

Energy efficiency - Polish experience: White certificates

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Introduction

- 1) legislative background,
- 2) national target for the energy efficiency
- 3) task for public sector entities
- 3) energy efficiency support mechanism,
 - a) white certificates,
 - b) obligation to redeem white certificates,
 - c) substitute fee,
 - d) similarities with the support system for RES and CHP
- 4) energy efficiency audits,
- 4) operation the support system for energy efficiency,
- 5) conclusions.

Legislative background

Directive 2006/32/EC of The European Parliament and of The Council dated 5 April 2006 on end-use efficiency and energy services

The act of ... - Energy Efficiency Law (Journal of Laws ..., No ..., position ...)

Ordinance of Ministry of Economy of ... on detailed range of obligations for obtaining and presenting for redemption of white certificates, for making substitute fees as well as energy efficiency and confirmation of data concerning the quantity of saved energy. (Journal of Laws ..., No ..., position ...)

National target for the energy efficiency

The national target for energy efficiency by the 2016 determine energy savings in an amount not less than 9% of average national consumption of energy per year, compared to average amount consumption of energy by the 2001-2005 years.

Energy efficiency obligation

Energy companies selling energy, heat or gas to the final users on the territory of the Republic of Poland, are obligated to:

- Receive and present for redemption white certificates to the President of the Energy Regulatory Office, or
- Pay a substitute fee accordingly to the number of missing certificates white certificates.

Energy efficiency obligation

Energy enterprises selling electricity, heat or natural gas to end users connected to the network in the Polish Republic have obligation to purchase and redemption of white certificates values in toe, no more than 3% of the quotient the amount of income from the sale of electricity, heat or gas natural gas to final customers, for a given year and substitute fee unit (Ozj).

Task for public sector entities

Public sector entity, in fulfilling its tasks, apply at least two of the measures to improve energy efficiency:

- contract relating to the implementation and financing of the project of improving energy efficiency,
- the acquisition of new equipment, installation or vehicle, characterized by low power consumption and lower operating costs,
- replacement of equipment, installation or vehicle on the device, installations or a vehicles to improving energy efficiency,
- purchase or rent energy-efficient buildings or parts thereof or reconstruction or renovation of buildings in use,
- draw up an energy audit.

The sector entity informs the public about the applicable measures to improve energy efficiency on its website or otherwise

(article 10 EE act)

White certificates

President of the ERO shall select projects to improve efficiency energy, for which you can obtain a certificate of energy efficiency. For this purpose, at least once a year, announces, organizes and conducts tender.

For the tender may participate the projects achieved savings in the amount equivalent to at least **10 toe** on average per year, or projects of the same kind of efficiency (ESCo) improvement energy, as a result of which yield a total energy savings amount equivalent to at least 10 toe per year on average.

President of the ERO granted white certificates only this enterprises who win tender, information about them send to the Polish Power Exchange.

White certificates

Enterprise which obtain white certificates are obligated to completion of the project stated in the tender. They must send information to President ERO as soon as the projects were ended.

President ERO send information about realized projects to the Polish Power Exchange.

President of the ERO shall make or cause to other entities, random verification energy efficiency audits or verify compliance of energy savings achieved as a result realization of project.

If, after verification, it appears that a enterprise has received much more of white certificates, must redeem excess white certificates granted by President ERO

Circulation and redemption property rights

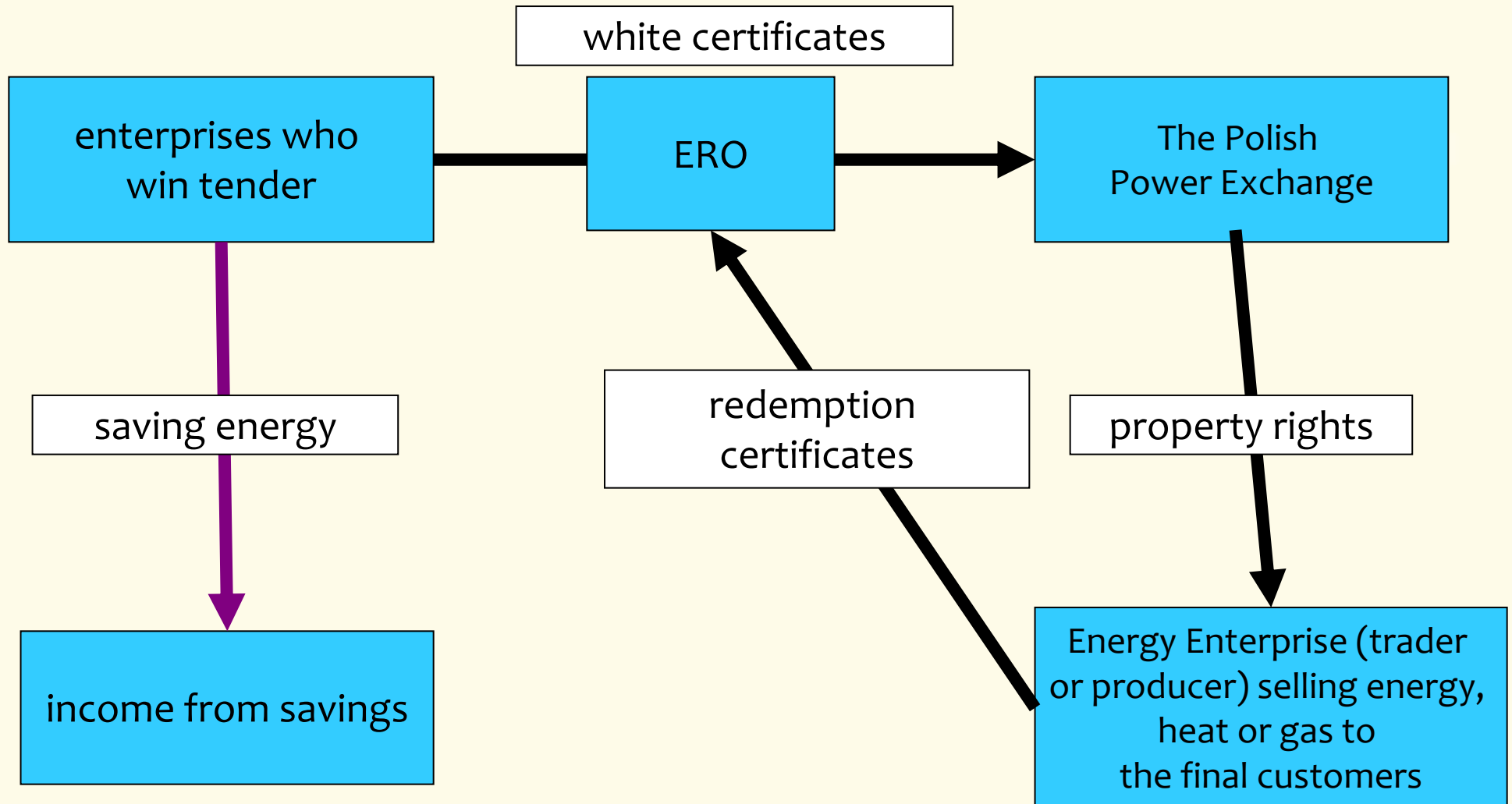
When white certificates will be registered on the Polish Power Exchange databases of the information about certificates, they become the property rights at this moment.

The property rights arising of the certificate are transferable and constitute an exchangeable commodity.

Upon a motion of the energy enterprise (which sells electricity, heat or gas to the final customers on the territory of the Republic of Poland) which is holder of the property rights arising of the certificate, President ERO redemption the certificate of origin by the decision, completely or partially.

Redemption decision confirms fulfillment obligation regarding energy efficiency completely or partially.

Energy efficiency support system



Substitute fee

Energy companies selling energy, heat or gas to the final users on the territory of the Republic of Poland, are obligated to:

- Receive and present for redemption white certificates to the President of the Energy Regulatory Office, or
- Pay a substitute fee accordingly to the number of missing certificates white certificates.

The substitute fee shall constitute the revenue of National Fund for Environmental Protection and Water Management and shall be paid to separate bank account of Fund by 31 March each year.

Level of substitute fee regarding energy efficiency

$$O_z = O_{zj} \times E_p$$

according to art. 9a point 2:

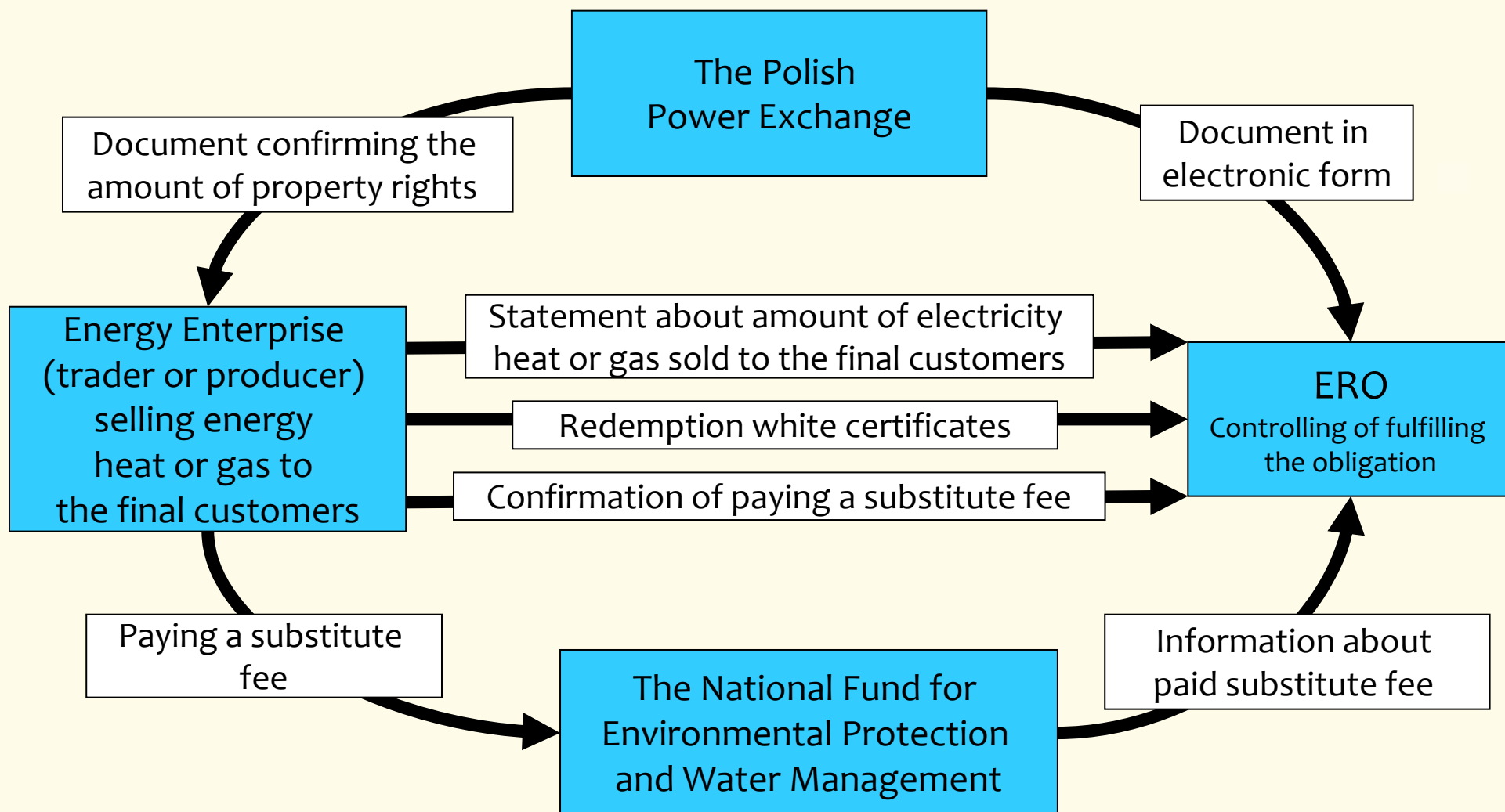
O_z – substitute fee in PLN,

O_{zj} – substitute fee unit not less than 900 Pln/toe and not more than 2 700 Pln /toe,

E_p – difference between the amount of primary energy in accordance with the obligation specified in the regulations and amount of primary energy which been documented in the white certificates presented by the energy enterprise for redemption in the given year.

Minister of Economy will publish substitute fee unit (O_{zj}) in ordinance.

System of controlling fulfilling the obligation



Level of penalty

President of the ERO requires the enterprises, by a decision, a fine of not more than 10 % revenue in the fiscal year preceding the year of the imposition of penalties if the entity is:

- fails to obtain and submit to the President, ERO white certificates or paying substitute fee,
- fails to submit within the prescribed period the documents or information concerning fulfilling energy efficiency obligation;
- submitted an application for cancellation of certificates of efficiency energy, with false data and informations.



RES Electricity and certificates of origin in 2005 - 2010

RES Technology	2005	2006	2007	2008	2009	2010
	Electricity amount [MWh]	Electricity amount [MWh]	Electricity amount [MWh]	Electricity amount [MWh]	Electricity amount [MWh]	Electricity amount [MWh]
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Biogas	104 465,281	116 691,863	161 767,939	220 882,924	295 311,766	318 891,604
Biomass	467 975,678	503 846,206	545 764,936	560 967,435	601 088,244	665 495,676
Wind	135 291,628	257 037,412	472 116,429	806 318,563	1 035 019,729	1 496 500,019
Hydro	2 175 559,099	2 029 635,604	2 252 659,312	2 152 943,187	2 375 778,805	2 674 821,865
Co-fired	877 009,321	1 314 336,612	1 797 217,058	2 751 954,127	4 286 588,172	4 174 499,768
Total (certificates of origin amount)	3 760 301,007 (5 150 CO)	4 221 547,697 (4 223 CO)	5 229 525,674 (5 739 CO)	6 493 066,236 (6 935 CO)	8 593 786,716 (8 533 CO)	9 330 208,931 (9 157 CO)



CHP Electricity and certificates of origin in 2007 – 2010

CHP Type	Second half 2007	2008	2009	2010
	Electricity amount [MWh]			
(1)	(2)	(3)	(4)	(5)
Small (under 1 MW) or gas source	1122692,21	2978385,44	3066105,55	2823384,95
Biogas or methane from coal mines				66762,28
Other CHP source	9405003,58	21133596,88	21821087,20	20755714,06
Total (certificates of origin amount)	10527695,79 (131)	24111982,32 (470)	24887192,75 (547)	23645861,29 (490)

Energy efficiency audits

Energy efficiency audit shall include a description of the possible ways and options for implementation of projects aimed at improving energy efficiency with an assessment of the economic viability of these projects and possible to achieve energy savings.

Energy efficiency audit prepares a person who has the appropriate permissions and is included in the list of auditors.

President of the ERO shall appoint committees of qualification verifying the knowledge of auditors and is responsible for keeping the register of auditors.

Conclusions

The idea of energy savings undoubtedly deserves to be approved.

The form of support for energy efficiency is extremely complicated, difficult to implement and very expensive.

Cover a large number of actors (probably a few hundred thousand), which in a short period of time would have to be handled in the modes of tendering. The reason for this is that determining the minimum level of savings to allow access to the system at 10 toe, for example, corresponds to just a few thermo-building.

Conclusions

Settlement of the obligation until 1900 to energy companies selling electricity, heat or natural gas to final customers, which leads to the absolute necessity of substantially expand the government.

Create a new profession - register of auditors authorized to conduct energy audits. The consequence of this may be need to set up and administrative support for several thousands of auditors from different areas of the economy.

Very high risk of system failure and paralysis of the administrative in case when support system for energy efficiency will based on white certificates in that shape.

**Thank you for your
attention**

