



Ministry of Economic Affairs
and Climate Policy

Session 2: Applicability of unbundling models in the specific Brazilian context

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Recapture: 3 models of TSO unbundling in the European Union

- Model 1: ownership unbundling (OU)
- Model 2: independent system operator (ISO)
- Model 3: independent transmission operator (ITO)

Basic principles:

- Clear separation between gas transmission and gas production, trade and supply for all associated tasks, activities and decisions.
Rationale: providing transportation is by definition a monopolistic activity (it makes no sense to have competing transportation infrastructures).
- Aim:
 - fair, equal, transparent and non-discriminatory access to the transmission system;
 - avoid information leakage from the transportation company to the supply company;
 - create the right investment decisions, also for third parties;
 - opening up of markets to attract new suppliers and investors.



Key elements of the 3 models of TSO unbundling - I

Model 1: **ownership unbundling (OU)**

- Control over a production or supply company cannot be combined with control or any right over a transmission system, and vice versa.
- Vertically integrated companies need to be split up ('unbundled') into separate companies.

Model 2: **independent system operator (ISO)**

- Transmission assets remain with vertically integrated company, but technical and commercial operation of transmission system is performed by the ISO, acting as a TSO.
- The ISO must demonstrate that it has at its disposal the required financial, technical, physical and human resources to carry out its tasks.
- The ISO must be independent from supply or production interests and must comply with relevant rules on ownership unbundling. Rights of ownership limited: owner of transmission assets obliged to finance investments decided by the ISO.



Key elements of the 3 models of TSO unbundling - II

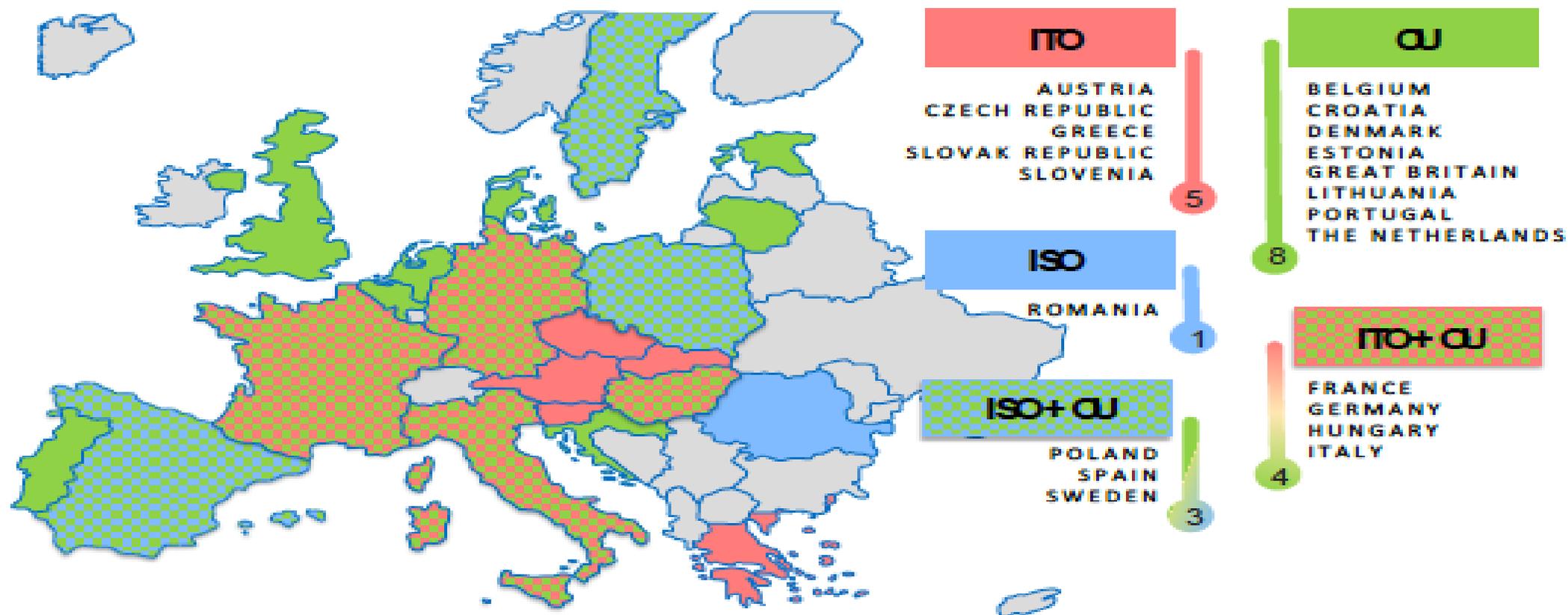
Model 3: **independent transmission operator (ITO)**

- The ITO may remain part of the vertically integrated undertaking (VIU), but detailed rules apply to ensure independence.
- The ITO must have all necessary assets and resources to manage, operate and control the transmission system and has sufficient financial resources for investments.
- The ITO needs to establish and implement a compliance programme to exclude discriminatory conduct, and to ensure that the compliance with that programme is adequately monitored by a compliance office



The 3 models can co-exist (source: CEER 2016)

- 57 TSOs for gas certified: 40% under OU model and 44% under ITO model.
- EU landscape (a country can have multiple TSOs):





Unbundling: potential options for Brazil

- EU experience shows that the 3 models can co-exist, however there is no specific need for Brazil to implement them all.
- OU-model is the most 'pure' and most effective model, but it is also the most complex and costly one to implement in the case of existing vertically integrated companies (like Petrobras).
- Option: opt for the ITO-model as a first, intermediary step for existing vertically integrated companies.
 - EU experience shows that the ITO-model is more acceptable and easier to implement for existing vertically integrated companies.
 - The ITO-model requires less unbundling actions than the ISO-model (and the OU-model).
 - Pre-condition: a good compliance programme and strong regulatory oversight.



Unbundling: suggestions for implementation in Brazil - I

- Implementation - 1: introduce the OU-model for new TSOs and allow, as an intermediary step, the ITO-model for existing vertically integrated companies.
- Implementation – 2: place the Petrobras assets and resources in Transpetro and TBG in a separate (Petrobras) TSO-entity which has its own management and staff and acts independently from other parts of the Petrobras organisation.
Require the TSO-entity to establish and implement a compliance programme.
- Implementation – 3: introduce a certification procedure to verify that TSOs comply with the unbundling provisions and are equipped with the necessary resources to carry out their tasks.
 - The regulator (ANP) needs to be able to assess the independence of the TSO from supply, etc. related activities.
 - ANP need to be able to assess if the TSO is capable to perform its tasks without the involvement and/or assistance from others.



Unbundling: suggestions for implementation in Brazil - II

- Implementation – 4: introduce a system to:
 - (a) monitor the behaviour of TSOs in assigning capacity to market participants;
 - (b) monitor the actual usage of the available capacity in order to free up contracted capacity that is not used and to prevent capacity hoarding.
- In order to create confidence in the independence of the TSOs, market participants (newcomers in particular) have to be certain that capacity is available and assigned to them on an equal basis and in an open and transparent way.
- In order to avoid unnecessary investments and to create the right investment signals all the available capacity should be made available to the market.

The 4 suggestions or 'steps' can be taken in parallel or successively.



Further information

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Unbundling models in detail: ownership unbundling

- Obligation to implement OU for any TSO set up after 3 September 2009. No choice between OU/ ITO / ISO models (or alternative) in this case.
- Owner of a transmission system shall act as a TSO.
- Same person cannot exercise control over a production or supply company and at the same time exercise control or any right over a transmission system, and vice versa.
- Same person cannot appoint board members of a TSO and exercise control or any right over a production or supply company.
- Same person cannot be a member of the board of a TSO and of a production or supply company.



Unbundling models in detail: ownership unbundling

SUPPLIER

- No control
- Only minority shareholding
- Dividends allowed
- No voting rights
- No appointment of administrators

TSO
Owns network
Manages network



Unbundling models in detail: Independent System Operator

**Vertically
Integrated
Undertaking
SUPPLIER**

**NETWORK
OWNER
(Network
leased to ISO)**

+ stricter regulation and permanent monitoring (e.g. NRA approval of investment planning)

ISO
Network operator
(incl. investment
decisions)



Unbundling models in detail: Independent Transmission Operator



+ heavy regulation and permanent monitoring