

# INTERNATIONAL YOUTH NUCLEAR CONGRESS

THE GLOBAL NETWORK OF FUTURE LEADERS  
IN NUCLEAR SCIENCE AND TECHNOLOGY



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**23rd Women in Nuclear Annual Conference:**  
**Women in Nuclear Meet Atoms for Peace**



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# Environmentalists and the Anti Nuclear Movement — Understanding Communication Outside the Nuclear Industry



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# IYNC report is organized around three main ideas:

1. Young nuclear professionals need to understand the birth and history of the anti-nuclear environmental movement.
2. Young nuclear professionals need to understand the main arguments against the nuclear industry and why they exist.
3. Young nuclear professionals need to understand the way anti-nuclear activists use these arguments.

# The main types of argument used by anti-nuclear activists:

1. “Nuclear energy is expensive”  
(the economic argument)
2. “Nuclear energy is dangerous”  
(the safety argument)
3. “There is no solution to nuclear waste”  
(the waste argument)
4. “Nuclear energy technology can result  
in the creation of nuclear weapons”  
(the non-proliferation argument)



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# Economic arguments against nuclear power

1. Unreliable Data & Cost Prediction
2. Economies of Scale
3. Cost of Capital
4. Maintenance and Fuel Costs
5. Performance and Lifetime
6. Decommissioning Costs



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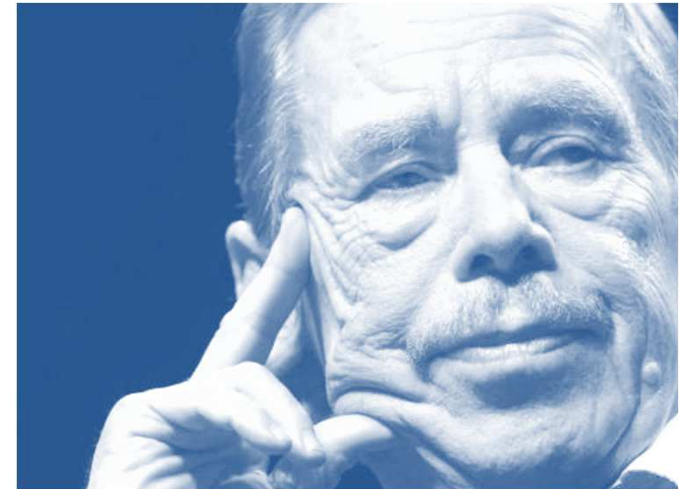
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*The construction costs of nuclear plants completed during the 1980s and early 1990s in the United States and in most of Europe were very high – and much higher than predicted today by the few utilities now building nuclear plants and by the nuclear industry generally [...] I have been lied to nine times. I do not know why I should believe them in the 10<sup>th</sup> case*

Vaclav Havel,  
President of the Czech Republic, 1999



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# Safety arguments against nuclear power

1. Defense-in-depth
2. General Arguments of 'Too Little Safety'
3. Institutionalised Safety and Regulatory Standards



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*While multinational nuclear suppliers, such as G.E. and Westinghouse publicly insist that their products are extraordinarily safe, they are adamant that they will not accept any liability should an accident occur at one of their reactors.*

Suvrat Raju, physicist at India's International Centre for Theoretical Sciences and  
M.V. Ramana, physicist at Princeton University,  
and, March 2015



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# Waste arguments against nuclear power

1. Waste Management
2. Deep Geological Disposal
3. Generation IV Fast Neutron Reactors



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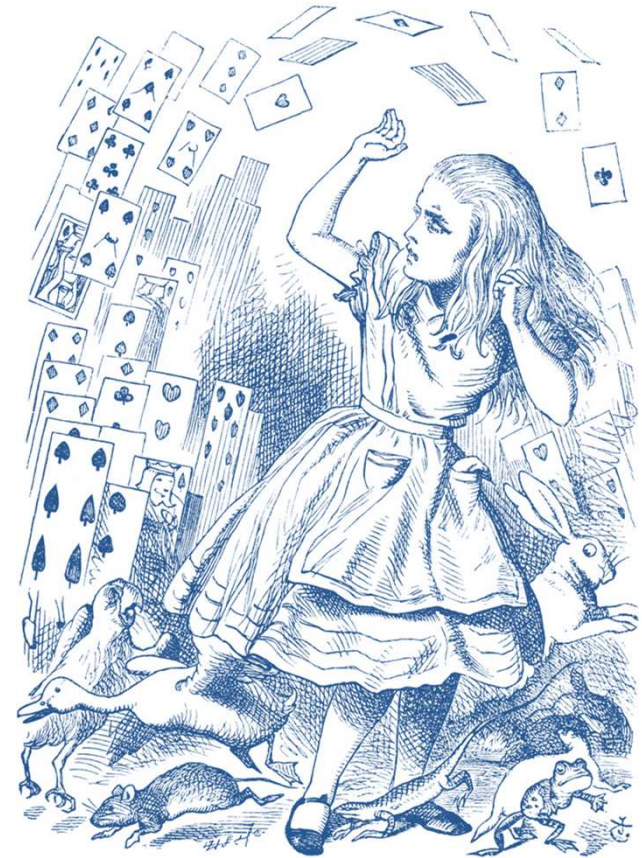
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*The development of Fast Nuclear Reactors has an “Alice in Wonderland flavor” to it. The promotion of “non-existent” reactor types is “an implicit acknowledgement that conventional uranium-fuelled reactors aren’t all they’re cracked up to be.*

Jim Green,  
activist for Friends of the Earth



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# Proliferation arguments against nuclear power

1. Uranium and Plutonium
2. “Too many bomb-making material”
3. Nuclear Safeguards



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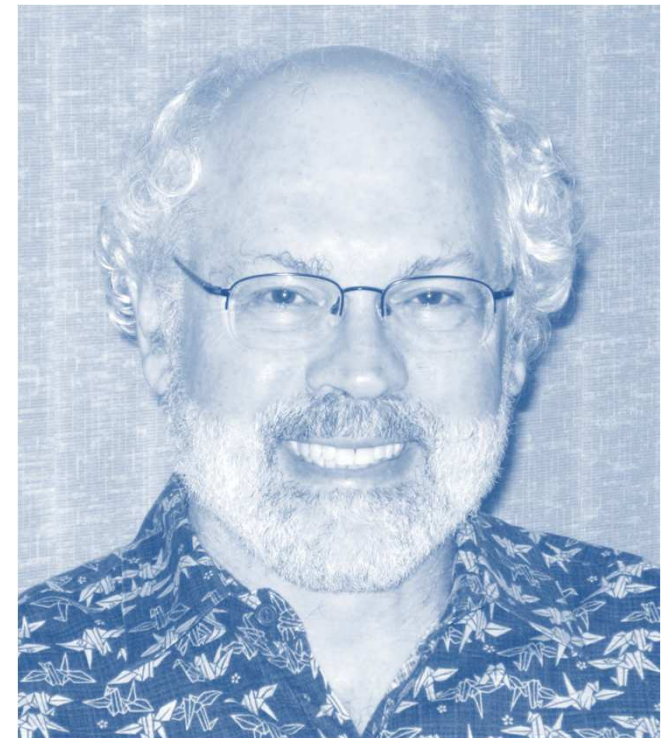
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*Even a ‘small’ nuclear war between India and Pakistan, with each country detonating 50 Hiroshima-size atom bombs – only about 0.03 % of the global nuclear arsenal’s explosive power – as air bursts in urban areas, could produce so much smoke that temperatures would fall below those of the Little Ice Age of the fourteenth to nineteenth centuries, shortening the growing season around the world and threatening the global food supply.*

Alan Robock,  
associate director of the  
Center for Environmental Prediction  
at Rutgers University



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*The geopolitical risk of nuclear technology becomes increasingly higher nowadays. As a result, I think the boundary between military and peaceful uses of nuclear technology is blurred even though many nuclear experts endeavour to keep it strictly peaceful. If governments change their current policy to develop a nuclear warhead, can the experts stand against it?*

Mr. Hideyuki Ban,  
Secretary General of Citizen`s Nuclear  
Information Center (CNIC), Japan



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*I worked on the Czech Republic's nuclear waste programme and the first time that the target date of 2065 began circulating for the first final storage in the country, I calculated the age of my son at that time. He would be 73 years old. For me this is a problem because this is two generations away from me and with a lot of uncertainties included.*

Jan Haverkamp,  
expert consultant on nuclear energy and  
energy policy for Greenpeace Central and  
Eastern Europe



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*Nuclear energy is only 50 years old. Compared to the railway industry, we see a similar line of development. In the 1880s, the railway industry was seen as very dangerous and some cities went as far as to ban locomotives. They thought it was too dangerous to have a train station. Yet now we have high-speed rail, which is affordable and safe. Most of all, it is convenient and clean, especially when it is powered by nuclear energy. Nuclear energy is in the first phase of its history and some parts of the population have not yet understood the benefits it can bring.*



Bruno Comby, founder of the organization  
Environmentalists For Nuclear



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# Young Generation Perspective IYNC Communication Workshop at ENYGF2015 in Paris

1. Communication in Nuclear curriculum at Universities
2. Nuclear Science Outreach
  - STEM/Critical Paths
  - Education event for children (including parents)
3. Host Low Carbon Energy events together with groups from renewable energies
4. Organize community outreach activity as part of all nuclear conferences



**THANK YOU!**



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