

## New regulation of district heating in Poland

### The possibility of CHP tariffs approval based on benchmark method

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# Regulatory framework

## Primary legislation:

The Energy Law Act - (10 April 1997) provided for a general legal and regulatory framework for three network-based energy sub- sectors: electricity, gas and district heating

## Secondary legislation:

Ordinances of the:

Minister of Economy (mostly), Prime Minister, Council of Ministers

# Regulatory framework

## Ordinances of the Minister of Economy:

- ❖ concerning the detailed principles of the establishment and calculation of tariffs and billing principles for heat supply (17 September 2010)
- ❖ concerning detailed conditions of functioning of heating system (15 January 2007)

# Regulatory framework

According to article 23 of the Energy Law, the President of the ERO regulates the activity of the energy enterprises

## Main responsibilities important for DH:

- ❖ granting and revoking licenses
- ❖ approval and supervision of application of heat tariffs, including the analysis and verification of the costs accepted by energy enterprises as substantiated and reflected in the process of calculation of the prices and fee rates in the tariffs
- ❖ calculation and publication of an average heat price from non cogeneration and the reference index
- ❖ setting a justified return on capital from heat activity

# Regulatory framework

The President of the ERO regulates activities of energy enterprises

Energy enterprises possessing licenses  
(for heat generation it is at least 5 MW capacity installed in sources  
or 5 MW capacity of power ordered)  
shall formulate tariffs,  
which are subject to approval by the President of the ERO



# Regulatory framework

**No license shall be required to perform economic activity  
in the field of heat generation obtained in industrial technical processes**

# Regulatory framework

Energy enterprises possessing licenses submit tariffs on their own initiative or upon request of the President of the ERO

The President of the ERO within 60 days, shall approve the tariff or refuse to approve it in case of its inconsistency with principles and provisions mentioned in the Energy Law Act and in Ordinance

# Regulatory framework

The President of the ERO submits, within 7 days from approval,  
approved tariffs for heat for publication  
in the territorially appropriate Voivodeship Official Journal



# Regulatory framework

**The tariff must not be in force earlier than after 14 days  
and not later than 45 days from its publication**

# Regulatory framework

**Enterprise which applies prices and tariffs  
not obeying the duty to submit the tariff to the President of the ERO  
for the approval shall be fined**

**The amount of the fine can be up to 15% of revenues of the fined enterprise  
obtained from the licensed activity in previous fiscal year**

# Heat tariffs

In the process of approving heat tariffs the President of the ERO aims at balancing the interests of the energy enterprise and the customers

## Heat tariff shall ensure:

- ❖ covering the justified expenses of the energy enterprises (including a justified return on investment)
- ❖ protecting the customers against an unjustified increase of the prices and fee rates

# Heat tariffs

The prices and payment rates are settled on the basis of planned:

- ❖ justified annual costs for the conduct of business activities in respect of heat supply
- ❖ justified annual costs of modernisation, development and the investment costs in respect of environmental protection
- ❖ a justified return on investment from such activity

Until 3 November 2010 the only way of heat tariffs calculation was:

Cost-based  
regulation

# Heat tariffs

## Main rules

**COSTS**  
justified expenses:  
operational,  
modernisation and development,  
environmental protection

**PLAN**  
A prospective approach  
based on retrospection

**INCENTIVES**  
(long-term tariff,  
return on investment)



**TARIFF**  
Prices and fees and  
conditions of their  
applicability

**Financial result  
of enterprise**



# Heat tariffs

## General principle

$$\text{Heat price} = \frac{\text{Justified planned income}}{\text{Planned sale of heat}}$$

# Heat tariffs

## Planned costs

**Costs are determined on the basis of planned annual heat production for activities in relation to:**

- ▶ **sum of thermal power ordered by the customers**
- ▶ **estimated annual sale of heat**

# Heat tariffs

## Justified return on capital from heat activity

**Planned return on capital should take into account return on equity and debt, serving to finance assets engaged in heat production and heat supply**

**And**

**Inclusion of return on capital must not lead to unjustified increase of prices and fees for customers**

# Heat tariffs

The categorisation of customers to tariff groups of customers on the groups depends on level of justified costs and the following criteria:

- ▶ type of heat carrier and its parameters;
- ▶ heat source or the set of sources which are supplying the heating grid;
- ▶ grid, which is used for the specific heat carrier;
- ▶ point of the heat delivery;
- ▶ scope of heat services;
- ▶ requirements regarding quality standards and continuity of heat supply;
- ▶ quantity of ordered heat capacity and characteristic of heat receipt

# Heat tariffs

## Tariff should include:

- ▶ **prices of ordered heat capacity in zł per MW – generation;**
- ▶ **prices of heat in zł per GJ – generation;**
- ▶ **prices of heat carrier in zł per Mg or per m<sup>3</sup> – regards generation;**
- ▶ **fixed rates of payment for distribution services zł/MW;**
- ▶ **variable rates of payment for distribution services in zł for GJ;**
- ▶ **utility connection fee – distribution**



# Polish Energy Policy until 2030

**Document was adopted in November 2009**

# Polish Energy Policy until 2030

## Action:

Preparation and gradual implementation of new rules to regulate the prices of district heating to ensure the elimination of cross-financing of combined heat and power generation with revenues from the production of electricity and redemption of certificates by introducing a method of comparison (benchmarking) for the determination of heat prices - from 2010

# Polish Energy Policy until 2030

## Action:

**Changing the regulatory mechanisms  
through the introduction of pricing methods for heat  
with the use of reference prices  
and incentives to optimize the heat supply costs**

# Polish Energy Policy until 2030

## Action:

Preparation of new rules to regulate the prices of district heating  
by introducing the comparative method - 2010  
gradual implementation of new rules - 2011

# Polish Energy Policy until 2030

## Action:

Preference for cogeneration as the preferred technology  
in the construction of new power generation



# Regulatory framework

On 11 March 2010

the Act of 8 January 2010 entered into force  
which amended The Energy Law  
and certain other acts

# Regulatory framework

## Innovation

According to the changed Polish Energy Law Act (8th January 2010) and having regard to the Energy Policy of Poland until 2030, the President of the ERO is obliged to:

- announce average sale prices of heat generated in non-cogeneration units
- announce a reference index determining prices of heat from cogeneration

# Regulatory framework

## Issues addressed in the new regulation

The new ordinance concerning heat tariffs – main issues:

- ❖ limitation of annual increase of heat prices from cogeneration
- ❖ balancing interest of customers and giving a financial support to cogeneration development
- ❖ taking into account costs of CO<sub>2</sub> emission

AND

- ❖ how to avoid an increase of heat prices from cogeneration in the long term

# Regulatory framework

## New regulation

### A simplified method

allows to calculate the planned income of heat sale  
on the basis of the average heat price from non-cogeneration  
and the reference index

# Regulatory framework

## New regulation

Both the reference index and the average price of sale heat produced in non cogeneration units for selected types of fuels i.e.:

- ▶ - coal,
- ▶ - oil,
- ▶ - gas,
- ▶ - renewables,

are announced by the President of the ERO by 31 March each year



# Regulatory framework

## New regulation

Simplified way of calculating tariffs allows to determine planned income and on this basis to calculate prices in accordance

with rules used up to now:

- ▶ fixed price (regarding power ordered),
- ▶ variable price (regarding quantity of heat which is to be supplied),
- ▶ and price of heat carrier

# Regulatory framework

## New regulation

Enterprises conducting network activity,

calculate the part regarding the grid

on the basis of costs (as previously)

# Heat tariffs

## New regulation

from 3 November 2010 a new regulation was applied in Poland  
by

Ordinance of the Minister of Economy,

concerning the detailed principles of the establishment and  
calculation of tariffs and billing principles for heat supply  
(17 September 2010)

# Heat tariffs

## New regulation

The regulation indicates the possibility to calculate the planned revenue on the basis of a simplified formula

$$P_c = Q_s \times C_c$$

where:

$P_c$  – planned revenue of heat sale

$Q_s$  – planned quantity of heat which is to be sold;

$C_c$  – price of heat settled by the company for the year of tariff application, not higher than the reference price

# Heat tariffs

## New regulation

The regulation indicates the way of calculating reference heat price

$$C_r = C_{csn} \times X_c$$

where:

$C_r$  – reference heat price calculated for each source;

$C_{csn}$  – valid average price of heat sale for the same fuel type as the source;

$X_c$  – valid reference index, determined for each type of fuel.



# Heat tariffs

## New regulation

The regulation sets out the method of calculating the reference price in case of source, in which heat is generated from several different types of fuels: for example coal and biomass

The average price is determined as a weighted average of prices of heat calculated respectively for each type of fuel used to produce electricity and heat at the source and the planned amount of the chemical energy of fuels to produce each unit of electricity and heat

# Heat tariffs

## New regulation

The regulation described the method of determining the reference index by the President of the ERO

$$X_C = \frac{C_{sn} + k}{C_{sn}}$$

Where:

k – increase in cost for the unit of heat output, resulting from new or amended existing laws to the extent to which these costs shall be borne by the production of heat in the fixing of the reference index, and not burden the previous year

# Heat tariffs

## New regulation

**The regulation limits the increase in revenues the enterprises  
applying the simplified tariff calculation**

- to 2 percentage points above inflation (to 31 March 2011);
- to 2 percentage points above the increase in average selling prices of heat from sources that are not-cogeneration units (from 31 March 2011 to 31 March 2013 or after 31 March 2014);
- to 2 percentage points above costs of buying carbon dioxide emission allowances during the entry into force of the next accounting period for CO<sub>2</sub> emissions (from 31 March 2013 to 31 March 2014)

# Heat tariffs

## New regulation

**The regulation restricts the application of tariffs,  
in which a simplified method of calculation is used  
to one year**

# Heat tariffs

## New regulation

The regulation recognizes the case  
of **CHP** not using the simplified method

$$P_c = P_{ec} - (E_s \times C_e) - P_{Mc} - P_{Mz}$$

### Where:

- ▶  $P_c$  – planned revenue of heat production (justified costs and return of capital);
- ▶  $P_{ec}$  – joint planned revenue of heat and electricity production together;
- ▶  $E_s$  – planned quantity of electricity which is to be sold;
- ▶  $C_e$  – price of electricity;
- ▶ Income does not include income ( $P_{Mc}$  and  $P_{Mz}$ ) arising from the redemption of certificates of origin for electricity from cogeneration and from renewable energy sources.



# Heat tariffs

## New regulation

In relation to sources with cogeneration unit  
the regulation allows for the appointment by the President of the ERO  
path leading to the reference price

$$C_{sn} = C_{sb} \times [1 + (RPI - X_r) : 100]$$

where:

$C_{sn}$  – new price after one year applying

$C_{sb}$  – the price used before change

RPI – inflation

$X_r$  – correction factor determining the effectiveness of the proposed business improvement

Obligation has been imposed regarding the annual price changes by firms with a cogeneration unit in the source and not using the simplified method of calculating tariffs. The changes of long-term tariffs (approved for at least two years) are allowed but not obligatory for the remaining heating companies.

# Regulatory framework

## Regulate as usual

***The scope of the activity of the President of the ERO***

***includes setting of the correction factors determining the proposed***

***effectiveness improvement of the power company***

***and change regarding the terms of conducting their economic activity***

# Regulatory framework

## Regulate as usual

*The scope of the activity of the President of the ERO  
includes determination of tariffs and correction factors validity*

# Regulatory framework

## Regulate as usual

*Above two instruments are helpful to realize  
the main activity of the President of the ERO  
as balancing the interests of the energy enterprises and the customers*

# Regulatory framework

## Regulate as usual

### **Energy enterprises**

***are obliged to calculate tariffs in a way  
that protects the interests of consumers  
against unreasonable level of prices and rates***



# Thank you for your attention

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