

SPANISH WIND LEGAL FRAMEWORK: TO THE ENVIRONMENTAL ADVANCE FROM THE GALICIAN CASE?

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BRIEF: 1. INTRODUCTION.- 2. THE DECREE 205/1995.- 3. THE LIMITED AMBITION OF DECREE 302/2001, 25 OCTOBER.- 4. THE DECREE 242/2007.- 5. LAW 8/2009, AND ITS DERIVATIVES: THE ORDER OF THE ENVIRONMENTAL COMPENSATION FUND AND THE REPOWERING DECREE.- 6. CONCLUSIONS.- 7. REFERENCES.

SUMMARY:

During the last two decades, the renewable energies have got a main role in the world energy system, overall the development of wind energy. In this way, United States, China and the European Union have reached the leaders positions of installed wind capacity, being Spain on a prominent level and specially, the region of Galicia.

However, this expansion was not without controversy because social acceptance depends on the transparency of the administrative process for the implementation of a wind farm, the reversion of citizenship or benefits on the valuation of forest land where they are located. In Spain the wind sector evolved under markedly productivist public policy, stationing himself by not defining a comprehensive regulatory framework that would allow participation and defense of all participating agents, as had happened in countries such as Denmark, Holland and Germany.

The absence of comprehensive regulatory framework that has been a defining feature of the wind farm in Galicia advance, which slowed the evolution of the sector and resulted in several complaints to the courts of justice.

We analyze the rules that regulated the wind sector in Galicia in the period 1995-2010, to determine the possible developments in the regulation, particularly on environmental issues.

Keywords: wind energy, regulatory framework, environmental items

JEL classification: Q25, Q43, 013

1. INTRODUCTION

In the early nineties held various meetings between energy groups, which showed the urgent need to tackle the exploitation of the wealth wind in Galicia. The Galician government began to receive several proposals from developers for companies installing wind farms, being clear high demand in the sector. The remarkable anticipation and interest raised by wind resources led the administration to regulate industrial activity in this field.

For this reason, in July 1995 sees the light of Decree 205/95 of the Government of Galicia, regulating the management, authorization and industrial development plans of harnessing wind power in Galicia.

Since then, there have been in Galicia three legislative decrees and a law in order to regulate the use of wind resources:

- Decree 205/1995: it was the first legislative document regarding regulation of wind energy. They get to sit the foundation for the development of the sector, which will lead to a new layout at the end of 2001.
- Decree 302/2001: the implementation of the new decree began a most ambitious stage as to the challenges of the wind sector in Galicia, and culminates with the publication other than successful. In this period, Galicia manage jobs worldwide reference in terms of wind production.
- Decree 242/2007: This provision was a new way to regulate the development of the wind sector in Galicia, considering those key agents for the sector which until then had been forgotten. But also deepened the environmental problems and the marked path was truncated by the change of the regional government, with the cessation of the last decree and birth by pressing a law, with very different characteristics to the above provisions.
- Law 8/2009: begins a new era in which we live today, characterized by the appearance of law, modern, ambitious but incomplete, ambiguous and features almost unconstitutional. This is the case of the Wind Canon (or fee) (with its own order) designed as figure extrafiscal, compensatory environmental impact, and the Environmental Compensation Fund (a decree to regulate its distribution) equipped with the charging cradle, to be distributed among the municipalities affected by wind farms.

In this paper, we perform a comparative theoretical analysis of the four standards indicated, to determine, if any, developments followed in defining the regulatory framework of the wind sector in Galicia, and in particular in the environmental aspects, one of important benefits of renewable energy.

2. THE DECREE 205/1995

The first legislative document as such regulation in the field of wind power was the Decree 205/1995 of 6 July, which regulated the use of wind power in Galicia.

This decree was to fill the gaps arising from the application of Law 40/1994 of 30 December on the arrangement of the electrical system in Spain, in terms of the contribution of electricity to from all settlements wind farms. It met the basic premises of the energy policy of the Government of Galicia, as they were

the rational use of energy and use of renewable energy resources, based on the National Energy Plan 1991-2000. Include the following main guidelines:

- Increase the contribution of wind turbines to produce electricity, from 4.5% to 10% in 2000.
- Implement wind farms to reduce the consumption of electricity obtained from conventional sources and improve the level of supply.
- To achieve simultaneously a positive impact on environmental protection.
- Regular First Wind Plan as part of the Strategic Energy Plan of.

This Strategic Plan Wind has been approved by the Council of Industry and Trade of the Government of Galicia, in a resolution of 29 December 1995¹, with the following regulations, regulated the implementation of wind farms in Galicia in recent years².

In 1995, he published the first Galician Energy Plan³ that contemplated a provision for the development of various energy sources that were generally overcome. Given the types of sources, the plane picked up the possibility of achieving 1,800 MW wind by 2010, a figure that now seems little ambitious, but at that time was regarded with great skepticism, because the supposed impossibility technique⁴.

The objective of this decree would be regulation in Galicia, the procedure for the authorization of facilities dedicated to the production of electricity from wind energy, called wind farms, as well as the technical, socio-economic and environment for its implementation⁵. Would be allowed wind farms with an installed capacity equal to or greater than 100 MW⁶.

The "Strategic Wind Plans"⁷, were defined as the procedures for planning the implementation of two or more wind farms, industrial plants connected by a single investor in multi investments. The key elements of assessment before the administration would be content innovator in the industry, the impact on energy sector planning and harmonious development of wind projects, the impact on the industrial fabric and local and regional development.

¹ DOG n° 51, 12 of march 1996.

² The legislation consulted is diverse and provides information dispersed. It is worth mentioning the Law 1995/58; Law 1/1995 of 2 January and Decree 205/1995 of 6 June.

³ Government fo Galicia (1995)

⁴ Doldán, (2010).

⁵ Chapter I, General Provisions

⁶ Article II

⁷ Chapter II

In temporary shelter provision that the authorization files that were being processed coinciding with the transition period until the entry into force of the decree, could benefit from the present decree if requested by the applicant, prior to submission of supporting documents. Also stated that the actions will not be covered by the decree⁸, would apply to Law 40/1994 of 30 December on the arrangement of the electrical system in Spain.

The main key of this decree was the “Strategic Wind Plan”⁹, which came into force in 1997¹⁰. It compiled the guidelines you should follow the developer of wind resources and the whole set of industrial activities, administrative and economic to carry out for the implementation of a wind farm, always under the approval and supervision of the regional Administration. These were plans to link bidirectional, that is, between the company and the legislative authority.

Wind Plans focus on three strategic areas:

- Research Plan Wind: “Set the regions targeted by the promoter, which have a preferential basis to the possible installation of a park.”

- Investment Programme: “Submit to the expected investment planning, relevant to the development of wind farms included in the Plan Wind in question.”

- Programme of Industrial Activities: “A fundamental part of any plan to Wind values, its mission is to facilitate the huge investments that allow you to create wind farms affect installation in the region, attracting new industrial facilities, creating jobs and boosting business projection of a local or regional. “

The figures compiled in this program, both investment and generation of employment show distinctly ambitious project, placing the Strategic Plan Wind Galicia as the most advanced of Spain¹¹. Through the Council of Industry and Trade of the Government of Galicia, has developed a character ambitious

⁸ Final Provision

⁹ Simón, (2010): when it entered into force on Plan Wind Sector Galicia existed prior assignment by the regional administration. Specifically, 2842.9 MW, which assumed 73.3% of the total power allocated to the holders of the wind business plans. The route used for the allocation of this power were the wind farms strategic plans, as the only element regulating the use of the wind resource in Galicia.

¹⁰ DOG nº 243, 15 of december 1997

¹¹ The Wind Plan of Galicia would definitely approved on 1 October 1997, a meeting of the Council of Galicia, in which the green light to the so-called Wind Sector Plan, which would govern the application of the regulatory legislation, published since 1995 to 1997. It must be noted that filed claims against the initial writing of the Wind Plan of Galicia, being overcome

project, promoted by private initiative, coordinated in their early by Gestión public institution Energy of Galicia, Ltd. (GESTENGA), and now by the Institute of Energy of Galicia (INEGA) to plan the possibilities of harnessing wind energy in the community. This program is supported by a study of wind conditions and an analysis of alternatives according to the elements conditions for the development of energy: wind power, the direction, the availability of land, the topography, population and so on.

However, the breadth of this legislative decree not covered all of the situations and problems that affected the development of the wind sector in Galicia. So saw the light of new regulations, most comprehensive and advanced, trying to cover a general regulation of the sector: the Decree 302/2001, 25 October.

3. THE LIMITED AMBITION OF DECREE 302/2001, 25 OCTOBER

The Decree 302/2001¹², 25 October, promotes the growth of wind power in Galicia, introducing changes to the previous legislation such as the emergence of a new figure, the unique wind farms (3MW), which disappear with Decree 242/2007 of 13 December. During the term of the Decree 302/2001 was not adopted any plan wind business¹³.

The text of the decree picked up the definition of the basic concepts of regulation, among which worth mentioning “wind farm singular”, understood as aimed mainly wind farm to the consumption of energy produced in the same, which may be municipal, domestic, industrial or service. This character will also parks aimed at improving the security and quality of supply of power distribution small companies(SMEs) in rural Galicia. (Chapter I, General Provisions).

with the publication of the Resolution of October 14, 1997, the Department of Industry, with which orders the publication of the decision of the Council of the Government of the October 1, 1997 when the project was approved definitively sector incidence Supramunicipal called Wind Plan Galicia. These claims filed by municipalities and environmental organizations, questioned the value of the document, the cartographic error detectárense, changes in land use compatibility and environmental damage.

¹² This decree was amended by Decree 513/2005 of 22 September, mainly as regards the land in which they are to establish wind farms. Thus collected it is impossible from the start of processing the promoter indicate any hobbies and servitude steps of the wind farm, and therefore the expropriation is a way to turn in the event of disagreement between the parties.

¹³ Simón et al.(2010).

This concept would be a turning point as the Decree 205/95 and the Decree 242/2007, a marked difference that would lead to a new way of conceiving the production of electricity in wind farms.

The characteristics of the regulation of “wind farms singular” constituted one of the major innovations of this regulation¹⁴, determining their contribution to consumption and to improve the quality of power supply of small and medium enterprises in rural areas, which was not regulated by Decree 205/95.

Also regulated the possibility of hosting the special regime¹⁵ of the installation of electricity¹⁶. Emphasizes the creation of the Monitoring Committee¹⁷ with representation from all departments with processing skills.

The main features of Decree 302/2001 were:

- Annual planning power to develop.
- The Business Plans Wind approve from specific calls¹⁸.

¹⁴ Chapter V.

¹⁵ The special regime electricity, regulated by Royal Decree 661/2007, replacing the Royal Decree 436/2004, Royal Decree 1432/2002 and Royal Decree 841/2002 establishes that it is a regulatory set to achieve energy efficiency goals as of electricity production from renewable energy sources. It refers to the production of electricity through cogeneration, the use of renewable energy, the combustion of biomass or biogas and upgrading of various waste with a total capacity limit of 50 MW. This scheme is a system subvencional as support fee as compensation mechanism, regulated and primate based on the average reference rate and the requirement to purchase power from the distributor system.

¹⁶ Chapter VI.

¹⁷ The Monitoring Committee of Galicia Wind Plan was created from the Order of June 13, 2002. This Commission was established according to the provisions in the second provision of the Decree 302/2001, assigning him as the main functions:

- Debate on permit applications for wind farms.
- Studying the location of the projects submitted prior to the resolution of each program year.
- Report in advance of the possible difficulties of processing each application.
- Monitoring the implementation of the material planning annual wind made.
- Collaborate on streamlining the processing of various wind projects accepted for processing

¹⁸ During the term of this Decree, include the following commands to call for approval of wind farms:

- Order of October 29, 2002 the requirements of wind farms singular (DOG n ° 216, of November 8, 2002), which according to the provisions of the decree defined the characteristics of procedure regulate the authorization of wind farms singular, indicating an element to the approval ratings would be forecast compliance with appropriate conditions to ensure the protection of the environment and the minimization of environmental impacts.
- Order of January 22, 2004, request authorization from wind farms (DOG No. 18 of 28 January, 2004), which was the first call that was applied this decree, and it was defined as a criterion for assessment environmental involvement but not specific.

-Elimination of the competitive process of the projects.

-Setting up a monitoring committee

-Creation of the figure of the “wind farms singular” associated with the consumption of electric companies, electrical distributors and municipalities that meet the following characteristics:

- Maximum power of 3 MW

- Interconnection electrical medium voltage (20 kV)

- Consumption of 10% to 30% of the energy produced

Comparing the contents of Decree 205/95 and Decree 302/01, it can be concluded that the two have three clear components:

-Wind-Research Plan

-Investment Program

-Industrial Activities Program¹⁹

Decree 302/2001 introduces two important changes compared to the previous decree:

- The figure of the wind farms associated with the consumption of, unique wind farms (with a maximum power of 3 MW)

-Planning to develop power annually.

In relation to the environmental implications decisive aspect in the acceptance of wind energy, the decree stated in the preamble: “Thus, we find ourselves before a modern clean energy and a high social acceptance, which is believed to facilities like wind farms and businesses clean, without negative environmental consequences ... “.

Decree 302/2001 looked at the compatibility of uses wind to natural areas integrated in the Natura 2000 network, to assume that the environmental values of these would not be affected by the construction of wind farms in these areas. For this reason, many of the wind farms that promote from that year until the entry into force of the new decree in 2007, and even some authorized and built after, these natural areas are located. Since 1995

¹⁹ Order of July 29, 2002 picked up the creation and regulation of the procedure for the collection and processing of data from energy production facilities welcomed the special regime electricity. Took as a basis the provisions of Law 54/1997, which transformed the legal status of the supply of electricity, which happens to be qualified as an essential activity and is no longer considered a public service by introducing competition in those phases of the supply not subject to restrictions technical. This procedure is known as CADPE, gathered information from all facilities welcomed the special regime electricity production had a total installed electrical power exceeding 1,000 kW.

authorized the installation of approximately 50 parks in 15 areas of the Natura 2000 Network. One of the best known and most significant is the *Serra de Xistral* (Province of Lugo) concentrate more than twenty wind farms in a place with high ecological value, putting into question the supposed environmental benefits of this renewable energy when the criteria of its expansion have almost no sensitivity to environmental priority. And it seems to defend the private interests of energy companies at the end of a declared social and public utility ignores the social demands, the private interests of hills communities and individuals, and does away valuable public spaces.

The application of environmental reports to the companies in which they pick up the effects of wind accounted for only a small administrative lock, having to include specific documents on this issue and be one of the evaluation criteria for the authorization²⁰, but did not imply negative consequences for the occupation of natural areas.

4. THE DECREE 242/2007

Decree 242/2007 of 13 December, marks a point at the legislature, and tries to also be a turning point in the economic and technological. If characterize the disappearance the unique wind farms (3MW), supported by the previous rules, and the emergence of annual calls, setting a limit on the power authorized, 6,500 MW.

One of the most significant elements of Decree 242/2007, which includes the possibility that, on a voluntary basis, and the effects of the draft assessment, the business promoters applicants submit a request for additional commitments²¹, based on any of the following documents:

- Proposed public participation in the share capital of the project, by means of public law entities that comprise one of its social objectives implement energy production systems and have the ability to create or participate in other societies.

²⁰ Were also criteria for assessing the energy efficiency of the installation, the effective development and implementation of technological and industrial plans associated the wind business plans, to influence the development of the electricity distribution network or transport, technical and financial capacity of the applicant, the developments linked to land and municipalities and the implementation period of the wind farm.

²¹ Chapter III, permits the installation of wind farms

- Proposed financial instruments to channel the savings of individuals, especially those affected by the projects to investors related to the proposed project.

- Determining the mode of involvement of the owners of the land where it deploys the wind farm through different sources that link to the installation of wind production with income derived from the formula of the movement or transfer of use, such as leases, among others, in the case that the developer opt for this form of disposition of the parcels you need.

This decree incorporating new proposals for action trying to facilitate the participation of public organizations and citizens in the process of implementation of wind farms, although these are established on a voluntary basis.

Highlight important developments in this case the incorporation of public and community interests of land owners affected virtually ignored in previous legislation. But these developments have just been definitive, so that voluntary, but with the effects assessment, relegated rights groups and private affected the result of the business strategy applied. And also the calculation of the opportunity to consider a game in which, on the one hand is a transfer of a part of the business benefits provided or club from the control of the company and on the other, to permit a greater number of megawatts and a greater share of business and control the wind resource. On the environment, not incorporating new final, because it established a clear framework in this regard and exceed the regulatory gaps of the past.

The life of this decree turned out to be too short. Just held a contest while in wind force of this decree, the resolution of which, at the end of 2008, took place in the middle of pre-campaign Galician regional elections. The interruption of the process of resolution of the covered call in Decree 242/2007 of 13 December resulted in the birth of a new law, Law 8/2009, as well as a new design of energy policy.

5. LAW 8/2009, AND ITS DERIVATIVES: THE ORDER OF THE ENVIRONMENTAL COMPENSATION FUND AND THE REPOWERING DECREE

Via the urgent procedure, which allowed approval of regulations within a shorter and less bureaucratic barriers, see the light of the Law 8/2009 of 22 December 2009²², the law currently in force governing the establishment of

wind farms in Galicia. The following indicates a critical analysis of the text of the law, from the items that are considered most relevant:

- Public Participation and authorization procedure

Criticism directly²³ the system protected by Decree 242/2007 to provide for an optional and voluntary participation of public organizations and citizens in the process of implementation of wind farms, defined as great inconvenience the obligation of Government of Galicia to participate in boards of directors, claim that there surprising if we consider that for the Government of Galicia has been a common fact engage in both public and semi-public enterprises as energy companies²⁴. This aversion to public participation indicates a clear ideological directive where the private corporate interests are placed above the public interest. It must be remembered that the Energy Institute of Galicia (INEGA) involved with capital in eight companies (see table 1) of which is a semi-public nature and the other seven, five public participation took the previous government of Galicia.

Table 1: Companies participated by INEGA

COMPANY	% PARTICIPACIÓN
Sotavento Galicia S.A.	32,50
Biomasa Forestal S.L	19,98
Sistemas Energéticos Mañón Ortigueira S.A.	4,00
Sistemas Energéticos Chandrexa S.A	3,93
Energías Especiales de Careón, S.A	3,00
Parque Eólico de San Andrés, S.A.	3,00
Energías Ambientales de Somozas, S.A.	3,00
Eos Pax II A, S.L.	3,00

Resource: INEGA (2008)

²² D.O.G. N° 252, 29 of december 2009.

²³ Explanatory Memorandum I.

²⁴ The participation of the Government of Galicia in public or semi-public companies is channeled through different departments, and particularly in the case we are studying, through the Ministry of Economy and Industry, INEGA, Igape and Xesgalicia. The Inega engage in energy and wind farms, and the Ministry of Economy and Industry has participation in Engasa and other companies (Allarluz, Pemalsa etc.).

At the same time, the text of the law is considered that the new regulations represent a “more legal” public interest in Galicia, tint which undoubtedly correspond believe the judiciary and the legislature. The proposed new “public participation” in the process of implementation of wind farms consist of the formation of the Environmental Compensation Fund, fueled by the collection derived from the imposition of a fee, described as wind a “extrafiscal” figure that penalize the environmental impact caused by these facilities, depending on the number of wind turbines installed. Also expresses the intention²⁵ of “conceive new model of harnessing wind described in the preceding paragraphs,” without setting conditions and basic features as the procedure for approval of wind farms, allowing characterize this new form of action. And concluded the explanatory memorandum sentencing wind than the previous model was based on public participation in outside capital to their interests (item mentioned earlier), and conditioning so the new public participation strategy based on the collection of the fee.

- The Wind Canon and Environmental Compensation Fund.

The development of renewable energy and, in particular, the installation of wind farms, is considered a more respectful of industrial activity (compared to fossil fuels) to the environment and help to change the current energy model untenable. These reasons justify the interest of the governments to encourage this kind of action, in the case of Spain, goes through the establishment of raw that bonifiquen selling kW wind. For this reason, it draws attention to the public, in this case regional criminalize the imposition of a fee on development of activity at the same time recognized as beneficial to the environment.

The fee appears as a extrafiscal figure²⁶. The extrafiscality was supported by the Constitutional Court of Spain, available 37/1987 of 26 March, meaning that occurs when a tax is used to pursue non recadatorios purposes, involving a removal of the defining characteristics of the concept of tax, such as the principles of generality, economic and tax equality. Gives, therefore, a contradiction between the definition of extrafiscalidade and recaudatoria purpose of this fee, you could not have that end collection concerning a figure extrafiscal.

²⁵ (again in the Explanatory Memorandum I).

²⁶ *El Correo Gallego* (7 of august and 23 of august 2009).

By reference to the significance of economic, fiscal and social canon, it should be mentioned that their design as a penalty environmental impact caused is clearly justified in the law: the fee is to function penalizing the environmental impact of wind turbines installed, depending on the number not the power of the park, or the production of it. From the installation of 3 wind turbines, business owners of wind farms will pay additional amounts will increase by stages in order to create an Environmental Compensation Fund that will benefit the municipalities affected by the installation of wind farms in their areas, to take out activities without specific, environmentally friendly. Article 15, which covers the tax rate and the tax share, says that those wind farms up to 3 wind turbines will be exempt from payment and marked sections depending on the number of wind turbines in the park, with unit values per wind turbine per year ranging from 2,300 euros in wind farms from 4 to 7 wind turbines, up to 5,900 euros for wind turbine in the parks more than 15 wind turbines. Article 16 establishes a discount in fee for those wind farms that perform activities repotenciamento. At first, it seems that you are looking for with is repotenciamento cause less environmental impact, however, consequences of this measure is that reduciense the number of wind turbines, wind business leaders will be benefited with a lower fee, increasing its production more than exponentially on the power, and therefore the benefits.

Therefore, we present the need to penalize the implementation process is not harmless this renewable energy, in contrast with the lack of such tax figures in the process of installing other energy infrastructure and other larger infrastructure (highways, airports, ports, etc..)environmental damage are noticeable and sometimes detrimental to the economic development of areas where they are created. Only there is a similar figure in Galicia, the hydroelectric canon of Bipartite Government²⁷, to consider the environmental impact of impaired rivers, depending on the amount of stagnant water and free use shells that are Galician competition.

The Environmental Compensation Fund²⁸ will be the means to achieve the objectives of territorial balance, as well as contributing to the protection of the environment, to reduce the number of wind turbines and incorporate new technologies to them, again in based on repotenciamento.

²⁷ When set "bipartito" is referring to the Government of Galicia from 2005-2009, formed by a coalition of the Socialist Party of Galicia and the Galician Nationalist Bloc.

²⁸ Title III article 7.

Described in general terms, the collection target²⁹ that make up the Environmental Compensation Fund: “allocated preferentially to the realization of investment expenditure in local authorities whose municipality is found in the polygonal boundary of a wind farm in the form of a grant,” but did not address specific lines of action allow mitigating the negative effect on the environment, something that would be wait a legislative repeatedly insists that its *raison d’être* is the fix that damage the environment.

The July 2, 2010 published the *Order of June 25, 2010*³⁰ regulating the announcement of grants and the allocation criteria of the Environmental Compensation Fund, which is a call for grants, on a competitive basis and not competitive in 2010, the Galician municipalities can make productive investments and generator employment, based on three lines of action set and have presented accounts of the entities referred to in article 208 and following of legislative Royal Decree 2/2004, of March 5:

a) Actions aimed at the conservation of biodiversity, knowledge and the use of recreational and educational natural resources and recreational use of the environment degraded or contaminated.

b) Performance boost efficiency and sustainable use of renewable energy.

c) They may be financed at the expense of the bottom of the supply contracts defined in Article 9 of Law 30/2007 of 30 October contracts in the public sector, aimed at the acquisition of equipment, products, vehicles or property furniture whose purpose is linked to the objectives set out in the preceding paragraphs.

- The environmental impact and the repowering.

As noted in the previous paragraph does not describe specific lines of action to minimize the environmental impact caused by the installation and operation of wind farms. Only indicates that the Environmental Compensation Fund would be designed to mitigate these potential effects and authorize repowering activities, as less damaging by.

Based on the text of the document³¹ contemplates the existence of bonus by repoweing activities (reducing the number of wind turbines, installing new wind turbines with greater power unit), it is necessary to set parameters based on which considers the existence of environmental impact. The removal

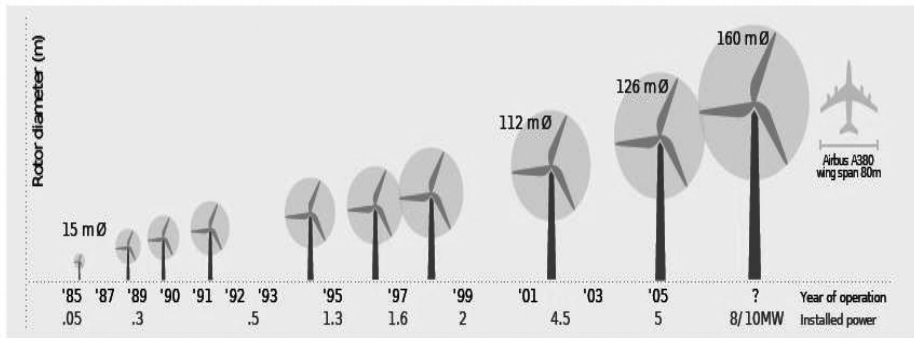
²⁹ Title III article 25.

³⁰ DOG n° 125, 2 of July 2010.

³¹ Title III articles 15 and 16.

of wind turbines can reduce the visual impact depending on the size of new wind turbines installed. As an illustration, a wind turbine G-47 of Gamesa Company, widely extended in Galicia, has a diameter of 47 meters and blades has an output of 750 kW. A wind turbine G-850 Gamesa has a diameter of blades ranging between 52 and 58 meters. Of substituírense the new wind turbines with power of 2.1 MW, the diameter of the wheel would be located about 70 meters. If replaced by wind turbines of 4.5 MW operating in other countries, the diameter would be 112 meters; for 5 MW, the diameter would be 126 meters, and if the wind turbine experimental 8 MW, the diameter of the blades would be 160 feet, measuring each blade as well as a wing of Airbus 380 (see figure 1). It should be noted that the blades increase in length and in breadth, and the height of the tower that supports the gondola, also increase in a proportional manner.

RELATIONSHIP BETWEEN THE SIZE OF THE WIND TURBINES AND THE VISUAL IMPACT.



Resource: Gómez (2009)

We also should not forget that the bigger the turbine, the greater should be the size of the base of the shoe concrete supports, to be built in a location different from the wind turbine to replace because you can not expand the existing, so that the installation work will also cause a greater impact on the environment.

The repowering activity has a standard regulation, *Decree 138/2010*,³² 5 august, establishing the procedure and the technical and administrative conditions for

³²DOG, nº 155, 13 of august 2010.

obtaining the permits draft repotenciación of existing wind farms in the Autonomous Community of Galicia.

The authorization of this activity will for the effective recognition of the reduction in the number of wind turbines, as defined in Article 3, and that for wind farms based in areas of the Natura 200 Network must achieve at least a 50 percent of the wind turbines installed. We also need to point out that according to the provisions of Article 5, which deals with the location of the new facility derivative of repotenciamento, should "installed in the same location where it was placed on the existing wind farm", and, if necessary extend to initial location, shall be "provided that the land affected by the extension they are included within an area of wind development (ADE) of the Sectorial Plan of Galicia or, as the case may be, outside of this area, a range of 500 meters".

Finally, it is worth pointing out that there are established measures of control over the environmental impact in the process of construction of wind farms.

- Wind Sector Plan.

Of Law 8/2009, established planning use³³ the wind through the development of the new Sector Plan Wind Galicia. But we need that is currently in force a Wind Sector Plan of Galicia, used by the bipartisan Government for distribution of outstanding MW to achieve the established quota of 6,500 MW, so the new plan would be designed to order distributions beyond the goal of 6500 MW. Canon wind and the Environmental Compensation Fund figures are considered to ensure the territorial balance and sustainability of the natural values affected, but did not indicate specific measures under these objectives, so its realization, while this does not occur it seems very difficult.

Exposed features³⁴ Wind Sector Plan of Galicia, and in the third transitory provision shows the validity of the previous Wind Sector Plan while not prepare the young and all that is not contrary to the bill. Another basic determination that is collected is the "territorial and environmental impact," but not set any reference/corrective measures to minimize the environmental impacts produced, throughout the text are presented as the plot axis of the bill.

- The wind auctions or orders call

Regarding calls³⁵, marked as a criterion at least one call per year³⁶, based on orders call for groups of wind development areas, a clear differentiator on

³³ Title I article 1

³⁴ Title II article 6.

³⁵ Title IV article 28.

the respect to Decree 242/2007. This way of proceeding requires knowing the real power installed and available capacity to allow new wind facilities, having provided with drainage capacity of the network at any time. With regard to the submission of applications³⁷, determined to require the presentation, among other documents, the commitment of adequate compliance with the conditions of environmental protection and minimization of environmental impacts, item seems a bit paradoxical, because despite the rhetoric discourse on the environmental effects not establish guidelines for the Administration in this regard.

- Diseases on production

No doubt, the suspension of the Decree 242/2007 and the enactment of Law 8/2009, involving the birth of a new way of award by the government of the Government of Galicia, characterized mainly by:

- Cancellation of the cast provisional tender wind of Decree 242/2007, approved by the previous government of the Government of Galicia.
- Start the process of awarding characterized by a competitive procedure and urgent processing being completed the final process in late 2010.
- Abolition of public participation in the promotion of wind farms and charging by this means.
- Application of a fee / tax for environmental impact, record the new wind farms and wind farms also in operation. Will be exempt from paying the fee wind farms three or less than three wind turbines. There are different wind turbines installed power ranging from 540 kW to 2 MW, so the tax per kW of installed power would be more onerous for wind turbines of less capacity and therefore less profitable.

³⁶The first order published under the force of this Act, the Order of 28 January 2010 (DOG No. 18 of 28 January 2010), stands for the promoters, being holders of a plan wind business and for reasons of planning could not develop the planning, plans relating be considered as wind farms not exhausted business plans, as set out in Section 2 of the second transitional provision of Law 8/2009.

It is a special call for content, time frame, and therefore indicates that is not subject to the procedure of selection of drafts in competition and does not apply strictly regulated procedure in Title IV, Chapter I of the Act 8/2009. However, establishes the creation of a commission assessment to verify compliance with the financial capacity of the applicants and complete presentation of administrative documents.

Applications must be made on areas of each business plan wind and mentions among the documentation to be submitted, the memory that indicates the environmental effects caused on the environment and minimization of impacts.

³⁷ Title IV article 29.

- Establishing a bond of 2% of the value of the business venture that will recover once the wind farm and the business plan were implemented in its entirety. This deposit appears to look like the legal figure of the “ultimate guarantee” existing administrative procedures with public procurement, and included in Law 30/2007 of 30 October, the Public Sector Contracts.

6. CONCLUSIONS

The comparative analysis performed allows us to conclude the main characteristic features of the three decrees and a law (see table 2):

TABLE 2.- COMPARISON OF THE MAIN CHARACTERISTICS OF WIND DECREES OF GALICIA AND LAW 8/2009.

DECREE	BASIC FEATURES	PUBLIC PARTICIPATION	ENVIRONMENTAL IMPACT
Decree 205/1995	<ul style="list-style-type: none"> -Increase the contribution of wind turbines to produce electricity, from 4.5% to 10% in 2000. - Implement wind farms to reduce the consumption of electricity obtained from conventional sources, and improve the level of supply. Regular first Wind Plan as part of the Strategic Energy Plan of. - Achieve 1,800 MW wind by 2010 		Declared the intention to achieve simultaneously a positive impact on the protection of the environment, contributing to the spread of renewable energy.
Decree 302/2001	<ul style="list-style-type: none"> -Appear notices of frequency triannual that should be presented based on public orders. -Appears to figure of Wind farms singular (3 MW), as one park designed to produce energy mainly allocated to consumption by the developer, which can be municipal, domestic, industrial or service. This character will also parks aimed at improving the security and quality of supply of power distribution SMEs in rural areas. -Annual planning of the power to be developed. -Plans Wind Business appropriate from specific calls for them. -Elimination of the process of competing projects. -Setting up a monitoring committee 		
Decree 242/2007	<ul style="list-style-type: none"> - Disappearance of the wind farms singular figure (3MW). -Appearance of calls for orders, setting a limit on the power that will allow 6,500 MW in 2012. 	<ul style="list-style-type: none"> -Proposal of public participation in the share capital of the project. -Proposal of financial instruments to channel the savings of individuals. -Determining the mode of involvement of the owners of the land. 	-Establishment of a procedure for environmental performance
Law 8/2009	<ul style="list-style-type: none"> - Considered a range of law, as opposed to the previous decree range. -Calls annual function of wind development areas, ie those with potential nesting wind. 	Public participation by means of tax collection	-Establishment of the environmental fee as a tax figure "extrafiscal".

Resource: Regueiro-Ferreira (2010)

The disparities in the standards corroborate the existence of an incomplete regulatory framework, demonstrating even more the main steps taken in environmental (see table 3):

TABLE 3.- COMPARATIVE ANALYSIS OF THE ENVIRONMENTAL MEASURES TAKEN IN THE DIFFERENT REGULATIONS ON WIND GALICIA.

ENVIRONMENTAL MEASURES	DECREE 205/1995	DECREE 302/2001	DECREE 242/2007	LAW 8/2009
Exclusion of the Natura 2000 Network	Not	Not	Yes	Yes
Need for environmental impact assessment	Not	Not	Yes	Not
Environmental Impact Statement (EIS) for the grant of authorization	Not	Not	Yes	Yes /Not
Power of municipalities to authorize use wind	Not	Not	Non	Yes
Need to offer several alternative location	Not	Not	Yes	Not
Consideration of the environmental condition in the evaluation of projects	Not	Not	Yes	Yes
Assessment of additional commitments to affected	Not	Not	Yes	Yes
Public participation in profits	Not	Not	Yes	Yes
Expropriation	Yes	Yes	Yes	Yes
Wind Sector Plan modification before delivery	---	---	Non	Not
The Sector Plan should specify corrective measures and minimizing environmental	Not	Not	Yes	Not
Transmission of wind farms without installing	---	Yes	Non	Not
Obligation to replace the environmental damage at the end of use	Yes Not	Yes/not	Yes	Not

Resource: author's elaboration from López Vispo (2010).

Stated the existence of different courses of action in relation to disruption by environmental regulations analyzed, being necessary to the following matizaciones:

- Exclusion of the Natura 2000 Network: Decree 242/2007 considers the exclusion under Article 6.2, as well as Law 8/2009, and this added measure before Parliament (Article 31).

Need for environmental impact assessment: the Decree 302/2001 and Law 8/2009 not considered in general, based on the Law 6/2001, and only in the case of parks for more than 50 wind turbines, or more than 10 wind turbines in areas of the Natura 2000 network, with skills Government of Galicia up to 50 MW (25 wind turbines), as established in Article 18.2 of Decree 302/2001 and Article 36.1 of the Law 8/2010. Instead, the Decree 242/2007, gathers for all parks.

- Environmental Impact Statement (EIS) binding to the approval or denial of authorization: Decree 242/2007 gathers in Article 14.7, Law 8/2009 presented different situations in accordance with the provisions of Royal Decree 1/2008, Article 37.

- Need for the proposed location of several alternatives: Decree 242/2007 gathers based on the requirements of the law of environmental impact assessment, while the Law 8/2009 or even contemplated in areas of the Natura 2000 network and other protected areas.

- Consideration of environmental condition when baremación projects: Decree 242/2007 contémplo Article 10.2 based on the best relationship between energy production and environmental condition; Order 6/2008 also considered as well as the Law 8/2009 Article 34.1. b, which was added before Parliament.

- assessed additional commitments with affected: the Decree 242/2007 set out in Articles 9 and 10.2, as well as the Order 6/2008. Law 8/2009 also provides in accordance with article 34.1.d that was added before Parliament.

- Public participation in profits: through voluntary transfer and baremada in favor of the Government of part of the profits and share in the company established the Decree 242/2007 and Order 6/2008 this measure, while the Law 8/2009 designs the concept of “environmental fee” based on the number of wind turbines and without having link any environmental impact (Articles 7 to 26).

- Participation of land owners in profits: Article 10.2 of Decree 242/2007 and Order 6/2008 so indicate.

- expropriation: Decree 302/2001 and Law 8/2009 indicate that this measure will be carried out when the company requested. Decree 242/2007 only as a last option, justifying reasons for the lack of agreement with the owners.

- Obligation to replace the environmental damage at the end of use:

Decree 302/2001 states that will be made on the basis of collected in the corresponding day, while the Decree 242/2007 indicates that it will always, regardless of which have per day, while the Law 8/2009 is not evidence.

The analysis shows that environmental disappeared some progress made in the past, such as the obligation established in Decree 242/2007 to present day in order to be accepted a project disturbing element that seems to show that there is only interest in colonization business³⁸ sector at any cost.

In the period 2008-2010³⁹, put up a total of 15 wind farms with a total capacity of 244 650 kilowatts and 11 unique parks, which accounted for an installed capacity of 26,900 kilowatts. The installed capacity was much less than the two previous periods, a total of 244 650 kw, located primarily in the provinces of Lugo (with the installation of eight wind farms) and A Coruña (with the installation of four wind farms, one of them being an extension of the park existing). In total for the period in question, from 1995 to 2010, settled 11 unique parks, seven started by municipalities and three promoted by companies with a total of 26 900 kW of power.

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³⁸ Vázquez Pumariño,(2008).

³⁹ The most updated data for this period corresponds to June 2010, according to data provided by Inega.

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