Overview of unbundling regimes and organizational models of the transmission and distribution networks in the power market and the Portuguese case

Training Session Paper

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MEDREG is co-funded by the European Union
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This paper was created as a supporting reading material for the training that MEDREG organized in June 2020 on “Unbundling and Third-Party Access in gas and electricity markets: economic principles, design and effective implementation”.

MEDREG wishes to thank Mr. José Francisco Veiga for preparing this report to the benefit of the whole MEDREG community.

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Table of Contents

ABOUT MEDREG AND THIS PAPER ................................................................. 2
TABLE OF CONTENTS ..................................................................................... 3
1. INTRODUCTION ....................................................................................... 4
2. UNBUNDLING REGIMES – GENERAL OVERVIEW .................................. 4
   2.1. OWNERSHIP UNBUNDLING (OU) ....................................................... 5
   2.2. INDEPENDENT SYSTEM OPERATOR (ISO) ....................................... 10
   2.3. INDEPENDENT TRANSMISSION OPERATOR (ITO) ......................... 11
   2.4. CERTIFICATION MODELS ADOPTED IN EUROPEAN COUNTRIES (MAPS) .......... 14
   2.5. CERTIFICATION PROCEDURE .......................................................... 15
3. UNBUNDLING FOR DISTRIBUTION SYSTEM OPERATORS (DSO) .............. 17
   3.1. LEGAL UNBUNDLING ....................................................................... 18
   3.2. FUNCTIONAL UNBUNDLING ............................................................. 18
   3.3. ACCOUNTING UNBUNDLING .............................................................. 22
   3.4. EXEMPTIONS FOR DSO SERVING LESS THAN 100 000 CONNECTED COSTUMERS .. 23
1. Introduction

Generally, we recognize the importance of regulation due to three main scopes\(^1\). Firstly, regulation is able to *design rules* in order to encourage certain behaviours of regulated entities. Therefore, regulation must ensure that by buying and selling energy on spot markets, all agents know the price of energy and, thus, transparency and competition can increase.

Secondly, regulation is important due to the structure of the power industry. This is mainly related to market power. As we know, regulation intends to promote competition and, consequently, “*for the market to operate properly, a sufficient number of similarly sized competitors must participate*”\(^2\).

Finally, regulation intends also to supervise agent’s behaviour, even when all rules are well designed. Thus, regulators must monitor, take legal actions and, if they have competence to do so, apply administrative fines after developing infringement proceedings.

Unbundling is present in achieving all these three purposes. In fact, firstly, legislators drafted laws and regulators drafted regulations that made possible to create power markets. At the same time, they tried to avoid market power of groups of companies and, of course, payed attention (and still pay) to agent’s behaviour, in order to ensure respect for the rules.

On the other hand, since European Union intends to promote energy regional markets, there are many common rules. In this article, it will be possible to have a general overview of different types of unbundling regimes stipulated by the European directives. In addition, I will present the Portuguese case regarding Portuguese Transmission System Operators (TSO) and Distributor System Operators (DSO). Regarding Portuguese DSO, I will also make some comments on new developments on concessions in Portugal mainland.

2. Unbundling regimes – general overview

Unbundling is related to *restructuring activities*\(^3\). In power sector, this means that activities that were used to be done by a single vertical integrated undertaking (VIU) are now open to competition. We must bear in mind, however, that not all activities can be pursued in a competition market. Therefore, in order to split a single power company in several companies, it is important to understand which activities are open to competition and which ones are not. European legal framework (as we will see) establishes that generation and retailing are subjected to competition. On the other hand, transmission and distribution were considered regulated

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activities (not subjected to competition\(^4\)), in order to ensure quality of service and efficient prices\(^5\). In addition, since it is not possible to have an acceptable level of competition on these sectors, regulation is considered the only efficient way of promoting the optimal outcome for the society\(^6\).

European Directives regarding power energy stipulate three possible options for **transmission unbundling models**: a) Ownership unbundling (OU); b) Independent System Operator (ISO); c) Independent Transmission Operator (ITO); and d) ITO+. We will analyse the main characters of each one of these options (with exception of the fourth one) and focus on the Portuguese model.

### 2.1. Ownership Unbundling (OU)

It is important to notice that separation of activities intends to diminish or eliminate conflict of interests or incentive to discriminate a company. However, there are different levels of *unbundling*. Some scholars distinguish these types of unbundling and say that a given level “should be adjusted to each individual case”\(^7\).

*Ownership Unbundling (OU)* model determines that regulated activities are conducted by separate utilities that do not engage in deregulated activities and these two types of companies (regulated and deregulated ones) have different owners\(^8\). This is a structural remedy (since it is not behavioural). Otherwise, supervision would need to be stronger.

Directive 2009\!/72/EC (“Electricity Directive”), still in force\(^9\), refers to this type of unbundling in Article 9 (“Unbundling of transmission systems and transmission system operators”). By reading this article, we can conclude that National Regulators Authorities (NRAs) are entitled to analyse if the Transmission System Operator (TSO) is independent from generating and supply interests. This is particularly important, since suppliers and generators are not allowed to interfere in the work of a TSO. In order to achieve this purpose, Article 9 of the said Directive\(^10\) stipulates that Member States must ensure that:

\[
\begin{align*}
(a) & \text{ each undertaking which owns a transmission system acts as a transmission system operator;} \\
(b) & \text{the same person or persons are entitled neither:}
\end{align*}
\]

\(^4\) Notwithstanding, many countries have implemented competitive mechanisms, v.g., tendering procedures, regarding building new transmission/distribution lines. So, countries (that may own the lines TSO/DSO operate in, through concession agreements, as happens in Portugal – articles 34, 38 and 42 of Decreto-Lei n.º 172/2006) decide through a tendering procedure which entity is able to build a new line (TSO/DSO themselves or a (sub)contractor). This law is available online in Portuguese [Official Journal website](https://dre.pt/pesquisa/search/540627/details/maximized) [access date: 18.02.2020].


\(^8\) Idem.


\(^10\) Excluding grammatical changes (that do not modify the meaning of the Article) on “are entitled neither (…) nor” (Article 9 of Electricity Directive 2009\!/72/EC and Article 9 of the Gas Directive 2009\!/73/EC) to “are not entitled either (…) or” (Article 43 of Electricity Directive 2019\!/944/EU), wording is the same.
(i) **directly or indirectly to exercise control** over an undertaking performing any of the functions of **generation or supply**; and **directly or indirectly to exercise control or exercise any right over** a transmission system operator or over a transmission system; nor

(ii) **directly or indirectly to exercise control over** a transmission system operator or over a transmission system, **and directly or indirectly to exercise control or exercise any right over** an undertaking performing any of the functions of **generation or supply**;

(c) **the same person or persons are** not entitled to **appoint members of the supervisory board, the administrative board or bodies legally representing the undertaking,** of a transmission system operator or a transmission system, **and directly or indirectly to exercise control or exercise any right over** an undertaking performing any of the functions of **generation or supply**; and

(d) **the same person** is **not entitled to be a member of the supervisory board, the administrative board or bodies legally representing the undertaking,** of both an undertaking performing any of the functions of **generation or supply** and a **transmission system operator or a transmission system.**

(Emphasis added)

Therefore, in order to determine the entity that performs the functions of TSO, it is important to respect several requirements that will allow NRA to certificate that entity and maintain its certification\(^1\).

**Firstly**\(^1\), as indicated in paragraph 1a) above, the undertaking that owns a transmission system must act as a TSO. This is particularly important, since, that way, this undertaking is responsible for, among other competences, (i) managing third-party access on a non-discriminatory basis to system users, (ii) collecting access charges, congestion charges, and payments under the inter-TSO compensation mechanism, and (iii) maintaining and developing the network system.

**The second requirement**, as indicated in paragraph 1b), predicts that the same person is not entitled to exercise control over an undertaking performing any of the functions of production or supply and to exercise control or exercise any right over a TSO or a transmission system. Accordingly, it is not possible for the person who controls TSO to exercise control or any right over a generator or a supplier. All Directives define “control”\(^3\) as follows:

“*control* means **rights, contracts or any other means** which, either separately or in combination and having regard to the considerations of **fact or law** involved, confer the **possibility of exercising decisive influence on an undertaking**, in particular by:

(a) **ownership or the right to use all or part of the assets of an undertaking**;

(b) **rights or contracts which confer decisive influence on the composition, voting or decisions of the organs of an undertaking.**”

(Emphasis added)

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\(^1\) It is important to bear in mind that, in accordance with Portuguese legislation (article 25.º-B of Decreto-Lei n.º 29/2006 and article 21.º-B of Decreto-Lei n.º 30/2006), TSO is subjected to continuous supervision of ERSE, in order to make sure these requirements are being fulfilled. In addition, TSO must communicate ERSE all changes that may happen and that may jeopardize its independence.

\(^2\) In order to better analyse these requirements, I will focus on the “Interpretative note on Directive 2009/72/EC concerning common rules for the internal market in electricity and Directive 2009/73/EC concerning common rules for the internal market in natural gas – The unbundling regime” (Interpretative Note), issued by the European Commission on 22 January 2010.

According to the Interpretative Note, this control is both *de jure* and *de facto*, which means that not only is important to analyse if there is a legally binding obligation that allows to a person to exercise control, but also to understand if in fact a person has the ability of controlling these assets.

Regardless the concept of “person”, it is important to clarify that it includes individuals as well as companies and any other public or private entities.

The concept of “rights” implies to take into account paragraph 2 of Article 9 of Electricity Directive 2009/72/EC. According to this this paragraph, these rights include (i) the power to exercise voting rights, (ii) the power to appoint members of the supervisory board, administrative board or boards that can legally represent the undertaking. Consequently, a supplier can keep a direct or indirect shareholding on a network operator if:

- a) Its share does not constitute a majority;
- b) The supplier does not directly or indirectly exercise voting rights;
- c) The supplier does not directly or indirectly exercise power to appoint members of bodies representing the network operator (as the administrative body or the supervisory board);
- d) The supplier does not have any form of control over the network operator.

*Mutatis mutandis*, the same conditions must be met if the TSO has a direct or indirect shareholding in a supplier.

These rules are also applied for parent companies, such as a holding company that may own TSO and/or the supply.

**Thirdly,** Directives establish another requirement (under subparagraph c)) that is not related to control. In fact, when we analysed other requirements, we noticed that the major concern of the European legislator was related to the effective control that could be exercised by the same person(s). That is why it was important to understand the meaning of control. In this case, European legislator is actually concerned with parents companies or other companies that do not have interest in controlling TSO or a supplier or generator, but can make some undesired control. Consequently, for instance, a parent company that holds the majority share of a supplier and appoints board members or exercises its voting rights cannot appoint members of the TSO.

**Finally,** subparagraph d) tries to avoid conflict of interests. In this case, the European legislator tried to prevent the same person to be member of a board of both a TSO and a supplier or generator. It is not important who appointed that person to be in both companies.

It is important to clarify that all conditions set above are cumulative. Besides that, all these rules apply both to public and private entities. However, regarding public entities, the Interpretative Note states that "two separate
public bodies should be seen as two distinct persons and should be able to control generation and supply activities on one hand and transmission activities on the other provided that they are not under the common influence of another public entity (Article 9(6) of Electricity Directive 2009/72/EC and Article 43(5) of Directive 2019/944/EU and Article 9(6) of Gas Directive 2009/73/EC).

Regarding public entities, we can very briefly analyse the case of certification of “Affärsverket svenska kraftnät” (Svenska Kraftnät)\(^\text{14}\). In this case, Commission analysed the independence of this Swedish TSO taking into account that (i) it was a public Swedish company, and (ii) Sweden was also owner of a generator and supplier.

Initially, Commission, in accordance with comments given by the Swedish Regulator (EI), noticed that there were important facts that could help to conclude that these companies were independent.

The first one was related to the Minister to which the companies answered to. While Svanska Kraftnät (TSO) fell within the area of competence of the Swedish Ministry of Enterprise, Energy and Communications, Vattenfall AB (supplier/generator) fell within the area of competence of the Ministry of Finance.

In addition, Sweden has a constitutional “ban on ministerial government” for any individual Minister to directly intervene in the day-to-day operations of a state-owned public service company that is part of the public administration. On the other hand, both companies were legally and organizationally different from each other.

In the end, European Commission issued an opinion, inviting EI to analyse if the Minister of Enterprise, Energy and Communications could issue decisions for non-day-to-day decisions concerning the activities of TSO without being influenced by the minister of Finance or by any overarching public authority taking into account the interests of the Swedish State in Vattenfall AB.


In order to better understand conflict of interests of TSO, it is important to pay attention to the corporate structure of REN, SGPS, S.A. (REN SGPS), since REN – Rede Eléctrica and REN Gasodutos are its subsidiaries, as we see below:

\(^{14}\) Commission’s opinion was issued on 30.04.2012 (C(2012) 3011). A draft version in English of the final decision is available online: https://ec.europa.eu/energy/sites/ener/files/documents/2012_017_se_en.pdf [access date: 25.02.2020].
Figure 1 – Corporate structure of REN, SGPS, S.A. in 2018.  

ERSE decision indicates the shareholders of REN SGPS when REN Rede Eléctrica and REN Gasodutos applied for certification under OU regime and its changes during the process. In this paper, I will briefly address some of its main conclusions, in accordance with its main concerns regarding independence (from different interests of its shareholders at the time of ERSE decision):

- **State Grid International Development Limited** is a Chinese public company. Since China Three Gorges – another Chinese public company – is shareholder of EDP, ERSE must monitor that they act independently from each other.

- **Parpública, SGPS, S.A.** is a Portuguese public company. Since it has rights on Galp, it cannot appoint members to the Board of REN SGPS. However, during the certification process, Parpública sold its position in REN SGPS.

- **EDP** – Since EDP is a group that is responsible for generation, distribution and supply of energy, some remedies were applied (but EDP could maintain its position on REN SGPS). Consequently, EDP cannot appoint members of the board of REN SGPS, does not have any voting rights (nor on the Board, nor on General Assembly) and can only exercise its financial rights (receiving dividends).

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15 Source: REN. Available on REN website: https://www.ren.pt/files/2018-06/2018-06-20162752_7a820a40-3b49-417f-a962-6c4d7f037353$7319a1b4-3b92-4c81-9d7-fca9b6eafacdf07f0418dd-edb5-46a7-8a31-409f72273c45S1.pdf [access date: 23.06.2020].

16 This decision is publicly available on ERSE website: https://www.erse.pt/media/ynlp5dcz/decis%C3%A3ocertifica%C3%A7%C3%A3o.pdf [access date: 23.06.2020].
2.2. Independent System Operator (ISO)

In accordance with Article 9(8) of Electricity Directive 2009/72/EC and Article 43(7) of Electricity Directive 2019/944/EU and Article 9(8) of Gas Directive 2009/73/EC, a Member State may decide not to apply rules on OU and may prefer a different type of unbundling: ISO. However, this is not an entirely free choice made by NRAs or undertakings, since some requirements must be fulfilled. In fact, ISO model can be chosen if transmission operator belonged to a vertical integrated undertaking (VIU) on 3 September 2009.


1. Transmission System owner must ask for being ISO (NRA does not have competence to determine itself the application of this legal framework).
2. NRA must certified that the Transmission System complies with all legal requirements (see below).
3. Commission must approve its designation.
4. Member State approves and designates that Transmission System as ISO.

Legal requirements are defined on the same articles of the European Directives. For instance, taking as example the Electricity sector (the same, adapted as necessary to the Gas sector):

a) The candidate operator must demonstrate that it complies with the requirements of Article 9(1)(b), (c) and (d) [unbundling requirements, with exception of the first one, as explained above on OU section];

b) The candidate operator must demonstrate that it has at its disposal the required financial, technical, physical and human resources to carry out its tasks under Article 12 [related to the tasks performed by TSOs, as grating and managing third-party access, including the collection of access charges, congestion charges and payments under inter-TSO compensation mechanism; operating, maintaining and developing the transmission system];

c) The candidate operator must undertake to comply with a ten-year network development plan monitored by the regulatory authority;

d) The transmission system owner must demonstrate its ability to comply with its obligations under paragraph 5 [which is related to cooperation to ISO to fulfill its tasks, financial obligations and

\[^{17}\text{In accordance with Article 2(21) of Electricity Directive 2009/72/EC and Article 1(53) Electricity Directive 2019/944/EU, as well as, mutatis mutandis, Article 2(21) Gas Directive 73/2009/EC, a VIU means an electricity undertaking or a group of electricity undertakings where the same person or the same persons are entitled, directly or indirectly, to exercise control, and where the undertaking or group of undertakings perform at least one of the functions of transmission or distribution, and at least one of the functions of generation or supply of electricity. In accordance with the Interpretative Note (page 11), this concept applies also if the VIU acts in more than one Member State.}\]
liabilities. To that end, it shall provide all the draft contractual arrangements with the candidate undertaking and any other relevant entity; and

e) The candidate operator has demonstrated its ability to comply with its obligations under Regulation (EC) No 714/2009 including the cooperation of transmission system operators at European and regional level.

It is important to add that burden of proof is put on the candidate operator or on the system owner (not on NRA).

If an ISO is certified, NRAs have more duties, since it is important to ensure its independence (and, of course, risks of lacking that independence are stronger in this situation in comparison with an OU). Thus, Article 37(3) of Electricity Directive 72/2009/EC and Article 59(5) of Electricity Directive 2019/944/EU, as well as Article 41(3) of Gas Directive 2009/73/EC determine, among other things, that NRAs must monitor transmission system’s owner, relations and communications between transmission system owner and ISO, approve investment plans, ensure that network access tariffs collected by ISO include remuneration for the network owner (since adequate remuneration is needed for network assets and investment), carry out inspections and monitor the use of congestion charges in accordance with the rules of Electricity and Gas regulations.

Finally, it is important to add that when an ISO is chosen, it is necessary to determine a legal and functional unbundling (like the one applied to DSOs – see below). This is clear in Article 14(1) of Electricity Directive 72/2009/EC and Article 45(1) of Electricity Directive 2019/944/EU, as well as Article 15(1) of Gas Directive 2009/73/EC. In accordance with these Articles, “A transmission system owner, where an independent system operator has been appointed, which is part of a vertically integrated undertaking shall be independent at least in terms of its legal form, organisation and decision making from other activities not relating to transmission” (emphasis added).

Paragraph 2 of the said Articles stipulates rules on independence (in terms of organisations and decision-making power) of the transmission system owner from other activities of the VIU that are not related to transmission. And paragraph 3 requires the establishment of a compliance programme.

2.3. Independent Transmission Operator (ITO)

In accordance with Article 9(8) of Electricity Directive 2009/72/EC and Article 43(7) of Electricity Directive 2019/944/EU and Article 9(8) of Gas Directive 2009/73/EC, a Member State may decide not to apply rules on OU and may prefer an ITO regime. This can only apply where a VIU (as defined above) existed on 3 September 2009. Under this model, TSO may continue to make part of a VIU, but several detailed rules are provided in order to ensure actual unbundling. Particularly, we will focus on:
(i) rules on assets, equipment, staff and identity of the ITO;
(ii) independence of the ITO;
(iii) independence of the staff and the management of the ITO;
(iv) supervisory body;
(v) network development and powers to make investment decisions;
(vi) specific duties of the regulatory authority;
(vii) review clause.

Regarding rules on assets, equipment, staff and identity of the ITO, it is important to add that Article 17(1) of Electricity Directive 72/2009/EC and Article 46(1) of Electricity Directive 2019/944/EU, as well as Article 17(1) of Gas Directive 2009/73/EC refer to a general rule of autonomy. Thus:

- All assets (not only the ones related to the network) must be owned by ITO and autonomous from VIU).
- Staff for performing the core activities for transmission, including network and management operation, must be employed by ITO.
- The same happens for corporate services, including legal services, accountancy and IT services to handle a day-to-day activities, which must be employed by ITO (nevertheless, under specific circumstances, and for an exception rule, it is possible to make contracts with third-party service-providers18, but ITO responsibilities cannot be transferred to other entities). Whenever we are dealing with services that are not related to (the core of) electricity or gas transmission (such as cleaning services or security services), it is not necessary for ITO to employ those workers and it is allowed to contract third-party19.
- Corporate identity, communications and branding of TSO must not create confusion with the ones used by VIU (paragraph 4).

Regarding the independence of ITO, European Directives intend to provide that ITO have effective decision-making rights and, in consequence, are not dependent from any other part of the VIU, concerning assets for maintaining, operating and developing the transmission system. That is why:

- ITO must have power to raise money from the capital market (Article 18(1)(b) of Electricity Directive 72/2009/EC and Article 47(1)(b) of Electricity Directive 2019/944/EU, as well as Article 18(1)(b) of Gas Directive 2009/73/EC);

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18 However, if this is the case, it is not possible for ITO to share IT systems or equipment, physical premises nor security access systems (see Article 17(1)(c) Electricity Directive 72/2009/EC and Article 46(1)(c) of Electricity Directive 2019/944/EU, as well as Article 17(1)(c) of Gas Directive 2009/73/EC.
19 However, in accordance with paragraph 1(c), it is possible for the ITO to provide services to the VIU if there is not a discrimination to other users, nor restriction of competition and if the NRA approves the same provision.
• Subsidiaries of VIU, performing the functions of generators or suppliers, cannot directly or indirectly have shareholdings of the ITO and, on contrary, ITO cannot have shareholdings of subsidiaries of VIU, performing the functions of generators or suppliers (Article 18(3) of Electricity Directive 72/2009/EC and Article 47(3) of Electricity Directive 2019/944/EU, as well as Article 18(3) of Gas Directive 2009/73/EC);

• Commercial and Financial relations between ITO and other parts of the VIU must comply with market conditions, revealed to NRA and submitted to approval (paragraphs 6 and 7);

• The process of decision making must provide effective independence, establishing rules for compliance in the decision-making structure. This compliance programme must be approved by NRA and a compliance officer must be appointed by the Supervisionary Board (Article 21 of Electricity Directive 72/2009/EC and Article 50 of Electricity Directive 2019/944/EU, as well as Article 21 of Gas Directive 2009/73/EC).

Regarding the independence of ITO, it is important to understand the role of the Supervisory Board. In fact, according to Article 19 of Electricity Directive 72/2009/EC and Article 48 of Electricity Directive 2019/944/EU, as well as Article 19 of Gas Directive 2009/73/EC, this Board takes some important decisions, such as the appointment and renewable, as well as working conditions (remuneration and termination of the term of office) of members of administrative bodies. In addition, the same Articles stipulate some rules that pretend to avoid conflict of interests. Therefore:

• Management and people answering directly to the management and other employees cannot exercise directly or indirectly any professional position or responsibility, interest or business relationship with VIU (or any part of it), nor with its controlling shareholders;

• They cannot have any interest or receive professional position or responsibility, interest or financial benefit with any part of the VIU (so, their remuneration cannot depend on the results of the VIU, but only taking into account their activities in the management of ITO);

• After they terminate their agreement, they cannot have any professional position or responsibility, interest nor business relationship with the VIU.

Some of these rules (namely, rules established in Article 20(3) of Electricity Directive 72/2009/EC and Article 49(3) of Electricity Directive 2019/944/EU, as well as Article 20(3) of Gas Directive 2009/73/EC) are also applicable to, at least, half minus one members of the Supervisory Board. Regarding this body, it is important to add that it is in charge of taking the decisions that may have a significant impact on the value of the assets of the shareholders (such as the approval of annual and longer-term financial plans).

Regarding network development, it is important to refer that, Directives make ITO to develop a ten-year investment plan, subject to the approval of the NRA. If ITO is not capable of executing its plan, than NRA
must have power to act accordingly (for example, by organizing a tendering procedure, or obliging ITO to accept a capital increase, in order to develop these investments).

Finally, ITO has specific obligations to fulfil and NRAs must have additional powers, too. Thus, for example, NRAs must have power to act and issue penalties if they find ITO issued a discriminatory behaviour, favouring VIU.

2.4. Certification models adopted in European countries (maps)

Once explained the main characteristics of the main models, we present the maps that include information on the unbundling models in Europe in 2016 (for both Electricity and Gas sector)\(^\text{20}\):
2.5. Certification procedure


Briefly, the procedure is as follows:

1. **Initiating the procedure**: This certification procedure is applicable to all unbundling models. It is applicable for the initial certification and whenever there is a reassessment. A TSO or the NRA (including after request by the European Commission) can initiate the procedure. If there is a cross-border transmission infrastructures, NRAs must cooperate to each other, in order to aligning their decisions. These may include regular meetings between relevant NRAs, joint NRAs/TSO meetings, cooperation on drafting and timing of information requests, sharing information between NRAs and attempts by relevant NRAs to notify preliminary certification decisions to the European Commission. There are special rules for TSOs controlled by third countries. In this case, dispositions predicted on Article 11 of Electricity Directive 72/2009/EC and Article 53 of Electricity Directive 2019/944/EU,
as well as Article 11 of Gas Directive 2009/73/EC are followed and NRA must notify European Commission. The NRA and another competent authority (e.g. ministry), examines independently the impacts of a certification on the national as well as European security of supply. When adopting its final decision, the NRA must take utmost account of this prior Commission opinion which must be provided in advance.

In this case, certification in relation to third countries shall be refused, if it has not been demonstrated that:

- The entity concerned complies with the requirements of the unbundling rules according to Article 9 of the Directives; and
- Granting certification will not put at risk the security of energy supply of the Member State and the European Union.

2. **Interaction with the TSO:** The NRA can review all relevant documents, ask the TSO or other entities for further documents/evidences. The burden of proof as to whether the requirements are met is put on the candidate operator or on the system owner. National rules (administrative proceeding) may require the NRA to consult previously the TSO (highly recommend to do it before EC opinion).

3. **Interaction with the European Commission:** The NRA shall adopt a preliminary certification within four months from the date of the notification by the TSO, or from the date of the European Commission request. After expiry of that period, the certification shall be deemed to be granted. However, the explicit or tacit decision of the NRA shall only become effective after an opinion of the European Commission. The European Commission can request ACER to provide an opinion on the NRA’s preliminary decision (but has in no case sought the opinion of the ACER). At any time during the procedure NRA and European Commission can request from a TSO and/or an undertaking performing any of the functions of production or supply any information relevant to the fulfilment of their tasks. Generally, for Ownership Unbundling, there are some common remedies that can be taken by the European Commission:

- Control of old small sized generation plants may be temporarily allowed through a subsidiary if performed under a regulated framework and special monitoring duty;
- Financial investors may be allowed but without voting rights / Board members;
- Compliance officers may be “put in place”;
- Articles of Association review: shareholders must confirm before general meetings (GM) they have no interest in generation and supply;
- Letter from Board Members confirming personal independence;
- Annual reports submitted to NRA: confirming the fulfilment of conditions imposed, send GM minutes, accounts.
4. **After the opinion of the European Commission:** After having received the opinion of European Commission, the final certification decision is made by the NRA within two months. The NRA is required to take “utmost account” of the European Commission’s opinion. National rules (administrative proceeding) may require the NRA to consult previously the TSO before its decision.

5. **Approval (if that is the case) – Certification procedure completion:** The certification procedure must be approved by the NRA and the undertaking is designated as being a TSO by the State. NRA must publish its final decision, together with the European Commission opinion\(^{21}\). The same happening in the Official Journal of the European Union.

6. **Monitoring:** After the approval, NRA must monitor the fulfilment of law and the conditions of certification approval. Focus is on general oversight, such as financial information, GM minutes, the news, new shareholders and new investments. Besides that, NRA must:
   - Analyse the Compliance officer’s reports;
   - Ask TSOs to provide information;
   - Ask for the TSOs planned transactions;
   - Ask for commercial and financial agreements; and
   - Make general oversight.

   NRA must reopen a certification to ensure all requirements are being fulfilled, namely upon a reasoned request of the Commission, on their own initiate, or after notification of the TSO. Sometimes, this can happen due to change in the shareholding, new contracts with the VIU or change of the branding/communication policy.

3. **Unbundling for Distribution System Operators (DSO)**

   This legal regime (predicted in article 26 of Electricity Directive 72/2009/EC and Article 35 of Electricity Directive 2019/944/EU, as well as Article 26 of Gas Directive 2009/73/EC) is applicable to situations where DSO is part of a VIU. Basic elements of this unbundling regime are as follows:

   - Legal unbundling of the DSO from other activities of the VIU;
   - Functional unbundling of the DSO in order to ensure its independence from other activities of the VIU;
   - Accounting unbundling (need to separate accounts for DSO activities);
   - Possibility of exemptions of legal and functional unbundling to certain situations.

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\(^{21}\) Both documents, regarding the certification of the Portuguese TSO, are published on ERSE website: [https://www.ersel.pt/eletricidade/funcionamento/transporte/](https://www.ersel.pt/eletricidade/funcionamento/transporte/) [access date: 29.02.2020].
3.1. Legal Unbundling

Legal unbundling ensures that the undertaking performing the activity of a DSO is a different one from the VIU. It is important to add that legal unbundling does not imply the separation of generation nor supply (these activities can be pursued by the same company); only the separation of DSO. VIU is free to choose any legal regime to subject this undertaking, as long as it is independent (including its management).22

3.2. Functional unbundling

Management Separation

The same articles predict a functional unbundling regarding DSO. For this purpose, European legislators intended to ensure that, even if formally companies were different, it would not be possible for the VIU to control the DSO. Thus, persons responsible for the management of the DSO (including top management, members of the executive management and/or members of the board having decision-making powers) cannot participate in company structures of the VIU responsible for day-to-day operation on production, transmission and supply.23

Paragraph 2(b) of the same Articles stipulate that “appropriate measures must be taken to ensure that the professional interests of the persons responsible for the management of the distribution system operator are taken into account in a manner that ensures that they are capable of acting independently” (emphasis added). Each Member must define clearly which measures must be taken in order to ensure such independence. For example:

- Salary structure of these persons shall not be based on the performance of the holding, producer or supplier;
- Rules shall be created in order to ensure independence whenever there is a transition of members between DSO and other company of the VIU or vice-versa;
- DSO shall not directly nor indirectly hold shares in the related supply or production company;
- Decisions taken by the VIU to replace one or more members of the management may also undermine DSO independence.

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22 In Portugal, laws on power sector impose legal separation. For electricity regime, see, for example, Article 36 of Decreto-Lei n.º 29/2006 (available online in Portuguese on https://dre.pt/web/guest/legislacao-consolidada-;lc/70115581/201612281541/exportPdf/normal/1/cachel.LevelPage7_LegislacaoConsolidada_WAR_drefrontofficeportlet_rp=indice [access date: 29.02.2020]). The same obligations are established for what concerns gas sector in Article 31 of Decreto-Lei n.º 31/2006 (available online in Portuguese on: https://dre.pt/web/guest/legislacao-consolidada-;lc/58500377/201612281541/exportPdf/normal/1/cachel.LevelPage7_LegislacaoConsolidada_WAR_drefrontofficeportlet_rp=indice [access date: 29.02.2020]).

23 Nevertheless, the Interpretative Note refers that “a combination of functions can only be permissible if the holding company does not take any day-to-day management decisions concerning the supply, production or network activity”.
Articles related to the independence of ITO can give some inspiration for this purpose.

It is also important to add that DSOs must have their own services related to personnel and finance, IT, accommodation and transport, in order to ensure DSOs can fulfil its tasks of operating, maintaining and developing the network. Consequently, common services (services that are shared with VIU companies) must be limited, in order to avoid cross-subsidies. In cases where they may occur, these common services must be subjected to legal contracts and provided in accordance with market conditions.

**Effective decision-making rights**

This requirement is referred on paragraph 2(c) of the same Articles and establishes that DSO must have assets (human, technical, physical and financial resources) necessary to operate, maintain and develop the network. These assets must be owned by DSO or, if that is not the case, they must remain under DSO command, executing only its decisions. Nevertheless, the VIU maintains, obviously, its supervision rights related, namely, with return on assets. On contrary, supervision rights related to day-to-day decisions and decisions related to the upgrade of the network are not permitted.

In some, DSOs must have completely independence and must be capable of maintain and extend the existing network.

**Compliance Programme**

This programme is predicted on subparagraph 2(d) of the same Articles we are analysing. Its purpose is to provide a formal framework in order to ensure the principle of non-discrimination is respected in all network activities, by the management of the DSO and its individual employees. This programme must ensure confidentiality of commercial sensitive and commercial advantageous information, as well as sanctions imposed by national legislation that must be applied if DSO does not fulfil its obligations. This confidentiality pretends to ensure that, for example, personal working for the supplier does not have access to commercially advantageous information.

DSO must actively promote this programme, offering training on a regular basis to make sure its employees know and fulfil their compliance obligations and clearing that individual employees are subjected to disciplinary proceedings if they do not fulfil obligations predicted in such programme. DSO must also appoint a compliance officer who, among other things, is responsible for submitting a report to NRA with the measures taken in order to ensure this compliance programme.

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24 In Portugal, ERSE has competence to promote infraction proceedings and apply fines whenever companies subjected to its regulation do not fulfil their obligations. DSO is also subjected to this proceedings and, for example, if there are evidences that DSO does not fulfil its non-discrimination obligation, ERSE can initiate these proceedings, in accordance with Articles 28(1)(b)(h) and 29(1)(b)(j) of Lei n° 9/2013. This law is available online (in Portuguese): [https://data.dre.pt/el/lei/9/2013/01/26/p/dre/pt/html](https://data.dre.pt/el/lei/9/2013/01/26/p/dre/pt/html) [access date: 29.02.2020].

25 Regarding the main Portuguese DSO operating in Portugal mainland, the last report (2019) is available on [https://www.edpdistribuicao.pt/sites/edd/files/2020-06/Relat%C3%B3rio%20de%20Conformidade%202019.pdf](https://www.edpdistribuicao.pt/sites/edd/files/2020-06/Relat%C3%B3rio%20de%20Conformidade%202019.pdf) [access date: 01.07.2020].
Additional measures to ensure functional unbundling – rules on communication and branding

Subparagraph 3 of the Articles we are analysing state that NRA must carefully monitor DSO in order to ensure that, when DSO is part of a VIU, rules on competition are still respected. The final part of this subparagraph states as follows:

“In particular, vertically integrated distribution system operators shall not, in their communication and branding, create confusion in respect of the separate identity of the supply branch of the vertically integrated undertaking.”

These are, of course, minimum requirements that Member States must ensure in accordance with European law (we must bear in mind that we are in presence of a Directive). Member States can, in their national legislation, create more demanding rules. Portugal created general rules on communication and branding in Articles 36(2)(e) of Decreto-Lei n.º 29/2006 (electricity) and 31(2)(e) of Decreto-Lei n.º 30/2006 (natural gas). Generally, these rules stated that branding and communication rules should obey to regulations approved by ERSE. Before presenting logos used on electricity sector by EDP Distribuição (DSO), EDP Serviço Universal (last resort supplier26) and EDP Comercial (supplier integrated on VIU) until last year, it is possible to understand companies that made part of EDP group in 201627

![Figure 6 – Companies that made part of EDP group in 2016.](https://web3.cmvm.pt/sdi/emitentes/docs/fsd237971.pdf) [access date: 19.06.2020].

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26 In accordance with recital 47 of Electricity Directive 72/2009/EC and recital (27) of Electricity Directive 2019/944/EU, “That supplier [last resort supplier] may be the sales division of a vertically integrated undertaking, which also performs the functions of distribution, provided that it meets the unbundling requirements of this Directive”.

27 Some companies no longer belong to EDP group. Source: “Prospecto de admissão à negociação no mercado regulamentado euronext lisbon de 568.797.735 acções ordinárias, escriturais e nominativas com o valor nominal de 1 euro cada” (page 196). Available online: [https://web3.cmvm.pt/sdi/emitentes/docs/fsd237971.pdf](https://web3.cmvm.pt/sdi/emitentes/docs/fsd237971.pdf) [access date: 19.06.2020].
Below, there are all logos used by EDP group.

<table>
<thead>
<tr>
<th>EDP Distribuição (DSO)</th>
<th>EDP Serviço Universal (last resort supplier)</th>
<th>EDP Comercial (supplier)</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Logo EDP Distribuição" /></td>
<td><img src="image" alt="Logo EDP Serviço Universal" /></td>
<td><img src="image" alt="Logo EDP Comercial" /></td>
</tr>
</tbody>
</table>

Since branding of these companies was too close, ERSE imposed *unequivocal differentiation* in Articles 57 and 58 of electricity Regulations on Commercial Relations of 2017\(^\text{29}\). This process is still ongoing. EDP Distribuição refers to it expressly on its compliance report presented to ERSE (pages 22-24). Meanwhile, EDP Serviço Universal changed its name to SU Eletricidade and EDP Comercial also changed its logo, as below:

![Logo SU Eletricidade](image) ![Logo EDP Comercial](image)

Natural gas Regulations on Commercial Relations do not have the same wording of the electric one (namely, the obligation set in Article 49(1)(b) of Regulamento n.º 416/2016 in its current version\(^\text{30}\) is only to create a different image, but it is not to create a *unequivocal differentiation* between the image of all companies)\(^\text{31}\).

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\(^{28}\) EDP Comercial is supplier of both the electric and natural gas sectors.

\(^{29}\) This regulation corresponds to Regulamento n.º 632/2017 (that made a revision of the previous regulations – Regulamento n.º 561/2014). Both regulations are published in Portuguese Official Journal. A compiled version is also available in Portuguese on ERSE website: [https://www.erre.pt/ebooks/regulamento-de-relacoes-comerciais-setor-eletrico](https://www.erre.pt/ebooks/regulamento-de-relacoes-comerciais-setor-eletrico) [access date: 29.02.2020].

\(^{30}\) A consolidated version of this Regulation is available in Portuguese on ERSE website: [https://www.erre.pt/ebooks/regulamento-de-relacoes-comerciais-setor-gas-natural](https://www.erre.pt/ebooks/regulamento-de-relacoes-comerciais-setor-gas-natural) [access date: 29.02.2020].

\(^{31}\) ERSE launched a Public consultation whose objective is to review both regulations and unify them for both sectors (electricity and natural gas). Contributions to this public consultation ended on 28 February 2020. The proposed wording is available online and the obligation of clearly distinguish the corporate image and designation, branding and communication of DSO and VIU is established in Article 89: [http://pubhtml5.com/giem/gbdu/](http://pubhtml5.com/giem/gbdu/) [access date: 29.02.2020].
The same thing happened in natural gas sector. In this case, subsidiaries companies\(^\text{32}\) and logo are, as follows:

![Diagram showing subsidiaries of Gás Natural Distribuição (GGND)](image)

**Figure 7** - Companies that made part of Gás Natural Distribuição (GGND) group in 2017. This is group makes part of Galp Power, S.A. (supplier), which is not presented above.

<table>
<thead>
<tr>
<th>Natural Gas DSO (Beiragás, Dianagás, Duriensegáis, Lisboagás, Tagusgás, Lusitaniagás, Medigás, Paxgás, Setgás)</th>
<th>Galp Power (supplier)(^\text{33})</th>
</tr>
</thead>
</table>

3.3. Accounting unbundling

Article 31(3) of Electricity Directive 72/2009/EC and Article 56(3) of Electricity Directive 2019/944/EU, as well as Article 31(3) of Gas Directive 2009/73/EC predict unbundling of accounts. This is the minimum level of unbundling and it is not possible to derogate this rule. The purpose of such obligations is to avoid discrimination, cross-subsidisation and distortion of competition.

\(^{32}\) In accordance with _Galp Gás Natural Distribuição, S.A._ management report and accounts 2017 [in English], available online: [https://web3.cmvm.pt/sdi/emitentes/docs/PC68192.pdf](https://web3.cmvm.pt/sdi/emitentes/docs/PC68192.pdf) [access date: 29.02.2020].

\(^{33}\) Galp Power is a supplier of both electric and natural gas sectors.
3.4. Exemptions for DSO serving less than 100,000 connected customers

Article 26(4) of Electricity Directive 72/2009/EC and Article 35(4) of Electricity Directive 2019/944/EU, as well as Article 26(4) of Gas Directive 2009/73/EC give Member States an opportunity to exempt DSO from applying rules on legal and functional unbundling if they serve less than 100,000 connected customers. This rule is not mandatory, so Member States are not obliged to put this possibility in their national legislation.

It is important, however, to make clear that this rule applies the whole group of companies. So, for example, if a DSO has 80,000 connected customers and buys two other DSO, each one with 11,000 connected customers, all three DSO must become legally and functionally unbundled, since all three companies serve 102,000 connected customers.

This exemption is predicted in Portuguese legislation in Article 36(8) of Decreto-Lei n.º 29/2006 and Article 31(8) of Decreto-Lei n.º 30/2006 and is applied to ten small DSO\textsuperscript{34}.