



Audit conclusion from audit

10/31

Trading of surplus Assigned Amount Units and use of such funds received from the trading

The audit was included in the audit plan of the Supreme Audit Office (SAO) for 2010 under the number 10/31. The audit was managed and the audit conclusion drawn up by SAO Member Mr Karel Sehoř.

The aim of the audit was to scrutinise the sale of surplus assigned amount units ("AAUs") and the set-up of the *Green Savings* programme (in Czech "*Zelená úsporám*", also referred to hereinafter as the "Programme") with regard to the defined conditions and attainment of the objectives of this Programme.

The audited period was the years 2009 and 2010; the preceding period and the period until the completion of the audit were also scrutinised where relevant.

The audit was performed from September 2010 to February 2011.

Auditees:

Ministry of the Environment ("MoE");
State Environmental Fund of the Czech Republic ("SEF").

Objections to the audit protocol submitted by the SEF were dealt with by the head of the audit team by a decision on objections. The SEF did not file an appeal against the decision on objections.

The Board of the SAO, at its 10th session held on 23 May 2011, **approved** by resolution no. 8/X/2011 **the audit conclusion** as follows:

I Introduction

1. Brief description of the environment

The sale of AAUs¹ is based on the *Kyoto Protocol to the United Nations Framework Convention on Climate Change*² (the "Protocol"³), which the Czech Republic signed in 1998 and ratified in 2001. The Protocol entered into effect in 2005, once the conditions of the

¹ One AAU entitles the holder to emit one tonne of CO_{2eq} in the years 2008 to 2012; CO_{2eq} is the carbon equivalent of CO₂ (carbon dioxide), i.e. an expression of the effect of various greenhouse gas on climate change in terms of the effect of CO₂.

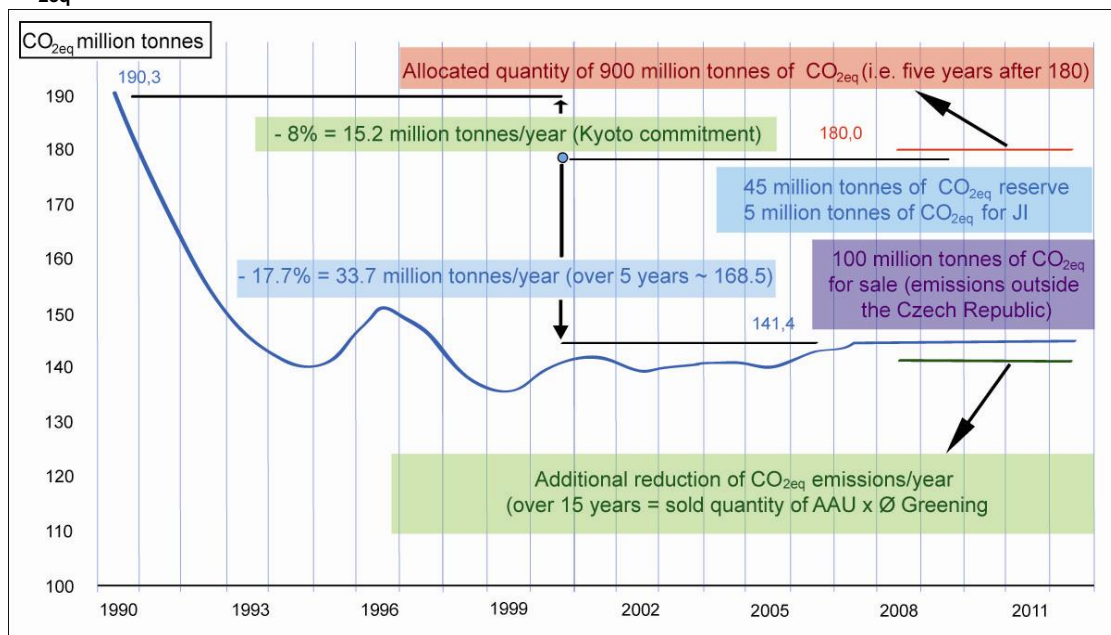
² **The United Nations Framework Convention on Climate Change** adopted in Rio de Janeiro in 1992 defined general standpoints on climate change (hereinafter the "Framework Convention").

³ **The Kyoto Protocol** adopted on 11 December 1997 allows trading in AAUs. The quantity of AAUs allocated to a particular country is based on the emissions savings targets specified in Annex B. The Protocol expires at the end of 2012.

agreement were satisfied⁴. This is a binding multilateral international treaty obliging the signatory states to monitor emissions of greenhouse gases and reduce the average volume of emissions in the years 2008 to 2012 by at least 5% compared to the level in 1990.

Annex B to the Protocol obliges the Czech Republic to reduce the average volume of greenhouse gases, converted to CO_{2eq} units, by 8% in the years 2008 to 2012. In 2008 the Czech Republic reduced the quantity of greenhouse gases by 25.7% compared to the reference state in 1990. Meeting this commitment provided the Czech Republic with savings of 17.7%, which it decided⁵ to sell under the terms of Article 17 of the Protocol by means of the international emissions trading (“IET”) mechanism⁶. In 1990 the Czech Republic had emitted 190.3 million tonnes of CO_{2eq}.

Chart 1: Emissions balance of the Czech Republic in the years 1990-2008 and volume of CO_{2eq} for sale



Source: “Green Savings” programme – programme document from 8 March 2009, Czech Hydrometeorological Institute.

900 million tonnes of AAUs were allocated to the Czech Republic for the years 2008 to 2012. The surplus is thus around 150 million AAUs (see Chart 1). After deducting the obligatory 5% of the allocated quantity as a reserve and around 5 million AAUs for the “joint implementation mechanism”⁷, 100 million tonnes of tradable AAUs were left to the Czech Republic.

The *Green Investment Scheme* (“GIS”), an initiative of the countries involved in the IET, is designed to promote further reductions in greenhouse gas emissions. The goal of the GIS is to ensure at the level of individual states that AAUs are linked to concrete emission reduction

⁴ **Ratification** by at least 55 countries, of which Annex I countries emitted in 1990 at least 55% of their total greenhouse gas emissions. In 2004 the Protocol was ratified by 132 countries, 37 of them Annex I countries emitting 61.6% of the emissions of Annex I countries. In 2005 it was 193 countries with 63.7% of the emissions.

⁵ **Government resolution no. 44 of 17 January 2007** on *The Government’s Programme Declaration*, Act No. 695/2004, on the conditions for trading with greenhouse gas emissions allowances and amending certain acts, following up Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emissions allowance trading within the Community and amending Directive 96/61/EC.

⁶ **The Protocol permits three application mechanisms:**

- Joint Implementation (JI);
- Clean Development Mechanism (CDM);
- International Emission Trade (IET).

projects⁷. In the Czech Republic the *Green Savings* programme was devised on the GIS principles.

2. Specification of auditees

The **MoE** is the central government body and body of supreme state oversight in environmental matters. According to the Act No. 695/2004, on the conditions for trading in greenhouse gas emissions allowances and amending certain acts, AAUs are the property of the Czech Republic managed by the MoE. The laws governing the management of the Czech Republic's assets do not apply to the management of these assets.

The **SEF** was established by Act No. 388/1991, on the State Environmental Fund of the Czech Republic. Act No. 695/2004 provides that funds obtained from the sale of AAUs form part of the SEF's revenues; these funds may only be used to promote activities and actions leading to reductions in greenhouse gas emissions. To this end the SEF administers the *Green Savings* programme.

3. Aims of the audit

The audit sought to assess whether the AAU sales system had brought the biggest possible quantity of funds and whether the funds thus acquired (the "funds") were used economically, efficiently and effectively in the Programme.

When assessing economy the SAO scrutinised whether the cost of administering and promoting the Programme were minimised. When assessing efficiency the SAO scrutinised whether the emissions reduction was achieved at the lowest possible cost. When assessing effectiveness the SAO scrutinised whether the expected emissions reduction was achieved by the Programme.

The audit examined the way the AAU sales system was set up and the results attained, the management of funds obtained from sales of AAUs, the way the Programme was set up, how it was managed and administered, the way the system was set up and how the attained results and benefits were evaluated. The audit did not scrutinise appropriations allocated to beneficiaries.

The audit focused solely on the area concerning the IET mechanism; it did not deal with the mechanism of the European system of emissions trading (EU ETS)⁸. The audit did not seek to judge the point and purpose of the Protocol.

NB: All the legal regulations referred to in this audit conclusion are applied in the wording effective for the audited period. Prices in the audit conclusion are given including VAT, unless specified otherwise.

⁷ The symbol CO₂ is used hereinafter in the text of the audit conclusion.

⁸ **EU ETS** (European Union Emission Trade Scheme) – an instrument by which EU countries fulfil the obligations placed on them by the Protocol. According to the MoE website, 394 Czech industrial enterprises are engaged in the system in the Czech Republic; 86.8 million tonnes of CO_{2eq} per annum was allocated to them in the years 2008 to 2012.

II Audit findings

1. Acquisition of funds for the purposes of the Programme and use of such funds

1.1 Use of AAUs

The proposed procedure for AAU trading and for the use of funds obtained from the sale of AAUs was discussed by the government, which officially took note of the procedure⁹. The estimated revenues were close to CZK 25 billion. The MoE subsequently began preparations for trading and negotiating with potential buyers. The Czech Republic, represented by the MoE, concluded its first AAU sales contract on 30 March 2009. Eleven contracts in total had been concluded up to 31 December 2010. Based on these contracts, AAUs were sold both to other states and to private foreign entities.

The MoE put in place the kind of preconditions for preparing and executing trading that would lead to the attainment of the anticipated proceeds in the conditions of international AAU trading.

As of 31 December 2010 the MoE had sold 85.75 million of the total quantity of 100 million AAUs earmarked for sale. The average price of one sold AAU and the quantity sold come close to the results envisaged prior to the start of trading. In the audited period the Czech Republic was the most successful seller of surplus emissions on the international emissions market in terms of the quantity of AAUs sold.

1.2 Use of funds obtained from sales of AAUs

Some of the contracts concluded with AAU buyers allow for the provided funds to be increased in value further by means of term deposits under defined conditions. The steering committee of the *Green Savings* programme (see Section 2.2 of this audit conclusion) approved the SEF's proposal for the banks cooperating in administration of the Programme to take part in increasing the value of the funds. When deciding on the size of the sums to be divided between cooperating banks from the earmarked funds, additional criteria over and above the framework of the contractual conditions with AAU buyers were used. The upshot was that the significance of the interest rate as the decisive criterion for maximising yields was diminished.

In the period from 1 January to 17 February 2010 the SEF left funds worth CZK 6 billion in a Czech National Bank account to accrue interest. An audit calculation found that the yield attainable (at the lowest commercial interest rate on the market) on these funds was thus reduced by at least CZK 3.6 million.

The SEF did not secure the maximum possible increase in the value of the funds it obtained from selling AAUs.

2. Set-up and management of the Programme

2.1 Set-up of the Programme

On 17 January 2007 the Czech government adopted resolution no. 44 declaring that a programme intended to achieve energy savings in flats and houses and in administrative and public buildings would be financed out of the proceeds from the sale of AAUs. It was envisaged that financing under the Programme should be accessible, without any major

⁹ Government resolutions no. 1280 of 14 November 2007 and no. 1524 of 1 December 2008.

changes in the conditions, to all applicants throughout the Programme's duration, or until the Programme's funds had been exhausted.

In line with the Protocol the Programme's duration is limited to 31 December 2012; the allocation of funding was determined by the quantity of funds obtained from the sale of AAUs. The *Programme Document* for the *Green Savings* programme, dated 8 March 2009 (the "Programme Document"), envisaged revenues of up to CZK 25 billion, a price per AAU of approx. EUR 10 and a reduction in CO₂ emissions of 18.2 tonnes over the following fifteen years.

In the Programme Document the MoE (in collaboration with the SEF) defined five strategic objectives for the Programme:

- "1) In the IET make use of the reduction in national greenhouse gas emissions that is a consequence of the constant improvement in the energy efficiency in the Czech economy in the 1995-2008 period.*
- 2) Invest the acquired funds in measures and programmes with a high potential for reducing emissions (maximising greening¹⁰) and in accordance with the national targets for sustainable development.*
- 3) Minimise the transaction and administrative costs of financing the said programmes and measures.*
- 4) Ensure the projects executed under the GIS are sustainable, i.e. achieve a long-term reduction effect lasting substantially beyond 2012.*
- 5) Maximise the social, economic and environmental effects of the GIS in the Czech Republic, above all improving the quality of housing, improving family budgets in particular for lower income categories, creating jobs in the small and medium-sized enterprise sector and reducing local air pollution by SO₂, NO_x and PM₁₀¹¹."*

In March 2009 the environment minister (the "minister") approved the Programme's focus and goal¹². According to this document the Programme's goal was to support selected measures leading to an immediate reduction in carbon dioxide emissions in the households sector and to kick-start a long-term trend of sustainable housing. Implementation of the Programme was also intended to bring a reduction in the concentration of airborne dust particles and to reduce emissions of other pollutants; to create or preserve jobs; to reduce the Czech economy's energy dependence; and to cut Czech household expenditure on heating energy.

In connection with the approved document the Programme was specified by a MoE directive of 3 April 2009 which defined four areas of support:

- A – heating energy savings;
- B – passive building construction;
- C – use of renewables for heating and hot water;
- D – appropriation bonus for selected combinations of measures.

The Programme was intended for the owners of houses and non-prefab apartment buildings. In support area C the owners of prefab apartment buildings could also apply.

¹⁰ **Greening** represents an additional saving of greenhouse gas emissions. It is expressed as a ratio of **1 : x**, where **x** shows how many AAUs are required for an additional saving of one tonne of CO₂ emission. The savings monitoring period was set at 15 years for the purposes of the Programme.

¹¹ **SO₂** – sulphur dioxide, **NO_x** – nitrogen oxides, **PM₁₀** – *particulate matter* (airborne dust with particles smaller than 10 micrometres).

¹² In the document entitled *Programme of Support for Renewable Sources and Energy Savings in the Field of Housing from Emissions Credits – "Green Savings" Programme*.

The support areas and the conditions for funding under the Programme were modified by two further directives:

- MoE directive of 13 August 2009 widened the set of support area A beneficiaries to include applicants for support for prefab apartment buildings and introduced a new support area E – appropriations for the preparation and implementation of supported measures under the Programme.
- MoE directive of 17 June 2010 introduced a new support area F – energy savings in public-sector buildings. In this support area the acceptance of applications was limited to the period from 1 July to 31 August 2010 and the maximum support allocation was set at CZK 4 billion.

Expenditure on the administration and promotion of the Programme was covered out of the Programme's technical assistance ("TA"). TA was limited to 5% of the funds obtained from AAU sales and from the interest on deposits of such funds.

The Programme was set up in line with the contracts concluded with AAU buyers. Apart from those for support area F, no other time or quantity restrictions were defined.

2.2 Management of the Programme

The following management structures were involved in managing the Programme:

- The Programme steering committee ("Steering Committee") was defined by the statute as the supreme body of the Programme responsible for implementation of the Programme. The Steering Committee's work included defining the conditions of the Programme, the overall management of the Programme and coordinating its implementation. The members of the Steering Committee were appointed by the minister; they were representatives of the MoE, the SEF and the Council of the State Environmental Fund of the Czech Republic.
- The Programme monitoring committee ("Monitoring Committee") was charged by the statute *inter alia* with overseeing the effectiveness and quality of the implementation of the Programme. Based on analyses of the results of the implementation of the Programme the Monitoring Committee could propose changes to the Steering Committee. The members of the Monitoring Committee were appointed by the minister; they were representatives of the MoE, the SEF, the Chamber of Deputies and Senate of Parliament of the Czech Republic, one representative each from the Office of the Government of the Czech Republic and from four selected ministries, and representatives of NGOs.

Proposals for support provision were discussed by the Council of the State Environmental Fund of the Czech Republic (an advisory body to the minister), which then recommended applications worthy of support to the minister, under whose authority decisions of the provision of SEF finances fall.

3. Promotion and administration of the Programme

The SEF promoted the Programme on the basis of action plans and one-off projects and activities. **These, however, did not influence interest among potential applicants in a way that would encourage the regular drawdown of Programme finances in the envisaged scope and in specific support areas.**

The following were the principal aspects of Programme administration:

- administering applications;
- monitoring and regularly assessing the Programme;
- checking approved and implemented applications.

As of 21 January 2011 the SEF had drawn almost CZK 392 million on Programme promotion and administration, which was around 39.8% of the total sum earmarked for TA. The SEF did not monitor TA costs in the structure specified by the MoE directive.

On multiple occasions the SAO audit encountered problems with incomplete or missing documentation on the part of the SEF.

3.1 Administration of applications

The administration of applications was handled by the regional offices of the SEF with five banks selected by public tender. During the preparation of the Programme it was expected that as many as 250,000 applications would be lodged. Contrary to expectations, the total number received up to the suspension of acceptance of applications on 29 October 2010 was just 78,774.

The key work for applications administration was that of the SEF regional offices, but they were insufficiently equipped both in personnel terms (the number of employees was only increased during the Programme) and in terms of expertise (the new employees were not trained properly). The cooperating banks handled the administration of applications only in a restricted extent. Contrary to the original objective, the SEF thus did not secure the entire administration through the banks.

The registration process for incomplete applications took a long time. The MoE directive made it possible for applicants to provide additional documentation for applications in support areas A, B and C but did not set a time limit for this.

In the support area for which project documentation was first examined separately no time limit was set for applicants to apply for registration in the Programme's information system ("GIS IS").

The MoE directive did not set time limits for the individual administrative actions in support areas A, B and C. The time limits for registering applications in the GIS IS were defined in internal documents but were not complied with:

- the time limit for registering received applications in the GIS IS was set at 10 days for banks. The average time it took banks to register applications was 22.4 days from the day of receipt. Almost 30,000 applications were registered by the banks within a time bracket of 11 to 30 days from receipt; another 12,000 applications between 31 and 60 days from receipt.
- no time limit for registering received applications in the GIS IS was set for the SEF. The average number of days its regional offices took to register applications was 48.6 days from receipt.

The delay in registering applications meant that at any given moment the GIS IS did not provide a complete picture of the Programme's substantive and financial development.

Applicants were not informed about how far the processing of their applications had progressed and when they would be notified about the possible allocation of support.

To minimise administration costs, no assessment criteria were defined. Banks performed the administration of applications for a fee, which, based on the price offered for the administration of one application, ranged from CZK 500 to CZK 1,725.50. As of 31 December 2010 the average cost of administering one application by the banks was CZK 1,443.88. No figure was put on the cost of a regional office's administration of one application, making it impossible to compare costs.

3.2 Monitoring and regular assessment of the Programme

Monitoring of the Programme did not provide interim information about the development of the Programme's parameters (e.g. drawdown of funds) and the attainment of its goals. The values of the achieved CO₂ emissions savings and the volume of heat generation from renewables were monitored by the SEF at yearly intervals for the requirements of drawing up the annual report on the Programme. **The SEF did not monitor at all the extent to which the Programme's benefits for which no unequivocal target values were set were achieved** (see Section 2.1 of this audit conclusion).

The monitoring systems used as the basis for monitoring and reporting the Programme's financial development were not defined by the SEF in conjunction with an external contractor until April 2010, i.e. a year after the Programme's launch. The SEF supplied the contractor with the data for drawing up regular reports and the methodology for drawing up the reports. The submitted reports comprised the cumulative sum of the supplied data and did not offer any value added. Weekly reports for the period from August to October 2010 were presented for the SAO audit. The SEF paid CZK 168,000 for the reports. **The money spent by the SEF on the drawing up of reports by the external contractor was not spent economically.**

3.3 Checking of approved and implemented applications

The contractual terms agreed with the providers contain an obligation to perform checks of a sample of at least 5% of the supported projects. As of 31 December 2010 the SEF had performed just 21 checks of compliance with the Programme's conditions by appropriation beneficiaries, which represents 0.06% of the total number of 35,433 applications approved by the minister by that date. Yet any money returned on the basis of inspections of appropriation beneficiaries may be reused for the purposes of the Programme. Given the length of time required for the specified number of checks and the time limit for the use of the returned funds, however, there is a risk that returned funds would not be used, which would lead to inefficient use of the funds.

3.4 Audited public tenders linked to administration of the Programme

3.4.1 Public contract for the GIS IS

In total three public contracts were awarded in connection with the creation, launch, operation, maintenance and adjustment of the GIS IS. These tenders led to the conclusion of four contracts with one contractor. The audit found that the tender organiser split the subject of the contract into three public tenders, thus reducing the envisaged value of the public tender in a way meaning it did not have to award the contract as a single whole by open procedure. The total cost of the GIS IS was CZK 9,641,118.20. **By proceeding in this way the SEF violated Section 13 (3) of Act No. 137/2006, on public contracts.**

The calculation of appropriations for applicants in support area A was based on floor space data as registered in the GIS IS. The GIS IS did not make it possible to enter all the data necessary for calculating the size of floor space correctly; the appropriation calculation methodology was modified in the course of the Programme. As of 31 December 2010 various kinds of changes had been made affecting 19,443 applications in the GIS IS; of that number, the amount of the appropriation approved by the minister was changed in the case of 736 applications (this did not exceed the limits approved by the minister, however). **The GIS IS did not provide reliable interim information about the correct appropriation amount in all cases.**

In relation to the Programme's main objective as ensuing from the Protocol the GIS IS did not make it possible to calculate the expected CO₂ emissions savings or greening. Although these functions were mentioned in the contract with the system contractor as one of the fundamental requirements, **the price for creating the GIS IS was not reduced for the failure to fulfil this requirement and the SEF paid the contractual price in full. The way the SEF proceeded in procuring the GIS IS resulted in uneconomical expenditure.**

3.4.2 Public contract for application administration services performed by the banks

Based on a tender for services consisting in the provision of banking services and related administrative work for the provision of appropriations from the Programme the SEF concluded a framework contract with five selected banks. The total final value of the public contract was CZK 100 million excluding VAT. The framework contract specified that the individual public contracts awarded according to Section 92 of Act No. 137/2006 would be awarded to the banks on the basis of "mini-tenders".

The SEF staged a total of six mini-tenders; the fifth was later annulled. Audit of the tender process found the following shortcomings:

- the criterion of "economic advantageousness" opted for in the third mini-tender did not guarantee the economically most advantageous implementation of the public contract; the "reaction time" criterion that assessed bids according to the time required to commence the administration of applications had a weighting of 90%. The SEF selected a bank that offered the immediate commencement of administration. The second best offer proposed beginning the administration within one hour of being so requested. The selected bank's price for the administration of one application was CZK 238 higher than the second best offer. However, the SEF did not conclude the administration contract with the selected bank until almost a month after the award of the public contract, which cast the elected criterion into doubt;
- the criterion of economic advantageousness opted for in the fourth and sixth mini-tenders did not guarantee the economically most advantageous implementation of the public contract. The assessment criterion of "availability of financing for applicants" with a weighting of 80% made no allowance for the relationship between the utility value and the price of the contract. As a result, the economic advantageousness criterion gave no indication of the economy and efficiency of the actual process of the administration of applications through the selected bank at the SEF's expense;
- the assessment of candidates' bids in the sixth mini-tender was not transparent within the meaning of Section 6 of Act No. 137/2006, as the SEF did not assess the criteria in the order in which it had itself, as the tender organiser, defined and did not specify in advance the way assessment would be performed if more than one product was offered. Receiving differently structured bids then made assessment more difficult.

In each of the five performed mini-tenders the SEF defined different assessment criteria in order to involve in the administration all five banks it had concluded a framework contract with. **In the case of the third, fourth and sixth mini-tenders it failed to demonstrate that the public contracts were economically advantageous.**

3.4.3 Public contract for the creation of an audiovisual work

When selecting a contractor the SEF applied an exemption under Section 18 (1) (h) of Act No. 137/2006 and awarded the public contract without tender proceedings. It failed to document the grounds for invoking the exemption. It paid a total of CZK 12,192,119 for the creation of an audiovisual work in the form of three commercials and an advertising message and for provision of a licence. **The SEF did not make use of the possibility of verifying the economic advantageousness of the contractor's offer by holding a tender and thus ensuring economical use of funds.**

4. Development of the Programme

The *Green Savings* programme was announced on 7 April 2009. After the Programme's launch the Steering Committee repeatedly discussed proposals for the kind of changes that would increase interest among applicants and consequently result in greater drawdown. On 1 September 2009 the Programme's support area A was widened to include prefabricated apartment buildings without any financial or time limits being imposed on the support. In the middle of 2010 the Programme was widened to include support for projects designed to achieve energy savings in public-sector buildings. Based on the sharp rise in the number of applications for insulation improvements for prefab apartment buildings the minister decided to suspend the acceptance of applications lodged by this type of applicant as of 24 August 2010.

CZK 18.35 billion was obtained from the sale of AAUs as of 22 September 2010. At the same time the expected volume of funding for the accepted applications and TA costs reached CZK 21.5 billion. The Programme's disposable funds thus did not cover the full expected volume of funds in the lodged applications. The value of the applied-for appropriations was rising by approximately CZK 400 million a week at that time. Nevertheless, with the minister's assent the Steering Committee decided to suspend the acceptance of applications in all measures, deferred for five weeks.

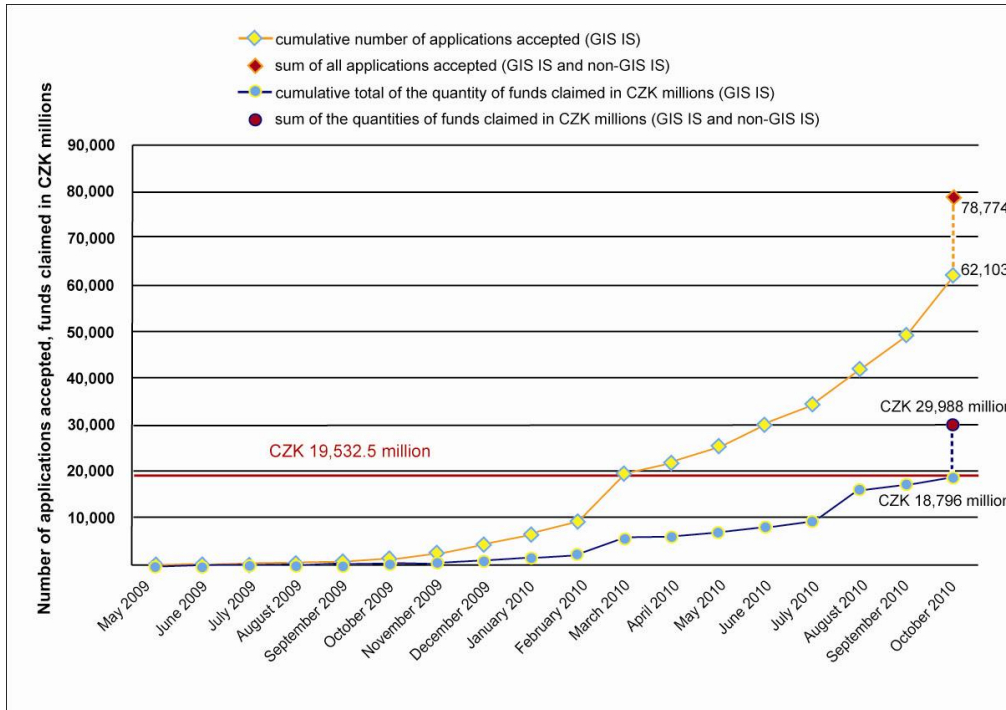
The Monitoring Committee, which was charged with supervising the implementation and evaluation of the Programme, did not meet from 14 June 2010 until the completion of the audit and thus failed to concern itself with the development of the Programme.

The acceptance of applications was suspended by decision of the minister as of 29 October 2010; potential applicants were informed of the suspension of acceptance of applications five days in advance. Up to the completion of the SAO audit on 28 February 2011 the MoE had not decided how to proceed with regard to the approval of funding under the Programme.

4.1 Financial development of the Programme

The development of acceptance of applications was not evenly spread over the course of the Programme: a month-on-month comparison shows marked fluctuations in consequence of the changes adopted.

Chart 2: Cumulative total of applications and volume of funds claimed

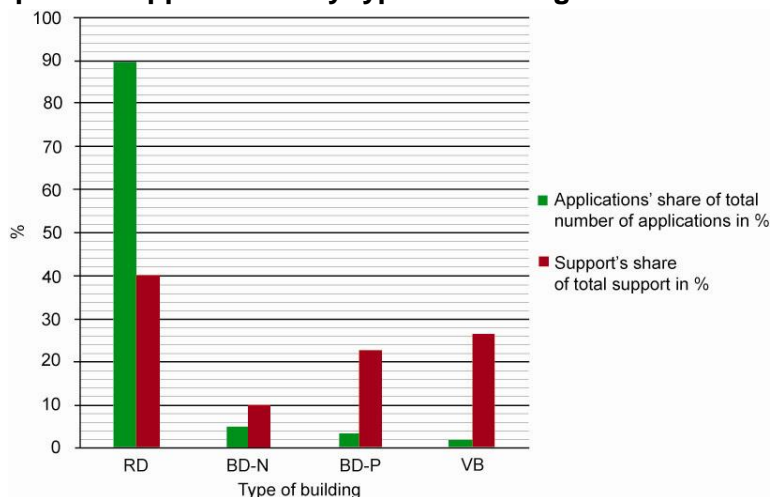


Source: SEF information from 12 January and 18 February 2011.

NB: The red line shows the total volume of funds obtained for the Programme from AAU sales as of 31 December 2010. The number of applications and volume of funds requested is based on data provided by the SEF as the state as of 31 December 2010. The data may change after completion of the SAO audit.

The chart shows clearly that the volume of funds requested is much higher than the available resources obtained from AAU sales. After adding TA costs of approximately CZK 392 million the Programme's total costs amount to CZK 30.38 billion. As CZK 19.53 billion was obtained from the sale of AAUs as of 31 December 2010, **the total volume of requested funds not covered by AAU sales was more than CZK 10.5 billion.**

Chart 3: Applications registered in the GIS IS as of 31 December 2010 and appropriation applications by type of building



Source: data set provided by the SEF for the period from the start of Programme implementation to 31 December 2010.

Key: SH – single houses; AB-N – apartment buildings (non-prefabricated); AB-P – apartment buildings (prefabricated); PB – public-sector buildings.

The Programme was originally designed to support the owners of single houses and apartment buildings. The support was gradually broadened to include prefab apartment buildings and public-sector buildings. The above chart reveals that the volume of appropriations applied for by the latter two types of applicants who were incorporated into the Programme at a later date accounts for almost half of the total volume applied for. Yet these applications do not even account for 7% of the total number.

4.2 Substantive development of the Programme

The principal declared goal of the Programme, which ensues from the Protocol and contracts concluded with the buyers of AAUs, is reducing CO₂ emissions. The declared values of expected emissions reductions varied (18.2 million tonnes of CO₂, 16.4 million tonnes of CO₂, 11.7 million tonnes of CO₂), whereby with the exception of two contracts concluded with one buyer these target values were not specified as binding. **Consequently, after the Programme's end it was possible to evaluate the achieved reduction in CO₂ emissions only in relation to differing, non-binding expected values.**

The GIS IS did not make it possible either to monitor emissions reductions or to calculate greening, so the MoE arranged for these values to be monitored in another way.

At the time of the SAO audit, data on the expected reduction in emissions were available for just 55,099 applications registered as of 31 December 2010 in support areas A, B and C (hereinafter "Registered Applications"). In total 78,774 applications had been accepted at that time. The total expected emissions reduction for Registered Applications for 1 year is 582,000 tonnes of CO₂, i.e. 8.73 million tonnes of CO₂ for a period of 15 years. Almost 54% of the total expected emissions reductions are supposed to be achieved in support area A, which comprises the largest number of applications.

The conditions for selecting applications that will be supported under the Programme had not been categorically defined for support area F by the end of the SAO audit. For that reason this support area was not factored into the calculation of the total volume of expected CO₂ emissions reductions.

The absence of information on the expected emissions reductions in the case of certain accepted applications makes it impossible to assess what CO₂ emissions reductions were achieved in the audited period.

5. Assessment of efficiency in attaining goals

The SAO assessed the efficiency of attaining the Programme's goals in terms of achieving CO₂ emissions reductions as the Programme's main objective and in terms of achieving energy savings. The absence of relevant data and assessment methodologies made it impossible to judge how efficiently the Programme's other benefits were achieved (see Section 2.1).

5.1 Efficiency in achieving CO₂ emissions reductions

In all contracts with AAU buyers greening values were defined for individual measures and types of applicants. Greening is an indicator of the efficiency of investments in CO₂ emissions reductions. The MoE directive governing the conditions for applications submitted by the owners of houses and apartment buildings did not define the criteria for assessing the effectiveness of applications in terms of the ratio between the size of the appropriation and the expected CO₂ emissions reduction. The SEF therefore took no account of the greening value of the submitted applications and accepted applications solely on the basis of the

satisfaction of the substantive and technical parameters specified by the directives. In some cases the appropriation accounted for 90% of the total investment.

The fact that no greening value was defined as a criterion for assessing applications means that there are significant differences in greening values between applications. Applications that did not achieve the required value were compensated for by applications from other applicants that displayed a high level of efficiency. The aggregate greening values thus correspond to the expected total values.

The efficiency of achieving CO₂ emissions reductions could have been greater if greening assessment criteria had been defined for the selection of applications from the owners of houses and apartment buildings. Greater CO₂ emissions reductions could thus have been achieved at the same cost.

5.2 Cost of reducing CO₂ emissions

Based on a sample of 21,713 applications which were approved by the minister as of 31 December 2010 and for which data on total investment costs had been entered in the GIS IS, the SAO's audit calculations determined the cost of reducing CO₂ emissions by one tonne and of saving one KWh of energy for heating. This set of applications is hereinafter referred to as "Approved Applications".

Table 1: Efficiency of reducing CO₂ emissions for 1 year (Approved Applications)

Support area	2009			2010		
	Total investment costs	Appropriation	Appropriation as a percentage of total investment costs	Total investment costs	Appropriation	Appropriation as a percentage of total investment costs
	CZK / 1 tonne of CO ₂		(%)	CZK / 1 tonne of CO ₂		(%)
A	55,804	35,291	63	56,087	35,263	63
B	1,067,909	147,521	14	756,211	103,176	14
C	13,901	6,372	46	14,903	7,485	50

Source: data set provided by the SEF for the period from the start of Programme implementation to 31 December 2010; SAO calculation.

With appropriations set up in this way, reducing CO₂ emissions by one tonne is most efficient when the appropriation is invested in the use of renewables (support area C). For the year 2009 investments for this purpose were 5.5 times more efficient than appropriations channelled into insulation for buildings (support area A) and 23 times more efficient than appropriations towards passive building construction (support area B). Support for passive building construction was justified in the Programme's set-up as promoting long-term trends of sustainable housing.

In addition, based on its own calculations the SAO estimated the cost of reducing CO₂ emissions by one tonne for the Registered Applications (55,099 applications).

Table 2: Efficiency of the Programme in reducing CO₂ emissions (Registered Applications)

Commodity	Emissions in 2008	Reduction in CO ₂ emissions			Volume of appropriations requested	Cost of reducing CO ₂ emissions by 1 tonne over a period of 15 years
		1 year		15 years		
	(million tonnes)	(million tonnes)	(%)	(million tonnes)	(CZK billions)	(CZK)
CO ₂	141.4	0.582	0.41	8.73	13.912	1,594

Source: data set provided by the SEF for the period from the start of Programme implementation to 31 December 2010; Czech Hydrometeorological Institute; SAO calculation.

On the assumption that support was granted to all Registered Applications and that the supported projects are sustainable for 15 years, the cost of reducing CO₂ emissions by one tonne was CZK 1,594. The proceeds gained from selling one AAU (i.e. the equivalent of one tonne of surplus CO₂ emissions) were on average EUR 9 during the audited period, i.e. approximately CZK 225¹³. **One tonne of surplus CO₂ emissions was thus sold for a price seven times lower than the expenditure from the appropriation on the CO₂ emissions reduction of the same quantity.**

5.3 Cost of achieving energy savings

It is not possible to compare the costs of saving one kWh between the various support areas or to ascertain other indicators of the efficiency of spending (e.g. return on investments etc.). In the case of the Approved Applications the SEF presented data on energy savings solely for support area A (9,203 approved applications).

Table 3: Expected cost of saving one kWh of energy for 1 year (Approved Applications, support area A)

Proportional indicator	2009	2010
	CZK / 1 kWh	
Cost amounting to the energy-saving appropriation	13.58	13.45
Cost amounting to total investment costs on energy saving	21.48	21.39

Source: data set provided by the SEF for the period of Programme implementation up to 31 December 2010; SAO calculation.

The SAO also estimated the cost of achieving one kWh energy saving for the Registered Applications in support area A (27,865 applications).

¹³ At average exchange rate of EUR 1 = CZK 25.

Table 4: Efficiency of the Programme in terms of achieving energy savings (Registered Applications, support area A)

Commodity	Total consumption in the Czech Republic in 2008	Energy saving			Volume of appropriations requested	Cost of saving 1 kWh for a period of 15 years
		1 year		15 years		
	(GWh)	(GWh)	(%)	(GWh)	(CZK billions)	CZK / kWh
Energy	316,796	794.5	0.25	11,917.5	11.594	0.97

Source: data set provided by the SEF for the period of Programme implementation up to 31 December 2010; Czech Statistical Office data; SAO calculation.

On the assumption that support was granted to all Registered Applications in support area A and that the supported projects are sustainable for 15 years, the cost of achieving a 1 kWh energy saving was CZK 0.97.

Area B of the appropriations programme entitled *State Programme to Support Energy Savings and the use of Renewable Energy Sources*, which was announced by the MoE and administered by the SEF up to 2009, focused on supporting investments in the use of renewables. The SAO could not perform a comparison of the data from the two programmes because the SEF did not possess a calculation methodology or even comparable data.

6. Certain comparative indicators stemming from the findings

6.1 The Programme's contribution to the implementation of the national energy savings plan

Achieving energy savings in households, specifically by improving the heat insulation properties of apartment buildings and cutting the consumption of energy for heating them by as much as 30% by 2030 (compared to 2005) is one of the targets defined in the *Updated State Energy Concept of the Czech Republic* from 2010. Implementing the *National Energy Efficiency Action Plan*, among other things, is intended to achieve this goal. The indicative energy-saving goal defined by this document for the households sector comprises 30.5% of the overall target. For 2010 it was set at 914 GWh; in 2016 it is supposed to attain 6,048 GWh.

Data on energy savings from Registered Applications in area A were used to assess the Programme's contribution to the implementation of the national energy savings plan in the households sector. The total expected energy saving contained in these applications is 794.5 GWh. It is reasonable to assume that after factoring in the planned energy savings stated in the Registered Applications in support areas B and C the energy savings would exceed the planned target value defined in the *National Energy Efficiency Action Plan*. If support is awarded to all the Registered Applications, the planned saving in the entire households sector up to 2010 would be achieved by the Programme alone.

In the event of linear growth up to the target value in 2016 around 30% of the planned energy savings would be covered by the Programme.

6.2 Size of living area in applications submitted to the Programme

As of 31 December 2010 there were 46,258 registered applications in the GIS IS with "single house" as the indicated building type for which a figure relating to floor space before implementation of the measure was given.

It was found from Czech Statistical Office¹⁴ (“CSO”) data relating to the average size of living space in single houses that, on the assumption that support was granted to all the said applications, the measures were more frequently implemented in buildings with an above-average living area. The average floor area of a single house before the measure was 184.3 m². Houses with above-average floor area made up almost 60% of all accepted applications. It was not possible to verify whether the structure of applicants is connected to the Programme’s fifth strategic goal (see Section 2.1 of this audit conclusion), and above all whether it corresponds to the lower income category. Comparison of the sum of these values with CSO data showed that, on the assumption support was awarded to the said applications, the Programme would affect around 8.4% of the total living area of permanently inhabited houses in the Czech Republic.

6.3 Value of generated investments

From the data in Table 1 the SAO found that implementation of the projects generated various amounts of additional investments out of applicants’ resources; the amounts depended on the type of project.

When the ratio between the appropriations awarded and the total investment costs are compared, the most efficient area of support is passive building construction (support area B). In 2009 one Czech koruna of provided funding generated further investment worth CZK 6.20 by the support beneficiary¹⁵. One Czech koruna of an appropriation spent on improving heat insulation for buildings (support area A) generated just CZK 0.60 of further investment; the same amount channelled into projects in the use of renewables (support area C) generated CZK 1.20 of further investments.

Passive building construction projects accounted for less than 1% of the total number of applications accepted in support areas A, B and C. Projects to improve the heat insulation of buildings made up almost 56% and projects for the use of renewables more than 43% of the total number of applications accepted.

III Summary

The Programme was announced in April 2009 and its implementation is due for completion on 31 December 2012. Acceptance of applications for the Programme was suspended on 29 October 2010. The MoE secured **resources for the Programme** through the sale of surplus AAUs, whereby both the amount sold and the average price per one AAU sold were close to what had been expected when the Programme was being prepared. In the audited period the MoE acquired CZK 19,532,407,930 from sales of AAUs, while the total requested in the accepted applications amounted to almost CZK 30 billion. The shortfall not covered by AAU sales was therefore approximately CZK 10.5 billion.

The Programme’s goal was to reduce CO₂ emissions and to kick-start a long-term trend for sustainable housing among the owners of houses and non-prefabricated apartment buildings. The target values were not defined as binding in most of the contracts with buyers of AAUs and in the programme documents. It was only possible to assess whether the targets were reached in relation to the envisaged different and predominantly non-binding values. **Progress towards the goal was meant to be monitored via the GIS IS, but that did not make it possible;** the MoE therefore arranged for the monitoring of the interim

¹⁴ Census of People, Houses and Flats as of 1 March 2001.

¹⁵ The proportion was calculated as the ratio between the values in the *Total investment costs* and *Appropriation* columns; the result was reduced by CZK 1 so that it was possible to show the ratio between CZK 1 of appropriation and the quantity of additional investment generated.

results in a different way. The target values of the Programme's expected benefits (i.e. reducing the concentration of airborne dust particles and reducing emissions of other pollutants; creating or preserving jobs; reducing the Czech economy's energy dependence; and cutting Czech households' expenditure on energy for heating) were not defined categorically and progress towards these goals was practically not monitored at all.

The MoE directives governing the conditions for applications submitted by the owners of houses and apartment buildings did not define the **criteria for assessing the efficiency** of applications in terms of the ratio between the size of the appropriation and the expected CO₂ emissions reduction. Consequently, maximum efficiency in pursuing the Programme's main objective was not achieved.

The process of administering applications was not continually monitored and assessed; the SEF failed to respond appropriately to the process's weak points. Selected banks were engaged to increase capacity for the administration of applications, but the banks' administration of applications was only limited in scope. As a result, they did not fulfil the premise of comprehensive administration, which was the reason for engaging them.

Spending on the Programme's administration and promotion was not always economical. **In the case of the public contract for the selected banks' administration of applications**, the SEF defined different assessment criteria for each of the five public contracts, referred to as "mini-tenders", (in order to involve all five banks it had signed a framework contract with in the administration), which reduced their economic advantageousness. The SEF divided **the public contract awarded in connection with the GIS IS** into three separate contracts so that it was not awarded as a whole under open procedure. The SEF's spending in the case of this public contract was uneconomical, because the contractual price was paid in full even though the contractor did not fulfil the contract in full. **In the case of the public contract for the creation of an audiovisual work** the SEF failed to verify the economic advantageousness of the supplier's offer and thus whether the money was being spent economically.

The MoE directives did not specify time limits for applicants to provide additional information for incomplete applications or time limits for submitting scrutinised project documentation to a bank. There were delays in the registration of applications in the GIS IS, as a result of which there was no reliable and timely information about the Programme's substantive and financial development.

Financing under the Programme was supposed be accessible, without major changes in the Programme's conditions, to all applicants throughout the Programme's duration, or until the Programme's funds had been exhausted. In order to increase drawdown the Steering Committee modified the Programme's set-up and parameters during the Programme. Even though it was clear by 22 September 2010 that the Programme's disposable finances would not be enough to cover the sums claimed in all the accepted applications, the **Steering Committee** did not decide to suspend the acceptance of applications until five weeks later. The minister approved the suspension of acceptance of applications as of 29 October 2010. In the second half of 2010 **the Monitoring Committee** was entirely inactive and thus did not fulfil its obligation to oversee the implementation and interim assessment of the Programme as required of it by the statute.

Up to the completion of the SAO audit the MoE had not decided how to proceed with regard to the approval of funding under the Programme.

IV Evaluation

The *Green Savings* programme represents an opportunity for the Czech Republic to contribute to reducing CO₂ emissions and achieving energy savings in the households sector. The Programme was presented to the public as financial support for selected measures designed to achieve energy savings and the use of renewable energy sources in households.

The administration of the Programme was affected by systemic shortcomings that led to an absence of complete and reliable information about its substantive and financial development. This was caused by a combination of several factors:

- Up till the end of the SAO audit, the tools for monitoring interim results were not set up in a way that would give all the necessary information about the Programme's development.
- The conditions governing the applications administration process as defined in the MoE directives, administration contracts with banks and SEF internal regulations did not enable the efficient performance of administration and were a contributing factor in the application administration capacity becoming overloaded. As a result, there were delays in ascertaining information about the Programme's development.
- The SEF did not use the Programme's communication and promotion tools in a way that would effectively influence interest among the owners of houses and apartment buildings. Adding additional types of applicants to the Programme contributed to a sharp increase in drawdown, which, combined with the application administration problems, led to the premature suspension of the acceptance of applications.

The audit throws up the following recommendations:

- for any new applications submitted by the owners of houses and apartment buildings, the criteria of the efficiency of CO₂ emissions reduction should be defined in the selection phase in a way that would enable the biggest possible reduction in CO₂ emissions in terms of the ratio between the size of the appropriation and the expected emissions reduction;
- the Programme should be administered and monitored in a way that makes available timely and complete information about the substantive and financial development of the Programme; this information would serve as a reliable basis for the Programme's management and evaluation;
- the applications administration rules, including time limits, should be defined clearly and comprehensibly; this would help reduce the burden of Programme administration and would simplify the submission process for any new applications;
- inspections of appropriation beneficiaries should be commenced as soon as possible so that any returned sums can be re-used by other applicants while the Programme is still ongoing;
- the SEF should improve its documentation practices so that documentation is saved in its complete form and so that all the relevant persons are familiarised with the internal regulations concerning the Programme;
- a single methodology should be drawn up and used to assess the efficiency of the administration of appropriation programmes with similar goals.