

THIRD REPORT ON PROGRESS ACHIEVED TOWARDS NATIONAL ENERGY EFFICIENCY TARGETS IN THE CZECH REPUBLIC

(pursuant to Article 24 of Directive 2012/27/EU on energy efficiency)

Introduction

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 (“the Directive”) establishes a common framework of measures for the promotion of energy efficiency within the Union in order to ensure the achievement of the Union’s 2020 20% headline target on energy efficiency and to pave the way for further energy efficiency improvements beyond that date. It lays down rules designed to remove barriers in the energy market and to overcome market failures that impede efficiency in the supply and use of energy, and provides for the establishment of indicative national energy efficiency targets for 2020.

Most of the detailed data is contained in the third National Action Plan for Energy Efficiency (NAPEE-III can be accessed at: <http://www.mpo.cz/dokument150542.html>).

Indicative national energy efficiency targets for the Czech Republic to 2020

The Czech Republic’s national target was first notified to the Commission in April 2014 as part of NAPEE-III, and amounted to **47.84 PJ** (= 13.29 TWh = 1,142.64 Mtoe) of total new savings on final energy consumption to 2020. With this target in mind, the measures adopted were intended to bring new savings amounting to **6.83 PJ** (= 1.90 TWh = 163.13 Mtoe). Cumulated new savings would then reach a total sum of **191.10 PJ** (= 53.08 TWh = 4 564.35 Mtoe). However, this target was calculated as a three-year average taken from 2009, 2010, 2011. Statistical data for 2012 was not available at that time and could therefore not be used to calculate the target value. The Commission was warned that this was only a preliminary value, which had not been approved by the Czech Government and which was only included in the National Reform Programme.

Following on from the publication of preliminary statistical data for 2012, a new savings target of **47.94 PJ** was calculated. Although this figure was sent to the Commission when NEEAP-III was prepared, it was not approved by the Government and had to be updated to reflect the revised preliminary statistical data for 2012.

After the revision of the 2012 data, the target value was updated to **47.78 PJ** (= 13.27 TWh = 1 141.21 Mtoe) and included in the updated NAPEE-III, which was approved by the Government in December 2014. IEA rather than Eurostat methodology was used to determine the target value. It therefore

follows from the Government-approved target that new savings of 6.82 PJ should be met each year, with total cumulated savings totalling 191.00 PJ.

The process of implementing the Directive on Energy Efficiency

After the adoption of the Directive, the Czech Republic initiated procedures for its implementation into Czech law. The Czech Republic is required to transpose the Directive by 5 June 2014.

The Directive has an extremely broad focus and its transposition into the Czech legislation has been implemented through amendments to three Acts, namely Act No. 458/2000 Coll., on business conditions and public administration in the energy sectors, Act No. 406/2000 Coll., on Energy Management and Act No. 165/2012 Coll., on subsidised energy sources.

The previous time schedule for the legislative process and the expected entry into force of the individual legal regulations:

Act No. 406/2000 Coll., on energy management

- I. The Government approved the bill and forwarded it to the Chamber of Deputies on 3 September 2014.
- II. The 3rd reading took place on 11 February 2015 at the 25th session of the Chamber of Deputies. The bill was passed.
- III. On 24 February 2015, the Chamber of Deputies forwarded the bill to the Senate. The bill was debated on 19 March 2015 at the 7th session of the Senate. The Senate returned the bill to the Chamber of Deputies with amendments.
- IV. The Chamber of Deputies voted on the bill returned by the Senate on 10 April 2015 at its 26th session and passed it.
- V. The President of the Republic signed the bill into law on 16 April 2015.
- VI. The amendment is due to enter into force on: 1 July 2015.

Act No. 458/2000 Coll., on business conditions and public administration in the energy sectors and on amendments to other Acts (the Energy Act)

- I. The Government approved the bill on 20 October 2014.
- II. The Government submitted the bill to the Chamber of Deputies on 24 October 2014.
- III. The 1st reading took place on 11 December 2014.
- IV. The 2nd reading took place on 11 March 2015.
- V. The 3rd reading took place on 10 April 2015 at the 26th session of the Chamber of Deputies. The bill was passed.
- VI. The amendment was submitted to the Senate on 21 April 2015.
- VII. Expected date of entry into force: 1 January 2016.

The effective dates of the implementing legal regulations will apply to the individual Acts.

The specific breakdown of the Directive's provisions in the Acts referred to above is contained in the individual chapters of the National Energy Efficiency Action Plan.

Several of the Directive's provisions are non-legislative in nature and these provisions are therefore implemented by non-legislative means. These include:

Article 4 – Building Renovation

A long-term building renovation strategy is one of the annexes to the National Energy Efficiency Action Plan. The strategy analyses the potential for savings in buildings in the CR, with a focus on houses, apartment blocks and other buildings that are usually inhabited. Given the diverse characteristics of the housing stock, possible savings were calculated based on stochastic modelling, which allowed aggregate simulation of the energy performance of the entire stock of buildings. To perform the evaluation, the buildings are divided into categories by type, age and size, based on statistical data obtained from the Czech Statistical Office (the Population and Housing Census of 2011). The model value for each category of 1,000 different buildings is calculated on the basis of adjusted variable parameters. The necessary input geometric parameters of the model and the limits set are adjusted so that the resulting calculated values match the statistical data provided (the dimensional characteristics of the housing stock). It is therefore expected that the results contain a smaller margin of error than if the calculation were always to contain one representative of each building category. Other input parameters for the model are subsequently adjusted according to available information on final energy consumption to ensure that the consumption calculated for the building stock as a whole in its current state generally corresponds to the actual situation (to the available statistical data), and the model is then calibrated.

The aim of the strategy is to determine the potential savings in final energy consumption in the housing stock of the CR and the investment required to achieve these savings. The model for buildings in their current state is then used to test energy-saving measures in the form of complete renovation of buildings with various energy standards.

The strategy outlines four possible scenarios which could arise as a result, highlighting the one most suitable for the achievement of the objective under Article 7.

Article 5 – Exemplary role of public bodies' buildings

The Czech Republic has opted for an alternative approach to Article 5, as notified to the Commission in December 2013. On the basis of bilateral discussions, the central government authorities for the purposes of the Directive have been identified in accordance with the procedure recommended by the Commission and making use of Annex IV to the Directive on the award of public works contracts (2004/18/EC), which contains a list of central government authorities of the Czech Republic. This represents a total of **972 buildings** owned and used by **42 bodies**:

The Security Information Service
 The Czech Academy of Sciences
 The Czech National Bank
 The Czech Mining Office
 The Czech Statistical Office
 The Czech Telecommunication Office
 The Czech Office for Surveying, Mapping and
 Cadastre
 The Energy Regulatory Office
 The Grant Agency of the Czech Republic
 The Office of the President
 The Office of the Ombudsman
 The Ministry of Transport
 The Ministry of Finance
 The Ministry of Culture
 The Ministry of Defence
 The Ministry for Regional Development
 The Ministry of Labour and Social Affairs
 The Ministry of Industry and Trade
 The Ministry of Justice
 The Ministry of Education, Youth and Sports
 The Ministry of Interior
 The Ministry of Foreign Affairs

The Ministry of Health
 The Ministry of Agriculture
 The Ministry of the Environment
 The National Security Authority
 The Supreme Audit Office
 The Supreme Court
 The Supreme Administrative Court
 The Supreme Public Prosecutor's Office
 The Chamber of Deputies of the Czech Parliament
 The Senate of the Czech Parliament
 The Administration of State Material Reserves
 The State Labour Inspection Office
 The State Office for Nuclear Safety
 The Office for the Protection of Competition
 The Industrial Property Office
 The Office for Personal Data Protection
 The Office for Government Representation in
 Property Affairs
 The Office of the Government of the Czech
 Republic
 The Constitutional Court
 The Prison Service

The MIT, in cooperation with the central government institutions involved, has drawn up a list of buildings which will be subject to the requirements set out in Article 5 (although this is not required where an alternative approach is taken to the implementation of the Article). This list of buildings was also submitted to the Czech Government for information. The MIT then drafted materials setting targets for energy savings to 2020, while at the same time determining the method of organising, financing and reporting energy savings, and submitted these to the Government. The list of these buildings, including the documents referred to above, containing an analysis of the targets set out in Article 5, can be found on the Ministry of Industry and Trade website: <http://www.mpo.cz/dokument145673.html>.

The target to comply with Article 5 of the Directive was set at **215,280 GJ** to 2020.

Buildings used by central government institutions are also required by law to submit the required data on energy consumption annually to the monitoring system so that the Czech authorities can stay up-to-date with the situation and take decisions on necessary future action.

While complying with Article 5 of the Directive, measures implemented in buildings occupied by central government institutions generated energy savings amounting to **7,243 GJ (2 012 MWh)** in 2014.

Article 7 (Article 3) – Energy efficiency obligation schemes

The CR has also opted to adopt an alternative approach to Article 7, which has been described in the document entitled “Policy measures to achieve energy savings among final customers in the Czech Republic” which was submitted to the Commission in December 2013. As set out in this document, the Czech authorities will ensure the fulfilment of the objective under Article 7 through aid schemes and financial engineering instruments. The funding will primarily be provided from operational programmes and state programmes, including a programme making use of revenue from emission allowances. Since a large proportion of these programmes focus on energy saving measures in the building sector, the savings achieved will make a significant contribution to the implementation of Article 7. This is therefore also in line with long-term strategies for building renovation, while in execution also corresponding, in essence, to the implementation of Article 7, including securing the necessary financing.

The individual measures and the expected benefits are described in detail in the National Action Plan.

The savings achieved in 2014, broken down by individual policy measure, are shown in the table below.

	Measure	2014 [TJ]
1. 1	Regeneration of high-rise pre-fabricated buildings - PANEL or NEW PANEL PROGRAMME	22.4
1. 2	Green Savings	completed
1. 3	New Green Savings 2013	50.0
1. 4	New Green Savings 2014–2020	projects under implementation
1. 5	JESSICA Programme	projects under implementation
1. 6	Integrated Regional Operational Programme 2014–2020	in preparation
1. 7	Joint programme replacement scheme	49.6
1. 8	Operational Programme Environment 2007–2013	84.5
1. 9	Operational Programme Environment 2014–2020	in preparation
1. 10	State Programmes for the promotion of energy savings and the utilisation of investment grants for renewable energy sources	7.0
1. 11	OP Prague, Growth Pole of the CR – building part	in preparation

1. 12	Operational Programme Enterprise and Innovations	441,8
1. 13	Operational Programme Enterprise and Innovations for Competitiveness	in preparation
	TOTAL	665.3

Comments:

Total benefits achieved by the individual policy measures for 2014 amount to 665.3 TJ of energy savings for final consumption. These benefits do not meet the desired savings for the phased compliance with the objectives of Article 7 of the Directive. This situation has been largely affected by the failure to begin the implementation of new Operational Programmes during the 2014 – 2020 period, which excludes funding amounting to CZK 60 billion that has been allocated through these programmes. At the same time, there is generally at least a two-year period between the announcement of individual programme calls and the completion of project implementation in construction projects, as well as complex technological measures. This means that, for example, of the projects falling under the New Green Savings 2013 programme, those that contributed savings in 2014 were mainly technological measures that could be implemented quickly. Benefits from construction projects will increase in 2015 and this will continue over time. In terms of other actions, the CR expects to initiate the implementation of structural funds in 2015, making maximum efforts to accelerate the overall process both on the part of the managing authorities and on the part of the grant beneficiaries, to ensure that it duly meets its commitments under the climate and energy policy. At the same time, a proposed uniform methodology for data collection and reporting will be submitted to the Government this year for approval, which will apply uniformly to all managing authorities carrying out policy measures. Savings achieved by all the programmes will subsequently be published in more detail. The current data collection system will be standardised and formalised.

Statistical data from the CR (retroactively updated for 2011 and 2012, 2013 added)

	unit	2011	2012	2013
Primary energy consumption	TJ	1,792,356	1,784,411	1,756,760
Total final energy consumption	TJ	1,070,243	1,060,895	1,064,051
Final energy consumption by sector:				
Industry	TJ	296,994	284,206	281,831
transport	TJ	248,879	242,320	239,285
households	TJ	250,722	255,213	263,849
Services	TJ	126,814	127,374	130,085
Gross value added by sector:				
Industry	CZK million	1,347,410	1,349,253	1,344,750
Services	CZK million	2,202,569	2,200,654	2,224,410
Disposable income of households	CZK million	2,068,417	2,090,728	2,058,614
Gross domestic product (GDP)	CZK million	4,022,410	4,047,675	4,086,260
Electricity generation from thermal power generation	GWh	53,928	51,824	50,167
Electricity generation from combined heat and power	GWh	10,498	10,443	10,540
Heat generation from thermal power generation	TJ	96,242	97,979	95,939
Heat generation from combined heat and power plants, including industrial waste heat	TJ	117,434	117,766	116,792
Fuel input for thermal power generation	TJ	639,973	618,937	598,111
Passenger kilometres	pkm million	42,863	42,723	42,523
Tonne kilometres	tkm million	71,817	68,087	71,509
population (middle class)	person	10,496 672	10,509 286	10,510 719

Historically, the Czech Republic has compiled its energy balance according to International Energy Agency (IEA) methodology, which also applies to the Updated State Energy Concept. The data provided above are therefore in accordance with IEA methodology. There are certain methodological differences between energy consumption data compiled using IEA and Eurostat methods. The Czech Statistical Office is currently reviewing the methodology used and we cannot therefore exclude the possibility of a retroactive revision and update of the statistical data.