuclear power can never be a risk worth taking."

However, there is as yet no evidence of a general public backlash against nuclear, although local activists have called for the planned two reactors at Hinkley Point C to be scrapped. On March 14, members of South West Against Nuclear pitched up at EDF Energy's Bridgwater offices to make their protest.

Burnham and Highbridge constituency MP Tessa Munt, a Liberal Democrat, noted that a tsunami had struck Somerset in 1607, and urged the government to exercise caution. "The tsunami in Somerset does not compare with the tragedy in Japan in any way but we should recognize that there are risks and the government really needs to assess them," Munt said.

#### **CORRECTION:**

In last week's issue (FCW #415, March 10) we named Alastair Clayton, an Extract Resources director, as a representative for Rio Tinto, although he is a Kalahari Minerals nominee (one of two) to the Extract board. We apologize for the error.

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