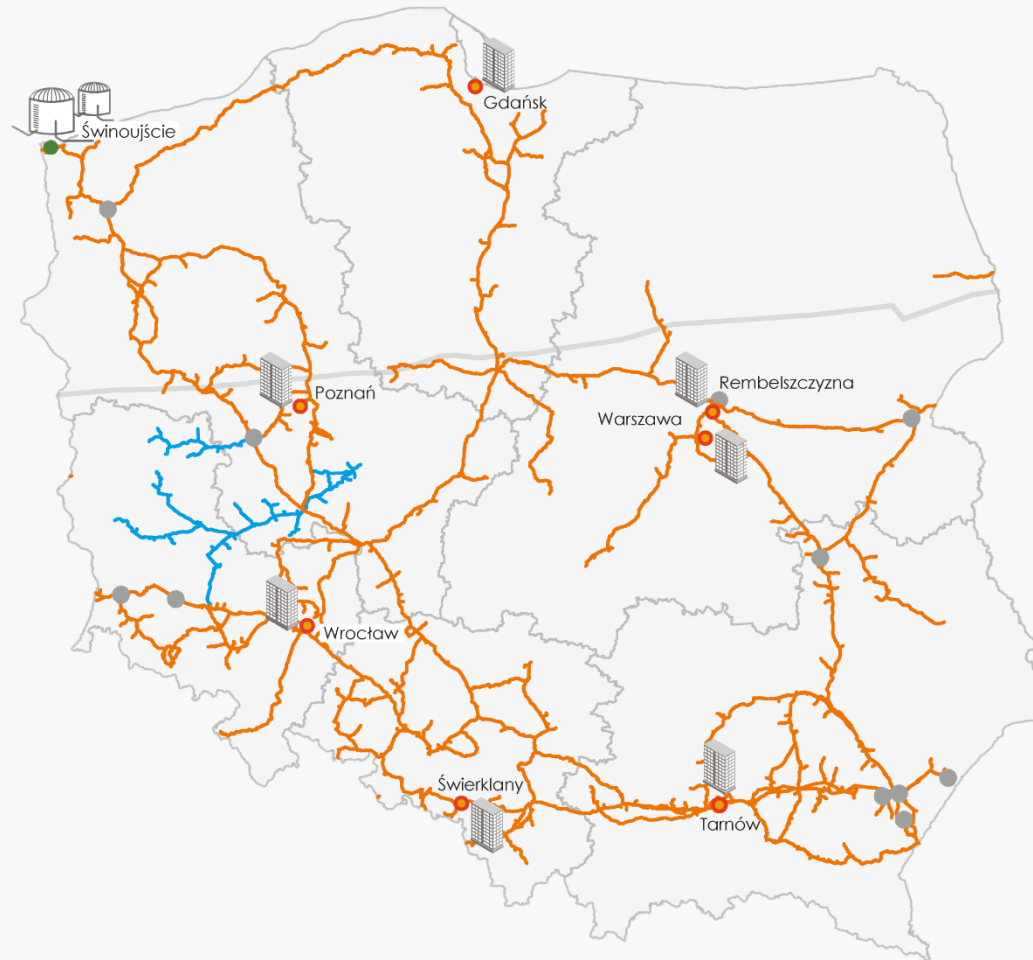


# INTEROPERABILITY NETWORK CODE

Implementation process and lesson learnt  
based on Polish experience



# GAZ-SYSTEM - INTRODUCTORY INFORMATION



**100%** SHARES HELD BY  
STATE TREASURY

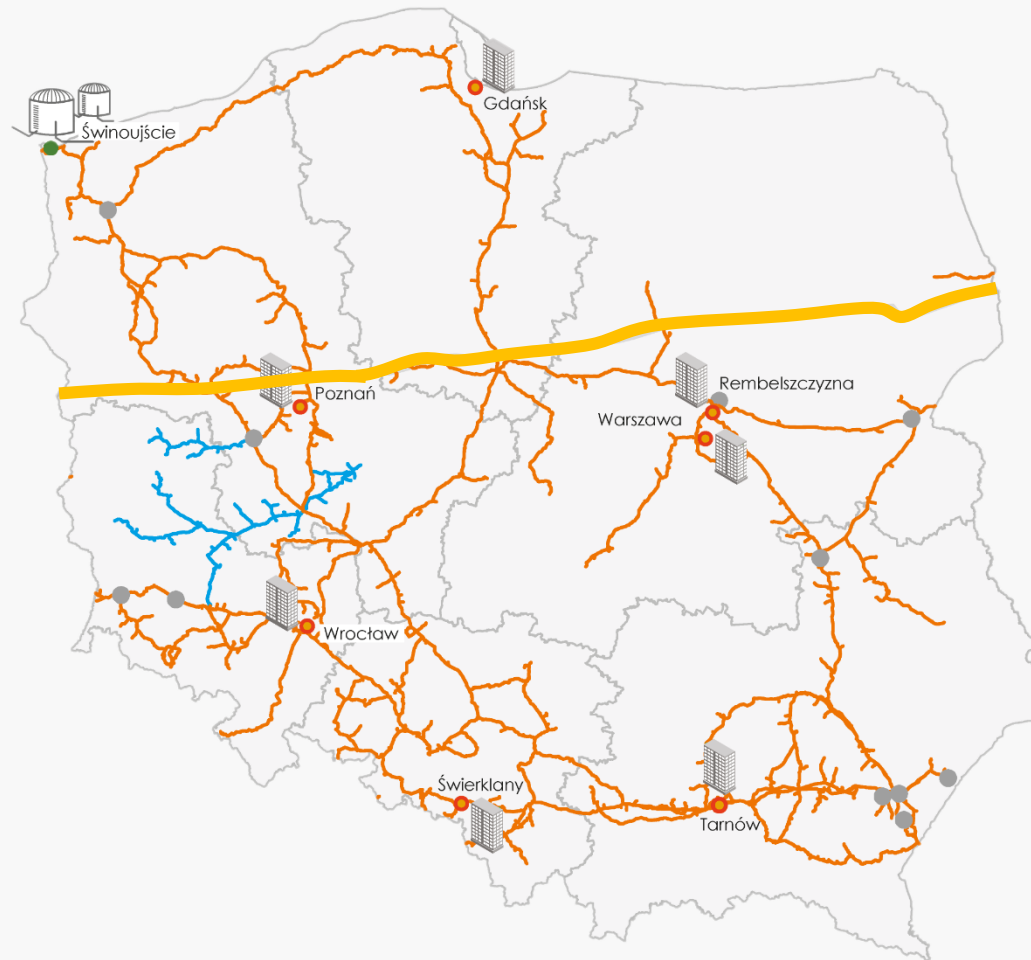
**CERTIFIED TSO**  
FOR NATIONAL TRANSMISSION SYSTEM IN POLAND

**CERTIFIED ISO**  
FOR THE YAMAL-EUROPE PIPELINE IN PL

**LNG TERMINAL** IN ŚWINOUJŚCIE  
(OPERATED BY ITS SPV, POLSKIE LNG)

# MARKET/BALANCING ZONES IN POLAND

1. H-gas balancing zone
2. L-gas balancing zone
3. TGPS balancing zone



# H-GAS BALANCING ZONE – CHARACTERISTICS

## 62 entry points

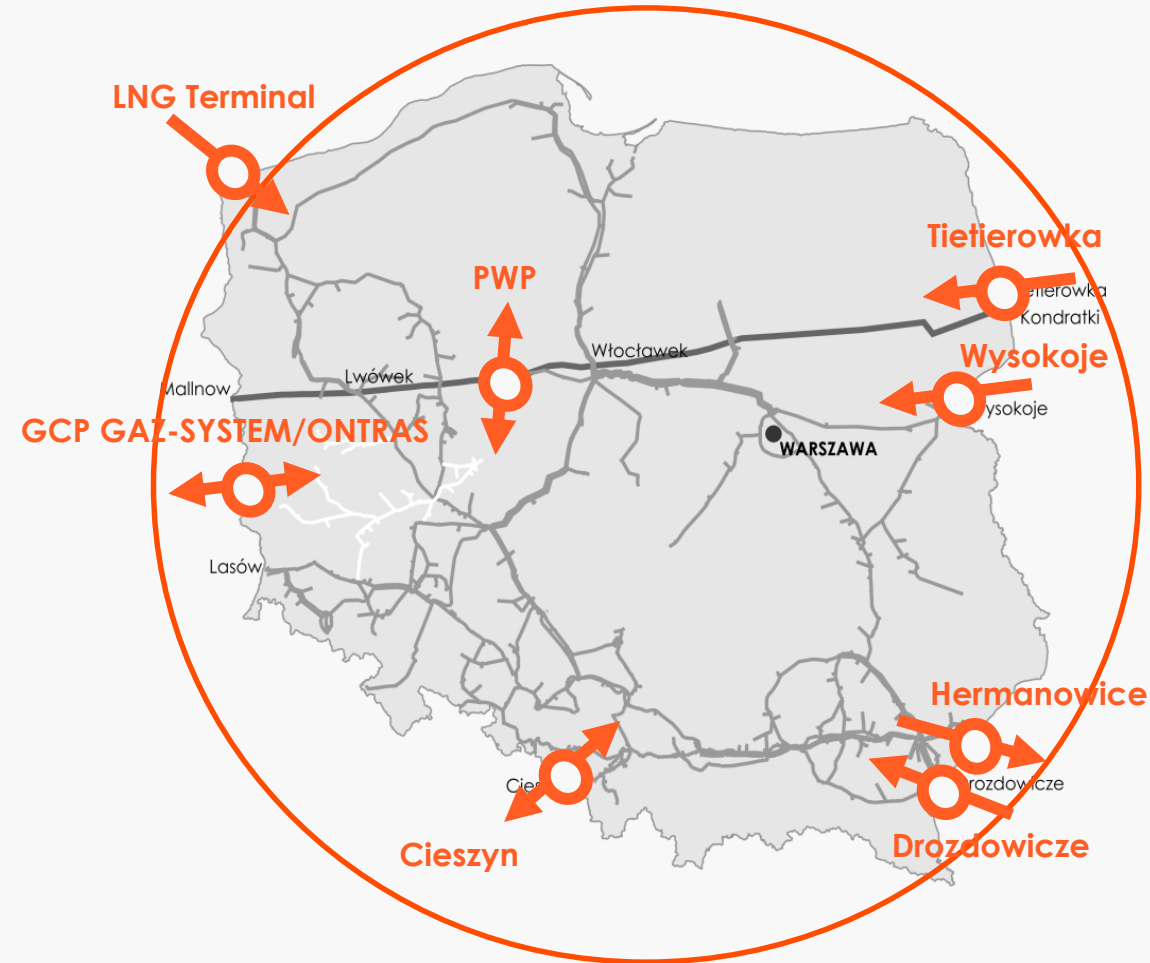
- IPs
- LNG Terminal
- Production

## 902 exit points

- IPs
- End users (industry)
- DSOs (23)

### ➤ Interconnection points:

- **BY → PL:** Tietierowka, Wysokoje
- **UA → PL:** Drozdowicze
- **PL → UA:** Hermanowice
- **PL ↔ CZ:** Cieszyn
- **PL ↔ DE (ONTRAS):** GCP GAZ-SYSTEM/ONTRAS
- **PL ↔ Yamal (transit):** PWP



# TGPS BALANCING ZONE - CHARACTERISTICS

**TGPS** – Polish part of Transit Gas Pipeline System Yamal - Europa

## ➤ Entry points:

- **Kondratki** (connection point, Belarus)
- **Mallnow** (connection point, GASPOOL - Gascade)
- **PWP reverse** (contractual connection point, H-gas balancing zone)

## ➤ Exit points:

- **Mallnow** (connection point, GASPOOL - Gascade)
- **PWP** (virtual interconnection point based on physical points between TGPS and H-gas balancing zone)



# INTEROPERABILITY - CHALLENGES

## 1 Interconnection agreements:

- Information and public consultations
- Rules for flow control
- Measurement principles for gas quantity and quality
- Matching process
- Rules for allocations of gas quantities
- Communication in case of exceptional events

## 2 Units

## 3 Gas quality

- Short term monitoring and data publication
  - Past
  - Future variation
- Long term monitoring

## 4 Data exchange

- Transport layer
  - Document based – AS4
  - Integrated data exchange - HTTP/S-SOAP
- Message layer - Edig@s-xml
- Interactive data exchange (web portals)



# INTEROPERABILITY - CHALLENGES

## 1 Interconnection agreements:

- Information and **public consultations**
- Rules for flow control
- Measurement principles for gas quantity and quality
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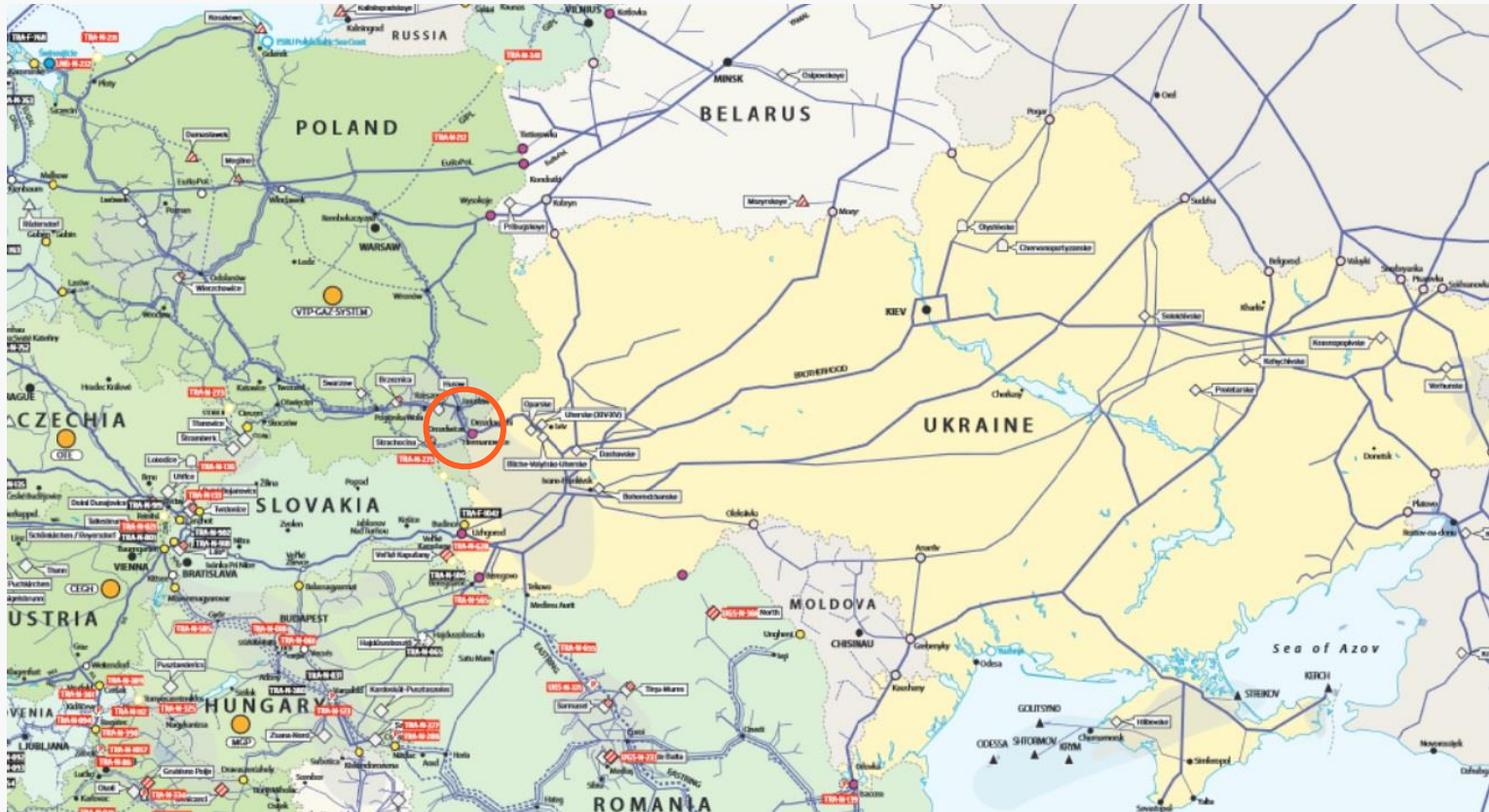
# EXISTING PL-UA INTERCONNECTIONS

## Drozdowicze IP

**Direction:**  
UA→PL

**Capacities:**  
-firm:  
4.38 bcm/y

-interruptible:  
5.69 bcm/y



## Hermanowice IP

**Direction:**  
PL→UA

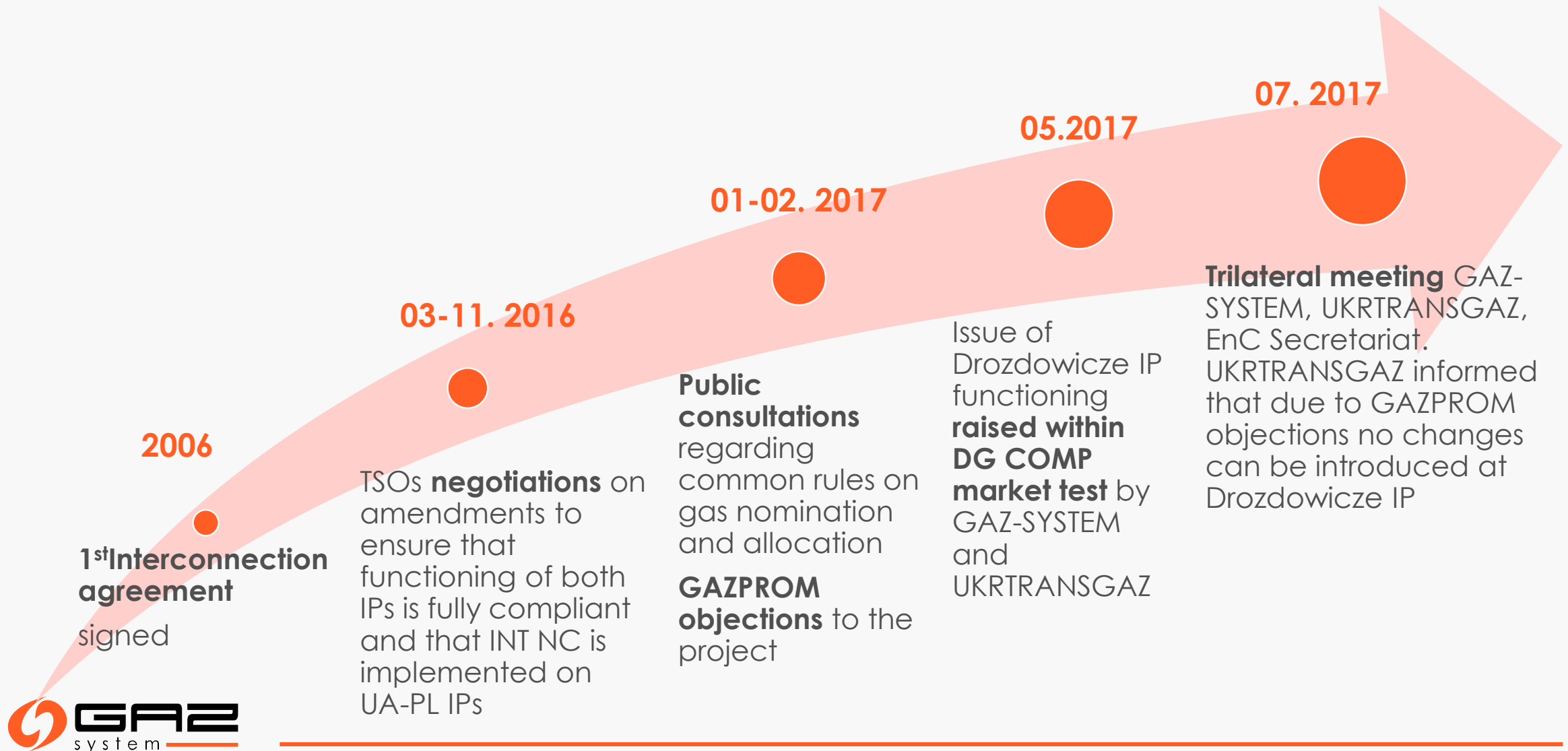
**Capacities:**  
→ 2.16 bcm/y  
1 Sept. – 30 April

→ 1.46 bcm/y  
1 May – 31 Aug.

## GOAL

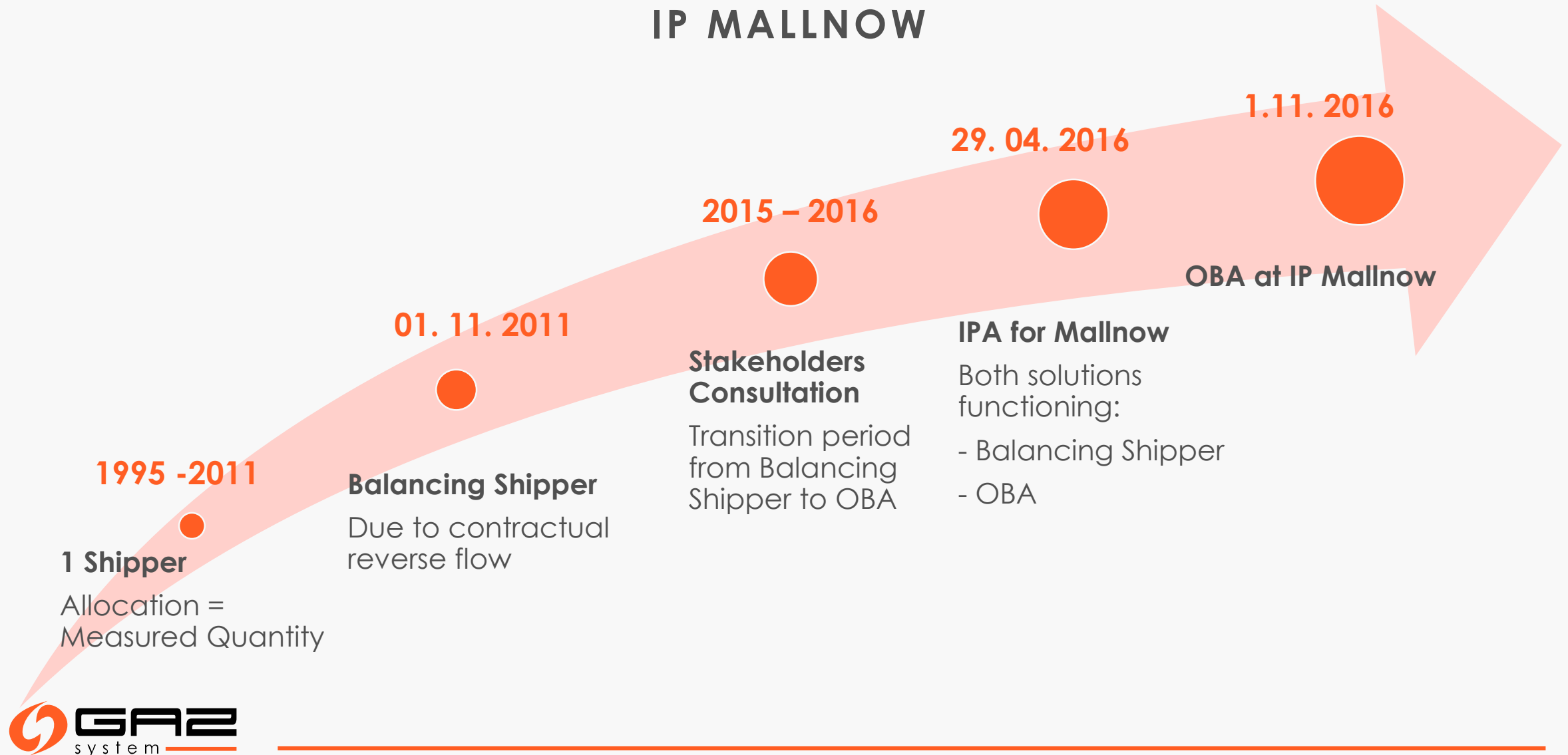
Creation of a Virtual Interconnection Point between PL-UA entry-exit systems

# DROZDOWICZE IP – INTERCONNECTION AGREEMENT

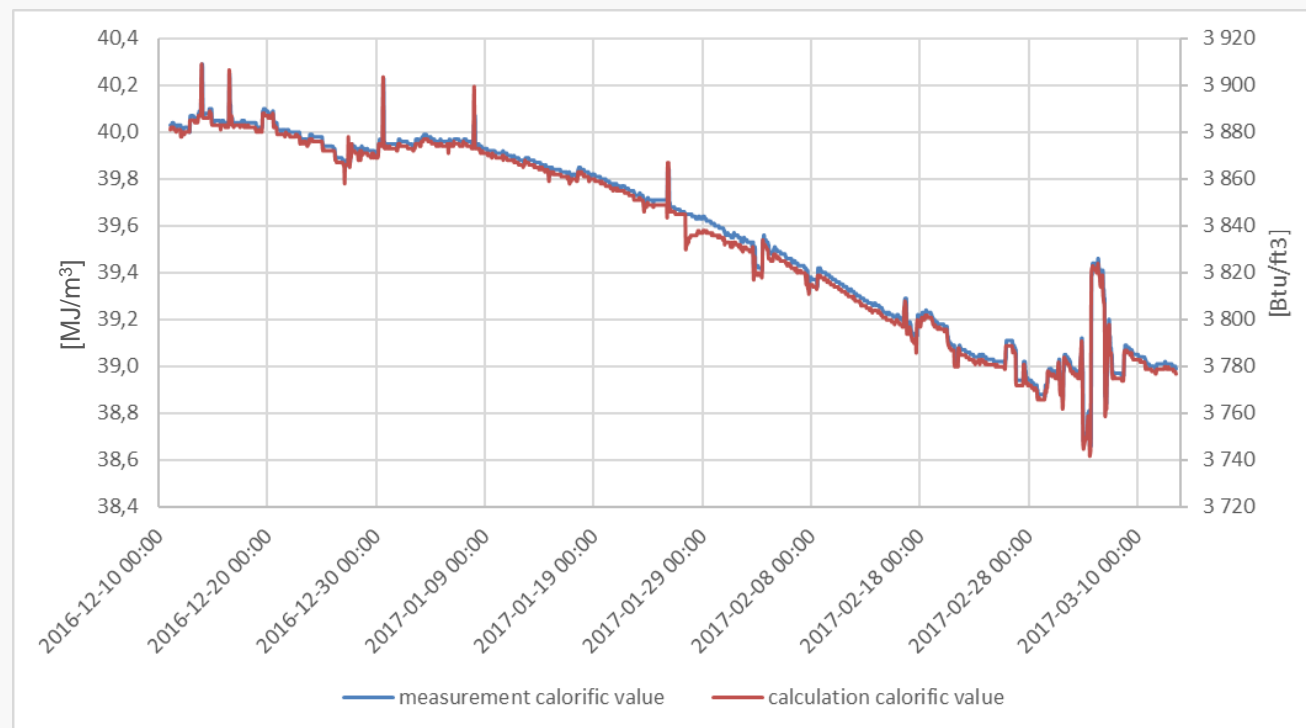
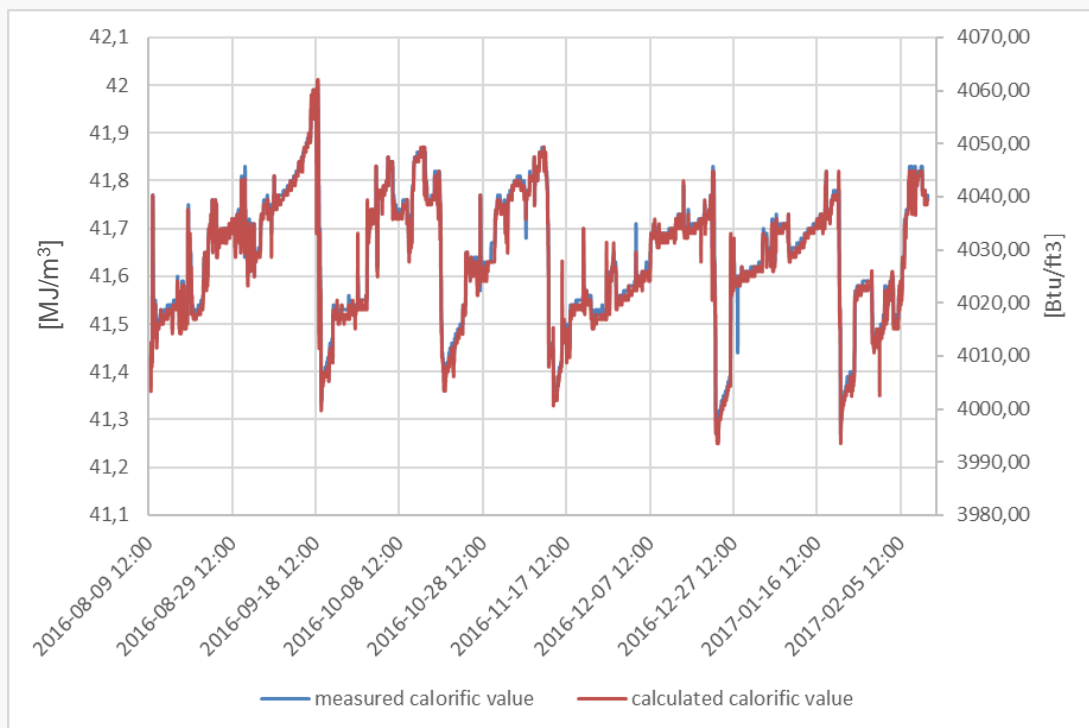


# ALLOCATIONS – HISTORICAL CONTRACTS

## IP MALLNOW

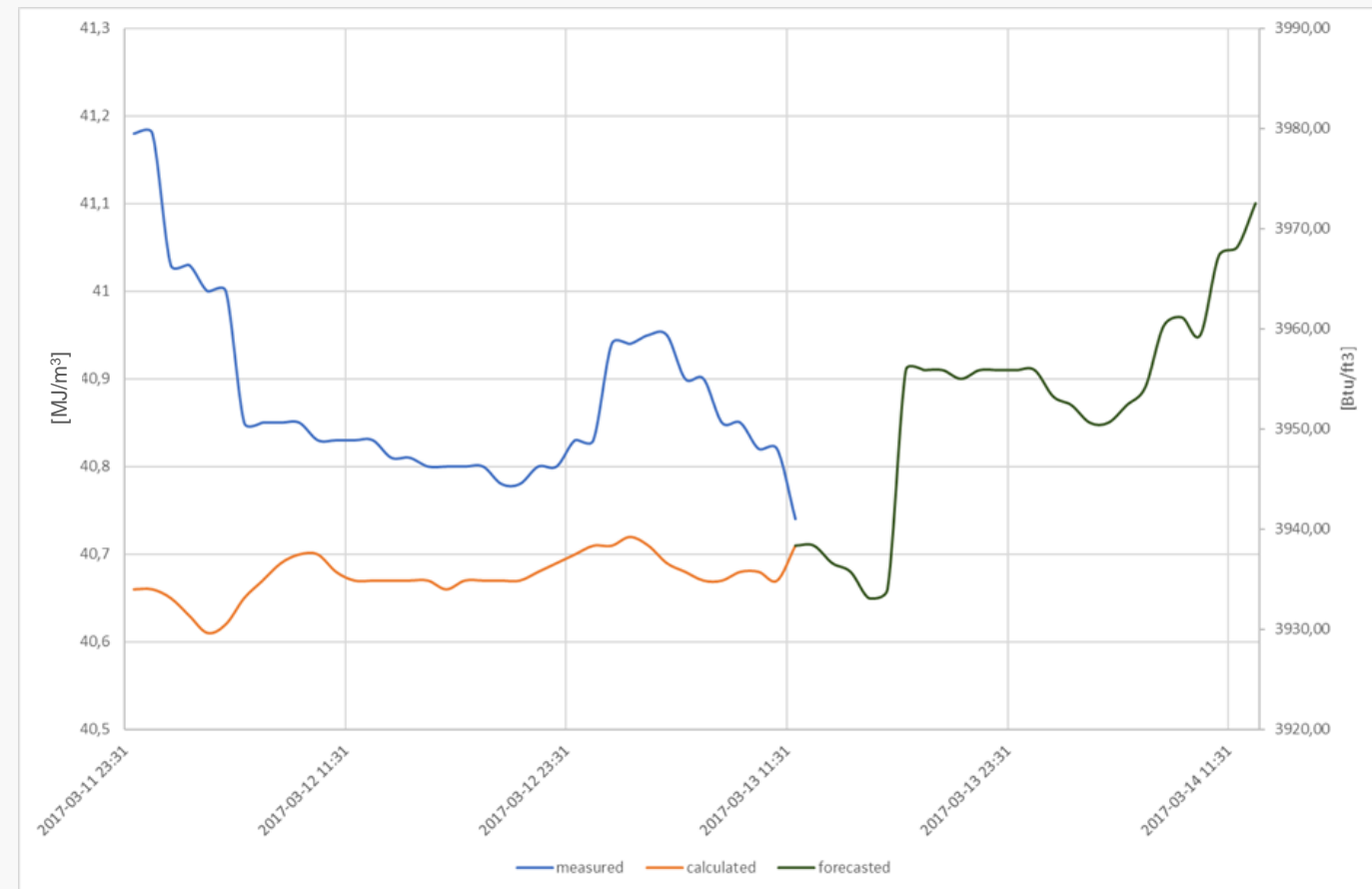
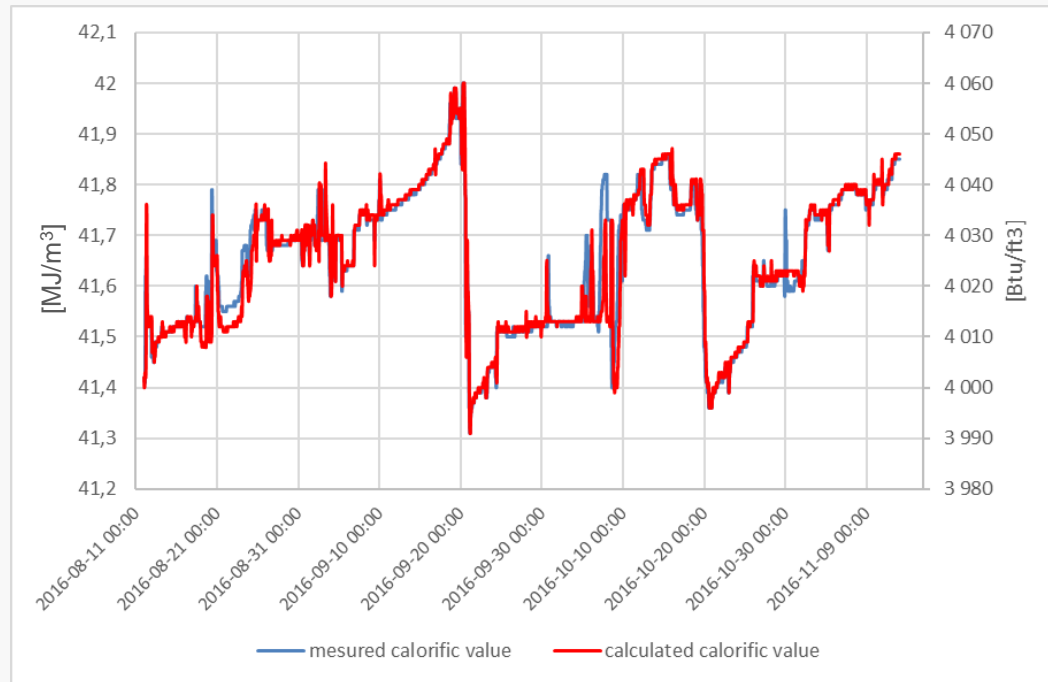


# INTEROPERABILITY - GAS QUALITY VARIATION AT ENTRIES



# INTEROPERABILITY - GAS QUALITY

## VARIATION AT EXITS



THANK YOU FOR YOUR ATTENTION

