Information

on the method applied in Poland for the energy efficiency obligation scheme — pursuant to Article 7 of and Annex V to Directive 2012/27/EU

1. ENERGY EFFICIENCY OBLIGATION SCHEME — OBLIGATED PARTIES AND PROJECT CATEGORIES

Pursuant to Article 7(1) of Directive 2012/27/EU on energy efficiency[1], each Member State shall set up an energy efficiency obligation scheme or adopt alternative policy measures in order to achieve the specified end-use energy savings target. Energy savings that are to be achieved under the energy efficiency obligation scheme or through alternative measures applied pursuant to Article 7(9) of the Directive shall be at least equivalent to new savings achieved each year from 1 January 2014 to 31 December 2020 of 1.5% of the annual energy sales to final customers of all energy distributors or all retail energy sales companies by volume, averaged over 2010, 2011 and 2012.

Pursuant to the provisions of Directive 2012/27/EU, Member States shall by 5 December 2013 notify the European Commission of the details of their proposed methodology for operation of the energy efficiency obligation schemes or of alternative policy measures planned to be adopted as alternative solutions.

In Poland, the energy efficiency obligation scheme was introduced pursuant to the Act of 15 April 2011 on energy efficiency (Journal of Laws No 94, item 551, and 2012, item 951, 1203 and 1397). The scheme has remained in force since 1 January 2013. Pursuant to the Act on energy efficiency, the following groups of enterprises shall obtain energy efficiency certificates, also referred to as *white certificates*, and submit them to the President of the Energy Regulatory Office (URE) for redemption:

- energy enterprises selling energy to final customers,
- final customers connected to the grid within the territory of the Republic of Poland who are members of a commodities exchange, within the meaning of Article 2(5) of the Act of 26 October 2000 on commodities exchanges, as regards transactions entered into on their own behalf on a commodities exchange,
- commodity brokerage houses or brokerage houses executing transactions on a commodities exchange at the request of final customers connected to the grid within the territory of the Republic of Poland.

Pursuant to Article 25(1) of the Act on energy efficiency, energy efficiency certificates create alienable proprietary interests that constitute commodities within the meaning of the Act of 26 October 2000 on commodities exchanges, thus they can be traded on the Polish Power Exchange. Parties that shall obtain energy efficiency certificates pursuant to the Act but do not obtain and redeem them must pay appropriate substitution fees, whose amount is determined in the Act.

Energy efficiency certificates may be awarded only for projects achieving the highest levels of energy efficiency. These are selected through a tender procedure organised by the President of the URE. Certificates are awarded to the parties declaring the greatest energy savings in relation to the value of energy efficiency certificates.

[1] Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC, OJ L 315, 14.11.2012, p. 1.

The first tender procedure serving to select projects aiming at improving energy efficiency for which energy efficiency certificates can be awarded was announced by the President of the URE on 31 December 2012. The President of the URE announced the tender procedure for three categories of projects, for which the number of certificates to be awarded was also specified. These are the following project categories, as determined pursuant to Article 16(3) of the Act:

- stimulating end-use energy savings,
- stimulating energy savings of auxiliaries, which shall, pursuant to Article 3(14) of the Act, be understood as groups of auxiliary facilities or installations used to produce electricity or heat,
- reducing transport- or distribution-related electricity, heat or natural gas losses.

The tender procedure served to select projects aiming at improving energy efficiency for which energy efficiency certificates are awarded. The first certificates have already been awarded. Another tender procedure is expected to be announced by the end of Q4 2013.

Under the scheme established in accordance with the Act on energy efficiency, the obligated parties have certain amounts of primary energy that shall be obtained and redeemed for each year from 2013. These amounts, as well as the method for the calculation thereof, have been specified in the Regulation of the Minister for Economy of 4 September 2012 on the method for the calculation of the amount of primary energy equivalent to the value of energy efficiency certificate and of the amount of separate substitution fee (Journal of Laws 2012, item 1039). This Regulation also determines conversion factors arising out of the efficiency of processes consisting in transforming primary energy into final energy. Values of these factors are determined for electricity provided from the electricity network, heat provided from the heating network and natural gas.

Energy savings required to fulfil the obligation may be achieved by the obligated parties through implementing a project aiming at improving energy efficiency, yet energy savings achieved by other parties shall also count towards that obligation, as per Article 7(7)(b) of Directive 2012/27/EU.

2. CUMULATIVE ENERGY SAVINGS TARGET THAT IS TO BE ACHIEVED IN 2014–2020 AND THE METHOD FOR THE CALCULATION THEREOF (INCLUDING THE POSSIBILITIES TO COUNT CERTAIN ENERGY SAVINGS TOWARDS THE CUMULATIVE ENERGY SAVINGS TARGET PURSUANT TO ARTICLE 7(2) OF DIRECTIVE 2012/27/EU).

The document entitled 'Guidance note on Directive 2012/27/EU on energy efficiency — Article 7: Energy efficiency obligation schemes'[2] explains how to calculate the cumulative target as regards cumulative and new energy savings that are to be achieved under the obligation for 2014–2020, and which statistical datasets may be used. Furthermore, this amount may be reduced by Member States even by 25% through the application of four options set out in Article 7(2)(a), (b), (c) and (d) of the Directive.

THE AMOUNT OF THE OBLIGATION

Pursuant to the Commission's Guidance note, the energy savings target shall be calculated and reported under the final energy category, therefore this paragraph makes reference to that category.

[2] COMMISSION STAFF WORKING DOCUMENT Guidance note on Directive 2012/27/EU on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC Article 7: Energy efficiency obligation schemes, SWD(2013) 451 final.

Pursuant to Directive 2012/27/EU, energy used in transport may be excluded from the calculation of energy savings under the scheme. The baseline used to calculate energy savings is presented in Table 1, according to data provided by Eurostat[3].

Table 1 Consumption of final energy (in TJ) in 2009–2011 according to Eurostat

Item	INDIC_NRG	No	2009	2010	2011	average
B_101700	Final energy consumption	1	2 555 074	2 782 325	2 708 381	2 681 927
B_101900	Final energy consumption — transport	2	693 225	737 043	743 955	724 741
	Final energy consumption (excluding transport)	3 = 1 - 2	1 861 849	2 045 282	1 964 426	1 957 186

Source: Eurostat (October 2013)

If at the time when the official 2012 energy consumption data are available there are significant discrepancies between the estimated and real numbers, then the above amounts will need to be readjusted (the Commission's Guidance Note, point 12).

Up to 25% of the final energy consumed can be deducted from the baseline (1957 PJ), provided that final energy is consumed within EU ETS industry, as defined in Annex 1 to Directive 2003/87/EC.

Pursuant to Directive 2012/27/EU, there are two methods for calculating the cumulative final energy savings target over 2014–2020:

1. a standard one, pursuant to Article 7(1) of the Directive: 1.5% per annum up until 2020, i.e. 10.5%,

2. a reduced one, pursuant to Article 7(2)(a) of the Directive: 9%

of the annual energy sales to final customers by volume, averaged over the most recent three-year period prior to 1 January 2013.

Pursuant to Article 7(2) of Directive 2012/27/EU, Member States shall also be entitled to:

1. exclude from the calculation all or part of the sales, by volume, of energy used in industrial activities listed in Annex 1 to Directive 2003/87/EC (Article 7(2)(b)),
2. allow energy savings achieved in the energy transformation, distribution and transmission sectors to be counted towards the cumulative energy savings target (Article 7(2)(c)),
3. count energy savings resulting from individual actions newly implemented since 31 December 2008 that continue to have an impact in 2020 and that can be measured and verified towards the cumulative energy savings target (Article 7(2)(d)).

There is no limitation on Member States' choice or combination of these possibilities except that, according to Article 7(3), all the selected possibilities taken together must amount to no more than 25% of the savings required.

Following the analyses, it has been decided that a standard method would be employed, i.e. the method provided for in Article 7(1) of the Directive, that is equivalent to the cumulative final energy savings target of 10.5% in 2020.

[3] http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database (October 2013).

ENERGY CONSUMPTION WITHIN EU-ETS INDUSTRY (INCLUDING THE POSSIBLE EXCLUSION PURSUANT TO ARTICLE 7(2)(B) OF DIRECTIVE 2012/27/EU)

In order to calculate the amount of the possible exclusion, i.e. to calculate the final target as regards energy savings that is pursued under the scheme, it is necessary to determine final energy consumption within EU–ETS industry (Article 7(2)(b) of Directive 2012/27/EU). This consumption is presented in Table 2.

Pursuant to the Commission's Guidance Note[4], the energy used for combustion installations with a rated thermal input exceeding 20 MW, mineral oil refineries and coke ovens shall not be covered by the exclusions.

[4] Guidance Note: section B4, point 18: From this amount must be deducted the energy used for the three 'energy activities' that are listed in Annex I of the ETS Directive: combustion installations with a rated thermal input exceeding 20 MW (except hazardous or municipal waste installations); mineral oil refineries; and coke ovens.

Table 2 Average final energy use within EU ETS sector in 2009–2011

Details		Average value in 2009–2011 TJ
1	Main Activity Producer Heat Plants	300 150.0
2	Autoproducer Combined Heat and Power (CHP) Plants	55 196.0
3	Main Activity Producer Combined Heat and Power (CHP) Plants	291 017.3
4	Main Activity Producer Electricity Plants	1 180 459.8
5	Petroleum industry	97 661.9
6	Coke oven industry	18 421.0
7	Iron and steel industry	95 068.1
8	Cement industry	43 573.7
9	Ceramic industry	5 223.2
10	Chemical industry	45 938.6
11	Wood-based industry	14 710.9
12	Paper industry	28 652.0
13	Glass industry	20 282.0
14	Lime industry	6 267.8
15	Other industry	36 705.1
16	**Total EU–ETS**	**2 239 327.3**
17	Energy sector (1 + … + 6)	1 942 906.0
18	**Total EU–ETS (excluding energy sector)** (16–17)	**296 421.3**

Source: Calculations on the basis of data provided by KOBiZE

Final energy consumption within EU–ETS industry (i.e. excluding item 17 in Table 2) amounts to 296.4 PJ. Pursuant to the Commission's Guidance note[5], this consumption may be subtracted from the cumulative final energy consumption, ensuring that the cumulative reduction of accruing energy savings for 2020 does not exceed 25% of such energy savings.

COMPARISON OF MAXIMUM AND POSSIBLE AMOUNTS OF ENERGY SAVINGS THAT CAN BE EXCLUDED

It has been decided to resort to Article 7(2)(b) of the Directive, therefore energy savings that can be achieved depend on energy consumption within EU–ETS industry. Therefore, following the adopted standard energy savings approach (10.5% pursuant to Article 7(1) of the Directive), the maximum amount of energy savings that can be excluded shall be equal to 205.5 PJ of the final energy.
Table 3 presents calculations for the standard energy savings approach (growth of 1.5% per annum that translates to 10.5% energy savings per annum in 2020).

Table 3 The effects of excluding EU–ETS sector for the standard energy savings approach (10.5% per annum)

year	savings to be achieved (accruing)	savings without exclusions	exclusions — max 25% cumulatively	savings after exclusions (25%)	EU–ETS industry exclusions	Savings after EU–ETS industry exclusions
	% cumulatively	TJ	TJ	TJ	TJ	TJ
2014	1.5	29 358	7 340	22 018	4 446	24 911
2015	3	58 716	14 679	44 037	8 893	49 823
2016	4.5	88 073	22 018	66 055	13 339	74 734
2017	6	117 431	29 358	88 073	17 785	99 646
2018	7.5	146 789	36 697	110 092	22 232	124 557
2019	9	176 147	44 037	132 110	26 678	149 469
2020	10.5	205 505	51 376	154 128	31 124	174 380
Total 2014–2020	**42**	**822 018**	**205 505**	**616 514**	**124 497**	**697 521**

Source: Calculations on the basis of Directive 2012/27/EU, the Commission's Guidelines and data provided by Eurostat

It follows from the analysis that under the adopted standard energy savings approach, the final energy

[5] Guidance Note: section B4, points 18 and 19.

consumption excluded from EU–ETS industry (124.5 PJ) does not result in exceeding the limit of 25% and leaves the space to apply Article 7(2)(c) and (d) of Directive 2012/27/EU and, consequently, to achieve final energy savings amounting to 81 PJ.

It is expected that under the scheme that is currently in force in Poland pursuant to the Act on energy efficiency, energy efficiency certificates, the value of which is equal to final energy savings amounting to 1.1 Mtoe, will be redeemed by the President of the URE between 1 January 2014 and 31 March 2016. Therefore, this obligation is more or less equal to the 2015 target calculated in Table 3, in the column entitled 'Savings after exclusions', which amounts to 44.037 PJ (1.05 Mtoe)[6].

3. METHODOLOGY FOR CALCULATING ENERGY SAVINGS FOR THE PURPOSES OF ARTICLE 7(1) AND (2) OF DIRECTIVE 2012/27/EU

Pursuant to Article 7(6) of Directive 2012/27/EU, Member States shall ensure that while calculating energy savings for the purposes of the target referred to in Article 7(1) and (2), the methods and principles set out in points (1) and (2) of Annex V to the Directive are applied. Member States shall put in place measurement, control and verification systems under which at least a statistically significant proportion and representative sample of the energy efficiency improvement measures put in place by the obligated parties is verified. That measurement, control and verification shall be conducted independently of the obligated parties.

Under the scheme established pursuant to the Act of 15 April 2011 on energy efficiency, the entities reporting projects aiming at improving energy efficiency for the purposes of the tender procedure shall file a duly completed tender declaration accompanied by the results of energy efficiency audit carried out for that project with the President of the URE. The detailed scope of and method for carrying out energy efficiency audit, as well as the method and procedure for its verification, are set out in the Regulation of the Minister for Economy of 10 August 2012 on the detailed scope of energy efficiency audits, template of energy efficiency audit card and on the methods for calculating energy savings (Journal of Laws 2012, item 962).

It is obligatory to carry out energy efficiency audit for a given project in order to be able to apply for energy efficiency certificate (*white certificate*). Energy efficiency audit serves to determine the basic parameters of the project aiming at improving energy efficiency, such as the annual average final energy savings and annual average primary energy savings. These parameters are recorded on the energy efficiency audit card.

The energy efficiency audit carried out before implementing a project aiming at improving energy efficiency, as regards the description of different ways of and options for implementing the project, as well as the assessment of its profitability and possible energy savings, shall include, according to the method in line with which it is carried out, in particular the following:

1) identification of ways of and options for implementing the project which are permissible from the technical and economic points of view, taking account of the application of different technologies;
2) a detailed description of the improvements planned as part of the individual ways of and options for implementing the project;
3) identification of possible energy savings together with profitability assessment with respect to each project that can be implemented, in particular the following:

[6] The following conversion factor has been applied: 1 Mtoe = 41.868 PJ.

a) assumptions adopted and sources of data used to calculate energy savings,
b) the method used to carry out data analyses, calculation methods and mathematical models applied as well as a detailed description of formulas, indicators and factors used in these calculations,
c) profitability assessment with respect to each way of and option for implementing the project, which shall include, in particular, the following: types of investment costs, current and expected fuel or energy prices that have been adopted and the expected payback time,
d) results of the calculations and conclusions drawn from these calculations as regards the optimal option for or way of implementing the project, accompanied by the list of software used to calculate energy savings.

Following the implementation of the project for which annual average energy savings exceeding 100 toe were declared, an entity that received an energy efficiency certificate shall carry out an audit confirming the energy savings achieved. In other cases (energy savings not exceeding 100 toe), an entity that received an energy efficiency certificate shall enclose a statement confirming that the project carried out is consistent with the tender declaration.

Pursuant to Article 23 of the Act on energy efficiency, the results of audits serving to confirm the achieved energy savings, as well as statements, shall be verified by the President of the URE or at the request of the President of the URE. Pursuant to the Act on energy efficiency, financial penalties (of up to EUR 2 000 000) are imposed if it is ascertained during verification that energy savings lower than those specified in the tender declaration have been achieved.

Furthermore, pursuant to the Act on energy efficiency (Article 21(5)), the President of the URE shall publish information on the energy efficiency certificates issued together with energy efficiency audit cards, which ensures that the requirement included in Article 7(8) of Directive 2012/27/EU on publishing the energy savings achieved under the scheme is fulfilled.