

NGO's cooperation with authorities to
ensure social responsibility while
shutting down Ignalina NPP

Saulius Piksrys
Community "ATGAJA"
CEE Bankwatch Network

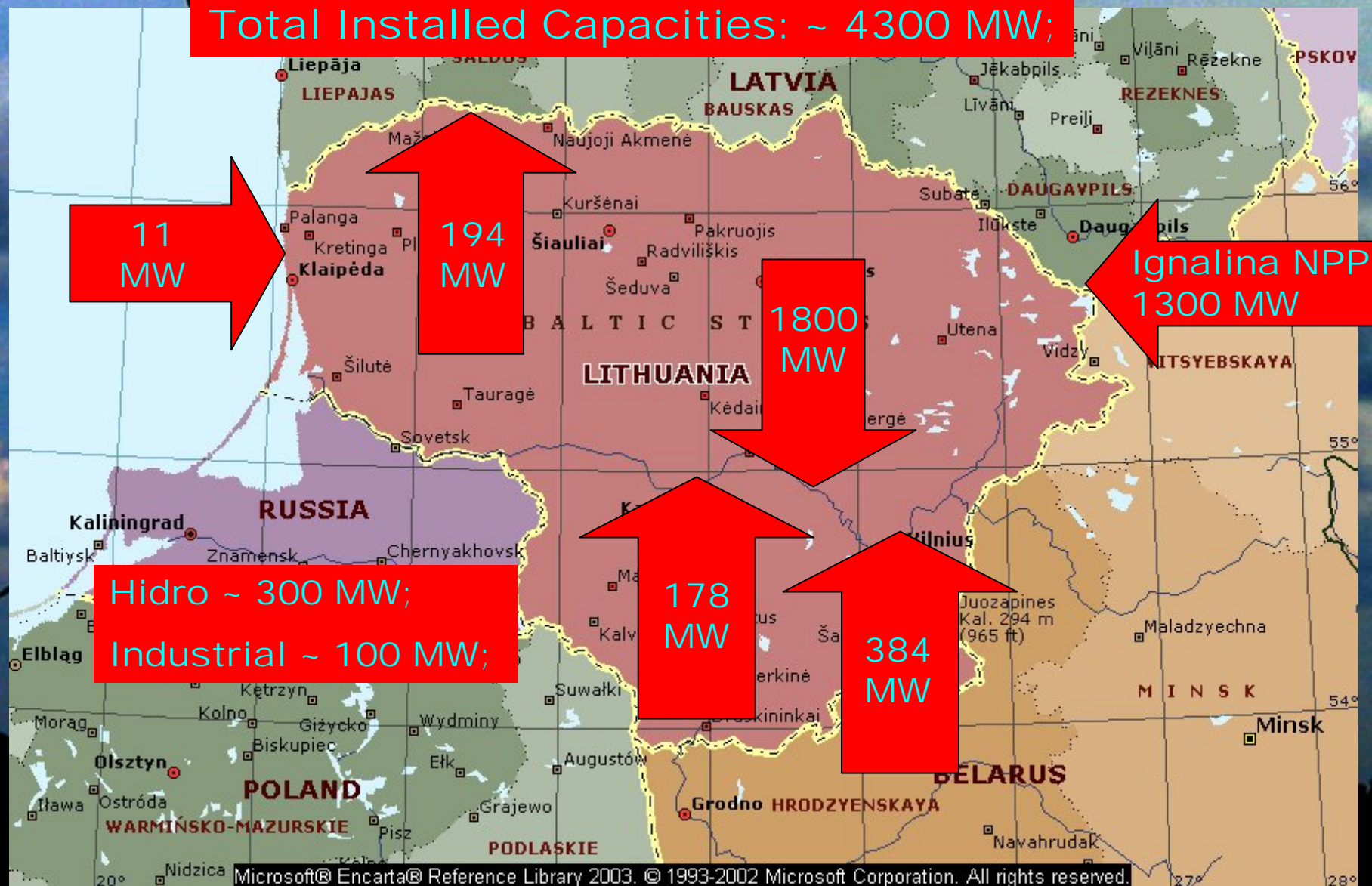
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CURRENT SITUATION IN ENERGY SECTOR

- No primary energy resources, full dependency from imported fuels;
- Huge generating capacities;
- Decommissioning of Ignalina NPP;
- Fossil fuel prices increasing;
- Power plants obsolete and inefficient;
- No links to Western electricity grid;
- Big potential for energy efficiency;
- Certain renewable energy potential;

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Total Installed Capacities: ~ 4300 MW;



Hidro ~ 300 MW;
Industrial ~ 100 MW;

IGNALINA NUCLEAR POWER PLANT

- Unit 1 commissioned - 1984;
- Unit 2 commissioned - 1987;
- Unit 3 construction stopped - 1988;

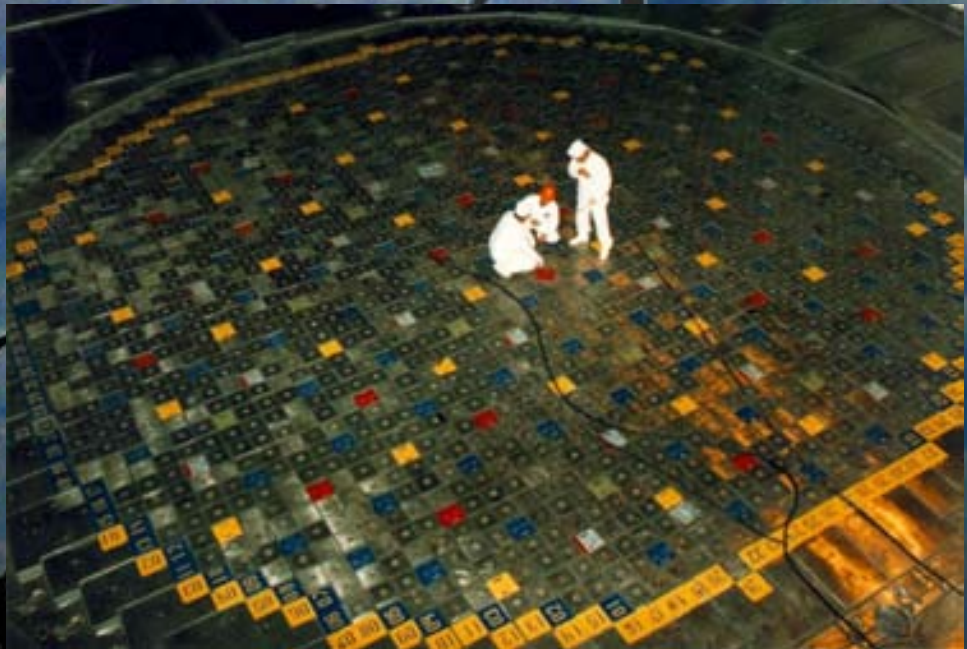


IGNALINA NUCLEAR POWER PLANT

- 2 x RBMK-1500 water-cooled graphite-moderated channel-type reactors;
- Thermal power output - 4800 MW;
- Electric power capacity - 1500MW;
- Core diameter – 11,8 m;
- Core height – 7m;
- Fuel channels - 1661;
- Control rod channels - 235;
- Reflector cooling channels - 156;

IGNALINA NUCLEAR POWER PLANT

Reactor core



Refuelling machine

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IGNALINA NUCLEAR POWER PLANT

Control and monitoring
system



Turbogenerator set



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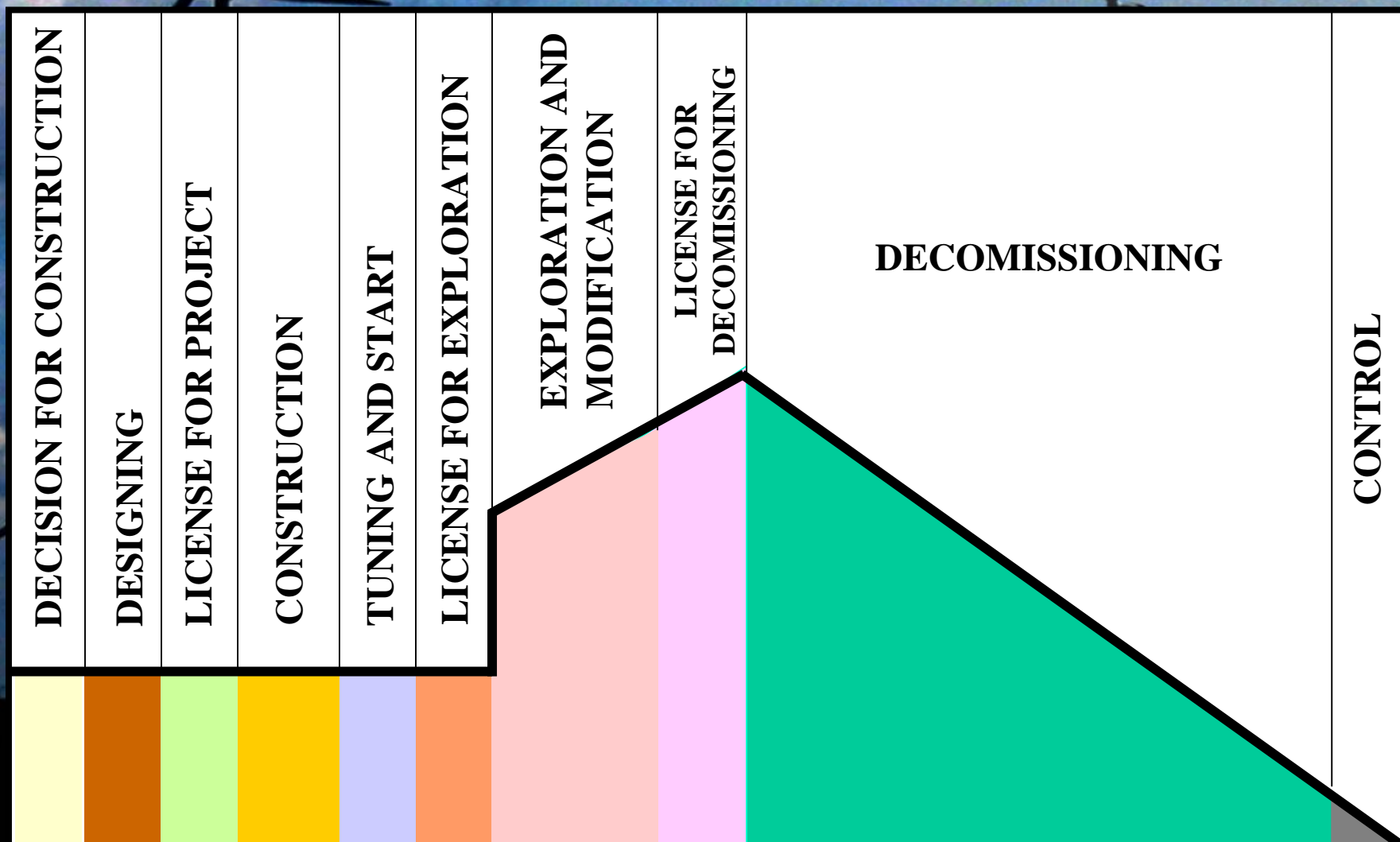
Environmental NGO's Against Nuclear

- Dangerous;
- Polluted;
- Unhealthy;
- Expensive;
- Corrupt;



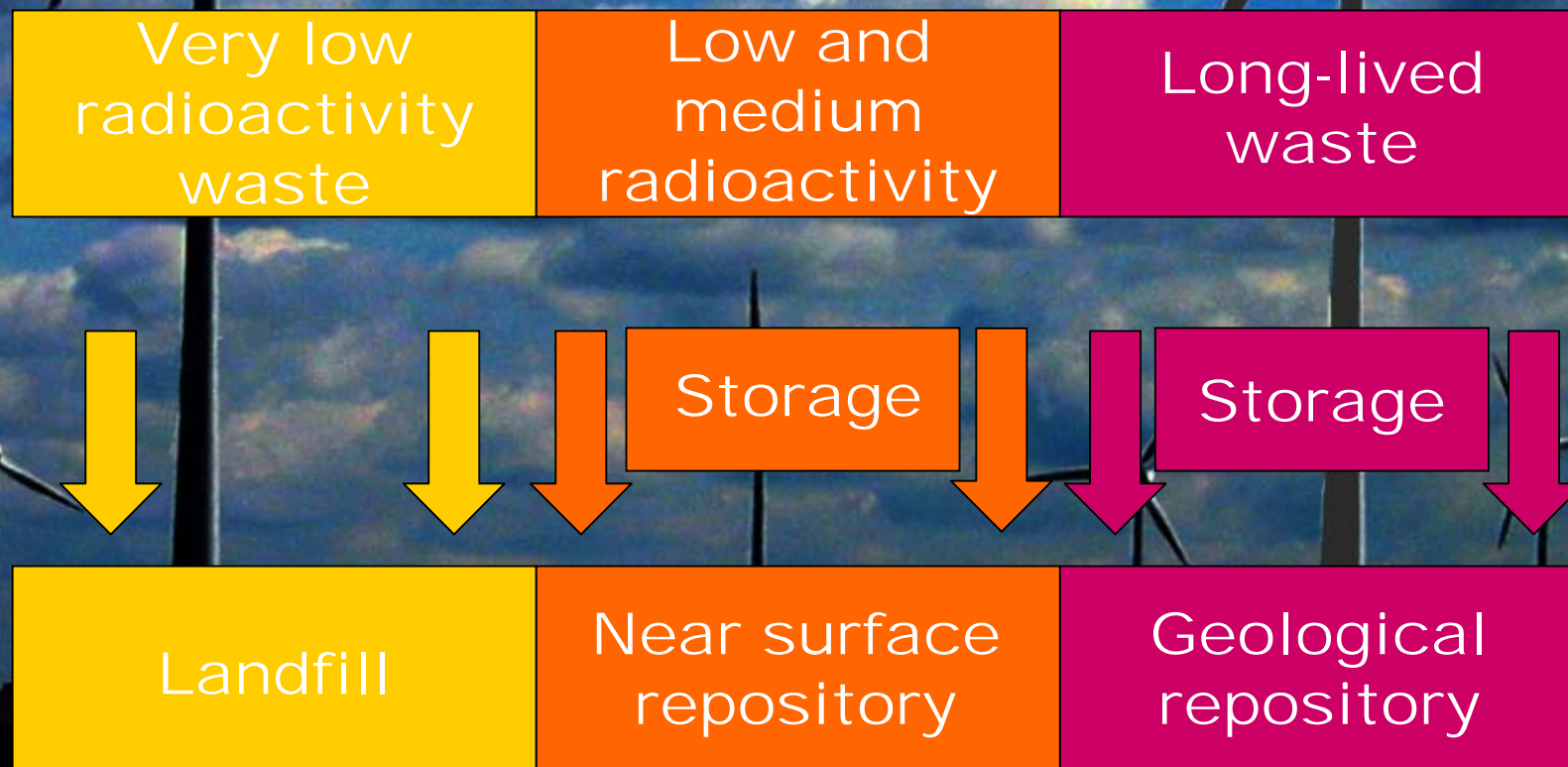
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LIFE CYCLE OF NUCLEAR POWER PLANT



RADIOACTIVE WASTE MANAGEMENT CONCEPT

Three flows of radioactive waste



LEGAL FRAMEWORK

- THE LAW ON NUCLEAR ENERGY;
- THE LAW ON THE MANAGEMENT OF RADIOACTIVE WASTE;
- THE LAW ON RADIATION PROTECTION;
- THE LAW ON THE DECOMMISSIONING OF UNIT 1 OF THE STATE ENTERPRICE IGNALINA NUCLEAR POWER PLANT;
- PROGRAMME OF THE MANAGEMENT OF NUCLEAR WASTE;

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RADIOACTIVE WASTE MANAGEMENT PROJECTS

- Projects are related to decommissioning of Ignalina NPP;
- Spent fuel interim storage facility;
- Long lived radioactive solid waste storage and management;
- Low and medium lived radioactive waste storage and management;
- Liquid radioactive waste incineration facility;

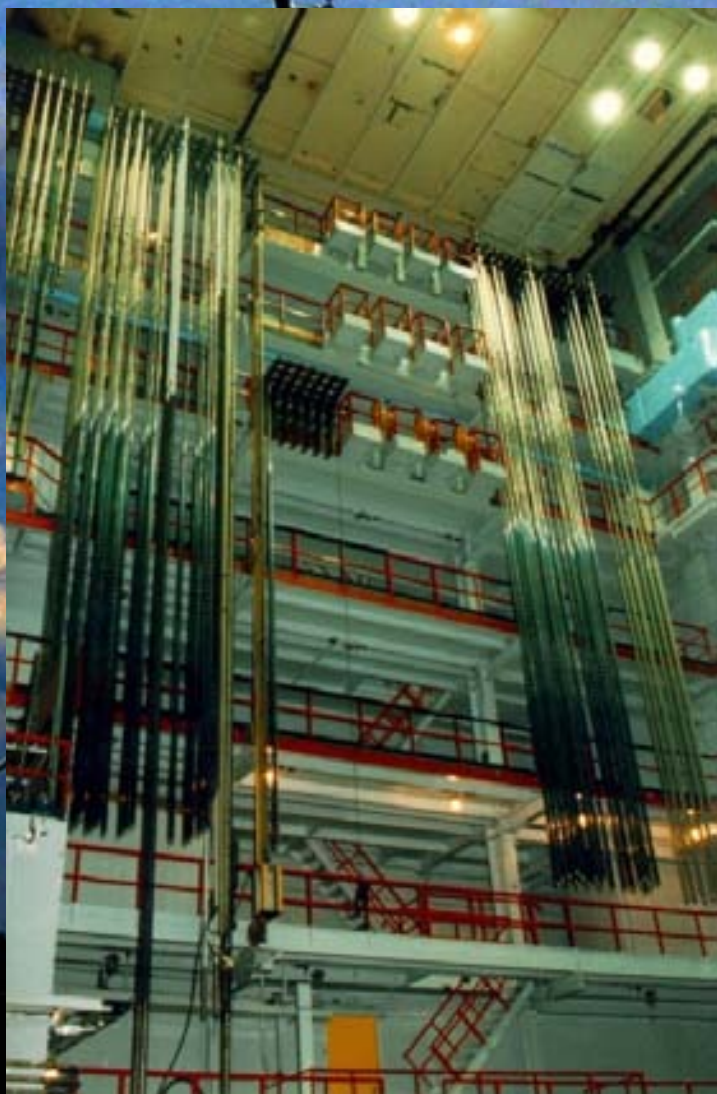
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SPENT FUEL INTERIM STORAGE

- At Unit 1 accumulated 1785 spent fuel assemblies plus 1661 left in reactor core;
- Estimated total amount of spent fuel assemblies – 18 000;
- Usage of new fuel assemblies – 400 per reactor, per year;
- Maximal pace of spent nuclear assemblies removal from ponds - 102 per month (1224 per year);

SPENT FUEL INTERIM STORAGE

New and used nuclear
fuel assemblies;



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SPENT FUEL INTERIM STORAGE

Storing spent fuel
assemblies into
containers;

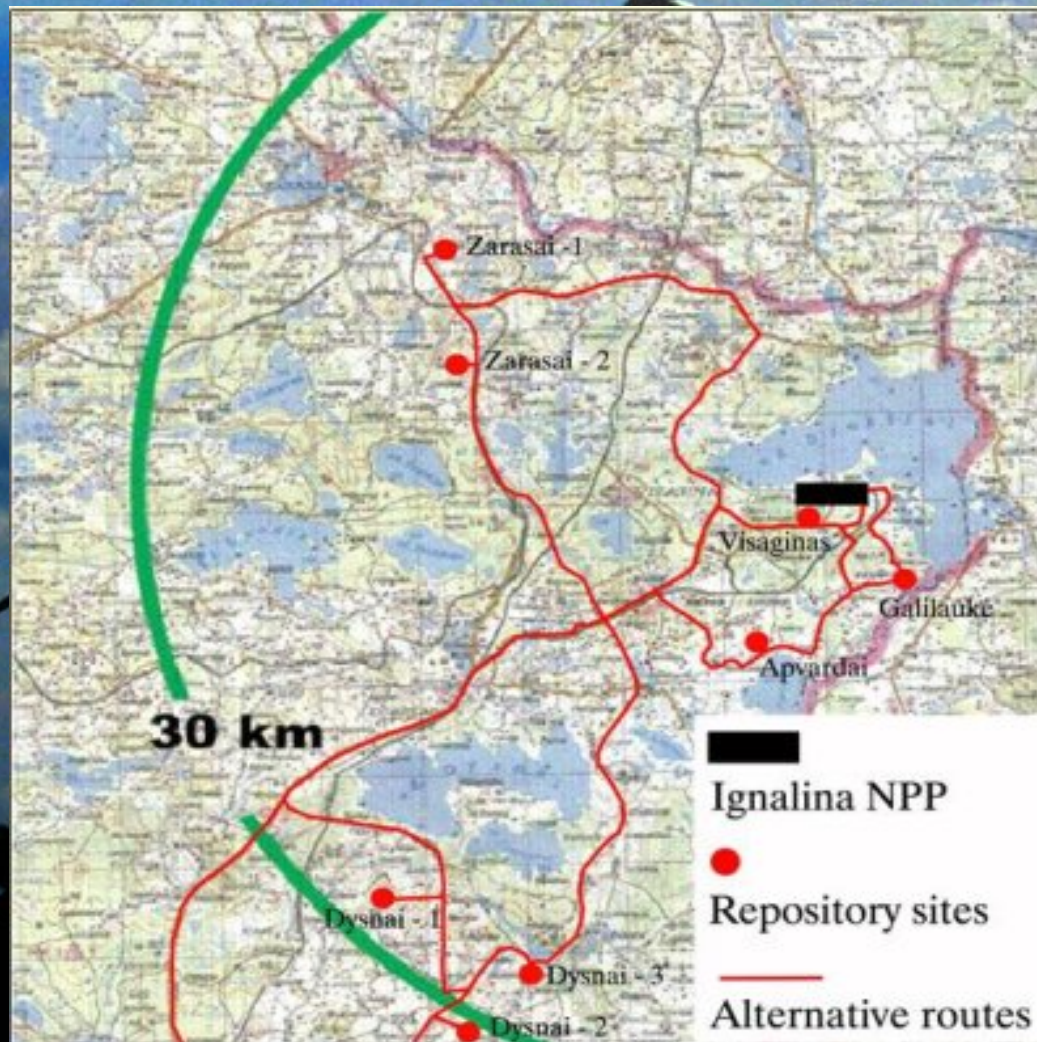


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LOW AND MEDIUM LIVED RADIOACTIVE WASTE STORAGE

9 sites were investigated in 3 qualified areas within 30 km zone around the power plant;



LOW AND MEDIUM LIVED RADIOACTIVE WASTE STORAGE



1. Galilauke site;
2. Apvardai site;
3. Stabatiskės site;

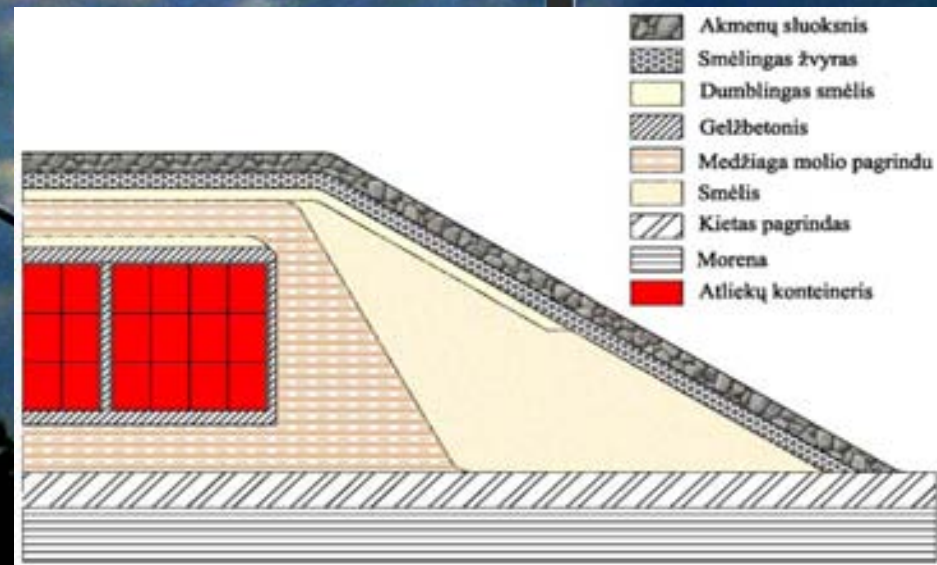
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- 50 storage places;
- 100 000 m³ radioactive waste;
- Storage 3 ha;
- Protection zone 40 ha;



- Storing until 2030;
- 100 years active monitoring;
- 300 years passive monitoring;



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HISTORIC RETROSPECTIVE

- 1984 – Commissioning of Unit I;
- 1986 – Chernobyl;
- 1987 – Commissioning of Unit II;
- 1990 – Independence Proclaimed;
- 1992 – G – 7 Munich;
- 1994 – EBRD NSA;
- 1997 – AGENDA 2000;
- 1999 – EU HELSINKI SUMMIT;
- 2000 – Donors Conference;
- 2004 – EU Accession;

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THREE STAGES OF NGO's ACTIVITIES ON IGNALINA NPP

- 1987 – 1992 Protest Campaign, collaboration with foreign NGO's and networks (EYFA, ASEED, OVE, OOA, etc);
- 1994 – 2000 Lobby for Early Closure, participation in NGO's networks (INforSE, CAN CEE, FoE Europe, CEE Bankwatch Network, etc.);
- 2000 – 2006 Work with Local Communities and Lobby for Mitigation of Social Consequences;

"LIFE CHAIN" AROUND IGNALINA NPP

ATE
GNALINOS



- Construction of Unit III Was Stopped;
- International Experts Were Invited;
- Commission for Investigation of Environmental Issues was Founded;

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Action During Bicycle Tour in 1992



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Lobbying at European Commission



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Lobbying at European Parliament



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Lobbying at EBRD



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Lobbying at EBRD

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NGOs Issue Paper EBRD Annual Meeting, Riga, May 2000

DECOMMISSIONING FUND

For the past two years, the European Union has paid much attention to the nuclear reactors in Central and Eastern Europe that were designed by the USSR in the '70s. Special attention was paid to the high-risk types of reactors, which are RBMK (Chernobyl type) and VVER440/230 (PWR analogue with significant safety deficiencies). Because of this concern, a fund called the Nuclear Safety Account (NSA) was created in 1993 to support short-term safety upgrades and to facilitate early closure of the units. Yet today, although all the funds in the NSA are exhausted, none of the units has been closed.

Non-governmental organisations have proposed setting up a new Decommissioning Fund (DF) that will not support safety improvements, but rather accelerate closure of the high-risk units. Now, as part of the European Union enlargement process, the European Commission is developing such a structure to finance decommissioning of the high-risk nuclear units in the pre-accession countries. However, CEE Bankwatch Network believes that the Decommissioning Fund should be proactive and initiate early closure rather than following the plans of the countries to keep operating these units for years.

Previous attempt - the NSA

According to the European Union, the primary objective of the NSA was to promote earlier closure of the high-risk units. For this purpose and with the initiative of the EC and G7, the Nuclear Safety Account was set up. The investment of the NSA was created within the European Bank for Reconstruction and Development (EBRD). Altogether, ECU 217 million was donated to the fund by national governments and the EU. In the following years, G8+Agreement were signed with Russia, Ukraine, Bulgaria and Lithuania. Slovakia, another country with high-risk units, was upgrading units in Bohemian NPP and it was clear that no early closure would be achieved. Seven years after the creation of the fund, it is apparent that NSA has failed to meet its objective since none of the target units has been closed.

Date of the high-risk units' closure

Plant, unit, country	Forecast of 1994	Forecast of 1999
Kozloduev NPP units 1, 2, Bulgaria	97 expected - NSA agreement (92)	04 - Bulgaria Government (90)
Kozloduev NPP units 3, 4, Bulgaria	90 expected - NSA agreement (92)	12 - Bulgaria Government (90)
Ignalina NPP unit 1, 2, Lithuania	93-94 expected - NSA agreement (94)	01, 08 - Lithuanian Government (90)
Ignalina, V1, Slovakia	2000 or earlier - Slovak Prime Minister (94)	08-09 - Slovak Government

Reforms. Significant delay or lack of reforms of the energy sector as well as the whole economy of the target countries.

Financial. The NSA had insufficient resources to guarantee closure of the reactors and there was no clear mechanism for estimating the needed cost of improvements.

Legal. There was no legal bond associated with the agreement, leaving space for new negotiations.

Implementation. Because insufficient control was exercised over the NSA, some of the measures that were mentioned under the agreement have not been implemented.

Decommissioning of the nuclear units

There should be a clear list of activities developed that can be funded as a part of Decommissioning. Clearly it must address not only technical activity on-site, but also social issues and energy substitution. We propose including the following activities:

Technical	Spent fuel management, Waste management strategy, Facilities for the radioactive waste management, separation, transportation and storage, Storage plant, Management of the closed unit.
Social	Training for the NPP staff looking for new specialisations and creating new jobs for them, Financial support for those who will prefer to move.
Energy substitution	Investments in energy efficiency and demand-side management and renewables, Investments in electricity transmission networks in order to adjust to the closure of reactors.



NGOs Issue Paper EBRD Annual Meeting, London, April 2001

DECOMMISSIONING OF IGNALINA NUCLEAR POWER PLANT

Since the G-7 meeting in March in early 1990, the European Union has paid much attention to the nuclear units in Central and Eastern Europe designed by the USSR in the 1970s. Special attention has been given to the high-risk reactor types, which are RBMK (Chernobyl type) in Lithuania and VVER440/230 (PWR analogue with significant safety deficiency) in Bulgaria and Slovakia. After almost ten years, NGOs in the region agree that progressive steps to decommission the high-risk reactors is very slow and passive. To date, none of the high-risk nuclear reactors in the region are closed. The Nuclear Safety Account, created for short-term safety upgrades on the most dangerous reactors, failed due to high resistance from recipient governments to phase out nuclear energy. The little progress made is visible only in Lithuania, but NGOs fear that the final decommissioning of Ignalina Nuclear Power Plant (INPP) is questionable.

In December 1998, the European Council emphasised that, for accession countries which operate non-upgradable nuclear reactors (Bulgaria, Lithuania and Slovakia) the energy sector strategies must be prepared with exact dates of closure of these reactors including an agreed timetable for closure consistent with Accession Partnership priorities and the Nuclear Safety Account Agreement. As a result of intensive negotiations between the European Commission and the Lithuanian Government, on 7 October 1999, the Lithuanian Parliament adopted the National Energy Strategy, which contains the provision to close down Unit 1 of the INPP before the year 2005. On 2 May 2000, the Lithuanian Parliament adopted a Law on the decommissioning of Unit 1 of the Ignalina Nuclear Power Plant. On 29 June 2000, the Lithuanian Government in co-operation with the European Commission and the EBRD organised the Donor's Conference for the decommissioning of the Unit 1 of Ignalina NPP. The Conference represented the operating state of the Decommissioning Fund for Unit 1 of Ignalina NPP administered by the EBRD. During the Conference donors committed over 216 million EUR to the Decommissioning Fund and certain long-term financial assistance.

Framework Agreement

However, the Lithuanian Government was late with the Framework Agreement which is what led to a delay in using the Decommissioning Fund for the projects related with decommissioning Unit 1. Moreover, Lithuania still has not approved a Decommissioning Programme for Unit 1 of Ignalina NPP which includes detailed measures needed to be implemented. This also prevents proper development in decommissioning process. Finally, some political parties in Lithuania are attempting to revise a decision to shut down Unit 1 of Ignalina NPP before the year 2005, and to set the provision that Unit 1 will be closed only when funds for complete closure are available. The main argument in favour of such a revision is that Lithuania does not have its own funds for complete decommissioning and do not have enough guarantees from the international community for long-term financing. The decommissioning of Unit 1 of Ignalina only has definite commitment from the EU of 15 million EUR for the year 2001. But according to Lithuanian legislation the nuclear regulatory body, VATES, has no right to issue permission for decommissioning of any nuclear unit without guarantees on all the necessary funds. Such an ambiguous situation, without clear commitments either from European Commission or from Lithuania, allows Lithuania to play a 'not and mouse' game and put the idea of decommissioning of high-risk nuclear units in Central and Eastern Europe in danger. We think that a clear agreement between the donors and Lithuania will ensure stability and a long-term prospect for energy sector development.

Social issues

Another weak point in the process of decommissioning high-risk nuclear units regards social issues. The closure of Unit 1 before the year 2005 (and the future decision concerning Unit 2) will raise serious economic problems for Lithuania and social problems for the region where Ignalina NPP is located. International assistance for technical closure of Unit 1 is somehow committed and hopefully will be better developed in the near future. But social issues and the future of the town of Virgajai is still not well reflected either in the Government's programmes or in the commitment of international donors.

Ignalina NPP is located in the municipality of Ignalina, in the north-eastern part of Lithuania. About 1 km west from the INPP is the town, Virgajai, which was developed in parallel with the NPP and is completely dependent on

COOPERATION WITH LOCAL COMMUNITY FOR MITIGATION OF SOCIAL CONSEQUENCIES

- Partnership with local NGO's;
- Partnership with Trade Unions;
- Cooperation with municipalities;
- Experience transfer from other countries;
- Cooperation with similar satellite towns of NPP's;
- Pressure to central authorities;
- Look for investments/grants from abroad;

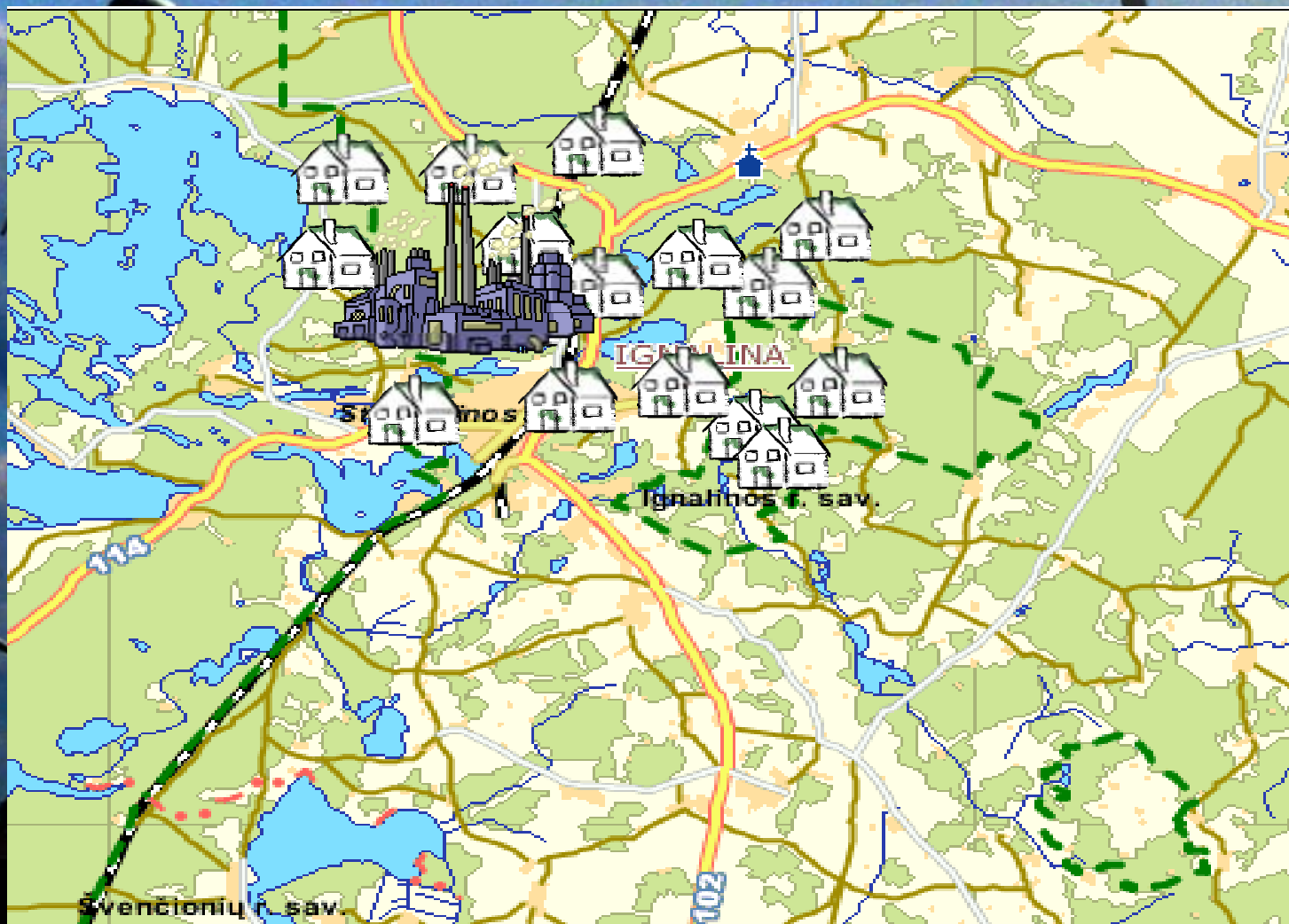
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LOCAL COMMUNITIES



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LOBYING FOR 30 km ZONE



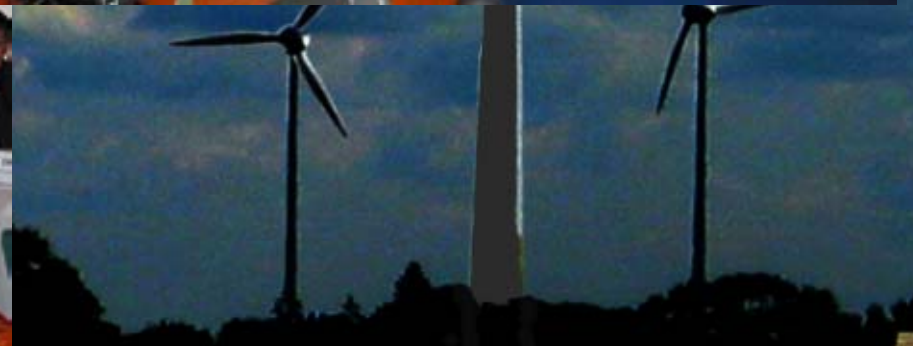
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Cooperation with Similar Towns for Mitigation of the Socials Issues

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CAMPAIGN AGAINST NEW NUCLEAR IN THE REGION

- Governments of Lithuania, Latvia and Estonia planning new nuclear capacities in Lithuania:
 - Dependency from Russia;
 - Absence of connection to Western electricity grid;
 - Common EU Energy Strategy failed;
 - Lack of generating capacities in the region after 2020;
 - Increasing prices of fossil fuels;
 - Lithuania willing to remain “nuclear country”;

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POSITION OF ENVIRONMENTAL NGO's

- Fundamental arguments why nuclear is not acceptable;
- All last nuclear project in Europe failed:
 - Mochovce;
 - Temelin;
 - K2/R4;
 - Kalinin;
 - Olkiluoto;
- Grid connections with Western countries are necessary;

GRID CONNECTION WITH SWEDEN



GRID CONNECTION WITH POLAND

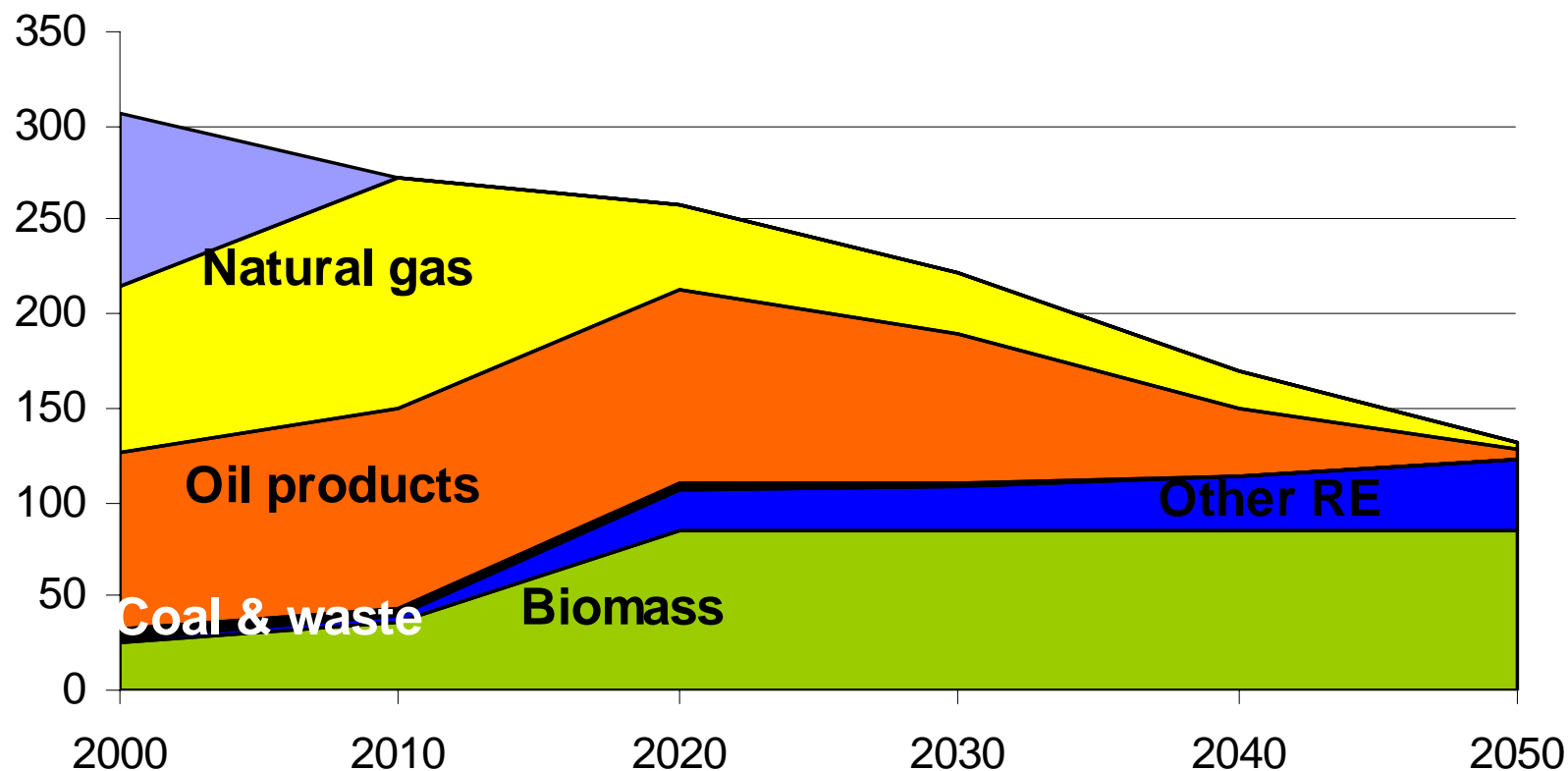


POSITION OF ENVIRONMENTAL NGO's

- Energy Efficiency Increase and energy Savings;
- Decentralized CHP's next to Heat Consumers;
- Development of Renewable Energy;

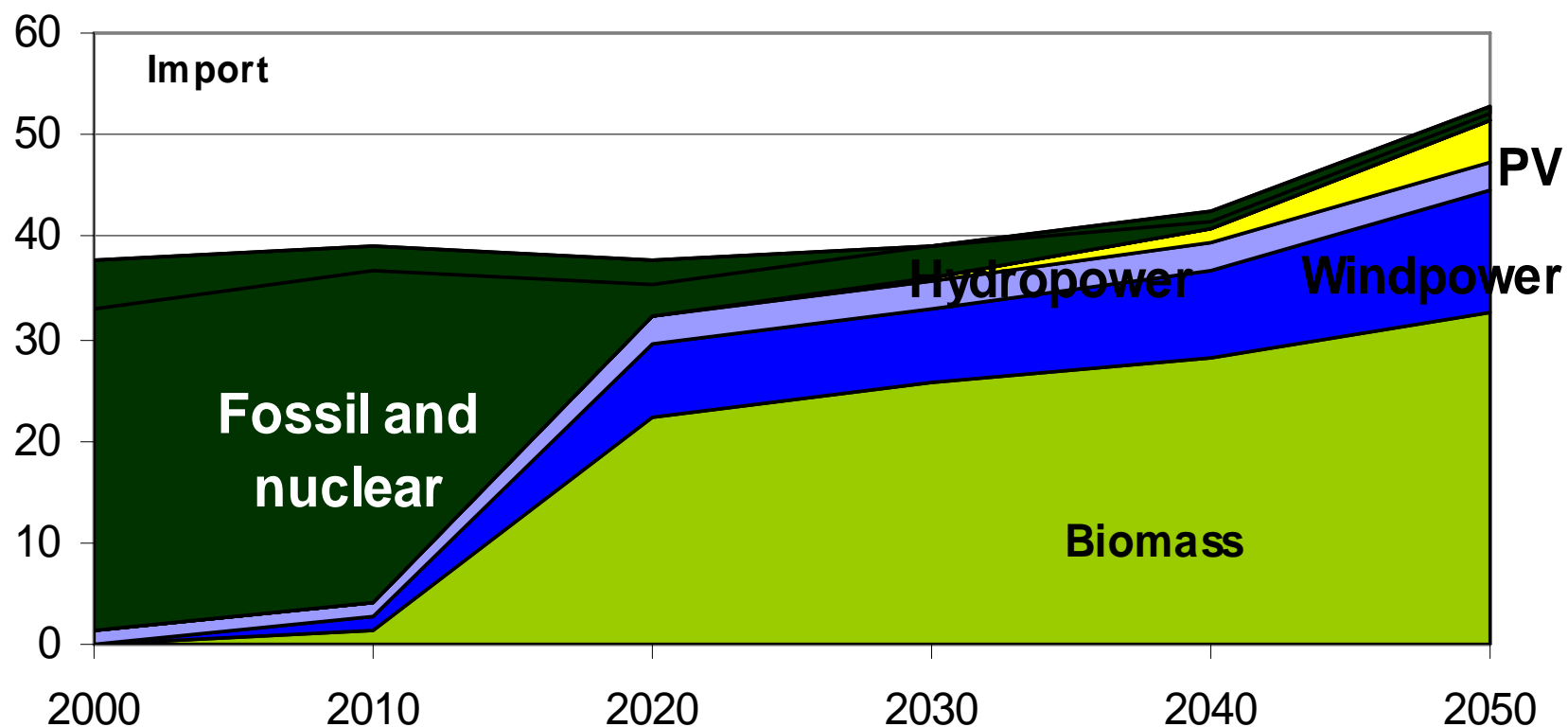
NGO's SUSTANABLE ENERGY VISION UNTILL 2050

Primary Net Energy Supply, Lithuania (PJ)



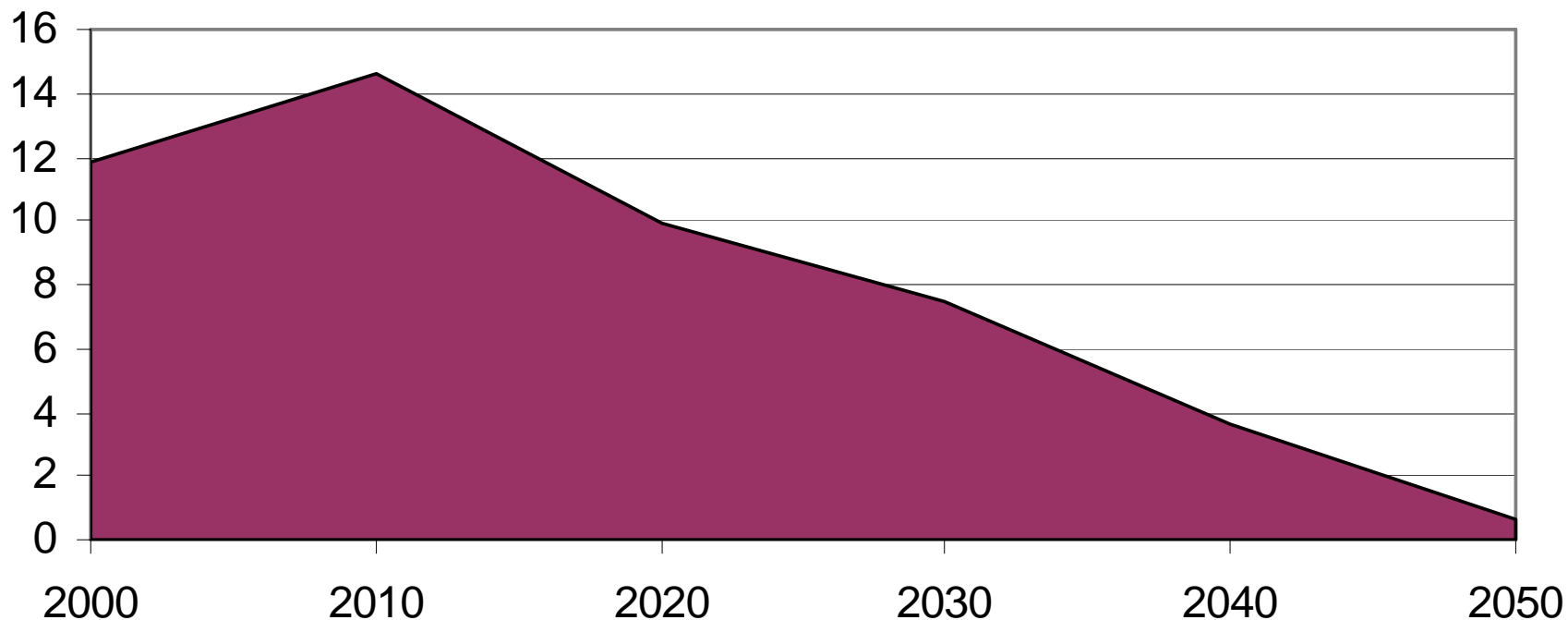
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Lithuanian Electricity Supply Divided in Sources (PJ)



NGO's SUSTANABLE ENERGY VISION UNTILL 2050

**CO₂ emissions from energy consumption, million tons
CO₂/year**



Thank you for attention

www.atgaja.it

www.bankwatch.org



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