



# **Demand assessment report for incremental capacity between *Hungary* and *Croatia***

**– External document for publication –**

**27.07.2017**

This report is a joint assessment of the potential for incremental capacity projects conducted by

TSO 1

TSO 2

FGSZ Natural Gas Transmission Private Company Limited by Shares Plinacro Ltd

8600, Siófok, Hungary

Zagreb 10000, Croatia

Tanácsház u. 5

Savska cesta 88a

General contact information

General contact information

telephone +36-84-312-311

telephone +385 1 6301 720

email: info@fgsz.hu

email: prodaja@plinacro.hr

fax: +36-84-505-592

fax: +385 1 6301 788



## **Table of contents**

A. Non-binding Demand indications	4
B. Demand assessment	10
i. Historical usage pattern	10
ii. Results of current annual yearly auction	10
iii. Relations to GRIPS, TYNDP, NDPs	10
iv. Expected amount, direction and duration of demand for incremental capacity	11
C. Conclusion for the (non)-initiation of an incremental capacity project/process	12
D. Provisional timeline	12
E. Interim arrangements for the auction of existing capacity on the concerned IP(s)	12
F. Fees	12
G. Contact information	13

## A. Non-binding Demand indications

Drávaszerdahely IP connects the Croatian and Hungarian entry-exit system.

Currently available capacities:

IP name	Drávaszerdahely (HU>HR)	Drávaszerdahely (HR>HU)
	kWh/h/y	kWh/h/y
FGSZ physical capacity	8,311,000	8,311,000
Plinacro physical capacity	3,261,377	3,261,377*
Published technical capacity** (FGSZ/Plinacro)	3,261,377	3,261,377*

\*currently only interruptible capacity is available from Croatia to Hungary

\*\*currently this capacity is available on the Croatian side

The following **aggregated non-binding demand indications** for firm capacity have been used as a basis for this demand assessment:

**Indicative demand submitted to FGSZ**

Drávaszerdahely (HU>HR)

From  [entry-exit system name]  “EXIT CAPACITY”	To  [entry-exit system name]  “ENTRY CAPACITY”	Gas year  yyyy/yy	Amount  (kWh/h)/y	Request is submitted to other TSOs  [yes, TSO] or [no] (detailed information shall be provided below)	Period when Demand Indication was received*  [please include the period according to the numbers 1) - 3)]	Additional Information  (e.g. type of capacity, if different from bundled firm freely allocable)
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2018/19-2034/35</i>	<i>1,071,250</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>

Drávaszerdahely (HR>HU)

From  [entry-exit system name]  “EXIT CAPACITY”	To  [entry-exit system name]  “ENTRY CAPACITY”	Gas year  yyyy/yy	Amount  (kWh/h)/y	Request is submitted to other TSOs  [yes, TSO] or [no] (detailed information shall be provided below)	Period when Demand Indication was received*  [please include the period according to the numbers 1) - 3)]	Additional Information  (e.g. type of capacity, if different from bundled firm freely allocable)
<i>Plinacro</i>	<i>FGSZ Ltd.</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>

Shippers did not submit non-binding demand indicators, where condition was requested.

## Indicative demand submitted to Plinacro

Drávaszerdahely (HU>HR)

From  [entry-exit system name]  “EXIT CAPACITY”	To  [entry-exit system name]  “ENTRY CAPACITY”	Gas year  yyyy/yy	Amount  (kWh/h)/y	Request is submitted to other TSOs  [yes, TSO] or [no] (detailed information shall be provided below)	Period when Demand Indication was received*  [please include the period according to the numbers 1) - 3)]	Additional Information  (e.g. type of capacity, if different from bundled firm freely allocable)
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2018/19</i>	<i>2.606.678</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2019/20</i>	<i>2.471.184</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2020/21</i>	<i>2.502.985</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2021/22</i>	<i>2.469.650</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2022/23</i>	<i>2.485.023</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2023/24</i>	<i>2.495.372</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2024/25</i>	<i>2.632.068</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2025/26</i>	<i>2.698.514</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2026/27</i>	<i>2.893.688</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2027/28</i>	<i>2.927.985</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2028/29</i>	<i>2.951.022</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2029/30</i>	<i>2.970.893</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2030/31</i>	<i>2.992.643</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2031/32</i>	<i>2.999.631</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2032/33</i>	<i>3.008.501</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2033/34</i>	<i>3.026.241</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>
<i>FGSZ Ltd.</i>	<i>Plinacro</i>	<i>2034/35</i>	<i>3.043.980</i>	<i>Some yes, some no</i>	<i>2</i>	<i>--</i>

Drávaszerdahely (HR>HU)

From [entry-exit system name] “EXIT CAPACITY”	To [entry-exit system name] “ENTRY CAPACITY”	Gas year yyyy/yy	Amount (kWh/h)/y	Request is submitted to other TSOs [yes, TSO] or [no] (detailed information shall be provided below)	Period when Demand Indication was received* [please include the period according to the numbers 1) - 3)]	Additional Information (e.g. type of capacity, if different from bundled firm freely allocable)
<i>Plinacro</i>	<i>FGSZ Ltd.</i>	—	—	—	—	—

\* The following standardised period shall be used for indicating the receiving date of the demand indication:

- 1) later than eight weeks after the annual yearly capacity auction in the previous incremental capacity cycle, that have not been considered previously;
- 2) within eight weeks after this year’s yearly capacity auction (0 – 8 weeks after yearly auction in year);
- 3) later than eight weeks after this year’s yearly capacity auction, but that will be considered in this incremental capacity cycle (9 – 16 weeks after yearly auction in year).

The following table shows the **non-binding demand indications**, where a **condition** was attached by the network users:

Drávaszerdahely (HR>HU)

From  [entry-exit system name]  “EXIT CAPACI- TY”	To  [entry-exit system name]  “ENTRY CA- PACITY”	Gas year  yyyy/yy	Amount  (kWh/h)/y]	Request is submitted to other TSOs  [yes, TSO] or [no] (detailed in- formation shall be provided below)	Conditions**  [please include the letter(s) a) to c) and de- scribe the con- ditions in more detail below]	Period when Demand Indi- cation was received*  [please include the period according to the numbers 1) - 3)]	Additional Information  (e.g. type of capacity, if different from bundled firm freely alloca- ble)
Plinacro	FGSZ Ltd.	2018/19	1.100.023	No	d)	2	
Plinacro	FGSZ Ltd.	2019/20	1.100.023	No	d)	2	
Plinacro	FGSZ Ltd.	2020/21	1.100.023	No	d)	2	
Plinacro	FGSZ Ltd.	2021/22	1.765.687	No	d)	2	
Plinacro	FGSZ Ltd.	2022/23	1.765.687	No	d)	2	
Plinacro	FGSZ Ltd.	2023/24	1.277.287	No	d)	2	
Plinacro	FGSZ Ltd.	2024/25	1.284.017	No	d)	2	
Plinacro	FGSZ Ltd.	2025/26	1.290.887	No	d)	2	
Plinacro	FGSZ Ltd.	2026/27	1.297.887	No	d)	2	
Plinacro	FGSZ Ltd.	2027/28	1.305.032	No	d)	2	
Plinacro	FGSZ Ltd.	2028/29	1.312.322	No	d)	2	
Plinacro	FGSZ Ltd.	2029/30	1.319.787	No	d)	2	
Plinacro	FGSZ Ltd.	2030/31	1.327.337	No	d)	2	
Plinacro	FGSZ Ltd.	2031/32	1.335.067	No	d)	2	
Plinacro	FGSZ Ltd.	2032/33	1.342.957	No	d)	2	
Plinacro	FGSZ Ltd.	2033/34	1.351.002	No	d)	2	
Plinacro	FGSZ Ltd.	2034/35	1.359.197	No	d)	2	



\* The following standardised period shall be used for indicating the receiving date of the demand indication:

- 1) later than eight weeks after the annual yearly capacity auction in the previous incremental capacity cycle, that have not been considered previously;
- 2) within eight weeks after this year's yearly capacity auction (0 – 8 weeks after yearly auction in year);
- 3) later than eight weeks after this year's yearly capacity auction, but that will be considered in this incremental capacity cycle (9 – 16 weeks after yearly auction in year).

\*\* The following standardised terminology shall be used for describing the conditions:

- a) commitments linking or excluding commitments at other interconnection points;
- b) commitments across a number of different yearly standard capacity products at an interconnection point;
- c) commitments conditional on the allocation of a specific or minimum amount of capacity;
- d) other (depending on the realization of Krk LNG Terminal.)

### **Elaboration of conditions**

---

Demands are mostly connected to the realization of the LNG Terminal Krk, some of them put notice that demands for the longer period of gas years shall be discussed and additionally to data listed in above table one request is submitted only in form of the letter specifying general number (1 bcm/year) depending on the feasibility of the planned LNG.

---

---

---

---

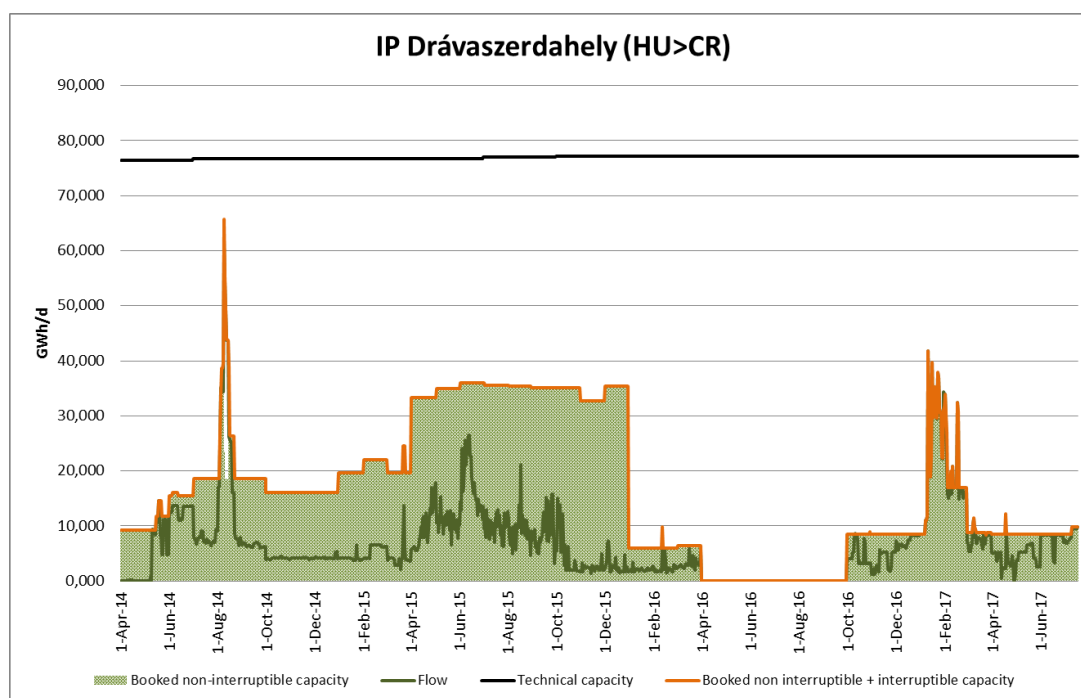
---

---

## B. Demand assessment

### i. Historical usage pattern

Historic usage on the Hungarian side can be found below:



### ii. Results of current annual yearly auction

Yearly bundled products (direction from Hungary to Croatia) have been auctioned at the Regional Booking Platform (RBP) in 2017. The offered bundled capacity was 2,935,239 kWh/h/y between 2017/18 and 2031/32 year by year, and the booked capacity is 1,735,470 kWh/h/y for 2017/2018.

Unbundled interruptible products (direction from Croatia to Hungary) is auctioned at the Regional Booking Platform (RBP) on the Plinacro's system but not booked till now.

### iii. Relations to GRIPS, TYNDP, NDPs

On the Hungarian side no need further investment because the technical capacity in case of both directions 8,591,284 kWh/h/y, which is significantly higher than the maximum non-indicative demands (from Hungary to Croatia 1,435,687 kWh/h/y and from Croatia to Hungary 4,433,740 kWh/h/y). In the documents GRIPS, TYNDP, NDPs we declared that FGSZ system is able to provide 8,591,284 kWh/h/y in both direction.

On the Croatian side some projects will be developed regarding Dravaszerdahely inter-connection point (listed in table below).

No.	Project	NDP	TYNDP Code	PCI
1	<i>Compressor station 1 at the Croatian gas transmission system</i>	5.1	TRA-F-334	6.26.3
2	<i>LNG evacuation pipeline Omišalj - Zlobin (Croatia)</i>	1.17	TRA-N-090	6.5.1
3	<i>LNG evacuation pipeline Zlobin-Bosiljevo-Sisak-Kozarac</i>	1.18, 1.19, 1.20	TRA-N-075	6.5.2
4	<i>LNG Evacuation Pipeline Kozarac-Slobodnica</i>	1.29	TRA-N-1058	6.5.2

#### **iv. Expected amount, direction and duration of demand for incremental capacity**

There is no incremental capacity demand on Hungarian side.

PLINACRO has received capacity non-binding demand indicators that exceed existing technical capacity at Dravaszerdahely IP in the direction from HR towards HU for the period of 15 years.

Plinacro has developed network expansion scenarios by which the technical capacity at Dravaszerdahely interconnection point in the direction from Croatia towards Hungary will be increased.

In the period from 18 January 2016 to 4 March 2016 the non-binding phase of the Open Season procedure for gas transmission from the LNG terminal on the island of Krk was carried out by Plinacro. In this Open Season procedure increased interest for gas transmission from the LNG terminal on the island of Krk towards Hungary was determined. The binding phase of the Open Season procedure commenced during the finalization of this DAR. More information can be found on [www.plinacro.hr](http://www.plinacro.hr).

### **C. Conclusion for the (non)-initiation of an incremental capacity project/process**

There is no incremental capacity on the Hungarian side due to non-indicative demand.

Plinacro has already commenced the binding phase of the Open Season concerning the LNG terminal on the island of Krk and demands received in DI, so the incremental capacity project has already been initiated.

### **D. Provisional timeline**

There is no incremental capacity project on Hungarian side.

The binding phase for capacity booking in the Open Season procedure is scheduled for the Q4 2017/Q1 2018.

### **E. Interim arrangements for the auction of existing capacity on the concerned IP(s)**

Plinacro and FGSZ concluded a Pressure Management Agreement, which temporarily ensure HR>HU delivery of 50,000 cm<sup>3</sup>/h (15°C) FGSZ's compressor station shall be in periodical operation until 31.03.2019.

### **F. Fees**

For the incremental capacity cycle addressed by this report, involved TSOs did not introduce a fee for the evaluation and processing of non-binding demand indications.

## **G. Contact information**

FGSZ Ltd.

Plinacro Ltd.

Sándor Bogoly

Franjo Balijs

Head of Product and Service Management

Business Unit of Regulatory Affairs

+36-84-505-202

+385-1-6301-609

+36-20- 944-0706

+385-1-6301-788

[sbogoly@fgsz.hu](mailto:sbogoly@fgsz.hu)

[franjo.balijs@plinacro.hr](mailto:franjo.balijs@plinacro.hr)