

Ms Bongji Shinga

ACER (Africa) Environmental Management Consultants

MTUNZINI

Dear Ms Shinga

RE: COMMENT ON SCOPING PHASE-ESKOM NUCLEAR POWER STATION AND ASSOCIATED INFRASTRUCTURE

I cordially thank you for the BID document and for keeping me informed. Herewith are my views of what issues must be addressed by the Scoping Process:

A. DEMOCRACY & RIGHTS

Participatory governance and democratic principles, human and environmental rights as enshrined in the Constitution and other laws, particularly NEMA, are a major concern particularly as the EIA processes of nuclear and uranium developments appear thusfar to have by-passed any semblance of these principles and concerns, and left vast communities most likely to be affected completely uninformed. Just because large numbers of our population are illiterate or uneducated does not mean they should not be adequately informed over these issues. Moreover, it is ordinary people whose health and land becomes affected by these developments, and more often than not it is ordinary folk who are left grappling in the dark in a defensive manner trying to understand the almost mythical nature of these developments, their impacts, the positioning of various laws over various aspects of these developments and also, ultimately, the various chain of command, accountability and recourse. Democracy implies that governments work for those who elected them into power and those office bearers and the laws they purport to uphold and protect, are answerable to the electorate. These issues cannot be dealt with lightly, flippantly or dismissively.

As such, it is incumbent upon the Scoping Process to consider the above issues thoroughly and objectively and in ways that are understandable to ordinary folk. If Arcus Gibb, along with ESKOM and the nuclear industry, approaches this EIA from the premise that nuclear energy is unavoidable and inevitable, then such declaration should be made immediately so that public funds are not wasted on a futile "greenwashed" process and citizens can consider their options via the Constitutional Court.

I therefore submit that the Scoping Process addresses the following:

1. The **Constitutionality of nuclear energy** developments within the context of possible **recourse** which may or may not exist for civil society.
2. A thorough **overview of laws** that have a bearing on each and every aspect of Eskom's Nuclear Power Stations and Associated Infrastructures;
3. A thorough **overview of environmental and human rights legislation** of relevance to these developments with consideration to cradle to grave full fuel cycle ;
4. A thorough **overview of the chains of command/responsibility, governance and accountability, regulatory control, environmental control, health and safety control, fiscal control** and what **mechanisms for transparency** will be adopted for these controls;
5. In addition a full explanation of the **licensing processes** involved in terms of authorisations, approvals, avenues for public participation in these processes;
6. The provision for a **national referendum** over nuclear energy only ONCE its proponents have provided funding for adequate and unbiased debate and public education (based on best international practise where this has occurred).
7. An explanation of how, as stated in the BID, I&APs will assist the EIA Team to identify issues and suggest mitigation of associated impacts. **What objective criteria** will this be based on? **What rights does this EIA guarantee civil society?**

8. In line with the above-mentioned rights of civil society, what will this EIA process do to ensure that civil society is informed beforehand of all the steps, deadlines, procedures and role players of this EIA, and ensure that I&APs remain informed and alerted throughout the entire process?

B. PROJECT DESCRIPTION & AUTHORISATION REQUIREMENTS

1. The Scoping Process needs to assess whether it can continue with a process that is based merely on assumptions for a nuclear design which has not yet been completed.
2. There are vast amounts of non-industry reports and articles on Pressurised Water Reactors and technologies which raise alarming issues and do not instil confidence. These should be thoroughly investigated in the Scoping Process. If the EIA consultants are not sure where to obtain these studies and reports, I&APs and the public should be alerted and requested to provide such.
3. The Scoping Process should address the recourse I&APs have for checks and balances on the "specialist studies" that will be commissioned for the EIA, and be prepared to accept international studies that have been done.
4. The Scoping Process must address the funding for local or international experts whose commissioning for reports or submissions related to this EIA and issues related to the authorisation requirements as may be deemed necessary by I&APs.
5. The BID page that shows a diagram of the EIA showing the phases for public participation opportunities must be accompanied with deadline dates
6. The reports on the desktop and field pre-feasibility studies conducted in the 80s my ESKOM must be made public.

C. ALTERNATIVES

EIA regulations state a prescriptive imperative that alternatives to the intended project be evaluated. It is not good enough, as has been the practise, to dismiss alternatives to nuclear energy without a holistic and thorough investigation of alternative energy sources and/or alternative approaches to energy provision. In this regard, a great deal of research globally and in this country has produced far-reaching possibilities for energy generation that exclude nuclear energy. Indeed there are many examples of these alternatives already operating efficiently.

I therefore submit that the Scoping Process addresses the following:

1. A thorough investigation into **alternative energy sources** and **alternative approaches to energy provision and supply**.
2. The scenarios for "cleaning up" or mitigating against the massive CO² and other pollution from **coal power stations** as an immediate measure in the battle against pollution and the causes of climate change and, together with other energy saving mechanisms that can be implemented, what bearing this would have for sustainable energy supply until alternative sources are integrated.

D. CRADLE TO GRAVE FULL FUEL CYCLE & WASTE

A growing number of researchers have concluded from extensive studies that not only does nuclear energy make no economic sense, but that it is also not a mitigating factor insofar as CO² and CFC emissions among others are concerned when the cradle to grave full fuel cycle is concerned. In addition, the cradle to grave perimeters are also being re-evaluated and beginning to indicate that the management of radioactive waste from nuclear installations could be necessary for a lot longer than previously anticipated.

Similarly, increasing international reports indicate that nowhere in the world has a workable solution been found for radioactive waste. With the advent of climate change, tectonic plate shifts, seismic faults and climatic upheaval, have delivered more unanswered questions than sustainable solutions.

In addition, the full cost of decommissioning and waste management, environmental mitigation as well as medical costs to human health and safety throughout the cycle beginning with uranium mining and its processing, through the ensuing emissions and radioactive waste generation, to dealing with the spent fuel, contamination and defunct power stations

I therefore submit that the Scoping Process addresses the following:

1. A thorough investigation into **all existing cradle-to-grave full fuel cycle studies** from not only the nuclear industry but including those done by opponents to nuclear energy among them the Massachusetts Institute for Resource and Security Studies, Storm van Leeuwen and Phillip Smith to reach an unbiased view.
2. Thorough **geological investigations** for the proposed sites of both the power stations and radioactive waste disposal sites, taking into account authoritative views on **climate change patterns** and geological patterns, seismic activities, global tectonic plate activities, and earthquake patterns both historic and projected.
3. A thorough investigation into **ALL views of radioactive waste**, its management, its duration, its content, its handling and the associated costs – not just the views of pro-nuclear industry.
4. A thorough analysis of all the different **types and volumes of emissions and waste products** to be produced by the nuclear power stations **AND all associated infrastructures** and the **long-term assessment** of these fate, volume, handling, and danger of these.
5. A thorough investigation into all the **auxiliary and ancillary industries** such as Uranium Hexafluoride, Hydrogen Fluoride or any other chemicals and substances for which there will be beneficiation plants – their potential danger and the environmental impact they could have.
6. And thus, a full outline of what this BID refers to as “associated infrastructure”. This should therefore take into account the question of whether these “associated infrastructures” require separate EIAs or not.
7. A thorough investigation into the costs and effectivity of “**decommissioning**” the nuclear power stations.
8. A thorough investigation into the amounts of radioactive material that will be subject to **transportation** in, around, and to South Africa. Volumes, types of materials, transportation methods, transportation vehicles and routes. Additionally, the environmental impact along these routes, including a breakdown analysis of towns, ports, communities, airports, informal settlements, traffic volumes, accident rates, hijacking statistics, remedial actions, evacuation plans, markings and warnings on vehicles, trucks, airplanes, trains etc; training and occupational health protection and recourses for drivers, pilots, ship captains and their respective staff members and all handlers.

E. ECONOMICS & VESTED INTERESTES/FOREIGN PARTNERS

The nuclear industry is notorious for underestimating costs involved for the development of nuclear power stations. Budget over-runs, lack of private investment, the massive spending of taxpayers' funds are all major concerns to civil society.

From time to time an unwitting public is being informed of trade and industrial partnerships the government is forging with foreign countries and governments. Where these concern uranium mining and nuclear developments, there is grave concern over the track records of intended and already existing business partners that are chosen.

I therefore submit that the Scoping Process addresses the following:

1. A thorough and transparent **business plan** involving all players – current and intended - and to include an analysis of all costs involved in the proposed developments taking into consideration the full cradle-to-grave full fuel cycle scenario with a view to determining who will pay what and who stands to gain.

2. An honest look at the national and international track record of all businesses involved in these developments.
3. Equally important is to address what **guarantees/ recourse** is available to civil society if there is a massive abuse of taxpayers' funds and non-adherence to proposed budgets.
4. A thorough unbiased investigation into the **financial scenarios** of existing nuclear stations – Koeberg and internationally and the implications on the public expenditure and for consumers. Civil society input must determine the neutrality of this study.
5. A thorough investigation into **the implications this hold for electricity consumers**.
6. Both government and the nuclear industry must openly declare **agendas with foreign partners and stakeholders** as far as all nuclear and uranium mining activities are concerned.

F. HEALTH SAFETY & LIABILITIES AND THIRD PARTY INSURANCES

I submit that the Scoping Process addresses the following:

1. A thorough investigation into the **liabilities and third party insurances policies** that exist and what is expected by civil society, human and environmental rights and democracy watchdogs. These policies must take into consideration not only the nuclear power station, but once again, cradle-to-grave issues including uranium mining, transportation of nuclear substances, and waste. What exists in South Africa should be measured against international best practise – possibly Austria – and result in meaningful recommendations to the government.
2. A thorough investigation into well documented reports on **ionizing radiation, dose standards and the health effects** of all substances involved in the full fuel cycle of the nuclear power station. The criteria applied to this investigation must be acceptable to civil society groups and not merely take into account the views of pro-nuclear groups.
3. Transparent and independently monitored **epidemiological studies and medical surveillance programmes** for all affected areas within a 100km radius of installations, along all the transportation routes and radioactive waste repositories to begin prior to developments. Mechanisms for ongoing transparent and independently studies and programs must be considered as well as recourse for those nuclear workers and members of the public who become afflicted from any illness or genetic deformities that are identified as having potentially been caused by ionizing radiation or any other activities conducted at nuclear installations or sites.
4. The establishment of **hospitals or clinics** near affected communities – either underground or to be placed in the area for least possible fallout from wind direction.
5. **Evacuation plans** must be drafted that take into account scientific knowledge of wind speed, other nuclear disasters to include as wide as possible area and not the bare minimum. The costs of the exercise, who will be paying, where people will be taken to, how they will get there, how they will be informed, what will happen to them once they are removed from their homes are also among the issues that need to be addressed.
6. **The recourse** available to nuclear workers as well as members of the public where disputes arise that involve the infringement of human and environmental rights, health and safety issues.
7. Mechanisms for the ongoing **independent monitoring** of health, safety, environment and maintenance issues at the nuclear power station and all auxiliary and ancillary industries and associated infrastructures.

8. Mechanisms whereby **whistle-blowers** are protected from intimidation and threats in order to alert the public of abuses at the nuclear power stations and associated infrastructures.
9. A clear outline of which **government organisations** are responsible for and accountable on issues relating to the health, safety, maintenance, environmental and human monitoring. These are to consider ways of providing maximum transparency and avenues for recourse; and to provide the public with a thorough understanding of who is criminally or legally responsible for substances and materials each step of their existence.

G. SPECIFIC ENVIRONMENTAL ISSUES

1. The implications of this development on the region's water supply
2. The implications of returning heated sea water used for cooling purposes back into the ocean on global warming and marine life.
3. The exact nature of the sea water that is returned to the ocean – its radioactive content, and other additives gained during the cooling process – and what the implications are taking into account not only what our nuclear industry asserts is their experience at Koeberg, but what has been discovered by environmental justice groups globally.
4. It would be wise to inform and involve Namibia, as the strong Benguela current would carry any radioactive contamination from SA shore North to Namibia and eventually Angola. This was the case even in the Irish Sea, where radioactive from the British side found it way to the Irish coast and provoked a strong reaction from the Irish Government. In other words, **the transnational nature of radioactivity** must be factored in.
5. The effect of radioactivity on dolphins sensory and migratory patterns in particular, as well as the effect that radioactivity and other waste effluent generated by these nuclear power stations or auxiliary industries which may end up in the ocean should be studied.
6. Because specific concerns about nuclear power stations are not necessarily known to ordinary people, it is highly recommended that international experts who have studied the issue for many years internationally be consulted. A starting point is to contact those listed below in the list of suggested stakeholders.

THE REGULATOR, PSIFs, PAIA AND RULE OF LAW

1. The stated role of the **National Nuclear Regulator** has never been meaningfully fulfilled and historically there is a mountain of evidence that shows the NNR is neither transparent nor necessarily objective and that it merely serves the interests of the DME and the nuclear industry. It is therefore submitted that this Scoping Process address the issue and consider civil society concerns so as to either provide a mechanism for independent monitoring or civil society involvement in the NNR or recommend the establishment of an auxiliary regulator, under the transparent control of Environmental Affairs which has veto rights over the existing NNR.

Oversight and independent monitoring of the processing of licenses and applications should be provided if there is to be any real concern for “the protection of persons, property and the environment against nuclear damage... etc”. The NNR's current approach reflects its direct conflict of interests between civil society and industry. The Scoping Process should therefore also consider the possibility that a regulator which is truly accountable for persons, private property and the environment report directly to a non-aligned, autonomous and democratically established “Environmental Watchdog”.

2. The Scoping Report must address the full extent of what is envisaged in terms of the **NNR's public participation process**, dates, deadlines and requirements from the public, possible results from participation in such a process.

3. In addition, mechanisms need to be created whereby the so-called **Public Safety Information Forums** constituted by the NNR are truly representative of civil society so that these bodies do not become extensions of the nuclear industry itself.
4. Mechanisms for efficient and accurate **Access to Information** insofar as all the health, safety, environmental, surveillance, emissions, waste, and economic issues of the nuclear power station are concerned need to be addressed.
5. For all the above reasons, the Scoping Process should also address mechanisms whereby civil society is able to obtain **unhindered access to the Constitutional court** or human rights commission.

GLOBAL FEARS OF TERRORISM, PROLIFERATION OF NUCLEAR WEAPONS

Despite assurances by governments and nuclear industry in general, fears concerning the terrorism, the proliferation of nuclear weapons and the production of weapons-grade nuclear material during the process of operating nuclear power stations is an undeniable reality. Although the South African government has signed the Non-Proliferation Treaty, it has not gone beyond bare minimum efforts to instil a sense of security in the South African public that at any time in the future, or with a change of government at any time in the future, these threats may have a real impact on the South African public.

It is therefore suggested that the Draft Scoping Process clearly outline exactly to which international treaties, protocols, agreements, organisations, groups and bodies etc South Africa has become a signatory or member, and how many others exist that are available to the global nuclear industry which provide checks and balances to which South Africa has not yet become a signatory or not yet ratified it's memberships.

Additionally, the EIA should consider "worst case scenarios" of sabotage and acts of terrorism that could be inflicted on these nuclear power stations or any of the auxiliary industries and study the likely effects of these on both the environment, surrounding populations and country as a whole.

I SUGGEST THE FOLLOWING STAKEHOLDERS BE INVOLVED IN THE PROCESS:

1. **All citizens of this country** – notification by means of repeated national advertising using all television stations, all radio stations, national and all community newspapers and information packages handed personally to all inhabitants (landowners, labourers etc) within a 100km radius of each proposed nuclear power station. Such advertising should not be biased in favour of nuclear energy and should be run for a period of 6 months to ensure.
2. **Transnational interests** – where countries like Namibia, for example, may be affected by the strong Benguela current carrying radioactive contamination from the SA shore north to Namibia and eventually Angola, environmentalists and possibly the governments of these countries should register as I&APs.
3. **Environmental groups** like Earthlife Africa, groundWork, Green Connections, Biophile, Energy Caucus, and others suggested by these groups.
4. COSATU and NUM – Derek Elbrecht delbrecht@num.org.za
5. Dr David Fig - davidfig@iafrica.com
6. Sustainable Energy Africa Leila Mohomed - leila@sustainable.org.za
7. In light of the perplexing lack of independence of expert knowledge that has not already been co-opted by the nuclear industry in SA, below is a list of organisations who should be contacted to provide suggestions for experts to be involved in the process. (Where email addresses are not provided, the listed websites below contain active links):
 1. "An Inconvenient Truth" campaign leader, former vice-president of the US, Al Gore (particularly on the prognosis for fading coastlines in the face of climate change effects globally). Al Gore's spokesperson, Kalee Kreider at Kalee@carthagegroup.com or via

2100 West End Avenue Suite 620
Nashville, TN 37203
USA

2. Massachusetts Institute for Resource and Security Studies – Gordon Thompson
info@irss-usa.org
3. [WISE Uranium Project](#) via wiseamster@antenna.nl
4. [WISE](#) (World Information Service on Energy)
wiseamster@antenna.nl
5. Low-level Radiation Campaign www.llrc.org
6. [Institute for Energy and Environmental Research](#) <http://www.ieer.org/>
Arjun Makhijani, Ph.D. ieer@ieer.org
7. [Nuclear Information and Resource Service \(NIRS\)](#) Michael Mariotte
nirsnet@nirs.org
8. [Nuclear Policy Research Institute \(NPRI\)](#) info@nuclearpolicy.org
Led by Dr. Helen Caldicott, educates the American public through the mass media about the medical, environmental, political and moral consequences of nuclear weapons, power and waste.
9. [Physicians for Social Responsibility \(PSR\)](#)
National organization working for nuclear disarmament, environmental protection and violence prevention. Also see [PSR-Madison](#).
10. [Union of Concerned Scientists](#)
National organization with educational and advocacy programs on energy, agriculture, arms control and more.
11. [Center for Health, Environment and Justice \(CHEJ\)](#)
Helps people and organizations organize and unify to hold industry and government accountable and work toward a healthy, environmentally sustainable future.
12. [ECODEFENSE!](#)
Anti-nuclear campaign of the Socio-Ecological Union, Russia.
13. [Radiation Effects Research Foundation](#)
14. The Oxford Research Group www.oxfordresearchgroup.org.uk
15. Jan Willem Storm van Leeuwen storm@ceedata.nl
16. European Committee on Radiation Risk (ECRR) – Chris Busby or Rosalie Bertell
www.euradcom.org
17. ILEX Energy Consulting.
18. Stephan Thomas stephen.thomas@gre.ac.uk

19. Jim Green

Jim Green is the director of the Beyond Nuclear Initiative in Australia. Email:

jim.green@foe.org.au.

Beyond Nuclear Initiative, a project supported and led by Friends of the Earth, Australia, supports and strengthens existing campaigns for a nuclear-free Australia. The Beyond Nuclear Initiative is campaigning against: the expansion of the uranium mining industry in Australia; against the imposition of a nuclear waste dump on the Northern Territory; in support of a clean energy future; and against proposals to use nuclear power as a climate-change abatement strategy. www.foe.org.au.

20. Mike McCally, MD.

Mike McCally is executive director of Physicians for Social Responsibility. Dr. McCally is a public health physician and most recently was Professor and Vice Chairman of the Department of Community and Preventive Medicine at the Mount Sinai School of Medicine in New York, where he was Co-Director of the Center for Children's Health and the Environment. He holds a B.A. in English Literature from Princeton University, an M.D. from

Western Reserve University, and a Ph.D. in Physiology from Ohio State University. He has held positions in academic medicine and hospital administration as well as the foundation community. Dr. McCally is active in public health advocacy organizations and medical organizations concerned with militarism and nuclear war. He has served on the board of directors of Physicians for Social Responsibility (PSR) for many years and as its President in 2004. Dr. McCally was Treasurer of International Physicians for the Prevention of Nuclear War when it won the 1985 Nobel Peace Prize. Dr. McCally's most recent book is *Life Support: The Environment and Human Health*, published by MIT Press in 2002. Tel: 202.667.4260 / Email: mmcally@psr.org.

Physicians for Social Responsibility Security Program

21. Karl Grossman

Karl Grossman serves on the board of Beyond Nuclear at NPRI. Karl Grossman is a full professor of journalism at the State University of New York at Old Westbury and coordinator of the Media & Communications Major at the college. For 40 years he has pioneered the combination of investigative reporting and environmental journalism in a variety of media. He is the host of the nationally syndicated television program "Enviro Close-Up" and writer and narrator of award-winning TV documentaries including "Three Mile Island Revisited", "Nukes in Space: The Nuclearization and Weaponization of the Heavens" and "The Push to Revive Nuclear Power." He is the author of six books including "Cover Up: What you are not supposed to know about nuclear power," "Power Crazy" and "The Wrong Stuff: The Space Programs' Nuclear Threat to our Planet." Grossman has received numerous awards for investigative reporting including the George Polk, James Aronson and John Peter Zenger Awards. His TV documentaries have received Gold and Silver Awards at the WorldFest-Houston International Film Festival and other honors. His journalism has been repeatedly cited by Project Censored, the media initiative at Sonoma State University, as involving the most "under-reported" issues. Email: kgrossman@hamptons.com.

22. Dr. Joseph Gerson

Dr. Joseph Gerson has served the American Friends Service committee since 1976 and is currently Director of Programs and Director of the Peace and Economic Security Program for the AFSC in New England. His program work focuses on challenging and overcoming U.S. global hegemony: its preparations for and threats to initiate nuclear war, and its military domination of the Asia-Pacific and the Middle East. He has been involved in the U.S. justice and peace movements since the mid-1960s. His work with AFSC has included helping to launch the nuclear freeze movement of the 1980s, preventing New England harbors from being transformed into nuclear weapons bases, helping to build the U.S. and global anti-bases and nuclear weapons abolition movements, and helping to create peace and anti-war coalitions in the Boston area and across New England. His books include *The Sun Never*

Sets, *With Hiroshima Eyes* and, most recently, *Empire and the Bomb*. Tel: 617-661-6130 / Email: jgerson@afsc.org.

The New England Peace and Economic Security Program is a program of AFSC.

<http://afsc.org/newengland/nepeace.htm>

23. Bruce Gagnon

Bruce Gagnon is coordinator of the Global Network Against Weapons & Nuclear Power in Space. He was a co-founder of the Global Network when it was created in 1992. From 1983–1998 Bruce was the State Coordinator of the Florida Coalition for Peace & Justice and has worked on space issues for more than 20 years. In 1987 he organized the largest peace protest in Florida history when over 5,000 people marched on Cape Canaveral in opposition to the first flight test of the Trident II nuclear missile. He was the organizer of the Cancel Cassini Campaign (launched 72 pounds of plutonium into space in 1997) that drew enormous support and media coverage around the world and was featured on the TV program 60 Minutes. In 2006 he was the recipient of the Dr. Benjamin Spock Peacemaker Award. He frequently travels and offers reflections on organizing and the state of America's declining empire. Visit Bruce's blog at: <http://space4peace.blogspot.com>. Tel: 207.443.9502 / Email: globalnet@mindspring.com.

Global Network Against Weapons and Nuclear Power in Space opposes U.S. space domination, the use of nuclear- powered space probes and the deployment of weapons in space. www.space4peace.org.

24. John Burroughs

John Burroughs is a specialist on treaty regimes and international law relating to nuclear and other non-conventional weapons. He represents LCNP in Nuclear Nonproliferation Treaty (NPT) review proceedings, the United Nations, and other international forums. In 1998, Dr. Burroughs represented LCNP at the negotiations on the International Criminal Court in Rome, and in 1995, he was the nongovernmental legal coordinator at the hearings on nuclear weapons before the International Court of Justice. Dr. Burroughs is co-editor of *Rule of Power or Rule of Law? An Assessment of U.S. Policies and Actions Regarding Security-Related Treaties*, Apex Press, 2003, to which he contributed the chapter on the NPT, and author of *The Legality of Threat or Use of Nuclear Weapons: A Guide to the Historic Opinion of the International Court of Justice*, Transaction Publishers, 1998. He has published articles in the *Bulletin of the Atomic Scientists* and the *World Policy Journal*, most recently co-authoring "Arms Control Abandoned: The Case of Biological Weapons" (*World Policy Journal*, summer 2003). He is an adjunct professor of international law at Rutgers Law School, Newark, where he teaches a seminar on legal controls on weapons of mass and indiscriminate destruction. He has a J.D. and Ph.D. from the University of California at Berkeley and a B.A. from Harvard. Tel: 212.818.1861 / Email: johnburroughs@lcn.org.

The Lawyers' Committee on Nuclear Policy, Inc. was founded in 1981. It is a national nonprofit educational association that uses national and international law to promote peace and disarmament. www.lcnp.org.

25. Jim Riccio

Jim Riccio is the Nuclear Policy Analyst for Greenpeace, USA, has two decades of experience on nuclear energy policy and is considered one of the nation's most prominent anti-nuclear activists. His advocacy experience has put his name in the country's major newspapers including the New York Times, Washington Post, Wall Street Journal, Los Angeles Times, Boston Globe, as well as ABC News, the Discovery Channel and CNN among others. From the conference rooms of the Nuclear Regulatory Commission to the halls of Congress, Riccio has long been the voice of safe, renewable energies opposing industry and government officials' assertions that nuclear energy poses no safety hazard. He has worked for Nuclear Information Resource Service as well as the Critical Mass Energy Project at Public Citizen, one of the leading citizen activist groups founded by Ralph Nader. Riccio has a Bachelor's degree in International Relations and Political Science from Colgate University and a J.D. from Syracuse University. Tel: Greenpeace Media Department 202-462-1177 / Email: jim.riccio@wdc.greenpeace.org.

Greenpeace has grown in 30 years from a small group of dedicated activists to an international organization with offices in more than 30 countries. The threat of global warming, destruction of ancient forests, deterioration of our oceans, and the threat of a nuclear disaster loom large. Greenpeace is actively working to address these and other threats.

www.greenpeaceusa.org.

26. Kay Drey

Kay Drey serves on the board of directors of Beyond Nuclear at NPRI. She has worked for 30 years as an advocate for the protection of the general public, workers and the environment from the hazards of nuclear power and radioactive waste. In 1996 she chaired a statewide campaign in Missouri, her home state, that prevented electric utilities from charging ratepayers for construction costs of power plants prior to their completion and that led to the cancellation of a nuclear reactor then under construction. She also led the successful campaign against the construction of a permanent disposal bunker at the St. Louis Airport for uranium and thorium wastes generated during the production of atomic weapons in the 1940s and '50s. Through litigation, she helped achieve stricter monitoring controls over releases of radioactive waste into the Missouri River from the Callaway nuclear plant as part of its routine operation. Mrs. Drey conducts research and has collected materials on a broad range of environmental issues, maintaining a library that is used by the media, government officials and members of the public. Tel: 314.725.7676.

27. Michael Mariotte

Michael Mariotte, Executive Director, is the chief spokesperson for NIRS. He has led the organization for 22 years making many television appearances and has been widely quoted in the press. He has testified before the United States Senate and the U.S. House of Representatives on radioactive waste transportation; radioactive metals "recycling;" the future of the nuclear power industry; "one-step" reactor licensing; and other issues.

Nuclear Information and Resource Service is the information and networking center for citizens and environmental organizations concerned about nuclear power, radioactive waste, radiation, and sustainable energy issues. www.nirs.org.

28. David Lochbaum

David Lochbaum is the Director of the Nuclear Safety Project for the Union of Concerned Scientists. Mr. Lochbaum leads UCS's efforts to ensure the safety of nuclear power in the United States by monitoring licensed commercial nuclear plants to identify and publicize safety risks. He has more than seventeen years of experience in commercial nuclear power plant start-up testing, operations, licensing, software development, training, and design engineering. Mr. Lochbaum received a Bachelor of Science in Nuclear Engineering from the University of Tennessee in 1979. He has been a member of the American Nuclear Society since 1978. Mr. Lochbaum has written numerous articles on various aspects of nuclear safety and published books entitled Nuclear Waste Disposal Crisis and Fission Stories. Tel: (202) 223-6133 / Email: dlochbaum@uscusa.org.

The Union of Concerned Scientists Security Program works to bring about a safer world by eliminating the risks posed by nuclear arsenals and nuclear terrorism, improving nuclear power plant safety, preventing the deployment of anti-satellite and space-based weapons, and enhancing international dialogue on security issues. www.ucsusa.org/global_security.

29. Dr. Judith Johnsrud

Judith Johnsrud, Ph.D., serves on the board of directors of Beyond Nuclear at NPRI. Her special areas of focus and expertise are: geography of nuclear energy; its entire system of production, utilization, and waste isolation; radiation impacts on humans and environment; and problems of sequestration of "high-level," "low-level," and recycled radioactive wastes. Tel: 814.237.3900 / E-mail: johnsrud@uplink.net.

30. Karl Grossman

Karl Grossman serves on the board of Beyond Nuclear at NPRI. Karl Grossman is a full professor of journalism at the State University of New York at Old Westbury and coordinator of the Media & Communications Major at the college. For 40 years he has pioneered the combination of investigative reporting and environmental journalism in a variety of media. He is the host of the nationally syndicated television program "Enviro Close-Up" and writer and narrator of award-winning TV documentaries including "Three Mile Island Revisited", "Nukes in Space: The Nuclearization and Weaponization of the Heavens" and "The Push to Revive

Nuclear Power." He is the author of six books including "Cover Up: What you are not supposed to know about nuclear power," "Power Crazy" and "The Wrong Stuff: The Space Programs' Nuclear Threat to our Planet." Grossman has received numerous awards for investigative reporting including the George Polk, James Aronson and John Peter Zenger Awards. His TV documentaries have received Gold and Silver Awards at the WorldFest-Houston International Film Festival and other honors. His journalism has been repeatedly cited by Project Censored, the media initiative at Sonoma State University, as involving the most "under-reported" issues. Email: kgrossman@hamptons.com.

31. Michele Boyd

Michele Boyd is legislative director of Public Citizen's Energy Program. She joined Public Citizen in July 2003 as the Legislative Director. Previously, she was the Global Outreach Coordinator and Staff Scientist at the Institute for Energy and Environmental Research. She has two bachelor's degrees in biology and agriculture from Purdue University and a master's degree in environmental policy from the University of Michigan. Tel: 202.546.4996 / Email: mboyd@citizen.org.

Public Citizen Critical Mass Energy Program safeguards consumers from the impacts of electricity deregulation, educates the public on the dangers of nuclear power while encouraging responsible nuclear waste management, and fights against environmental degradation by promoting clean energy alternatives. www.citizen.org/cmep.

32. Diane D'Arrigo

Diane D'Arrigo is the Radioactive Waste Project Director at Nuclear Information and Resource Service. Her main area of expertise is radioactive waste and radiation issues. She has considerable international experience. She has closely followed so-called "low-level" nuclear waste issues for decades, the national and international moves to deregulate nuclear waste that would allow it to be made into everyday household items and be dumped as regular trash. She has been with NIRS since 1986. Tel: 301.270.6477 / Email: dianed@nirs.org.

Nuclear Information and Resource Service is the information and networking center for citizens and environmental organizations concerned about nuclear power, radioactive waste, radiation, and sustainable energy issues. www.nirs.org

33. Helen Caldicott

Dr Helen Caldicott is the founding president of Nuclear Policy Research Institute. She has devoted the last 35 years to an international campaign to educate the public about the medical hazards of the nuclear age and the necessary changes in human behavior to stop environmental destruction. Born in Melbourne, Australia, Dr Caldicott trained and practiced as a pediatrician, specializing in cystic fibrosis, before concentrating full time on the prevention of nuclear war. She co-founded Physicians for Social Responsibility. Its international umbrella

group (International Physicians for the Prevention of Nuclear War) won the Nobel Peace Prize in 1985. Dr Caldicott has received many prizes and awards for her work and was personally nominated for the Nobel Peace Prize by Linus Pauling - himself a Nobel Laureate. She has authored numerous books and articles and is the subject of several documentary films. Dr Caldicott currently divides her time between Australia and the US where she lectures widely. Email: info@helencaldicott.com.

The Nuclear Policy Research Institute was established by Dr. Helen Caldicott to educate the American public through the mass media about the greatest single threat to our country's – and indeed the world's – public health, namely the profound medical, environmental, political and moral consequences of perpetuating nuclear weapons, power and waste. www.nuclearpolicy.org.

34. Donald Aitken, Ph.D.

Dr. Donald Aitken, Principal of Donald Aitken Associates, is a LEED™ Accredited Professional, Affiliate Faculty Member at the Frank Lloyd Wright School of Architecture, and Senior Consulting Scientist for the Energy Department of the Union of Concerned Scientists. Previously he has been a staff research physicist and astrophysicist at Stanford University and founder and Chairman of the Department of Environmental Studies at San Jose State University. He received his Ph.D. in Experimental Nuclear Physics from Stanford University. Dr. Aitken has twice served as national Chairman of the American Solar Energy Society. Dr. Aitken's work has a multiple emphasis on the use of renewable energy in the electric utility sector, on renewable energy marketing frameworks, and in architecture. Dr. Aitken is a sought-after architectural and sustainable energy policy consultant, renewable energy policy and architectural daylighting lecturer, and professional architectural and engineering workshop leader. Tel: 510.649.9571 / Email: donaldaitken@earthlink.net or info@donaldaitkenassociates.com.

Donald Aitken Associates is a multi-faced consulting firm experienced in climate-sensitive sustainable development and building design worldwide. www.donaldaitkenassociates.com.

35. Lori Goodman

Lori Goodman, is a member of the Board of Directors of DINE Care. Tel: 970.759.1908 (cell) / Email: kiyaani@frontier.net.

DINE Citizens Against Ruining our Environment Diné is an organization by and for the Diné, the People. Its work is mostly sponsored by volunteers and foundation grants and members are not only those who are leaders in their communities, but all those Diné who strive to maintain a relationship with Mother Earth based on balance and harmony. For DINE Care, membership means taking up the cause of honoring our Earth, and honoring the perspective toward Mother Earth that has been handed down to us from our ancestors. We are local, community people working together on issues that affect our communities. www.dinecare.org

36. Kevin Kamps

Kevin Kamps covers all aspects of the nuclear fuel chain with particular expertise on government and industry efforts to dump nuclear waste at Yucca Mountain, Nevada, as well as on the risks of radioactive waste generation and storage at reactor sites, and transportation through communities across the country. Prior to joining Beyond Nuclear he was for eight years the Radioactive Waste Specialist at Nuclear Information and Resource Service. He has traveled widely across the U.S. and overseas, speaking at many community and governmental forums and on television, radio and at press conferences and has testified before numerous federal, state, and local government agencies. Tel: 301.270.2209 / Email: kevin@beyondnuclear.org.

37. Arjun Makhijani

Dr. Arjun Makhijani is the president of the Institute for Energy and Environmental Research. He holds a Ph.D. in engineering (specialization: nuclear fusion) from the University of California at Berkeley. He has produced many studies and articles on nuclear fuel cycle related issues, including weapons production, testing, and nuclear waste, over the past fifteen years. He is the principal author of the first study ever done (completed in 1971) on energy conservation potential in the U.S. economy. He is the principal editor of Nuclear Wastelands and the principal author of Mending the Ozone Hole, both published by MIT Press. Tel: 301.270.5500 / Email: arjun@ieer.org.

The Institute for Energy and Environmental Research was established to provide people with literature which has a quality equal to that in scientific journals, but which doesn't require you to go back to college to get a degree in science to understand it. www.ieer.org.

38. Tom Goldtooth

Tom Goldtooth (Dine/Dakota) is the Executive Director of the Indigenous Environmental Network. He oversees the work of IEN and assists IEN staff organizers, affiliates, sister organizations and indigenous communities in organizing, training and policy work around environmental protection, energy, climate, toxics & environmental health, water, globalization, and building sustainable communities. Tel: 218.751.4967 / Email: ien@igc.org. www.igc.org. **Indigenous Environmental Network**

Environmental Network is a network of Indigenous Peoples empowering Indigenous Nations and communities towards sustainable livelihoods, working towards environmental justice and maintaining the sacred fire of our traditions. www.ienearth.org.

39. Diane Curran

Diane Curran is a partner in the law firm of Harmon, Curran, Spielberg and Eisenberg, L.L.P. A nationally recognized expert in the field of nuclear safety law, Diane has spent over twenty years representing citizen groups, state and local governments, and individuals in a wide range of licensing and enforcement cases relating to nuclear facilities. Diane has litigated the

requirements of the Atomic Energy Act, the National Environmental Policy Act, the Safe Drinking Water Act, the National Historic Preservation Act, and other environmental protection laws in a broad array of administrative proceedings before the U.S. Nuclear Regulatory Commission. She has appealed numerous NRC licensing and rulemaking decisions to the U.S. Courts of Appeals, and she has brought Clean Water Act and Freedom of Information Act enforcement cases in federal district court. Tel: 202.328.3500 / Email: dcurran@harmoncurran.com.

Harmon, Curran, Spielberg & Eisenberg, L.L.P specializes in providing legal advice to nonprofit organizations and individuals in the areas of: Nonprofit Organization Tax law; Election law; Employment law; Environmental law.

<http://www.harmoncurran.com>.

40. Julia Huff

Professor Julia Huff specializes in environmental law and environmental litigation. She also has expertise in land use and real estate law. Professor Huff received a B.A. in English and philosophy from Michigan State University, with high honors, her J.D. from the University of Iowa College of Law, with distinction, and her LL.M. in Environmental Law, summa cum laude, from Vermont Law School. In 2003, she joined the Vermont Law School faculty as an assistant professor of law and the first assistant director of the Environmental and Natural Resources Law Clinic. Tel: 973.353.5695 / Email: jhuff@kinoy.rutgers.edu.

Rutgers Environmental Law Clinic serves two vital and interdependent functions: providing an opportunity for law students to practice environmental advocacy and serving New Jersey's environmental community through trial and appellate litigation, administrative advocacy and policy development. http://law.newark.rutgers.edu/clinics_environment.html.

41. Linda Gunter

Linda Gunter is the media and development specialist for Beyond Nuclear. Prior to creating Beyond Nuclear she worked as a journalist, in public relations and led the media and development efforts at three national environmental nonprofit organizations. She is the co-author, with Paul Gunter, of *Licensed to Kill*, a landmark report on the impact to marine animals from the routine operation of coastal nuclear reactors.

Tel: 301.270.2209 / Email: linda@beyondnuclear.org.

42. Cindy Folkers

Cindy Folkers specializes in radiation impacts on health and manages the administrative operations of Beyond Nuclear. Prior to joining Beyond Nuclear, she specialized in radiation impacts on health at Nuclear Information and Resource Service where she held a number of responsibilities during her 12-year tenure. She communicates with members of the public, U.S. Congress, the press, and national and international agencies on radiation and health regulation and science, climate change, U.S. energy legislation and activities on Capitol Hill.

She has traveled and spoken at public meetings, conferences and academic symposia.

Tel: 301.270.2209 / Email: cindy@beyondnuclear.org.

43. Kevin Kamps

Kevin Kamps covers all aspects of the nuclear fuel chain with particular expertise on government and industry efforts to dump nuclear waste at Yucca Mountain, Nevada, as well as on the risks of radioactive waste generation and storage at reactor sites, and transportation through communities across the country. Prior to joining Beyond Nuclear he was for eight years the Radioactive Waste Specialist at Nuclear Information and Resource Service. He has traveled widely across the U.S. and overseas, speaking at many community and governmental forums and on television, radio and at press conferences and has testified before numerous federal, state, and local government agencies. Tel: 301.270.2209 / Email: kevin@beyondnuclear.org.

44. Paul Gunter

Paul Gunter covers all aspects of the nuclear fuel chain with a special focus on reactor operations. He previously served for 16 years as the Director of the Reactor Watchdog Project for Nuclear Information and Resource Service. He is a lead spokesperson on nuclear reactor hazards and security issues and acts as the regulatory watchdog over the U.S. Nuclear Regulatory Commission and the nuclear power industry. He has made national and regional television and radio appearances and is frequently quoted in the press. He was a cofounder of the antinuclear [Clamshell Alliance](#) in 1976 to oppose the construction of the Seabrook (NH) nuclear power plant through non-violent direct action. An activist and energy policy analyst, he has been an ardent critic of atomic power development for more than 30 years. Tel: 301.270.2209 / Email: paul@beyondnuclear.org

Beyond Nuclear aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abandon both to safeguard our future.

Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic.

The Beyond Nuclear team works with diverse partners and allies to provide the public, government officials, and the media with the critical information necessary to move humanity toward a world beyond nuclear. www.beyondnuclear.org.