

SURVEY

Benchmarking gas transmission access
systems in Europe: a trader's perspective

EFET Gas Committee

9 February 2006

HIGH LEVEL OBJECTIVES OF EFET GAS TRANSMISSION ACCESS SURVEY

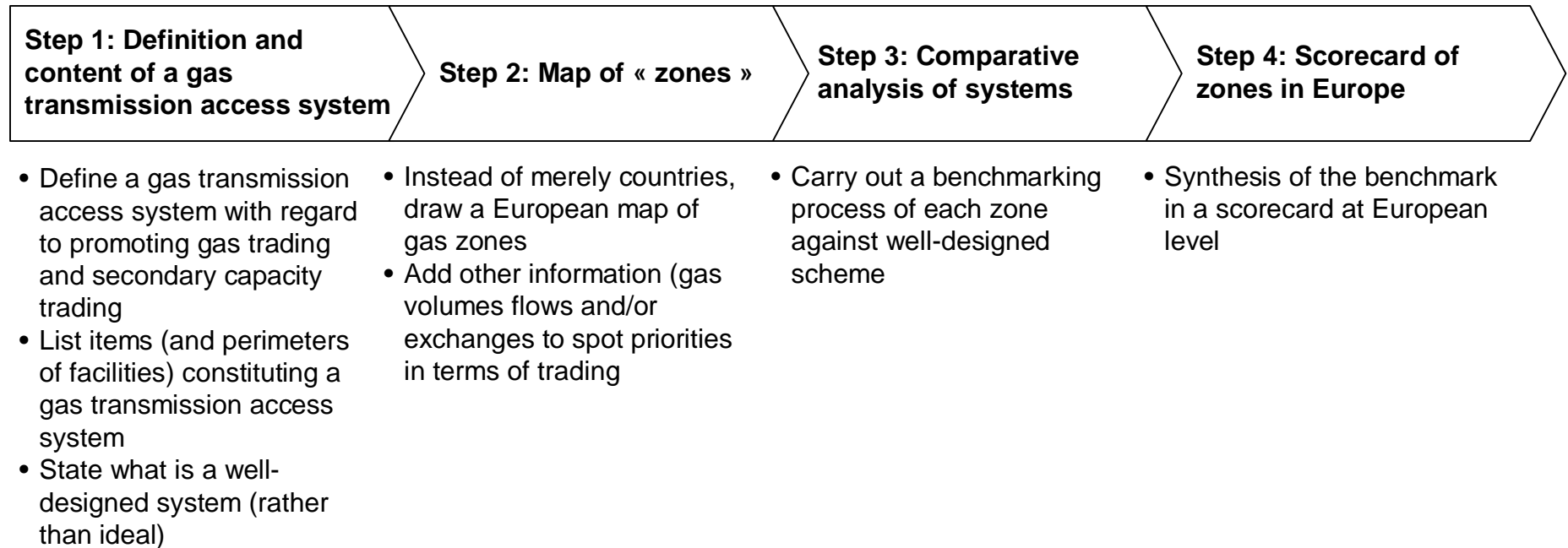
The European Federation of Energy Traders, EFET, actively contributes to the development of a transparent and liquid wholesale gas market throughout Europe and in which all consumers have a choice of energy supplier.

To achieve this all suppliers must be free to offer innovative solutions to meet customer needs and traders must be able to operate free of artificial restrictions. The benefits of full energy market opening include competitive prices for all customers, a wider range of products, more efficient use of infrastructure and delivery of security of supply, and increased standards of service, quality of supply and innovation.

The establishment of transparent and robust wholesale markets is essential to enable substantive competition and choice of supplier for European consumers. Without effective energy trading there will be no substantive competition in energy supply.

Establishing well functioning gas transmission arrangements (entry/exit zones) is a pre-requisite for the development of transparent and liquid traded gas markets. Efet has therefore made an evaluation of the existing gas transmission access systems (entry/exit zones) in Europe against an ideal set of criteria in order to determine to what extent this goal is reached and what improvement needs to be made.

WORK GROUP ROADMAP - METHODOLOGY



DEFINITION AND CONTENT OF AN ENTRY EXIT SCHEME

Step 1

–Definition of entry-exit system

Any definition is drawn to serve a business objective. In our case, we felt that an entry-exit system should help foster access to gas (easiness, non-discriminatory, transparency...) at the most efficient cost (information cost, billing...).

DEFINITION: An **entry-exit system** is a specific transportation scheme applicable for a homogeneous zone (with regard to gas quality) within which:

- § Entry and exit capacity is booked and paid for separately at any number of points within the zone
- § Trading is facilitated through a virtual hub

–Scope of system: items and facilities

- § Number of points - scope of the zone
- § Tariff structure
- § Services:
 - Facilities included – offshore pipelines, storage, LNG, ...
 - Capacity - auction process, duration of capacity, booking procedures, tradability or rights
 - Balancing rules
 - Similarity between transit and domestic rules

BENCHMARKING OF ZONES ' SYSTEMS

Step 3

Benchmarking methodology

Designing a common methodology to assess each transport system efficiency

Alongside the definition EFET used for conveying its survey, a scorecard methodology was designed internally with the aim of capturing and ranking important topics related to the performance of a gas transmission access system.

6 categories were defined to appraise this:

- § Area: focus was put on the clarity and simplicity of the area in terms of entry and exit points.
- § Services: appraisal was conducted on essential services expected for efficient trading (when applicable : entry and exit capacity, balancing, tolerance margins, flexibility, load factor conversion, allocation...).
- § Capacity booking: analysis of the easiness to book and trade entry and exit capacity on all points.
- § Commodity trading: key appraisal of gas exchange management (comprise criteria on whether the hub is firm or physical, allows for title of transfer, presence of absence of clearing and fees)
- § Transparency: rates transparency in all aspects listed above
- § Tariff structure: appraisal in light of fairness, cost-reflectiveness and as a tool for efficient investment decisions

Benchmarking transport systems with a common set of weights

Weights were given to each topics appraised. These weights are standardised and more often than not found applicable to every transport system. The scores collected by a specific transportation system was then normalised by calculation a performance indicator (weighted average of all scores). The relative weights distributed to each category highlights the importance of their content from a trading standpoint.

When a criteria was found non applicable to a particular region or transport system, the criteria was discarded in the benchmark grade and score was modified accordingly.

BENCHMARKING OF ZONES ' SYSTEMS

Step 3

Benchmarking methodology

Definition of Ideal Characteristics

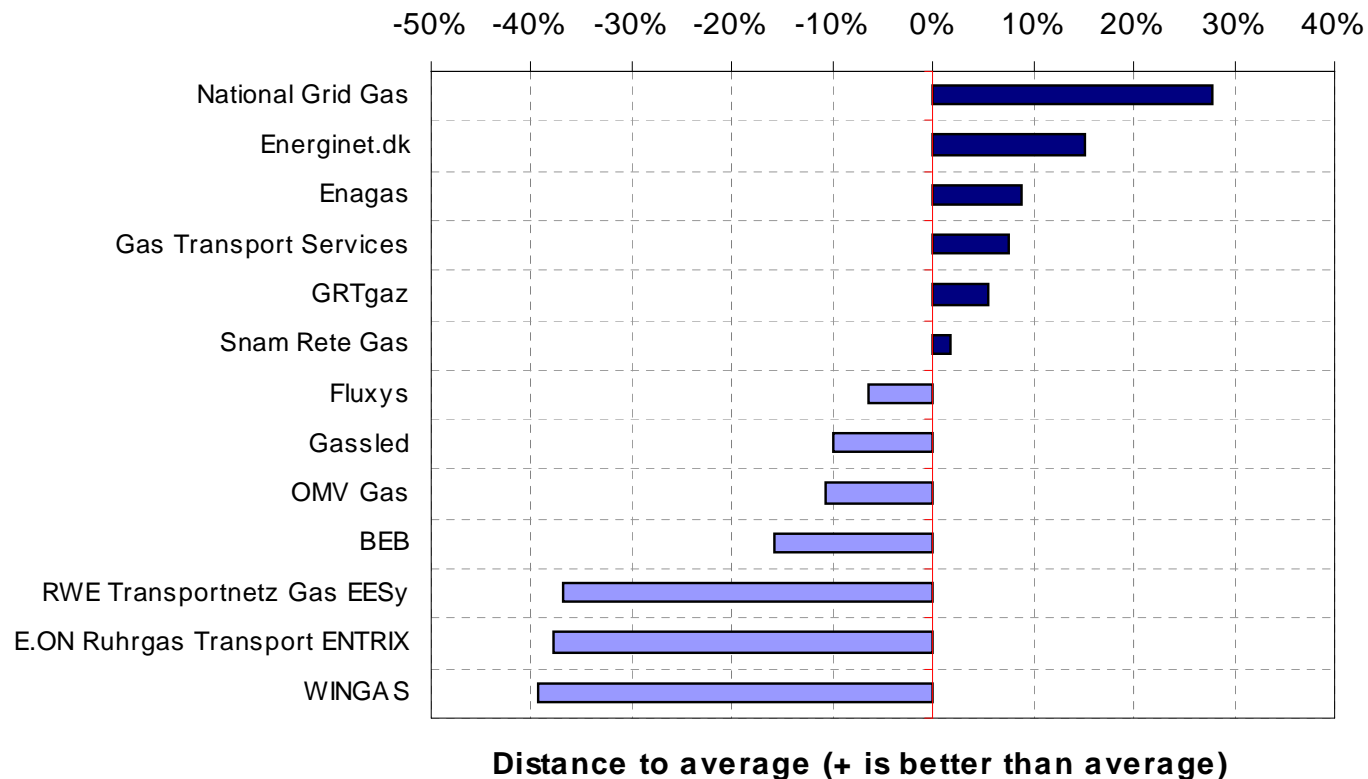
Nr.	Topics	Items	Definition	References for awarding points	Weight			Por.
					0-3	1,2,3,4		
A. Area								
1		Definition of points within the area	good understanding of the zone's perimeter	3 = all points listed, with map, online		4	0	
		Number of zones in system		3 = one zone		4	0	
B. Services								
1		Entry capacity	an entry capacity booking service is provided	3 = entry capacity can be booked		1	0	
2		Exit capacity	appropriate organisation of exit points as zones and/or points	3 = manageable size of exit points		3	0	
3		Balancing	service reflecting requirements of the system (including a market)	3 = 24 balancing market for hourly market		4	0	
4		Tolerance	allow for a given margin of metering process error	3 = reasonable tolerance level (standard 2%)		1	0	
5		Flexibility	capacity provided by the zones' operator to allow for possibility to reschedule	3 = able to renominate as much as possible, up to end		2	0	
6		Load factor conversion	TSO shapes gas according to profile of exit point	3 = TSO takes full responsibility for shaping		2	0	
7		Allocation	how and when data is made available and what method is used for the process	3 = instantaneous numbers for balancing		2	0	
8		Matching	between TSOs/SSOs for example - connected facilities. TSOs responsibility to monitor	interconnections		4	0	
9		Blending	needed for specifications (e.g UK - gas), costs incurred	3 = TSO takes full responsibility for blending		2	0	
C. Capacity booking								
1		Separate booking	Separate booking of entry and exit points	3 = can book separately		4	0	
2	entry only	Secondary market	TSO facilitates secondary market and secondary trading of capacity	3 = market place, active promote use of, screen based, bulletin board		4	0	
3	entry only	Allocation of capacity	auctions, first come, first served, etc...	3 = market based, non-discriminatory		3	0	
4	entry only	Capacity products	What capacity products are on offer - monthly/yearly/daily/etc	3 = variety, can book anything you like		4	0	
5	entry only	Booking period	when do bookings need to be made and when is a response given	3 = instantaneous, online		3	0	
6		UIOLI principle	Use it or lose it principle is applied to ensure capacity is kept free	3 = capacity hoarding is transparent and prevented		4	0	
D. Commodity trading								
1		Virtual hub	is there a virtual hub to facilitate trading	3 = there is a virtual hub		4	0	
2		Title transfer (incl. Title tracking)	is there title transfer facility at the hub	3 = there is a title transfer facility		4	0	
3		Clearing	TSO facilitation of clearing process	3 = there is clearing		2	0	
4		Fees	Fees should not discourage liquidity	3 = there are no fees		2	0	
E. Transparency								
1		Available capacity publication	Numerical, up to date information provided	3 = accurate, numerical, instant information is given for all points		3	0	
2		Booked capacity publication	Numerical, up to date information provided	3 = accurate, numerical, instant information is given for all points		3	0	
3		Calculation methods	method for calculating capacity levels (booked, available, etc)	3 = method is described, published online		4	0	
4		Balancing method	transparency of how the service is provided	3 = method is described, published online		2	0	
5		Tariffs	Publication of all tariffs	3 = tariffs are published		4	0	
F. Tariff structure								
1		Non-discriminatory	Tariffs should not discriminate against any shipper	3 = no discrimination		4	0	
2		Efficiently incurred or market based	Costs can be either (eg regulated or auctions)	3 = Tariffs reflective of costs incurred - if not market based due to congestion		2	0	
3		Providing price signals for arbitrage	Signal which points are congested/free	3 = signals in place		3	0	
4		Imbalance charges	cost reflective and not prohibitive	3 = cost reflective		4	0	
5		Unbundled tariffs for unbundled services	Services should be able to be bought separately and charged accordingly	3 = Complete tariff unbundling		3	0	
6		Short Haul	Avoids inefficient investments and provides flexibility to the entry/exit system	3 = Short haul available		1	0	
G. Useful but not integral to an ideal system								
1		Quality conversion	capacity to switch one gas quality to another (if necessary)				0	
2		Storage	capacity provided by TSO to allow for storage				0	
3		Screen based facilitation	TSO supports commodity trading through screen based system				0	

BENCHMARKING OF ZONES ' SYSTEMS

Step 4

–Overall results on gas transmission access systems

Ranking of gas transmission access systems by comparison with weighted average score



BENCHMARKING OF ZONES ' SYSTEMS

Step 4

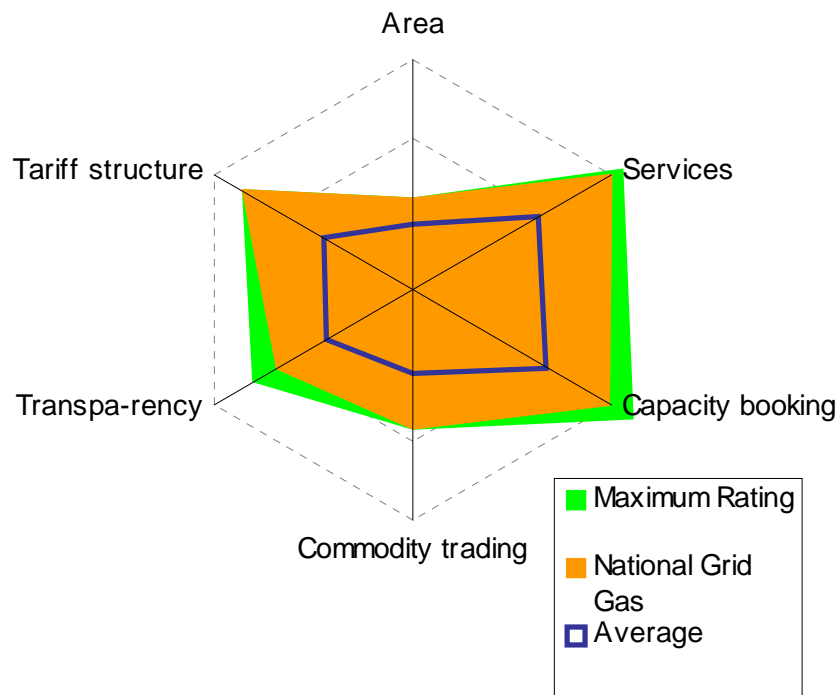
–Overall results on gas transmission access systems

system	Points	Perf.	Distance to Avg	Area	Services	Capacity booking	Commodity trading	Transparency	Tariff structure
National Grid Gas	271	94%	28%	24	60	59	36	41	51
Energinet.dk	230	82%	15%	24	49	62	32	32	31
Enagas	212	75%	9%	24	41	44	36	34	33
Gas Transport Services	213	74%	8%	24	37	48	36	32	36
GRTgaz	203	72%	6%	16	38	48	32	28	41
Snam Rete Gas	196	68%	2%	24	38	37	30	36	31
Fluxys	173	60%	-6%	12	49	26	28	27	31
Gassled	161	56%	-10%	20	51	34	0	34	22
OMV Gas	157	56%	-11%	16	44	30	18	24	25
BEB	146	51%	-16%	16	32	38	24	15	21
RWE Transportnetz Gas EESy	85	30%	-37%	4	18	35	10	8	10
E.ON Ruhrgas Transport ENTRIX	82	28%	-38%	8	24	31	0	11	8
WINGAS	78	27%	-39%	8	15	31	0	18	6
Average	170	66%	0%	17	38	40	22	26	27

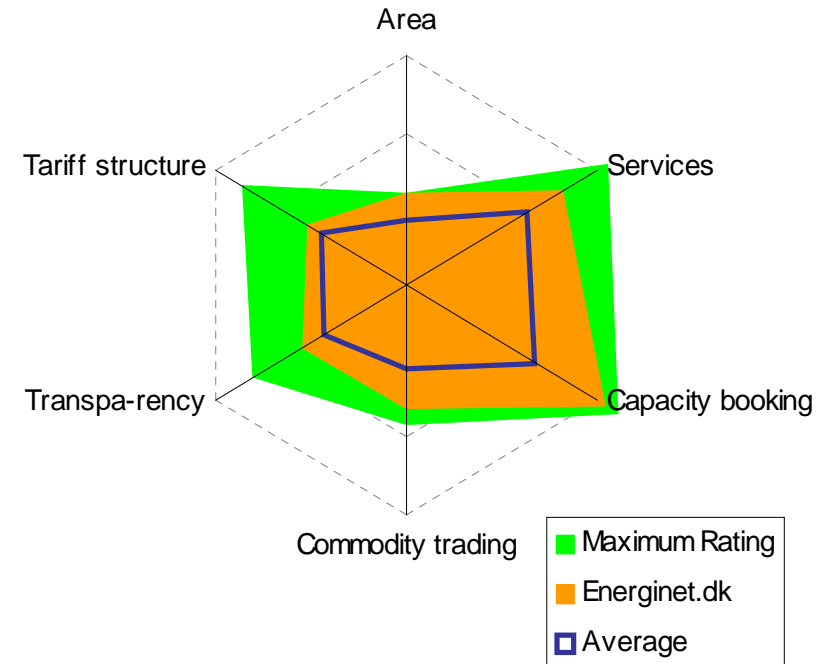
BENCHMARKING OF ZONES ' SYSTEMS

Step 4

–Detailed results on gas transmission access systems



- **Strong points** : Virtual hub supported by a title transfer facility, flexibility on capacity booking, transparency (overall), tariff structure
- **Improvements needed** : transparency on capacity levels calculation

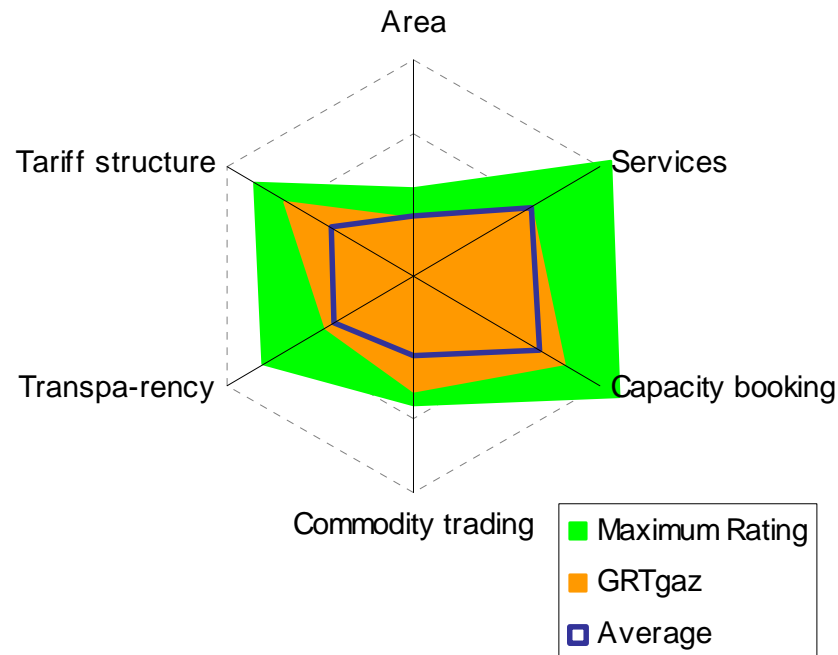


- **Strong points** : Virtual hub supported by a title transfer facility, flexibility on capacity booking
- **Improvements needed** : transparency on capacity levels calculation, balancing service and charges

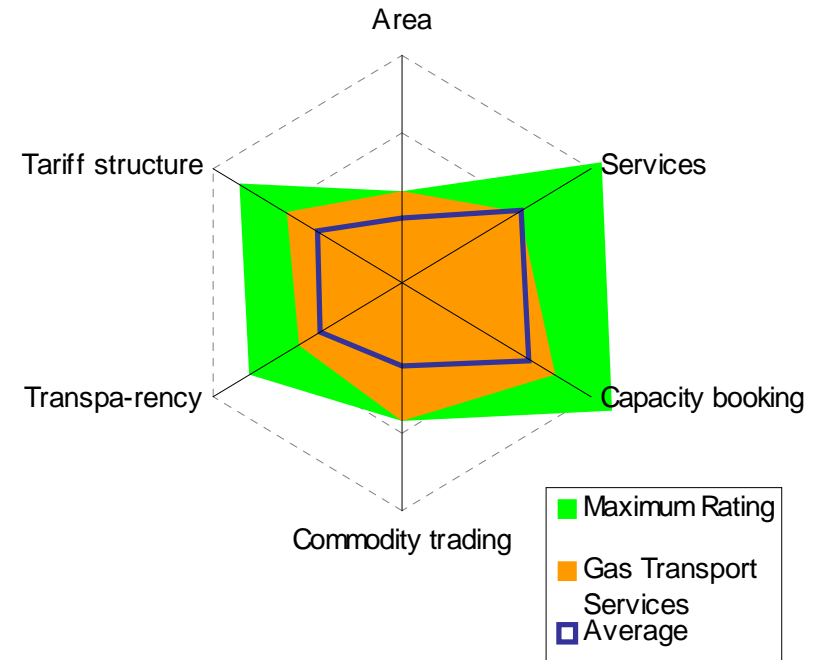
BENCHMARKING OF ZONES ' SYSTEMS

Step 4

–Detailed results on gas transmission access systems



- **Strong points** : Virtual hub supported by a title transfer facility, flexibility on capacity booking, UIOLOI
- **Improvements needed** : reduction of zones, liquidity, secondary market on capacity

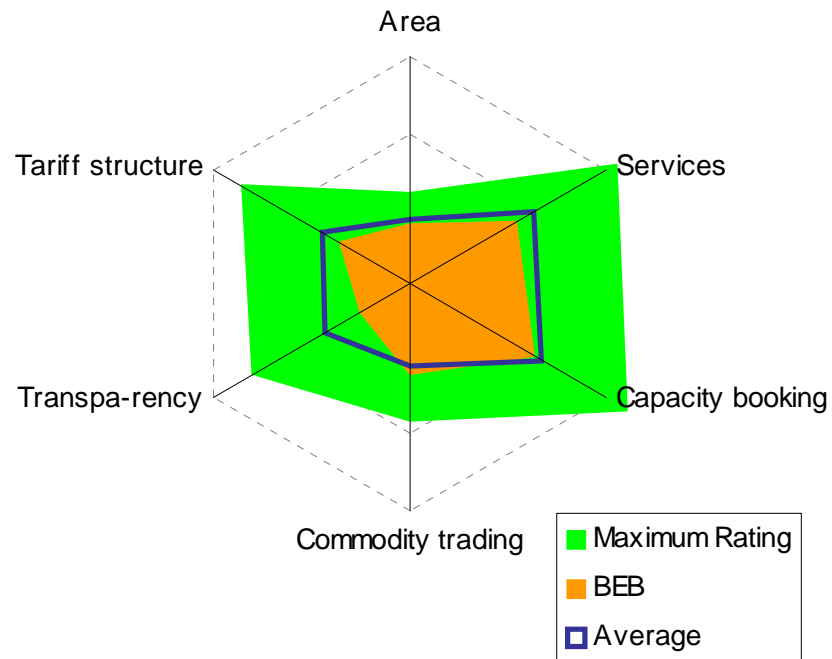


- **Strong points** : Virtual hub supported by a title transfer facility, flexibility on capacity booking
- **Improvements needed** : numerous exit points, secondary market for capacity, improvements in imbalance charges

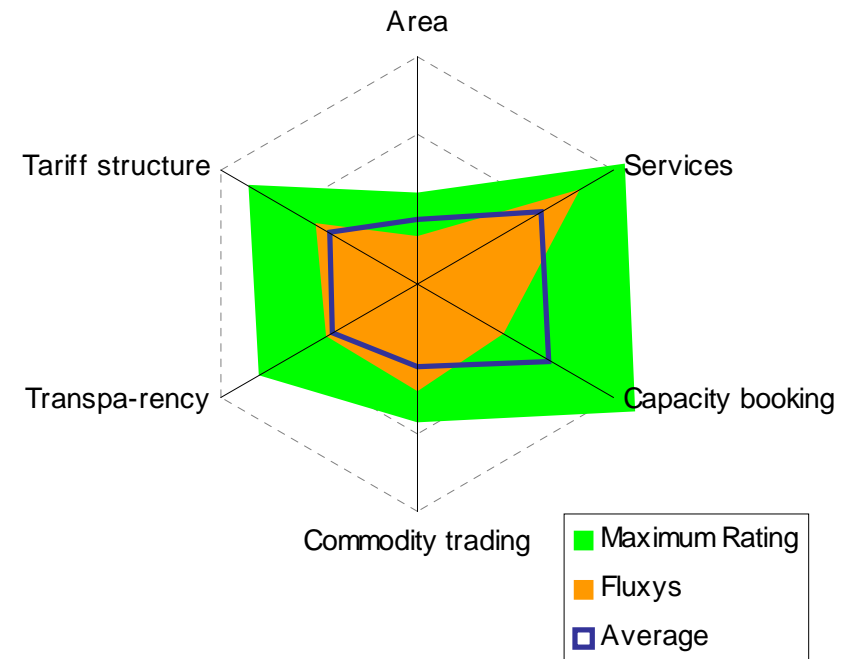
BENCHMARKING OF ZONES ' SYSTEMS

Step 4

–Detailed results on gas transmission access systems



- **Strong points** : Virtual hub, with separate booking on entry and exit capacity
- **Improvements needed** : transparency on capacity levels, balancing service and charges

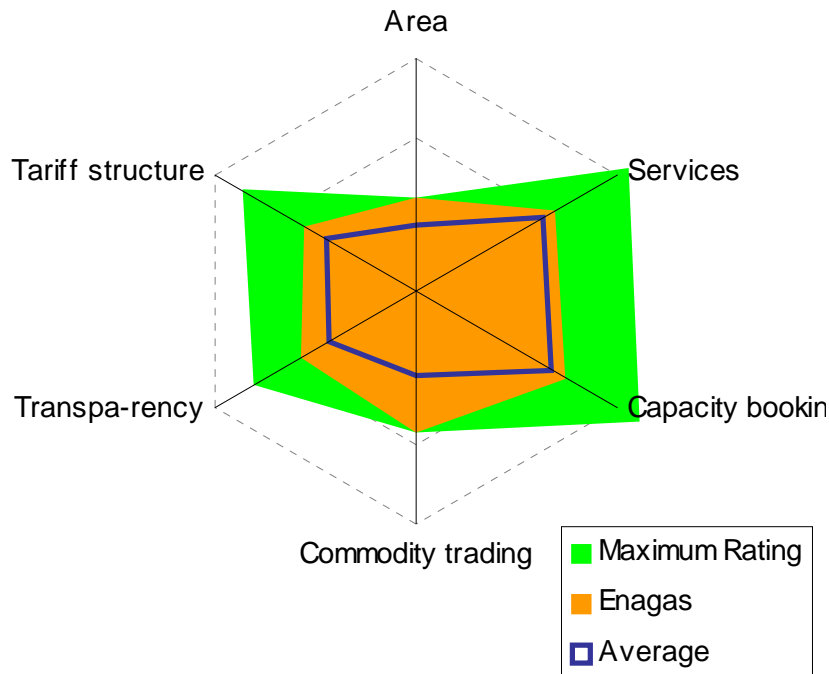


- **Strong points** : facility supported by a title transfer facility, transparency on tariffs, capacity products
- **Improvements needed** : not a virtual hub, no separate booking of entry and exit, number of zones

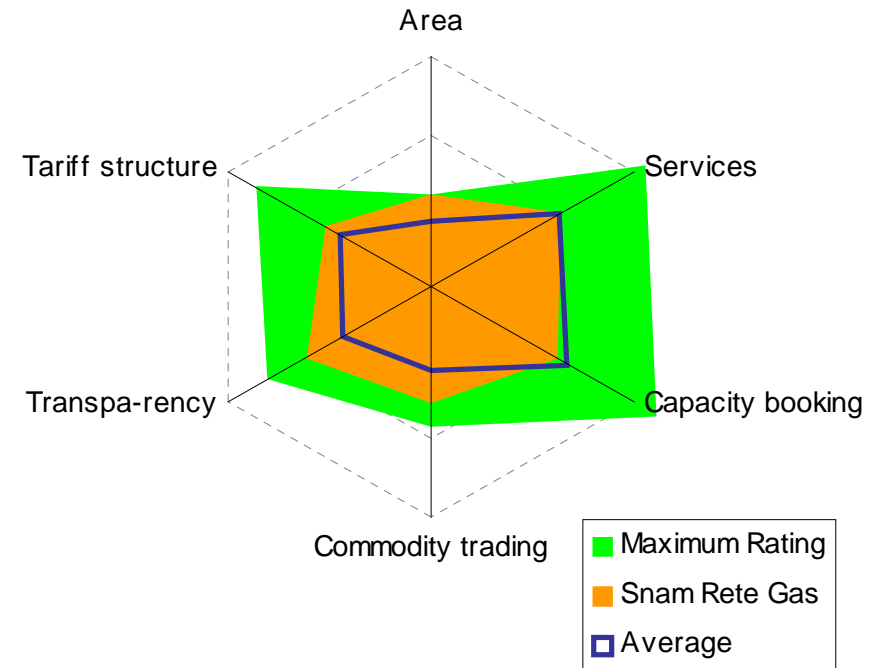
BENCHMARKING OF ZONES ' SYSTEMS

Step 4

–Detailed results on gas transmission access systems



- **Strong points** : separate booking of entry and exit, capacity publication, non discriminatory tariff
- **Improvements needed** : non efficient or cost incurred charges

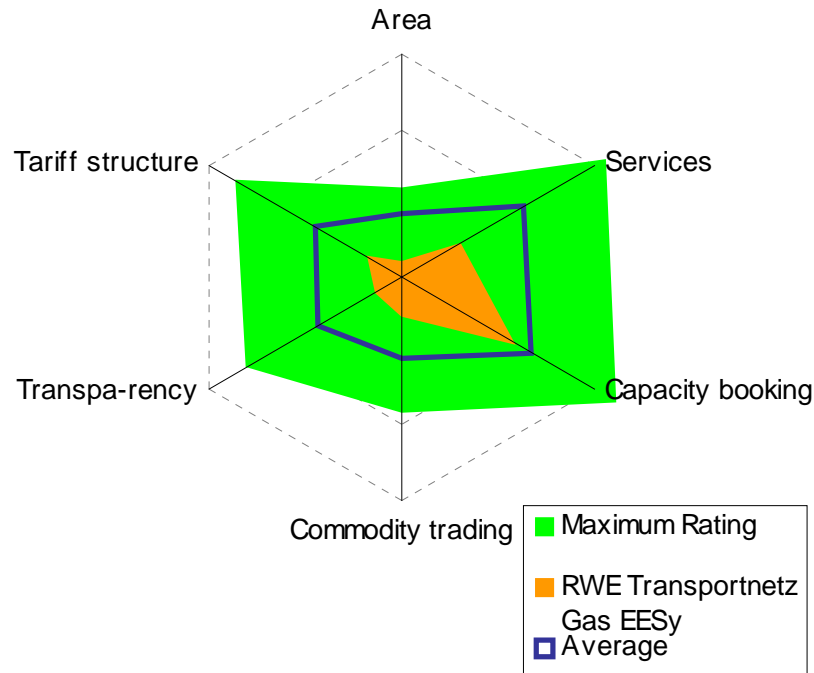


- **Strong points** : single area, virtual hub, separate booking of entry and exit, non discriminatory tariff
- **Improvements needed** : no title transfer facility, capacity products, non efficient or cost incurred charges

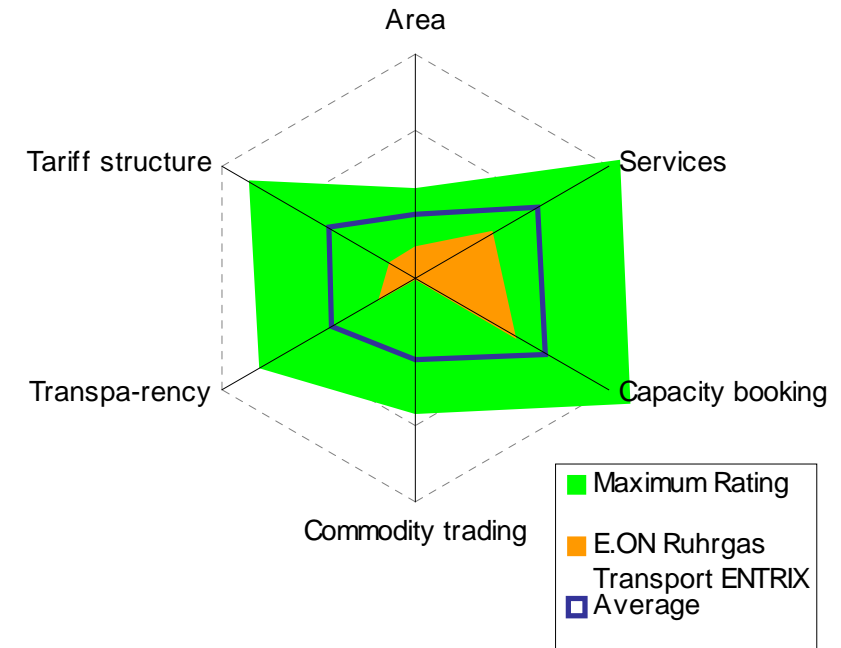
BENCHMARKING OF ZONES' SYSTEMS

Step 4

–Detailed results on gas transmission access systems



- **Strong points** : separate booking of entry and exit, capacity products
- **Improvements needed** : nine zones, no virtual hub expect on zones, no title transfer facility, non efficient or cost incurred charges, transparency (in general)

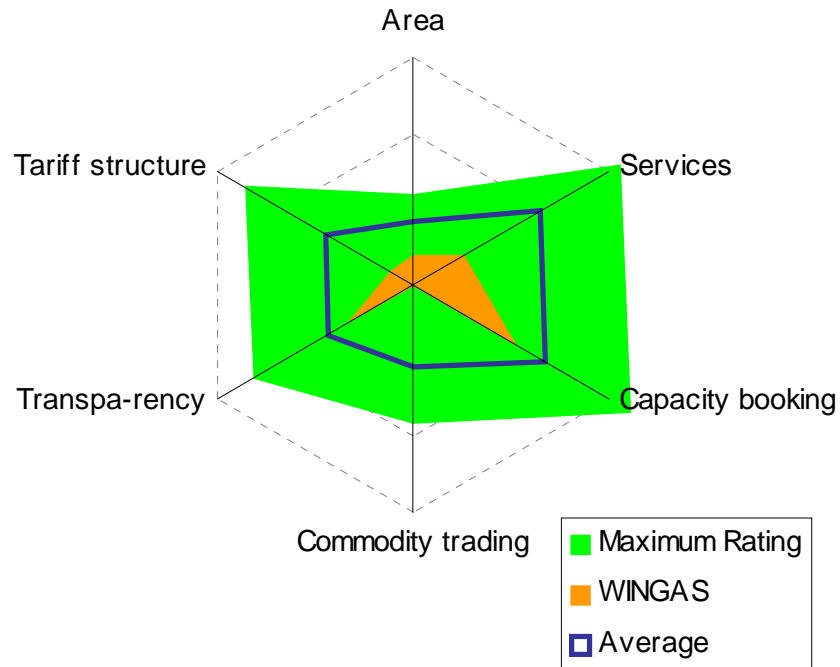


- **Strong points** : separate booking of entry and exit, capacity products
- **Improvements needed** : five zones, no virtual hub expect on zones, no title transfer facility, non efficient or cost incurred charges, transparency (in general)¹³

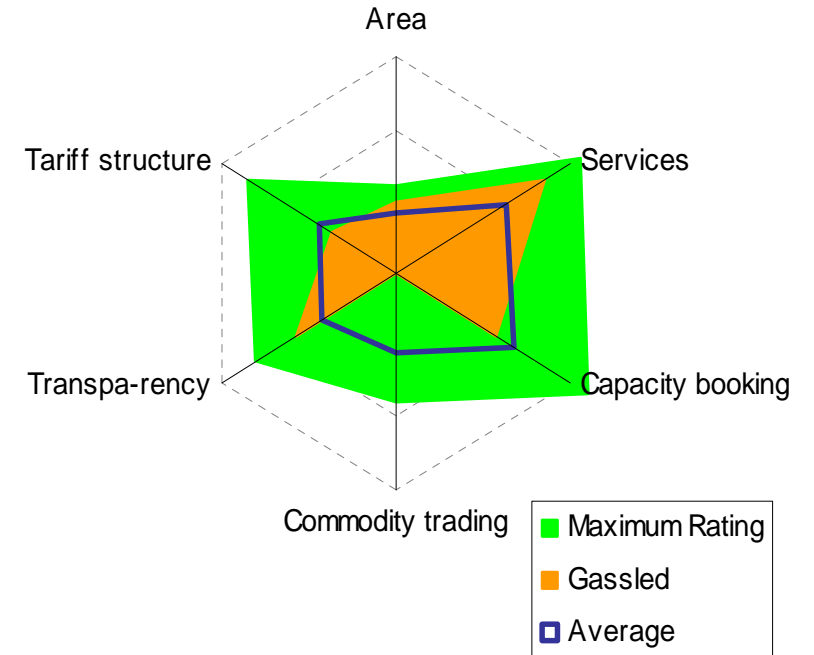
BENCHMARKING OF ZONES' SYSTEMS

Step 4

–Detailed results on gas transmission access systems



- **Strong points** : separate booking of entry and exit, capacity products
- **Improvements needed** : four zones, 73 exit points, no virtual hub expect on zones, no title transfer facility, no tolerance, transparency (in general)

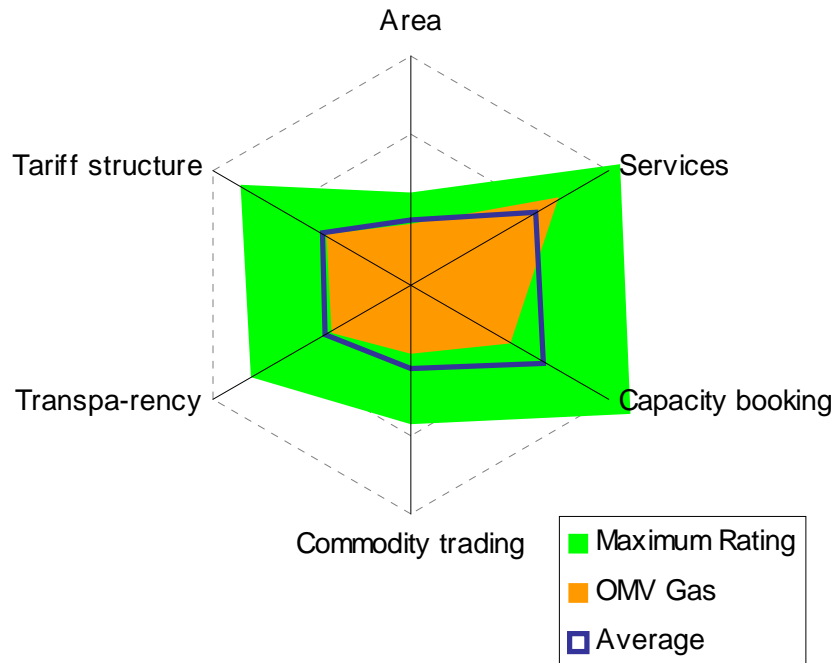


- **Strong points** : capacity products, balancing, non discriminatory tariff
- **Improvements needed** : no virtual hub, no title transfer facility, non efficient or cost incurred charges,

BENCHMARKING OF ZONES ' SYSTEMS

Step 4

–Detailed results on gas transmission access systems



- **Strong points** : virtual hub
- **Improvements needed** : no title transfer facility, capacity booking and allocation, transparency (in general)

BENCHMARKING OF ZONES ' SYSTEMS

Step 4

–Summary improvements needed for gas transmission access systems

National Grid Gas	transparency on capacity levels calculation
Energinet.dk	transparency on capacity levels calculation, balancing service and charges
Enagas	non efficient or cost incurred charges
Gas Transport services	numerous exit points, secondary market for capacity, improvements in imbalance charges
GdF Transport	reduction of zones, liquidity, secondary market on capacity
Snam Rete Gas	no title transfer facility, capacity products, non efficient or cost incurred charges
Fluxys	not a virtual hub, no separate booking of entry and exit, number of zones
Gassco	no virtual hub, no title transfer facility, non efficient or cost incurred charges

BENCHMARKING OF ZONES ' SYSTEMS

Step 4

–Summary improvements needed for gas transmission access systems

OMV Gas	no title transfer facility, capacity booking and allocation, transparency (in general)
BEB	transparency on capacity levels, balancing service and charges
RWE Transportnetz Gas EESy	nine zones, no virtual hub expect on zones, no title transfer facility, non efficient or cost incurred charges, transparency (in general)
E.ON Ruhrgas Transport ENTRIX	five zones, no virtual hub expect on zones, no title transfer facility, non efficient or cost incurred charges, transparency (in general)
WINGAS	four zones, 73 exit points, no virtual hub expect on zones, no title transfer facility, no tolerance, transparency (in general)

Changes to gas transmission access systems in Germany based on the new model recently published are not considered herein.

FEEDBACK FROM TSOs

TSOs

As mentioned earlier, EFET submitted its first version of the appraisal scorecard to GTE for its consideration asking for comments of feedback from its members.

By the time of the closing, the Group has collected and analysed a few answers from individual TSOs (Snam Rete Gas, Gas Transport System, OMV, Enagas). Others requested meetings or provided general feedback.

The Group welcomed the interest of TSOs with this study and their comments. These were carefully analysed and when it was applicable changed the grade structure.

Way forward

EFET welcomes this opportunity to invite all participants in the energy sector to join and discuss all actions that could be seen as necessary to improve gas trading efficiency and energy market liberalisation.

EFET will be happy to discuss the results of this survey – being a single perspective – and help design action plans to achieve this goal.