Tariffs and prices

39th ECRB Gas Working Group meeting

Irina Oshchepkova, Tariff Subject Manager
1. Tariffs allowed per TAR NC
2. Reserve prices calculation
3. ENTSOG’s Implementation Document and Workshop
Let’s get confused!

- Transmission tariffs
- Capacity-based transmission tariffs
- Flow-based charge
- Commodity-based transmission tariffs
- Complementary revenue recovery charge
- Non-transmission tariffs
- Other prices at non-CAM points
- Payable price
- Floating payable price
- Reference prices
- Clearing price
- Reserve prices
- Fixed payable price
1. Tariffs allowed per TAR NC
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-DISTINGUISH BETWEEN TRANSMISSION AND NON-TRANSMISSION SERVICES

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>If both conditions (a) and (b) are met</td>
<td>Per first subparagraph of Article 4(1), it is a transmission service</td>
</tr>
<tr>
<td>If condition (a) is not met</td>
<td>Per second subparagraph of Article 4(1), it may be a transmission service OR</td>
</tr>
<tr>
<td>If condition (b) is not met</td>
<td>a non-transmission service subject to NRA decision per Article 27(4) on periodic consultation per Article 26</td>
</tr>
</tbody>
</table>

Blending, odourisation, biogas, regional networks services, dedicated compression, dedicated metering, dedicated pressure, dedicated connections...
2. Reserve prices calculation
Multipliers, seasonal factors, discounts

- **Multiplier + seasonal factor + interruptible discount**
  - firm price is the same for a given product but interruptible prices can differ if $D_i$ differ (due to different factors Pro/A)

- **Multiplier + seasonal factor**
  - $SF$ allows for variations in the seasonal value of the same product

- **Multiplier**
  - $M$ describes the pricing relationship between the short-term product and the yearly product
Level: multipliers and seasonal factors
# Monthly seasonal factors [1]

<table>
<thead>
<tr>
<th>SEQUENCE OF STEPS</th>
<th>15(3)a</th>
<th>15(3)b</th>
<th>15(3)c</th>
<th>15(3)d</th>
<th>15(3)e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forecasted flows</td>
<td>15(3)a</td>
<td>Sum of Monthly Forecasted Flows</td>
<td>Usage rate: Monthly Flows divided by Sum</td>
<td>Preceding (c) values multiplied by 12</td>
<td>Preceding (d) values raised to the power of 2</td>
</tr>
<tr>
<td>Jan</td>
<td>15</td>
<td>113</td>
<td>0.132743363</td>
<td>1.592920354</td>
<td>2.537395254</td>
</tr>
<tr>
<td>Feb</td>
<td>14</td>
<td>113</td>
<td>0.123893805</td>
<td>1.486725664</td>
<td>2.210353199</td>
</tr>
<tr>
<td>Mar</td>
<td>12</td>
<td>113</td>
<td>0.10619469</td>
<td>1.274336283</td>
<td>1.623932963</td>
</tr>
<tr>
<td>Apr</td>
<td>10</td>
<td>113</td>
<td>0.088495575</td>
<td>1.061946903</td>
<td>1.127731224</td>
</tr>
<tr>
<td>May</td>
<td>8</td>
<td>113</td>
<td>0.07079646</td>
<td>0.849557522</td>
<td>0.721747983</td>
</tr>
<tr>
<td>Jun</td>
<td>6</td>
<td>113</td>
<td>0.053097345</td>
<td>0.637168142</td>
<td>0.405983241</td>
</tr>
<tr>
<td>Jul</td>
<td>5</td>
<td>113</td>
<td>0.044247788</td>
<td>0.530973451</td>
<td>0.281932806</td>
</tr>
<tr>
<td>Aug</td>
<td>5</td>
<td>113</td>
<td>0.044247788</td>
<td>0.530973451</td>
<td>0.281932806</td>
</tr>
<tr>
<td>Sep</td>
<td>6</td>
<td>113</td>
<td>0.053097345</td>
<td>0.637168142</td>
<td>0.405983241</td>
</tr>
<tr>
<td>Oct</td>
<td>8</td>
<td>113</td>
<td>0.07079646</td>
<td>0.849557522</td>
<td>0.721747983</td>
</tr>
<tr>
<td>Nov</td>
<td>11</td>
<td>113</td>
<td>0.097345133</td>
<td>1.168141593</td>
<td>1.364554781</td>
</tr>
<tr>
<td>Dec</td>
<td>13</td>
<td>113</td>
<td>0.115044248</td>
<td>1.380530973</td>
<td>1.905865769</td>
</tr>
</tbody>
</table>
### Monthly seasonal factors [2]

<table>
<thead>
<tr>
<th></th>
<th>15(3)f</th>
<th>15(3)h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monthly SF: preceding (e) values multiplied by the Multiplier</td>
<td>Monthly SF: preceding (f) values multiplied by correction factor</td>
</tr>
<tr>
<td>Jan</td>
<td>3,552353356</td>
<td>3,360995851</td>
</tr>
<tr>
<td>Feb</td>
<td>3,094494479</td>
<td>2,92780083</td>
</tr>
<tr>
<td>Mar</td>
<td>2,273506148</td>
<td>2,151037344</td>
</tr>
<tr>
<td>Apr</td>
<td>1,578823714</td>
<td>1,493775934</td>
</tr>
<tr>
<td>May</td>
<td>1,010447177</td>
<td>0,956016598</td>
</tr>
<tr>
<td>Jun</td>
<td>0,568376537</td>
<td>0,537759336</td>
</tr>
<tr>
<td>Jul</td>
<td>0,394705928</td>
<td>0,37343983</td>
</tr>
<tr>
<td>Aug</td>
<td>0,394705928</td>
<td>0,37343983</td>
</tr>
<tr>
<td>Sep</td>
<td>0,568376537</td>
<td>0,537759336</td>
</tr>
<tr>
<td>Oct</td>
<td>1,010447177</td>
<td>0,956016598</td>
</tr>
<tr>
<td>Nov</td>
<td>1,910376694</td>
<td>1,80746888</td>
</tr>
<tr>
<td>Dec</td>
<td>2,668212076</td>
<td>2,524481328</td>
</tr>
<tr>
<td>Average</td>
<td>1,585402146</td>
<td>1,5</td>
</tr>
</tbody>
</table>

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

**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

\[ P_{st} = m_i \times \left( \frac{T}{365} \right) \times d \]

\[ P_{st} = m_{wd} \times \left( \frac{T}{8760} \right) \times h \]

- \( m_i \): the multiplier for a given product
- \( T \): price of the yearly product
- \( d \): duration of quarterly, monthly or daily product in days
- \( m_{wd} \): 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

\[ D_{\text{ex-ante}} = \text{Pro} \times A \times 100\% \]

**Di\_ex-ante** = discount

**A** = adjustment factor to reflect estimated economic value of the product

\[ \text{Pro} = \frac{N \times D_{\text{int}}}{D} \times \frac{\text{CAP}_{\text{av.int}}}{\text{CAP}} \]

**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

**CAP\_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

\[ P_{st\, INT} = P_{st\, FIRM} \times (1 - D_{ex\, ante}) \]

- \( P_{st\, INT} \) = 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

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