

# NUCLEAR MONITOR

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## JOINT STATEMENT ON THE FUKUSHIMA DAIICHI NUCLEAR DISASTER

### On the Occasion of the 25th Anniversary of the Chernobyl Nuclear Disaster, April 26, 2011

The Fukushima Daiichi nuclear disaster, precipitated by the huge earthquake and ensuing tsunamis that hit eastern Japan on March 11, has created fear of radiation exposure and radioactive contamination not just in Japan, but throughout the world.

The Japanese Government, electric power companies and academics who served them boasted that Japan's nuclear power plants were completely safe, that a nuclear accident would not occur. Their responsibility is heavy indeed. Many people had long warned of precisely the situation that is now in progress - of the danger of a huge earthquake and tsunami, of an accident caused by a loss of power supply, of the danger of concentrating several plants on a single site, of the problems facing suicide squads required to respond to a major accident, of the defects of emergency response preparations which only covered a 10 kilometer radius - but these warnings were not taken seriously. The attitude of promoting nuclear energy no matter what is one of the reasons why the response on this occasion by the Japanese Government and Tokyo Electric Power Company has at each stage been too late. To nevertheless claim that this was 'beyond expectations' is both immoral and criminal.

Reactors at the Fukushima Daiichi Nuclear Power Station have not achieved cold shut down. The situation continues to be unpredictable. It is important to maintain cooling function and to take measures to prevent further contamination from releases and leaks of radioactive material. It goes without saying that in doing so sufficient consideration must be given to the safety of the workers. Radiation exposure standards for residents should not be set excessively high to meet accident circumstances. Rather, it is necessary to rapidly take all steps to enable the earliest possible adherence to the original standard of less than 1 millisievert per year. Decommissioning and disposal of the huge heap of radioactive waste that Fukushima Daiichi has become will probably be a long battle extending over decades.

We have continued to oppose nuclear power and nuclear facilities, calling for a phase out of nuclear energy through activities throughout Japan. Hoping for the earliest possible end to the crisis at Fukushima Daiichi, whatever we are able to do together we wish to do it now.

As a first step we are issuing this joint statement today, 25 years after the Chernobyl accident. At an appropriate time we will launch a large national action demanding a formal decision to permanently close down the Fukushima Daiichi and Fukushima Daini Nuclear Power Stations, to cancel the nuclear fuel cycle program, to cancel plans to build new nuclear reactors and to shut down aging nuclear reactors and we will propose a process for achieving a steady phase out of nuclear energy.

We refuse to allow the earth to be further subjected to radioactive contamination and radiation exposure. For the sake of all living beings, let us walk together towards the achievement of a nuclear-free society.

April 26, 2011, endorsed by 87 Japanese NGOs

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# FUKUSHIMA: THE ONGOING DISASTER

**The most remarkable thing about the response so far to the "gempatsu shinsai" (nuclear-earthquake disaster) that has engulfed Japan is that there are still people who think nuclear power has a future. Should this be attributed more to the dependence of modern industrialized societies on massive inputs of energy, or to a collective lack of imagination?**

**(726.6120) Philip White** - We do not yet know how this unfolding catastrophe will end, but we can be sure that if most of the radioactivity in the Fukushima Daiichi Nuclear Power Plant remains on site, then the true believers will claim that this is as bad as it gets and that the risk is worth taking. The environmental damage of localized contamination and releases to sea will be discounted and long-term health impacts from exposure to low levels of radiation will be denied. Even those workers who suffer from acute radiation sickness will not find their way into the most commonly quoted statistics, unless they die promptly.

The truth is that even in the best-case scenario the environmental and human consequences of this disaster will be enormous. The potential impact of a worst-case scenario is beyond most people's comprehension. To give an indication of the amount of radioactive material involved, the total capacity of the three reactors that were operating at the time of the earthquake was double that of the Chernobyl number 4 reac-

tor that exploded 25 years ago in the Ukraine. To this you have to add the radioactivity in the spent fuel pools of all 6 units and of the shared spent fuel pool.

All of this is at risk and, due to the long-term heat-generating properties of the fuel, the situation will not be stabilized any time soon. Even if the radioactivity does not travel far, the release of just a fraction would have incalculable consequences for human beings and the environment.

Besides the true believers, there are also those who regard nuclear energy as a necessary evil. They don't particularly like it, but they see no alternative. But is it true that there is no alternative? For those who can't see beyond the current centralized, supply-driven electrical power systems and who assume an eternally increasing demand for energy, then perhaps it is difficult to imagine how modern societies could survive without nuclear power. But if you allow the possibility of decentralized systems that reward the efficient provision of

energy services, rather than the supply of raw energy, then hitherto unimagined options open up.

After last year's oil spill in the Gulf of Mexico and now the Fukushima Daiichi "gempatsu shinsai," people must realize that business as usual is not an option.

To claim that nuclear energy has a future represents a colossal failure of our collective imagination -- a failure to imagine the risks involved and a failure to imagine how we could do things differently. If future generations are to say that there was a silver lining to the cloud of the Fukushima Daiichi disaster, it will be because human beings now looked beyond their recent history and chose to build a society that was not subject to catastrophic risks of human making.

(Philip worked as the International Liaison Officer of the Tokyo-based Citizens' Nuclear Information Center in Tokyo, Japan. He now returns to Australia)

## TEPCO: 'LEAKAGE HAS NOT STOPPED COMPLETELY'

**Japanese Prime Minister Naoto Kan announced on May 10, that Japan is scrapping plans to build 14 new nuclear reactors and instead will rethink its energy policy with a focus toward renewable energy sources and efficiency. Three months earlier, on February 7, the Japanese Ministry of Economy, Trade and Industry gave unit 1 of Fukushima-I permission to continue operations beyond 40 years of commercial operation. Just over one month later the Fukushima I Unit 1 was wiped out by an earthquake and tsunami.**

**(726.6121) WISE Amsterdam** - The May 10 decision to abandon plans to build more nuclear reactors and "start from scratch" in creating a new energy policy, will mean the end for a plan that the Kan government released last year to build 14 nuclear reactors by 2030 and increase the share of nuclear power in Japan's electricity supply to 50 percent. Japan currently has 54 reactors that before the earthquake produced 30 percent of its electricity. But 13 of those could well be closed permanently after the March 11 earthquake: six at Fukushima-I, four at Fukushima-II and three at Hamaoka. Could the Chernobyl 1986 accident be characterized as a Soviet accident in a

unique type of reactor, the Fukushima accident occurred in a high-tech nation with broad international cooperation and a common reactor type. Even more, the accident as a result of the earthquake happened in one of the most active earthquake zones in the world, in a society prepared for massive earthquakes.

After initially rating the accident Level 5, on April 12, Japan's Nuclear and Industrial Safety Agency uprated the ongoing accident to Level 7, the highest level on the International Nuclear Event Scale (INES), indicating a major accident with significant environmental consequences. Helmut Hirsch, a consultant to Greenpeace Germany, already published an

analysis two weeks earlier (March 25), saying the Fukushima events should be rated at Level 7, or even three Level 7s for the three damaged core's, based on releases up to March 25.

On the same day, April 12, an official from Tepco (world's #4 power company) told a press briefing that radiation leakage "has not stopped completely and our concern is that it could eventually exceed Chernobyl." The phrase "leakage has not stopped completely" turned out to be the understatement of the year, given the fact that late April and early May enormous peaks in releases occurred, and it can take months before (accidental) radioactive release stop.

In uprating the accident to Level 7, however, the government appears to be downplaying the actual radiation releases, with several media reports quoting government officials as saying releases have been about 10% of those from Chernobyl. However, the Austrian weather service, which has been monitoring radiation across the world and advising the International Atomic Energy Agency, said on March 23 (!), that releases of Cesium-137 at that time could amount to about 50% of the Chernobyl source term of Cesium-137 and Iodine-131 releases were at 20%. It is true however that prevailing winds blew the vast majority of the radioactivity onto the sea, but in several periods the emissions were transported inland.

Meanwhile, the world's largest nuclear

companies are trying to capitalize on the nuclear catastrophe: they are forming consortia to bid for work to stabilize and clean up the Fukushima I nuclear power plant. Tepco and the Japanese government face the challenge of managing a huge project that will dwarf the Three Mile Island-2 cleanup. "TMI took 10 years and a billion dollars, and this is a lot bigger," one industry source said. Hitachi is leading one group of companies, including reactor business partner General Electric, seeking Fukushima I work. Toshiba has formed another consortium with several US companies. Areva is in talks with Tokyo Electric Power Co. The consortia could divide the work by unit or by task; the remediation of contaminated air, water and solids are different areas requiring different work.

On May 9, Chubu Electric Co. agreed to Prime minister Kan's request that

the three operational reactors at the Hamaoka nuclear complex be closed, at least until seismic upgrades can be performed and a new seawall to protect against tsunamis be built. The betting here is that these reactors, which sit atop probably Japan's most dangerous earthquake fault, will not reopen.

IAEA Director General Yukiya Amano has announced a post-Fukushima Ministerial Conference on Nuclear Safety to be held in Vienna June 20-24.

**Sources:** Nucleonics Week, 31 March and 14 April 2011; NIRS Update; Nuke Info Tokyo 141, March/April 2011

## THE LIQUIDATORS OF FUKUSHIMA

**There are many signs that Tepco is facing great difficulties in finding workers in the titanic struggle to bring to contain the dangerous situation at Fukushima. At present, there are nearly 700 people at the site. As in ordinary times, workers rotate so as to limit the cumulative dose of radiation inherent in maintenance and cleanup work at the nuclear site. But this time, the risks are greater, and the method of recruitment unusual.**

(726.6122) Job offers for Fukushima come not from Tepco but from Mizukami Kogyo, a company whose business is construction and cleaning maintenance. The description indicates only that the work is at a nuclear plant in Fukushima prefecture. The job is specified as three hours per day at an hourly wage of 10,000 yen (US\$123 or 86 euro). There is no information about danger, only the suggestion to ask the employer for further details on food, lodging, transportation and insurance.

Those who answer these offers may have little awareness of the dangers and they are likely to have few other job opportunities. A rate of US\$122 an hour is hardly a king's ransom given the risk of cancer from high radiation levels. But Tepco and the Nuclear and Industrial Safety Agency (NISA) keep diffusing their usual propaganda to minimize the radiation risks.

Rumor has it that many of the cleanup workers are burakumin (a minority group dating from Japan's feudal era and still often associated with discrimination). This cannot be verified, but it would be congruent with the logic of the nuclear industry and the difficult job situation of day laborers. Because of ostracism, some burakumin are also involved with yakuza, or organized crime groups.

Therefore, it would not be surprising that yakuza-burakumin recruit other burakumin to go to Fukushima. Yakuza are active in recruiting day laborers of the yoseba (communities for day laborers): Sanya in Tokyo, Kotobukicho in Yokohama, and Kamagasaki in Osaka. People who live in precarious conditions are then exposed to high levels of radiation, doing the most dirty and dangerous jobs in the nuclear plants, then are sent back to the yoseba. Those who fall ill will not even appear in the statistics.

On March 14, three days after the earthquake and tsunami that caused the damage at Fukushima, the Ministry of Health and Labor raised the maximum dose for workers to 250 mSv a year, where previously it was set at 100 mSv over five years (either 20 mSv a year for five years or 50 mSv for two years, which is in itself a strange interpretation of the recommendations of the International Commission on Radiological Protection's guideline stipulating a maximum of 20 mSv a year. The letter that the ministry sent the next day to the chiefs of labor bureaus to inform them of the decision justifies it on the grounds of the state of emergency, ignoring the safety of the workers.

This could be a measure to avoid or limit the number of workers who would apply

for compensation. Stated differently, it has the effect of legalizing illness and deaths from nuclear radiation, or at least the state's responsibility for them. Usually, in case of leukemia, a one year exposure to 5 mSv is sufficient to obtain occupational hazards compensation. The list of potential applicants could be very long in light of the number of workers already on the job, or who are likely to be recruited to dismantle the reactors. The project proposed by Toshiba to close down and safeguard the reactors would take at least 10 years.

In short, the state's concern appears to be less the health of employees and more the cost of caring for nuclear victims. The same logic prevailed when, on April 23, the government urged children back to the schools of Fukushima prefecture, stating that the risk of 20 mSv or more per year was acceptable, despite the high vulnerability of children. Can the state be prioritizing the limitation of the burden of compensation for TEPCO and protection of the nuclear industry at large over the health of workers and children?

**Source:** Paul Jobin, Asia Times Online, 4 May 2011

# NO FAKE STRESS TEST!

**In the wake of Fukushima, European Union officials pledged to create stress tests for the 143 nuclear power plants in the EU, that would evaluate the threat posed by natural disasters, terrorism, cyberwar and human error. Now it turns out that that nuclear regulators are unwilling to accept stricter scrutiny and the plans are likely to get watered down.**

**(726. 6123) WISE Amsterdam** - Western European nuclear regulators are now staunchly rejecting calls for rigorous tests, *Süddeutsche Zeitung* reported in its May 4 edition. The regulators reportedly stated in an internal paper that they would only agree to conduct stress tests involving natural disaster scenarios -- and not terrorist strikes or other manmade situations. Instead, they would agree to compose reports on potential threats that would be submitted to the European Commission in Brussels. Neither would independent nuclear experts be given access to the plants under the plan.

European Commission sources told the newspaper that France and Britain have led the efforts to oppose more stringent stress tests. With France's 59 plants and Britain's 19, the two operate the largest number of nuclear power plants of any countries in Europe. Government officials in Paris and London have al-

ready stated that they plan to rely more heavily on nuclear power in the future despite the Fukushima disaster. Officials in London also stated they would not publish the results of the stress tests, which are expected to be completed by December.

Such a stress tests will not give a comprehensive and transparent risk assessment of the European nuclear installations. If developed in such a way the stress tests will only serve as "alibi tests" so nuclear operators can continue their business-as usual.

On May 11, the European nuclear lobby organisation Foratom said that "Including terrorist attacks or cyber-attacks as stress-test criteria would mean the checks will take more time and authorities won't be able to make the results public." And continued: "Our feeling is that citizens in Europe are waiting for the results and we should announce

them without delays. People don't want to make things political and it's important to prove that nuclear plants in Europe are safe."

Or... people want results now - therefore we should not do stress tests, but simply tell them it's OK...., commented Greenpeace spokesperson Jan Haverkamp

We ask you to take urgent action on this issue! Put pressure on Commissioner Oettinger by writing him an E-Mail expressing your concern and protest. Your protest for a genuine stress test on nuclear power plants in Europe. Go to [www.nofaketest.eu](http://www.nofaketest.eu).

**Sources:** [www.nofaketest.eu](http://www.nofaketest.eu); Der Spiegel, 5 May 2011; Bloomberg, 11 May 2011

## FUKUSHIMA DAIICHI AND DAINI

**The 9.0-magnitude earthquake and resultant tsunami in northeastern Japan on March 11, affected more than 31,800 megawatts (MW) of generating capacity. In the immediate aftermath of the earthquake 11 nuclear reactors with 9,674 MW of capacity at four sites shut down automatically, while three other reactors with 2,700 MW of capacity which were closed for maintenance were also affected.**

**(726.6124) WISE Amsterdam** - The Japan Atomic Power Company's 1,100-MW Tokai Daini boiling water reactor (BWR) in Ibaraki prefecture shut down without apparent problems, although JAPC said on March 13, that two of three diesel generators used for emergency cooling had failed. Meanwhile a fire occurred immediately after the disaster in a turbine building at one of the three BWRs at Tohoku Electric Power Company's 2,174-MW Onagawa plant in Miyagi prefecture. It was extinguished without indications at the time of radioactive leakage.

Tohoku Electric subsequently said on March 12 that radiation levels at Onagawa had surged. But by March 14 radiation had fallen to normal levels, with the International Atomic Energy Agency (IAEA) saying that "the current assumption of the Japanese authorities is that the increased level may have been due to a release of radioactive material from

the Fukushima Daiichi nuclear power plant."

Fukushima, which has experienced by far the worst problems, comprises two plants located 11.5 kilometers apart. Fukushima Daiichi (Fukushima-I) and Fukushima Daini (Fukushima-II) are both owned and operated by the Tokyo Electric Power Company (Tepco), with the Fukushima-I complex comprising six BWRs with 4,700 MW of capacity, while Fukushima-II comprises four BWRs with 4,400 MW of capacity.

All four Fukushima-II reactors were operating at the time of the earthquake and shut down automatically, as did three units at Fukushima-I. The remaining three reactors at Fukushima-1 were already shut for scheduled maintenance.

The automatic shutdown of the Fukushima-II reactors ran into cooling problems when emergency generators failed, ap-

parently as a result of the impact of the tsunami on the generators or their diesel stocks. But much worse loss of coolant incidents occurred at Fukushima-I. Nevertheless, early May Tepco, perhaps bowing to reality, said that it may never restart its four Fukushima II (Daini) reactors.

### **Fukushima I (Daiichi)**

*Reactor 1* [BWR, 439MWe, March 1971] - Possible hydrogen explosion March 12, outer building is damaged and there was a partial meltdown. When fuel rods heat up due to insufficient cooling, the zirconium alloy in the fuel rods reacts with steam and produces a large amount of hydrogen. Radioactivity has been vented and leaked. Probably 70% of fuel rods are damaged. Operators have trouble cooling down the reactor. The reactor has 400 fuel assemblies and the spent fuel pool has 292. Update May 12: possible 100% of fuel rods damaged

*Reactor 2* [BWR, 760MWe, July 1974] - The fuel and the reactor core severely damaged. Some fuel may have leaked out of the reactor vessel into the primary containment vessel, which was damaged in an explosion on March 15. Broken fuel rods have been found outside the reactor, probably from the spent fuel pool. The reactor has 548 fuel assemblies and the spent fuel pool has 587. Probably 30-40% of the fuel rods have been damaged.

*Reactor 3* [BWR, 760MWe, March 1976] - The reactor used uranium and plutonium (MOx), which may produce more toxic radioactivity. The reactor containment vessel may have been damaged due to the March 14 explosion, and the spent fuel pool may have become uncovered. The reactor had 548 fuel assemblies and the spent fuel pool has 514. About 30% of fuel rods have been damaged. A remarkable early May video of the fuel pool at Unit 3 has been released. It shows the pool is now underwater, but also a picture of complete devastation. There is no actual visual evidence any fuel remains in the pool - certainly not in racks as designed. However, some fuel must remain, as NHK TV reports on May 11, radiation readings taken May 8, inside the pool of

“140,000 becquerels of radioactive cesium-134 per cubic centimeter, 150,000 becquerels of cesium-137, and 11,000 becquerels of iodine-131.” The presence of short-lived Iodine-131 indicates that either the pool has become contaminated from melting fuel in the Unit 3 reactor or there has been inadvertent fissioning inside the fuel pool itself. An inadvertent criticality is believed by many to have caused the enormous explosion at Unit 3.

*Reactor 4* [BWR, 439MWe, March 1971] - Spent fuel rods in a water pool may have become exposed to air, emitting radioactive gases. On March 15, a hydrogen explosion created by chemical reactions with the spent fuel rods, and fire have damaged the building and probably also the spent fuel pool. There are no fuel assemblies in the reactor; 548 were removed for maintenance and are part of 1,535 in the spent fuel pool.

*Reactor 5* [BWR, 760MWe, October 1978] - The reactor is shut down at the time of the earthquake and the building is not damaged. But the concern had been about spent fuel in the building becoming exposed to air. With power restored to the building, that concern has abated. The reactor has 548 fuel assemblies and

the spent fuel pool has 946.

*Reactor 6* [BWR, 760MWe, April 1978] - The reactor was shut down at the time of the earthquake and the building is not damaged. But the concern had been about spent fuel in the building becoming exposed to air. With power restored to the building, that concern has abated. The reactor has 764 fuel assemblies and there are 876 in spent fuel pools.

*General:* New joint U.S.-Japanese aerial monitoring results of the area have been posted and show significant Cesium contamination well beyond the government's evacuation zone. Cesium levels above 600,000 becquerels per square meter are indicated more than 60 kilometers (30 miles) northwest of the Fukushima Daiichi site. After Chernobyl, the Soviet Union evacuated areas above 550,000 becquerels per square meter. Maps are posted on the DOE website at <http://blog.energy.gov/content/situation-japan/>

**Sources:** Wim Turkenburg, Power point presentation Copernicus Institute Utrecht, NL; April 26, 2011); NIRS Updates; TEPCO updates; Japan, coming to terms with the power crisis (Platts, April 2011)

**Nuclear reactor residual heat generation over time from shut down**

Time after reactor stop	Residual power (% of operating power)
1 second	17%
1 minute	5%
1 hour	1.5%
1 day	0.5%
1 week	0.3%
1 month	0.15%
1 year	0.03%

**Source:** Autorité de Sûreté Nucléaire (ASN)

**IN BRIEF**

**OPPOSITION TO NUCLEAR IN JAPAN**

The crisis at the Fukushima Daiichi nuclear power plant has spawned antinuclear protests in Tokyo on a scale not seen for decades, raising hopes among activists that Japan's future is geared toward a revolution in renewable energy. Japanese media estimated that 17,000 people calling for immediate closure of all the country's nuclear plants marched through Tokyo's Koenji neighborhood on April 10, and many thousands again on similar demonstrations early May.

**30 Years of resistance against proposed Kaminoseki reactors.** Tradition matters at Iwaishima Island. People do things just like their great-great-grandfathers once did, each day venturing out to sea to haul in seaweed, octopus and red snapper. Villagers are proud of their tightknit camaraderie and historical harmony with nature. But a utility company plans to build a nuclear power plant just across the bay, at the tip of the Kaminoseki peninsula. After receiving compensation, several nearby communities have hesitantly embraced the project.

Not Iwaishima. Many residents are convinced that the twin reactors will threaten not just their way of life but the long-term survival of the Inland Sea, a national park known as Japan's Galapagos for its range of sea life. They say the plant's warm water discharge will raise sea temperatures, altering the ecosystem.

So for three decades, since the Chugoku Electric Power Co. unveiled its plans in 1982, islanders have taken an unusually aggressive stand, turning their backs on efforts at negotiation. Graying residents, mostly in their 70s, have in recent years formed an alliance with young antinuclear activists. Together, they have staged hunger strikes, picketing and sit-ins, using a flotilla of fishing boats and kayaks to block company construction cranes from reaching the site.

After the Fukushima accident, the utility temporarily suspended plant construction after local officials expressed safety concerns. "Without our protests, that plant would already be running," said Masue Hayashi, 59, who began her opposition to the project when she was 30. "Those people near Fukushima could have been us."

**LA Times, 5 May 2011**

**Farmers protest nuclear power.** Angry Japanese farmers working and living up to 60 kilometers away from the crippled Fukushima nuclear plant have protested in the country's capital Tokyo that their businesses are in jeopardy. More than 200 farmers including cereal, vegetable and livestock growers demanded redress for farm products contaminated by radiation spewing from the crippled Fukushima nuclear plant.

**Agra Europe, 3 May 2011**

**Protest against increase permissible radiation levels.** On May 2, furious parents in Fukushima delivered a bag of radioactive playground earth to education officials in protest at moves to weaken nuclear safety standards in schools. Children can now be exposed to 20 times more radiation than was previously permissible. The new regulations have prompted outcry. A senior adviser resigned and the prime minister, Naoto Kan, was criticised by politicians from his own party. Ministers have defended the increase in the acceptable safety level from 1 to 20 millisieverts per year as a necessary measure to guarantee the education of hundreds of thousands of children in Fukushima prefecture.

**Guardian (UK), 2 May 2011**

**Shareholders call for disinvestments in nukes.** Some of the shareholders of a Japanese electric power company say they want the utility to close its nuclear power plants. On May 2, a group of 232 individual stockholders of Tohoku Electric Power Company submitted the documents needed for their proposal to scrap its nuclear power plants. The proposal is expected to be put to a vote in an annual shareholders' meeting at the end of June. Tohoku Electric Power has 2 nuclear power plants in Japan's northeastern region, one in Higashidori Village in Aomori Prefecture and another in Onagawa Town in Miyagi Prefecture. The group is also calling for the company to end its investment in spent nuclear fuel reprocessing businesses, including a reprocessing plant at Rokkasho.

**NHK, 2 May 2011**

## FINLAND: BACK TO BASICS – FUKUSHIMA REMINDS OF NUCLEAR RISKS

**Finland has always been a country where people rely on engineering. Despite the techno-optimistic views the Finnish parliament was still far-sighted enough to turn down an industry application for a fifth nuclear power reactor in 1992.**

**(726.6125) Finnish Association for Nature Conservation** - Even if mushrooms and reindeer meat still contained traces of extra radioactivity, the memory of the Chernobyl disaster faded in the '90s when climate discussion drew attention.

Throughout the '90s, the Finnish industry was in a good position to make breakthroughs in the development of new wind and solar technologies. This was not utilized, however, because the industry was already preparing ground for a new nuclear reactor application.

In the turn of the century, the nuclear industry saw its chance. It came out with a message that we cannot fight climate change without a full array of non-carbon energy sources, i.e., renewables and, of course, nuclear power. The

industry's sudden worry showed clear signs of greenwashing. After all, until then the industry had been telling us that if they are forced to fight the climate change then they lose their competitiveness.

Despite the suspiciousness of this sudden climate worry, the industry message bore fruit. This was partly because of a wrong campaign analysis by the anti-nuclear movement. The environmentalists thought they can be stronger at the renewables debate than the heavy industry, and went along with this debate. They abandoned the traditional nuclear risk debate.

It became apparent that the anti-nuclear movement had the wrong strategy. The Finnish parliament believed the industry, and the application for the fifth reactor

was passed in the parliament in May 2002.

There were several reasons why the anti-nuclear movement did not use the risks of nuclear power as the key campaign message. Most importantly, the memory of Chernobyl had faded. The media was not at all interested in the debate about the risks of nuclear power, and neither were some of the younger generation activists who had a climate activist background.

The Fukushima accident changed the nuclear debate entirely. Again, it is politically credible to stress the risks of nuclear power. The major Finnish media have written more about the nuclear risks than they have done in the whole millennium so far.

The nuclear industry keeps fairly quiet. Currently, they cannot ignore people who discuss the numerous risks of the life cycle of nuclear power.

The energy industry's response has been to wait and see, and to talk posi-

tively about the need to test the safety technology in the existing reactors. Most probably, however, the industry is already making plans on how to "normalize" the situation.

**Source and contact:** Jouni Nissinen,

Head of Environmental Protection, Finnish Association for Nature Conservation  
Email: jouni.nissinen@sll.fi

## SWITZERLAND: CLOSER TO A NUCLEAR PHASE-OUT OR TACTICAL PAUSE ?

**A referendum on the construction of three new 1600 MW nuclear power plants (NPP) was to be held in 2013, for a planned grid connection in 2025. That was before the Fukushima catastrophe. Since then the federal department in charge of energy decided to uphold the entire consultation process to "learn more" from the Japanese catastrophe.**

**(726.6126) 'Sortir du nucléaire'** - When the nuclear catastrophe started to unfold at Fukushima-1 on March 11, the Minister for energy and infrastructures, Ms Doris Leuthard, a former nuclear lobby board member, decided to uphold the non-decisionary consultation process - mandatory under the new nuclear energy law - that was to lead to a decisionary referendum expected for 2013 (see Nuclear Monitor 676, 4 September 2008). The reason given for this decision was to analyse 3 new nuclear power plants projects using new knowledge gained at Fukushima. A country without sea coastline has no tsunami warning zone, but other residual risks exist, such as major breaches in large mountain dams that could drown nuclear installations, earthquakes or human errors.

The federal council ordered new studies, on the security of the 5 existing nuclear reactors and on future energy scenarios, including nuclear phase-out plans. At first the antinuclear campaign was relieved by this, until doubts started clouding the federal decision. Had Ms

Leuthard been genuinely shocked by the new nuclear catastrophe, enough to halt a process that was supposed to lead to the building of at least one new nuclear power plant that she backed until then? Or was it a tactical decision, namely, a momentary suspension, not a grounding? Was she afraid Swiss citizens wouldn't vote according to plan this time, and simply decided to postpone the vote until momentary emotional considerations receded back to normal? Since 1984, three votes on nuclear phase out initiatives (formal proposals) have been put to vote. Each one failed to phase out nuclear power, apart from a 1990 vote, 4 years after Chernobyl, that imposed a 10 year moratorium on nuclear power plant constructions.

What are the current prospects for change on the energy issue outside of the federal council?

The Swiss Green party launched a new federal initiative, gaining political and NGO support. If voted into the constitution (in 3 to 5 years), it would bar construction of new nuclear power plants

and limit life cycles of existing reactors to 40 years, with a last closure in 2024. The Socialist party, also in competition for new green votes, announced parliamentary initiatives to phase out nuclear power.

Major editorialists and conservative politicians have taken position against nuclear energy, before Fukushima this wouldn't have been expected. In June the Swiss parliament will hold sessions dedicated to future energy scenarios; will the anti-nuclear drive lose momentum or will this catastrophe act as a catalyst for change? Two weeks after Fukushima, a poll showed 87% of the population wanted a progressive nuclear phase out.

**Source and contact:** Philippe de Rougemont,  
President, Sortir du nucléaire  
CP 1378 CH 1001 Lausanne  
Email: pdr@sortirdunucleaire.ch  
Web: www.non-au-nucleaire.ch/

## IN THE SHADOW OF FUKUSHIMA: AUSTRALIA'S NEW URANIUM DEBATE

**The continuing disaster at Japan's Fukushima nuclear complex is sending shock waves through the Australian uranium industry. Australia is home to around 40% of the world's uranium reserves and currently supplies around 20% of the global market from three commercial mines. The sector is dominated by large scale multi-national companies with BHP Billiton and Rio Tinto responsible for over 90% of production. Recent years have seen a strong industry and federal government push to greatly expand the sector with aggressive promotion and exploration programs and a range of political and financial assistance measures.**

**(726.6127) Australian Conservation Foundation** - Despite this support the uranium industry remains fiercely contested with wide spread and sustained opposition from environmental and Indigenous groups and a high level of community concern. In this context

images of exploding reactors and technicians dressed in protective suits running radiation counters over bewildered children have damaged the industry's perception and strengthened the resolve of opponents to uranium mining.

The market has reflected this new sense of concern with steep falls in the share value of particularly the smaller, dedicated or aspirant uranium companies. While industry promoters like the Australian Uranium Association remain upbeat about the sector's prospects

many brokers and market commentators are cautious or sceptical about the sector's opportunities for growth. Economics Professor John Quiggan from the University of Queensland colourfully captured this mood describing the sector as reflecting "zombie economics" – unhealthy but refusing to die.

The political response to the new landscape has been disappointing with the avidly pro-nuclear federal Resources Minister Martin Ferguson describing uranium mining as "a fact of life" and pledging further support to the sector while Prime Minister Julia Gillard has spoken of "business as usual" and actively promoted the Australian resource sector on post Fukushima visits to Japan, China and Korea.

The renewed attention is coming at a pivotal time for the Australian industry. Despite strong opposition the industry is pushing hard to expand both existing and new operations. Despite the

Rio Tinto owned Energy Resources of Australia's Ranger uranium mine in the World Heritage listed Kakadu National Park region having to suspend mining and processing operations following severe contamination threats posed by heavy rainfall ERA is continuing to push for an expansion of the troubled mine, including through the use of a controversial acid leaching technology.

The world's biggest mining company BHP Billiton is also pushing ahead with their plan to open a massive new open cut operation at its Olympic Dam/Roxby Downs site in northern South Australia. The mine plan would see Olympic Dam become the world's largest uranium project and is linked with extensive and adverse impacts on water quality and consumption and the generation of enormous volumes of perpetual pollution in the form of mine tailings.

In the shadow of Fukushima Australian opponents to uranium mining have

been active on the streets, the airwaves and cyberspace pushing for a renewed national debate on the costs and consequences of the nation's involvement in the nuclear trade and a halt on the export of the material that leads to leaking tailings dams at home and fuels radioactive waste and leaking reactors internationally. They are gaining increasing support for their call that our global energy future needs to be renewable not radioactive but Australian resource politics is a game with high stakes and hard players and the struggle remains an active work in progress.

**Source and contact:** Dave Sweeney, Nuclear Free Campaigner, Australian Conservation Foundation.  
Floor 1, 60 Leicester St, Carlton Vic 3053, Australia.  
Tel: +61 3 9345 1130  
Email: d.sweeney@acfonline.org.au  
Web: www.acfonline.org.au

## CHINA RETHINKS ITS NUCLEAR FUTURE

**The Fukushima nuclear crisis has had an enormous impact on China. Given its geographical proximity to Japan and with a large Chinese population living and working in Japan, the Chinese government and a great many Chinese citizens have been keeping a close watch on the unfolding events.**

**(726.6128) Wen Bo** - On March 16, the Chinese government held a high level State Council meeting to discuss the Japan nuclear crisis and to consider China's own nuclear planning. At the meeting, the government made three major decisions on nuclear power. Firstly, the government decided to halt its plan to build new nuclear power plants. Secondly, it ordered a re-examination of the safety risks of nuclear power stations currently under construction. Any safety faults discovered will lead to construction being stopped. Thirdly a decision was made to enhance the management of safety aspects of nuclear power stations currently in operation in China.

In a rare stand, the Chinese government indicated that the utmost priority should be attached to nuclear safety. China will also step up its process of drafting nuclear safety planning and adjust its middle and long term nuclear development plan. Any new nuclear plan will be shelved, including preliminary work.

### **Chinese media nuclear frenzy**

Due to the fact that this is a nuclear crisis in Japan, Chinese media were allowed to report freely. Such a rare media

freedom for coverage of nuclear issues offers a rare opportunity for Chinese media to introduce concerns over nuclear power and its related hazards and risks. Though some nuclear specialists, indeed most of them, are supportive of nuclear power, were invited to give comments on television programs; as a result, mounting concerns amongst the general public have emerged, largely making clear that they would rather not have nuclear power at all. Other scholars indicated this is a golden opportunity to popularize the issue and to increase knowledge amongst the public on nuclear radiation and safety measures.

The Chinese language newspaper Southern Metropolitan Daily also published a map outlining names and locations of all proposed Chinese nuclear plants, plants under construction, and those in operation. This is the first publicly released information on China's nuclear industry and planning. For the first time the Chinese public is able to know about many of these new nuclear plants and their locations. These revelations will surely generate a huge outcry and opposition from the public.

China Dialogue, a bilingual website featuring China environmental and development issues, also published a special series on China's nuclear power, titled *China's Nuclear Future*.

*Caijing* magazine also published a special edition on China's nuclear development and reexamined China's nuclear policies and management challenges.

### **NGO Reactions.**

Chinese environmental group Green Earth Volunteers organized a journalist salon which included a briefing from a nuclear safety official Zhao Yamin on China's nuclear development on March 16, 2011. The event drew a large audience. Many journalists and attendants raised sharp questions over China's nuclear power plan and safety measures.

On March 25, the Heinrich Böll Foundation organized a seminar in Beijing, aiming at briefing Chinese journalists on nuclear safety issues.

On April 26, upon the 25 year anniversary of Chernobyl disaster, a local NGO Blue Dalian organized nuclear awareness activities at different campuses in Dalian and an evening candle visual



activity to commemorate the tragedy. The activities have drawn official attention from Liaoning provincial government and subsequently, a number of student activists have been interrogated by their respective university authorities on their motivation and social links.

Chinese netizens have also been active in highlighting potential risks of nuclear power plants under construction or planned. For example, netizens in Dalian discovered Hongyanhe nuclear power plant in Liaoning province is built on Tan-Lu fault line. Such facts have not been mentioned before in official documents or public media. (A Netizen -from internet and citizen- or cybercitizen is a

person actively involved in online communities).

#### **Internal politics.**

While most power companies are state owned, debates on nuclear power exist within Chinese government. Hydropower lobbyist and the like have criticized China nuclear power sector as "falling into a trap of American nuclear sales". They are quick in using Fukushima crisis as new reasoning for more state investment and favorable policies on hydropower sector.

While investments in nuclear construction are high, local governments in China are strong advocate for their nuclear

power projects and often use tactics of hijacking -- that is to ask for more funds, either bank loans or governmental investments, by threatening the loss of initial investment; or to force government to approve their nuclear plans by claiming potential financial loss of preliminary investment.

**Source and contact:** Wen Bo.  
Wen Bo is China advisor of Global Greengrants Fund  
Email: wenbo@greengrants.org.cn

## U.S.: WASHINGTON CONTINUES TO PRETEND NUCLEAR EMPEROR IS WEARING CLOTHES

**The Fukushima accident has exposed a deep and growing gulf between the people of the United States and U.S. policymakers. How this plays out over the next couple of years likely will determine the future of nuclear power in the U.S.**

**(726.6129) NIRS** - On one hand, the public—after several years of at least lukewarm support for new nuclear reactors—has turned solidly against new reactor construction, against taxpayer support for the nuclear industry, and is increasingly skeptical about the operation of existing reactors.

According to an ABC News/Washington Post poll released April 20, for example, 64% oppose new reactors versus 33% supporting them. Strong opposition was even more striking: 47% strongly oppose new reactors, only 20% strongly support them. The opposition runs across party lines, with majorities of Democrats, Republicans and Independents all against new reactor construction.

Other recent polls show that about 75% of the public opposes taxpayer loan guarantees for new reactors. One might think this overwhelming public sentiment might cause a similar re-examination of the issue by policymakers. But in Washington, being tone-deaf to public opinion appears to be considered a virtue (consider, for example, Republican insistence on dismantling the Medicare program in the face of 70-80% opposition).

In official Washington, support for nuclear power remains strong. In mid-March, even while his Nuclear

Regulatory Commission Chairman was recommending that U.S. citizens within 50 miles (80 kilometers) of Fukushima evacuate (an area five times larger than U.S. standards), President Obama reiterated his support for nuclear power as a "clean" energy source and repeated his call for US\$36 billion more in taxpayer loan money for new reactors.

Congressional hearings have produced a parade of Congressmembers and witnesses asserting that "it can't happen here, U.S. reactors are safe;" ignoring the fact that the Fukushima reactors were General Electric Mark I designs, 23 of which happen to be operating in the U.S. now and 22 of which already have been relicensed to operate another 20 years.

Just days after the accident began, the Nuclear Regulatory Commission—also apparently deciding there is nothing to learn from Fukushima--authorized a 20-year license renewal for the most controversial reactor in the U.S., Vermont Yankee, which the State of Vermont has vowed to close when its initial license expires next year. Vermont Yankee, of course, is a GE Mark I of the same vintage as the Fukushima reactors. Fortunately for the people of Vermont, the State is likely to prevail in legal battles to close the reactor.

Rep. Ed Markey (D-Mass.), a long-time nuclear critic, introduced a bill in Congress to improve nuclear safety by setting new requirements for backup power supplies, among other measures, but so far has been able to rustle up only a handful of co-sponsors. And with Republicans in charge of setting hearing schedules, it is highly unlikely hearings will be held on the issues or that the bill will go anywhere. Markey is also pressing hard to force implementation of a law that passed in 2002 requiring stockpiling of potassium iodide near reactors—and even that effort, to implement a law Congress passed and was signed by President Bush, is finding opposition.

On the Senate side, the first post-Fukushima nuclear legislation that will be considered is most likely to be a bill to encourage development of new "small modular reactors" in the U.S., with the government offering to pick up half the price tag for the design work. (see box)

And over at the Environmental Protection Agency, a program to provide enhanced radiation monitoring for Fukushima fallout reaching the U.S. has been ended—despite the fact that the accident hasn't ended and, especially in Hawaii, radiation levels significantly above legal limits have been detected in milk. Move along, nothing to see here....

But even as official Washington continues to pretend the nuclear emperor is wearing clothes, the reality is that Fukushima is already having and will continue to have its inevitable impact.

NRG Energy already has backed out of its plans to build two new reactors at South Texas, which were to be financed by a combination of U.S. Department of Energy and Japan Bank for International Cooperation (JBIC) loans. One of NRG's partners in the project was Tokyo Electric Power (Tepco), which no longer has the financial means to participate, and Japan's new stance on nuclear power makes the already questionable JBIC loans exceedingly unlikely. Another NRG partner, Toshiba, is officially attempting to continue the project, but can't obtain a license or build them on its own.

In Maryland, UniStar Nuclear's Calvert Cliffs-3 project is on the verge of final collapse. Onetime UniStar partner Constellation Energy dropped out of the project last fall and sold its share to Electricite de France (EdF), which now owns 100% of UniStar.

In April, the NRC staff ruled that EdF cannot legally obtain a construction/operating license because of the Atomic Energy Act's prohibition against foreign ownership, control or domination of a U.S. reactor project and the NRC's licensing board in the case is now con-

sidering whether to deny a license and end the process.

The odds of UniStar finding a U.S.

### **No private money for Next Generation Nuclear Plant.**

The United States' Next Generation Nuclear Plant (NGNP) project faces a number of challenges as the Department of Energy (DOE) struggles to find private investors to share the program's cost. The Energy Policy Act of 2005, which initiated the NGNP program, specified that private companies have to share at least 50% of the cost of the NGNP, a gas-cooled design that would produce combined heat and power.

The NGNP Alliance said the September 2021 deadline to complete the demonstration plant as specified in the Energy Policy Act "is in jeopardy" due to delays and lack of funding. The NGNP Industry Alliance is an industry group aiming to facilitate the commercialization of a high-temperature reactor, consists of reactor developers, potential end users such as petrochemical companies and nuclear utility Entergy. DOE also believes the 2021 deadline is not feasible because "we haven't got the level of funding we needed, or done the level of design and licensing reviews" necessary for the project to proceed on schedule, according to a spokesperson

**Nucleonics Week, 28 April 2011**

partner seem vanishingly small in the post-Fukushima climate, and grew even smaller when the largest U.S. nuclear utility, Exelon, announced a merger with Constellation Energy. Questioned about rejoining the Calvert Cliffs-3 project, Exelon CEO John Rowe emphatically

said Exelon has no interest in that reactor.

Meanwhile, the NRC is in the midst of a 90-day review of U.S. reactors to determine whether there are regulatory changes that must be made immediately to incorporate lessons from Fukushima. Most observers believe this very limited review will result in modest changes at most. But a longer-term (6-month) review will follow closely, and is likely to include more public participation and have a much broader mandate than the initial review, which is both limited in scope and is being conducted entirely internally within the NRC. Some top NRC officials have privately speculated that this broader review may well lead to more significant regulatory changes, some delays in the reactor licensing processes and perhaps even some reactor closings.

And President Obama's request for US\$36 billion more in nuclear loan money? He made the same request last year, and didn't get it. This year, both because of hesitance over Fukushima and because of opposition to basically any federal spending among many in Congress, Congressional approval appears even less likely.

**Source and contact:** Michael Mariotte at NIRS

## **Radiating Posters**

A collection of posters from the global movement against nuclear power

'Radiating posters' is a compilation of the large cultural heritage of 40 years of global struggle against nuclear energy. The full-color book shows more than 600 posters (from 1970-2010) from 45 countries from all over the world.

'Radiating posters' will be an important tool in showing the rich history of the anti-nuclear movement and by doing so spreading the anti-nuclear message.

Never before such a large collection of anti-nuclear posters was brought together, or, for that matter, of any other societal issue, of so many countries, cultures and of such a long period.

This book truly is an homage to the richness of the cultural heritage of the anti-nuclear power movement and could be a source of inspiration for anyone deciding to design a poster.

'Radiating posters' is published by WISE Amsterdam and Laka Foundation.

The book is in English language. A French version (Posters irradiieux) will be available soon. A German version (Strahlende Plakate) is negotiated, as is a Russian version. A Spanish supplement (Carteles Radiantes) is available too.

**The book is available for \$35, including priority mail postage, from NIRS**

**Order the book by sending an email to [nirsnet@nirs.org](mailto:nirsnet@nirs.org) or buy from our online store on our website: [www.nirs.org](http://www.nirs.org)**

# BELENE: HSBC SIGNS CONTRACT FOR NPP IN EARTHQUAKE ZONE

**Exactly one month after the start of the Fukushima disaster, HSBC signed an agreement for the long delayed and highly controversial Belene nuclear power plant project in Bulgaria. HSBC is hired by the Bulgarian government for consultancy services, to help it decide how to proceed and attract new investors for the Belene project**

**(726.6130) BankTrack** - Belene is one of the oldest and most controversial nuclear projects in Europe. It is plagued with numerous problems, from its location in an earthquake zone in a country with a poor nuclear safety culture, to the use of an untested Russian reactor technology. [For more information on the Belene dodgy deal, you can access its full profile on the BankTrack website.]

Jan Haverkamp, Greenpeace energy campaigner for Europe, recounts the long history of the project: "As early as 1983 Soviet scientists warned that this location was not suitable for an NPP due to the seismic risks. In 1990 the Bulgarian Academy of Science came to the conclusion that the project should be dropped for economic, environmental and social reasons and the Bulgarian Government subsequently termed Belene to be 'technically unsafe and economically unviable'. However, due to strong vested interests behind the project, Belene has become a kind of nuclear zombie and continues to pop up on the Bulgarian Government's agenda,

in spite of the fact that this is a dangerous and irresponsible project."

Since 2006, over a dozen banks and several utilities have turned down offers to participate in or finance Belene. Among these are, for example, Deutsche Bank, UniCredit, Citibank, RWE, E.ON and Electrabel.

Heffa Schücking, from the German NGO *urgewald*, says: "Some banks had to find out the hard way that Belene is a no-go. After protests took place in front of Deutsche Bank and HypoVereinsbank branch offices throughout Germany, both banks were forced to withdraw from the project. RWE followed suit in 2009 after major shareholders attacked the company's plan to provide 49% of the equity for Belene. European environment organizations are united in their opposition to this project and we are ready to move against HSBC if needed."

The Fukushima disaster continues and shows us just how deadly a mix nuclear and seismic risks are. "As even

the European Commission recently announced that it will review the legal and safety framework, including the seismic risk of the Belene project, it is incomprehensible that HSBC chose this moment in time to replace BNP Paribas as a financial advisor to the project," says Yann Louvel, climate and energy campaign coordinator for the BankTrack network. He concludes: "The decision of HSBC is deeply disturbing. Instead of drawing the lessons from the Fukushima catastrophe, reviewing its nuclear policy and stepping out of this dangerous sector altogether, HSBC is now involved in one of the worst nuclear projects around the world. We call on the bank to immediately step back and abandon the Belene deal."

**Source:** Press release BankTrack, 12 April 2011  
Contact: Yann Louvel, Climate and Energy Campaign Coordinator BankTrack. Vismarkt 15, 6511 VJ Nijmegen, Netherlands.  
[www.banktrack.org](http://www.banktrack.org)

# SELLAFIELD EMERGENCY EXERCISE POSTPONED – WRONG WEATHER

**An on-site emergency exercise at Sellafield, scheduled for 4 November last year, was initially postponed when a real emergency unfolded in the form of a loss of coolant water to a number of Sellafield's operating facilities when water supplies from the local lake at Wastwater were disrupted. It is not yet clear what caused the disruption or its duration.**

**(726.6131) CORE** - The planned Level 1 demonstration exercise "Magpie", understood to have been based on a scenario whereby a truck carrying a load of plutonium contaminated material (PCM) had crashed over one of the site's bridges, coincidentally damaging an important water pipe and posing a fire risk to the PCM, was postponed by the organisers in order to deal with the real water-loss event, and re-scheduled for 9th December. Come the day, the decision was taken to cancel the re-scheduled exercise altogether – because of inclement weather conditions (a prolonged freeze) and Sellafield's Emergency Manage-

ment Team being too busy with other work (preparing for another exercise some 4 months ahead).

Explanations for the abandonment of the 'Magpie' emergency exercise were provided to a local stakeholder group meeting on 7 April 2011 and drew disbelief from some members. Surely, the Emergency Management Team was not saying that Sellafield accidents could be expected to occur only on warm and sunny days and when emergency teams just happened to have time on their hands?

CORE's spokesman Martin Forwood told the stakeholder meeting that the cancellation of any exercise was of significant concern, and later added that as there was little enough confidence in Sellafield's ability to deal with a real accident on or offsite and to cope with public evacuations if necessary, the failure to take advantage of a practice exercise – under any conditions – was a missed opportunity that could prove costly and even fatal in the future. It was unacceptable that Sellafield's emergency teams appeared unable to multi-task when the situation demanded.

As vividly played out in Japan recently, the loss of water supplies to nuclear facilities can have catastrophic results. For Sellafield, there would be dangerous implications for its reprocessing plants and spent fuel storage ponds, and particularly for its highly radioactive liquid High Level Waste (HLW) storage tanks that require 24/7 cooling and use water extracted from Wastwater as an emergency cooling supply. The lake is

located some 11 kilometers from Sellafield, its water extracted via what is understood to be, for the most part, the original 50 year old piping.

The loss of coolant to the HLW tanks, leading to their overheating, catching fire and releasing a radioactive plume off-site, is designated as Sellafield's 'Reference Accident' (the worst credible accident for the site) and forms the basis

for West Cumbria's Nuclear Emergency Plan.

**Source:** CORE Briefing, 11 April 2011  
**Contact:** Cumbrians Opposed to a Radioactive Environment (CORE), Dry Hall, Broughton Mills, Broughton-in-Furness, Cumbria LA20 6AZ., U.K.  
Tel: +44 1229 716523  
Web: www.corecumbria.co.uk

## IN BRIEF

**Areva suspends work on US nuclear manufacturing facility.** Areva Newport News, a joint venture of Areva NP Inc. and Northrop Grumman, has postponed indefinitely further construction of a nuclear power reactor component manufacturing facility in Newport News, USA, "until market conditions become more favorable," spokesman Jarret Adams said on May 9. And "the situation in Japan" is not helping the market, according to Adams. The facility is for the manufacture of heavy components for Areva power reactors, such as reactor vessels and steam generators, including components for its US-EPR design being considered for construction by utilities in Maryland, Missouri and Pennsylvania.

When ground was broken for the facility in July 2009, the companies said manufacturing would begin in mid-2012. In August 2010, that date was pushed back to 2013. The plant represents a US\$360 million investment, the partners said in 2009.

**Platts, 10 May 2011**

**Funding still needed for new shelter for Chernobyl reactor.** On April 19, at a pledging conference in Kiev, Ukraine, representatives of about 30 countries promised to collectively provide Euro 550 million (US\$ 785 million) to finish the shelter, called the New Safe Confinement for the Chernobyl-4 reactor, and a long-term spent fuel storage facility. According to the European Bank for Reconstruction and Development (EBRD), the funding gap before the conference was estimated at Euro 740 million — Euro 600 million for the shelter and Euro 140 million for the spent fuel facility — out of a total cost estimated for the two projects of about Euro 1.9 billion.

The projects have been delayed repeatedly and the price tags have crept up due to increases in labor and materials costs, as well as the requirement for more detailed technical knowledge. The NSC is currently estimated to cost Euro 1.6 billion and the spent fuel facility Euro 300 million. (More on the NSC project: Nuclear Monitor 719/20, 12 November 2010)

**Nucleonics Week, 21 April 2011**

**Italy: WikiLeaks documents show nuclear industry corruption.** In the wake of the emotion prompted by Fukushima and at a time when the Italian government appears to be reluctant to implement a policy of redeploying nuclear power (phased out following a referendum in 1987), the Italian magazine L'Espresso publishes in its March 18 "All'Italia mazzette sull'atomo" article, a series of American diplomatic cables that reveal how "bribes could have a major impact on the future of the country's energy industry." The documents obtained by WikiLeaks provide details of a four-year US campaign, which began in 2005, to encourage Italy to re-start a nuclear power program with a view to reducing its energy dependence on Russian gas and limiting the influence of the partnership between Italian energy company ENI and Russia's Gazprom. To this end, according to the article in the March 18 issue of L'Espresso, Washington fought a prolonged battle with the French nuclear power specialist EDF-Areva in which it took advantage of its close ties with several Italian companies. In the end, writes L'Espresso, the American lobbyists succeeded in convincing Rome to set aside EU safety standards for new power stations and to adopt more flexible OECD norms — a victory for US industry, obtained at the expense of the safety of the Italian people.

**Presseurope, 18 March 2011, WikiLeaks - nuclear industry corruption**

**Arrests at antinuclear action Belarus.** Activists from Belarus and Germany arrested brutally at peaceful anti-nuclear action. On April 25, six activists from Germany and five activists from Belarus, as well as one activist from Poland were brutally arrested in the Belarus capital of Minsk. Around 40 activists have protested peacefully against the construction of the first nuclear power in Ostrovets, Belarus. They held banners saying «Chernobyl, Fukushima --- Ostrovets?» and «We are against nuclear power plants» and handed out leaflets. There were two flashmobs - the first lasted around 5 minutes.

However, the second flashmob was interrupted immediately. After around one minute two vehicles with civil police stopped, as well as a red prisoner's transport. Peaceful protestors were thrown to the ground and arrested using brutal force.

All German people and the person from Poland were deported by train to Warsaw on the evening of April 27.

**Indymedia Germany, 25 & 27 April 2011**

## WISE/NIRS NUCLEAR MONITOR

The Nuclear Information & Resource Service was founded in 1978 and is based in Washington, US. The World Information Service on Energy was set up in the same year and houses in Amsterdam, Netherlands. NIRS and WISE Amsterdam joined forces in 2000, creating a worldwide network of information and resource centers for citizens and environmental organizations concerned about nuclear power, radioactive waste, radiation, and sustainable energy issues.

The WISE/NIRS Nuclear Monitor publishes international information in English 20 times a year. A Spanish translation of this newsletter is available on the WISE Amsterdam website ([www.antenna.nl/wise/esp](http://www.antenna.nl/wise/esp)). A Russian version is published by WISE Russia and a Ukrainian version is published by WISE Ukraine. The WISE/NIRS Nuclear Monitor can be obtained both on paper and in an email version (pdf format). Old issues are (after two months) available through the WISE Amsterdam homepage: [www.antenna.nl/wise](http://www.antenna.nl/wise).

### NEW on NIRS website:

**May 12, 2011. Fukushima Fallout: Regulatory Loopholes at U.S. Nuclear Plants. Major new report from Rep. Ed Markey (D-Mass.) details safety problems at U.S. reactors and inadequate regulatory response. For example, 69 emergency diesel generator failures at 33 sites in the past 8 years.**

**May 2, 2011 press release from Japanese organizations following meeting with government officials to protest new and unconscionable allowable radiation exposure levels for children.**

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With contributions from: Dave Sweeney (Australia), Philip White (Japan), Michael Mariotte (USA), Jouni Nissinen (Finland), Martin Forewood (U.K.), Yann Louvel (BankTrack), David Hoffman (Czech Republic), Philippe de Rougemont (Switzerland), Wen Bo (China)

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## WISE/NIRS offices and relays

### WISE Amsterdam

P.O. Box 59636  
1040 LC Amsterdam  
The Netherlands  
Tel: +31 20 612 6368  
Fax: +31 20 689 2179  
Email: [wiseamster@antenna.nl](mailto:wiseamster@antenna.nl)  
Web: [www.antenna.nl/wise](http://www.antenna.nl/wise)

### NIRS

6930 Carroll Avenue, Suite 340  
Takoma Park, MD 20912  
Tel: +1 301-270-NIRS  
(+1 301-270-6477)  
Fax: +1 301-270-4291  
Email: [nirsnet@nirs.org](mailto:nirsnet@nirs.org)  
Web: [www.nirs.org](http://www.nirs.org)

### NIRS Southeast

P.O. Box 7586  
Asheville, NC 28802  
USA  
Tel: +1 828 675 1792  
Email: [nirs@main.nc.us](mailto:nirs@main.nc.us)

### WISE Argentina

c/o Taller Ecologista  
CC 441  
2000 Rosario  
Argentina  
Email: [wiseros@ciudad.com.ar](mailto:wiseros@ciudad.com.ar)  
Web: [www.taller.org.ar](http://www.taller.org.ar)

### WISE Austria

c/o Plattform gegen Atomgefahr  
Roland Egger  
Landstrasse 31  
4020 Linz  
Austria  
Tel: +43 732 774275; +43 664 2416806  
Fax: +43 732 785602

Email: [post@atomstopp.at](mailto:post@atomstopp.at)  
Web: [www.atomstopp.com](http://www.atomstopp.com)

### WISE Czech Republic

c/o Jan Beranek  
Chytalky 24  
594 55 Dolni Loucky  
Czech Republic

Tel: +420 604 207305  
Email: [wisebrno@ecn.cz](mailto:wisebrno@ecn.cz)  
Web: [www.wisebrno.cz](http://www.wisebrno.cz)  
**WISE India** 42/27 Esankai  
Mani Veethy  
Prakkai Road Jn.  
Nagercoil 629 002, Tamil Nadu  
India  
Email: [drspudayakumar@yahoo.com](mailto:drspudayakumar@yahoo.com); **WISE Japan**  
P.O. Box 1, Konan Post Office  
Hiroshima City 739-1491  
Japan  
**WISE Russia** P.O. Box 1477  
236000 Kaliningrad  
Russia  
Tel/fax: +7 95 2784642  
Email: [ecodefense@online.ru](mailto:ecodefense@online.ru)  
Web: [www.antiatom.ru](http://www.antiatom.ru)

**WISE Slovakia** c/o SZOPK  
Sirius

Katarina Bartovicova  
Godrova 3/b  
811 06 Bratislava  
Slovak Republic  
Tel: +421 905 935353  
Email: [wise@wise.sk](mailto:wise@wise.sk)  
Web: [www.wise.sk](http://www.wise.sk)

**WISE South Africa** c/o Earthlife

Africa Cape Town  
Maya Aberman  
po Box 176  
Observatory 7935  
Cape Town  
South Africa  
Tel: +27 21 447 4912  
Fax: +27 21 447 4912  
Email: [coordinator@earthlife-ct.org.za](mailto:coordinator@earthlife-ct.org.za)  
Web: [www.earthlife-ct.org.za](http://www.earthlife-ct.org.za)

**WISE Sweden** c/o

FMKK  
Tegelviksgatan 40  
116 41 Stockholm  
Sweden  
Tel: +46 8 84 1490  
Fax: +46 8 84 5181  
Email: [info@folkkampanjen.se](mailto:info@folkkampanjen.se)  
Web: [www.folkkampanjen.se](http://www.folkkampanjen.se)

### WISE Ukraine

P.O. Box 73  
Rivne-33023  
Ukraine  
Tel/fax: +380 362 237024  
Email: [ecoclub@ukrwest.net](mailto:ecoclub@ukrwest.net)  
Web: [www.atominfo.org.ua](http://www.atominfo.org.ua)  
**WISE Uranium** Peter Diehl  
Am Schwedenteich 4  
01477 Arnsdorf  
Germany  
Tel: +49 35200 20737  
Email: [uranium@t-online.de](mailto:uranium@t-online.de)  
Web: [www.wise-uranium.org](http://www.wise-uranium.org)

# The NUCLEAR MONITOR

Nuclear Information and Resource Service/World Information Service on Energy  
6930 Carroll Avenue, #340, Takoma Park, MD 20912