

Nuclear Renaissance on Hold

Leaving the Nuclear Industry Stuck in the Dark Ages

by Gordon Edwards, April 21, 2014

*"Since about 2001 the term **nuclear renaissance** has been used to refer to a possible **nuclear power** industry revival, driven by rising **fossil fuel prices** and new concerns about meeting **greenhouse gas** emission limits. However, the **World Nuclear Association** has reported that nuclear electricity generation in 2012 was at its lowest level since 1999."*

http://en.wikipedia.org/wiki/Nuclear_renaissance

The nuclear renaissance was supposed to start in North America with a dizzying flurry of new orders, then spread to Europe -- and before long other countries would be buying them and building them like crazy. This has not happened and will not happen.

In North America the industry is definitely on the decline. A few years ago new CANDU reactors were going to be built in Canada -- two in Northern Alberta, one or two in Saskatchewan, a new CANDU (Lepreau-2) in New Brunswick, plus 2 new ones at Bruce, 2 new ones at Clarington, and 2-4 new ones at Darlington. All of these new CANDU projects have either been explicitly cancelled or put on a very distant back burner. Moreover the refurbishment of Pickering-B is not going ahead, so by 2020 or so the Pickering Nuclear Station will be a thing of the past. Quebec has phased out of nuclear power completely and AECL's reactor division has been sold for a song to a scandal-ridden SNC-Lavalin. The two isotope-producing MAPLE reactors were non-functional fiascos, and Canada will no longer be producing medical isotopes from nuclear reactors after 2016. The 57-year-old NRU reactor at Chalk River will likely be shut down for good. The Advanced CANDU reactor, ACR, under development for decades, is nowhere to be seen. Canada's nuclear future looks bleak.

In the USA, since the mid-2007s, there were 16 licence applications

The Renaissance That Never Was

to build 24 new nuclear reactors. Most of these have since been cancelled. There has been no new ground-breaking for a new US nuclear power station since 1974, and until 2013, no ground-breaking for new US reactors at existing nuclear stations since 1977 -- two years BEFORE the Three Mile Island accident. Meanwhile 5 older reactors have been permanently retired in the USA for economic reasons, bringing the number of US reactors down to 99 -- and it is expected that up to 13 more older US reactors may be retired in the next year or so. Gregory Jaczko, the Chairman of the US Nuclear Regulatory Commission at the time of the Fukushima disaster, has said repeatedly that all US nuclear plants should be shut down for safety reasons.

There are five reactors currently under construction in the USA: the *Watts Bar 2* reactor (ice condenser design) in Tennessee, as well as the *VC Summer* in South Carolina, and *Vogtle* in Georgia (both of the latter are two AP1000 reactors each). Clearing (not officially defined as "construction") at the *VC Summer* and *Vogtle* sites actually began in 2007. All of these sites have existing reactors at them. None of these projects could obtain financing without lavish loan guarantees from the US Government.

In Europe, Sweden, Germany, Austria, Belgium, Italy and Switzerland have nixed nuclear power for future developments. Nuclear prospects in France are not bright, the Olkiluoto reactor in Finland is still struggling to see the light of day, and the UK nuclear program is looking more desperate every year, though the official UK line is to go ahead and build a new fleet of nukes. Eastern Europe has shown more willingness to build new nukes, although recently the Czech Republic is showing signs of faltering in its nuclear plans.

The places where new reactors are much more likely to be built are Russia and parts of Asia, especially China and South Korea. A South Korean TV crew was just here last week (leaving for home today from Montreal) to interview Shawn-Patrick Stensil in Toronto, myself in Montreal, Michel Duguay in Quebec City, and Chris Rouse (of New Brunswick) in Ottawa, as well as CNSC people (mainly Dr. Gregory Rzentkowsky) in preparation for a 60-minute documentary that will be

The Renaissance That Never Was

critical of the safety of CANDU reactors that will be aired in Korea.

We have learned that 70% of Koreans are now against nuclear power. Hundreds of people, some of them quite highly placed, are already serving prison terms in Korea for high-profile fraudulent activities in the Korean nuclear power field that compromise the safety of those reactors.

China is not expanding its nuclear fleet nearly as fast as people thought they would, and nuclear is only about 3% of their electricity anyway, but they are definitely building new reactors. Meanwhile, of Japan's 54 operating reactors on March 1 2011, four have been destroyed and the other 50 are all shut down. Although the Abe government wants to restart as many reactors as it can, it appears that only about a dozen will be able to meet the new safety standards to allow for a restart, assuming it proves politically possible to do so.

Even before the Fukushima disaster, many independent studies had concluded that the role of nuclear will continue to be on the decline for the next 20 years or more no matter how many new reactors are built, because the old ones will be closing down faster than the new ones can be built. Financing is a major problem, as no private concerns -- but only national or regional governments -- seem foolhardy enough to risk investing in new nuclear reactors.

For a brief sample of some of these pre-Fukushima reports, see http://www.ccnr.org/blog_decline_of_nuclear_2012.pdf

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