Budapest – 17 May 2017

TAR0828, Rev_1

Tariffs and prices

39th ECRB Gas Working Group meeting

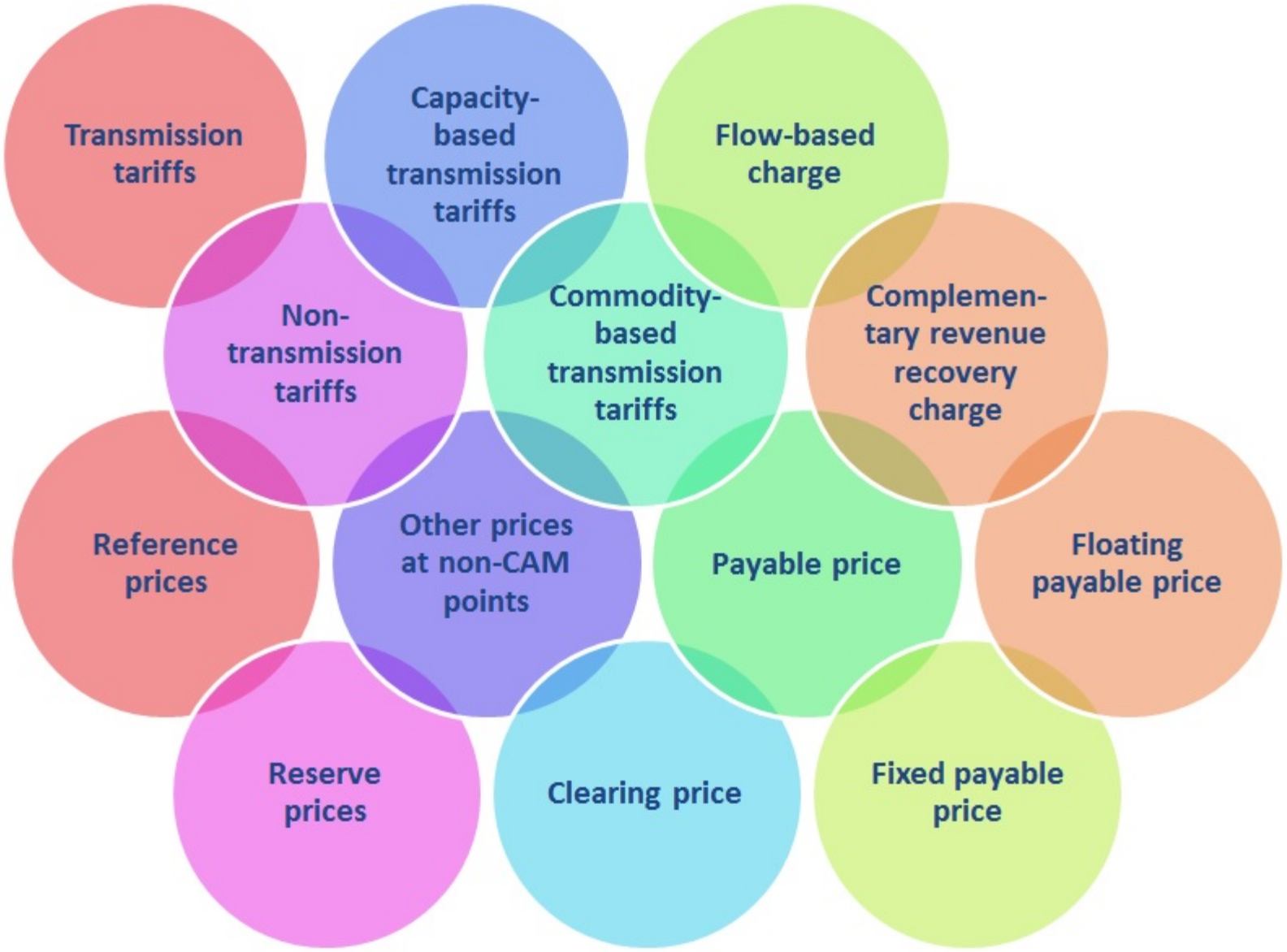
Irina Oshchepkova, Tariff Subject Manager

Image Courtesy of Thyssengas

Agenda

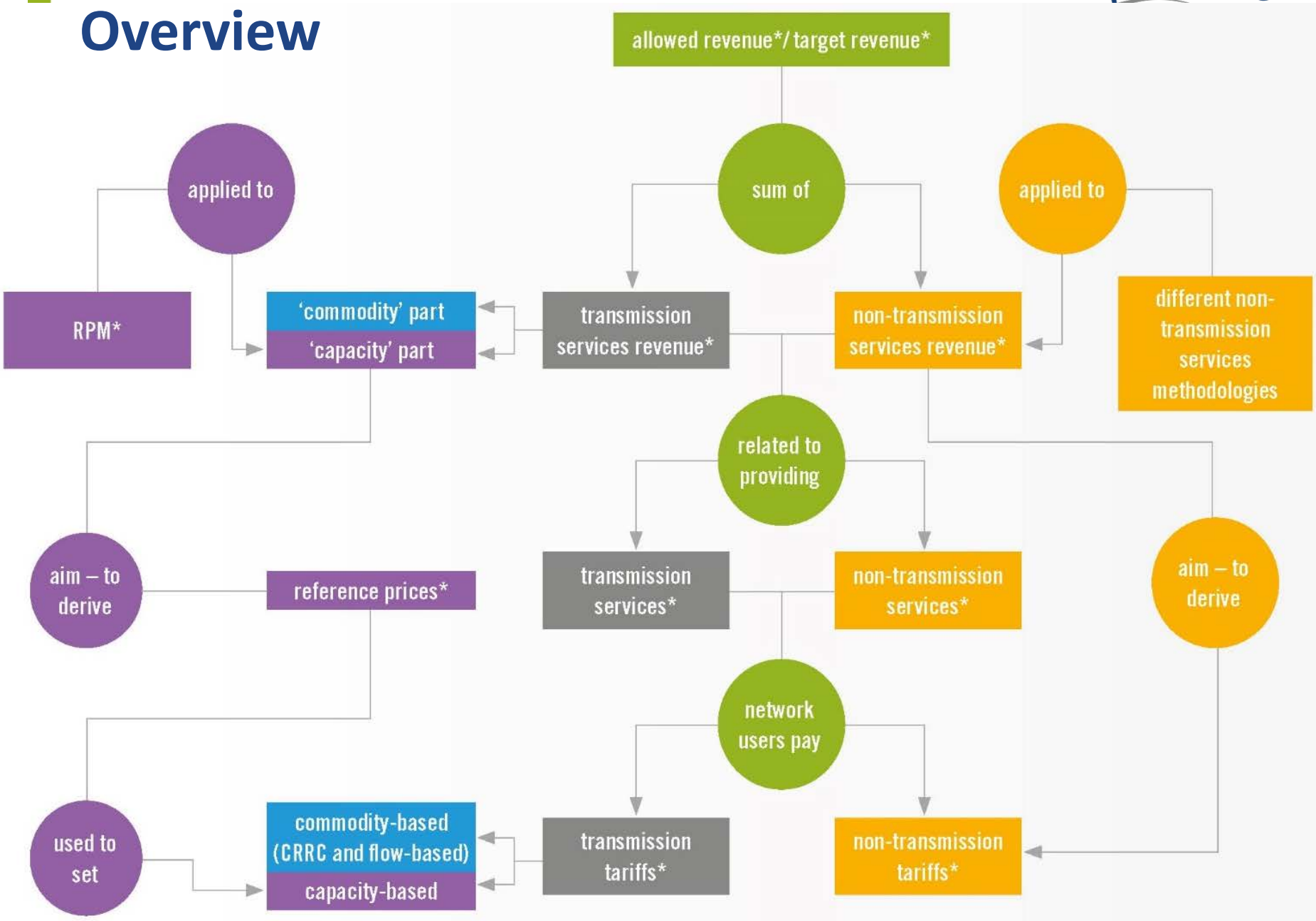
1. Tariffs allowed per TAR NC
2. Reserve prices calculation
3. ENTSOG's Implementation Document and Workshop

Let's get confused!



1. Tariffs allowed per TAR NC

Overview


allowed revenue*/ target revenue*
sum of
applied to
applied to
RPM*
'commodity' part
'capacity' part
transmission services revenue*
non-transmission services revenue*
different non-transmission services methodologies
related to providing
aim – to derive
reference prices*
transmission services*
non-transmission services*
aim – to derive
network users pay
used to set
commodity-based (CRRC and flow-based)
capacity-based
transmission tariffs*
non-transmission tariffs*

Three tariff groups

Capacity tariffs

- **Consultation:** reference prices - min every 5 years, reserve prices - every tariff period
- **Publication:** reserve prices - before annual yearly capacity auctions, other prices applicable at non-CAM points - before tariff period

Commodity tariffs

- **Consultation:** min every 5 years
- **Publication:** before tariff period

Non-transmission tariffs

- **Consultation:** min every 5 years
- **Publication:** before the tariff period

Transmission or non-transmission?

(a) costs are caused by both capacity and distance; (b) costs are related to infrastructure which is part of RAB for the provision of transmission services

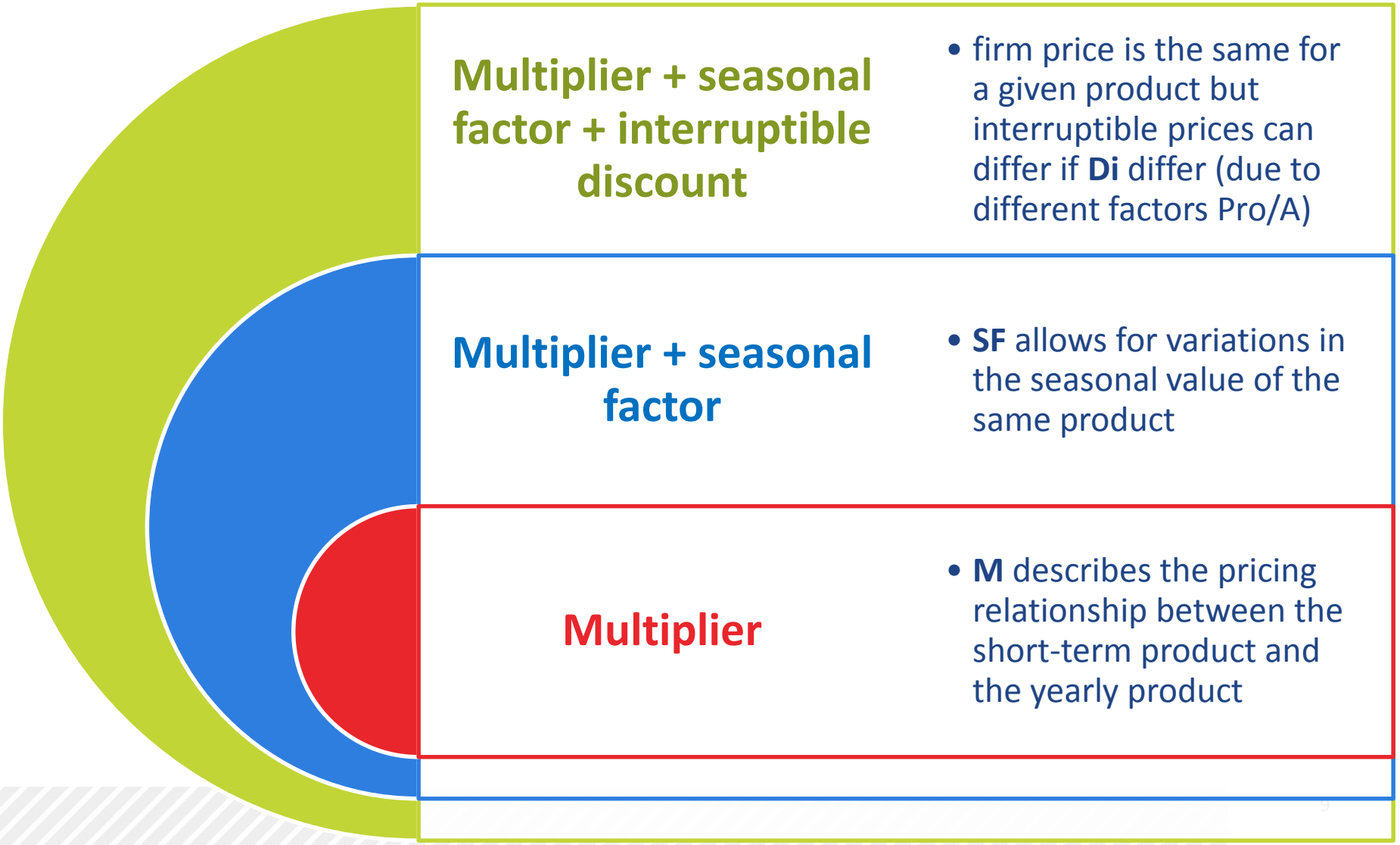
CRITERIA TO DISTINGUISH BETWEEN TRANSMISSION AND NON-TRANSMISSION SERVICES

Criteria	Consequence
If both conditions (a) and (b) are met	Per first subparagraph of Article 4(1), it IS a transmission service
If condition (a) is not met	Per second subparagraph of Article 4(1), it MAY be a transmission service OR a non-transmission service subject to NRA decision per Article 27(4) on periodic consultation per Article 26
If condition (b) is not met	

Blending, odourisation, biogas, regional networks services, dedicated compression, dedicated metering, dedicated pressure, dedicated connections…

2. Reserve prices calculation

Multipliers, seasonal factors, discounts



Level: multipliers and seasonal factors

Monthly seasonal factors [1]

SEQUENCE OF STEPS					
15(3)a Forecasted flows		15(3)b Sum of Monthly Forecast-ed Flows	15(3)c Usage rate: Monthly flows divided by Sum	15(3)d Preceding (c) values multiplied by 12	15(3)e Preceding (d) values raised to the power of 2
Jan	15	113	0,132743363	1,592920354	2,537395254
Feb	14	113	0,123893805	1,486725664	2,210353199
Mar	12	113	0,10619469	1,274336283	1,623932963
Apr	10	113	0,088495575	1,061946903	1,127731224
May	8	113	0,07079646	0,849557522	0,721747983
Jun	6	113	0,053097345	0,637168142	0,405983241
Jul	5	113	0,044247788	0,530973451	0,281932806
Aug	5	113	0,044247788	0,530973451	0,281932806
Sep	6	113	0,053097345	0,637168142	0,405983241
Oct	8	113	0,07079646	0,849557522	0,721747983
Nov	11	113	0,097345133	1,168141593	1,364554781
Dec	13	113	0,115044248	1,380530973	1,905865769

Monthly seasonal factors [2]

	15(3)f Monthly SF: preceding (e) values multiplied by the Multiplier	15(3)h Monthly SF: preceding (f) values multiplied by correction factor
Jan	3,552353356	3,360995851
Feb	3,094494479	2,92780083
Mar	2,273506148	2,151037344
Apr	1,578823714	1,493775934
May	1,010447177	0,956016598
Jun	0,568376537	0,537759336
Jul	0,394705928	0,373443983
Aug	0,394705928	0,373443983
Sep	0,568376537	0,537759336
Oct	1,010447177	0,956016598
Nov	1,910376694	1,80746888
Dec	2,668212076	2,524481328
Average	**1,585402146**	**1,5**

* Correction factor in step (f): 1.5/15,85402146

Other seasonal factors

DAILY/WITHIN DAY SF	
15(3)f Daily/Within-day SF: preceding (e) values multiplied by the multiplier	15(3)h Daily/Within-day SF: preceding (f) values multiplied by correction factor
7,612185762	6,721991701
6,631059597	5,85560166
4,871798888	4,302074689
3,383193672	2,987551867
2,16524395	1,912033195
1,217949722	1,075518672
0,845798418	0,746887967
0,845798418	0,746887967
1,217949722	1,075518672
2,16524395	1,912033195
4,093664343	3,614937759
5,717597306	5,048962656
3,397290312	**3**

Quarterly SF:

Option 1. Arithmetic mean of the respective monthly SFs
Q1 SF is (1.5+1.7+1.2)/3 = 1.47

Option 2. Any value between the lowest and highest respective monthly SFs
Q1 SF is any value between 1.2 and 1.7 (inclusive)

Calculations 1: firm reserve prices

$$P_{st} = mi \times (T/365) \times d$$

i = quarterly, monthly or daily product
m_i = the multiplier for a given product
T = price of the yearly product
d = duration of quarterly, monthly or daily product in days

$$P_{st} = m_{wd} \times (T/8760) \times h$$

m_{WD} = the multiplier for a within-day products
h = duration in remaining hours of the gas day

Note leap years change in formulae: 366 and 8784

Ex-ante

$$\mathrm{Di}_{\text{ex ante}} = \mathrm{Pro} \times \mathrm{A} \times 100\%$$

$\mathrm{Di}_{\text{ex-ante}}$ = discount
A = adjustment factor to reflect estimated economic value of the product

$$\mathrm{Pro} = \frac{\mathrm{N} \times \mathrm{Dint}}{\mathrm{D}} \times \frac{\mathrm{CAP}_{\text{av int}}}{\mathrm{CAP}}$$

Pro = probability of interruption
D = duration of the product
CAP = capacity of the product
N = number of expected interruptions
D_{int} = expected duration of interruption
$\mathrm{CAP}_{\text{av.int}}$ = expected amount of interrupted capacity

Ex-post

'The ex-post compensation paid for each day on which an interruption occurred shall be equal to three times the reserve price for daily standard capacity products for firm capacity.'

If approved by NRA, ex-post can be applied

Compensation for each day of an interruption

Three times the daily reserve price

Option to reimburse the network user for an interruption in the aftermath of the occurrence

Calculations 2: interruptible reserve prices and compensation for interruption

$$P_{st\ INT} = Pst_{FIRM} \times (1 - Di_{ex\ ante})$$

$P_{st\ INT}$ = interruptible reserve price
$P_{st\ FIRM}$ = firm reserve price of a given product

$$C = 3 \times (M \times S \times T/365) \times (I \times D)$$
$$C = 3 \times (M \times S \times T/8760) \times (I \times D/24)$$

C = compensation
D = duration of interruption for a product in gas days (for quarterly, monthly and daily) or in hours (for within-day)
D/24 = proportion of the gas day for which the capacity was interrupted
I = amount of interrupted capacity

Note leap years change in formulae: 366 and 8784

3. ENTSOG's Implementation Document and Workshop

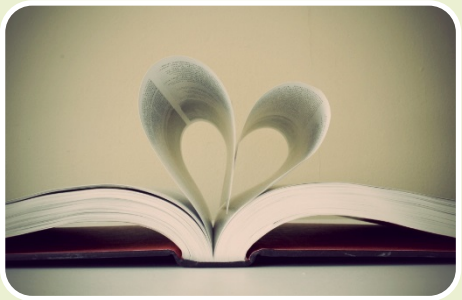
Implementation material

TAR NC IMPLEMENTATION

TAR0790_170217_Agenda TAR NC Implementation Workshop.pdf	9 Mar 2017
170322_ENTSOG_TAR NC IDoc_High-Res	22 Mar 2017
170322_ENTSOG_TAR NC IDoc_Flipbook	22 Mar 2017
TAR0806_170322_Presentation_TAR NC Implementation Workshop_Final_Updated_Notes	4 Apr 2017
TAR0811_040317_Minutes_TAR NC_Implementation_WS_Final.pdf	4 Apr 2017
Videos from the First Implementation Workshop (external link)	29 Mar 2017

https://entsog.eu/publications/tariffs#TAR-NC-IMPLEMENTATION

Next steps



IDoc: please read and comment

30 June 2017

TAR-NC@ entsog.eu

Next Workshop

Thank You for Your Attention

Irina Oshchepkova, Tariff Subject Manager

ENTSOG -- European Network of Transmission System Operators for Gas
Avenue de Cortenbergh 100, B-1000 Brussels

EML: Irina.Oshchepkova@entsog.eu
WWW: www.entsog.eu