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A GREEN NEW DEAL

Joined-up policies to solve the triple crunch of the credit crisis, climate change and high oil prices

Financial meltdown, soaring food and energy bills, high oil prices, accelerating climate change. The global economy faces a 'triple crunch' which could develop into a perfect storm to rival or surpass the Great Depression. Time is short. There could be only 100 months or less from August 2008 to take meaningful action on climate change. Current responses are not getting to the root of the problem. When politicians and the market fail us, and the world slips further into financial and environmental freefall, a panel of experts ask: do we need a Green New Deal?

(678.5896) New Economics Foundation - This 'triple crunch' is a combination of a credit-fuelled financial crisis, accelerating climate change and soaring energy prices underpinned by an encroaching peak in oil production. To help prevent this from developing into a Great Depression we are proposing a Green New Deal.

In this way we believe we can begin to stabilise the current triple-crunch crisis. We can also lay the foundations for the emergence of a set of resilient low-carbon economies, rich in jobs and based on independent sources of energy supply. This will create a more stable economic environment in which there is a lot more local production and distribution, and enhanced national security. In the first half of this report we examine the financial, economic and environmental landscapes that are the backdrop to this triple crisis. In the second half, we propose a series of policies that can be used to tackle the problems we have identified.

The Green New Deal

We call our programme a Green New Deal - one that combines stabilisation in the short term with longer-term

restructuring of the financial, taxation and energy systems. The Green New Deal is international in outlook, but requires action at local, national, regional and global levels. Focusing first on the specific needs of the UK, an interlocking programme of action needs to involve:

- Executing a bold new vision for a low-carbon energy system that will include making 'every building a power station'. Involving tens of millions of properties, their energy efficiency will be maximised, as will the use of renewables to generate electricity. This will require a £50 billion-plus per year crash programme to be implemented as widely and rapidly as possible. We are calling for a programme of investment and a call to action as urgent and far-reaching as the US New Deal in the 1930s and the mobilisation for war in 1939.
- Creating and training a 'carbon army' of workers to provide the human resources for a vast environmental reconstruction programme. We want to see hundreds of thousands of these new high- and lower-skilled jobs created in the UK. It will be part of a wider shift from an economy narrowly

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focused on financial services and shopping to one that is an engine of environmental transformation. The UK has so far largely missed out on the boom in 'green collar' jobs, with Germany already employing 250,000 in renewable energy alone.

- Ensuring more realistic fossil fuel prices that include the cost to the environment, and are high enough to tackle climate change effectively by creating the economic incentive to drive efficiency and bring alternative fuels to market. This will provide funding for the Green New Deal and safety nets to those vulnerable to higher prices via rapidly rising carbon taxes and revenue from carbon trading. We advocate establishing an Oil Legacy Fund, paid for by a windfall tax on the profits of oil and gas companies. The monies raised would help deal with the effects of climate change and smooth the transition to a low-carbon economy.
- Developing a wide-ranging package of other financial innovations and incentives to assemble the tens of billions of pounds that need to be spent. The focus should be on smart investments that not only finance the development of new, efficient energy infrastructure but also help reduce demand for energy, particularly among low-income groups, for example by improving home insulation. The science and technology needed to power an energy-and-transport revolution are already in place. But at present the funds to propel the latest advances into full-scale development are not.
- Re-regulating the domestic financial system to ensure that the creation of money at low rates of interest is consistent with democratic aims, financial stability, social justice and environmental sustainability. Our initial proposals for financial renewal are inspired by those implemented in the 1930s. They involve the reduction of the Bank of England's interest rate

to help those borrowing to build a new energy and transport infrastructure, with changes in debt-management policy to enable reductions in interest rates across all government borrowing instruments. In parallel, to prevent inflation, we want to see much tighter controls on lending and on the generation of credit.

- Breaking up the discredited financial institutions that have needed so

Next Nuclear Monitor Financial crisis: Implications for nuclear power.

The worldwide crisis that hits the financial markets has certainly implications for the nuclear industry. For nuclear and other generation technologies, "the places where capital has been obtained" are now "not available," a Department of Energy spokesperson said late September, referring to the demise or restructuring of Wall Street's major investment banks. What those implications are, we will investigate in the coming issue of the Nuclear Monitor.

"In fact the only upside of all this is that the massive slow-down in economic growth will rapidly cut the growth rates of CO2 emissions. Pollution is tightly linked to the level of economic activity, so that a few years of negative growth would lead to reductions in pollution levels not seen since the 1970s. It seems ironic that the greed of Wall Street may have inadvertently achieved what millions of well intentioned scientists, activists and politicians have failed to achieve - a slowdown in global warming."
Nicholas Bloom, Assistant Professor of Economics at Stanford University, USA.
(<http://www.voxeu.org/index.php?q=node/2243>)

much public money to prop them up in the latest credit crunch. We are calling for the forced demerger of large banking and finance groups. Retail banking should be split from both corporate finance (merchant banking) and from securities dealing. The demerged units should then be split into smaller banks. Mega banks make mega mistakes that affect us all. Instead of institutions that are 'too big to fail', we need institutions that are small enough to fail without creating problems for depositors and the wider public.

- Re-regulating and restricting the international finance sector to

transform national economies and the global economy. Finance will have to be returned to its role as servant, not master, of the global economy, to dealing prudently with people's savings and providing regular capital for productive and sustainable investment. Regulation of finance, and the restoration of policy autonomy to democratic government, implies the re-introduction of capital controls. These are vital if central banks and governments are to fix and determine one of the most important levers of the economy - interest rates

- Subjecting all derivative products and other exotic instruments to official inspection. Only those approved should be permitted to be traded. Anyone trying to circumvent the rules by going offshore or on to the internet should face the simple and effective sanction of 'negative enforcement' - their contracts would be made unenforceable in law. Ultimately our aim is an orderly downsizing of the financial sector in relation to the rest of the economy.

- Minimising corporate tax evasion by clamping down on tax havens and corporate financial reporting. Tax should be deducted at source (i.e. from the country from which payment is made) for all income paid to financial institutions in tax havens. International accounting rules should be changed to eliminate

transfer mispricing by requiring corporations to report on a country-by-country basis. These measures will provide much-needed sources of public finance at a time when economic contraction is reducing conventional tax receipts. We also urge the UK to take action at the international level to help build the orderly, well-regulated and supportive policy and financial environment that is required to restore economic stability and nurture environmental sustainability.

Our Government's objectives should include:

- Allowing all nations far greater

autonomy over domestic monetary policy (interest rates and money supply) and fiscal policy (government spending and taxation).

- Setting a formal international target for atmospheric greenhouse gas concentrations that keeps future temperature rises as far below 2°C as possible.
- Delivering a fair and equitable international climate agreement to succeed the Kyoto Protocol in 2012.
- Giving poorer countries the opportunity to escape poverty without fuelling global warming by helping to finance massive investment in climate-change adaptation and renewable energy.
- Supporting the free and unconstrained transfer of new energy technologies to developing countries.

In the words of France's President

Sarkozy, 'we have to put a stop to this financial system which is out of its mind and which has lost sight of its purpose.' The Green New Deal will rekindle this vital sense of purpose, restoring public trust and refocusing the use of capital on public priorities and sustainability. In this way it can also help deliver a wide range of social benefits that can greatly improve quality of life in the future.

There is also an immediate imperative to restore some faith that society can survive the dreadful threats it now faces as a result of the triple crunch. Beyond that, we believe the Green New Deal can deliver a crucial national plan for a low-energy future and its provision on the ground. The absence of any such plan at present leaves the country very vulnerable. There is no risk analysis of the peak-oil threat, and

there is no contingency plan for what would happen if oil and/or gas supplies collapsed rapidly. Our plan would include oversight and coordination for generating the funding from government, the energy industry and a range of private savings vehicles for investment in a vital multi-decade programme for the transition to a low-energy future. In short, it is a route map for the journey from energy and economic insecurity to one of energy and environmental security.

Source and contact: This is the executive summary of A green New Deal; was published by the New Economics Foundation on behalf of the Green New Deal Group. For more articles on this issue, please visit <http://www.neweconomics.org/gen/triplecrunch.aspx>

ROKKASHO REPROCESSING PLANT VITRIFICATION FACILITY'S TROUBLES CONTINUE

Japan Nuclear Fuel Ltd (JNFL) was supposed to be conducting active tests at the Rokkasho Reprocessing Plant, but in reality the plant has been effectively out of action since the end of 2007. The reason is that problems continue to plague the vitrification facility, which mixes high active liquid waste with molten glass, in order to seal the radioactive waste in glass canisters.

(678.5897) Citizens' Nuclear Information Center - As a result of these problems, in July JNFL was forced to announce that the date for completion of active test had been postponed until November. However, even in the unlikely event that the facility operates without a hitch from now on, this is already an impossible schedule. There is no chance that the plant will commence commercial operations before 2009.

During tests carried out over a period of about a month at the end of 2007, JNFL was unable to maintain the glass melting kiln at the required constant temperature of 1,200 degrees C. As a result, platinum group elements (palladium, ruthenium, etc.) contained in the high active liquid waste accumulated at the bottom of the kiln, blocking the outlet and preventing the waste from flowing smoothly into the canisters below. The tests were held up for the next six months while JNFL tried to fix the problem. On July 2, the tests were finally recommenced, but although

the liquid flowed down for a moment, the flow stopped almost immediately. Further attempts to recommence the tests failed and the facility remains as it was. With radioactive waste and glass still stuck in the kiln. This dangerous situation was not even foreseen in the operation manual.

In September, two months after the latest attempt to operate the facility, the situation has only just become clear. According to JNFL, molten glass became stuck around the flow-through nozzle at the bottom of the kiln. JNFL used a heater made especially to deal with this problem to remelt the glass that had become stuck to the nozzle to allow it to flow through. An implement was then used to remove the remaining glass that had adhered to the high frequency heating oil. In addition, the coupling device which connects the nozzle to the canisters into which the glass flows was removed for inspection. The cause and mechanism by which the molten glass became stuck is still unclear. Consequently, there is no

indication when the tests will recommence.

All sorts of problems have arisen in the production of high-level waste glass canisters at the Rokkasho Reprocessing Plant. It is still not possible to determine the causes of the problems, or appropriate responses to these problems. Stable production of glass canisters is one of the acceptance conditions for the active tests. Obviously, it is impossible to give approval for commercial operation of the plant if it does not have the capability to produce glass canisters.

Source: Nuke Info Tokyo, Sept/Oct 2008

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CIVIL SOCIETY AGAINST FOOD IRRADIATION

Food irradiation is the process of exposing food to high levels of ionizing radiation. The practice has been in existence since the 1950s, but has been more widely used in recent years. Irradiation has three main purposes: to eradicate pests such as fruit flies on harvested crops, kill disease-causing microorganisms and extend the shelf life of food. The international institutions (via a World Health Organization (WHO), Food and Agriculture Organization of the United Nations (FAO) and the IAEA joint Committee have authorized irradiation for every type of food without any limit of dose.

(678.5898) Collectif français contre l'irradiation des aliments - No

independent research was carried out so far on the long-term impacts of the consumption of irradiated food. Only a Franco German research (2002) showed that new chemicals formed when fat food is exposed to radiation, in fact cyclobutanones which have been linked to genetic damage.

Moreover, treating food with the equivalent of tens of millions of chest X-rays can ruin its nutritional value (in particular vitamins, A, B, C, E, PP, and K). When food is irradiated, ionizing radiation reacts with water in the food, causing the release of electrons and the formation of highly reactive free radicals. The free radicals interact with vitamins in ways that can alter and degrade their structure and/or activity. The extent to which vitamin loss occurs can vary based on a number of factors, including the type of food, temperature of irradiation, and availability of oxygen. Nonetheless, vitamin loss almost always increases with increasing doses of radiation. The destruction of vitamins continues beyond the time of irradiation. Therefore, when irradiated food is stored, it will experience greater vitamin loss than food that has not been irradiated. Cooking further accelerates vitamin destruction in irradiated food more than in non-irradiated food.

These are some of the reasons to fight food irradiation. This technology can also replace good sanitary practices of production. In addition, this technology has environmental and social impacts, and fits ideally globalized industrial food production.

Irradiation doesn't stop developing throughout the world: the number of units exploded in developing countries. In China, the number of irradiation units increased from 7 in 2003 to 50 in 2006. India plan to build 25 new units by 2012 and Mexico the biggest irradiation unit in the world.

Such countries as Brazil or South Africa authorize irradiation for every type of foods. Countries such as Mexico, China, India, USA, and Canada authorize irradiation for a large type of foods, especially meats and fruits. This year, the US authorities added lettuce and spinach to their positive list and in Canada the debate goes on: the authorities plan to develop the positive list as well.

In 1999, The European Union legislated on food irradiation. Only one type of food was authorized to irradiation: the herbs, spices and vegetable seasonings. However, some countries put in place dispensations in order to commercialize irradiated foods (see: http://ec.europa.eu/food/food/biosafety/irradiation/index_en.htm) . A wide range of food may be irradiated (poultry meats, frozen frog legs, shrimps, gum arabic, casein, dehydrated vegetables and fruits, onion, garlic, shallot ...). Belgium, Holland and France are the largest producers of irradiated foods in the EU. According to the last report of the European Commission (2005), these countries irradiated the following tons of foods: 7 279, 2 (Belgium), 3 299, 2 (Holland) and 3 111(France).

You cannot see irradiation. Since the 1999 European legislation, labeling is compulsory. The mention "treated by

ionization" must be labeled on every package. It is the only way for the consumer to be informed. However, high fraud level and very few controls do not ensure European citizens correct information. At the European level, frauds developed since 2001. Moreover, it is impossible to know how many tons of foods are irradiated and commercialized in the European Union. In 2005, 10 Members States had declared food irradiation units. However, only 8 countries gave to the Commission information on the tonnage of irradiated food in their countries and on the controlled samples. Italy and Spain, huge producers of fruits and vegetables do not give such information.

In Europe and in France in particular, a coalition of consumer, food safety and environmental organizations protest against food irradiation. They call on French and EU officials to improve regulation enforcement, levy sanctions against violators and fund independent research on the safety of irradiated foods.

The next international week against food irradiation will take place early November. In France, conferences will be organized and in Australia for example, a workshop on this issue with an "Irradiation Free Morning Tea" will be proposed to citizens.

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WOULD A RENAISSANCE IN NUCLEAR CONTRADICT THE ONGOING EFFORTS IN "SMART ELECTRICITY NETWORKS"?

The electricity system is facing a period of significant change. Fossil fuel-based electricity production is anticipated to experience its last decades of major contributions to global energy demand; climate change is no longer disputed, and the amount of resources is limited; however the time scale for this fading out process is highly discussed.

(678.5899) Hubert Fechner - Starting in the last decade of the 20th century, a substantial increase of distributed generation (DG) was experienced on power systems in many European countries, but also in the U.S., Japan and some other - mainly industrialised - countries worldwide. This significant rise may be explained by several factors: changes in the energy-political context (e.g. deregulation), progress in development of generation technologies, cost reduction in some materials and due to mass-production, as well as various economic incentives for end-users (e.g. special purchase tariffs for electric energy produced by Renewable Energy Sources (RES), Combined Heat and Power (CHP) systems or plants making use of waste).

Beside ecological benefits this development will lead to more political independency by using local resources as well as positive aspects for the regional economy. On the other hand especially the fluctuating sources like wind and solar need concepts for best integration into the system, with forecast models, storages, user incentives and other promising approaches currently under development respectively in the early phase of utilization.

The situation of a growing energy demand seems to proceed in the long run and needs to be met by new capacities fulfilling the economic and ecologic requirements for a sustainable future.

Checking the development of generation technologies and the forecasts given by its stakeholders, renewable generators seems to have a considerable potential of cost decrease; this is predominantly attributed to further technological development leading to an increase of efficiencies as well as by overcoming barriers which

comes from the fundamentally different feature of small, mainly privately owned electricity generators as partner in an old established electricity business. Costs which are assigned to raw materials and work force might level down this effect to some extent.

In a long term, electricity generators without external energy supply might prevail, amongst there are solar, hydro and wind - with solar as the most promising technology due to its outstanding potential, which is some thousand times the current global energy demand. Because of that reasons some studies predict direct solar technologies contribution to the global energy supply by 65% up to the end of this century.(1)

Efficiency measures are well known and highly discussed but no longer effectively introduced so far - mainly caused by lacking of sufficient economic win-win situations so far. The IEA's (International Energy Agency) World Energy Outlook suggests that in the absence of efficiency measures demand will double by 2030 compared to 2005.

Renewable energy already plays an important role in global electricity provision - around 18% in 2005. The blue map scenario of the IEA shows about 20.000 TWh global electricity production from renewables in 2020 compared to about 5.000 TWh nowadays. Other scenarios from the renewable industry sector are even much more progressive.

Electricity networks of tomorrow

The first electricity networks were built - more than one century ago - by connecting mainly small power plants, adding soon higher capacity plants and finally ending up with a system dominated by large centralised and well controllable power units. Due to the changes in the energy markets in many

parts of the world, a fundamental restructuring of the electricity networks is necessary, besides the ageing electricity infrastructure needs refurbishment.

But what can we expect for the future? Centralized or decentralized power generation?

It is not a question of either centralized or decentralized; it's simply a question of economically and environmentally benign technologies, both kinds can and will co-exist. Anyhow, central generation needs to be optimally integrated with decentralised generation, using the advantages of both approaches.

A successful transition to a future sustainable energy system depends on the involvement of all the relevant stakeholders: generators, consumers, traders, governments, regulators, transmission and distribution system operators, equipment manufactures and ICT providers. The European harmonisation process is essential in order to coordinate at regional, national and European levels. The European "Smart Grids Technology Platform" has been designed to facilitate this process, supported by various national activities like the national technology platforms (e.g. in Austria, Slovenia and other European countries). (2)

In the global context, the International Energy Agency (IEA) has started the initiative ENARD (Electricity Networks, Analysis, Research and Development) in 2006, with "DG System integration in Distribution networks" as its first technical project. (3)

The process of making electrical networks intelligent is anyhow needed, albeit one must consider that it is mainly the distribution network, which needs to be refurbished.

While transmission networks

are meanwhile generally equipped with intelligence, smartness is needed especially in the distribution networks in order to catch up the larger quantities of decentralised generators, with communication and power electronics as predominant technical requirements to achieve this intelligence. New market models and open electricity markets are depending on this intelligence in the same way like technical requirements for interconnection of decentralised technologies will profit from detailed knowledge of the electrical situation at the site of generation. The connection of Distributed Generation to the grid has given rise to new and sometimes challenging problems especially on distribution networks. Indeed, these networks were not initially designed to host generators. In particular they were usually operated with energy flows in only one direction, namely from the substation to the customers, which is no longer true with the increasing implementation of distributed generators.

Miscellaneous generation structure will come

Out of that, one can conclude that we have to prepare for a future of miscellaneous power generation: small units from private photovoltaic roofs, wind generators, larger as well as small private combined heat and power units, fuel cells, as well as large generation units coming also from renewables like large hydro, wind farms, photovoltaic multi-megawatt-systems, solar concentrated power or large biomass-power plants or geothermal, wave and tidal energy. "Smart grids" do in no way imply to

exclude large power stations as generators. The electricity system will become a universal tool capturing all generation and serving all consumers, who will more and more become active partners in the trading as well as network management; that latter by offering ancillary services like e.g.

Renewables in the USA.

According to the October 3 "Monthly Electricity Review" issued by the U.S. Energy Information Administration, net U.S. generation of electricity from renewable energy sources (biomass, geothermal, hydropower, solar, wind) surged by 32 percent in June 2008 compared to June 2007. Renewables accounted for 11.0% of net U.S. electricity generation in June 2008 compared to 8.6% in June 2007. Compared to June 2007, wind power grew by 81.6% in June 2008 while solar and conventional hydropower experienced increases of 42.6% and 34.7% respectively. Geothermal energy also enjoyed a slight increase (0.8%) while biomass (wood + waste) remained relatively unchanged. Renewable energy sources now account for 37% of the non-fossil net electricity generation in the United States. Net electricity generation from non-hydroelectric renewables (i.e., biomass, geothermal, solar, wind) increased by 24 percent and now accounts for just under three percent of total net U.S. electricity generation. By comparison, nuclear power's share of total net U.S. electricity generation dipped from 19.0% in June 2007 to 18.8% in June 2008. Total U.S. net electricity generation increased by 2.9%.
 Press release, SUN DAY, 9 October 9, 2008

contributions to voltage control, reactive power supply and filtering of harmonics. However, the grid-codes as well as the legal and conditions need to be set up accordingly.

Would a large penetration of nuclear energy significantly change this situation?

Nuclear energy so far plays a minor role in the global electricity system, even though some countries have important shares of nuclear generation. Provided that nuclear will start right now it renaissance with full public support, even in that case the ongoing process of decentralised renewable generation development makes new

network strategies necessary. Also in the unrealistic case of immediately stopping all incentives for renewables worldwide, the process of decentralisation is already settled, since grid parity (the point in time when the cost of electricity from distributed generators matches the price paid by consumers for retail electricity) for wind is reached during these years in some regions and will be reached for photovoltaics within the next five to ten years, in case of stronger increase of electricity-prices even sooner.

Electricity will definitely further gain importance in the future due to the general increasing demand of energy services and its outstanding feature as most elegant energy carrier.

For the electricity system itself we can prepare for a coexistence of large central power plants with small decentralised renewables. The share of each is not assessable yet and strongly dependent on economic

issues. The vision of smart, intelligent electricity networks is in any case valuable for all future ways of generating, transferring and distributing electrical energy.

- (1)- German Advisory Council on Global Change, 2003, www.wbgu.de
- (2)- Lugmaier, Fechner et.al. Austrian Technology platform Smart Grids, CIRED - Conference 2007, Vienna
- (3)- IEA ENARD, Implementing Agreement of the IEA, www.iea-enard.org

Source and contact: Hubert Fechner, Helfried Brunner, arsenal research. Giefinggasse 2, A-1210 Vienna, Austria

BRAZIL, ARGENTINA ON THE BRINK OF A NEW NUCLEAR PUSH

For the last 10 or 15 years, most of the citizens and environmentalists in Brazil had the impression that that country would be free from new nuclear power plants for a long period. Living with the 2 existing reactors, the population almost forgot questions such as safety, costs or the unsolved issue of where to dispose the radioactive waste. More than two decades passed since the accidents in Chernobyl and in Goiania, where the world's worst radiological accident took place in 1987.

(678.5900) Sérgio Dialeachi & Roque

Pedace - The national nuclear program was not officially finished, but no-one heard of it anymore. Also, the end of a 30-year-long cooperation with Germany gave the environmentalist movement the idea that there wasn't room for a nuclear outbreak in Brazil.

However, the nuclear industry was not dead. They used the hibernation period to prepare a future jump, creating a no-return situation, with investments being made to develop an uranium enrichment process and a type of small reactor that could be employed in both ways, in remote areas where the grid does not reach and in an "eternally" under-construction Brazilian nuclear submarine (tagged by the national Press as "the most expensive miniature model of a nuclear submarine in the world", referring to the slow rhythm of advancement of its construction).

But, in fact, jokes apart, the Brazilian Navy played a very important role in keeping the nuclear industry alive. Probably, few of the readers would remember the scandals in the nuclear field in which Brazil got involved: the smuggling of enriched uranium from an experimental reactor (installed at University of Sao Paulo) to Saddam Hussein's Iraq, in 1981, and the building (by the Air Force) of an unauthorized nuclear bomb test-site in the Amazon Forest (in Serra do Cachimbo, Para State), in 1991. After that, as the National Constitution forbids - since 1988 - the employment of nuclear energy for military proposals, the Brazilian armed forces became monitored and the only way they had to continue officially doing some nuclear research was to propose the construction of a submarine to guard Brazil's vast coast. The development of a small reactor to fit inside the submarine and the completion of the nuclear fuel cycle would be side-products, justified necessary steps in the Navy's project.

Silently, slowly, but gradually, the military joined forces with part of the scientific community. If nuclear energy was not important for electricity generation anymore, it became part of strategic science advancement in Brazil. Its spokespeople were no longer in the Ministry of Mining and Energy,

but in the Ministry of Science and Technology, with the Navy staying hidden behind them. This shift put aside issues such as costs, competitiveness, etc. It is not a matter of generating electricity expensively (remember that the nuclear program cost around US\$ 40 billion to Brazil, representing one-third of the country's foreign debt during the 1980's). Now, nuclear energy is an important conquest to keep Brazil's sovereignty; something that should make every citizen proud of it; an issue that must be controlled only by a very small group of cool experts and kept away of the loud and passionate environmentalists.

The Brazilian Constitution says that "any nuclear activity in the country must be authorized by the National Congress". Serious opinion polls show that 87% of the population are against the construction of any new nuclear power plant, including Angra 3, the will-be Brazilian third reactor, which has just got the Ministry for the Environment's license to be installed, after a 33-year-long wait and denial. In spite of this, President Lula decided to forget his very active past opposing the nuclear industry and, without consulting anyone, proclaimed the necessity of going ahead with a new "nuclear package". Last month, in a meeting with 11 of his most prestigious ministers, Lula discussed a program containing 60 different projects in the nuclear field, including the construction of 4 to 6 nuclear power plants in the North-Eastern part of the country. In a speech afterwards, the Minister of Mining and Energy went further beyond any reasonable point announcing plans to build 50 to 60 new nuclear power plants up to year 2050, at the pace of more than one new installation per year!

Of course, much of what has been announced contains a hint of strategy to remove the opposition of environmentalists to new huge dams proposed to the Amazon area. The government threatens to construct tens of nuclear power plants in order to get approval for 5 or 6 hydroelectric power plants. In reality, unfortunately, there is an official "nuclear package" under its way and it must have a considerable dimension. Cooperation agreements have been established with neighbor

countries. A new uranium mining area is almost ready to start being operated in Ceara State. The creation of a joint-venture company to enrich uranium and produce nuclear fuel has been discussed with Argentina. There has been a lot of talking about the Brazilian potential for exporting enriched uranium. The necessity of protection for the newly-found coastal petroleum reserves is the new argument in favor of a fleet of nuclear submarines. The constitutional nuclear monopoly is under attack in the Parliament, in an attempt of opening opportunities for national/international private investors and electricity generation companies. In different parts of the country, engineering studies assess potential sites for new nuclear power plants and a "definitive" radioactive waste depot.

How much of all this is mere bluff? How serious can the government announcements be taken? How deep is Brazil going to get involved again in a nuclear program? The answers to these questions will be known soon. Government officials say that the plans will be release up to the end of this year. Surely, Brazil and South America are on the brink of a new nuclear push. How strong the reaction of the NGOs and social movements can be is something to be seen.

And Argentina.....?

The former president, Nestor Kirchner, and his wife now in office, Cristina Fernandez de Kirchner, have been supportive of nuclear activities since they took office in 2003. Not only the budget was increased to levels never reached under elected governments but also they decided to reinstitute construction of Atucha II (750MW), the third nuclear plant started in 1980 under the last military regime, using the components bought and imported twenty years ago. The budget for this work has been agreed with several companies; AECL being responsible for nuclear engineering. The total sum is 750 million US\$, even though private sources consider the final bill will be around 1 bn US\$. A public corporation, NASA, is responsible for all three Argentinean nuclear plants and the next to come.

Embalse Rio Tercero (650MW) will have

life extension works done by AECL. This means this plant will remain operational the next two decades. AECL, the chosen "strategic ally" for the Argentinean nuclear plan, was assigned to put forward plans for two new power plants based on the latest units sold to China in the mid nineties. This decision was criticized on technological grounds, since this reactor type will no longer be produced in the coming years.

The government is also committed to build at least one small "fourth generation" reactor i.e. the CAREM, a PWR design enjoying some "inherently safe" properties. This was first intended to be produced for a nuclear submarine under the guise of "compact reactor design" just after the Malvinas-Falklands war. In the 80s it was recasted into civilian form for small grids and in the nineties CNEA tried to sell it to nuclear beginners for both power generation and research and training. There was never any reactor ordered and the project was frozen with no budget assigned until recently, when it was reintroduced as first priority of

CNEA. Now that substantial funds have been assigned, officials claim the pilot reactor could be built in two years time but there is no siting studies nor approval of any kind for any new reactor in Argentina. The real impact of CAREM is not commercial, since it was not even elected for the race for the Fourth Generation, but mainly as a window for newcomers that for less than 200 mn US\$ one could get 25 or more MW -about the same price as a state of the art research reactor. It could be also used for naval propulsion and eventually scaled up to more than 100MW if this proves economically sensible.

Plans for reinvigorating the lab scale uranium enrichment into a commercial plant have been put forward by CNEA. The technology would be an advanced diffusion enrichment and would render Argentina self sufficient for its needs of enriched uranium now being bought abroad. Heavy water reactors can use the slightly enriched (ca 1%) CARA fuel elements Argentina is also trying to sell to other users of this technology such as Canada, Korea, Rumania, China. But

effective demand from abroad is still not proven.

Argentina's CNEA has finished the Lucas Heights Replacement reactor in Sydney, Australia. The spent fuel elements will be sent to the US under an agreement Argentina is also using for its own nuclear elements. In the meanwhile, a law was passed that allows Argentina to import and (re-)process domestically these elements. This is claimed to be a violation of the constitution by many but will not be decided until there is a real demand from a third party. But the reprocessing market seems to be negligible and heavily monopolized by nuclear powers for proliferation fears.

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WATER IS MORE PRECIOUS THAN URANIUM

On September 20, almost two hundred people gathered under the thousand-year-old linden in the village of Kotel near Osená in the Liberec region (Czech Republic) to declare their protest against planned uranium mining in this area. Similar activities on the occasion of International Uranium Action Day were taking place in other six countries of Europe, in Russia and in Australia - at the places where local communities are endangered by uranium mining. Part of this action was a theatre performance by the local amateur theatre group Vojan. It was a parody on the efforts of foreign speculators to mine uranium in Bohemia.

(678.5901) **Sdru ení Calla** - Uranium mining in Stra pod Ralskem area started in the 1960's. It was being done by the worst known method - in situ acid leaching. During almost 20 years sulphuric acid was pumped underground in huge amounts. This caused not only the massive underground contamination but caused also great danger to the drinking water reservoir for the whole region. That was the reason the mining was stopped here.

"The problem of contamination years after uranium mining in Stra pod Ralskem was stopped is so large that we will fight it for the coming decades. Its stabilization will cost tens of billions of crowns paid for by our tax-money.

Nevertheless mining companies dare to suggest renewing of uranium mining nowadays. This time even in more inhabited areas towards Liberec," informed Hana Gabrielová from Calla organization which acts actively against renewing of uranium mining.

"Drinking water is obviously more precious for people than uranium. It seems to us absolutely absurd that mining companies plan renewing of mining only 5 kilometers from the place where the drinking water reservoir is. This reservoir supplies drinking water to nearby Liberec - a town with more than a hundred thousand inhabitants," emphasized Josef Jadrný, an organizer from the organization Naše Podještědí.

"From experience I know how incredibly difficult and expensive removing contamination after uranium mining from an area is," said Dr. Gavin Mudd, an Australian hydrogeologist dealing with impacts of uranium mining, who came to Kotel near Oseň to get to know the local situation and support the local community. "Uranium mining is a business, whose the only aim is to earn money. Water is for all people and its value is going to be more and more precious," emphasized Mudd.

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IN BRIEF

N-Korea: agreement on verification. North Korean nuclear cooperation was suddenly reinstated on October 12, two days after the process had apparently ground to a halt. Major moves were made by both main protagonists on 11 October: The USA removed North Korea from its 'axis-of-evil'-list of countries considered to sponsor terrorism, and North Korea agreed to a reliable verification protocol for its nuclear disarmament. It was these two sticking points that lay behind the escalation of tensions the week before came to a head with a North Korean statement that it would no longer allow International Atomic Energy Agency (IAEA) inspectors into any of its nuclear facilities.

The American side detailed the verification protocol it had negotiated, mainly during a special mission at the start of October. It said that all of the Six Parties (China, Japan, North Korea, Russia, South Korea and the USA) could participate in verifying that North Korean military nuclear equipment and sites had been put beyond use, and that the IAEA would have a role in consultation and support. Scientific procedures had been agreed, including sampling and forensic activities, and the protocol would apply to plutonium-based programs as well as uranium enrichment programs and "proliferation activities." The protocol would be applied to verification work to take place "in the near future," while over 18,000 pages of documents have already been reviewed following North Korea's June information submission to the Six Parties, the USA said

World Nuclear News, 13 October 2008

Return of highly enriched research reactor fuel to USA. Some nine kilograms of US-origin highly enriched uranium (HEU) research reactor fuel has been shipped from Germany to the USA, marking the return of all such material from the country. In the 1950's, under the Atoms for Peace program, the USA provided HEU reactor fuel to further other countries' research into peaceful uses of nuclear energy, with the provision that the fuel would be returned to the US after use. Recovering the fuel is now a major non-proliferation effort of the NNSA. The program to return US-origin HEU fuel began in the early 1990s. In 2004, the program became part of the NNSA's Global Threat Reduction Initiative (GTRI), which works to reduce and protect vulnerable nuclear and radiological materials located at civilian sites around the world. So far, the US-origin research reactor fuel return program has seen 45 shipments, totalling 1190 kg of US-origin HEU, from 27 countries. The HEU fuel assemblies are stored at the DoE's interim management site, at Savannah River in South Carolina, until final disposition arrangements are made. The program has now removed all US-origin HEU fuel from 16 countries: Argentina, Brazil, Chile, Colombia, Denmark, Germany, Greece, Italy, Philippines, Portugal, Romania, Slovenia, South Korea, Spain, Sweden and Thailand.

World Nuclear News, 8 October 2008

Turkey's tender for nuclear power plant: Six participants, one offer. September 25 was the day trumpeted over months by the Turkish government and especially by the Energy Minister as the day they would announce the tenders for the nuclear plant they want to build here - one of a number that they say they want to build. But only Atomstroyexport, the Russian nuclear power equipment and service export monopoly, presented a proposal for the nuclear tender to built Turkey's first nuclear power plant. The company's partners are Interrau and Turkey's Park Teknik, a part of Ciner Holding, which also has media interests. Six envelopes were received on September 25 by the Turkish Atomic Energy Agency, or TAEK, but five of these included "Thank you, but no thank you" messages. Details of the bid, including price and technical specifications, would be announced at a later date, said Hac Duran Gökkaya, general manager of state power producer TETA, which is issuing the permit. It remains unclear whether the submission of only one bid met the tender's competition rules, but analysts think one bid cannot go ahead as this is against competition laws.

This is a serious embarrassment for the energy minister and his nuclear plans as he has insisted on pushing the nuclear option and indeed over the months some Turkish companies did announce their interest. But in the end, it is clear that the government were not giving sufficient credit guarantees and our consistent and public campaigning on the economic madness as well as the potential impacts has clearly paid off. And our direct approaches and some public work recently on Sabanci (a Turkish company that had announced their intention to go into the nuclear bid 2 months ago) has clearly hit home. The Energy Ministry plans to build three nuclear plants to meet 8 percent of the nation's electricity demand by 2020. A second plant is meant to be constructed near Sinop, on the Black Sea coast. This tender was the fourth held for the construction and operation of Turkey's first nuclear power plant in decades. Turkey's mishandling of the nuclear tender is all the more difficult to bear, since its efforts date back to 1971, when the Nuclear Plant Department of the Turkish Electricity Administration was set up. The previous three tenders had failed.

Turkish Daily News, 25 September 2008

Non-proliferation regime privatized? An international organization aimed to strengthen the physical protection and security of nuclear materials and facilities worldwide launched on September 29 in Vienna, Austria. The World Institute for Nuclear Security (WINS) is to be set up with US\$3 million in funding from the Nuclear Threat Initiative, a matching US\$3 million from the US Energy Department and US\$100,000 from Norway and have a full-time staff of 5-10 experts. NTI's contribution is made possible by a grant from the Peter G. Peterson Foundation. Peter Peterson is co-founder of the Blackstone group, republican and Secretary of Commerce under president Nixon. NTI was set up by Ted Turner, founder of CNN. WINS will seek to bring nuclear experts, governments and private companies together to improve security at nuclear facilities. Roger Howsley, the former head of security for British Nuclear Fuels, will serve as its first executive director.

WINS is called an important initiative "aimed at ensuring that we can enjoy the benefits of nuclear energy while defending against its dangers", according to their own press release.

WINS takes its inspiration from WANO (World Association of Nuclear Operators), an organization created by the nuclear power industry after the Chernobyl accident "dedicated to sharing information in order to improve nuclear safety".

WINS will build on the fundamental and essential activities of the IAEA by working closely with and complementing the IAEA's vital work. WINS will be headquartered in Vienna to ensure close coordination.

So, is it basically a fire brigade made up of 'arsonists'?

The Guardian (UK), 30 September 2008 / www.wins.org / www.nti.org

Uranium Mining- A blessing or curse? International meeting and awareness raising tour in Namibia, from October 25 to November 1.

Uranium mining and exploration is on the increase in Namibia. It does contribute to the GDP but it also has long term implications. Uranium mining is often accompanied by economic, social, environmental and health effects. It is against this background that Earthlife Namibia and the Labour Resource and Research Institute (LaRRI), with support from WISE and SOMO are encouraging a public debate on the pros and cons of uranium mining. Over the years, Earthlife Namibia has compiled information on uranium mining in general and LaRRI recently conducted a study on uranium mining in Namibia. The discussions will therefore centre on the information collected by Earthlife and the empirical data from LaRRI. (as the report will be launched during the meeting we cannot publish it yet)

The debates and workshops will be held in several places in Namibia in an effort to reach out to local people, workers at the different mines and politicians and media. Besides Namibian experts and activists there will be input from NGO people from Tanzania, Brazil, Germany, Malawi, the Netherlands, South-Africa and Niger.

Contact and information: WISE Amsterdam

Netherlands: HFR restart not before February. The High Flux Reactor (HFR) in Petten, will restart on 16th of February. On August 21, Dutch company NRG decided not to start up the High Flux Reactor at the end of a month of major maintenance and inspections. A trace of gas bubble was detected in the primary cooling system during the course of these inspections, caused by corrosion of the primary pipework of the primary cooling system of the reactor. Now NRG, together with Areva/Uddcomb Engineering, has developed a repair plan as a result of which the pipe wall of the primary coolant system can be repaired and the reactor returned to service. The repair comprises the introduction of a sleeve into a section of pipework of the primary cooling system where corrosion and deformation have taken place. The sleeve will be installed using remote handling equipment and fixed in position by way of mechanical clamps.

The repair of the HFR is a particularly complex matter and requires considerable, because the pipework section of the primary coolant system in question happens to be contained in concrete and is difficult to access.

NRG contributes to between 30 and 40% of the world wide medical isotope production. As a result of the unplanned outage of the HFR, shortages have arisen on the market for medical isotopes which will now continue up to mid- February. During a meeting of the Association of Imaging Producers & Equipment Suppliers (AIPES) on October 13, NRG gave an explanation of the HFR situation to enable the other players on the isotope market to take their own measures to limit the shortages as far as possible. The conclusion drawn from the meeting is that, with the HFR out of service, continued supply will be limited, with delivery vulnerable and with limited guarantee. By means of mutual agreement AIPES is in search of ways to minimise the shortages. AIPES represents not only the pharmaceutical industry but also the reactors responsible for isotope production.

NRG press-release, 14 October 2008

UK: Repository details for time-schedule

Early indications of the timetable and cost for a deep underground nuclear waste repository in the UK were given to a meeting of the Committee on Radioactive Waste Management (CoRWM) by Nuclear Decommissioning Authority repository project director Alun Ellis. He said they hoped to have two 'volunteer' sites identified for investigation by 2012 and a site identified by 2025. He said it was projected that low or intermediate level wastes would be put into a repository by 2040 and high-level waste by 2075. However Mr Ellis stressed that all projections were currently based on a generic design and geology as no site had been investigated.

N-Base Briefing, Number 585 24 September 2008

The NUCLEAR MONITOR

The Nuclear Information & Resource Service was founded in 1978 and is based in Takoma Park, Maryland. The World Information Service on Energy was set up the same year and is housed 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.

The 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, a Ukrainian version is published by WISE Ukraine (available at www.nirs.org). Back issues are available through the WISE Amsterdam homepage: www.antenna.nl/wise and at www.nirs.org.

Receiving the Nuclear Monitor

US and Canadian readers should contact NIRS to obtain the Nuclear Monitor (address see page 11). Subscriptions are \$35/yr for individuals and \$250/year for institutions.

New on NIRS Website: www.nirs.org

Tell Warren Buffett to close UniStar Nuclear and cancel new reactors. Warren Buffett's MidAmerican Energy is purchasing Constellation Energy, 1/2 owner of UniStar Nuclear, which wants to build 4 new EPR reactors in the U.S. Tell Buffett no thanks, let's invest in sustainable energy instead. New petition on the front page of NIRS' website.

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