



TOWAROWA
GIEŁDA ENERGII S.A.

www.tge.pl

IMPLEMENTING EXCHANGE- BASED GAS MARKET

**Presentation of
Polish Power Exchange Group**

POLPX Jacek A. Goszczyński - Vice-President of the Board

IRGIT S.A. Ireneusz Łazor - President of the Board

Warsaw, 07/02/2012



ENERGY MARKET IN POLAND

KEY MILESTONES

April 1997 – adoption of the Energy Law

December 1999 – founding and registration of Giełda Energii S.A.
(currently **Polish Power Exchange**)

November 2008 – founding and registration of Warsaw
Commodity Clearing House

JANUARY 2013 – GOAL: GAS MARKET LIBERALISATION



LEGAL ENVIRONMENT FOR EXCHANGE-BASED GAS MARKET RUN BY POLPX

Existing legal instruments – the foundation for the proposed solutions

- EU's 3rd Energy Package;
- REMiT Regulation;
- Energy Law;
- Commodity Exchanges Act;
- Decisions of the President of ERO;

Expected legal environment - a tool streamlining the liberalization process

- **Gas Law** (in particular the provisions proposed by OGP Gaz System and e.g. PGNiG to be included in the draft of the legislation, intended to streamline the organisation and management of an exchange-based market for natural gas);
- Energy Law;
- Act on Renewable Energy Sources;



ROLE OF COMMODITY EXCHANGE IN GAS AND ELECTRICITY MARKETS

The objective of POLPX is to:

- aggregate the demand and supply of gas and electricity in one place;
- set the reference price of gas and electricity for the local wholesale market, determined in a fully competitive environment;
- such price provides a benchmark for other transactions in the gas and electricity market;



ADVANTAGE OF POLPX

The exchange-based mechanism ensures:

- **full anonymity of trading**
- **equal access to the commodity** i.e. gas or electricity for all market participants
- **public information on gas and electricity prices** and transaction volumes
- **full range of exchange market products** with different maturity terms
- **full security of financial settlements** for all exchange market transactions (Clearing House, system of security deposits)
- **supervision by competent regulatory authorities** (ERO, Financial Supervision Authority) over the functioning of the exchange market and actions of exchange members – effective protection against unlawful price speculation



POLPX MARKETS AND REGISTERS TODAY

For electricity

- **DAM – Day-Ahead Market** (spot contracts);
- **CDM – Commodity Derivatives Market** (forward contracts);
- **IDM – Intraday Market** (spot contracts);

Other

- **CO2 Spot – Emission Allowances Market** (spot contracts for EUA units)
- **PRM – Property Rights Market** (spot contracts for property rights arising under certificates of origin for electricity generated in renewable energy sources and high-efficiency co-generation units);
- **Certificate of Origin Register** (related to the above-mentioned support systems for renewables and co-generation units);



GAS MARKET AT POLPX

POLPX will launch exchange-based markets for natural gas

**Commodity
Derivatives
Market**

**Spot
Markets**



CONDITIONS OF GAS TRADING IN A COMMODITY EXCHANGE

According to Article 32 of the current Energy Law, exchange-based gas trading is released from licensing obligation, and consequently, from application of a Tariff approved by the President of ERO.

Within the meaning of the commodity exchanges act, the following entities may be a party to transactions on the Gas Market at a commodity exchange:

- **Exchange Member**
- **Principal (any entity) that executes a transaction in the exchange through a commercial company engaged in brokerage activity in respect of gas trading**



WHO CAN BE POLPX MEMBER

In accordance with Article 9.3 of the Commodity Exchanges Act, only the following entities may become POLPX members on the Gas Market:

commodity brokerage houses

- *represented by a commodity exchange broker they employ*

brokerage houses

- *represented by a commodity exchange broker they employ*

foreign legal persons engaged in
brokerage activity in respect of
commodity trading

- *in an EU member state, to the extent that international agreements ratified by Poland do not provide otherwise; operating in the territory of the Republic of Poland only in the form of a Branch and subject to obtaining a permission for such activity from Polish Financial Supervision Authority*

agricultural producer groups

- *represented by a commodity exchange broker they employ; **however, the Commodity Exchanges Act excludes their membership in a clearing house, e.g. WCCH***

commercial companies without the
status of brokerage houses but
engaged in the activity in respect of
commodity purchase and sale for a
third party's account

- ***however, the Commodity Exchanges Act excludes their membership in a clearing house, e.g. WCCH***



HOW TO TRADE GAS AT POLPX

Entity not
affiliated as an
Exchange
Member

- may participate in transactions **on the Gas Market** at POLPX only through a brokerage house affiliated as a POLPX member, which will enter into transactions on the Gas Market for the benefit of such entity

In the course of public
consultation on the draft
gas and energy law
TGE

- highlighted the need for amendment of the Commodity Exchanges Act that would enable the interested parties to take part directly **in gas trading transactions** at POLPX as an **Exchange Member**.



HOW TO OPERATE *) ON POLPX GAS MARKET AFTER ITS LAUNCH

Contact POLPX

- download procedure from www.rynekgazu.tge.pl
- take advantage of training opportunities offered by POLPX

Enter into agreement with TSO (OGP Gaz System)

- Transmission agreement – when a physical entry point or exit point in the TSO's system is used
- Balancing agreement – when only a virtual point is used, or when a exit point in a DSO's system is used
- Information on contracting conditions will be available on the websites of Gaz-System and POLPX

**Place a buy or sell order
with the brokerage house**

Enter into agreement with WCCH

- Enter into agreement with a POLPX member brokerage house
- Details of brokerage houses will be available on www.rynekgazu.tge.pl

(*) Detailed information regarding the participation in the POLPX Gas Market will be announced after the approval of the Transmission Network Code and Distribution Network Code by the President of ERO



TRANSACTION SETTLEMENT

Warsaw Commodity Clearing House (WCCH) is the trading counterparty for the participants of the gas market

**Company
sold gas at
POLPX**

WCCH accepts the invoice and pays the amount due to the seller

**Company
bought gas
at POLPX**

WCCH issues an invoice and collects the amount due from the buyer (gas delivery to the buyer is ensured by Gaz-System or Distribution System Operator)

**Security of
transactions at
POLPX**

The WCCH's` settlement guarantee system is based on an effective package of security mechanism that provide full guarantee of settling every single transaction



IT INFRASTRUCTURE AT POLPX

POLPX uses **CONDICO** trading platform delivered by NASDAQ OMX

CONDICO platform is made available by POLPX to the participants of the exchange market

Warsaw Commodity Clearing House uses the clearing engine of **CONDICO**



OBLIGATIONS UNDER REMIT

Since 28 December 2011, EU Regulation on Energy Market Integrity and Transparency, *REMIT*, has been in effect, and specifically:

- Article 3 on prohibition of insider trading;
- Article 4 on obligation to publish inside information;
- Article 5 on prohibition of market manipulation;
- Article 15 on obligations of persons professionally arranging transactions;
- Obligation to report to ACER on transmission and storage facilities and on transactions on wholesale market;
- **Definition of wholesale market share for customers with consumption capacity above 600 GWh per year, which in case of gas corresponds to the amount of approx. PLN 60 million per year**



PROPOSAL FOR ENERGY EXCHANGE INFORMATION PLATFORM IN FULFILMENT OF THE REMIT OBLIGATIONS

Benefits of the Information Platform:

- Collection of commercial information and information on the condition and performance of transmission system in a single website;
- Equal access to information for all market participants;
- Place for immediate publication of internal information;
- Fulfillment of disclosure obligations imposed under community and national legislation, and reporting to ERO and ACER



TOWAROWA
GIEŁDA ENERGII S.A.

www.tge.pl

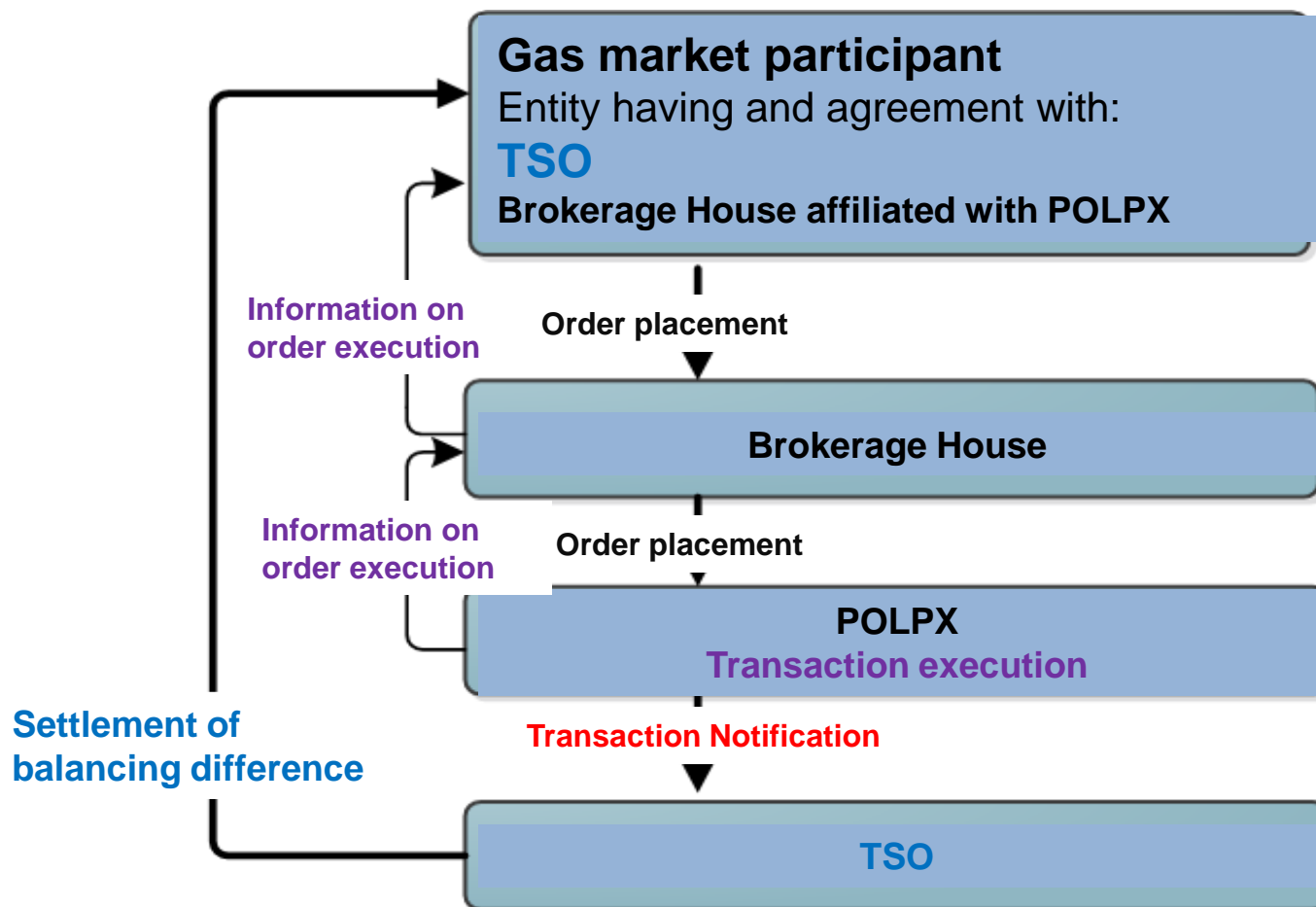
Similarities between Exchange Markets for Gas and Electricity

Leszek Prachniak POLPX
Director of Quotations Department



TRANSACTION MODEL 1

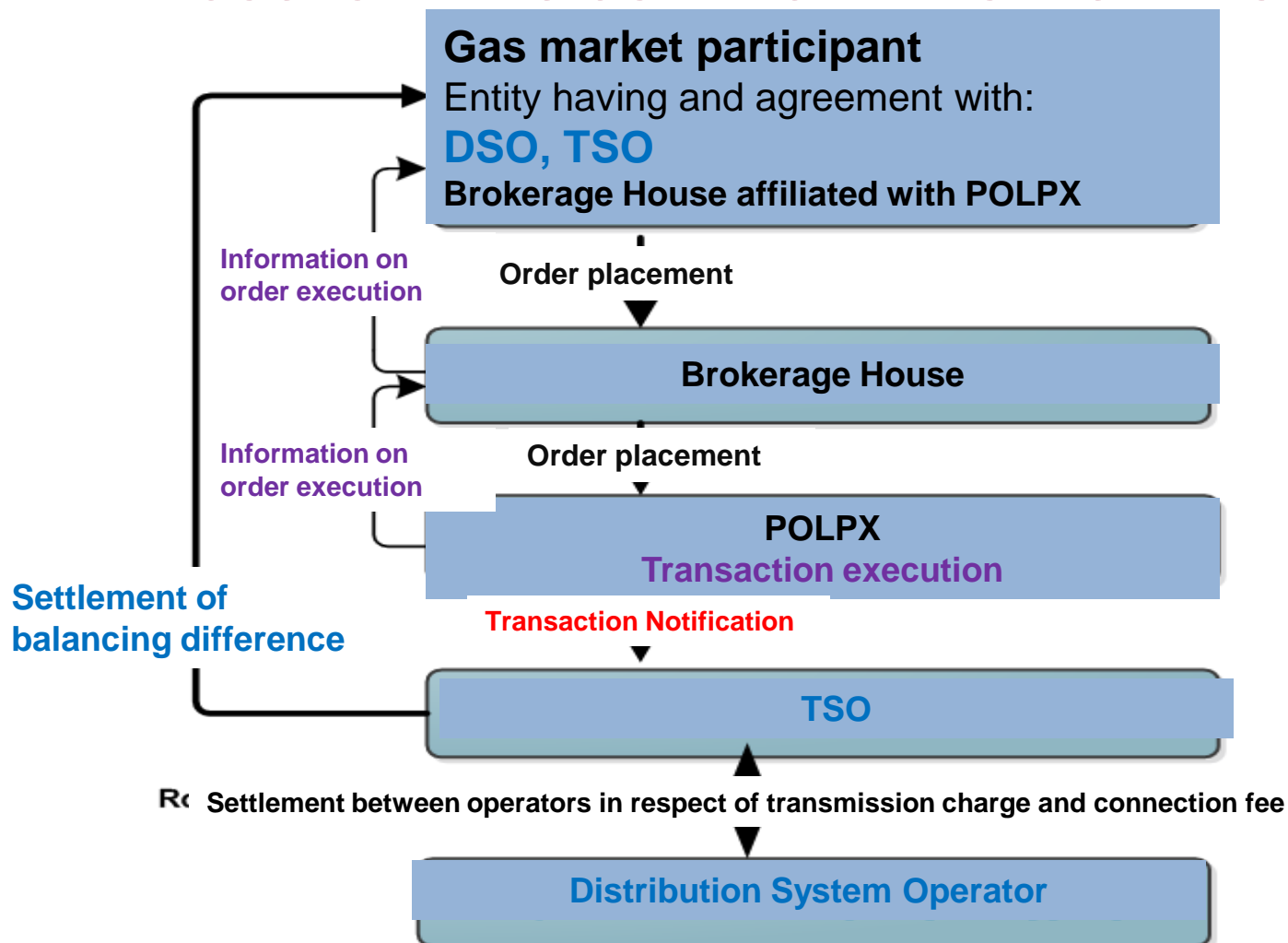
CUSTOMER IS CONNECTED DIRECTLY TO TRANSMISSION PIPELINE





TRANSACTION MODEL 2

CUSTOMER IS CONNECTED TO DISTRIBUTION





AUCTION-BASED TRANSACTION

Input of sell orders by Auction Participants.
Auction participants may only see their own orders

Input of bidder's buy order
Bidder may only see its own order

Auction closure
and announcement of results

Publication of results
on public website

Price limit	Volume
185	50
185.5	100
186.5	25
187.25	50
188.10	15
189.5	10
190.17	5
191	5

**Auction
Participant's (Sell)
orders**

Price limit	Volume
185.5	100

**Bidder's
(Buy) order**

Transaction price	Volume
185	50
185.5	50

**Transactions
executed**

www.polpx.pl

**Publication of
auction results**

14.00

14.20

14.30

14.31

15.30



STRUCTURE OF GAS PURCHASE COSTS

Existing customer
of PGNiG

- All costs included in a comprehensive agreement between the customer and PGNiG

POLPX
participant

- **Payment for gas purchased**
- *Costs of brokerage house*
- ***Transaction fee***
- ***Cost of WCCH***
- *Costs of services provided by the TSO or DSO and TSO as per the tariff approved by ERO*



TRANSACTION FEES IN THE ELECTRICITY MARKET

Average fee per unit comprising fixed charges and transaction costs weighted by the volume in the markets operated by POLPX.

Day-Ahead Market

- PLN 0.13/MWh
- 0.06% of the price per unit of energy

Commodity Derivatives Market

- PLN 0.02/MWh
- 0.01% of the price per unit of energy

One MWh of electricity is the energy equivalent of approx. 100 m³ of natural gas



GAS MARKETS

Spot Market

- **Day-Ahead Market** – daily instruments with next day delivery flat 24-hour contract (Base 24h)
- Transactions are executed in the continuous trading system.

Forward market with physical delivery

- **Forward instruments** consisting in a flat daily contract (Base 24h) with delivery within one week, month, quarter or year.



GAS MARKETS

Transactions in the spot and forward markets will be executed in the continuous trading system.

- Spot market will be quoted daily.

Forward market will be quoted on each business day.

Reports on executed transactions will be delivered daily to OGP Gaz System by POLPX.

- The report will present the balance of transactions executed in auction, spot and forward markets with the delivery on the following day.



POLPX Gas Market Project

For all relevant information and contact details
please visit www.gasmarket.polpx.pl

Project leader:

Mirosław Filip

Gas Market Project Manager

- rynekgazu@tge.pl
- +48 (22) 341 99 10