



Energy policy and climate change

France's nuclear future

Narrator

The French energy model is unique due to the country's history in geography. With few indigenous resources, national energy independence and technological innovation are at the core of its energy policies.

In this video we'll look at the influences that have shaped France's energy model.

Electricity is generated mainly from nuclear power, with a significant contribution from hydroelectricity, and more recently wind and other renewables.

Dominique Maillaird

We were producer of fossil fuels during the 20th Century. Coal, natural gas and, and oil. But nowadays we import all the coal we, we use. All our mines, coalmines are closed. We have closed also five years ago our last uranium mines. And it means that we import 97 percent of our natural gas, 98 percent of our oil. So the only resources, indigenous resources we have are renewables on one hand, mainly hydroelectricity and biomass, and also nuclear.

Narrator

France's 58 nuclear plants are run by *électricité de France*, or EDF. Historically the country's energy companies have been state run. France has lagged behind in fulfilling EU obligations to privatise a set percentage of the business.

Dominique Maillaird

We were on the line to say "Okay we have to open the market because it provides a lot of advantages for consumers." But we have to be sure that some key concerns are still well taken into account, especially security of supply.

Narrator

But, under increased pressure from Brussels, things are starting to change.

Dominique Maillaird

The position of the market is an obligation coming from European directive. And of course we will comply with and the French electricity and natural gas market will be completely open by the 1st of July 2007.

Narrator

Since 1945, France's policy has been to increase energy independence and self-sufficiency in electricity production. Spurred on by the 1970s oil crisis, France launched the most comprehensive national nuclear energy programme in history.

Thierry Dujardin

The question about security of energy supply was taken very seriously following the oil checks of the '70s, and it seems to prove today to be a very good choice.

Thierry Dujardin

You can analyse the benefit for country to develop nuclear energy for producing electricity mainly, for the time being. You can allow that with the same three er key er viewpoints. From the economics perspective you can bring stability in the um price of electricity in the long-run, because nuclear energy has a, is a very stable price, in comparison with fossil fuel energy; oil and gas. You may also er consider that in bring diversity of supply, which is good for the security of supply of any country, and it brings high technology in a country. So from all this

aspect nuclear energy should be conserved as a potential solution in all energy policy, in all mixes of energy that any country needs to develop.

Narrator

Advocates of nuclear power consider France as exemplary. Around 75 percent of its electricity is nuclear. They also argue that it contributes to the country's wider sustainable development goals.

Dominique Maillaird

Nuclear has maybe some drawbacks, but it is not a CO2 emissive resource. So, since reduction of CO2 emission is now a global target, we do consider that it's a good choice for achieving our own goals.

Narrator

France now has one of the lowest levels of CO2 emissions per capita in the industrialised world. But do the benefits of nuclear outweigh the risks? Attempts to green-wash the nuclear industry have outraged anti-nuclear groups. They claim that nuclear power is not entirely carbon free, and that the management of France's nuclear waste has been neglected.

Yannick Rousselet

The French government tried to convince the people that this industry, the nuclear industry is clean. Ah this argument is not true.

Yannick Rousselet

You doubtless have consequences in all the transport or, the extraction mining. All these things have direct consequences. But the main big problem is nuclear waste. And we have tons of high level waste storage in the nuclear plant La Hague. Nobody knows what will happen with that in the coming years.

Narrator

La Hague is one of the largest nuclear waste sites in the world. High level waste is stored in large interim facilities, while scientists search for a long-term waste repository. A solution still needs to be found.

Thierry Dujardin

It is a fact that there is no high level waste repository in operation in the world for the time being.

Thierry Dujardin

There is a large consensus that the final solution should be deep geological repository. It was not so much important to do, to start building a repository 20 years ago. I think it's a good time for many countries to develop it now.

Narrator

Opponents of nuclear power, like Greenpeace, argue that the French government should offer the same amount of support for renewable technologies.

Yannick Rousselet

The first things that the Government must do to is to be open and to have transparency of the different possibilities of energy.

Narrator

The environment and energy management agency, Ademe, plays a major role in advising ministries in charge of environment and energy policy.

Carole Le Gall

The main goal that the French policy wants to achieve is the Factor Four goal. The Factor Four means that we want to divide by four the amount of emissions of greenhouse gases by 2050. Our job in ADEME is to facilitate, promote, develop all the renewable energy.

Narrator

Hydroelectric power accounts for around 15 percent of French electricity, but some claim that the government's support for other renewable electricity sources has been disappointing.

Dominique Maillaird

It's very often said, even in France, that we have some delay in the development of renewables, and it's true as far as solar, wind energy are concerned. It's unfair to say that we have some delay on other sources. For instance, um I have to say that when you look at EU, France is still in volume the first producer of renewable energies.

Narrator

Ambitious goals have been set to ensure that renewable electricity will play an even bigger role in France's energy future, particularly through the development of its wind programmes.

Dominique Maillaird

Our wind programme is a small one. This year the wind farms will both out pass 1,000 megawatt and 2,000 megawatt in, in the same year.

Narrator

2005 saw the introduction of a new energy law. While still supporting the nuclear option, it also included a white certificates system to encourage energy savings, and a new tariff scheme to promote the development of solar, wind, biomass and geothermal energy.

Carole Le Gall

The tariffs are financial incentives, because today the renewable energy is still a little bit more expensive than traditional energy. So in order to help the development of this new renewable energy, the Government approves a special tariff that is calculated according to the cost today of producing this energy and to guarantee a normal level of return on investment.

Dominique Maillaird

We have objectives according to the European directive. The share of electricity produced by renewables in French system, should reached 21 percent by the year 2010, when it is around 14 or 15 percent nowadays.

Narrator

Energy efficiency improvements will also be needed to upgrade France's inefficient housing stock and transport systems. Transport produces 26 percent of all greenhouse gas emissions. The government's development programme for bio fuels aims to benefit both farmers
And the environment.

Carole Le Gall

We have a lot of effort to make towards heat. Today a lot of heat is non-renewable and we, we need to shift to a renewable heat. And also for bio fuels; today bio fuels are very small in the part of what we consume for our cars and, and we have quite ambitious goal of going to seven percent by 2010, which is again very soon, and we start from less than two percent.

Carole Le Gall

People are investing in their buildings to change windows or equipment to better the energy efficiency. People are changing cars for smaller and more efficient cars. So I think this whole policies, plus of course the, the increase of the price of energy, is really making things move.

Narrator

Proud of its technological inheritance, France seems likely to continue with its nuclear programme for the foreseeable future, but will also continue to diversify its energy mix.

Dominique Maillaird

For French energy policy it will be very important to keep the nuclear option. Of course it would be very important to diversify, to try to reduce more and more the share of fossil fuels, by all means.