Principles for transmission capacity management in common Baltic gas market

Baltic single entry-exit market zone

- It is foreseen that the gas markets of Lithuania, Latvia, Estonia and possibly Finland will merge and form a **single entry-exit system with a single balancing area** of the East Baltic sea region. The area between entry and exit points **will set a virtual trading point.**
- From a commercial perspective (capacity booking, pricing, nomination of flows) there would be **no interconnection points between Member States**:
  - IP Kiemėnai (LT-LV)
  - IP Karksi (LV-EE) and
  - IP Balticconnector (EE-FI), once Balticconnector is commissioned and Finland makes a decision to join merged balancing zone
- The gas which was injected through entry points, would be traded in the wholesale market in the single virtual trading point. The merged entry-exit system would also form a single **balancing area**

- There would be the following **entry points**:

  Imatra (RU-FI) or Balticconnector (EE-FI) depending on Finland's decision
  Narva (RU-EE) (until 01.01.2019)
  Varska (RU-EE)
  Izborsk/Korneti (RU-EE/LV)
  Misso (RU-EE)
  Kotlovka (BY-LT)
  Klaipėda LNG (LT)
  GIPL (LT-PL), once GIPL is commissioned

- There would be the following **exit points**:

  Misso-(EE-RU)
  Narva (EE-RU)
  Värska (EE-RU)
  Šakiai (LT-RU)
  GIPL (LT-PL)
  LT domestic exit
  LV domestic exit
  EE domestic exit
  FI domestic exit or Balticconnector (EE-FI) depending on Finland's decision

- There is a gas storage **entry and exit** points:

  Inčukalns UGS entry
  Inčukalns UGS exit

Definitions and abbreviations

Capacity – means the maximum flow, expressed in energy unit per time unit, to which the network user is entitled in accordance with the provisions of the transport contract

Capacity overrun fee – fee for transmitting gas volumes exceeding booked capacity, where gas flow is not nominated

Congestion management – means management of the capacity portfolio of the transmission system operator with a view to optimal and maximum use of the technical capacity and the timely detection of future congestion and saturation points

FCFS (First-come-first-served) – means the capacity allocation method when capacity is allocated primarily to the Network Users who have applied for capacity booking at the earliest

Implicit allocation method – means a capacity allocation method where both transmission capacity and a corresponding quantity of gas are allocated at the same time

Interruption – means limitation of network users rights to use the transmission system, i.e. the limitation of the right to transmit gas by using booked firm or interruptible capacities

MAM – Market Area Manager

CAM NC - Regulation (EU) No 2017/459 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013

Oversubscription and buy-back mechanism – possibility to offer additional capacity as the firm capacity in addition to the technical capacity (congestion management mechanism)

Pro rata - means the principle of allocation of capacity when the available transmission capacity is allocated in proportion to the capacity booked

Technical capacity – means the maximum firm capacity that TSO can offer to the network users, taking account of system integrity and the operational requirements of the transmission network

Third (3rd) countries – non EU countries

UIOLI – use-it-or-lose-it (congestion management mechanism)

Executive summary

- This report describes capacity management principles to be used in common Baltic gas market zone and should be implemented in common network rules.
- What relates capacity booking procedures, it is described that capacity allocation on interconnection points with other Member States (IPs) should follow the requirements of European network code on capacity allocation mechanisms (NC CAM) in gas transmission systems. In other entry-exit points all capacity products available at IPs also should be offered for booking. The range of capacity products should include both long-term and short-term products. Also the capacity in Baltic gas market zone should be marketed in common booking platform, which should be managed by Market Area Manager (MAM), which would also act as a common gate for exchange of information, related to transmission services and balancing services
- Regarding congestion management procedures and facilitation of the capacity usage, it is proposed that surrender of contracted capacity, secondary capacity trading and interruptible capacity should be available at all entry/exit points. On IPs as required by EU legislation, over-subscription and buyback scheme, long and short-term use-it-or-lose-it procedures also are foreseen to be applied.
- In the report it is described the cases and procedures for capacity restriction and usage over booked capacity and what fees are foreseen to applied in such cases. that for the capacity restriction which was not announced and for capacity overrun which is more than 3 % of the booked capacity, within-day capacity tariff multiplied by 3 should be used.
- In section on transparency requirements it is foreseen that all capacity booking information will be available in webpages of TSOs and MAM, as well the list of basic published information is provided.
- At the end of the report a roadmap for the implementation of the proposed solutions is provided.

Topics Analysed

Legislative framework and regulation

Regulation 715/2009 on conditions for access to the natural gas transmission networks

- **Article 12 (2) Transmission system operators shall promote** operational arrangements in order to ensure the optimum management of the network and shall promote the development of energy exchanges, **the coordinated allocation of cross-border capacity through non-discriminatory market-based solutions**, paying due attention to the specific merits of implicit auctions for short-term allocations and the integration of balancing mechanisms.
- **Article 16 (3) TSO shall implement non-discriminatory and transparent congestion-management procedures**
- **3.1.2 p (c 4) the procedure in the event of an interruption of interruptible capacity,** including, where applicable, the timing, extent, and ranking of individual interruptions (for example pro-rata or first-come-last-interrupted)
- **3.1.2 (h)** if applicable, **the flexibility and tolerance levels included in transportation** and other services without separate charge, as well as any flexibility offered in addition to this and the corresponding charges;
- **Annex 1 p 3.1.2 (m)** transmission system operators shall publish a **detailed and comprehensive description of the methodology and process**, including information on the parameters employed and the key assumptions, **used to calculate the technical capacity**

Regulation (EU) No 2017/459 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013

- **Article 2 (1) This Regulation shall apply to interconnection points**. It may also apply to entry points from and exit points to third countries, subject to the decision of the relevant national regulatory authority. This Regulation shall not apply to exit points to end consumers and distribution networks, entry points from LNG terminals and production facilities, and entry points from or exit points to storage facilities.
- **Article 8 (1) Auctions shall be used for the allocation of capacity at interconnection points**, except where the alternative allocation methodology pursuant to Article 30 is applied.
- **Article 37 (1) TSOs shall apply this Regulation by offering capacity by means of one or a limited number of joint web-based booking platforms**. Transmission system operators can operate such platforms themselves or via an agreed party that, where necessary, acts on behalf of them towards the network users.

Calculation of technical capacity at all entry/exit points

- ✓ The maximum technical capacity shall be made available to network users, taking into account system integrity, safety and efficient network operation
- ✓ TSOs will apply **joint technical capacity calculation methodology and dynamic approach** to re-calculating technical capacity in case the lack of bookable capacity at certain points will arise (in case of expected or existing contractual congestion)
- ✓ TSOs will have regard to information that network users may provide with regard to expected future flows when re-calculating the technical capacity

Capacity allocation options

- ✓ According to NC CAM capacity at GIPL (and Balticconnector)
  - ✓ must be auctioned at capacity booking platform
  - ✓ Adjacent TSOs at particular IP shall reach a contractual agreement to use a single booking platform
- ✓ Capacity at other entry/exit points shall be allocated jointly by TSOs on common booking platform
- ✓ MAM should provide services of capacity allocation (as it is proposed in the concept model for the coordinated balancing zone)
- ✓ Advantages if capacity at non IP entry/exit points is allocated on joint portal operated by MAM:
  - ✓ Convenience to market participants and TSOs
  - ✓ Cost optimization
  - ✓ Standardized solution
  - ✓ Flexible allocation solutions might be applied

Capacity products, allocation timing at IP

- ✓ Capacity allocation at GIPL (and Balticconnector*) must be fully in line with NC CAM requirements
- ✓ All capacity products must be auctioned. When implicit capacity allocation method is applied for certain capacity products, capacity auctions may not be used
- ✓ Capacity products of adjacent TSO at IP must be bundled

Capacity products	Start of capacity product	Allocation start time
Yearly (Offered at least for the upcoming 5 gas years)	1st of October	1st Monday of July
Quarterly	1st of October 1st of January 1st of April 1st of July	1st Monday of August (Q1-Q4) 1st Monday of November (Q2-Q4) 1st Monday of February (Q3-Q4) 1st Monday of May (Q4)
Monthly	Starting on the first day of each month	3rd Monday of each month for the following monthly capacity product
Daily	Each single gas day	Day-ahead capacity auction shall be held once a day on D-1
Within-Day**	Each single gas day	Next hour following the publication of results of the last day-ahead auction

*If Finland makes a decision not to join merged balancing zone

**The capacity will be booked for the certain hours of day D

Capacity products, allocation timing at entry/exit points with 3rd countries, LNG and UGS (1)

- ✓ More simple allocation method (compared to auction) would be used – Pro Rata or First Come First Served. At the non-congested entry/exit points only First Come First Served method could be used
- ✓ All standard capacity products would be offered at all entry exit points with 3rd countries, LNG and UGS
- ✓ Capacity would be allocated for the same period as it is on IPs – at least for the upcoming 5 gas years and for no longer than the upcoming 15 gas years
- ✓ Capacity would be allocated more closely to the start of relevant period of capacity product compared to how it is done on IP
- ✓ No more than 80 % of the existing technical capacity should be allocated via capacity products longer than 1 year. Exception to this rule could be applied at entry/exit points with 3rd countries.
- ✓ At least 10 % of the existing technical capacity should first be offered no earlier than the annual quarterly capacity products. Exception to this rule could be applied at entry/exit points with 3rd countries.

Capacity products, allocation timing at entry/exit points with 3rd countries, LNG and UGS (2)

Capacity products shall follow a logical order by which products covering longer period shall be offered first, followed by the product with the next shortest duration for use during the same period.

Capacity products	Allocation method	Start of capacity product	Allocation start time*	Allocation end time**
Yearly	Pro rata	1 of October	1 Monday of July	31 of August
	FCFS		1 of September	30 of September
Quarterly	Pro rata	1 of October (Q1) 1 of January (Q2) 1 of April (Q3) 1 of July (Q4)	1 Monday of August (Q1-Q4) 1 Monday of November (Q2-Q4) 1 Monday of February (Q3-Q4) 1 Monday of May (Q4)	10 of September (Q1-Q4) 10 of December (Q2-Q4) 10 of March (Q3-Q4) 10 of June (Q4)
	FCFS		11 of September (Q1) 11 of December (Q2) 11 of March (Q3) 11 of June (Q4)	30 of September (Q1) 31 of December (Q2) 31 of March (Q3) 30 of June (Q4)
Monthly	FCFS	Starting on the first day of each month	11 of September (M1-M3) 11 of December (M4-M6) 11 of March (M7-M9) 11 of June (M10-M12)	13.00 EET/EEST of the last day before start of the each month
Daily	FCFS and by submitting nomination	Each single gas day	20 days before start of month	On day D-1 at 13.00 EET/EEST (on D-1 at 15.00 EET/EEST)***
Within-Day	FCFS and by submitting re-nomination	Each single gas day	On day D-1 17.00 EET/EEST	On day D 4.00 EET/EEST

* When Pro rata principle is applied – the start time for application submission

** When Pro rata principle is applied – the time when capacity is allocated

*** Deadline for day-ahead nomination comes from BAL NC

Capacity products, allocation timing at domestic exit points

- ✓ Capacity allocation at domestic exit points would be allocated in case if TSO applies it (could differ in each country)
- ✓ Capacity products (if TSO applies) and allocation timing should be the same as those which would be applied at entry/exit points to 3rd countries, LNG and UGS
- ✓ For capacity tariffication and products one of these schemes could be applied:
  - A. No capacity is allocated, only energy based tariff is applied
  - B. Both capacity products and energy based tariff are applied
  - C. Only capacity is allocated, energy based tariff is not applied
- ✓ Also for domestic points the different schemes of capacity booking could be applied:
  - ✓ The capacity is booked by network user;
  - ✓ The capacity is booked by the connected party (DSOs or directly connected consumption sites owners)

Congestion management

According to Regulation 715/2009 TSO shall implement congestion-management procedures which shall be based on the following principles:

(a) in the event of contractual congestion, TSO shall offer unused capacity at least on a day-ahead and interruptible basis;

(b) network users who wish to re-sell or sublet their unused contracted capacity on the secondary market shall be entitled to do so.

According to Regulation 715/2009 congestion-management procedures, specified in Annex I, shall apply to IP between adjacent entry-exit systems**.** They may also apply to entry/exit points to 3rd countries, subject to the decision of the relevant national regulatory authority. Exit points to end-consumers, distribution networks, entry/exit points from LNG, UGS are not subject to the provisions congestion-management procedures.

Entry/exit point	Oversubscription and buy-back	Firm day-ahead UIOLI	Surrender of contracted capacity	Long-term UIOLI	Secondary capacity trading	Interruptible capacity
IP with other Member State	+	+*	+	+	+	+
3rd countries			+		+	+
LNG, UGS			+		+	+
Domestic exit**			+		+	+

*If, on the basis of the yearly monitoring report of ACER, it is shown that at interconnection point demand exceeded offer

**If capacity products are allocated

Secondary capacity market

- ✓ Secondary capacity trading should be available on all Entry/Exit points
- ✓ All capacity products offered in the primary market, except within-day capacity, should be traded in the secondary market
- ✓ Information on available capacity in secondary market should be available to all network users on platform where capacity trading is organized
- ✓ In the secondary capacity market only the rights to use capacity should be traded. Obligations, including the obligation to pay for the capacity, should remain to the network user that sold the capacity
- ✓ The price and any other conditions for secondary capacity trades, should be agreed by bilateral agreement between network users

Interruptible capacity and virtual reverse flow

- ✓ Interruptible capacity should be available on all Entry/Exit points where the firm capacity products are offered
- ✓ Interruptible capacity should be offered only if corresponding firm capacity was sold out or not available
- ✓ Interruptible capacity should be offered for all corresponding firm capacity products
- ✓ Capacity products for virtual reverse flow at least on interruptible basis should be offered at UGS entry/exit points. The level of such capacity products should be determined by UGS operator taking into account expected (potential, anticipated) usage of UGS, its technical parameters and other relevant factors

Capacity interruption

- In case of Emergency the TSO shall have the right at any time and without prejudice to interrupt all or part of the transmission services immediately in order to safeguard the safety and integrity of the transmission system and to perform the necessary repairs and/or replacement works. The fee for capacity interruptions in such a case should not be applied
- Planned maintenance work should be announced at least 42 days prior to the gas day on which this could affect the transmission services
- Unplanned maintenance works and the extent of the interruption should be announced as soon as possible
- When TSO reduces the firm capacity for more than 14 calendar days per gas year, the network user is exempt from payment obligations for the duration and scope of reduction beyond 14 calendar days (for the amount that was nominated but not transmitted)
- If restriction of the capacity was not announced, the compensation for the restriction should be calculated within-day capacity tariff multiplying by 3. In case of force majeure, fee for capacity restriction should not be applied.

Fees for capacity overrun in domestic exit points

- ✓ At the domestic exit points where capacity is booked, network user who, exceeds the booked capacities, shall pay an additional fee a for the overrun of capacity
- ✓ If the quantity of the overrun capacity is less than 3 % of the booked capacity, the additional fee for each overrun capacity unit shall be equal to the within-day capacity tariff
- ✓ If the quantity of the overrun capacity is more than 3 % of the booked capacity, the additional fee for each overrun capacity unit (which exceeds 3% of booked capacity) shall be equal to the within-day capacity tariff multiplied by 3

Transparency requirements

- ✓ TSOs shall publish all information regarding capacity allocation process on its web page
- ✓ TSOs (or MAM) shall submit all needed information to ENTSOG transparency platform
- ✓ Information on available capacity must be published on MAMs web page at least in English (when capacity is allocated by MAM)
- ✓ All information on TSOs webpage should be published in national and English languages
- ✓ Information that must be published:
  - a detailed and comprehensive description of the different services offered and their charges;
  - the network code outlining the rights and responsibilities of all network users including the procedure in the event of an interruption of interruptible capacity;
  - provisions on capacity allocation, congestion management and anti-hoarding and reutilisation procedures;
  - the rules applicable for capacity trade on the secondary market;
  - a detailed and comprehensive description of the methodology and process used to calculate the technical capacity.
  - All needed form/templates used for capacity allocation (agreement form, application form etc)

National legislation that should be changed

The relevant legislation below do not include the Network Rules applied by TSOs, which will have to be substituted by common Network Rules (Code) to be applied within regional market zone

EE	Natural Gas Act Gas Grid Code
LT	Law on Natural Gas
LV	Energy Law
FI	Natural Gas Market Act