

NUCLEAR MONITOR

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CONCERNS OVER URANIUM MINING IN MALAWI

The Centre for Human Rights and Rehabilitation (CHRR) in Malawi has urged the country's Ministry for Mines, Natural Resources and Environmental Affairs to inform and consult the people of Karonga and address concerns over the Kayelekera uranium project planned for their region.

(638.5729) CHRR - The high grade Kayelekera sandstone uranium deposit was first discovered in the 1980's by British company Central Electricity Generating Board (CEGB) who reportedly spent US\$9 million on the project over an eight-year period culminating in a full feasibility study in 1991 undertaken by Wright Engineers Limited of Canada.

The study, however, indicated that the project was uneconomical because of the mining model CEGB had proposed and low uranium prices at that time. Due to the poor prospects for uranium and the privatization of CEGB, the project was abandoned in 1992. The government of the day, the Malawi Congress Party (MCP), subsequently decided that it was unnecessary to enlighten the nation as to the circumstances that forced the project to fold.

In 1999 Australian Paladin Resources Limited Inc acquired a 90 percent share through a joint venture from Balmain Resources Limited, who retained 10 percent of free carried interest until the completion of the Bankable Feasibility Study (BFS).

The project was transferred to the Malawian registered company Paladin Africa Limited, a wholly owned subsidiary of Paladin Resources Inc in 2000. Following this, the company

proceeded with the engineering and financial evaluations using new project development concepts that suggested a positive outcome for the economy. The CEGB 1989-92 pre-feasibility study was also updated and metallurgical and resource drilling began in 2004.

In May 2005, the BFS verified new mining/milling concepts to be adopted as well as validation (or modification if required) of all other environmental and mine model parameters used in the 1991 final feasibility study.

With this kind of background, and exclusive of what Paladin Resources Inc has posted on its website and others concerning the Kayelekera project, it is surprising and regrettable that the minister for Mines, Natural Resources and Environmental Affairs continues to claim ignorance about the mine operations and Environmental impact assessment as he did recently in *The Nation* (Malawi) in response to CHRR's intervention on behalf of the local communities.

On October 27 2005, CHRR undertook a fact-finding mission to the Kayelekera uranium site accompanied by members of the Karonga Development Trust (KADET). It was obvious to the visitors that some activities have already begun to take place although the ministry has yet to inform Malawians in general, let

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alone the resident communities within the prospective operation area of the project.

In addition, the Mines, Natural Resources and Environmental Affairs Minister and his Lands counterpart are known to have personally visited the Paladin mining camp in Kayelekera on several occasions although neither has volunteered any feedback on their visits. As government officials, they should have given some account of such ministerial visits to either the National Assembly or directly to the public through the media but no such reports were forthcoming. It begs the question as to whose interests are being served - Malawi's or Paladin's (Australia)?

CHRR has condemned the secretive approach taken by the government and Paladin Resources Inc in the matter and expressed dissatisfaction with a process that would appear to set aside the rights of Malawians, and in particular the peoples of the Kayelekera area, to access information as enshrined in Section 37 of the country's republican Constitution.

The human rights' group hopes to educate the resident communities - the would-be victims of radiation - and the country at large, which at present has little knowledge of the uranium mining business, on the key issues and rights associated with uranium mining. CHRR believes that Malawi must work towards a uranium mining free environment and hopes to mobilize the public into action by sensitising them to the risks, facilitate the formation of a network of concerned groups and experts as well

as litigating against mining operations. The organization will also lobby parliamentarians to advocate for a review of the Mining Act to bring it in line with international standards.

Although Malawi could gain much needed revenue from uranium mining, CHRR believes that the fundamental question of whether the possible economic benefits should be allowed to outweigh social concerns, environmental and health hazards -

especially considering that the Kayelekera mine will only have a life span of 10-12 years while its negative effects and consequences would continue for over a hundred years - must be given serious consideration. It also cautions against the contamination of water resources from the toxic chemicals used in the separation of uranium ore and of the dangers the mismanagement of uranium disposal waste can have on long term health and environmental consequences.

Amongst demands made by CHRR are:

- (1) That the government allow an independent review of the social and environmental impacts,
 - (2) That basic human rights be respected as outlined in international declarations and conventions,
 - (3) That the operation of the mine should not commence without the informed and free consent of the communities concerned and only if it meets internationally set standards,
 - (4) That Paladin abides by IAEA standards on the establishment of legal safety standards, which Australia refused to sign in 1995,
 - (5) That Paladin provide safe working conditions and respect workers' rights to collective bargaining and sign on to the ILO Convention of Safety and Health in Mines, which it previously refused to do in 1995
 - (6) That Paladin ensures that no waste will be dumped into natural waters like the Sere and Rukuru rivers, which would lead to the pollution of Lake Malawi.
- CHRR, KADET and others concerned have vowed not to accept the government's and Paladin Resources' view of Kayelekera as some kind of sacrificial land and to continue to fight for human rights, environmental justice and most of all, to protect the Kayelekera land.

Source: CHRR presentation to Earthlife Africa Congress, Namibia, 11-14 November 2005; *The Nation* (Malawi), November 11, 2005; CHRR press statement, November 4, 2005

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ALERTS

IAEA atomic lobby and Nobel Peace Prize

On December 10 at the Oslo Guildhall, the Nobel Prize will be officially awarded to the IAEA its chief, Dr. ElBaradei. Groups, organizations, initiatives, parties and individuals who wish to protest against the scandalous decision are invited to sign a declaration against the award by BUND (Friends of the Earth, Germany). The declaration is downloadable as Word document from http://vorort.bund.net/suedlicher-oberrhein/letter_to_nobelprizecommittee.doc or in PDF format from http://vorort.bund.net/suedlicher-oberrhein/letter_to_nobelprizecommittee.pdf or alternatively you can sign up online at http://vorort.bund.net/suedlicher-oberrhein/projekte/castor/mittraeger_liste_englisch.php#organ

For more information contact: bund.suedlicher-oberrhein@bund.net in Germany or SESinfo@energiestiftung.ch in Switzerland.

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The Iran case - three strikes and you are out

On Saturday, December 10 from 2 pm - 6 pm, De Roed Hoed in Amsterdam will host a debate on the Iranian nuclear programme, the draft UN Security Council resolution and the possible U.S. plans to attack Iran.

The debate will be in the English language and will be attended by Hans-Christof Graf von Sponeck, former UN coordinator for humanitarian affairs in Iraq, Andreas Persbo, weapons control and disarmament researcher at the Verification Research, Training and Information Centre in London and Dan Plesch, researcher at the Centre for International Studies and Diplomacy, School of Oriental and African Studies at the University of London. Fiona Dove, director at the Transnational Institute in Amsterdam, will lead the debate.

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THE RESELLING OF ATOMIC POWER IN THE UNITED STATES

The Cheney/Bush energy bill, fostered in secret energy task force meetings to benefit its industry supporters and passed this year by the United States Congress with more than US\$12 billion for new reactor development, reveals that the so-called "renaissance" of atomic power is in need of more than just subsidies but rather a permanent umbilical attachment to the U.S. Treasury and the American taxpayer.

(638.5730) NIRS - With the federal government now proposing to finance, build, insure and purchase power with tax credits from the first new reactors to jump start the moribund industry, new activity is stirring within corporate boardrooms to jockey into starting gate positions.

A Deepening Crisis of Priorities

The energy crisis deepens with the fate of the earth in the balance should this money be appropriated by Congress for a relapse of a failed energy policy of the 1950's. The reinvestment in nuclear power robs vital resources from the very real and timely solutions for abating climate change, stabilizing world peace through the reduction of nuclear weapons materials and averting the next nuclear catastrophe by an accident or terrorist attack.

As Amory Lovins of the Rocky Mountain Institute has pointed out, every ten cents of investment purchases 1 kilowatt hour of electricity from nuclear power, 1.2 to 1.7 kilowatt hours from wind power or 10 kilowatt hours through energy efficiency.

In terms of climate change, a nuclear expansion buys less climate change abatement per US dollar. Moreover, given the long time frames for new reactor construction, it is an investment spent later rather than sooner, a critical factor in current global climate change. As United States Nuclear Regulatory Commission (NRC) Chairman Nils Diaz recently told a gathering of industry Chief Executive Officers, it will take at the very minimum eight years to bring the first of new nuclear reactors on line. That is more likely a decade or more of additional delay that could otherwise be spent instituting an aggressive policy of

energy efficiency and conservation coupled with renewable energy generation. Given the immediate availability of vast amounts of untapped energy efficiency and wind power potential, the time wasted and money squandered on a nuclear expansion is expected to both reduce and retard the reduction of carbon dioxide emissions. Society is clearly at an energy crossroad where we can build more nuclear power stations or work together to implement an energy policy that slows climate change, but we cannot do both.

U.S. Nuclear Industry Maneuvering Into Position

The number of nuclear consortia assembling around this government funding trough continues to grow with members still shifting alliances and forming new alliances.

The United States Nuclear Regulatory Commission (NRC), in preparation for the congressional windfall for future new power reactor construction and licensing, has developed the early site permit (ESP) and combined operating license (COL) application processes for the nuclear industry. The COL authorizes construction and conditional operation of a specified nuclear reactor design. According to NRC, the ESP was established for the regulatory approval of the physical sites for one or more nuclear power facilities. It constitutes a partial construction permit for everything but the reactor building and is good for 10 to 20 years and can be renewed for an additional 10 to 20 years. The ESP has been set up to "environmentally qualify" independent of a review of any specific nuclear plant design that has been substituted with very broad and vague design boundaries.

To date, no licensees have filed any applications with NRC. The nuclear power industry has only announced its "intent" to file applications for combined construction and operation licenses of new reactors. Without the promise of government financing even this intent would be non-existent. But the gathering of corporate intentions provides a much needed morale boost to the still lingering after taste of the "largest managerial disaster in business history" as Forbes magazine cover story headlined in 1985.

To date, the following companies and consortia have announced intent to apply for new reactor licensing:

Progress Energy has informed the NRC of its intention to submit a COL to build a new reactor at the currently operational single unit Shearon Harris reactor site near Raleigh, NC within the next two years. Intent to submit a second COL anticipated. (1)

Duke Energy has announced its intention to apply for a COL to build a new nuclear reactor somewhere in its service area and has been investing in its previously approved but abandoned Perkins site near Greensboro, NC. The Charlotte, N.C.-based utility is considering 14 possible sites in North Carolina and South Carolina and announcing a location in 2005. (2)

SCANA and Santee Cooper have announced their intention in a joint venture to seek a new reactor site at an undisclosed site in South Carolina. SCANA's principal subsidiary is South Carolina Electric and Gas Co (SCE&G) while Santee Cooper is South Carolina's state-owned utility. SCE&G already works with Santee Cooper on nuclear generation at the V.C. Summer

Nuclear Station near Jenkinsville, SC. (3)

The **NUSTART** consortium that includes numerous U.S. nuclear power companies and reactor vendors along with the federally operated Tennessee Valley Authority announced two potential sites intended for COL submittals at the abandoned Bellefonte nuclear power plant construction site near Scottsboro, Alabama and the expansion of the operational single unit Grand Gulf nuclear site near Vicksburg, Mississippi. NUSART has been studying the Department of Energy's nuclear weapons production site in South Carolina for one or more new power reactors - supporting local nuclear booster's hopes for an "energy park" at the site. (4)

Georgia's **Southern Company** announced its intention to expand the Vogtle reactor site in Waynesboro, GA in the summer of 2006 with either an application for an early site permit (ESP) or pre-combined operating license (COL) information that ultimately would become a part of a complete COL application. (5)

UniStar Nuclear, a partnership between the Baltimore, MD-based Constellation Energy and French-owned Areva Inc. has announced its intent to build and operate a new

reactor at the operational two-unit Calvert Cliffs nuclear power station in Calvert County, Maryland on the shores of the Chesapeake Bay, southeast of Washington, D.C. and a behemoth 1600 megawatt design in Scriba, NY that would expand the currently operational Nine Mile Point 1 & 2 and Fitzpatrick nuclear power station complex. (6)

Entergy Nuclear, headquartered in New Orleans, LA, announced its intent to prepare and file a COL application for a new site adjacent to its currently operational single unit River Bend nuclear power station near St. Francisville, LA. (7)

Early site permit applications currently under review by the NRC to environmentally qualify construction sites without a utility commitment to construct a specific reactor design include:

Dominion based in Richmond, VA has applied for an "Early Site Permit" at the current two-unit North Anna nuclear reactor site on Lake Anna in Mineral, Virginia to environmentally qualify up to 2 additional new reactors. (8)

Exelon Nuclear based in Chicago, IL has applied for the site expansion of the single unit Clinton nuclear power station in Clinton, Illinois. (9)

System Energy Resource Inc. (SERI), a wholly owned subsidiary of **Entergy Nuclear** based in New Orleans, LA has submitted an application to environmentally qualify the site expansion of the Grand Gulf nuclear power station in Port Gibson, Mississippi for new reactor construction. (10)

Sources:

- (1) <http://www.progress-energy.com/aboutus/news/article.asp?id=13122>;
- (2) <http://www.duke-energy.com/news/releases/2005/oct/2005102601.asp>;
- (3) <http://www.eere.energy.gov/news/archive.cfm/pubDate=%7Bd%20'2005-10-12'%7D#energy>;
- (4) http://www.nei.org/documents/NuStart_COL_News_Release_9-22-05.pdf;
- (5) <http://www.nei.org/doc.asp?docid=1434>;
- (6) <http://www.unistarnuclear.com/news.html>;
- (7) <http://www.nei.org/index.asp?catnum=3&catid=695>;
- (8) <http://www.nrc.gov/reactors/new-licensing/esp/north-anna.html>;
- (9) <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1815/>;
- (10) <http://www.nrc.gov/reactors/new-licensing/esp/grand-gulf.html>

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BULGARIA STILL CLINGING TO NUCLEAR

Nuclear power in Central Europe is where it always has been: at the forefront of energy planning, giving most energy lobbies a reason to exist and hope. Lately Bulgaria has played a more visible role in the European nuclear debate because of the upcoming closure of two of the Kozloduy nuclear reactors, the plans to build the Belene nuclear power plant and the death threats against an anti-nuclear activist. Should all go according to plan, Bulgaria will also enter the European Union on January 1, 2007 - that is, once it shows itself to be capable of curbing corruption.

(638.5731) **WISE Brno** - If one reads the Bulgarian media, the closure of the old VVER 440/230 blocks number 3 and 4 at the Kozloduy nuclear complex would appear to be an open question. Pro-nuclear members of the European Parliament - most recently UK Social Democrat Terrence Wynn, leader of the Forum for the Future of Nuclear Energy - and other nuclear lobbyists are regularly invited to Bulgaria to address the media and pontificate on the supposed madness of closing the reactors, which according to them meet all EU safety standards and without which, according to Wynn, "the lights will soon be going out in the Balkans"(1).

More critical visitors to Bulgaria, like this spring's delegation of European Greens, are hardly mentioned by the national media and rarely have their comments given coverage, with the result that the general public still believes that the debate over the closure of Kozloduy 3 and 4 remains open. Also recent remarks made by the IAEA president, Prof. ElBaradei, to the World Association of Nuclear Operators (WANO) Biennial General Meeting in Budapest, failed to capture the interest of the country's media and thus received no coverage in Bulgaria. ElBaradei had stated his concern over the state of some nuclear facilities, declaring himself to be "very worried". The IAEA chief expressed doubts over safety at facilities in the former Soviet Union and Central and Eastern Europe and over less than optimal design safety. ElBaradei warned "If we were to have a nuclear accident anywhere, it will have a crippling impact on nuclear energy all over the world." (2) Not to mention the impact it would have on the nearest populations.

However, the Bulgarian government is

taking more seriously the signals from EU Energy Commissioner Piebalgs suggesting that the closure of Kozloduy's 440 blocks cannot be renegotiated and is now planning for the shutdowns. The government continues to pursue a similar strategy to that employed before the closure of blocks 1 and 2 and has been warning the Bulgarian population of impending electricity shortages.

The Kozloduy CEO, Ivan Ivanov, even went as far as to suggest, "the electricity feed in the country will be restricted in certain hours" (3). Since Bulgaria actually does have ample capacity for its needs, this stance was recently changed to a warning that the country might have to reduce its exports of electricity to Greece and Serbia and possibly even increase its imports. Industry and Energy Minister Ovcharov even warned of a possible 60 percent price hike. (4) According to Petko Kovachev of the Bankwatch CEE Network, the attempt to create an atmosphere of fear is intended to help counter the growing public doubt over the necessity of the Belene nuclear power plant.

Kovachev recalls "Bulgaria only started to be one of the most important electricity exporters in the region just after the closure of the first two Kozloduy blocks, which was accompanied by similar warnings."

Belene: the legal battlefield and search for finances

The preparations for building Bulgaria's second nuclear power station near the town of Belene continue in the meantime. Where the project was first heralded as so viable that it could be completely financed by the private sector, Energy Minister Ovcharov is now more careful with his boasts. On November 2, he even stated he was not

optimistic about the building of Belene and warned that Bulgaria was in danger of losing its position as largest electricity exporter of, and for, the region. (5)

The matter of financing is at the moment crucial for the Belene project. In a recent television interview, Ovcharov conceded that Belene would need anything from 25 to 100 percent state participation to be viable. This, according to Mark Johnston of Greenpeace in Brussels, "will face heavy opposition" from the EU competition authorities. Meanwhile the Bulgarian government is looking for all kinds of alliances and recently convinced the Romanian government to stop its opposition against Belene, even though this is met with fierce public protests on the other side of the Danube. The Bulgarian government is also trying to convince Macedonia to take part in the project, and is shopping around in the U.S. for investors.

The preliminary interest shown by nuclear firms ENEL and RAO in running Belene is trumpeted to keep optimism up. However, an attempt to get EU

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financing for the project via a Euratom loan seems to have stalled, although expectations of Euratom support of around 300 million Euros were still mentioned by former Energy Minister Milko Kovachev last summer.

There are also several legal hurdles still to be cleared. Coalitions of concerned Bulgarian citizens, regional and international NGOs, like WISE and Greenpeace, are currently in court appealing against the approval of the Environmental Impact Assessment and the two government decisions that gave operator NEK the green light to go ahead with the tender to find a building consortium. Were any one of these complaints to succeed, the legal basis for the tender would disappear.

One of the tender candidates is a consortium led by Czech Skoda JS, a daughter company of the Russian firm OMZ, and including Westinghouse and several European banks, alongside mainly Czech firms. The other consortium is led by Russian Atomstroyexport, which is partly owned by OMZ, with participation from Framatome and Siemens. The fact that both remaining tender candidates are so closely intertwined has not so far been subject to scrutiny.

Energy Revolution on the table

Another complicating factor for the nuclear debate in Bulgaria is that since the visit of the Greenpeace Energy Revolution Tour with the action ship "Anna" last summer, the discussion on alternatives is also in the public domain. For the first time, newspapers

started to debate the problems of climate change to a greater extent and also the fact that alternatives for nuclear and fossil fuel power do exist in Bulgaria. According to the OECD, Bulgaria is the most energy inefficient country in Europe, even topping Russia. (6) Furthermore, Bulgaria offers large possibilities for wind energy, the development of biomass and the use of solar energy. The BeleNE coalition, Za Zemiata, Ekoglasnost and several local organisations that partnered Greenpeace in the Energy Revolution Tour have received the organization's support for their demand that the government works out an energy policy scenario based on nuclear and long-term fossil phase-out for its next update of the National Energy Plan.

Threats diminish but corruption continues

This summer, the threats addressed to one of the long time critics of Bulgaria's nuclear power orientation, Mrs. Albena Simeonova, twice resulted in an unsuccessful attempt on her life. (See also *WISE/NIRS Nuclear Monitor* 624.5667 "Death threats against Belene opponent; debate around NPP decision heats up" & 625.5672 "Threats to Belene opponent Simeonova continue in spite of government protection measures") The widespread national and international support she received helped to largely diminish the influence of those threatening her, although there are still attempts being made to ruin her partly organic farm on which over a hundred people depend on for their income.

"My case is of course extreme," says Simeonova, "but it is only a visible tip of the iceberg. There is still a lot of manipulation going on - look at the tender procedures or the way the Environmental Impact Assessment was carried out. For us the EU warning to Bulgaria and Romania came as no surprise. On the other hand, only EU entry can effectively force the old habits out," she added.

Sources: (1) Article by Terry Wynn MEP, Sofia News Agency, October 27, 2005 (http://www.novinite.com/view_news.php?id=54342), (2) Nucleonics Week, October 13, 2005, (3) Webfactory Bulgaria, October 10, 2005 <http://www.webfactorybulgaria.com/news.php?newsid=381>, (4) Sofia News Agency, November 2, 2005, http://www.novinite.com/view_news.php?id=54633, (5) Ibid, (6) Stability Pact Watch and CEE Bankwatch Network, Arrested Development - Energy Efficiency and Renewables in the Balkans (May 2005) http://www.bankwatch.org/publications/studies/2005/arrested_development_05-05.pdf

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Visit: http://bluelink.net/belene/e_index.shtml

Good and bad news from the European Parliament

Support for nukes post-Kyoto?

The European Parliament debate on a new report on European post-Kyoto politics to combat climate change ("Beating Global Climate Change", also known as the Wijkman report, November 16, 2005) has been interpreted by some as giving the nuclear industry a boost.

The original draft contained text calling for nuclear to be excluded from those energy sources eligible for financial aid from European credit facilities and/or any other public European money. This text was subsequently removed by a majority vote on November 16.

An amendment, included by the Greens in the process towards the plenary votes, which explicitly stated that nuclear cannot be part of the solution for climate change

(because of waste, proliferation etc.) was defeated. One amendment that stated that the EP "Calls on the Commission to set ambitious, but realistic objectives which lay down very low CO₂-emission, CO₂-free and CO₂ neutral energy technologies should cover 60% if EU electricity needs by 2020, as a contribution to achieving European objectives in the areas of climate protection and security of supply" and could have been used to support the spurious claims that nuclear energy emits no CO₂ was however defeated.

The Wijkman report no longer contains anything on nuclear. The good text is out and the better one did not get in.

Sources: The Wijkman report - "Beating Global Climate Change", November 16, 2005

Europe badly prepared for nuclear decommissioning

On November 17, The European parliament adopted a report that states that Europe is badly prepared for decommissioning and that more effort was needed to make obsolete power plants in the EU safe.

Speaking at a press conference the European Parliament's rapporteur on nuclear decommissioning funds said "Financial and technical preparations for the decommissioning of nuclear power plants are unsatisfactory in most EU member states. Against this background any discussion about extending the life-span of such plants, let alone building new ones, is irresponsible."

The report is an important step in the right direction but in order to ensure that security and safety levels are met, more effort is needed. The EP called on the European Commission to create and apply with trans-

parency, a EU-wide strategy for decommissioning to guarantee that safety is the number one priority and is considered before economic factors.

Rebecca Harms, author of the report stated "more than one third of the nuclear power plants operating in EU member states at the moment will be shut down within 20 years. The closure of a nuclear power plant does not, however, eliminate the dangers that nuclear energy poses to public health and the environment. During the closure and decommissioning of plants high safety standards must therefore be observed and sufficient funds must be available in time, and over a period of several decades. At present this is not the case. The biggest problems are to be found in new member states.

The Commission estimates the costs of decommissioning a nuclear plant are between EUR200m and EUR1bn. Sufficient availability

of these funds must be secured - equally in the interest of the environmental and precautionary principles of the EU as in the interest of a liberalised energy market - through autonomous funding systems available in every member state. The structure and the volume of the funding must above all take the technical safety aspects into consideration in order to prevent possible negative long-term consequences for humans and for the environment. The financial means should be managed separately from the budget of the respective companies and should be outwardly transparent. To avoid the distortion of competition the Commission must decide on the permitted designated purpose of the funds. In the current report these requests are watered down."

Source: The Greens/EFA in European Parliament, press release, November 16, 2005

GERMAN NUCLEAR PHASE-OUT SURVIVES - FOR NOW

The many observers who had thought the nuclear power question would no longer play a part in a German election campaign have been proved wrong. The subject of nuclear power was the only environmental topic among the top issues in the recent German Federal election campaign. When the elections were over and the coalition of the Social-Democrats (SPD) and the Greens were not re-elected, a Grand Coalition of Ms. Merkel's conservative and pro-nuclear CDU/CSU with the SPD became inevitable and observers then thought the nuclear phase-out was dead. They turned out to be wrong again.

The nuclear phase-out has proved not to be simply a pet-project of the Green party, but a decision supported by a majority of some 70% of the population including most of the social-democratic electorate and even significant parts of the conservative electorate. Until late Saturday night (November 12), both coalition parties were fighting for and against the nuclear-phase-out without gaining any ground on each other; the only result it seemed was to agree to disagree. This is reflected in the text of the Coalition Accord (see unofficial translation below).

So no news is good news in this case. But there are still important concerns about the nuclear phase-out in

Germany. Greenpeace and other environmental organisations in Germany have heavily criticized the existing German nuclear phase-out for a number of reasons, but mainly for the slow speed at which it is currently taking place, for the guaranties for "undisturbed operation" the state is granting utilities over the years to come, as well as for the many loopholes it contains.

One of the major loopholes being that there are no fix shut-down dates in the phase-out accord and Atomic Law, but so called "remaining electricity quantities", which utilities are allowed to shift from one plant to another. The huge problem is, that the utilities have announced, that they intend to apply for a shift of remaining electricity quantities from younger plants to older plants in order to extend the agreed lifetime of the oldest German plants like, for example, the infamous Biblis A reactor close to Frankfurt / Main. If the government would grant the utilities shifts like this, this would undermine and eventually destroy the whole nuclear phase-out scheme. So how serious this new government and its Social Democratic partner really is about a nuclear phase-out, remains to be seen - until 2008 at the latest when Biblis A will be closed down, or not as the case may be.

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An unofficial translation of excerpts from the coalition accord

"Concerning the use of nuclear power for electricity generation, different views exist between CDU, CSU and SPD. Therefore the agreement between the Federal Government and the Electricity Generating Utilities, signed on June 14 2000, as well as the procedures agreed on in this document and the necessary mechanism introduced into the amended Atomic Law cannot be changed. For CDU, CSU and SPD the safe operation of Nuclear Power Plants has the highest priority. In this context we will continue and extend the research for the safe operation of Nuclear Power Plants. CDU, CSU and SPD are committed to the national responsibility for the safe final storage of radioactive wastes and to seeking a solution for this problem in a speedy and result-oriented manner. We intend to arrive at a solution during this term of government. In the field of nuclear safeguards Federal and Regional authorities cooperate in a trustful manner."

RUSSIAN STUDY ON LOW DOSE RADIATION

A new study mostly conducted by Russian scientists, with cooperation from U.S. scientists, has bolstered the findings of previous studies suggesting that no radiation dose, low or otherwise, should be considered safe.

(638.5732) WISE Amsterdam - In the *WISE/NIRS Nuclear Monitor #632*, we covered the conclusions of the Biological Effects of Ionizing Radiation Report VII (BEIR VII) from the U.S. National Academy of Sciences (NAS) panel that surmised that no dose of radiation is safe for humans. Further that even x-rays may be 2-3 times more dangerous than other forms of radiation and showed that background radiation, excluding radon, is responsible for cancer incidence in 1 in 100 people, which equates to 60 million people worldwide. (See *WISE/NIRS Nuclear Monitor 632.5701* "U.S. Radiation panel: no radiation dose safe")

The newly released Russian study looked at a cohort of almost 30,000 people from 41 villages along the banks of the Techa River in the southern Urals region of Russia. Liquid radioactive wastes discharged from the Mayak plant during the late 1940s and 1950s contaminated the Techa, which is fed by the artificial Lake Karachai near Mayak and flows for around 240 kilometers through rural areas of Chelyabinsk and Kurgan Oblasts.

Mayak's contaminative history

The Mayak plant, nearly 100 kilometers north of the city of Chelyabinsk began operating a nuclear reactor and plutonium separation plant in 1948. Plutonium separation is known to create vast amounts of liquid wastes and it is estimated that Mayak released some 76 million cubic meters of radioactive waste into the Techa River between 1949 and 1956; however, the largest quantities were discharged between January 1950 and December 1952. The levels of radiation (around 120 million curies), from long-lived radionuclides cesium-137 and strontium-90, were said to be 2.5 times the total releases from Chernobyl. A 1990 report by the Natural Resources Defense Council (NRDC) found that

traces of the wastes could even be detected as far as the Arctic Ocean.

Apart from the dumping of radioactive wastes into the Techa, Mayak also caused other disasters. In 1957, the cooling system broke down causing one of the concrete tanks containing contaminated water to explode, releasing 20 million curies of radioactivity into the atmosphere and contaminating 23,000 square kilometers. Then ten years later, a drought exposed the bed of lake Karachai and radioactive dust was carried by a tornado over a wide area. The then Soviet authorities hid and denied the accidents for many years and when they did admit them, claimed that there had been no casualties and no long-term health effects. The people of the Techa villages swam and fished in its waters until it was finally fenced off. But once the flimsy fences had broken down and without any signage to indicate radioactive danger, villagers - often children - again returned to the riverbanks.

The first known research on radiation exposure in the Chelyabinsk region was published in the *Physicians for Social Responsibility* journal in 1993 and revealed an increased incident of death from leukemia among a cohort of 28,000 exposed to radiation from Mayak. It estimated that some half a million had been affected by the three contamination incidents from 1951 to 1967.

Following the various accidents some 60,000 people are believed to have been evacuated but many were relocated to remote parts of the then Soviet Union where no records were kept on most of them.

Study results

Dispensary 1, now the Urals Research Centre for Radiation Medicine

(URCRM), established the cohort in 1955 in order to learn more about the effects of chronic long-term radiation exposure, from both internal and external radiation. It included people from wide ranging age groups and was made up of both sexes (60% women) with some 40% aged under 20 years old and 30% aged over 40 years old at the time of exposure and followed up on the majority of the group for 50 years. The members were people who had lived in the villages during the years of most significant discharges and originally those born before January 1, 1950 who had lived in the villages along the Techa between January 1950 and December 1952. Later the group was expanded to include people who first lived by the river between January 1953 and December 1960 but who had also been born before January 1, 1950.

Levels of strontium-90 in the teeth of the subjects were measured and whole-body counts of strontium and cesium-137 were also taken and the results showed that at least one strontium measurement for over one third of the villagers. Of the 12,732 deaths from known causes among the cohort, 1,842 of the villagers are known to have died from solid cancers (excluding bone cancer) and 61 from leukemia (excluding chronic lymphocytic leukemia or CLL). That is 14.5% and 0.4% respectively. The scientists concluded that the excess cancers found in the populations living around the Techa could be linked to the exposure to radioactivity from Mayak.

Another previous study, conducted by the International Agency for Research on Cancer in Lyon, France, looked at data from over 400,000 nuclear plant workers from 15 countries and found 6519 deaths from solid cancers and 196 from non-CLL leukemia. This, the largest study of nuclear workers ever undertaken, suggested that between

1% to 2% of deaths may be due to radiation but did fail to take smoking into account. The researchers admitted that smoking might have played a role in the increased risk of cancer, excluding leukemia, but countered that smoking could not explain all the increased risk observed. That being said, the latest Russian study does corroborate previous evidence and comes to a similar conclusion.

The International Commission on Radiological Protection (ICRP) in 1991 set dose limits for radiation workers at 20 millisieverts (mSv) per year over five years although the United States does not use these standards, instead preferring to expose workers to up to 50 mSv per year. The French study

revealed an average lifetime dose of 19.4 mSv for nuclear workers while the Russian study found that the majority of villagers had received less than 50 mSv over a lifetime.

Industry has long sought to have ICRP limits increased claiming that they are over cautious but the evidence now seems to suggest that more not less caution needs to be taken.

Sources: *Science*, Vol. 310, Issue 5750, November 11, 2005; *Radiation Research* 164, p 591-601 & p 602-611 (2005) "The Techa River Cohort: Study Design and Follow-up Methods" by M. M. Kossenko, T. L. Thomas, A. V. Akleyev, L. Yu. Krestinina, N. V. Startsev, O. V. Vyushkova, C. M.

Zhidkova, D. A. Hoffman, D. L. Preston, F. Davis and E. Ron; "Protracted Radiation Exposure and Cancer Mortality in the Techa River Cohort" by L. Yu. Krestinina, D. L. Preston, E. V. Ostroumova, M. O. Degteva, E. Ron, O. V. Vyushkova, N. V. Startsev, M. M. Kossenko and A. V. Akleyev; *WISE/NIRS Nuclear Monitor* #632, July 15, 2005; *WISE News Communique* #453 June 7, 1996; *WISE News Communique* #385 January 22, 1993; *WISE News Communique* #374, June 25, 1992; *WISE News Communique* #341, November 2, 1990

Contact: WISE Amsterdam

Report "Import of nuclear waste to Russia, 2001-2005", Ecodefense, Moscow 2005

The full report is currently only available in Russian - below is a translated summary of its conclusions.

More than four years ago Russian authorities approved new legislation that would allow the nuclear industry to import spent nuclear fuel. However, during that period, the industry failed to improve its financial situation and has also neglected to begin any programs for the rehabilitation of radioactively polluted territories. Both the facilities that store foreign spent nuclear fuel, Krasnoyarsk-26 and "Mayak", receive government subsidies covering over 50% of their operational costs.

Since the legislation for nuclear fuel import was introduced in June 2001, the Russian Federal Agency for Atomic Power (Rosatom, previously Minatom) has not managed to secure any new customers for its spent nuclear fuel services. Only the old customers, Ukraine and Bulgaria, continue to send relatively small quantities of nuclear waste to Russia, mostly for storage. At the same time, officials in Ukraine have repeatedly stated that they will stop sending spent fuel to Russia in the next few years.

Rosatom has received US\$120 million for accepting foreign spent fuel. The total amount of fuel accepted from Ukraine and Bulgaria is nearly 300 tons, which is 66 times lower than the amount prediction by the industry in 2001. According to a 2001 Rosatom statement, Russia was projected to import 20,000t in a ten year-period, which equates to 2,000t per year.

Environmental groups are of key importance in preventing new contracts for spent fuel import. Rosatom tried to prevent public criticism by establishing a "public council" with leading environmental groups, but many refused the offer to "cooperation" and continued to criticize and oppose the industry. When Minatom (Ministry for Atomic Power) was re-established as Rosatom (Agency for Atomic Power) during an administrative reform of 2004, the "public council" was dissolved.

The present condition of spent nuclear fuel storages allows for approximately 1500t to be deposited while Russia's nuclear industry alone produces 800-850t per year.

The Russian nuclear industry has mostly focused on the storage of spent fuel, not on reprocessing it. Russia has only one reprocessing center, "Mayak", but it is unequipped to handle fuel from the majority of Russian reactors, which are of RBMK and VVER-1000 designs. Work on the construction of a new reprocessing plant, RT-2, Krasnoyarsk-26, is not expected to begin until 2020, if it ever will.

Contact: Ecodefense (WISE/NIRS Russia)

IN BRIEF

Japan could cut CO2 emissions by 70%. Japan's carbon dioxide emissions can be cut by 70 percent by 2050 without adding nuclear power plants if energy efficiency were to be improved and natural energy generation increased according to the National Institute for Environmental Studies. Junichi Fujino, a researcher at the Institute said that alternatives are "worth trying for future generations' sake". Wise words...

The Japan Times, November 15, 2005; Kyodo News, November 9, 2005

Australian terror suspects at nuclear facility. Documents released to a Sydney court allege that three of the 18 terror suspects recently arrested in Sydney and Melbourne had previously been stopped by police near the Lucas Heights nuclear facility outside Sydney. The three were questioned by police at the time. The gate lock to a reactor reservoir was also found to have been recently cut. The men are charged with conspiring to manufacture explosives for a terrorist attack and of belong to a terrorist organization.

The Guardian, November 14, 2005

Britain EU's windiest. An indepth investigation into Britain's wind resources has revealed that the UK has the best wind in Europe because it blows year-round and peaks when demand for electricity is at its greatest - during the day and in winter months. The government study assessed national wind patterns and how they might affect the output of wind farms by collecting the hourly wind-speed records of 66 meteorological stations since 1970. So much for the claims of nuclear proponents that wind power is unreliable and intermittent. Energy minister Malcolm Wicks said, "This new research is a nail in the coffin of some of the exaggerated myths peddled by opponents of wind power."

The Independent, November 14, 2005

India to join ITER. A high level meeting of the International Thermonuclear Experimental Reactor's (ITER) Preparatory Committee on November 8, to which India was invited to observe, has invited the country to officially request inclusion into the program - a move seen as a mere formality. The United States had committed to helping India join the project in the July 18 joint Indo-US statement. New Delhi is also thought to be interested in joining the US-led Generation IV reactor program, seeking to end its isolation in the area of nuclear research.

The Indian Express, November 8, 2005

Al-Qaeda nuclear bomb website. Terrorism experts have warned that an Al-Qaeda Arabic language website containing detailed instructions on how to make nuclear, "dirty" and biological bombs, which has received 57,000 hits and received hundreds of readers' inquiries, could boost the organization's appeal to would-be assassins. The 80-page illustrated manual was posted on October 6 and is divided into nine lessons headed "The Nuclear bomb of Jihad and the Way to Enrich uranium". The website informs the reader of effective alternative materials to uranium, like radium that are available on the market, and also explains how to make simpler bombs.

Chief of the German BND foreign intelligence agency told ARV television that it was unlikely that terrorists would be able to steal or produce a nuclear bomb at the present time but warned that a dirty bomb attack would be within their capabilities.

Reuters, November 9, 2005; The Sunday Times, November 6, 2005

EDF claims Britons favor new nuclear. A survey carried out by MORI on behalf of EDF Energy, the UK subsidiary of the French utility, has according to the utility shown that 55% of those questioned agreed that old nuclear power plants should be replaced with a mix of nuclear power and renewable sources such as wind power. Also that nearly four out of ten agreed that new plants to be built on the same sites as old ones - which might indicate that six out of ten did not agree... This poll is said to be giving a boost to the nuclear industry and its supporters in government but that is undoubtedly because of the interesting manner in which some of its results have been presented. The same poll also showed that 76% of the people surveyed believed that nuclear plants are vulnerable to terrorist attack, more than half thought that nuclear energy causes dangerous pollution and 57% supported the relaxation of building regulations to make building wind farms easier while making it easier to build nuclear power stations was more controversial. Wind farms were also found to be the most popular means of energy generation with 72% support for onshore farms and 78% for offshore. So much for the overwhelming support then...

MORI website, November 7, 2005; The Telegraph, November 6, 2005

Scottish farms still contaminated after Chernobyl. Eleven farms covering 11,300 hectares in Ayrshire, Scotland, are still considered too contaminated by the Chernobyl accident over 19 years ago for their sheep to be considered safe to eat. Caesium-

137 levels in the animals exceed the safety limit of 1000 Becquerels of radioactivity per kilogram, preventing farmers from being able to slaughter the animals for food. High levels of caesium-137 have also been detected in Highland deer and grouse in the past. Scottish National Party chairman, Bruce Crawford MSP said that under the circumstances it was "ludicrous" that the UK government is considering new nuclear plants and that we should learn from past mistakes instead of repeating them.

Sunday Herald, November 6, 2005

Sortir Silenced. The French anti nuclear network "Sortir du nucléaire" is in possession of a secret EDF document that states that the EPR reactor would not withstand the impact an airplane crash. This information is of extreme interest and importance because, to date, the French government and nuclear utilities (EDF, Areva) have insisted that the EPR is "the only reactor in the world that could resist an airplane crash".

Since November 3, a national debate on the EPR reactor has commenced in France and will continue for four months. Sortir du nucléaire has written a text that should be made public but the French government petitioned the "Public Debate Commission" to censor this text because it contains six lines mentioning the famous secret document!

Some newspapers, like *Le Monde*, have briefly commented on this issue but most of the French population remain unaware of the full facts. Sortir du nucléaire is still trying to let the public know...

Source: Sortir du nucléaire by e-mail, November 17, 2005

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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). 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.

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