

# **ASSET STUDY on Cost sharing and cost recovery arrangements in the European Union in accordance with Regulation (EU) 2015/1222 (CACM Regulation)**



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## About the ASSET project

The ASSET Project (Advanced System Studies for Energy Transition) aims at providing studies in support to EU policy making, research and innovation in the field of energy. Studies are in general focussed on the large-scale integration of renewable energy sources in the EU electricity system and consider, in particular, aspects related to consumer choices, demand-response, energy efficiency, smart meters and grids, storage, RES technologies, etc. Furthermore, connections between the electricity grid and other networks (gas, heating and cooling) as well as synergies between these networks are assessed.

The ASSET studies not only summarize the state-of-the-art in these domains, but also comprise detailed qualitative and quantitative analyses on the basis of recognized techniques in view of offering insights from a technology, policy (regulation, market design) and business point of view.

## Disclaimer

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This study has been developed as part of the ASSET project by Tractebel Impact.

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## Executive summary

Establishing, operating and further developing single DAM and IDM coupling cause costs for NEMOs and TSOs. TSOs are fully regulated entities and pass the costs of their market coupling activities through to final electricity consumers and/or electricity producers via regulated network tariffs. On the other hand, NEMOs have the special feature of performing both regulated and merchant (subject to competition) activities. Nevertheless, all their costs are borne by their market participants via market fees. In some cases, however, CACM provides for TSO contributions to NEMO costs, but does not give guidance how this contribution should look like. It results that there is a variety of choices taken by NRAs as regards the cost allocation and recovery mechanism. Such non-harmonized approach may create (1) competitive distortions between NEMOs and (2) lower incentives for NEMOs to spend effort on establishing, updating and further developing single DAM and IDM coupling. This study contributes thus to the evaluation by the Commission of the different cost sharing and cost recovery mechanisms applied across the Union. Based on information collected from NRAs, this study shows indeed a relatively wide variety of choices taken at national level. However, it is also concluded that different TSO contributions do not per se cause distortions in NEMO competition between and within Member States. Instead, it is the absence of a clear definition of regulated activities together with missing transparency on national costs (as opposed to common and regional costs) that may create issues of cross-subsidization.

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## Acronyms

ACER	Agency for the Cooperation of Energy Regulators
CACM	Capacity Allocation and Congestion Management
DAM	Day Ahead Market
EC	European Commission
FCA	Forward Capacity Allocation
IDM	Intraday Market
MS	Member State
NEMO	Nominated Electricity Market Operators
NRA	National Regulatory Authorities
SDAC	Single Day-Ahead Coupling
SIDC	Single Intraday Coupling
TSO	Transmission System Operators

### Country codes:

AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HR	Croatia
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	Netherlands
NO	Norway
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia
UK	United Kingdom

## Introduction

The organization of coupled intraday and day-ahead markets generate costs for the Transmission System Operators and the Nominated Electricity Market Operators. This study reviews the cost sharing and cost recovery arrangements in the European Union as foreseen by Commission Regulation (EU) 2015/1222. The context is set first before the study objectives are further developed.

## Context

The present study lies within the context of the Commission's efforts to support the implementation of the market coupling in Europe in line with the Commission Regulation (EU) 2015/1222 establishing a guideline on capacity allocation and congestion management (hereafter "CACM").

Articles 75 to 80 of CACM set the general rules and provisions on cost sharing and cost recovery to be followed and applied by the relevant parties, i.e. Electricity Transmission System Operators (TSOs), Nominated Electricity Market Operators (NEMOs) and National Regulatory Authorities (NRAs). Article 80 stipulates that every year in their report on costs, TSOs and NEMOs define the costs for establishing, amending and operating the single day-ahead and single intraday coupling (as defined in Article 75 ff. ) and ask for NRAs to recover them through tariffs or other mechanisms if they consider them as reasonable, efficient and proportionate.

In this context and given the concerns of several parties, the Commission wants to monitor that the NRAs' decisions on the cost recovery of NEMOs and TSOs serve the goals of CACM and are compliant with its objectives.<sup>1</sup> In its 2019 monitoring report on the implementation of the CACM Regulation and the Forward Capacity Allocation (FCA) Regulation and related to Article 76, ACER [1] highlights several problems related to:

- The clarity of the CACM Regulation on cost sharing;
- The line of responsibilities for establishing, updating and further developing the Single Day-Ahead Coupling (SDAC) and the Single Intraday Coupling (SIDC);
- The non-harmonised approach to cost recovery and possible TSOs' contributions.

In particular, "the contributions from TSOs are considered as voluntary from the TSOs' perspective and thereby uncertain for NEMOs when they invest in these processes". Also, "NEMOs in some Member States would get all their costs recovered via network tariffs, whereas NEMOs in other Member States would recover only part or none of these costs via network tariffs and would thereby need to increase their fees to market participants. This could allow those NEMOs which participate in different Member States to cross-subsidise their operations and could thus create a non-level playing field for NEMO competition, which is one of the cornerstones of the CACM Regulation".

## Objective of the study

The study contributes to the evaluation by the Commission of the different cost sharing and cost recovery mechanisms applied across the Union, and how these mechanisms contribute or hinder the achievement of the objectives set in Article 3 CACM, mainly:

- § the promotion of competition;
- § the non-discriminatory treatment of TSOs, NEMOs and other market participants;
- § the creation of a level playing field for NEMOs.
- § The results of the study will help the Commission to decide on the potential need for changes of the current legal framework. In particular, the goal is to compile and make a

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<sup>1</sup> Note that the Commission does not have an explicit obligation in CACM to make this assessment, which falls rather under its general NC implementation monitoring obligations.



preliminary assessment of the implementation of NRAs' decisions on the cost sharing and cost recovery of NEMOs and TSOs costs (pan-EU common costs, regional and, if information is available, national costs as mentioned in Article 80 par. 2) related to Article 76 and Article 77 of CACM.

## Methodology

To compare the different cost sharing and cost recovery mechanisms that are applied in the Member States (MSs) related to Article 76 (costs for the purpose of establishing, amending and operating single day-ahead and intraday coupling) and Article 77 (cross-zonal clearing and settlement costs) of CACM, information was gathered through questionnaires sent to and filled by the National Regulatory Authorities (NRAs). The information requested relates to:

- § NEMOs/TSOs proposals and relevant NRAs decisions on the pan-EU, the regional and, to the extent information is available, national costs for single day-ahead and single intraday coupling;
- § the easiness to recover the costs and the stability of the recovery mechanism: Has the NRA published a decision or only provided informal guidance on the NEMO cost recovery methodology? For how many years is the cost recovery mechanism defined?
- § percentages of such costs that NEMOs recover in each MS through TSOs/NEMOs tariffs or other means.

The questionnaire was jointly developed by the EC and the Consultant.

This report is structured as follows: Section 0 highlights the relevant parts of the CACM regulation on sharing and recovery arrangements of costs related to the single day-ahead and single intraday coupling. The study then continues in Section 0 with a discussion on the potential issues caused by cost allocation and recovery mechanisms. Section 0 presents the findings of the survey and tries to identify commonalities and differences between MSs in the mechanisms implemented. The last section concludes.

## CACM Regulation

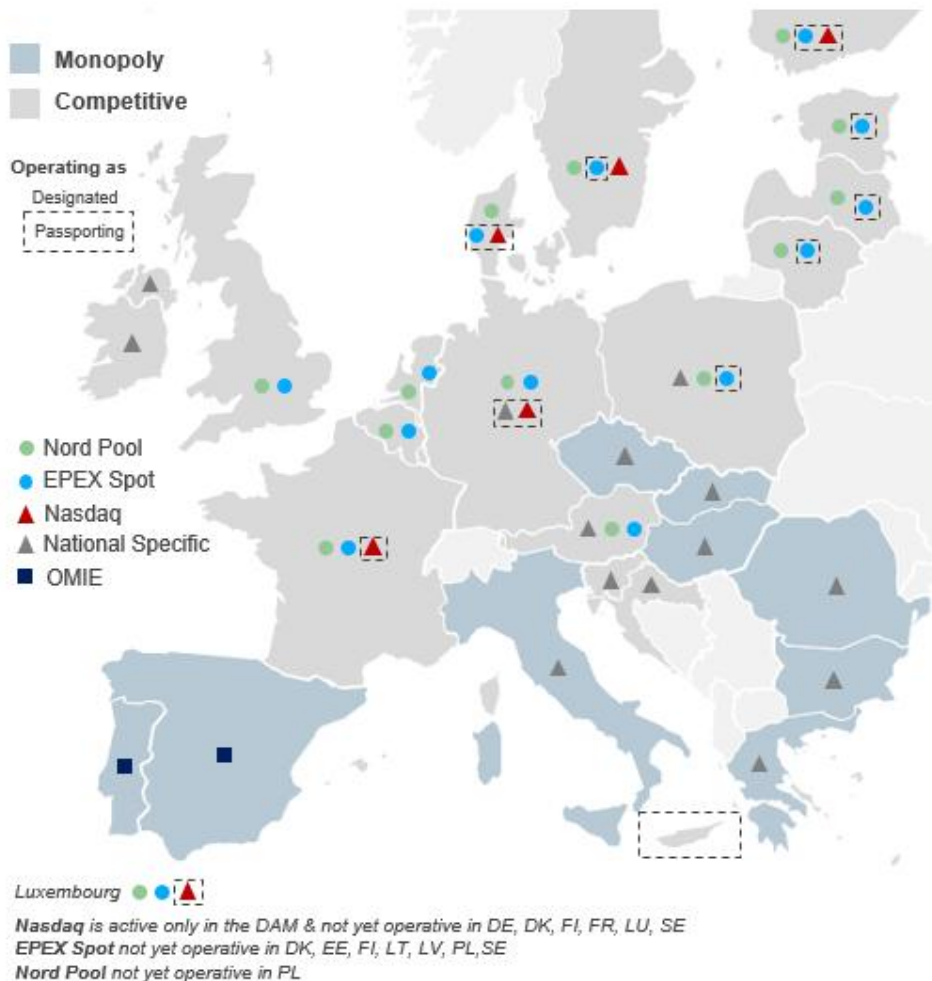
The target design model for the European internal electricity market is based on a temporal sequence of forward, short term day-ahead and intraday as well as real-time balancing markets. The rules governing these markets are laid down in eight Commission Regulations, commonly referred to as Network Codes. There are three families to be distinguished: codes related to grid connection, to system operation and to markets. As regards the latter, forward markets are dealt with in the Forward Capacity Allocation (FCA) Network Code, while the Electricity Balancing (EB) Network Code establishes guidelines for the electricity balancing markets. The Capacity Allocation and Congestion Management (CACM) market network code organizes the single European day-ahead (DAM) and intraday market (IDM) coupling. In particular, it defines the role of a Nominated Electricity Market Operator (NEMO) who operates the market, in close cooperation with the Transmission System Operators (TSOs). Establishing, operating and further developing single DAM and IDM coupling cause costs that need to be allocated between NEMOs and TSOs. The CACM Regulation defines some principles for the allocation and recovery of these costs, which are reviewed below. Before this, the role of the NEMO is described in more detail. It has the specific feature of combining regulated and competitive activities.

### Nominated Electricity Market Operators – NEMOs

According to CACM, *"Nominated Electricity Market Operator"* means an entity designated by the competent authority to perform tasks related to single day-ahead or single intraday coupling. At least one NEMO per bidding zone has to be designated by the NRAs. Article 7 CACM lists a series of tasks that NEMOs have to perform: receiving orders from market participants, matching and allocating orders, publishing prices and informing market participants on the results, acting as central counter parties for clearing and settlement of the exchange of energy, etc.

The particularity of the European market operation is that NEMOs have tasks that refer to regulated and competitive activities. NEMOs are thus competitors for some activities, while they have to cooperate for the execution of other, regulated, tasks. Article 7 CACM does not clearly distinguish between regulated and competitive tasks. At least the “Market Coupling Operator (MCO) function” can be considered as regulated: matching orders from DAM and IDM for different bidding zones and simultaneously allocating cross-zonal capacities, developing and maintaining associated algorithms, systems and procedures, processing input data on cross-zonal capacity and allocation constraints, validating and sending results to the NEMOs (Article 7(2)). On the other hand, it is not clear from the CACM whether other functions belong to the regulated perimeter.

While the competitive model is the default model for NEMO designation, some Member States have opted for a national legal monopoly. This is possible where a monopoly existed at the time of entry into force of CACM. *Figure 1* provides an overview of the NEMOs and the model MSs opted for. 9 MSs have a national legal monopoly with a national specific NEMO, except for OMIE that is the NEMO for both Portugal and Spain. EPEX Spot and NordPool operate in most of the MS with a competitive setting. Note that EPEX Spot has recently entered the Nordics and intends to enter the Baltics markets soon. Nasdaq intends to enter the DAM in Germany, France and the Nordics<sup>2</sup> in the course of 2020.



Source: Tractebel, status December 2019  
Figure 1 – NEMO overview

<sup>2</sup> Nasdaq has been designated by the Swedish NRA in December 2018, but it is not operational yet.

## Cost sharing and recovery mechanisms

Market coupling activities cause costs that are borne by NEMOs who pass them through to their market participants via market fees. In some cases, however, CACM allows TSOs to contribute to the costs subject to approval by the NRA. It is straightforward that this possibility exists only for costs related to regulated activities. In particular, CACM refers to the costs incurred by NEMOs for establishing, amending and operating market coupling (Article 76) and for clearing and settlement (Article 77).

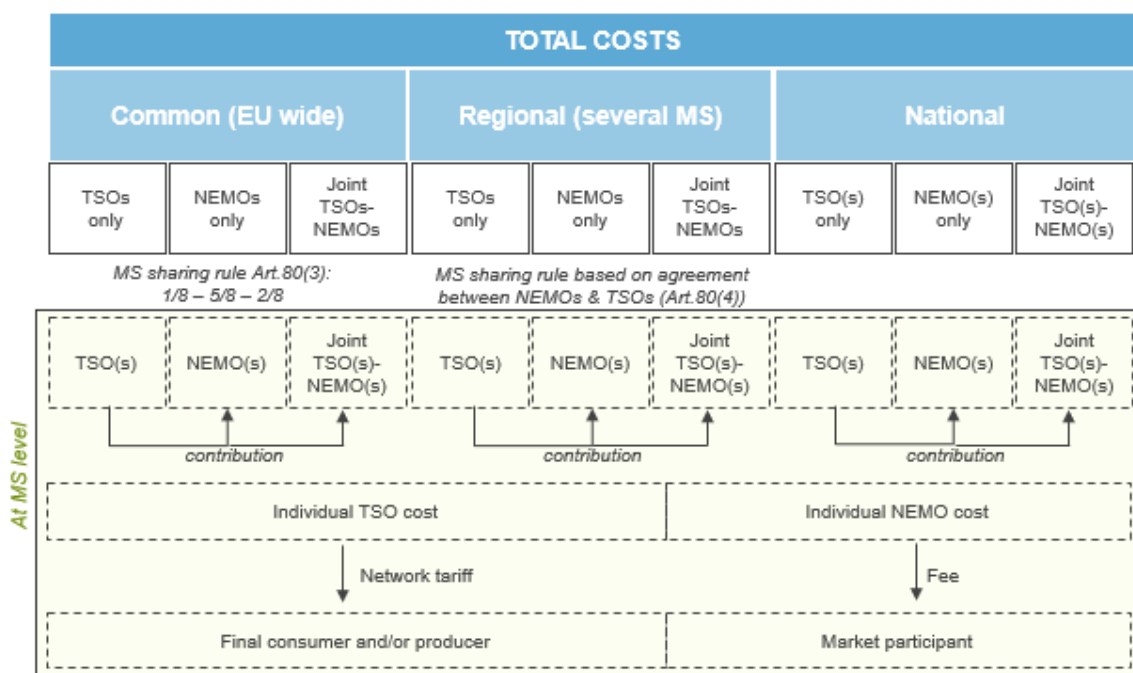
### Costs of establishing, amending and operating single day-ahead and intraday coupling

Article 76 of CACM allows for TSO contribution to the costs of establishing, amending and operating single day-ahead and intraday coupling. These costs can be considered as being part of the MCO function, although CACM is not explicit on it. Costs are categorized from a geographical point of view (common EU-wide, regional and national) and depending on who is involved: NEMOs only, Joint TSOs and NEMOs and TSOs only costs. Before being allocated to TSOs and NEMOs at MS level, all common (i.e. EU-wide) and regional costs have first to be split among MS. For the common (EU-wide) costs, Article 80 CACM foresees a specific sharing key:

- § 1/8 shall be divided equally among MS;
- § 5/8 shall be divided among MS proportionally to their (final yearly electricity) consumption;
- § 2/8 shall be divided equally between the participating NEMOs. The NRAs decided to divide the two eighths of common costs between the MSs proportionally to the volume traded by the NEMOs participating in the single day-ahead and intraday coupling (designated or passporting) in each MS. This principle ensures that NEMOs do not have to bear part of the All TSOs costs. [2].

The allocation of the regional costs among involved MSs shall be based on a sharing rule agreed upon by participating NEMOs and TSOs.

Once costs are allocated among MSs, Joint TSOs and NEMOs costs need to be split and TSOs can decide to participate in the NEMOs costs. Finally, individual TSO and NEMO costs are covered, respectively, by network tariff and market fees. TSO costs are paid by final consumers and/or producers, while NEMO costs are paid by DAM and IDM participants. *Figure 2* provides a global overview.



Source: Tractebel, status September 2019  
Figure 2 – Article 76 cost classification and allocation

CACM does not give any guidance as to the contribution by TSOs to NEMO costs, except that every year, all NEMOs and TSOs have to provide a report to the NRAs in which the costs are explained. The report, to be published by ACER, shall also provide full details of contributions made to NEMO costs by TSOs (Article 80(1)). In the ACER cost report editions [3] and [4], however, TSO contributions to NEMO costs are not published.

### Clearing and settlement costs

According to Article 7(1)(g) CACM NEMOs are responsible to act as central counterparties (CCPs) for clearing and settlement of the exchange of energy resulting from DAM and IDM. CCPs act as counter party between themselves and the market participants but also between themselves and other CCPs.

Referring to cost recovery, CACM does not clearly define the tasks of clearing and settlement as regulated or competitive. One can argue that tasks relating to common technical solutions or information sharing between different NEMOs or between NEMOs and TSOs could be considered as regulated and associated costs should, thus, come into consideration for a TSO contribution. Clearing and settlement between NEMOs and their own customers, on the other hand, should be seen as a competitive activity and should be fully borne by NEMOs.

Article 77 CACM does not provide any rule on how to allocate potential common or regional clearing and settlement costs among MSs. If there were any such costs, the general principles of Article 80 and Article 76 should apply.<sup>3</sup>

### Conclusions

Establishing, operating and further developing single DAM and IDM coupling cause costs that need to be allocated between NEMOs and TSOs. TSOs are fully regulated entities while NEMOs have the special feature of performing both regulated and merchant (subject to competition)

<sup>3</sup> Note that Article 77 refers to CCPs and shipping agents and not to NEMOs. According to Article 7, NEMOs are tasked with clearing and settlement and act as a CCP. Shipping agent could be a TSO but only if they agree to that. Otherwise, the default is also the NEMO.

activities. CACM does not provide a comprehensive view on regulated activities (MCO function, Article 76 costs, partially Article 77 costs and potentially others). Furthermore, CACM provides for TSO contributions to NEMO costs but does not give guidance how this contribution should look like. It results that there is a risk of distortion in the NEMO competition within and between MSs.

The following section sheds some more light on possible issues resulting from cost allocation and recovery mechanisms.

## Potential issues caused by cost allocation mechanisms

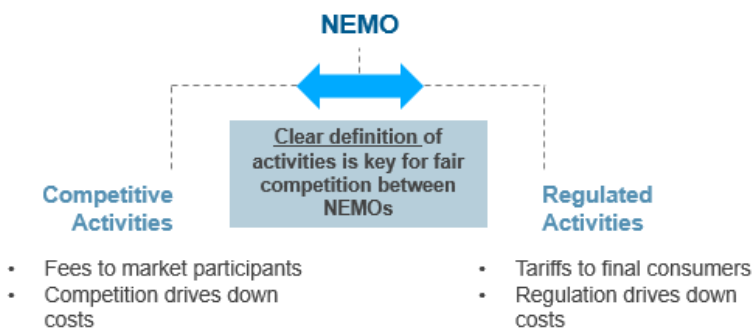
In 2018, the Commission [5] concluded that “*legal uncertainties around issues such as cost sharing or cost recovery, and a lack of harmonisation of governance-related issues led to delays and significant disagreement among relevant parties at several occasions.*” More specifically, ACER [1] points to three major issues around cost sharing and recovery:

1. Problems related to the clarity of the CACM Regulation;
2. TSO contributions may be voluntary and thus uncertain for NEMOs;
3. Non-harmonized approaches among MSs may create possibilities for cross-subsidization, harming competition between NEMOs in different MSs.

We review each of them in the following sections.

### Clear definition of competitive and regulated activities

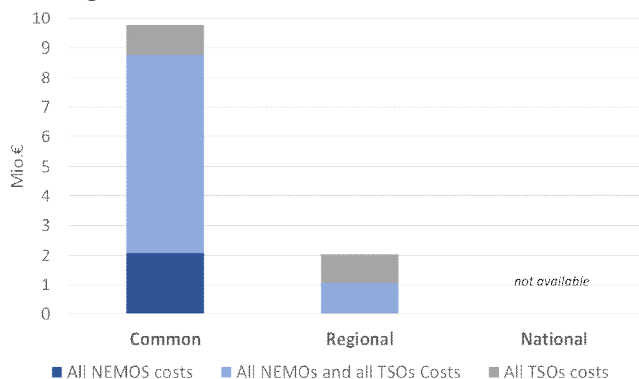
In the reference competitive NEMO model, NEMOs are competitors for some activities, while other activities are fully regulated and even require cooperation among NEMOs. NEMOs allocate their costs thus either to their clients (market participants) through fees, or to final consumers via TSOs (regulated tariffs). See *Figure 3*. Competition between NEMOs will be effective only if there is a clear separation and definition of regulated and competitive activities. Otherwise, risks of cross-subsidization arise within and between MSs. Within MSs, competition between NEMOs could be distorted if unclear definitions lead to different cost allocations between regulated and competitive activities and if the TSO takes over at least some of the costs. This risk seems high if a NEMO is willing to enter a new market that it is not fully familiar with. Between MSs, issues may arise if NEMOs are active in several MSs and less transparent conditions in one MS allow to shift costs between MSs and from competitive to regulated activities.



Source: Tractebel  
Figure 3 – NEMO activities

Section 0 highlighted that the CACM does not clearly distinguish between regulated and competitive tasks. One can argue that this is less problematic as long as there is common agreement between TSOs, NEMOs and NRAs on the activities and costs to be considered. This is certainly true for common and, to a lesser extent, regional costs. National costs, on the other hand, are not documented in the CACM cost reports [3] and [4]. NEMOs and TSOs classify national costs resulting from regulated activities as sensitive commercial information, to be submitted directly to the relevant regulatory authority. Anecdotal evidence suggests, however, that national costs represent by far the largest cost category before common (almost

10Mio.€ in 2018) and regional (2Mio.€) costs.<sup>4</sup> See Figure 4. As long as there is no transparency on these costs, risks of competitive distortions within and especially between MSs can thus be considered as high.



Source: CACM Cost Report of 2018 [4] & Tractebel  
Figure 4 – Common and Regional CACM costs 2018

### Uncertain recovery mechanisms

Article 76 of CACM stipulates that TSOs may, but are thus not obliged to make a contribution to NEMO costs. Also, CACM does not give guidance on how such contribution should be structured. Cost sharing and recovery mechanisms are thus organized at MS level and therefore highlight a potentially large variety of choices. Some MSs may not have agreed yet on a recovery scheme, TSO commitments may be shorter or longer, etc. Combined with the previous conclusion that regulated activities and duties are not necessarily well defined, NEMOs may indeed have low incentives to spend effort on establishing, updating and further developing single DAM and IDM coupling.

### Cross-subsidization

Cross-subsidization occurs if one product is sold above marginal costs such that another product can be sold below marginal costs. Cross-subsidization raises concerns if it is used for a predatory pricing strategy, i.e. driving competitors out of the market in order to raise prices in the long term. ACER [1] argues that “NEMOs in some Member States would get all their costs recovered via network tariffs, whereas NEMOs in other Member States would recover only part or none of these costs via network tariffs and would thereby need to increase their fees to market participants. This could allow those NEMOs which participate in different Member States to cross-subsidise their operations and could thus create a non-level playing field for NEMO competition, which is one of the cornerstones of the CACM Regulation”. According to ACER, different TSO contributions across MS favour thus cross-subsidization and unfair competition between NEMOs. This requires some clarification since on the contrary, it is concluded below that different TSO contributions (percentages of NEMO costs covered) should not affect competition between NEMOs active in different MSs. The stylized example in Figure 5 illustrates the idea.

Assume two identical MSs A and B and two NEMOs 1 and 2 operating in both markets. NEMO 1 (2) has a market share of 70 (30) percent in MS A. In MS B, NEMO 1 (2) has a market share of 30 (70) percent. There is a common cost of 100€ and since MSs are identical, this cost is shared equally among the MSs (50€ each).<sup>5</sup> Cases 1 and 2 show that independent from the TSO contribution to NEMO costs (same or different contributions in the MSs), the relative cost (€/unit traded) is the same for the NEMOs in a given MS (0, 0.25 or 0.5€/unit). As long as

<sup>4</sup> In DK (DE), it seems that national costs are 3-4 (2) times as high as the sum of the MS share of common and regional costs.

<sup>5</sup> This is a simplifying assumption. The conclusions would not change if different countries, in terms of volumes traded for instance, were considered.



costs are shared between NEMOs according to volumes (size), NEMOs within a MS compete on a level playing field. Also Case 2 shows that cross-subsidization between MSs driven by different TSO contributions is not feasible as long as NEMO competition drives down costs to marginal costs. Case 3, however, shows that issues of unfair competition and cross-subsidization may appear if costs are equally allocated among NEMOs, or according to other criteria independent from their market shares. In the example of Case 3, costs are allocated equally among NEMOs in MS A and according to market shares in MS B. NEMO 1 has a competitive advantage in MS A (0.18 vs. 0.42€/unit) and this advantage could allow NEMO 1 to cross-subsidize its activities in MS B, by setting a price below 0.25€/unit. However, this concern is not caused by different TSO contributions between MSs, but by the way costs are allocated among NEMOs at MS-level.

	CASE 1		CASE 2		CASE 3	
	MS A	MS B	MS A	MS B	MS A	MS B
Common cost (€)	100		100		100	
Traded volume (units)	100	100	100	100	100	100
	Market shares (volume)		Market shares (volume)		Market shares (volume)	
NEMO 1	70%	30%	70%	30%	70%	30%
NEMO 2	30%	70%	30%	70%	30%	70%
NEMO costs per MS (€)	50	50	50	50	50	50
TSO contribution	50%	50%	0%	100%	50%	50%
NEMO allocation rule:	allocation among NEMOs according to volumes				Equal sharing among NEMOs	
Total cost per NEMO (€)						
NEMO 1	17.5	7.5	35	0	12.5	7.5
NEMO 2	7.5	17.5	15	0	12.5	17.5
Average cost per NEMO (€/unit)						
NEMO 1	0.25	0.25	0.50	0.00	0.18	0.25
NEMO 2	0.25	0.25	0.50	0.00	0.42	0.25

Source: Tractebel

Figure 5 – Stylized example of TSO contributions and cross-subsidization

As regards the relationship between TSO contributions and the risk of cross-subsidization, it is, thus, concluded that different TSO contributions alone do not raise concerns about cross-subsidization between MSs. On the contrary, independent from the TSO contribution share, the risk of cross-subsidization is low if there is sufficient NEMO competition in the MS (any “abnormal” rent used for subsidizing activities in another MS disappears) and/or costs are allocated among NEMOs according to their size (trade volumes). Finally, unclear separation of regulated and competitive activities, especially concerning national activities and costs, can favor cross-subsidization (Section 0).

## Conclusions

Different TSO contributions to NEMO costs alone do not raise concerns of cross-subsidization and unfair NEMO competition, since NEMOs in a given MS are exposed to the same TSO intervention. Issues arise if regulated costs are allocated within a MS among NEMOs independent from their size or traded volume. Larger NEMOs are then able to generate “abnormal” margins that could be used to cross-subsidize their merchant activities in another MS. Note that this effect is larger if TSO contributions are small. Furthermore, cross-subsidization is likely if regulated and merchant are not clearly separated, i.e. if regulated NEMO activities are not clearly defined. For common and regional costs, that seems less of an issue since costs have been commonly agreed upon by involved TSOs and NEMOs. For national costs, on the other hand, competitive distortions within and between MSs cannot be excluded. This is a concern since national costs are not public, while anecdotal evidence suggests that national costs are a multiple of common and regional costs.

To complement the insights gained so far, the following section compiles and makes a preliminary assessment of the concrete cost sharing and cost recovery mechanisms in the EU

MSs. The information is gathered from questionnaires sent to the NRAs and analysis of official documents.

## Findings

### Information collected from NRAs

As *Table 1* highlights, the study includes feedback from 23 out of 27 NRAs.<sup>6</sup> The 27 NRAs include the NRAs from 26 MSs (28 MSs except Cyprus and Malta) and the Norwegian NRA. The level of information received varies among MSs. The majority of these answers has provided information about allocation and recovery of costs related to Article 76 and Article 77 of CACM. While Bulgaria, Portugal, Slovakia and the United Kingdom provided no answer to the questionnaire, Slovenia shared no specific information regarding Article 76 and Article 77 costs. Italy provided information only for Article 76 but not for Article 77 costs. Interestingly, MSs in the Nordics (DK, FI, NO, SE) and in the Baltics (EE, LT, LV) presented joint guidance proposals to NEMOs and TSOs. Due to the integrated market, Ireland and Northern Ireland authorities provided an identical answer.

Note finally that all information gathered relates to common and regional costs, while no information on national costs was communicated via the questionnaire (see also Section 0.).

MS	Questionnaire Returned	The questionnaire provides information on			
		Art 76 - DAM	Art 76 - IDM	Art 77 - DAM	Art 77 - IDM
AT	X	X	X	X	X
BE	X	X	X	X	X
BG	-				
CZ	X	X	X	X	X
DE	X	X	X	X	X
DK	X	X	X	X	X
EE	X	X	X	X	X
EL	X	X	X	X	X
ES	X	X	X	X	X
FI	X	X	X	X	X
FR	X	X	X	X	X
HR	X	X	X	X	X
HU	X	X	X	X	X
IE	X	X	X	X	X
IT	X	X	X	-	-
LT	X	X	X	X	X
LU	X	X	X	X	X
LV	X	X	X	X	X
NO	X	X	X	X	X
NL	X	X	X	X	X
PL	X	X	X	X	X
PT	-				

<sup>6</sup> Status Summer 2019.



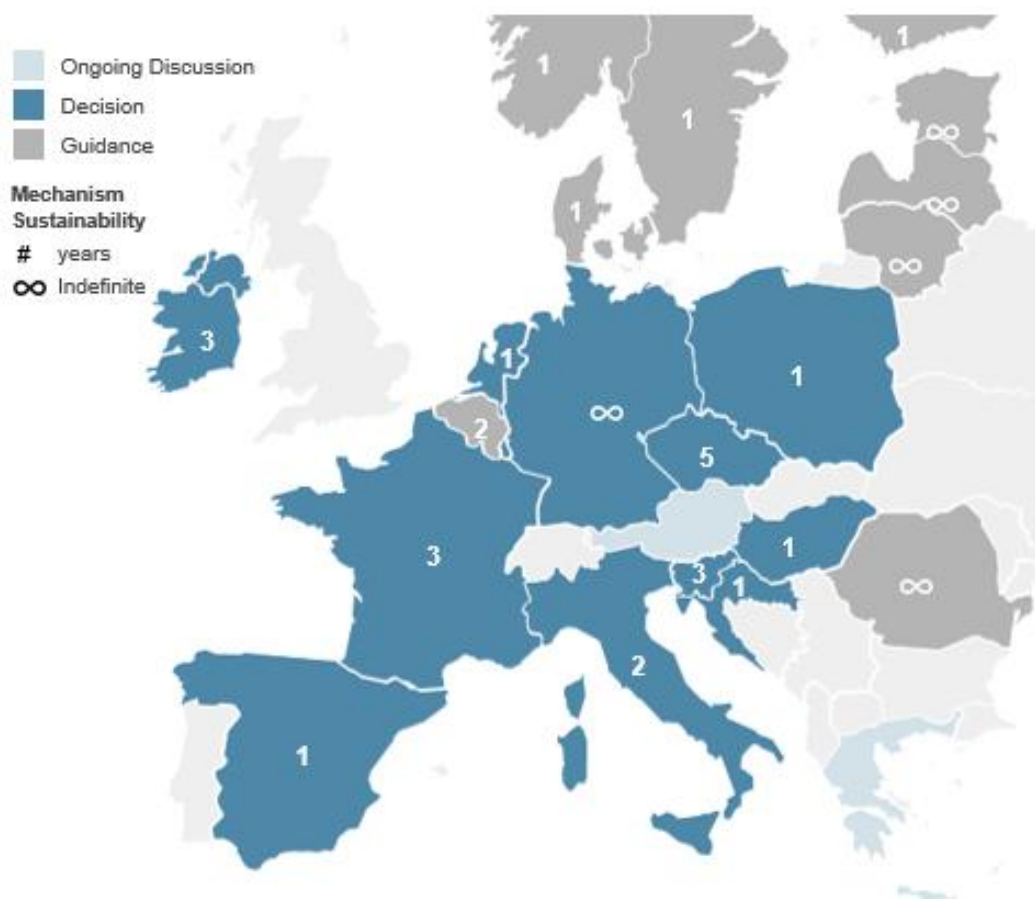
MS	Questionnaire Returned	The questionnaire provides information on			
		Art 76 - DAM	Art 76 - IDM	Art 77 - DAM	Art 77 - IDM
RO	X	X	X	X	X
SE	X	X	X	X	X
SI	X	X	X	X	X
SK	-				
UK	-				

X = answer, - = missing, MS in italics are national legal monopolies

Table 1: Answers to the questionnaire

### Status of the discussion in the Member States

As explained in Section 0, Article 80 of CACM allows TSOs to contribute to the costs incurred by NEMOs (under Article 76) subject to approval by the relevant NRAs, but it does not give any guidance as to the methodology to be applied for such sharing. All NRAs confirmed in their letter of 10th of May 2017 and in [2] *"that competent Regulatory Authorities within each Member State or third country will decide how to split the Member State Bill between TSOs and NEMOs within their jurisdiction"* and that *"given cost recovery is defined in the CACM Guideline as a national competence no further statement will be given to NEMOs or TSOs by all NRAs"*. That means that the process for cost allocation between NEMOs and TSOs is organized at MS level. Also, NRAs may intervene with a decision providing a specific rule, or via a guidance setting boundaries to direct sharing rules proposed by NEMOs and TSOs.



### Decision

### Guidance

**Mechanism**  
**Sustainability**

# years

$\infty$  Indefinite

Figure 6 – Status of the discussion and sustainability of the implemented mechanism

§ a guidance has been proposed in BE, DK, EE, FI, LT, LV, NO, RO, SE;

The German NRA acted without a formal input from TSOs or NEMOs and decided to allocate to the TSOs all common and regional costs regardless their typology<sup>7</sup>, while NEMOs have to bear their part of the national costs, without any TSO contribution. Romania has submitted its guidance to a public consultation process. Stakeholders in Austria and Greece<sup>8</sup> have not reached a conclusion yet. The Nordic NRAs have published a guidance to be transparent towards NEMOs and TSOs on what costs can be recoverable. However, each Nordic NRAs will also yearly issue a decision on cost recovery.

<sup>7</sup> Joint TSOs-NEMOs Costs, Joint NEMOs costs and Joint TSOs.

<sup>9</sup> Italy is not yet operational in XBID continuous trading.

## Sustainability of the allocation and recovery mechanism

TSO contributions can be uncertain and NEMOs may thus have low incentives to spend efforts on establishing, updating and further developing single DAM and IDM coupling (Section 0).

Table 2 shows the number of years after which the cost allocation and recovery mechanism is to be revised. This is used here as a key metric to assess the sustainability of the mechanism.

NEMOs have a long term view on cost sharing in some countries, where the cost recovery mechanisms are or will be in place for an indefinite period. This is the case for the Baltics, Germany, the Nordics, Romania and Luxembourg. Among MSs with finite durations,

- § Some NRAs assess on a yearly basis the possibility whether the NEMO costs submitted can be recovered by the TSO. This procedure is in place in HR and HU. In the latter country, the exact cost methodology - as explained in the HUPX Market Rules (§6.2) - is decided yearly by the NRA. On the other hand, the cost approval process in HR involves all the parties: it foresees an ex-ante and an ex-post evaluation of the NEMO cost submitted, then the NRA yearly decides on the appropriateness of these and on the TSO contribution.
- § Costs revision mechanisms foresee more than one year revision time frames in BE, CZ, FR, IE and IT. The length varies between 2 and 5 years and it can be linked to specific events, such as the introduction of IDM coupling with large enough intraday trade volume (IT) or tariff revision procedures (FR in 2021, CZ every 5 years when the new regulatory asset base is discussed).

The information collected from some NRAs did not allow to assess the sustainability of the recovery mechanism:

- § ES: the Ministry and the NRA assess the costs submitted on a yearly basis. This process defines how the NEMO can recover its costs via the regulated fee imposed to market participants.
- § PL: The regulator considered all SID costs incurred by NEMOs until the end of 2019 as development costs and their recovery by the TSO. PL joined the XBID in November 2019 from which moment only NEMOs' operation costs have incurred. There is no information provided for the years to come.
- § NL: the TSO can contribute to the totality of the development costs for the XBID development for the period 2017-2018. Again, there is no information provided for the years to come.

MS	Proposals / Decision			Revision after x years	Comments
	NEMO	TSO	NRA		
AT	-	-	-	-	Ongoing Discussion
BE	No	Yes	Yes	2	CREG Guidance not public yet
BG					No feedback on questionnaire
CZ	No	-	Yes	5	Official Decision for the next regulatory period
DE	No	No	Yes	∞	Proactive decision by BNetzA
DK	No	No	Yes	1	Nordics Guidance + National decision
EE	No	No	Yes	∞	Guidance in common with Baltics
EL	No	No	No	∞	Not coupled yet
ES	No	No	Yes	1	Decision: Ministry (DAM) NRA (IDM)
FI	No	No	Yes	∞	Guidance in common with Nordics
FR	No	Yes	Yes	3	Decision CRE 2019-167

MS	Proposals / Decision			Revision after x years	Comments
	NEMO	TSO	NRA		
HR	-	-	Yes	1	Official public Decision
<i>HU</i>	-	-	Yes	1	Included in the Market Rules
IE	Yes	No	Yes	3	Official public Decision
<i>IT</i>	Yes	No	Yes	2	Decision ARERA 658-18
LT	No	No	Yes	∞	Guidance In common with Baltics
LU	No	No	Yes	∞	Decision, but no NEMO Hub today
LV	No	No	Yes	∞	Guidance In common with Baltics
NO	Yes	No	Yes	1	Nordics Guidance + National decision
NL	No	No	Yes	-	Decision, not public yet
PL	No	No	Yes	-	Official Decision taken until 2019
<i>PT</i>					No feedback on questionnaire
<i>RO</i>	No	No	Yes	∞	NRA proposal under public consultation
SE	Yes	No	Yes	1	Nordics Guidance + National decision
SI	No	-	Yes	3	Costs recovered on 3-months basis
<i>SK</i>					No feedback on questionnaire
UK					No feedback on questionnaire

- = missing answers, ∞ = indefinite, MS in italics are national legal monopolies  
 Table 2 : Cost Recovery Mechanism Status

## Cost sharing arrangements Article76

### Joint TSOs-NEMOs costs allocation

The part of costs which are attributed to both parties, defined as joint TSOs-NEMOs costs, are normally allocated in equal part to the NEMOs and TSOs (50 percent for TSOs, 50 percent allocated among NEMOs). Germany and Luxembourg are the only exception. While in the latter there is no NEMO Hub active, the German regulator decided to allocate all common and regional costs directly to the TSOs.

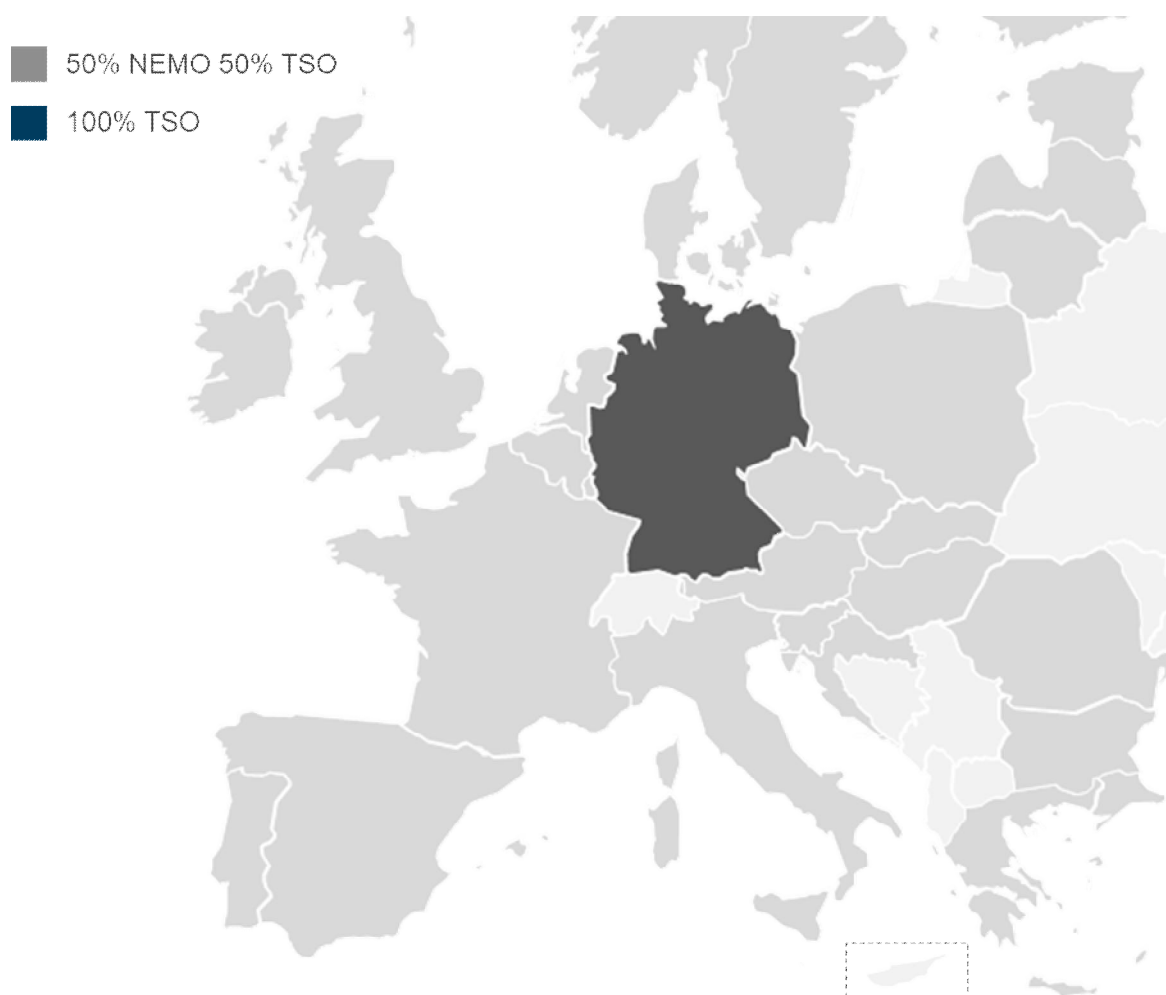


Figure 7 - Cost allocation Joint NEMOs - TSOs

#### TSO contribution to NEMO costs

Article 76 of CACM foresees the possibility for TSOs to contribute to NEMOs costs. Table 3 shows that this contribution can vary according to the market (DAM/IDM), the geographical level (common/regional/national) or the type of cost (NEMO only or NEMO part of Joint TSOs-NEMOs cost) considered. While NRAs in MS with national legal monopolies allow for a full recovery via NEMOs' market fees, MSs with a competitive NEMO framework present different solutions:

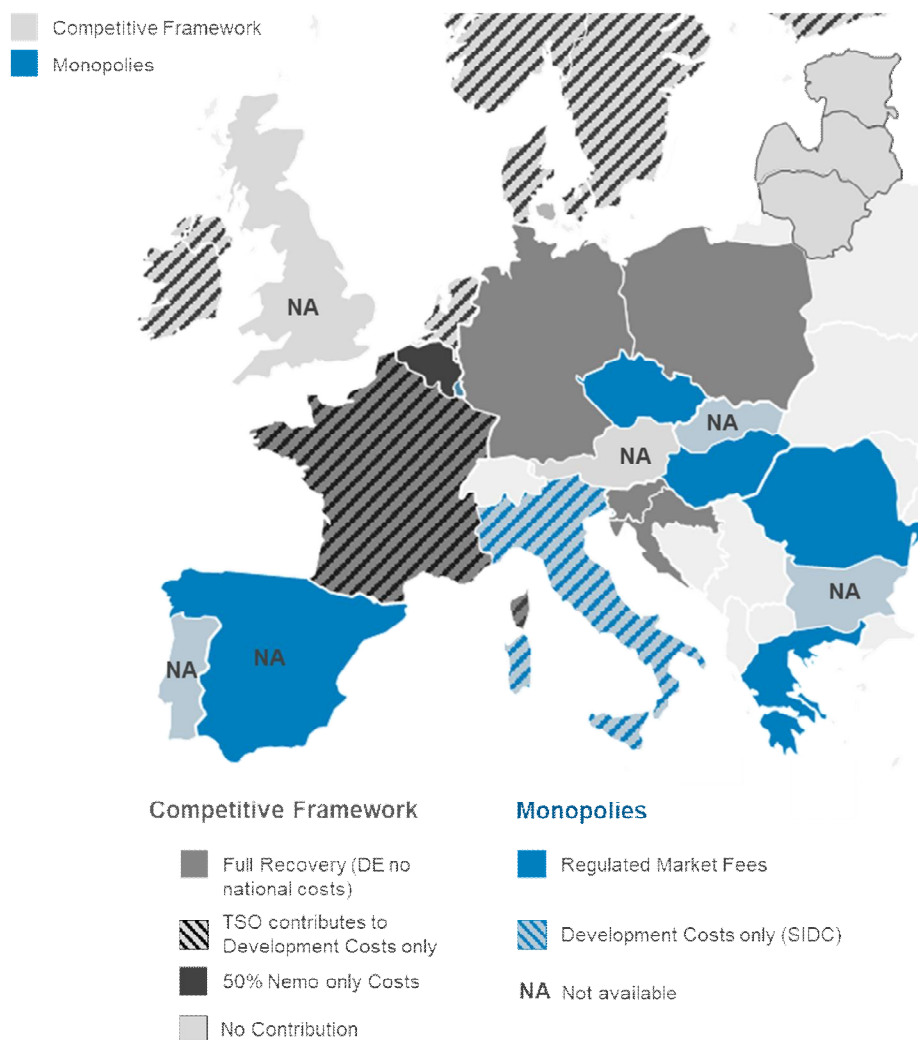


Figure 8 - TSO contribution to NEMO costs

- no TSO contributions are envisaged in EE, LT and LV;
- TSOs fully contribute to all NEMOs costs in HR, PL and SI. In DE, TSOs only contribute to common and regional costs;
- TSOs contribute to development costs only (so not to the operational ones) in DK, FI, IE, NO and SE;
- TSOs contribute to development costs only for the SIDC in IT<sup>10</sup> & IE and NL.
- TSO contribute to 50% of NEMOs only cost, while no contribution for Joint NEMOs-TSO costs in BE;
- in CZ costs are currently recovered by NEMOs through the market fee, but from the next regulatory period these costs will enter in the regulatory asset base of the TSO;
- in France till 2018, the TSO fully contributed to the NEMO costs. Caps applied on the total cost that could be recovered via TSO contributions but they were not binding. As of 2019, only the development costs will be borne by the TSO; TSOs contribute to the development costs

<sup>10</sup> Since Italy has not entered the continuous trading market, no operational costs are incurred. However, ARERA believes that once market liquidity will be reached the market fee imposed on participant is sufficient to sustain the costs. This is the authority's position for the DAM, where the current market fee imposed on participants in DAM is already recovering SDAC costs.

incurred (SDAC and SIDC) in IE and Northern IE, while operational costs are recovered via a market participant fee.

MS	Contribution to DA (IDM if ≠) NEMO Total Costs			Targeting which costs (IDM if ≠)		
	Pan-EU	Regional	National	Nemo	NEMO part of Joint costs	Via
AT	-	-	-	-	-	
BE	45% (9%)	0	-	50%	0	TSO
BG						
CY						
CZ	100%	100%	100%	Yes	Yes	NEMO Fee
DE	100%	100%	0%	Yes	Yes	TSO
DK	100% DV	100% DV	-	Yes	Yes	TSO
EE	0%	0%	0%	Yes	Yes	-
EL	-	-	-	Yes	Yes	NEMO Fee
ES	100%	100%	-	Yes	Yes	NEMO Fee
FI	100% DV	100% DV	-	Yes	Yes	TSO
FR	Capped	Capped	Capped	Yes	Yes	TSO
HR	100%	100%	100%	Yes	Yes	TSO
HU	100%	100%	100%	Yes	Yes	NEMO Fee
IE	100% DV	100% DV	100% DV	Yes	Yes	NEMO Fee/TSO
IT	0% (100%)	0% (100%)	0% (100%)	Yes	Yes	NEMO Fee/TSO
LT	0%	0%	0%	Yes	Yes	-
LU	-	-	-	-	-	TSO
LV	0%	0%	0%	Yes	Yes	-
MT						
NO	100% DV	100% DV	-	Yes	Yes	TSO
NL	0% (100% DV)	0% (100% DV)	0% (100% DV)	Yes	Yes	TSO
PL	100%	100%	-	Yes	Yes	TSO
PT						
RO	100%	100%	100%	Yes	Yes	NEMO Fee
SE	100% DV	100% DV	-	Yes	Yes	TSO
SI	100%	100%				TSO
SK						
UK						

DV = development costs only, MS in italics are national legal monopolies

Table 3 : TSOs contribution to NEMOs costs

## Article 77 costs

Table 4 illustrates that about half of the respondents stated that no proposal has been submitted for recovering clearing and settlements costs (BE, CZ, DE, EE, EL, LT, LU, LV, NL, PL). Remaining countries adopted different approaches:

- NRAs of DK, FI, NO, SE have jointly issued decisions on cross-border clearing and settlements arrangements in accordance with Article 77(2). The decision foresees that NEMOs shall bear the costs associated with the financial settlements and no contribution from the TSO is envisaged, but the costs incurred to perform the collection and transfer of congestion income to the Nordic TSOs shall be recovered via the TSOs' network tariff.
- Certain countries foresee a contribution from the TSOs: in HR the TSO is fully contributing, while in FR these costs are treated under the generic contribution cap valid for Article 76 and Article 77;
- HU, IE, RO ruled for including these costs into the market fees;
- In ES there is an agreement between parties.

MS	Answer	Proposal	Decision	Recovery & how
AT	Yes	No	No	No proposal received yet
BE	Yes	No	No	-
BG				No feedback on questionnaire
CZ	Yes	No	No	-
DE	Yes	No	No	-
DK	Yes	Yes	Yes	No TSO contribution
EE	Yes	No	Yes	No TSO contribution
EL <sup>11</sup>	Yes	No	No	-
ES	Yes	Yes	Yes	Agreement btw EPEX-NordPool in ES-FR
FI	Yes	Yes	Yes	No TSO contribution
FR	Yes	Yes	Yes	TSO contribution (CRE 2019-167 decision)
HR	Yes	Yes	Yes	Full TSO contribution (34k€ in 2018)
HU	Yes	Yes	Yes	Recovered via Market Fee
IE	Yes	Yes	Yes	Recovered via Market Fee
IT <sup>12</sup>	No	-	-	-
LT	Yes	No	Yes	No TSO contribution
LU	Yes	NA	Yes	-
LV	Yes	No	Yes	No TSO contribution
NO	Yes	Yes	Yes	No TSO contribution
NL	Yes	No	No	-
PL	Yes	No	No	-
PT				

<sup>11</sup> Greece is not coupled yet nor does it operate XBID. Therefore, no clearing and settlement costs occur.

<sup>12</sup> IT does not yet operate XBID. Therefore, no clearing and settlement costs occur for IDC.



RO	Yes	Yes	Yes	Recovered via Market Fee
SE	Yes	Yes	Yes	No TSO contribution
SI	Yes	No	Yes	No TSO contribution
SK <sup>13</sup>				No feedback on questionnaire
UK <sup>14</sup>				No feedback on questionnaire

MS in italics are national legal monopolies  
Table 4 : Clearing & Settlement Costs recovery

## Best practices

Article 3 of CACM defines the objectives of the capacity allocation and congestion management cooperation. It fundamentally aims at (1) the promotion of competition where possible (generation, supply, trading) and (2) a secure and efficient usage and development of the transmission system (including the way cross-zonal capacity is calculated, the markets are operated, market and system information is shared, the network is further developed, etc.). The NEMO costs' allocation and recovery mechanisms discussed in the present document affect both aspects: they may influence the way NEMOs compete for the merchant activities and their performance as regards the regulated activities. Potential issues that may arise were discussed in general and summarized in Sections 0 and 0. Considering the findings of the preliminary assessment of the concrete mechanisms in the EU MSs, we conclude that some best practices are identified at this stage and based on the available data:

- § Long-term cost recovery mechanisms might facilitate that NEMOs spend higher efforts on establishing, updating and further developing single DAM and IDM coupling. Only some MSs have such long-term mechanisms in place.
- § Transparency, including on the national costs, is key for allowing a level playing field among NEMOs. Transparency should avoid the possibility to shift national costs between MSs. Most of MSs do not differentiate between the geographical costs' categories (common, regional, national) when defining the TSO contribution to NEMO costs. Moreover, next to the absence of information on national costs, also the TSO contribution to these costs could not be gathered for some MSs (see Table 3);
- § Introducing caps might thus be a way to incentivize NEMOs collectively to become more cost-effective. France seems to be the only MS applying caps, both for the total TSO contribution and for the contribution to individual NEMOs. Given the nature of the costs related to regulated activities, competition can in principle not drive down costs. Every effort by one NEMO to be more efficient will typically be captured by all other NEMOs (competitors), since costs among NEMOs are allocated according to criteria independent from performance<sup>15</sup>: equal sharing (like in France for instance), sharing according to voting rights (e.g. Belgium) or traded volume.
- § Cost allocation among NEMOs should be based on their trading volumes. Other forms of cost allocation may create competitive distortions between NEMOs within and between MSs (see Section 0). The information collected so far indicates that this risk is present in several MSs: in the Baltics, one third of the NEMO costs is allocated equally among NEMOs, two thirds according to traded volumes. In France, development costs are equally split. In Belgium, the cost is split among the NEMOs on the basis of their voting rights.

<sup>13</sup> SK does not yet operate XBID. Therefore, no clearing and settlement costs occur for IDC.

<sup>14</sup> Uk does not yet operate XBID. Therefore, no clearing and settlement costs occur for IDC.

<sup>15</sup> Except for individual national NEMO costs, which are usually fully allocated to the NEMO concerned. One can question then whether these costs relate to regulated activities.

§ Different TSO contributions across MSs do not per se lead to distortions. Several MSs have opted to contribute only to development costs (DK, FI, IE, NL, NO, SE). This rule will also apply in France as of 2019. Such rule is believed to avoid cross-subsidization between the French and other market zones: *«La proposition de RTE de ne contribuer qu'aux coûts de développement à partir de l'année 2019 est par ailleurs cohérente avec les modalités de contribution des GRT aux coûts des NEMO prévues dans d'autres Etats membres, et limite ainsi les risques de biais concurrentiels et de transfert de coûts liés à l'opération du couplage dans d'autres zones de marché vers la France.»*<sup>16</sup> It is questionable, however, whether it is indeed a mean to prevent cross-subsidization since different TSO contributions to NEMO not raise concerns of cross-subsidization and unfair NEMO competition (see discussion in section O).

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<sup>16</sup> CRE : Délibération N° 2019-167, p.4.

## Conclusions

Establishing, operating and further developing single DAM and IDM coupling cause costs for NEMOs and TSOs. TSOs are fully regulated entities and pass the costs of their market coupling activities through to final electricity consumers and/or electricity producers via regulated network tariffs. On the other hand, NEMOs have the special feature of performing both regulated and merchant (subject to competition) activities. Nevertheless, all their costs are in principle borne by their market participants via market fees. In some cases, however, CACM provides for TSO contributions to NEMO costs, but does not give guidance how this contribution should look like. It results that there is a variety of choices taken by NRAs as regards the cost allocation and recovery mechanism. Concerns have been expressed that such non-harmonized approach may create (1) competitive distortions between NEMOs and (2) lower incentives for NEMOs to spend effort on establishing, updating and further developing single DAM and IDM coupling.

This study contributes thus to the evaluation by the Commission of the different cost sharing and cost recovery mechanisms applied across the Union, and how these mechanisms contribute or hinder the achievement of the objectives set in Article 3 CACM, mainly:

- § the promotion of competition;
- § the non-discriminatory treatment of TSOs, NEMOs and other market participants;
- § the creation of a level playing field for NEMOs.

Several conclusions are drawn from the analysis:

1. It is straightforward that the possibility for TSO contributions to NEMO costs only exists for regulated activities. All other activities should be exposed to competition. However, **CACM does not provide a comprehensive view on regulated activities**. Article 7, listing the tasks of the NEMOs, does not clearly distinguish between regulated and competitive tasks. At least the “Market Coupling Operator (MCO) function” can be considered as regulated. In Chapter 3 on cost recovery, CACM refers to the costs incurred by NEMOs for establishing, amending and operating market coupling (Article 76) and for clearing and settlement (Article 77). It is not clear whether other activities could be considered as regulated. Also, clearing and settlement activities (Article 77) can be regulated or competitive, depending on parties involved. Competition between NEMOs will be effective only if there is a clear separation and definition of regulated and competitive activities. Otherwise, **risks of cross-subsidization arise within and between MSs**. Within MSs, competition between NEMOs could be distorted if unclear definitions lead to different cost allocations between regulated and competitive activities. This risk seems high if a NEMO is willing to enter a new market that it is not fully familiar with. Between MSs, issues may arise if NEMOs are active in several MSs and less transparent conditions in one MS allow to shift costs between MSs and from competitive to regulated activities. It is therefore recommended that **the Commission, therefore, provides a clear definition of regulated activities that might benefit from TSO contributions**.
2. For common and (to a lesser extent for) regional costs, one can expect that the absence of a clear definition of regulated activities is less problematic, since there is a shared view between TSOs, NEMOs and NRAs on the activities and costs to be considered. The national costs, on the other hand, are not documented in the CACM cost reports. Anecdotic evidence suggests that national costs represent by far the largest cost category before common and regional costs. As long as there is no transparency on these costs, risks of competitive distortions within and especially between MSs can be considered as high. **The NEMOs/MSs should thus provide all NRAs with full transparency on national costs, as required by CACM**.

3. **Different TSO contributions to NEMO costs alone do not raise concerns of cross-subsidization and unfair NEMO competition**, since NEMOs in a given MS benefit from the same TSO intervention. In addition, competition within a MS should avoid “abnormal” rents allowing cross-subsidization. Hence, **an alignment of the MSs on the TSO contributions is not seen as required to comply with Article 3 CACM principles**.
4. On the other hand, issues arise if regulated costs are allocated among NEMOs independent from their size/traded volume. Larger NEMOs are then able to generate “abnormal” margins that could be used to cross-subsidize their merchant activities in another MS. **NEMO costs (joint NEMO costs and the NEMO part of the joint TSO-NEMO costs) should, thus, be allocated among NEMOs of a given MS according to traded volumes to ensure a level playing field**.
5. In terms of legal certainty on cost recovery, only some MSs have a long term mechanism in place. This may lead to lower incentives for NEMOs to further develop single DAM and IDM coupling.

Cost allocation and recovery mechanisms should not distort competition between NEMOs for the competitive activities. The analysis above indicates that the main cause of legal uncertainty potentially leading to competitive distortions is the absence of a clear definition of regulated activities, together with the absence of transparency regarding national costs. Different choices at MS level regarding TSO contributions are not problematic as such. On the other hand, cost allocation and recovery mechanisms should also set the right incentives to be cost-efficient as regards the regulated activities. However, given the nature of regulated activities (NEMOs have to collaborate), competition can in principle not drive down costs. Every effort by one NEMO to be more efficient will typically be captured by all other NEMOs, since costs among NEMOs are allocated according to criteria independent from performance: equal sharing, sharing according to voting rights or traded volume. The question how to incentivize NEMOs to be cost-efficient regarding regulated activities should be a topic for further research.

## References

- [1] ACER, “Monitoring report on the implementation of the CACM Regulation and the FCA Regulation,” 2019.
- [2] All Regulatory Authorities, “NRAs guidance to NEMOs and TSOs for preparing the yearly report on cost as referred to Article 80 et seq. of the CACM Guideline,” 2017.
- [3] NEMO Committee and ENTSO-E, “CACM cost report of 2017,” Prepared by all NEMOs and all TSOs according to Article 80 of COMMISSION REGULATION (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management., 2019.
- [4] NEMO Committee and ENTSO-E, “CACM cost report of 2018,” prepared by all NEMOs and all TSOs according to Article 80 of COMMISSION REGULATION (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management, 2019.
- [5] European Commission, “Report from the Commission to the European Parliament and the Council on the development of single day-ahead and intraday coupling in the Member States,” COM(2018) 538 final, 2018.
- [6] ELIA, “Proposal for contribution by Elia to costs incurred by designated NEMOs in Belgium for establishing, amending and operating the single day-ahead and intraday coupling,” 2018.
- [7] R. o. E. C. Authority, P. U. C. o. Latvia and N. C. f. E. C. a. P. o. Lithuania, “All Baltic NRAs position on Baltic TSOs' proposal for Financial arrangements of the Baltic arrangements of more than on NEMO in one bidding zone,” 2019.
- [8] Commission de Régulation de l'énergie, “Délibération de la Commission de régulation de l'énergie du 4 juillet 2019 portant approbation de la proposition de contribution de RTE aux coûts visés aux articles 76(1) et 77(1) du règlement (UE) 2015/1222 de la Commission du 24 juillet 2015,” 2019-167, 2019.
- [9] Commission for Regulation of Utilities and Utility Regulator Electricity Gas Power, “SEMOpX Price Control,” 2017.
- [10] ARERA, “MODALITÀ DI RECUPERO DEI COSTI SOSTENUTI DALLA SOCIETÀ GESTORE DEI MERCATI ENERGETICI S.P.A PER L'ISTITUZIONE, LA MODIFICA E LA GESTIONE DEL COUPLING UNICO DEL GIORNO PRIMA E INFRAGIORNALIERO, SECONDO QUANTO PREVISTO DAL REGOLAMENTO (UE) 2015/1222 (CACM),” 2018.
- [11] Institut Luxembourgeois de Régulation, “Cost Sharing and Cost Recovery under the CACM Regulation,” Luxembourg, 2019.
- [12] Urząd Regulacji Energetyki, “Letters from the Maciej Bando to adress common and regional SDAC and SDIC recovery,” 2018.

## Appendix - Documentation

### Baltics (Estonia, Latvia, Lithuania)

#### Documents provided

§ *NRAs [Competition Authority – Republic of Estonia, Public Utilities Commission, National Commission for Energy Control and Prices] (Letter) : All Baltic NRAs position on Baltic TSOs' proposal for Financial arrangements of the Baltic arrangements of more than one NEMO in one bidding zone*

#### Documents not provided

§ *TSOs & NEMOs (Letter) : Baltic TSOs' proposal for Financial arrangement of the Baltic arrangements of more than one NEMO is one bidding zone*

### Belgium

#### Documents provided

§ *ELIA (Proposal) : Proposal for contribution by Elia to costs incurred by designated NEMOs in Belgium for establishing, amending and operating the single day-ahead and intraday coupling in accordance with Article 76(2) of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Calculation and Congestion Management*

#### Documents not provided

§ *CREG (Guidance): Letter of CREG of 23th of November 2017 on "Guidance on the sharing of costs incurred for the establishing, amending and operating single day-ahead and intraday coupling"*

### France

#### Documents provided

§ *CRE (Decision 2019-167) : Deliberation of the Energy Regulatory Commission of 4 July 2019 approving the proposal for a contribution by RTE to the costs referred to in Articles 76 (1) and 77 (1) of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management.*

#### Documents not provided

§ *RTE (Proposal) : Proposal of the 6<sup>th</sup> June 2018 for contribution to active NEMOs in France*

### Germany

#### Documents provided

- § *BNetzA (Guidance) : Summary of results and BNetzA position: Cost sharing and support in the context of the VO 2015/1222 on April 11, 2016 in Bonn*

#### Documents not provided

- § *EPEX (Comments) : Comments submitted to the BNetzA proposal on the 23<sup>rd</sup> December 2025*

#### Hungary

##### Documents provided

- § *MARKET RULES of HUPX – Hungarian Power Exchange*

#### Ireland

##### Documents provided

- § *NRAs [Commission for Energy Regulation, Utility Regulator Electricity Gas Water] (Decision Paper) : Revenue Recovery Principles for SEMO and Designated NEMO (SEMOpX) from I-SEM go-live*
- § *NRAs [Commission for Energy Regulation, Utility Regulator Electricity Gas Water] (Decision) : SEMOpX Price Control*

#### Italy

##### Documents provided

- § *ARERA (Decision 658-18) : Means for Cost recovery by the company Gestore dei Mercati Energetici S.p.a for the establishment, modification and management of the single-day and intraday day coupling, according to the provisions of Regulation (EU) 2015/1222 (CACM)*

#### Luxembourg

##### Documents provided

- § *Institut Luxembourgeois de Régulation (Decision) : Cost sharing and cost recovery under the CACM regulation Netherlands*

#### Documents not provided

- § *NRAs (Decision) : Decision for Cost Recovery*

#### Nordics (Denmark, Finland, Norway, Sweden)

#### Documents not provided

- NRAs (Guidance) : Common Guidance for Cost Recovery*

#### Poland

#### Documents provided

- § NRAs (Decision Letter) : President URE letter 22/05/2018 about SIDC common cost recovery
- § NRAs (Decision Letter) : President URE letter 22/05/2018 about SIDC regional cost recovery
- § NRAs (Decision Letter) : President URE letter 22/05/2018 about SDAC common and regional cost recovery



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