

What people really think about nuclear energy



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What Impact has Fukushima had on public opinion?

Editorial

The Fukushima accident has had an impact on public opinion. However, though it is very difficult to assess this impact in the long-term, it can already be said that the results of opinion polls carried out throughout Europe after the event show that it is very country specific. In some countries, like Germany and Switzerland, opposition to nuclear has risen sharply, while in others where new build plans are under way, like the United Kingdom (UK) or France, a majority of the population still backs the use of nuclear power. The opinion poll carried out by Ipsos MORI in May 2011 shows that in nine (Belgium, France, Germany, UK, Hungary, Italy, Poland, Spain and Sweden) out of the 27 Member States less than one fifth of those opposed to nuclear have been influenced by the accident.

Before the accident occurred, public acceptance had been increasing and the latest **Eurobarometer on Radioactive Waste** published in July 2008, even showed that there were almost as many citizens in favour of nuclear energy (44%) as against it (45%). This was due mainly to the fact that people were more concerned with climate change and security of supply issues. It also showed a huge gap between views expressed in countries with an anti-nuclear culture such as Austria, Cyprus, Malta and Portugal, and those in countries where support for nuclear is strong like Hungary (63%), Sweden (62%), the Czech Republic (64%) and Lithuania (64%). Moreover, when it is not making headlines, nuclear energy is not people's main preoccupation. It is a "back-of-the-mind" issue, which implies that people's attitudes can change quickly and are heavily influenced by the way the questions are phrased.

Despite the accident in Japan, nuclear's credentials remain unaffected. Nuclear power is a base-load low-carbon source of energy and can contribute to the fight against climate change. It is also a competitive source of energy and can help reduce energy dependency. Therefore, whatever opinion polls reveal, it is vital that politicians take the lead and implement bold decisions regarding the energy mix. Developments in Finland or the United Kingdom demonstrate that if the political decision to include nuclear in the energy mix is taken and information is communicated in an open, inclusive and democratic way, people tend to become more favourable to nuclear power.



Public acceptance: a complex issue

Introduction

Nuclear energy performs a crucial role in the European energy mix. There are 139 nuclear power reactors in operation across the European Union. About one third (28%) of all the electricity produced in the EU is nuclear-generated. Compared to the situation before the previous enlargement in May 2004, when Romania and Bulgaria joined the EU in January 2007 the number of EU nations using nuclear almost doubled (rising from 8 to 15).

The real impact of the Fukushima accident on public opinion in the EU still needs to be assessed. However, a global opinion poll conducted in May 2011 by Ipsos-MORI¹ suggests that in 9 countries out of the 27 Member States, the event has influenced less than one fifth of those opposed to nuclear. The next **Eurobarometer on Radioactive Waste and Safety**, which is expected to be published in 2012, will provide an updated view of what people think about nuclear energy post-Fukushima.

The results of the **Eurobarometer survey, Attitudes towards radioactive waste**², published in June 2008, showed that since the previous **Eurobarometer** in 2005, there had been a gradual and significant evolution of public opinion in favour of nuclear power. There were as many citizens who were in favour of nuclear energy (44%) as were against it (45%). This compared with 37% in favour and 55% against in 2005. The results of the **Eurobarometer on Nuclear Safety**³ (April 2010) revealed that 56% of EU citizens wanted nuclear energy to be maintained or increased (up 8% on the 2007 survey results).

On the other hand, the **Eurobarometer on Nuclear Safety**³ also showed that a majority of Europeans (51% against 35%) believed that the risks posed by nuclear power outweigh its advantages. And yet a majority of EU citizens (59%) were confident that nuclear power plants can be operated safely. The issue of public acceptance is, therefore, complex and these results demonstrate that it is necessary to give a more accurate view of the state of public opinion in Europe.

Methodology

Nuclear energy and energy issues in general are not major concerns or top priorities for EU citizens. It is a “back of mind issue” (UK MORI survey, November 2007, “What issues concerns you most?” 3 people mentioned nuclear in a sample of over 2000 respondents). In the **Eurobarometer** on energy technologies, when today’s challenging issues are considered as a whole, EU citizens rate energy issues (14%) far below unemployment (64%), crime (36%) and healthcare systems (30%) in terms of importance, which relate more integrally to their daily life, economic stability, safety and health. That is why the way the questions are put influences heavily people’s answers. The methodology determines, of course, to a certain extent people’s answers: respondents are either requested to choose from a list of statements to answer open-ended questions, or asked to reply spontaneously to a blunt question with “yes” or “no”, “agree” or “disagree”... When the question refers to other aspects of energy issues, such as security of supply or climate change, respondents tend to change their attitude. For instance, in an IAEA study, when the question stresses the climate change benefits of nuclear energy one in ten people are more supportive of expanding the role of nuclear power in the world. In the same study, answers are completely different depending on whether people are asked a question regarding the expansion or the continuation of nuclear power. The wording is, therefore, crucial and figures alone are meaningless. Furthermore, it is not worth comparing different opinion polls (unless they are regularly repeated over time) without putting them into context.

¹ The Ipsos MORI global opinion poll is available at: www.ipsos-mori.com/Assets/Docs/Polls/ipsos-global-advisor-nuclear-power-june-2011.pdf

² The Eurobarometer survey on radioactive waste is available at: http://ec.europa.eu/public_opinion/archives/ebs/ebs_297_en.pdf

³ The Eurobarometer on nuclear safety is available at: http://ec.europa.eu/public_opinion/archives/ebs/ebs_324_en.pdf

Diversity of situations due to political and cultural developments

The **Eurobarometer** surveys reveal a clear division between countries within the EU. On the one hand, there are entrenched views expressed in countries with a rigidly anti-nuclear culture, like Austria, Cyprus, Malta and Portugal. On the other hand, countries like Hungary, Sweden, the Czech Republic and Lithuania show strong support for nuclear energy. This division makes it fundamentally difficult to identify an “average EU view” .



Experienced nuclear countries

In France, UK, Spain, Finland and Sweden nuclear policies are diverse.

Countries such as Finland, UK and France have clearly opted for nuclear power as a means to secure their energy supply and ensure energy independence. Public opinion usually supports nuclear in these countries. Sweden and Spain pursued other options.



France

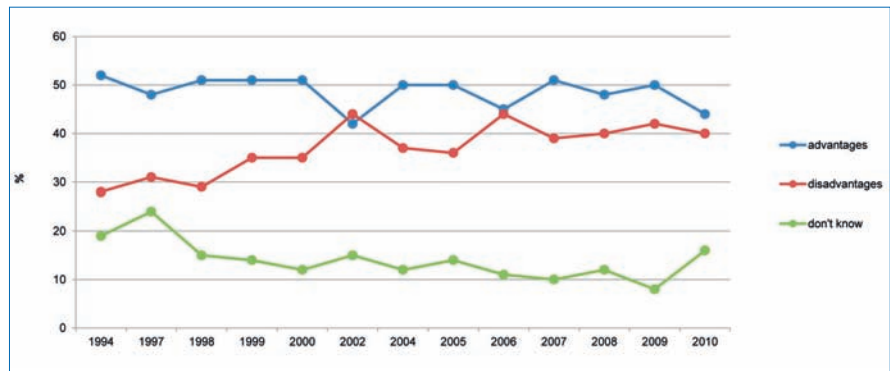
France is the world's largest nuclear power generator on a per capita basis and ranks second in total installed nuclear capacity behind the United States. France has 58 nuclear reactors that produce 74% of the total electricity. There is currently one nuclear reactor, a European Pressurised Reactor (EPR), under construction at Flamanville, which is scheduled to come into operation in 2016 and one reactor planned at Penly. After Fukushima, the French government reaffirmed its commitment to nuclear new build.

After the Japanese accident, an opinion poll carried out by BVA/Win-Gallup International revealed that a majority of citizens are still in favour of nuclear (58%). However, the same poll carried out before Fukushima found that 66% were favourable to nuclear before Fukushima. So public acceptance has decreased.

Advantages and drawbacks of nuclear

To your mind, the decision to produce three quarters of the French electricity production with nuclear power results in rather advantages or drawbacks?"

Source: CREDOC⁴



Explanation

Public support for nuclear power has always been quite strong in France. The French state is centralised and the decision in the 1970's to choose nuclear power in order to reduce energy dependency was applied to the whole territory. 58 nuclear reactors are operational on French territory, which means that nearly every French citizen lives close to a nuclear power plant. School and industry trips are organised to visit nuclear power plants (NPPs). People are, therefore, better informed about nuclear power and, consequently, less resistant to it.

The government and the nuclear companies (Areva, EDF) have carried out various pro-nuclear campaigns to foster public acceptance. Furthermore, the nuclear reactors have always been operated safely. Even if the French still believe that nuclear activities are risky (55% think that the risk of severe nuclear accidents is high), they do trust national authorities with controlling and ensuring the safe operation of nuclear reactors.

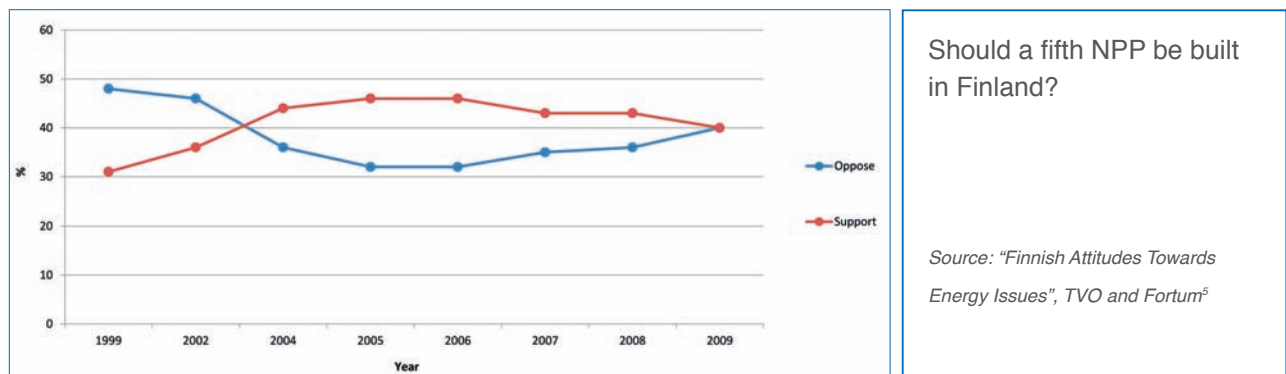
⁴ The French opinion poll is available at: <http://www.developpement-durable.gouv.fr/IMG/pdf/CS167.pdf>



Finland

Finland has chosen to expand its nuclear power capacity. Finland has two NPPs, each with two reactors, and in 2010 nuclear energy accounted for 28% of total electricity production. In 2002, the Finnish government gave permission for the building of a new NPP unit, Olkiluoto 3, which will be the fifth reactor in the country and is scheduled to start commercial operation in 2014. In April 2010, the Finnish government gave its “preliminary permission” to the Finnish companies, TVO and Fennovoima, to build two more nuclear reactors (sixth and seventh reactors); a decision that was ratified by the Finnish Parliament in July 2011.

Public opinion is in favour of nuclear, since 61% of the Finns polled in the **Eurobarometer on Radioactive Waste** declared that they were in favour of nuclear energy.



Explanation

In Finland, the debate on nuclear started in 2001. Consultations took place and the decision to build a new reactor was taken by the Finnish parliament. Although there was no referendum, citizens were very well informed about the issue and an open public debate took place. The Finns are pragmatic. They realised that the best solution to address both climate change and security of supply issues (over-dependence upon Russia) was to use nuclear power. Furthermore, the arguments against nuclear power (i.e. that dismantling is too expensive and that waste cannot be effectively managed) were proven wrong: the nuclear industry pays for the dismantling of NPPs at the end of their life-time (enough money has already been set aside) and a final repository in the Finnish bedrock has been selected in an open and democratic way to dispose of the waste produced by the reactors already in operation.

⁵ Finnish Attitudes Towards Energy Issues is available at: http://www.sci.fi/~yhdys/eas_09/english/eas_eluku-2.htm





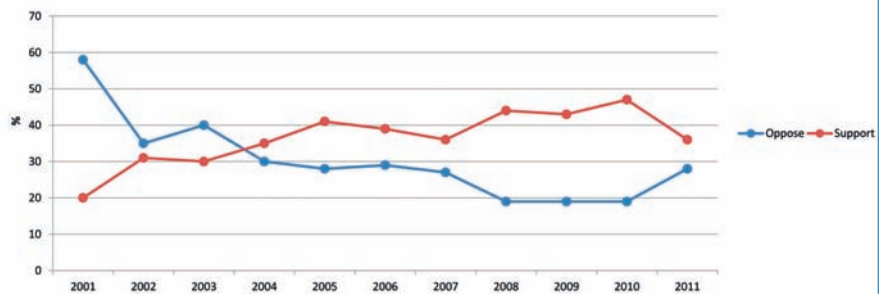
United Kingdom

The UK has 18 nuclear reactors generating 16% of its electricity. The UK's nuclear fleet is nearing the end of its lifetime. Therefore, the UK government has decided to replace the ageing NPPs by a new fleet to ensure continued security of supply and reduce CO₂ emissions.

According to an opinion poll conducted by Ipsos MORI⁶ and published in December 2010, 70% of UK citizens supported a balanced energy mix that includes nuclear power. The same opinion poll published in August 2011 shows that this number has slightly decreased to 68%. However, support for nuclear new build has significantly declined from 47% in December 2010 to 36% in August 2011, but it still indicates more support than opposition (28% against).

To what extent would you support or oppose the building of new nuclear power stations in Britain to replace existing ones?

Source: Ipsos MORI



Explanation

Oil reserves are dwindling in the North Sea. As a result, oil prices are rising and the UK's security of energy supply is being threatened. People consider that nuclear power is a means of addressing this issue. The energy debate that has been going on in the UK since May 2005 has helped inform people about the issue and increase public acceptance. UK citizens are also more concerned with environmental issues and especially climate change. They are also aware that renewables alone are not sufficient to tackle energy and environmental issues.

⁶ The Ipsos MORI poll is available at: <http://www.niauk.org/NIA-Press-Releases/Industry-poll-shows-continuing-support-for-nuclear.html>



Sweden

Sweden has 10 nuclear reactors that account for 38% of total electricity production. In February 2010, the Swedish government decided to allow the construction of a maximum of 10 new reactors in the country to replace existing ones as they are shut down.

An opinion poll issued in June 2008 conducted by the polling organisation Synovate⁷ shows that public support for continuing to use nuclear power remains strong at 82%. Around 94% of Sweden's electricity production is generated by hydropower and nuclear power combined.

A study was conducted by polling institute TNS Sifo⁸ on behalf of SKGS, which represents Sweden's electricity-intensive industries (forestry, chemical, mining and steel) in February 2010. It shows that 52% of Swedes support the continued use of nuclear energy, 30% support the replacement of Sweden's current fleet of power reactors when they have reached the end of their operating lives and 22% think that additional new reactors should be built.

The global opinion poll carried out by Ipsos MORI in May 2011 shows that Swedes are now quite divided on the nuclear issue. 50% said that they support nuclear, while 50% declared that they oppose it.



Spain

In Spain, the PSOE (Socialist Party) won the general elections of March 2004 and March 2008. The PSOE has made a strong political statement about nuclear energy, promoting its progressive phase-out. However, no calendar has been fixed yet. Since Fukushima, the policy of the PSOE government regarding nuclear power had remained unchanged. The PP (Partido Popular) that won the latest elections, in November 2011, is pro-nuclear.

An opinion poll conducted by Instituto Elcano in 2006 showed a clear split between nuclear supporters (41%) and nuclear opponents (55%). This division can be accounted for by social factors: graduates (47% of those in favour) and right wing voters (55%) tend to support nuclear power, whereas undergraduates are more likely to oppose nuclear energy. Those opposed want the use of nuclear to be stopped without delay. Those in favour consider nuclear energy as a way of decreasing Spain's energy dependency on oil and gas imports and reducing the oil bill.

An opinion poll carried out at the end of March 2011 by Metroscopia for the newspaper, **El Pais**, reveals that Spanish citizens remain divided on the nuclear issue. To the question, "Do you think Spain should stop relying on nuclear energy?" 49% answered "yes" and 46% "no".

⁷ The results of the survey are available at: <http://www.analys.se/lankar/opinion/OpinionJuni2008.pdf>

⁸ The results of the TNS Sifo survey are available at: http://www.world-nuclear-news.org/NP-Majority_of_Swedes_support_nuclear_energy-1703105.html

Phase-out countries

The Kyoto Protocol commitments and the gas and oil crisis have prompted many European countries to question their phase-out policy and consider expanding their nuclear capacity to reduce greenhouse gas emissions and ensure energy independence. However, some countries like Italy, Switzerland and Germany, have changed their mind after the Fukushima accident and decided not to build new nuclear reactors and/or to phase out nuclear.



Germany

Germany has 9 nuclear reactors in operation that accounted for 23% of its total electricity production in 2010. In June 2001, the leaders of the left-wing SPD/Greens “Red-Green” coalition government and the four main energy companies signed an agreement to limit the operational lives of the reactors to an average of 32 years. The current centre-right CDU and FPD (Black-Yellow) coalition agreed in September 2010 to extend the operational duration of the NPPs by 12 years on average beyond 2021. After Fukushima, the German government reversed its previous policy and decided in May 2011 to phase out nuclear by 2022.

In March 2008, a survey conducted by TNS Emind, a public opinion research company, showed that nearly half of the German population (49%) supports extending the lifetime of Germany’s NPPs. In June 2011, an opinion poll carried out by the Emnid Institute revealed that 57% of German citizens believe that the phase-out policy of the government is feasible.



Belgium

Seven nuclear reactors supply more than half of Belgium’s electricity output. A law regarding the closure of Belgium’s NPPs, which is likely to be implemented from 2015 to 2025, was approved by the Parliament in January 2003. The law also prohibits the building of new NPPs and limits the operational period of the existing ones to 40 years. On October 2009, the Belgian government decided to extend the period of operation of three reactors at the country’s NPPs by 10 years. The decision still needs to be approved by Belgium’s Federal Parliament. After Fukushima, The Belgian Energy Minister said that the decision to extend the lifetime of the country’s NPPs would be put on hold until “stress tests” had been carried out. In November 2011, Belgium’s main political parties reached an agreement on nuclear power. The oldest reactors are to be shut down by 2015 and all nuclear reactors at both NPPs will be shut down by 2025 provided enough energy from alternative sources is found to prevent power shortages.

In Belgium, 50% of the population was in favour of nuclear power (source: **Eurobarometer on Radioactive Waste**, July 2008) before Fukushima. No opinion poll has been carried out in the country since the accident.



Switzerland

Switzerland has great potential hydroelectric power sources, but has no oil and gas reserves and depends, therefore, on fuel imports. Around 60% of its electricity is produced by hydro-electric plants and around 40% generated by nuclear power plants. Before Fukushima, the Swiss government had decided to replace ageing nuclear reactors by new ones and was in the process of approving the construction of new NPPs at three locations. After the accident, the policy of the government changed drastically and in May 2011 it decided not to replace its ageing nuclear reactors and to phase out nuclear by 2034.

A telephone survey, carried out by market research company Demoscope and published in February 2010, showed that 55% of those questioned were in favour of building replacement units, while 41 % were against. Since Fukushima, support for nuclear power has dropped. According to an opinion poll published in May 2011, 80% of the population back the decision of the government to phase-out nuclear.

New build countries in Central and Eastern Europe

In the Baltic States, Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia, which have new build plans, public support is quite strong.

The results of public opinion polls are not yet available for the Baltic States, Romania, Slovakia and Slovenia.



Bulgaria

In Bulgaria, Units 3 and 4 of the Kozloduy NPP were shut down in December 2006 to meet the requirements for joining the European Union. Units 1 and 2 were closed at the end of 2002 and a modernisation plan is being implemented for units 5 and 6. Bulgaria is also planning to build a 2000-megawatt unit, in Belene, by 2015/2016. After Fukushima, the Russian and Bulgarian governments agreed on a three-month moratorium on the construction of the Belene NPP to calculate an exact price for the NPP and to fully assess seismic risks.

According to an opinion poll published in January 2009, and conducted by the Sova Harris agency, 72% of those surveyed were in favour of the Belene NPP, while 97% of those living near the plant supported it. No opinion poll has been carried out since Fukushima.



Czech Republic

The Czech Republic has 6 reactors, which account for 33% of total electricity production. The country exports electricity primarily to Germany, Austria and Slovakia. Two more reactors are planned to be built at Temelin NPP. After Fukushima, the government said it would stick to its new build plans.

The results of the latest **Eurobarometer on nuclear safety** shows that 86% of Czech citizens would like the share of nuclear power to be maintained or increased. No opinion poll has been carried out since Fukushima.



Hungary

Hungary has 1 NPP with 4 reactors, near the town of Paks, which is the largest power producer in the country and meets 42% of Hungary's domestic power needs. Hungary announced in February 2009 a proposal to double the capacity of the country's NPP. Members of Parliament overwhelmingly approved it on March 2009. The new reactors should be completed by 2025. The government hasn't changed its nuclear policy since Fukushima.

The Hungarians were the European citizens who were the most favourable to nuclear power (63%) according to the **Eurobarometer on Radioactive Waste** published in 2008. A global opinion poll carried out by Ipsos MORI in May 2011 shows that public support for nuclear in the country has declined since Fukushima. Only 41% of the respondents declared that they were in favour of nuclear. However the figures must be interpreted cautiously since the **Eurobarometer** survey and the Ipsos MORI poll did not ask precisely the same questions.



Poland

In recent years, Poland has experienced significant economic growth and electricity consumption is expected to rise by 80-93% by 2025. Poland relies mostly on coal to meet its energy needs, yet many coal-fired power plants have been operated for over 30 years and need to be modernised or decommissioned. Therefore, a major shift in the Polish energy policy has taken place. In January 2009, the government adopted a Resolution on nuclear energy that indicates that by 2020 electricity will be generated by 1 or 2 NPPs.

According to the results of the latest **Eurobarometer on Nuclear Safety**, published in 2010, 70% of the Polish population surveyed thought that the share of nuclear power should be maintained or increased. The Ipsos MORI global opinion poll carried out in May 2011 indicates that a majority of Poles surveyed (57%) is still in favour of nuclear power.

Explanation

Nuclear power is profitable and the nuclear industry is a big employer (many people would lose their job if nuclear power plants were to shut down). In some new EU Member States, nuclear energy provides a huge share of electricity production (Bulgaria: 33%, Hungary: 42%, Slovak Republic: 52%). People are afraid their country would lose its energy independence and become more dependent on energy imports from Russia if nuclear were to be phased-out.

Countries opposed to nuclear that are neighbours of pro-nuclear countries

In these countries, public opinion is traditionally strongly opposed to nuclear power. This is the case in Austria, Denmark, Ireland, Luxembourg and Norway.



Austria

Although Austria has considerable hydro-electric capacity (70% of the country's total generation), it has hardly any fossil fuel sources and imports almost all its supply of natural gas and oil. Hydro-electricity generation is highly seasonal, with significantly greater production capacity in the summer than in the winter. Austria imports significant amounts of electricity in the winter because of this seasonal generation pattern - mostly from Germany, Czech Republic, Hungary, Switzerland and Slovenia. In 1978, Austria passed its 'nuclear prohibition law' which forbids the construction of power plants based on designs using nuclear fission. Austria has no NPPs and yet 15% of Austria's winter electricity consumption is generated by NPPs in neighbouring countries.

Public acceptance of nuclear power is very low in Austria. It stands at 14% according to the **Eurobarometer on Radioactive Waste** published in July 2008. No opinion poll has been carried out since Fukushima.



Explanation

In 1978, a referendum was held on the future of nuclear power in Austria. The results did not show as wide-spread an opposition to nuclear power as there is now: 32% voted against nuclear power, 31% in favour of nuclear power, 36% did not participate, 2% invalid. The votes were motivated by political reasons, for or against the government's policy. The "nuclear prohibition law" was adopted anyway. The shift in public opinion started due to the safety issue (1979: Three Mile Island accident, 1986: Chernobyl accident). After the fall of the Soviet Union, Austria realised that ex-Soviet neighbouring countries, Slovakia (Mochovce NPP) and Czech Republic (Temelin NPP) intended to build new nuclear units. An anti-nuclear campaign began. The government tried to prevent these countries from building more units. The policy was also supported by the media, which led a very aggressive campaign against nuclear.

Countries where there is no real debate on the future expansion of nuclear power

Cyprus, Greece, Malta, Portugal, very few opinion polls on nuclear have been carried out in these countries. The level of support for nuclear power has only been analysed as a result of the **Eurobarometer surveys**. Strangely enough, though nuclear is not an issue, public opinion tends to strongly oppose nuclear power.



In Greece, 86% of the population is opposed to nuclear, in Cyprus 81%, in Malta 62% and in Portugal 53%. It proves that when citizens are not at all informed they are more likely to believe in the scare stories spread by nuclear opponents.

Remarks

It is almost impossible to talk about a single, unified European public opinion on nuclear energy. Political and cultural factors amplified by external events like Fukushima influence public opinion in different countries. That is why public acceptance differs so much from one country to another. The role of disseminating information through public debates and governmental action relayed via the media is essential to shape public opinion, since the more people know about nuclear the more they are in favour of it. However, the tendency of some media to sensationalise nuclear events has a negative effect on public opinion, as was the case with Fukushima. In the UK, the debate which has taken place since the latest general election has informed people about nuclear. In Finland, although there was no referendum, citizens were very well informed about the issue during the parliamentary debate. In both cases public debates, which were reported on in the media, resulted in better acceptance of nuclear power. The role of governmental campaigns and of the media is also to be noted. In Austria, the government's campaign against the construction of nuclear power plants in Czech Republic and Slovakia relayed via the media has shaped public opinion against nuclear energy. On the other hand, the French government's campaigns in favour of nuclear power, as well as public and parliamentary debates, have fostered positive attitudes towards nuclear.

Obstacles to increasing public acceptance

Though the state of public opinion on nuclear in Europe differs from one country to another, there are still trends that can be identified from opinion polls. Major hurdles that must be overcome to increase public acceptance can be highlighted from them.

People's perception of nuclear power is still driven by fear, connected primarily with safety, the threat of terrorism, the possible misuse of radioactive materials and the controversial question of what to do with radioactive waste.

The Safety issue

The safety issue is a precondition to gaining public acceptance - nuclear safety has to be ensured. Most people expect NPPs to be safe and if they don't think so then they automatically oppose nuclear power. Therefore, nuclear safety or the belief that NPPs are safe are preconditions for gaining public acceptance.

The **Eurobarometer on Nuclear Safety** (2010) showed that a majority of EU citizens (59%) were confident that NPPs can be operated safely. In countries that use nuclear energy to produce electricity, people generally believe in the safety of the nuclear power plants. Most citizens (51%) thought that nuclear safety authorities were capable of ensuring that NPPs are safe. But people were quite divided on the capacity of nuclear operators to run the plants safely (47% trust nuclear companies, 43% don't). It remains to be seen whether the next **Eurobarometer on Radioactive Waste and Safety**, which is due to be published in 2012, will show the same results.

Radioactive waste management

Radioactive waste management is *people's main concern regarding the use of nuclear power* (Source: **Eurobarometer on radioactive waste**, July 2008): 78% of EU citizens believe that all radioactive waste is very dangerous.

If the waste issue was solved, a majority of EU citizens would be in favour of nuclear power:

- 39% of those opposed would change their mind if the waste issue was solved
- A majority of EU citizens would be in favour of nuclear if the waste issue was solved (around 61%). That compares to 57% in the 2005 **Eurobarometer**

Security

Security is a growing concern since 11 September 2001

Nuclear security and proliferation have become increasingly important issues on the political agenda since 11 September 2001. They have also influenced public opinion and are now two of the major public concerns regarding the use of nuclear power. The results of the **Eurobarometer on Nuclear Safety** show that security and proliferation issues clearly influence negatively people's views on nuclear power: 52% of respondents disagree with the fact that NPPs are sufficiently secure against terrorist attacks, while 45% disagree with the statement that nuclear materials are sufficiently protected against proliferation.

Though the risk of terrorist attacks is not the main worry of citizens as far as nuclear power is concerned, it is still one of the fears regarding nuclear that most shapes public opinion and that opponents do not hesitate to trigger. Proliferation is an issue that is reported on every day in the media. Only the April 2010 **Eurobarometer on Nuclear Safety** asks questions in order to assess the impact of this global threat on public acceptance of nuclear. Forthcoming opinion polls on nuclear energy should take into account proliferation.

Problem of trust

Most people do not trust the nuclear industry as a reliable source of information on nuclear issues. The **Eurobarometer on Nuclear Safety** shows that only 12% of European citizens have confidence in the nuclear industry as a source of information on the management of radioactive waste in their country. Even in the countries where public acceptance of nuclear is quite high, most people do not trust the nuclear industry as a reliable source of information: France (11%), Finland (13%).

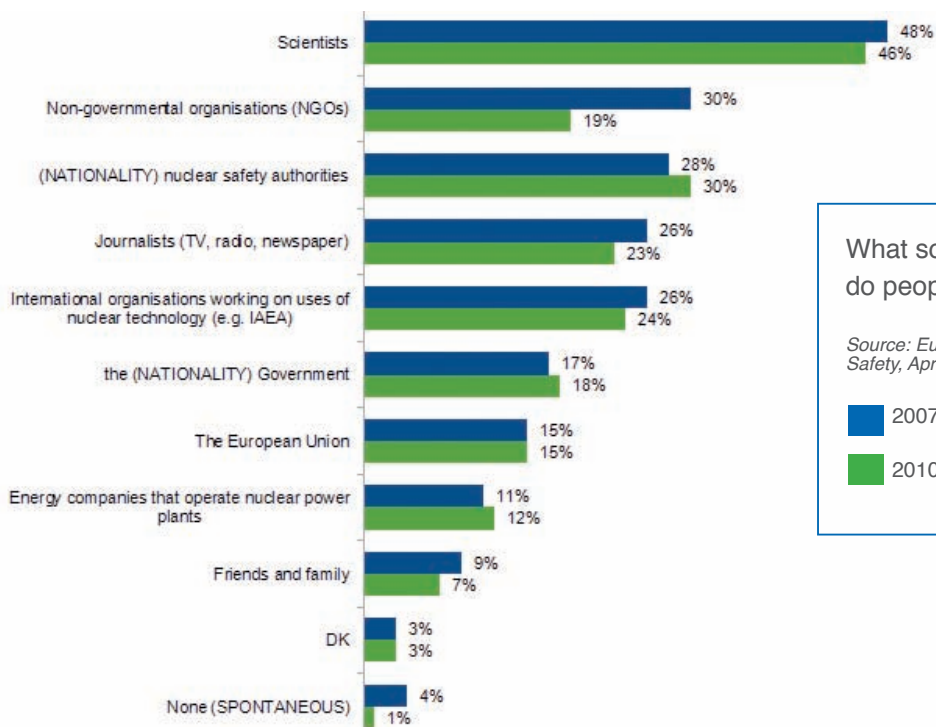
Information is the key to increasing public acceptance

Level of information

The results of the **Eurobarometers** do show that the greater the level of knowledge, the more favourable the opinion that citizens have of nuclear energy. On average EU citizens do not feel well-informed (74%, **Eurobarometer on Nuclear Safety**) about nuclear issues and radioactive waste in particular. However in countries where the level of real knowledge is greater like Sweden (Knowledge (K): 47%, Acceptance (A): 62%), Finland (K.: 51%, A.: 61%), the Netherlands (K.:44%, A.: 55%) and Czech Republic (K.: 41%, A.: 64%), public opinion is also more favourable to nuclear power (**Eurobarometer on Radioactive Waste**).

What sources of information do people trust?

In the April 2010 **Eurobarometer on Nuclear Safety**, the response on “credibility of source of information” is much as expected: scientists (46%) are still perceived as the most credible sources. However, it is worth noting that nuclear safety authorities (30%) have risen to second place in the credibility league. The Non-governmental organisations’ credibility rating, by contrast, has dropped by 11% point, to 19%, compared with the previous survey . The EU has a rating of 15% and the nuclear industry of 12% (+1% point). Though the mass media (TV:72%, newspapers: 40%) is EU citizens’ main source of information, journalists have a credibility rating of only 23% and rank fourth in the credibility league.



What source of information do people trust?

Source: Eurobarometer on Nuclear Safety, April 2010



Participation in decision-making

Only 1 in 5 Europeans (**Eurobarometer on Nuclear Safety**) would like to be directly consulted in the decision-making process regarding nuclear power. Around 25% would instead trust non-governmental organisations (NGOs) to represent their interests and 24% prefer to leave decisions to the responsible authorities. This can be accounted for by the fact that people do not feel well-informed and, therefore, not competent enough to decide on such issues.

Positive evolutions

EU citizens are quite well aware of the fact that nuclear power is one of the main energy sources in many European countries (**Eurobarometer on Energy Technologies**, May-June 2006). Respondents rank nuclear power (36%) third among the most used energy sources, after oil (81%) and coal (77%). Furthermore, a significant number of EU citizens are now making the connection between nuclear energy, security of supply and climate change.

A growing awareness of the climate change benefits of nuclear power

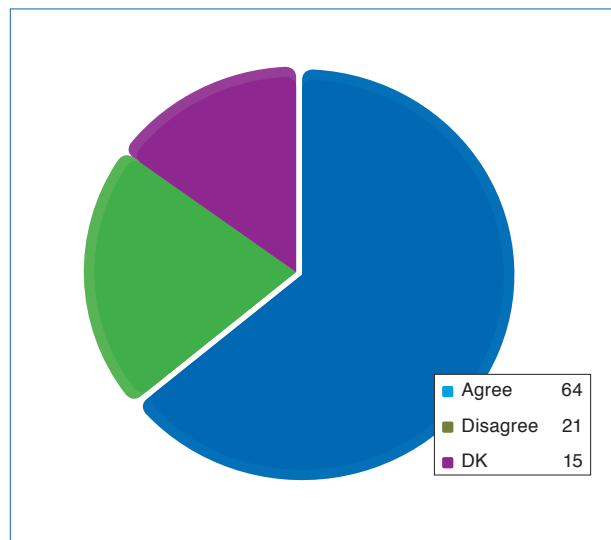
European citizens are getting more concerned with the climate change issue and are becoming aware of the fact that nuclear power is a non-emitting energy source. According to the latest **Eurobarometer on Radioactive Waste** (2008), 62% now agree that one of the main advantages of nuclear energy is that it produces less greenhouse gas emissions (GHG) than coal and oil (an increase of 4% compared to 2005).

Nuclear energy as a means of addressing security of supply and energy dependency

According to the latest **Eurobarometer on Radioactive Waste**, more than 64% of EU citizens polled believe that nuclear energy enables European countries to diversify their energy sources (an increase of 4% compared to 2005). The results of the latest **Eurobarometer on Nuclear Safety** show that 68% believe that using more nuclear energy would make Europe less dependent on fuel imports.

The use of nuclear energy enables European countries to diversify their energy sources

Source: Eurobarometer, Radioactive Waste, July 2008



Those who live next to an NPP are more in favour of nuclear power

People are generally more likely to be in favour of building NPPs on existing sites: In Finland, the population in municipalities that host nuclear facilities is more favourable to nuclear energy than in non-nuclear municipalities.

The results of the survey, **Energy Attitudes 2008**, reveals that a majority of citizens in Loviisa (59%) and Eurajoki (60%) supports the construction of a fifth NPP in the country. The national average is 43%.

Nuclear energy is expected to be a substantial part of the energy mix in the future

Looking ahead three decades, Europeans anticipate a fundamental swing towards the use of renewable energies. The **Eurobarometer Survey on Energy Technologies** (May-June 2006) reveals that European citizens now rank nuclear energy as likely to be the third “most used” energy source in 30 years’ time - after solar (49%) and wind (40%). In 2002, only 6% of EU citizens expected nuclear to be part of the energy mix in 20 years.

In the latest **Eurobarometer on Nuclear Safety** (2010), when asked whether they would like to see the share of nuclear energy reduced, maintained or increased, 56% said it should be maintained or increased. This is an increase of 8% compared to the previous survey.

Conclusions

It is pointless to oppose nuclear energy and other sources of energy such as renewables. Nuclear must be part of the energy mix. The nuclear energy expansion will continue to gather momentum if there is the political will to promote it.

Public opinion evolves quicker than it is usually assumed (e.g.: UK, Finland). Like with many “back-of-the-mind” issues, people’s attitudes towards nuclear energy are relatively unfixed and heavily influenced by recent news and by the way the questions are put. “There is little reason to believe that if the technical, environmental and economic case for nuclear energy is strong enough, popular opposition would act as an insuperable barrier.” (Malcolm Grimston, Associate Fellow with the Sustainable Development Programme, Chatham House, London.)

The accident at Fukushima led, understandably, to a temporary decrease in public confidence in nuclear energy in some countries. This might result in extra short-term costs for new build programmes. However, public support has generally held up well and these factors should not decisively effect nuclear energy’s contribution to Europe’s energy mix. When it comes to making energy choices, the inescapable benefits of nuclear energy will continue to speak for themselves.

Governmental campaigns, energy policy reviews and public debates play a major role in shaping public opinion. Those events relayed via the media are a means of better informing European citizens and information is key to gaining public acceptance. Governments and policy-makers should be encouraged to undertake such action.



The opinion polls mentioned in the brochure are available at: <http://www.foratom.org>

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January 2012