

# Informational autonomy in Nuclear Communication: analysis of current legislation

## *La autonomía informativa en Comunicación Nuclear: análisis de la legislación vigente*



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### **Abstract:**

Public opinion in Spain has historically been opposed to nuclear energy. The atomic sector points to a lack of information and awareness among the population as the main causes of this rejection. Bridges between public opinion and the atomic industry must be built with transparent information by those authorities with a responsibility to inform (be they the government, the regulatory body, or a nuclear power plant) so that citizens are protected in case of unforeseen events, and to ensure they understand the advantages and disadvantages of this energy source. In this sense, the legislation on Nuclear Communication considers transparency to be the fundamental basis for this interaction with society. In this article we review the international, European and national regulations to have a clear idea of the projection and influence that this regulation has on the communication management of these industries.

### **Keywords:**

Transparency; nuclear legislation; Nuclear Communication; nuclear energy; nuclear power plant.

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### **Resumen:**

*La opinión pública en España se ha posicionado históricamente en contra de la energía nuclear. El sector atómico señala la falta de información y el desconocimiento de la población como las causas principales de ese rechazo. El puente que une a la opinión pública y a la industria atómica debe trazarse con información transparente por parte de la autoridad responsable de informar (ya sea el Gobierno, el organismo regulador, o una central nuclear) para que los ciudadanos estén protegidos en caso de sucesos imprevistos, y para que puedan comprender las ventajas e inconvenientes de esta fuente de energía. En este sentido, la legislación en materia de Comunicación Nuclear contempla la transparencia como la base fundamental para esa interacción con la sociedad. En este artículo se revisa la normativa internacional, europea y nacional para conocer la proyección e influencia que la regulación tiene en la gestión de la comunicación de estas industrias.*

### **Palabras clave:**

*Transparencia; legislación nuclear; Comunicación Nuclear; energía nuclear; central nuclear.*

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## 1. Introduction

Opinion polls give clear results concerning the public's acceptance of nuclear energy and its production plants: Spaniards have been against nuclear energy in recent years although the level of acceptance rises when there is greater knowledge concerning certain aspects of this energy source (Ipsos Consulting & Innova Investigación de Mercados, 2014-2018).

Spaniards have perceived, since the introduction of nuclear energy in the 60s, a lack of transparency and certain opaque manoeuvres on the part of successive governments and the companies operating nuclear plants. To this we can add a lack of knowledge on the part of the citizens, poor management of several incidents in Spain, deficient communication following some civil accidents (Three Mile Island, Chernobyl and Fukushima), anti-nuclear campaigning, the ideological position of some political and opinion leaders, uncertainty over the handling of radioactive waste, and fear of a potential nuclear accident as the principal causes of this uneasiness among the general population regarding nuclear energy, as shown by the main authors on this subject as well as polling by the CIS and Eurobarometer<sup>1</sup>.

These polls also show that safety, the environment, public health, accidents, the profitability of production and radioactive waste are the subjects which have dominated debate cyclically over time. Current debate in Spain centres on the closure of Spanish nuclear plants or on renewal of their operating licenses<sup>2</sup>.

Do Governments behave responsibly when they inform the public on the usefulness of this energy source? Does the regulator transmit transparent information to the public on events in nuclear plants? Do nuclear plants prioritize their own interests over giving a true picture of the sector? Are citizens really informed about nuclear energy? What obligations do the authorities have concerning information in the atomic sector? The right to information is enshrined in Article 20 of the Spanish Constitution of 1978.

The objective of this study is to ascertain how much independence nuclear plants really have when they inform the public and what legal restrictions they are subject to in the area of communication. Furthermore, once we have looked at the regulations governing Nuclear Communication, we intend to consider how, and in what situations, citizens are protected by the law as regards communication.

## 2. Methodology

This study poses the following questions:

Do nuclear plants in Spain have legal restrictions concerning communication, or are they free to inform the public in any and all situations?

Are citizens protected by the law as it stands on information concerning nuclear matters?

In order to answer these questions, we have developed the following methodology. Firstly, we have reviewed current nuclear legislation (international, European and national) to find out the regulatory limitations imposed on nuclear

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1 Cf. Opinion polls by CIS (February 1995, November 1997, December 2000, November 2007, May 2011) and Eurobarometer (December 2002, September 2005, January 2006, February 2007).

2 In 2020 the Vandellós II & Almaraz nuclear plants have renewed their operating licenses for periods of ten and eight years, respectively.

plants by nuclear legislation relative to communication. We thereby intend to establish the true independence of Spanish nuclear plants when communicating with the public in different situations, that is, both in times of ordinary activity and at moments of crisis. Moreover, we seek to establish whether citizens are protected by the law concerning information, and under what circumstances.

Secondly, we have carried out extensive interviews with the press officers of Spanish nuclear plants to obtain first-hand knowledge of their vision of nuclear transparency and how they interpret the communicative function and regulatory limitations<sup>3</sup>.

The interviews took place face-to-face in their official centres: Madrid, Tarragona and Valencia. The experts interviewed were Monserrat Godall (Ascó-Vandellós II. Nuclear Association on November 3, 2016), Antonio Cornadó (Santa María de Garoña and the Spanish Nuclear Industry Forum. December 21, 2016), Juan Pedro Alcázar (Almaraz-Trillo Nuclear Plants. December 21, 2016), Jesús Cruz (Cofrentes. February 16, 2017), and both Javier Sala and Carlos Gómez (Cofrentes. February 17, 2017). Additionally, we interviewed Antonio Melo (Almaraz-Trillo Nuclear Plants. January 25, 2017) by e-mail. The face-to-face interviews were no longer than two hours and were transcribed and recorded. A single questionnaire was used, split into six blocks by subject matter: communication in the nuclear industry; the plant's communication department and its communication policy; the plant's communication in normal situations; the communication of crisis in the nuclear industry; the plant's communication manager; and the nuclear plant and public opinion.

Furthermore, we have examined the existing literature on Nuclear Communication. Though there is no established doctrine on how nuclear plants are supposed to handle their communication in situations of ordinary activity –beyond some recommendations by official organisms such as the International Atomic Energy Agency or the Nuclear Safety Council– some authors have related certain aspects of communication with situations of nuclear crisis. The main contributions have been those of Cobos & Recoder (2019a), De Oliveira (2015), Koerner (2014), Siegrist & Visschers (2013), Abe (2013), Lu (2012), Yamamura (2012) Ionescu (2012), Perko (2011) or Perko et al. (2012, 2013).

Finally, this study has reviewed all the Eurobarometer studies (special, flash and standard) between 1974 and 2019, to determine changes in the opinion of Europeans relative to nuclear activity and to identify the key subjects that influence their perception. Studies of public opinion in Europe regarding the atomic sector took place in October 2001, March 2010, June 2008, February 2007, January 2006, September 2005, December and April 2002. We have also reviewed the polls of the Centro de Investigaciones Sociológicas (CIS) from 1979 to 2019 to see how regularly questions on nuclear energy were asked and what perception Spaniards have of electricity production from that source. Additionally, we have analysed studies of public opinion and nuclear energy in Spain that have been carried out annually by Ipsos Consulting and Innova Investigación de Mercados, for the Spanish Nuclear Industry Forum (2004-2018), to which we have had access.

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3 For this study we have taken into consideration the Santa María de Garoña (Burgos) nuclear plant as, despite having permanently closed in 2017, the testimony of Antonio Cornadó –who was director of communication at the plant for over 20 years and later President of the Nuclear Forum– is important and of great value to the object of our study.

### 3. Results

#### 3.1. Regulatory restrictions on Nuclear Communication

Nuclear legislation is ample and does not contemplate detailed and non-voluntary regulation on how nuclear plants are to communicate with different interest groups under normal circumstances.

##### 3.1.1. The international setting

There are international treaties or declarations –some non-binding– subscribed to by States. The Aarhus Convention was signed by the European Union and 51 European and Asian States on June 25, 1998 in Denmark. This international treaty guarantees the rights of citizens to information, to participation in the decision-making process and to access to justice in matters pertaining to the environment.

Aarhus is an international treaty that affects the nuclear sector. Article 4 of the treaty includes citizens' right to be informed on environmental matters<sup>4</sup> by public authorities<sup>5</sup>, and the responsibility of the latter to inform the former on the environment in a transparent manner<sup>6</sup>.

Article 5 of Aarhus also points to the obligation to immediately release information to those persons who may be affected by any health or environmental threats, whether occasioned by natural causes or human activities.

Aarhus is an inheritance of the 1992 Rio Declaration<sup>7</sup>. Article 10 of the Brazilian letter calls for transparent information from States in environmental matters:

“At national level, every citizen must have adequate access to that information on the environment in possession of the public authorities, including information on those materials and activities that may pose a danger in their communities, as well as the opportunity to participate in the decision-making process. The States shall facilitate and encourage awareness among the population by making this information available to all. Effective access must be provided to the corresponding administrative and judicial processes, among these, indemnification for damages and the pertinent resources”.

Article 18 of the declaration calls on the States to inform the public immediately in cases of disasters and emergency situations which could affect the environment.

Twenty years after that meeting, the United Nations' Conference on Sustainable Development was held in Río de Janeiro, which reaffirmed the substance of Río '92 as regards the object of our study<sup>8</sup>.

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4 Article 2 specifies what is to be understood by environmental information. Energy, radiation, and health all fall into this category.

5 Article 2 defines “Public Authority” as the national, regional, and local public administrations, but also as those individuals or legal subjects that render public services or have public functions related to the environment. Nuclear plants are understood to fall within this definition.

6 Aarhus only allows for the refusal of access to environmental information in certain cases that may concern confidentiality, public safety, and situations subject to legal proceedings.

7 The Rio Declaration was an international summit on Development and the Environment organized by the United Nations in Brazil from June 3 to 14, 1992.

8 Rio+20 took place in June 2012 in Río de Janeiro (Brazil). The participating countries reaffirmed their commitment on two central subjects: sustainable development and the eradication of poverty.

The Rio Declaration is considered *soft law*<sup>9</sup> as the responsibility of the States goes no further than a moral commitment or a declaration of intentions. However, Aarhus is of an obligatory nature for the countries that subscribe to it<sup>10</sup>.

### 3.1.2. The European setting

Member States of the European Union are obliged to include European directives in their national legislation. Safety in nuclear plants and the management of spent fuel is an exclusive competence of the Member States.

With the birth of the Euratom Treaty<sup>11</sup>, the European Union established directives on nuclear energy, with the objective of protecting European citizens from radiation and protecting the environment.

The latest European directive on nuclear energy and safety established basic norms on nuclear safety for the member States of the European Union. This 2014 directive also includes some general norms corresponding to communication with the general public. Article 8 calls for transparency by the States –in plant safety matters– towards the main interest groups in the vicinity of the plants, that is, local population centres, local authorities, and the plant’s workers.

Furthermore, it is also established as an obligation that plant management and the competent regulatory organs provide information to the workers of the plant, local authorities and the general public, not only regarding the ordinary operation of the plant, but also that these *stakeholders* be swiftly informed of accidents or incidents.

This transparency demanded of member States may be linked to the acceptance by public opinion of nuclear energy, as indicated by Ruiz de Apodaca (2010:9): “Transparency, information and participation in the making of these decisions is what generates the necessary trust between the public, nuclear industry and regulators, thus permitting the exercise of such activities”.

Cornadó (2006:34) also mentions the transparency that the legislation grants to the nuclear sector: “Nuclear regulations foresaw, from the first moment, a complete and complex information system concerning all the industrial process related to the nuclear generation of electricity. This type of information grants a significant degree of transparency to the activities of the sector”.

Muñoz (2012:35), a journalist in the communication team of the Nuclear Safety Council, speaks on the same lines: “we must be prepared to respond to a society that not only demands that things are done properly, but that they are done transparently. Transparency and communication are crucial affairs in the information society of the XXI century”.

It can be said that the starting point for the building of public trust in nuclear affairs is to be found in transparent information from the nuclear authorities to the citizens in each State, this being true in all those areas that concern them regarding nuclear matters (safety, health and the environment).

9 Non-binding legal ordinances.

10 For example, Spain ratified the Convention in 2004 and it came into force in 2005. Aarhus was assumed by the legislation 27/2006.

11 The European Community of Atomic Energy (EURATOM) came into being as a consequence of the Treaty of Rome (1957). The Euratom treaty established the basis for the development of nuclear energy in Europe.

Another key European nuclear directive is that which refers to radioactive waste and the handling of spent fuel<sup>12</sup> (2011). One objective of this directive is the provision of effective information and the establishment of dialogue with the public to promote transparency.

### 3.1.3. *The Spanish setting*

Spain, as a Member State of the European Union, complies with these directives on nuclear matters and must assume, in their totality, all that which refers to informing the public and to transparency.

A historical review of nuclear legislation in Spain to see the legislation on the relation between the State and the Spanish people –in that which pertains to information provided to public opinion–, allows us to say that the 1964 law on nuclear energy<sup>13</sup> (hereinafter “LEN”), does not refer to the necessity of the provision of information by the competent authorities on nuclear matters (Ministry, Energy Board, or nuclear plants) to Spanish citizens.

The LEN is the keystone for the development of nuclear energy in Spain and, despite having undergone several modifications<sup>14</sup>, specific indications are not given to the nuclear plants on how to manage and organize their communication with the public.

In the interviews carried out for this study it was pointed out that communication by the nuclear plants to the Nuclear Safety Council<sup>15</sup> (Consejo de Seguridad Nuclear in Spanish, hereinafter “CSN”) is stipulated, that is, it must be informed of any events that take place in the installation<sup>16</sup>: “Anything that happens –however minor it may be– we have to tell them” (Alcázar, 2016). Notification of these events may be given after an hour or after 24 hours. In the former case, they may be events of greater importance from an operational point of view and are associated with a press release by the plant. In this case, the CSN also informs any interest groups of the incident via its own means.

Although the nuclear plants inform the regulator of any operational incident in the plant and post notification of these events on their web page, communication with the public has a protocol when an accident occurs (Cobos & Recoder, 2019a).

The Nuclear Safety Council –an agency independent of the State Administration– does include amongst its functions that of informing the public through the mass media, publications, its Information Centre, Internet, or Twitter<sup>17</sup>. This commitment of the CSN to public opinion is reflected in the law that created the agency (15/1980) and in the objectives

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12 The 2011/70/Euratom Directive obliges each member State to set up a storage facility for radioactive waste in their territory and to establish an independent regulatory organ (In Spain this is the Consejo de Seguridad Nuclear).

13 Law 25/1964 on Nuclear Energy is a pre-constitutional summary of 97 articles which started the development of the peaceful use of nuclear energy in Spain.

14 Law 33/2007, Law 11/2009, Law 12/2011, Law 15/2012.

15 The Nuclear Safety Council is an agency which is independent of the State with its own jurisprudence and is the competent authority in matters of nuclear regulation, vigilance, and control in Spain.

16 The Council’s instructions (IS-10) establish those aspects which must be reported to the regulatory authority.

17 The CSN is the only authority in Spain on nuclear affairs –together with the Spanish Nuclear Forum and the Spanish Nuclear Society– which has had an account on this social network since March 2011: @CSN\_es.

set in its 2017-2022 Strategic Plan, in which credibility derives from the trust Spanish citizens have that the Council will protect them from radiation, without touching on pro- or anti-nuclear feelings, as stated by Muñoz (2012:34).

Transparency is an objective of the CSN, which leads it to facilitate citizens' access to information so as to enhance their understanding of the regulatory process, aiming to reduce the asymmetry of the information. The CSN understands that, as the competent authority, it has more accurate data than the national authorities and the Spanish public.

The CSN's instruction IS-19 of October 22, 2008, on the requirements of the management system for nuclear installations, has two clauses of interest to this study. Point five –which refers to the responsibilities of members of the management– covers the importance of satisfying interest groups (5.2): “Senior managers shall bear in mind the expectations of interest groups in the activities and interactions of the processes of the management system, in order to raise the level of satisfaction of said interest groups and, at the same time, to guarantee that safety is in no way compromised”.

Point seven in this instruction deals with the execution and implementation of several processes and covers the subject of communication (7.3.16): “Information relevant to safety objectives, health and safety at work, environmental protection, physical safety, and other economic or quality objectives shall be made known to the members of the organization and, whenever necessary, to other interest groups”.

Another regulated commitment of Spanish nuclear plants is to follow the directives of the Basic Plan for Nuclear Emergencies<sup>18</sup> (PLABEN) and the implementation, in case of emergency or incident, of its specific plans<sup>19</sup>:

**Table 1. Exterior Nuclear Emergency Plan (PEN) by plant**

PEN	Province	Plant	Cabinet Agreement	Date of Approval	Publication in the gazette (BOE)
PENBU	Burgos	Santa M <sup>a</sup> de Garoña	16/10/09	20/10/09	10/11/09
PENTA	Tarragona	Ascó y Vandellós II	16/10/09	20/10/09	10/11/09
PENVA	Valencia	Cofrentes	16/10/09	20/10/09	10/11/09
PENCA	Cáceres	Almaraz	16/10/09	20/10/09	10/11/09
PENGUA	Guadalajara	Trillo	16/10/09	20/10/09	10/11/09

Source: Nuclear Safety Council (Consejo de Seguridad Nuclear): [www.csn.es](http://www.csn.es).

These plans for exterior response (PEN) include among their functions –during the emergency– notifying any affected population, the Civil Authorities and the mass media. When an emergency takes place, the director of the PEN<sup>20</sup> must have a communication team responsible for informing interest groups about any risks that the accident may pose, and about protection measures in the emergency plan itself. This team will be composed of representatives of the government and

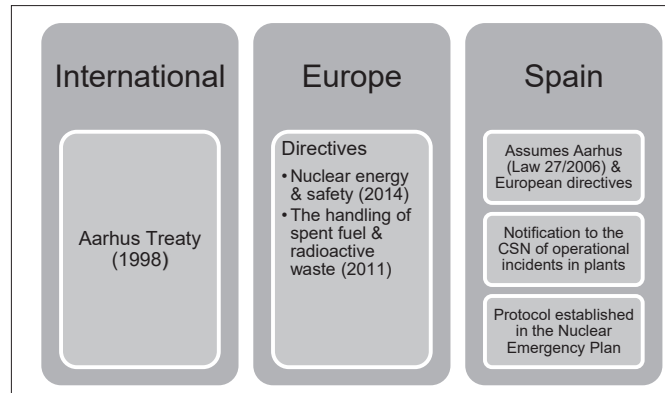
18 The PLABEN was approved by Royal Decree on 25 of June, 2004 and is currently in force. This directive contains norms on how to act in line with the nuclear emergency plans of Civil Protection and falls under the competences of the central administration.

19 The Cabinet approved the exterior emergency plans for Spanish plants in 2006, named for their location: Burgos (PENBU), Cáceres (PENCA), Guadalajara (PENGUA), Tarragona (PENTA) and Valencia (PENVA).

20 As specified in the PLABEN (Title III), this post is to be assumed by the Government Delegate of the Region where the nuclear plant is located.

may include specialists in communication from the regional authorities as well as experts from the plant itself<sup>21</sup> (Cobos & Recoder, 2019a).

Graph 1. Map of legislation on Nuclear Communication



Source: Created by the author

### 3.2. Communication praxis of nuclear plants in Spain and the recommendations of official agencies

In Spain, communication under normal circumstances is the competence of the nuclear plants, or of the economic interest grouping or company that backs them –depending on each case–, always assuming compliance with the established regulation and, as mentioned, it must obey the protocol in situations of operational nuclear crisis and of transparency. Communication in situations of nuclear emergency is a regulated and protocolized activity wherein responsibility for communication is assumed by official agencies (Cobos & Recoder, 2019a).

Communication experts in Spanish nuclear plants say, in the interviews, that atomic plants have –since their construction– sought, through communication, to gain the trust of the general public and of different interest groups which are in a position to decide on the future of their commercial activity.

In search of public acceptance of nuclear energy, it seems necessary, in the first place, to carry out responsible commercial activity, and then to inform the interested parties by means of communication and public dialogue (Cobos, 2017), taking into consideration that *stakeholders*, such as the media, for example, have influence on public perception of nuclear energy (Cobos & Recoder 2019c). Godall (2016) understands this communication as a “responsibility” that the plants must assume with the different publics.

21 Other participants in the prior execution of the information program are: the operating groups of the PEN; directors of the PAMEN; the Ministry of Health and Consumption; the CSN and the corresponding organs of the relevant regional governments and the Ministry of the Interior.



For this strategic -dialogue-based- orientation of communication to work, the nuclear plants must make adequate use of different tools and channels of information to reach their public, such as social networks (Cobos, 2021) and web pages (Cobos & Recoder, 2019b).

Citizens' right to information and the nuclear industry's need to be accepted by critical *stakeholders* leads us to reflect on the importance of transparent information being provided by those responsible for Nuclear Communication. As commented by Ruiz de Apodaca (2011:71): "Transparency and information on the part of governments, regulators, and the companies themselves on the advantages and disadvantages of nuclear energy are absolutely necessary".

Some prestigious international bodies in the atomic sector, such as the International Atomic Energy Agency (IAEA), the Nuclear Energy Institute (NEI) or the World Association of Nuclear Operators (WANO) do have recommendations on best practices regarding Nuclear Communication, although these are not obligatory.

The IAEA provides a manual on how nuclear plants should communicate with the public in case of nuclear or radiological emergency. This document contains recommendations to guide communication in case of accidents, though it is not intended to be mandatory. The manual includes such matters as the organization of communication during an emergency, the functions of each agency, a guide on how to act in the area of public announcements or informative reports. The agency also offers a Nuclear Communication manual with practical recommendations for common situations, although this has not been updated since 1994.

The NEI also has a guide with practical -non-binding- recommendations for the release of information to the public by the nuclear industry in case of accident.

#### 4. Conclusions

Communication in the atomic sector is necessary, as recognized by the heads of communication in Spain's nuclear plants (Cornadó, 2016; Alcázar, 2016; Godall, 2016; Gómez, 2017; Sala, 2017): "That industrial activity needs to be justified and explained and that is where communication comes in as an essential tool" (Cruz, 2017).

The protagonists of Nuclear Communication in Spain understand that communications activities have to be strategic-tactical due to the "social and political connotation" (Godall, 2016) which surrounds the atomic sector. And this *multi-stakeholder* dialogue must go accompanied by a dissemination of Nuclear Science, with the aim of making amends for any lack of information among the public, as reflected in opinion polls (Cobos, 2017; Alcázar, 2016).

Our review of all the nuclear legislation as well as our knowledge of the communication praxes of nuclear plants in Spain – thanks to the testimonies of the communication managers – allows us to affirm that the nuclear plants are free to organize communication with their interest groups in circumstances of ordinary activity, as the law demands, in general terms, transparency and that citizens have access to the information.

However, the atomic plants have to inform the regulator about any event which occurs in the nuclear installations (Cobos & Recoder, 2019a). Crisis communication is codified in cases of incidents or accidents, though not in other situations which present no risk to people's health or to the environment, but are related to events critical for the organization (for

example, events that may damage the image of the company or the sector but do not count as operating events, such as demonstrations by ecological or anti-nuclear groups, or the repercussion in the press of a statement opposing this energy source, among others) where the responsibility for communication falls to each nuclear plant or to the company which backs it.

Therefore, and in answer to the first question posed in this study, Spanish nuclear plants and the companies responsible for their operation, have real freedom to organize communication under normal circumstances although they must ensure the transparency required by the legislation. Moreover, the atomic plants can direct their crisis communication for non-operational episodes. However, in the case of a nuclear crisis the reins of communication are assumed by the competent authorities in Spain, following pre-established protocols.

Regarding the second question facing this study, current legislation covers information for citizens exclusively in situations of an operational nuclear crisis, as the different scenarios that may arise are covered, as is the information that must be provided to the public and which authority has the responsibility of disseminating this information. However, in those situations which do not constitute a nuclear crisis, there is no protection concerning information in the nuclear legislation due to the absence of greater and more specific detail in the regulations. The law establishes the general principle of transparency in communication with the public but does not make specific stipulations nor state how to measure such considerations in the varied circumstances that may occur in a nuclear plant in periods of normal activity.

To safeguard public interest and enhance transparency, we feel it necessary that all agencies participating in the nuclear field should establish an authentic commitment with society through norms of information. This would mean economic, political and ideological interests passing to a second plane to ensure greater understanding of the industry and to make clear the benefits and risks inherent in atomic activity, so as to ensure that the decisions made are taken for the common good.

But for this to become a reality, we understand that the first step is to establish regulations with greater detail and force to ensure citizens have access to transparent information. We feel that if this does not happen, the public is unprotected before an industry whose output implies risks, as is the case with nuclear power plants.

We consider that if greater detail were added to the legislation covering Nuclear Communication, society's trust in the relevant institutions would be enhanced, as would the credibility that each citizen gives to the informing authority. This point could contribute to public acceptance of nuclear energy.

In light of the above, transparent information is a basic pre-requisite by law, a responsibility that cannot be evaded, and more than anything, an important commitment to the Spanish people.

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