



*Empowering Mediterranean regulators for a common energy future.*

**Gas Working Group (GAS WG)**

# **Guidelines of good practice on capacity allocation**



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**FINAL VERSION**



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## About MEDREG

MEDREG is the Association of Mediterranean Energy Regulators, bringing together 25 regulators from 21 countries, spanning the European Union, the Balkans and North Africa.

Mediterranean regulators work together to promote greater harmonization of the regional energy markets and legislations, seeking progressive market integration in the Euro-Mediterranean basin.

Through constant cooperation and information exchange among members, MEDREG aims at fostering consumers' rights, energy efficiency, infrastructure investment and development, based on secure, safe, cost-effective and environmentally sustainable energy systems.

MEDREG acts as a platform providing information exchange and assistance to its members as well as capacity development activities through webinars, training sessions and workshops.

The MEDREG Secretariat is located in Milan, Italy. MEDREG is co-funded by the European Union.

For more information, visit [www.medreg-regulators.org](http://www.medreg-regulators.org)

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## Executive Summary

Market participants require access to gas transmission systems in order to be able to fulfil their contractual obligations and establish their position in the market, and that the allocation of capacity on cross border interconnections is at the moment regulated through different allocation mechanisms.

Interconnections have a key role towards market integration. The integration of two or more markets requires sufficient interconnection capacities between markets. In particular, where duplication of a gas network is neither economic nor efficient it is necessary that existing interconnection capacity is accessible to users, and newcomers, on a non-discriminatory basis, transparent conditions and fair price. Clear and non-discriminatory rules for the development of incremental or new capacity are also required.

Mechanisms for the allocation of capacity on gas infrastructure, if properly designed, can be fundamental towards promoting non-discriminatory access of shippers to the network, efficient network utilization and competition in the downstream markets.

On the other hand, the lack of transparency and the existence of discriminatory rules for access to natural gas transmission systems and in particular at interconnection points result in inefficient use of available capacities and can be detrimental to the development of downstream competition for the benefit of end users.

In 2016, the MEDREG Gas Working Group decided to perform an assessment of capacity allocation mechanisms at interconnection points in the Mediterranean region and to define MEDREG Good Practice Guidelines for Capacity Allocation.

The purpose of this work is to identify “good practices”, i.e. most efficient allocation mechanisms of capacity at interconnection points. Such mechanisms support the development of cross-border trade and can ensure an efficient use of infrastructure and a competitive gas wholesale market in the Mediterranean region.

MEDREG’s survey investigated capacity products and capacity allocation mechanisms, congestions and their management, ways of cooperation among TSOs and the specific role of the regulator. Recommendations developed revolve around 7 main steps:

- **TSOs must take an active role in managing capacity calculations.**

There needs to be sufficient transparency with regard to capacity availability and the maximization of available capacity at all IPs. TSOs should publish the technical and available capacity and the methods applied for such calculations.

- **TSOs must have a transparent and clearly defined mechanism for shippers to request capacity.**

Such a mechanism involves clear and published rules, requirements and timescales for an application for the reservation of capacity to be submitted and processed including relevant deadlines.

- **Methods of capacity allocation should ensure that new entrants are not foreclosed from the market.**

Respondents with non-EU IPs informed that capacity is allocated on a FCFS basis or pro-rata. Auctions, as applied now at EU IPs indeed ensure that firm capacity is allocated to those parties that value it most. Auctions for capacity combined with effective congestion

management procedures can further enhance liquidity and competition. Nevertheless, it is acknowledged that auctioning maybe interrelated with a complex implementation process. Given the European experience, auctioning maybe a last item in a long list where a first priority is assigned to the creation of transparent rules and making existing capacity available to the market.

- **Congestion management and TSO incentives**

Capacity holders should also be incentivized to release to the secondary market unused capacity for reservation for short-term bookings. Well-designed incentives may provide an effective and efficient mechanism for regulators to influence the behavior of TSOs and shippers.

- **Capacity allocation methods at cross-border interconnection points must be as compatible as possible.**

Here recommendation is made for IPs shared between MEDREG countries. The more aligned the capacity allocation methods and the available products are at both sides of the IP, the more trade is facilitated, and transaction costs are reduced. Coordination between TSOs to achieve compatible schemes is however necessary.

- **Cooperation between adjacent TSOs and Regulators**

In order to optimize the use of networks and capacity offered, adjacent transmission system operators need to cooperate at technical and operational level. The need of further cooperation between national regulators either on a bilateral level and/or through MEDREG should also be pursued with the active involvement of Regulators.

- **Power of Regulators**

Respondents informed that capacity allocation rules are generally approved by the regulators. This should be made a practice for all intra-MEDREG IPs and also at the side of cross-MEDREG<sup>1</sup> IPs which belongs to a MEDREG country. Capacity allocation shall be subject to ex-post review by NRAs if deemed necessary by an NRA.”

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<sup>1</sup> By cross-MEDREG IPs here reference is made to IPs shared by a MEDREG and a non-MEDREG country

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## 1. SCOPE AND OBJECTIVES

Starting from the consideration that market participants require access to gas transmission systems in order to be able to fulfil their contractual obligations and establish their position in the market, and that the allocation of capacity on cross border interconnections is at the moment regulated through different allocation mechanisms, the MEDREG Gas Group, in 2016, decided to work on an assessment of capacity allocation mechanisms at interconnection points in the Mediterranean region and to define MEDREG Good Practice Guidelines for Capacity Allocation.

Interconnections have a key role towards market integration. The integration of two or more markets requires sufficient interconnection capacities between markets. In particular, where duplication of a gas network is neither economic nor efficient it is necessary that existing interconnection capacity is accessible to users, and newcomers, on a non-discriminatory basis, transparent conditions and fair price. Clear and non-discriminatory rules for the development of incremental or new capacity are also required

Mechanisms for the allocation of capacity on gas infrastructure, if properly designed, can be fundamental towards promoting non-discriminatory access of shippers to the network, efficient network utilization and competition in the downstream markets.

On the other hand, the lack of transparency and the existence of discriminatory rules for access to natural gas transmission systems and in particular at interconnection points result in inefficient use of available capacities and can be detrimental to the development of downstream competition for the benefit of end users.

The purpose of this work is to identify “good practices” i.e. most efficient allocation mechanisms of capacity at interconnection points. Such mechanisms support the development of cross-border trade and can result in an efficient use of infrastructure and a competitive gas wholesale market in the Mediterranean region.

## 2. IMPLEMENTATION OF CAPACITY ALLOCATION MECHANISMS

The introduction of non-discriminatory and transparent capacity allocation mechanisms ensures more efficient allocation of available capacity at interconnection points (IPs) and can support the integration of gas wholesale markets among Mediterranean countries. Effective adoption of such mechanisms is ultimately related with the degree of market opening. In reverse, successive market opening is inherently linked to the adoption of non-discriminatory and transparent capacity allocation mechanisms as only such mechanisms can provide gas-to-gas competition leading to market development. Efficient and non-discriminatory capacity allocation mechanisms are also inherently linked to security of supply.

However, the introduction of non-discriminatory and transparent capacity allocation mechanisms is a non-trivial task. Significant amendments in national primary and secondary legislation and relevant amendments in existing gas transportation agreements, including their general terms and conditions, are required.

Furthermore, capacity allocation procedures and the definition of capacity products may also result in complex interactions with other interrelated topics such as:

- Congestion Management Procedures;
- Tariffs;
- Interoperability;
- Transparency;
- Balancing.

For each of these topics it may be necessary for regulators and policy makers to intervene so that rules are adapted in a coherent manner. For example, it may be necessary to approve new tariff mechanisms to take into account new capacity products and procedures (e.g. auction premiums) and also to guarantee full recovery of TSOs operating costs associated to the introduction of such capacity allocation mechanisms (additional human resources, development of required IT and additional costs to run processes and procedures).

Further, the adoption of allocation capacity mechanisms at interconnection points requires at least the initiation of cooperation between adjacent TSOs and the respective regulators so that essential elements regarding capacity services and allocation methodology can be defined in a compatible way.

**In relation to capacity services**, the following need to be defined:

- A set of standardized firm capacity products of different durations which meet market requirements and are offered at both sides of the IP;
- A set of interruptible capacity products offered again at both sides of the IP to increase infrastructure utilization and allow entry of new comers. The implementation of standardized and coordinated interruption procedures is also required.
- Where possible, a set of combined firm entry and exit capacity products sold as one bundled product according to the recently adopted EU practice (Regulation (EU)

2017/459) with bundling, a shipper books a single firm capacity product and is allocated one entry-exit capacity product at the IP.

**Short-term flexibility** is another basic requirement for the development of competitive markets. It sets the environment for efficient trading hubs to emerge and provides operators with the ability to manage the intrinsic uncertainty of gas supply businesses. Flexibility can be provided by short-term capacity products so that it may be also useful to set aside a certain, comparatively small percentage of the technical capacity, to be made available for short-term booking. In this way, players other than the incumbents that have long-term contracts can gain access to infrastructures.

**In relation to the allocation methodology**, market based mechanisms such as auctions are now widely considered to be the fairest way of allocating capacity. Alternative solutions such as pro-rata or first come first served may be also considered if equivalent safeguards for non-discrimination, transparency and competitive access to infrastructure are provided. If auctions are adopted is necessary define:

- A proper auction design (auction algorithm, reserved price, auction calendar, bidding windows structure, etc.);
- A booking platform (adjacent TSOs have to establish a joint, anonymous, web-based platform for primary capacity allocation and secondary capacity trading).

The implementation of appropriate congestion management procedures (surrender of capacity, oversubscription and buy-back and Use It or Lose It) are also inherently linked to network access and to the availability of capacity to be allocated particularly in IPs dominated by long term contracts and underutilization of capacity.

A key factor for success in implementation of allocation capacity process is the strong commitment, support and cooperation of all parties involved (TSOs, network users and Regulators).

Information related to many of above elements was collected by a questionnaire distributed to the Regulators of MEDREG countries; their answers are presented in the following paragraph.

### 3. MEDREG QUESTIONNAIRE ON ALLOCATION METHODOLOGIES

Information on capacity allocation mechanisms and methodologies in the MEDREG countries, was collected through an extensive questionnaire addressed to Regulators (hereinafter MEDREG CAM Questionnaire).

The MEDREG CAM Questionnaire comprised four sections as briefly described in Table 1.

A. Capacity products and capacity allocation mechanisms	<ul style="list-style-type: none"> <li>• methods used to allocate capacity at the interconnection points</li> <li>• firm/interruptible products offered</li> <li>• set aside of firm capacity for short-term products</li> <li>• possibility to offer unused capacity on a secondary market</li> <li>• additional capacity offered</li> <li>• bundled capacity</li> <li>• booking capacity period</li> <li>• booking platforms used for the allocation of capacity</li> <li>• timetable for capacity allocation</li> <li>• public service obligations or security of supply aspects</li> </ul>
B. Congestion and its management	<ul style="list-style-type: none"> <li>• contractual congestions</li> <li>• physical congestions</li> <li>• congestion management mechanisms</li> </ul>
C. Cooperation among TSOs	<ul style="list-style-type: none"> <li>• network codes/documents defining procedures for the exchange of information among TSOs</li> <li>• units of measure for capacity offered</li> <li>• barriers to TSOs cooperation</li> </ul>
D. Role of Regulator	<ul style="list-style-type: none"> <li>• TSOs Network Codes approval process by Regulators and stakeholders' involvement</li> <li>• regulatory supervision on the level of available (technical) capacity</li> <li>• contents of TSOs Network Codes (capacity allocation and congestion management methodologies, general terms and conditions, communication procedures)</li> <li>• collaboration among neighboring Regulators on capacity allocation and congestion management methodologies</li> </ul>

Table 1: Sections of the MEDREG CAM Questionnaire and topics addressed

A substantial number of MEDREG countries (11, 52%) did not respond to questionnaire, Table 2. We note however, that two countries in the non-respondents list (Malta and Montenegro) do not have access to natural gas. Albania, who responded to the MEDREG CAM Questionnaire, also informed that there is no access to gas and in Cyprus, there is no gas market. We also note that no regulatory authority is present in Morocco, Palestine and Tunisia.

Selected publicly available information is reported here about Croatia<sup>2</sup>, Slovenia<sup>3</sup> and Algeria<sup>4</sup>. No further information is provided for countries that did not respond to the Questionnaire.

<sup>2</sup> See Croatian TSOs website <http://www.plinacro.hr> and Prisma platform website at <https://platform.prisma-capacity.eu/#/start>

	Countries	Answer received	Observation
1.	Albania	X	No gas market
2.	Algeria		
3.	Bosnia – Herzegovina		
4.	Croatia		
5.	Cyprus		No gas market
6.	Egypt	X	
7.	France	X	
8.	Greece	X	
9.	Israel	X	
10.	Italy	X	
11.	Jordan	X	
12.	Libya		
13.	Malta		No gas consumption
14.	Montenegro		No gas consumption
15.	Morocco		No gas Regulatory Authority
16.	Palestine		No gas Regulatory Authority
17.	Portugal	X	
18.	Slovenia		
19.	Spain	X	
20.	Tunisia		No gas Regulatory Authority
21.	Turkey	X	
	Total	10	

Table 2: Contributions received from MEDREG countries

Five (5) out of ten (10) countries that responded to the questionnaire are EU Member States (France, Greece, Italy, Portugal, and Spain). The same goes for Slovenia and Croatia. EU Member States are bound by the EU legal framework in relation to capacity allocation (CAM) and congestion management (CMP). We also note that the EU framework also calls for harmonization of CAM and CMP mechanisms across Member States so that the mechanisms reported below for each of the above countries are similar. Four contributions were received from non-EU countries with access to gas (Egypt, Israel, Turkey and Jordan). As stated above, Albania responded to the CAM Questionnaire albeit the country does not yet have access to gas. The Trans Adriatic Pipeline (TAP) currently under construction will open the route for gas supplies from the Shah Deniz II field in Azerbaijan and link the country with European gas markets through connections with Greece and Italy. TAP is planned to be operational in 2020. Further gas infrastructure and market developments in Albania will be closely linked with the actual implementation of other projects envisaged by the Gas Master

<sup>3</sup> See Slovenian TSOs website <http://www.plinovodi.si> and Prisma platform website at <https://platform.prisma-capacity.eu/#/start>

<sup>4</sup> See Hydrocarbon Regulation Authority website <http://www.arh.gov.dz> and <https://sonatrach.com/>

Plan, including the Ionian Adriatic Pipeline (IAP), potential liquefied natural gas (LNG) and gas storage facilities and the refurbishment of the internal gas pipeline network.

For all countries, which responded to the questionnaire, Table 3, lists the relevant interconnection points to which the answers refer. Where interconnection points were not made available, the name of the infrastructure is provided. In relation to the information shown in the Table, the following are noted:

- Israel is connected to Jordan, exporting natural to Jordanian industries near the Dead Sea. A new infrastructure to connect Israel with Jordan is under construction and will be operational starting the end of 2019. Israel is interconnected with Egypt via idle Al Arish – Ashqelon pipeline; it is supposed to be operated by the reverse flow since 2019. Two interconnections between Israel and the Palestinian Authority is in the design stage.
- For the interconnection between Egypt and Jordan, reference is made to the infrastructure (Arab Gas Pipeline). Currently conditions of service are defined through bilateral contracts. A network code shall be developed.
- Only EU IPs are shown for Spain.

Croatia and Slovenia share the Rogatec IP. Slovenia has two more IPs Cersak and Sempeter connecting to Murfeld/Austria and Gorizia/Italy.

n.	Country	Connecting Infrastructure or Interconnection Point	Connected country
1	Egypt	Arab Gas Pipeline	Jordan
2	Greece	Kulata-Sidirikastro	Bulgaria
		Kipi	Turkey
3	France	Taisnières B	Belgium
		Vitualys	Belgium
		Obergailbach	Deutschland
		Dunkerque	Norway (production fields)
		Pirineos	Spain
		Jura	Switzerland (distribution network)
		Oltingue	Switzerland
4	Italy	Tarvisio	Austria
		Gela	Libya
		Gorizia	Slovenia
		Passo Gries	Switzerland
		Mazara del Vallo	Tunisia-Algeria
5	Jordan	Arab Gas Pipeline	Egypt
		Arab Gas Pipeline	Syria
6	Portugal	Campo Maior	Spain
7	Spain	Larrau	France
		Badajoz	Portugal
8	Turkey	Turkgozu	Azerbaijan
		Trans balkan	Bulgaria

	Kipi	Greece
	Gurbulak	Iran
	Durusu	Russia

Table 3: Interconnection Points and connecting infrastructure as provided by respondents to the MEDREG CAM Questionnaire

The next paragraphs present a summary of the responses received in each of the four sections of the questionnaire, Table 1.

### 3.1 Section A – Capacity products and capacity allocation mechanisms

Section A of the CAM Questionnaire focuses on methods used by TSOs of MEDREG countries to allocate capacity at interconnection points and on the characteristics of capacity products offered (e.g. firm, interruptible, duration etc.).

#### – Further comments on Question 1

What is the method used to allocate capacity at the interconnection points?		
n. 1	a. First-come-first-served mechanism	4 (France, Israel, Jordan, Algeria)
	b. Pro-rata	1 (Turkey)
	c. Auction	7 (Croatia, Greece, France, Italy, Portugal, Spain and Slovenia)
	d. Implicit allocation mechanism	2 (France, Portugal)

**Greece, Italy, Portugal and Spain:** Auctions of capacity with regulated tariffs as reserve price.

**France:** Auctions for all interconnection points except for Dunkerque (Norway) and Jura (Switzerland) where a distributive model (First Come First Served mechanism and open subscription period) is adopted. Regulated tariffs are used as reserve price in auctions. An implicit capacity mechanism is adopted at the North South link (not listed in the previous Table 3), for a small part of capacity. This mechanism will end in November 2018 when the North and South market zones will merge, and this interconnection point will disappear.

**Israel:** Adopts a First Come First Served mechanism. Until now, only long-term agreements are in place.

#### – Further Comments on Question 2

Which of the following firm products are offered?		
n. 2	a. More than a year	6 (Egypt, Israel, Italy, Jordan, Portugal, Algeria)
	b. Yearly	9 (Croatia, Greece, France, Italy, Portugal, Spain, Slovenia, Turkey, Algeria)
	c. Quarterly	7 (Croatia, Greece, France, Italy, Portugal, Spain, Slovenia)
	d. Monthly	8 (Croatia, Greece, France, Israel, Italy,

		Portugal, Spain, Slovenia)
e. Daily		7 (Croatia, Greece, France, Italy, Portugal, Spain, Slovenia)
f. Intra-daily		6 (Croatia, France, Italy, Portugal, Spain, Slovenia)

**Egypt:** Only long-term bilateral contracts (more than a year) are present at interconnection with Jordan.

**France:** Yearly capacity is offered up to 15 years ahead in line with the provisions of Regulation (EU) 2017/459 (CAM Code).

**Greece:** Only for last year (2017) instead of the yearly product, a nine-month product was offered because auction started late.

**Turkey:** Beside yearly capacity allocation, unreserved capacity can be allocated at least for one month.

### – Further Comments on Question 3

Are interruptible products offered? If yes, which products?		
n. 3	Yes	7 (Croatia, Greece, France, Italy, Portugal, Spain and Slovenia)
	No	3 (Israel, Jordan, Turkey)

**Greece and Italy:** Offer from yearly to daily interruptible products, if firm capacity is sold out.

**France:** Offers from yearly to daily interruptible products, if all the firm capacities are sold out or if there is an auction premium for the firm auction (in accordance with Regulation (EU) 2017/459). For the Pirineos interconnection point, interruptible capacities are offered only if 98% of the firm capacity is allocated.

**Portugal:** The interruptible products are the same as firm. Interruptible products are also available bundled and unbundled.

**Spain:** Daily and intra-daily interruptible products are offered.

### – Further Comments on Question 4

Do network codes or other documents define the possible reasons for interruptions and the procedures adopted in case of interruption?		
n. 4	Yes	7 (Greece, France, Israel, Italy, Portugal, Spain, Turkey)
	No	0

### – Further Comments on Question 5

Is a percentage of capacity set aside for short-term products (less than a year)?		
n. 5	Yes	6 (Greece, France, Israel, Italy, Portugal, Spain)
	No	2 (Jordan, Turkey)

**Greece:** A 10% of capacity is set aside for short-term products.

**France:** At all interconnections, except Jura (Switzerland) and Dunkerque (Norway), 10% of capacity is set aside for less than 1-year products and 10% for yearly products up to 5 years. Concerning Jura and Dunkirk, no capacity is set aside for short term (less than a year)

**Israel:** Distribution shippers are not obliged to book capacity since they represent less than 2% of the gas market.

**Italy:** A 10% of capacity is set aside for products of less than 1 year. Another 10% is set aside for yearly products up to 5 years. No capacity is set aside for short-term products at Mazara del Vallo (Tunisia-Algeria) and Gela (Libya) interconnections.

#### – Further Comments on Question 6

Is unused capacity offered on a secondary market?		
n. 6	Yes	6 (Greece, France, Italy, Portugal, Spain, Turkey)
	No	2 (Israel, Jordan)

#### – Further Comments on Question 7

Is additional capacity offered?		
n. 7	Yes	3 (France, Israel, Turkey)
	No	5 (Greece, Italy, Jordan, Portugal, Spain)

**France:** if the UBI is available

#### – Further Comments on Question 8

Is bundled capacity (corresponding entry and exit capacity at both sides of an interconnection point) offered?		
n. 8	Yes	5 (France, Israel, Italy, Portugal, Spain)
	No	4 (Greece, Italy, Jordan, Turkey)

**Greece:** Only the firm reverse flow is offered bundled. For the physical flow, there is no available capacity upstream (Bulgaria), because pre-existing long-term contracts are still in place.

**Italy:** Bundled capacity products are offered at interconnections with EU countries (Austria and Slovenia).

#### – Further Comments on Question 9

For how many years ahead can a shipper book capacity on a gas transmission system?		
n. 9	One year	4 (Greece, Israel, Spain, Turkey)
	More than a year	5 (France, Israel, Italy, Portugal, Spain)

**France, Israel and Italy:** capacity is bookable until 15 years.

**Portugal:** according to national codes shippers can book capacity for more than 1 year, and historically, the shipper buys 1-year product. The European network code allows until 15 years.

**Spain:** shippers can book one-year capacity product at Spain-Portugal interconnection and 15 years Spain-France.

#### – Further Comments on Question 10

Which is the timetable for the capacity allocation?		
n. 10	Network code CAM timetable (ENTSO-G calendar)	7 (Croatia, Greece, France, Italy, Portugal, Spain and Slovenia)
	Other	3 (Israel, Turkey, Jordan)

**Greece:** The comment refers to the gas year 2016/2017, when auctions did not start in time and a 9-month product was offered instead of the yearly-standardized product. All products were offered in December and the ENTSO-G calendar was not applied. Starting from gas year 2017-2018 the ENTSO-G auctions calendar is applied.

**Israel:** Two years for the new infrastructure with Jordan

**Italy, Portugal and Spain:** Capacity is allocated according to the CAM code and calendar published by ENTSO-G.

**France:** Capacity is allocated according to the ENTSO-G calendar for EU IPs. Allocation at Jura (Switzerland) and Dunkerque (Norway) is according to the calendar attached to national code.

**Turkey:** For each gas year (from 1 January to 31 December), 30 November is the last day for application for capacity allocation. Unreserved capacity can be booked prior or within the gas year.

#### – Further Comments on Question 11

In which unit is expressed the capacity offered?		
n. 11	kWh/day	7 (Croatia, Greece, France, Italy, Portugal, Spain, Slovenia)
	Sm <sup>3</sup> /day	2 (Turkey, Algeria)
	MMBtu	1 (Israel)

#### – Further Comments on Question 12

Are there public service obligations or security of supply aspect to be taken into account in the allocation process?		
n. 12	Yes	0
	No	7 (Greece, France, Israel, Italy, Portugal, Spain, Turkey)

### 3.2 Section B – Congestion and its management

Section B of the CAM Questionnaire looks into the existence of congestion (contractual or physical) at interconnection points of gas infrastructure located in MEDREG countries and on the respective congestion management mechanisms (CMP) adopted.

#### – Further Comments on Question 13

Is there contractual congestion at the interconnection points?		
n. 13	Yes	2 (Greece and Spain)
	No	7 (Israel, France, Israel, Italy, Jordan, Portugal, Turkey)

**Spain:** Contractual congestion occurs only in isolated days.

#### – Further Comments on Question 14

Is there physical congestion at the interconnection points?		
n. 14	Yes	2 (France and Israel)
	No	6 (Greece, Italy, Jordan, Portugal, Spain, Turkey)

**France:** there is congestion in rare cases (e.g. France – Spain interconnection).

#### – Further Comments on Question 15

Are congestion management techniques employed? If yes, which mechanisms are employed?			
n. 15	Yes	a. Short-term UIOLI	3 (France, Israel, Italy)
		b. Capacity release program	4 (Greece, Italy, Portugal, Spain)
		c. Long-term UIOLI	4 (Croatia, Greece, Israel, Italy, Spain)
		d. Re-allocation of capacity	0
		e. Offer of additional capacity	2 (Croatia, Portugal)
		f. Other	4 (Croatia, France, Turkey, Italy)
	No	1 (Jordan)	

**Croatia:** Surrender of contracted firm capacity, withdrawal of long-term contracted unused firm capacity, additional firm capacity offering and a buy-back of the contracted firm capacity are adopted to manage congestions.

**France:** Capacity surrender, over subscription and buy-back in line with the CMP guidelines are also adopted to manage congestions.

**Italy:** Capacity surrender on a voluntary basis are also adopted to manage congestions.

**Turkey:** pro-rata

### 3.3 Section C – Cooperation among TSOs

Section C of the CAM Questionnaire looks into the mechanisms developed between adjacent TSOs for the exchange of information, standardization of capacity in terms of units and potential barriers identified.

#### – Further Comments on Question 16

n. 16	The exchange of information of between adjacent TSOs on networks planning and operation at interconnection points (including impacts on capacity availability due to planned or unplanned maintenance and potential congestions) are defined in network codes or other documents?	
	Yes	7 (Greece, France, Italy, Jordan Portugal, Spain, Turkey)
	No	0

**Greece, France and Italy:** The exchange of information between TSOs is described in their internal procedures.

**Spain:** The exchange of information between TSOs is defined in the interconnection agreements.

**Turkey:** The exchange of information between TSOs is foreseen for maintenance and operation.

#### – Further Comments on Question 17

n. 17	Is capacity offered expressed in the same units at each side of the interconnection point?		
	Yes	a. kWh/day	7 (Croatia, Greece, France, Italy, Portugal, Spain, Slovenia)
		b. Sm <sup>3</sup> /day	1 (Turkey)
		c. MM scf/day	1 (Jordan)
	No	1 (Italy)	

**Italy:** Not known for Mazara del Vallo (Tunisia-Algeria) and Gela (Libya) interconnection points.

#### – Further Comments on Question 18

n. 18	In which unit is expressed the capacity offered?	
	a. Political reasons	2 (Greece and Jordan)
	b. Differences in regulatory environments	4 (Greece, Italy, Jordan, Turkey)
	c. Cooperation is not considered necessary	0
	d. Other	4 (France, Italy, Spain, Portugal)

**France, Portugal and Spain:** have specified that there are no barriers to cooperation between TSOs.

**Italy:** there are no barriers to cooperation between TSOs at interconnection with other Member States. Barriers due to different regulatory environments are present at interconnection points with Algeria, Libya and Switzerland.

### 3.4 Section D – Rule of Regulator

Section D of the CAM Questionnaire focuses on the rule of Regulator to ensure the development and implementation of non-discriminatory and transparent procedures for the allocation of capacity. The issue of cooperation between Regulators of adjacent countries on the specific topic of capacity allocation and the involvement of stakeholders in decision making through public consultations are also addressed.

#### – Further Comments on Question 19

Is the Network Code approved by the Regulator?		
n. 19	Yes	7 (Greece, France, Israel, Italy, Portugal, Turkey, Algeria)
	No	2 (Albania, Spain)

**Israel:** Regulator approves, following public consultation the Gas Transport Agreement (GTA) aspects of the Network Code.

#### – Further Comments on Question 20

Are stakeholders consulted before decisions are made?		
n. 20	Yes	9 (Albania, Greece, France, Israel, Italy, Jordan, Portugal, Spain, Turkey)
	No	0

#### – Further Comments on Question 21

Is there regulatory supervision to ensure that the TSO is releasing the maximum level of available (technical) capacity?		
n. 21	Yes	10 (Albania, Greece, France, Israel, Italy Jordan, Portugal, Spain, Turkey, Algeria)
	No	0

**France:** Tariff incentives are adopted to encourage the release of maximum level of available capacity.

#### – Further Comments on Question 22

Are the capacity allocation methodologies described in a TSO's Network Code?		
n. 22	Yes	7 (Greece, Israel, Italy, Portugal, Spain, Turkey, Algeria)
	No	1 (France)

**France:** Capacity allocation methodologies are defined in the network code.

**Israel:** Capacity allocation methodologies are partially described in Gas Transport Agreement (GTA) – aspect of the Network Code.

### – Further Comments on Question 23

n. 23	Are the congestion managements methodologies described in a TSO's Network Code?	
	Yes	6 (Croatia, Greece, Israel, Italy, Portugal, Spain, Turkey)
	No	1 (France)

**France:** Congestion management methodologies are defined in the network code.

**Israel:** Congestion managements methodologies are partially described in Gas Transport Agreement (GTA) – aspect of the Network Code.

### – Further Comments on Question 24

n. 24	Do network codes, or other documents, define communication procedures among TSOs and network users?	
	Yes	7 (Albania, Greece, France, Italy, Portugal, Spain, Turkey)
	No	0

**France:** Communication procedures are defined in interoperability Network Code.

**Italy:** Communication procedures are defined in the TSO Network Code.

### – Further Comments on Question 25

n. 25	Do neighbouring Regulators collaborate on the definition of capacity allocation and congestion management methodologies at the interconnection points? If yes, please specify the terms; if not, please specify the reasons	
	Yes	7 (Greece, France, Italy, Jordan, Portugal, Spain)
	No	2 (Turkey and Israel)

**Greece:** An interconnection agreement (including an Operating Balancing Agreement, OBA) was signed between the Greek and Bulgarian Transmission System Operators. Also, in 2015, the two TSOs produced a study “Joint method for the calculation of the firm technical capacity at the interconnection point ‘Kulata-Bulgaria/Sidirokastron-Greece’”.

**France:** Adjacent Regulators participate in the respective consultations

**Israel:** At this moment there is no collaboration with neighbouring Regulators. Collaboration with Jordan will begin in 2020 when the new infrastructure between the two countries will become operational.

**Italy:** Periodic meetings, information exchange and participation in each other consultations are planned with Regulators EU Member States. To guarantee to network users an homogeneous approach at all the interconnections points (including non-EU), Italy decided to apply the European allocation and congestion management methodologies also to the entry points with non-EU countries. The above decision has been adopted following a public consultation.

**Jordan:** Periodic meetings and information exchange are planned.

**Portugal:** The Regulators from Portugal and Spain have periodic meetings, information exchange and participate in each other's consultations.

**Spain:** Regulators collaborate in the definition of capacity allocation mechanisms together with TSOs in the framework of the Regional Initiative (SGRI).

**Turkey:** There is no collaboration, due to differences in regulatory environments. Turkey is not a member of ENTSO-G and the rules covering capacity allocation etc. can differ with the interconnections with Greece and Bulgaria.

## 4. SUMMARY OF FIRST EVIDENCE

The information collected through the MEDREG CAM Questionnaire provides insights on the:

- Functional part of capacity allocation (Sections A and B of the CAM Questionnaire). This part relates to the capacity allocation mechanisms adopted by MEDREG countries, the capacity products available and the congestion management mechanisms employed to ensure that contractual and physical congestion are addressed.
- Cooperation between adjacent TSOs and Regulators (Sections C and D of the CAM Questionnaire). Such a cooperation goes further than everyday technical operation of the connected pipelines. Instead it touches upon the development of a compatible procedure for the allocation of capacity at both sides of the IP. The questionnaire also touched upon powers of the national regulators in approving network codes and compliance monitoring.

Responses were collected from 5 MEDREG Members that happen to reside in Member States. Four additional responses (4) were received by non-EU MEDREG Members. It is useful for the analysis and the recommendations to follow to look summarize similarities and differences between the countries that participated to the survey. We note the following for MEDREG Members that responded to the questionnaire and happen to be located in EU Member States:

- **France** shares 7 IPs including the VIP Virtualys virtualizing three physical Entry/Exit Points between France and Belgium and the VIP Pirineos. Two out of the 7 IPs are shared with Switzerland (Oltingu (FR)/Rodorsdorf (CH) and Jura). One more IP, Dunkerque connects France to the production fields of Norway. The French regulator CRE clarified that capacity allocation at EU IPs is according to the EU legal framework and the CAM Network Code. Capacity allocation at the non-EU IPs is based on a First Come First Served (FCFS) mechanism with an over subscription period. No information on capacity products for the non-EU IPs was provided. No short-term capacity is set aside at the non-EU IPs. CRE informed that capacity at IPs maybe booked in the form of annual products for up to 15 years. It is unclear if this also holds for the French side of the non-EU IPs. Congestion management mechanisms are adopted but it is unclear if these also apply to the non-EU IPs.
- **Greece** has 2 IPs one with Bulgaria (Sidirokastro/Kulata) and one with Turkey (Kipi). The Greek network code provides for capacity allocation through the provisions of Regulation (EU) 2017/459 (i.e. allocation through auctions with standardized products) at the non-EU IP of Kipi. CMP provisions according to the EU framework are also implemented at both IPs. However, bundled capacity products in the dominant physical flow direction (Bulgaria to Greece) are not offered due to the lack of available firm forward capacity at the Bulgarian side of the IP. Almost all technical capacity at the Bulgarian side of the IP is booked by pre-existing long-term contracts. Capacity caps introduced by the Greek Competition Authority upon the incumbent DEPA, obliged DEPA to release reserved capacity of up to 67% of the technical capacity at the Sidirokastro interconnection point and up to 55% of the technical capacity at Kipi making thus available a significant amount of capacity for market based allocation. DEPA's participation to the capacity allocation auctions remains upon conditions related to the capacity caps.

- **Italy** has 5 IPs including one with Austria (Tarvisio/Arnoldstein), one with Slovenia (Gorizia/Sempeter) and 3 non-EU IPs: Mazara del Vallo linking the network of the Italian TSO Snam Rete Gas (SRG) to the Transmed pipeline (Tunisia-Algeria), Gela linking the SRG network to Greenstream (Libya) and the Passo Gries/Griespass IP to Switzerland. The CAM Network Code is applied to the two EU IPs. CMP procedures at EU IPs are also aligned with the EU legal requirements of Regulation 715/2009. No specific information was provided in the MEDREG CAM Questionnaire on capacity allocation and CMP at the non-EU IPs. However, according to the SRG Network Code (Chapter 5), capacity at Passo Gries is allocated by the EU procedures and rules. Capacity at the Mazara del Vallo and Gella is allocated in the PRISMA booking platform, through auctions, as provided by the EU framework and in the form of standardised products (annual capacity, quarterly, monthly and under conditions also daily). The Italian regulator informed that there is no short-term capacity set aside for short-term products at Mazara del Vallo and Gela. According to the SRG network code, EU CMP rules apply to Passo Gries but not to the remaining two non-EU IPs.
- **Portugal** has a single EU IP with Spain (Campo Maior(PT)/ Badajoz(SP)). Capacity allocation is according to the EU legal framework and in particular Regulation (EU) 2017/459.
- **Spain** shares one IP with Portugal and the virtual point VIP Pirineos grouping the Larrau/Pitt-Larrau and Irun/Buriatou IPs with France. Spain has two more non-EU IPs: Tarifa and Almería. The former connects the Spanish transmission system of Enagas to the Europe-Maghreb pipeline linking Spain to Morocco and Algeria. The latter connects the Enagas system to MEDGAZ and Algerian supply sources. Capacity allocation at EU IPs is according to the EU legal framework and in particular Regulation (EU) 2017/459. The Spanish regulator did not provide information in relation to capacity allocation at non-EU IPs.

MEDREG Respondents from EU Member States confirmed that capacity allocation mechanisms and CMP procedures are described in the network codes and that structured consultation processes with stakeholders, adjacent TSOs and Regulators is established. It is not clear if such processes extend to non-EU IPs. National regulatory authorities have competencies regarding the approval of capacity allocation and CMP rules.

From the above, it is clear that a common procedure for capacity allocation exists at EU internal IPs. This procedure is a result of a consistent effort towards the development of common rules in the internal EU market for over 20 years (ever since the first gas Directive 96/92/EC). The third Energy Package, through Regulation 715/2009, further specified that the rules for access to interconnection points are set by the Commission, after consulting the ACER and ENTSO for Gas. These rules, as reviewed above, involve standardized firm and interruptible capacity products and where possible also bundled products. Capacity allocation is done through auctions according to a common EU wide calendar and through purposely-designed booking platforms. CMP provisions and obligations of the TSOs for interoperability and data exchange are specified at European level. At non-EU IPs however, the allocation approaches are less compatible since the EU framework does not impose their application to the MS-side of IPs shared with third countries. We note that with the exception of the Swiss IPs and the IP shared between Greece and Turkey, the remaining interconnection points connect EU Member States almost directly with production fields.

To continue with the analysis, we note the following for the four (4) MEDREG Members that responded to the questionnaire and are not EU Member States:

- **Egypt** has significant hydrocarbon resources. However, the country faced declining gas production and soaring gas demand. The marketed production decreased rapidly between 2009 and 2015. Production rebounded in 2017 due to the commissioning of new offshore gas fields. To meet demand, two LNG regasification plants were commissioned in 2015. Egypt has an interconnection point on the Arab Gas Pipeline with Jordan, exports however have decreased. Capacity on the Arab Gas Pipeline is allocated through long-term bilateral contracts. No information about other capacity allocation mechanisms on other infrastructures and entry points was provided. The New Gas Market Regulation Law of July 2017 establishes a new Gas Regulatory Authority (GRA) for the gas sector and foresees the deregulation of downstream gas activities (third party access to infrastructure, gradual opening of the gas market). It is understood that capacity allocation mechanisms and congestion management procedures will be developed in the context of the provisions of the new law.
- **Israel** has also significant hydrocarbon resources. The country does not import gas and has no interconnection points. Connections with the transmission network are with the three operational production fields off Gaza, in Ashkelon, and Tamar. An LNG receiving terminal is located offshore from the coastal city of Hadera. Exports to Jordan from the Tamar field begun in 2017. The Israeli TSO, Israel Natural Gas Lines, is also building a new gas pipeline to supply gas from the Leviathan field to the Jordanian National Electric Power Company (NEPCO) over a 15-year period. In their responses to the MEDREG CAM Questionnaire, the Israeli Ministry of Energy, which also serves as the gas regulator (NGA), noted that capacity allocation in the transmission system is on a first come first served basis. Capacity products are of duration of up to 15 years. Monthly products are also available, and part of the technical capacity is set aside for such products. No interruptible products are available. Currently there is no contractual congestion, but physical congestion exists. Congestion management is achieved through short term UIOLI; however, unused capacity is not offered at the secondary market. Rules for access to the transmission system are described in the network code, which is approved by the Regulator. NGA is also entrusted to ensure that the maximum capacity is made available. A procedure for consulting with stakeholders is in place.
- **Jordan** has two interconnection points upon the Arab Gas Pipeline (Egypt-Jordan and Jordan-Syria sections). Imports from the Arab Gas Pipeline dropped sharply in 2011; with an import volume in 2014 ten times lower than in 2014. This reduction was a result of several accidents on the Arab Gas Pipeline and gas supply constraints in Egypt. A floating storage regasification unit was installed off the Red Sea port of Aqaba in 2015. Jordan started to import gas from the Tamar gas field in Israel in 2017. Capacity on the transmission system is allocated on a first come first served basis. Capacity is offered on MMBtu and contracts are of duration of more than a year. Interruptible contracts are not available, and no part of the technical capacity is reserved for short-term bookings. According to the responses received, no contractual or physical congestion is identified and no CMPs are in place. The procedure for the exchange of information between adjacent TSOs is defined in the network code. The regulator considers differences in the regulatory environments as the main barrier for cooperation between TSOs. The regulator

approves the network code and ensures that the maximum capacity is made available. A procedure for consulting with stakeholders is in place.

- **Turkey** shares 2 interconnection points with EU MS: the Kipi IP with Greece and the Strandzha/Malkoclar IP at the Bulgaria/Turkey border. The latter is an IP to the Transbalkan pipeline which imports gas to Turkey from the Soviet Union via Romania and Bulgaria. There are 3 more IPs: at Türkgözü on the eastern border of the country, accepting gas from Azerbaijan, Gürbulak with deliveries from Iran and Durusu, the entry point for gas shipped through the Blue Stream pipeline. The Turkish Regulator EMRA, informed that capacity is allocated pro rata on a yearly basis and that in the event that there is remaining available capacity this may be allocated at least on monthly basis. No interruptible products are available, and no available capacity is reserved for short-term allocation. According to the responses received, no contractual or physical congestion is identified at the IPs and no CMPs are in place. However, unused capacity may be offered at the secondary market. Exchange of information with adjacent TSOs is foreseen for technical reasons (maintenance) and is defined in the network code. Capacity is offered at Sm<sup>3</sup>/day. The regulator considers differences in the regulatory environments as the main barrier for cooperation between TSOs. EMRA approves the network code and ensures that the maximum capacity is made available. A procedure for consulting with stakeholders is in place.

The above reinforce our previous conclusion brought forward in relation to the EU Member State analysis. In non-EU IPs or at mixed EU/non-EU IPs capacity allocation is mostly on a first come first served basis through long term contracts. On some cases, a pro-rata scheme is also in place. Capacity is offered at various units of measurements such as kWh, Sm<sup>3</sup> and MMBtu. In general, short-term capacity is available only on limited occasions mostly in the form of monthly products. Interruptible contracts are not available, and no part of the technical/available capacity is reserved for short-term bookings. Some congestion management mechanisms are in place such as short term UIOLI. Unused capacity is not offered at the secondary market. Cooperation between adjacent TSOs is limited on technical aspects of network operation. Respondents to the MdReg CAM Questionnaire acknowledged differences in regulatory environments to be a main barrier for cooperation between TSOs. As a general rule, regulators approve network codes and ensure that the maximum capacity is made available. A procedure for consulting with stakeholders is in place.

Table 4 below provides a summary of the information collected.

Topics addressed in the MEDREG CAM Questionnaire	EU IPs	Non-EU IPs
A. Capacity products and capacity allocation mechanisms	<ul style="list-style-type: none"> <li>– A common set of products are defined (including interruptible and bundled products);</li> <li>– Non-discriminatory and transparent capacity allocation mechanisms are in place;</li> <li>– Harmonized market-based capacity allocation mechanisms are adopted (auction);</li> <li>– A percentage of capacity is set aside for short-term products.</li> <li>– Existence of old long-term gas transportation agreements still prevent bundling of capacity.</li> </ul>	<ul style="list-style-type: none"> <li>– Generally, only yearly or multi-year products are offered;</li> <li>– No market-based capacity allocation mechanisms.</li> <li>– In some cases, distributive models (first come first serve or pro-rata) are also adopted but often only long-term agreements are in place.</li> </ul>
B. Congestion management <sup>7</sup>	<ul style="list-style-type: none"> <li>– Congestion management procedures are in place.</li> <li>– Unused capacity is made available in the secondary market</li> </ul>	<ul style="list-style-type: none"> <li>– Non-structured procedures for congestion management are present.</li> <li>– In many cases unused capacity is not made available in the secondary market</li> </ul>
C. Cooperation among TSOs	<ul style="list-style-type: none"> <li>– No specific barriers to cooperation between TSOs at interconnection points between EU members' states.</li> <li>– ENTSOG acts as a facilitator for the promotion of cooperation amongst European TSOs.</li> </ul>	<ul style="list-style-type: none"> <li>– Barriers to cooperation (political and/or regulatory) between TSOs are present</li> </ul>
D. Role of Regulator	<ul style="list-style-type: none"> <li>– Capacity allocation mechanisms and congestion management procedures are approved by national regulatory authority. Collaboration between national regulation authorities is wide.</li> </ul>	<ul style="list-style-type: none"> <li>– In some cases, regulatory authority approves network code or part of it. In other cases, bilateral contracts governs transport conditions.</li> </ul>

Table 4 – Summary of the responses provided to the MEDREG CAM Questionnaire in relation to capacity allocation.

## 5. RECOMMENDATIONS

Taking into account the conclusions of this monitoring exercise, a number of recommendations may be drawn.

Recommendations developed herein also stem from previous guidelines on CAM and CMP included in the MEDREG Gas Group Guidelines of Good Practice on Third Party Access in the Mediterranean region published in 2013 (paragraph 2.6).

It is noted that the present recommendations in no way do they suggest that the Mediterranean region replicates the current European framework. As stated in the previous section, the EU framework was adopted and is being implemented as a result of a long process extending over two decades. The general scope of the EU framework is the creation of a single pan European gas market. The scope here is rather to provide directions for a more efficient utilization of existing capacity to the benefit of shippers including new comers and most importantly final consumers. It is inarguable that the application of non-discriminatory and transparent capacity allocation and congestion management rules can promote gas-to-gas competition, prevent market foreclosure, ensure security of supply and provide appropriate signals for new investments within a stable and well-defined regulatory environment. However, where relevant some examples from the European experience are provided with a view to provide practical examples.

The next paragraphs set a base for recommendations.

### – TSOs must take an active role in managing capacity calculations

- There needs to be sufficient transparency with regard to capacity availability and the maximization of available capacity at all IPs. TSOs should publish the technical and available capacity and the methods applied for such calculations.
- It is recommended that TSOs follow a dynamic approach for the estimation of the technical capacity. The dynamic approach requires that TSOs re-calculate technically available capacity on a regular basis and based on actual technical conditions (e.g. calorific value, temperature, expected consumption of a period of time). Transmission system operators need to cooperate where possible with adjacent TSOs for such efficient capacity calculations.

### – TSOs must have a transparent and clearly defined mechanism for shippers to request capacity.

- Such a mechanism involves clear and published rules, requirements and timescales for an application for the reservation of capacity to be submitted and processed including relevant deadlines.
- Standardized transportation agreements, clear credit requirements and transparent and reproducible transmission tariffs should also be in place. Transmission tariffs need to be based on charges due to capacity booked and not due to capacity used (or due to the volume of gas or amount of energy transported through an interconnection point or pipeline). Capacity based charges can well prevent the hoarding of unused capacity.

- Where there is no congestion at an existing IP, TSOs should in principle accept all requests for capacity. In case that a TSO declines the allocation of available capacity, the decision of the TSO should be notified to the regulator.
  - Recommendations above are made upon the implicit assumption that legacy bundled gas transportation and supply contracts are separated to one or more gas transmission agreements (GTAs) and separate supply contracts in the context of at least a legal/functional unbundling of the TSOs. Insufficient separation of infrastructure from supply functions results in insufficient market opening regardless any sophisticated or less sophisticated rules capacity allocation and CMP. If this process has not started or is not yet complete, then it would have to be concluded as soon as possible.
- Methods of capacity allocation should ensure that new entrants are not foreclosed from the market.**
- The EU framework provides that a reasonable part of the technical capacity at an IP is set aside for firm capacity products of less than a year. Annual contracts are provided for up to a period of 15 years, but their allocation is on a yearly basis (i.e. 15 annual contracts rather than 1 contract of 15 years of duration). Such types of products allow new entrants access to capacity, reduce the risk of market foreclosure by incumbents and help to bring capacity into the market on a regular basis. On the other hand, it is acknowledged that the lack of long term GTAs impose a substantial risk to the financing of any new investments and that a right balance between long-term capacity bookings and opportunities for new entrants needs to be achieved.
  - Overall, European experience has shown that if a reasonable level of short-term capacity is in the market, capacity hoarding for peak periods is also be reduced. The combination of capacity products of various durations is necessary to achieve both stability and flexibility of access. If shippers have access to a range of capacity durations, it will incentivize them to buy as much capacity as required over longer timescales, while allowing them to procure additional capacity at short notice for unexpected peaks.
  - It is noted that often there is contractual congestion at existing interconnection points and at both sides of the border due to legacy long-term gas transportation agreements. Such is for example the case in the Bulgarian side of the GR/BG IP, used to be the case at the Greek side of the same IP and possibly it is also a case in other IPs of MEDREG countries. The introduction of gas and capacity release mechanisms such as the one imposed upon the Greek incumbent DEPA at the Greek side of the GR/BG and GR/TR IPs or/and caps setting a maximum of capacity share/market share taken up by a certain shipper/supplier as the ones imposed upon Italian wholesale suppliers or those introduced in the exemption decisions of a number of TPA exempted pipelines in the EU such as OPAL, TAP and IGB are well proven mechanisms to resolve issues of market dominance and vertical foreclosure.
  - In this section, we refrained from recommending one specific methodology for the allocation of capacity. Respondents with non-EU IPs informed that capacity is allocated on a FCFS basis or pro-rata. Auctions, as applied now at EU IPs indeed ensure that firm capacity is allocated to those parties that value it most. Auctions for capacity combined with effective congestion management procedures can further enhance liquidity and competition. Nevertheless, it is acknowledged that auctioning maybe interrelated with a

complex implementation process. Given the European experience, auctioning maybe a last item in a long list where a first priority is assigned to the creation of transparent rules and making existing capacity available to the market.

#### **– Congestion management and TSO incentives**

- Congestion management is key for making available existing unused reserved capacity with a view to increase network utilization and also competition. European experience has shown that it may be challenging to implement long-term “Use It Or Lose It” particularly at the first stages of market opening. Nevertheless, making interruptible and firm short-term “Use It Or Lose It” requires only minor modifications to network codes, is comparatively easily accepted by the incumbents and can create opportunities for new entrants, provided of course that the released capacity is allocated through a transparent and non-discriminatory process.
- Capacity holders should also be incentivized to release to the secondary market unused capacity for reservation for short-term bookings. Well-designed incentives may provide an effective and efficient mechanism for regulators to influence the behavior of TSOs and shippers.

#### **– Capacity allocation methods at cross-border interconnection points must be as compatible as possible.**

- Here recommendation is made for IPs shared between MEDREG countries. The more aligned the capacity allocation methods and the available products are at both sides of the IP, the more trade is facilitated, and transaction costs are reduced. Coordination between TSOs to achieve compatible schemes is however necessary.

#### **– Cooperation between adjacent TSOs and Regulators**

- In order to optimize the use of networks and capacity offered, adjacent transmission system operators need to cooperate at technical and operational level. The European experience has shown indeed the lack of compatibility in technical, operational and communication areas creates substantial barriers to the free flow of gas and the maximization of the network utilization. Issues in related to gas quality and overall supply standards are also identified. Interconnection agreements targeting at least the following (a) rules for flow control; (b) measurement principles for gas quantities and quality; (c) rules for matching; (d) rules for the allocation of gas quantities; (e) communication procedures in case of exceptional events; (f) settlement of disputes arising from interconnection agreements can greatly standardize and facilitate the TSO cooperation. Respondents to the MEDREG CAM Questionnaire have already indicated that cooperation regarding maintenance, is already established at many intra-MEDREG IPs and that cooperation on technical issues is already in place. Such a cooperation should be gradually extended to address further topics from the list outlined above.
- MEDREG is also actively supporting the establishment of a Med TSO for gas. i.e. an association of gas system operators, representing multiple Mediterranean countries which can constructively contribute to a regional dialogue on promoting cooperation and removing barriers between TSOs.

- The need of further cooperation between national regulators either on a bilateral level and/or through MEDREG should also be pursued with the active involvement of Regulators.

#### – Power of Regulators

- Respondents informed that capacity allocation rules are generally approved by the regulators. This should be made a practice for all intra-MEDREG IPs and also at the side of cross-MEDREG<sup>5</sup> IPs which belongs to a MEDREG country. Capacity allocation shall be subject to ex-post review by NRAs if deemed necessary by an NRA.”

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<sup>5</sup> By cross-MEDREG IPs here reference is made to IPs shared by a MEDREG and a non-MEDREG country

## **6. WAY FORWARD**

The present report has known that capacity allocation mechanism and congestion management procedures between non-EU MEDREG Members or between EU/non-EU countries are not yet fully development and further work towards a complete implementation will have to be done. In this sense, some recommendations are proposed to promoting non-discriminatory access and efficient network utilization.

The progress of implementation the Guidelines of Good Practice on Capacity Allocation in the Mediterranean and compliance with them will be monitored regularly by MEDREG Ad-Hoc Group on Gas. The first monitoring of compliance with the Guidelines of Good Practice on Capacity Allocation shall be done in 2020. If deemed useful during the monitoring process the CAM report may be submitted to public consultation to collect any indications and/or comments from stakeholders.