



LET'S RENEW

WWF dismantles the myths of renewable energies in Spain

Subvencionado por:



INTRODUCTION

Climate change threatens ecosystems and human lives. Energy production and use from fossil fuels are the main causes of greenhouse gas emissions (GHG). WWF Spain works to curb and reverse climate change, and one of the major elements is the transition towards an energy model based on renewable energies and energy efficiency. This is the framework of “Let’s renew: Myths and Realities of Renewable Energies”, whose purpose is **to make Spanish population discover reality and the possibilities of renewable energies as a tool to fight against climate change**, and by removing any wrong idea about it, to increase the demand of this type of energy.

The project has experienced two phases. The first one was to check any wrong beliefs, which we have come to call “myths” about renewable energies. The second one was to create the arguments to dismantle these myths. All this was reinforced by the citizens’ opinions about renewable energies, obtained by way of different **surveys**. These have helped to understand deep-rooted ideas.

Several tools have been used. For two months, we analyzed all messages about renewable energies communicated in Spain through the media and different specialized sources of information. In this phase, we identified different mistaken messages that contribute to the wrong myths about the advantages and disadvantages of renewable energies.

To provide an **overview of the citizens’ opinion**, two types of surveys were performed: one to individuals and one to organizations that were administered during the months of March and April 2011. Questions were divided into four major areas: concerns about the energy sector in Spain, opinions about the different sources of energy, perceptions about the situation of renewable energies and institutional support to renewable energies.

The individuals survey were carried out through the [Website](#); social networks and member bulletins. A total of **872** valid surveys were returned. The group survey were carried out thanks to the participation of WWF network groups (Seville, Granada, Córdoba, Bizkaia, Alicante and Barcelona), whose members were trained in different workshops about renewable energies. A total of **59** surveys from consumers, users, cultural, youth and cooperation associations were analyzed...

A consulting company specialized in statistical data (Nielsen) was responsible for the processing of the questionnaires. The report of the results of the study can be found in our [Website](#).

This information served us to carry out a workshop with key players in the industry of renewable energies in Spain, representatives from consumers and users associations and other social groups, the media and representatives of the Public Administration.

The results of the questionnaires were discussed and the initial analysis of the messages transmitted through the media served to identify the false myths about renewable energies existing in Spain and to define the arguments and messages that dismantle them. The role of key sectors and the main recommendations to

improve the information transmitted to the population about renewable energies were also studied.

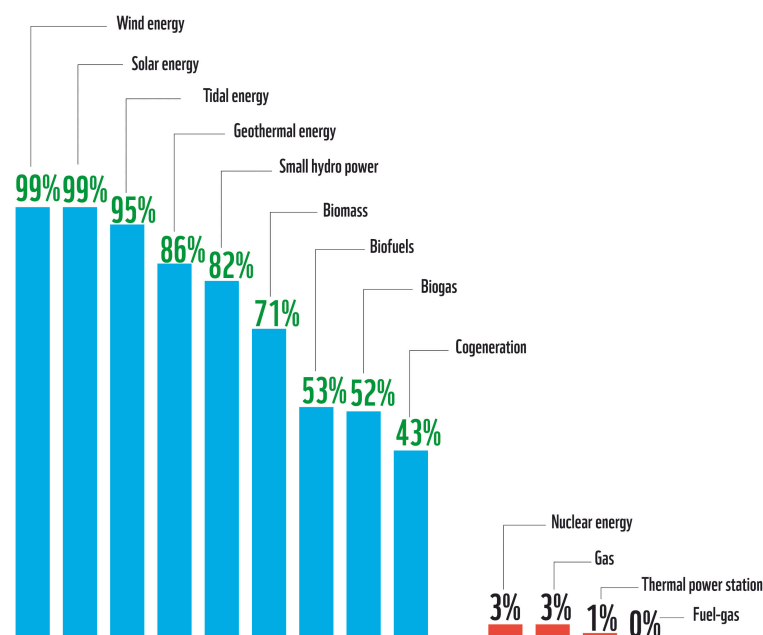
PERCEPTION OF THE POPULATION

The project “Let’s renew” also aims to identify citizens’ perception about renewable energies.

The most important results of the **individuals survey** are the following:

- Wind, solar and tidal power are the different types of energies that individuals regard as renewable energies. (Graph 1)
- The most common renewable energies in residential areas are photovoltaic and solar thermal panels.
- Of the people surveyed, 100% consider that these types of energies are more environmentally friendly than conventional energies.
- 30% of people state that they have a solid knowledge about this type of energy.
- Most of the people (95%) are worried about the slowdown in development of these types of energies.
- 92% of people think that energy policy decisions influence the economy.

Graph 1. Knowledge on renewable energies. ¿What type of energies do you regard as renewable energies? Total of surveys: 872.

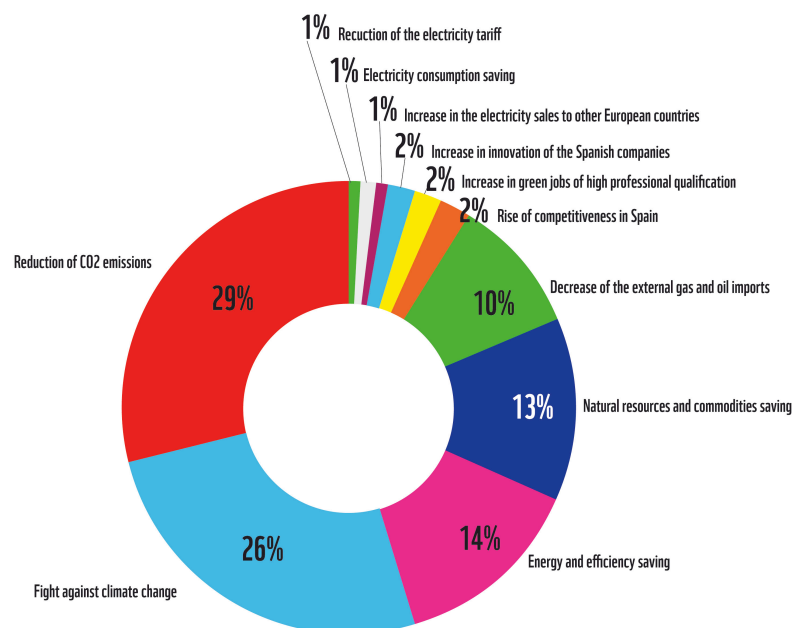


- All the people surveyed state they are in favor of the development of renewable energies, although only one third considers that Spain is a world

leader in the development of this type of energy, and less than half (44%) think that the rate of development is fast.

- 53% of individuals do not consider that Spain is a world leader in renewable energies. On the contrary, 35% do consider Spain is a world leader in this sector.
- The reduction of CO₂ emissions and the fight against climate change are the main benefits of renewable energies. (Graph 2)
- Solar photovoltaic energy should receive more institutional support.
- Almost all the people state it is critically important that the Government continues to support development of this type of energy, mainly to contribute to the change of the energy model.
- The interests of the electricity companies are the main reason to explain the increase in the electricity bill. These companies are considered the primary drivers of the increase in the electricity bill.

Graph 2. Benefits of renewable energies. ¿What is the main benefit of the renewable energies? Total of surveys: 872.

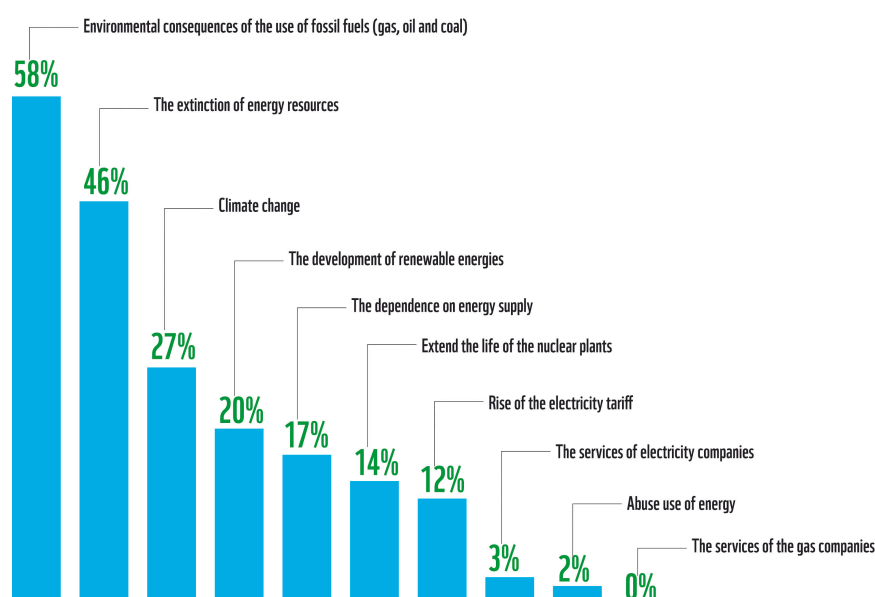


Of the results obtained from **survey completed by organizations** it is important to point out:

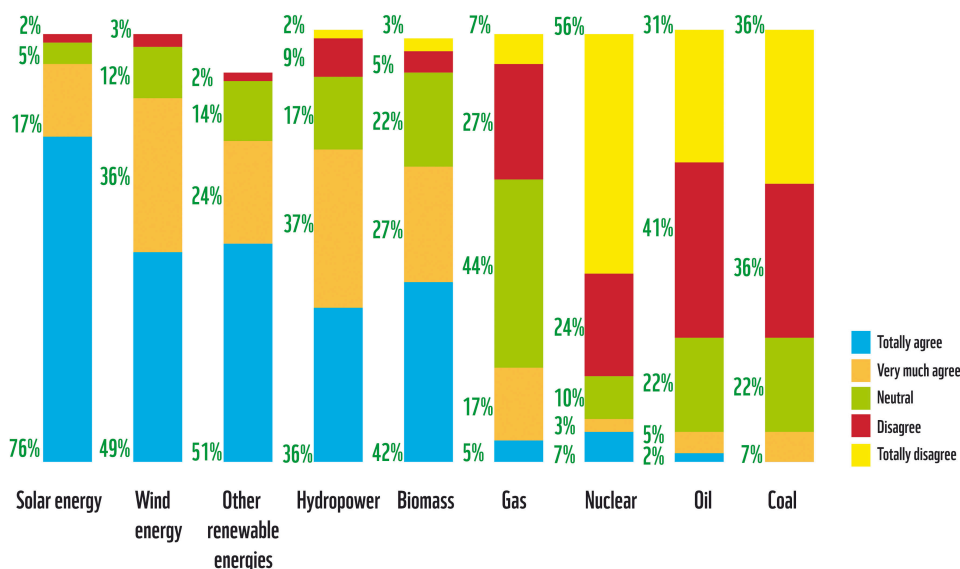
- Most of the people interviewed think that the current energy situation is not a problem for Spain. Nevertheless, they are worried about the consequences the use of fossil fuels or the extinction of energy resources could have for the environment. (Graph 3)
- Among the events people consider more likely to occur in Spain, almost all groups highlight the important increase in the price of gasoline and gasoil and electricity prices.

- Solar energy is perceived as the most effective means to fight against climate change, the cheapest type of energy and the least harmful to the environment and to human health.
- The uses of solar energy (93%) and wind energy (85%) are considered adequate. On the contrary, the use of nuclear energy, oil and coal is rejected. (Graph 4)
- Solar and wind energy are the most popular forms of renewable energies (98% and 97%), and installations of photovoltaic and solar thermal panels are the most frequent ones. The use of these types of energies encourages the decrease of CO₂ emissions.

Graph 3. Energy issues that concern in Spain. ¿What is the energy issue that you are most concerned about or you consider as much important in Spain? Total of surveys: 59.



Graph 4. Type of energy preference. ¿How much are you agree with the use of these types of energies in Spain ? Total of surveys: 59.



- 21% declares they have solid knowledge of renewable energies.
- 31% thinks Spain is a world leader in renewable energies. Most (91%) are concerned by the slowdown in development.
- 88% of people think that energy policy decisions influence the economy.
- 95% states that these types of energy are more environmentally friendly than conventional ones.
- 93% estimates that renewable energies must be developed in Spain.
- 39% of people are of the opinion they are developing fast.
- Most believe photovoltaic solar energy should receive the greatest institutional support. In addition, the majority point out that the Government must continue its support to the development of these types of energies to contribute above all to the change of the energy model.
- The increase in the oil price is considered the main cause of the increase in the price of electricity.
- 63% believe Spain can achieve the goal of 100% renewable electricity. The use of renewable energies will decrease the imports of oil and gas (for 88% of the population surveyed).

MYTHS DETECTED

Myths arose from the analysis of the information and the workshop carried out with the sectors involved.

From the **previous analysis of the information**, the following overview was generated:

- *Contradictory and confusing messages in the media.* A clash of messages from the conventional energy sector and the sector of renewable energies that confuses the population.
- *Technical and complex information about renewable energies* that hinders knowledge and understanding of the current situation and related problems of the sector.
- *Regulatory changes of the sector of renewable energies.* Unstable investments and flight of investments out of Spain due to the regulatory uncertainty.
- *Limited information about the benefits and advantages of renewable energies.* Improvement of competitiveness, industrial development, change of the productive and energy model, job creation, decrease of energy dependence, technological development, innovation, improvement of trade

balance, no CO₂ emissions, clean production, unlimited resources, sustainability, etc.

In addition, the following myths related to renewable energies were identified in the **workshop**:

Related to environmental impacts:

1. The environmental impacts of renewable energies have the same magnitude than those coming from fossil fuels or nuclear energy.

Related to economic aspects:

2. Renewable energies are expensive and we cannot afford them in times of crises.
3. Renewable energies are responsible for the increase of the electricity bill.
4. Renewable energies are subsidized.

Related to the viability of substituting fossil fuels and nuclear energy:

5. Not all energy can come from renewable sources. We will always need fossil fuels and nuclear energy.
6. Renewable energies cannot guarantee the electrical supply and they need the support of other power sources.

DISMANTLING MYTHS

To dismantle the myths about renewable energies in our country, the following arguments were defined and some key messages were prepared to help in the dissemination of these ideas to the population.

Related to environmental impacts:

Myth # 1. The environmental impacts of renewable energies have the same magnitude than those coming from fossil fuels or nuclear energy.

This is false because renewable energies:

- Generate 55 times fewer environmental impacts than conventional energies (oil spills, atmospheric pollution, radioactive waste, etc).¹
- Produce clean energy in comparison to energy from fossil fuels or nuclear power that causes environmental pollution and an increased risk of hazards.
- Do not have any negative impact on human health.
- No CO₂ emission is produced in generating them.

¹ According to the study: "Environmental impacts of electricity production" published in 2000 with the support of IDAE, CIEMAT, APPA and competent organizations in the energy area of five autonomous communities (Aragón, Catalonia, Navarra, Galicia and the Basque Country).

- Their facilities are easily dismantled once they reach the end of their productive life.
- Their impact in the event of an accident is minimal and much less than the impact of an accident in a nuclear power plant or in fossil fuels facilities (mines, refinery facilities, maritime transport of gas, oil or oil products, etc.)
- Its residues may be used to generate energy (slurry, organic waste, olive residues from the olive oil industry, forest residues...).

Messages related to the environmental impacts arising from renewable energies:

- They are considerably less significant than the impacts of fossil fuels and nuclear energy.
- They respect the environment; they do not pollute, resources are unlimited and they are sustainable from a social, economic and environmental point of view.
- They fight against climate change and hence they protect biodiversity.
- They avoid CO₂ emissions and the release of other harmful gases to the atmosphere.
- Their environmental benefits are more important than any possible impact.

Related to economic aspects:

Myth # 2. Renewable energies are expensive and we cannot afford them in times of crises.

This is false because renewable energies:

- Contribute to the increase of the GDP. In 2009, their total contribution to the GDP amounted to 8,525.6 Million Euros.²
- Decrease the energy dependence on fossil fuels. By 2020, renewable energies will generate import savings of 25.5 Million Tons of oil equivalent and a value of 13,351 Million Euro.²
- Will allow saving 67.3 Million Tons of CO₂ with a value of 1,830 Million Euros by 2020.²
- Thanks to them, Spain is a net exporter of electricity. The sale of renewable electricity improves our trade balance.
- Contribute to the export of renewable technology.
- Costs evolution of renewable energies follows a downward trend, while costs evolution of conventional energies follows an upward trend.
- Its technological improvement will ensure higher profitability than conventional energy sources in the near future.
- Contribute to jobs and wealth creation. They have potential for future job growth that is hard to beat by other sectors. In addition, these are highly qualified jobs and professionals in these fields are highly recognized and in high demand all over the world.

² APPA report on the "Study of the macroeconomic impact of renewable energies in Spain 2009", according to the parameters of the International Energy Agency.

- The economic, social and environmental costs of not implementing renewable energies are much higher than the impacts of climate change they contribute to avoid.
- They represent an undeniable commitment to the future of the Spanish economy, taking into account the benefits they will bring.

Myth # 3. Renewable energies are responsible for the increase of the electricity bill.

This is false because:

- The increase in the price of electricity is due to a political decision to maintain an artificially low price for years and to the increase in the price of fossil fuels.
- The higher the demand of renewable energies, the cheaper the price of electricity, while the higher the use of fossil fuels, the higher the price of electricity.
- 100% of renewable energies costs are shown in the cost of the electricity tariff, while the costs of conventional energies are not shown.
- Renewable energies are cheaper considering the hidden costs of fossil fuels and nuclear energy.

Myth # 4. Renewable energies are subsidized.

This is false because:

- The feed-in tariff to renewable energies are justified because conventional energies do not internalize all their costs.
- Renewable energies only receive compensations for their contribution to the technological development and to the decrease of CO₂ emissions and other air pollutants.
- All technologies have used subventions for their development. Nuclear energy, in the last few years, contributed less than 11% of primary energy and it has been a source needing economic subsidies even 40 times higher than those received by renewable energies in the beginning.³

Messages related to the economic advantages of renewable energies:

- The real costs of conventional energies are higher than the costs of renewable energies.
- Renewable energies provide savings in fossil fuels imports.
- Renewable energies are increasingly less costly, while conventional energies are increasingly costlier.
- Renewable energies are not responsible for the increase of the electricity tariff.
- Aids provided to renewable energies represent a minimal cost and in any case a transparent one.
- The expensive thing is not to fight against climate change.
- With renewable energies, we are all winners in terms of jobs creation, competitiveness, innovation and future for generations to come.

³ According to the European Environmental Agency in its 2006 report.

Related to the viability of substituting fossil fuels and nuclear energy:

Myth # 5. Not all energy can come from renewable sources. We will always need fossil fuels and nuclear energy.

This is false because:

- Fossil fuels are finite, while renewable energies are infinite and they are currently underused. According to the Intergovernmental Panel on Climate Change (IPCC), we only use 2.5% of renewable resources.
- Reaching the present contribution of renewable energies was considered only 10 years ago as a utopia. Reality has demonstrated that it was possible.
- In the future, fossil and nuclear resources will become depleted or extremely expensive and conflicts will arise worldwide to have access to finite fossil fuels.
- A high number of technical studies demonstrate that a future based on 100% renewable energies is possible and that there is no need for finite fossil and nuclear resources.
- Renewable energies provide for a change in the production model.
- The variety of renewable technologies, the storage and the electrical grid interconnections make possible that all the energy of the future may come from renewable energies.
- Taking into account all the benefits they generate, renewable energies represent an undeniable commitment to the future of the Spanish economy.

Myth # 6. Renewable energies cannot guarantee the electrical supply and they need the support of other power sources.

This is false because:

- Renewable energies are autochthonous, which represents an added value in terms of security supply and to economic development. They are thus more secure and democratic. In addition, they promote peace because they do not produce any type of international tension, as it can occur in the Middle East.
- The electric grid interconnections and the storage of energy will be the key to a renewable future.
- Not all renewable technologies are intermittent. Some examples of this are hydraulic power, biomass and solar thermal energy.
- Spain is a world reference in the integration of renewable energies to the electric grid.

Messages related to the viability of renewable energies:

- In the future, fossil and nuclear resources will become depleted or extremely expensive.
- Technologies for renewable energies already exist at commercial level. They only have to be optimized and installed on a large scale in Spain.
- The autochthonous nature of renewable energies guarantees energy independence and the security of the supply.
- Renewable energies provide a democratic, peaceful and safe type of energy.
- Renewable energies contribute to the change of the energy model towards a sustainable, renewable and clean model.

- Spain must continue being a world leader in renewable energies. We cannot afford to go against the flow.
- With all the existing renewable energy technologies, we can guarantee the supply of energy. There is a mix of energy solutions.

CONCLUSIONS

During the last 10 years, the development of renewable energies in Spain has been exceptional and it has maintained a highly accelerated rate thanks to the support given to its promotion. At present, however, due to a change in the regulatory framework, renewable energies have experienced an important curb and they have been the target of negative campaigns that have affected the perception of the population.

It is important **to ensure acceptance of renewable energies in our country**, while fighting against the [main barriers](#) they are facing at the same time⁴ (regulatory, technical and economic), innovation is promoted and competitiveness and technological development are improved. This will facilitate **the change of the energy model** to contribute to the decrease of CO₂ emissions in Spain and to fight effectively against climate change and its consequences.

By improving the awareness of the population about the advantages of renewable energies, we will be able to accelerate the transition towards an energy model based on renewable energies, savings and energy efficiency. To achieve this, **training and awareness campaigns are needed** to provide accurate and precise information, using **clear, concise and coherent messages** about renewable energies and using clear and simple language that everybody can understand to ensure comprehension by the population.

WWF CLAIMS

Key sectors must participate to increase and improve the information available about renewable energies in Spain: the Public Administration, the media, the consumers and users organizations and the associations of the renewable energy sector.

WWF makes the following requests related to the contributions each of the sectors could make **to improve the communication about renewable energies in Spain**.

WWF requests to the Public Administration:

- To increase education, training and awareness campaigns related to energy issues at all levels (general population, technicians of the Administration and civil servants).

⁴ "Renewable energy in Spain 2020: barriers and possible solutions". WWF 2010.

- To incorporate energy issues to the formal education system with a new social and environmental vision.

WWF requests to the media:

- Informative rigor incorporating journalists and professionals with different visions to the debates about energy issues.
- To speak about energy issues separating them from any current event, by creating “energy-related sections” that would consider social and environmental factors in addition to the economic one.

WWF requests to the organizations of users and consumers:

- To increase consumer awareness towards a more responsible consumption of energy by including other criteria in addition to price when evaluating energy options. One example is the information campaigns for their members where energy costs are associated to carbon footprint.
- Cooperation when demanding:
 - To the National Energy Commission, greater transparency of the information provided in the electricity bill in order to guarantee a better understanding from consumers.
 - To electricity companies, greater transparency about the origin of the electricity in the electricity bill.

WWF requests to the associations of renewable energies:

- Greater efforts in terms of communication and investment to transmit messages about renewable energies.
- To communicate the benefits of renewable energies, in addition to specific messages about the corresponding technologies.

WWF requests to citizens:

- To [be aware about their personal energy consumption](#) and about the best way to reduce it.
- To demand more information to electricity companies and to the Public Administration about the use given to energy and existing alternatives.

These measures will facilitate that the Spanish population demands to the Public Administration and competent sectors actions aiming at fighting the main challenges and barriers faced by renewable energies in Spain, in order to obtain an **urgently needed change of the energy model** towards a sustainable and clean model, based on renewable energies, energy savings and energy efficiency.

WWWF Spain
info@wwf.es

Text: Mar Asunción and Raquel García
Revision: Belén Fernández and Enrique Segovia
Editing: Amaya Asiain