

## **Audit conclusion report of Audit # 08/38**

### **Financial means allotted for support programmes for energy production from renewable energy resources and for energy savings support**

The audit was incorporated into the audit plan of the Supreme Audit Office (hereinafter 'SAO') for the year 2008 as Audit # 08/38. The audit was managed and the audit conclusion report was drafted by Mr. Zdeněk Brandt, M.Sc., the Member of the SAO.

The aim of the audit has been to review the spending of funds earmarked for support of the use of renewable energy resources; this included setting up the conditions conducive to meeting the indicative goal of reaching a share of 8 % of electricity generated from renewables in the total gross consumption of electric power in the Czech Republic by 2010.

The audit covered the 2005 through 2008 period, as well as previous and following periods in case of relevant connections. The audit was performed between November 2008 and June 2009.

The audited entities i.e., the auditees included the following organizations:

The Ministry of Industry and Trade (hereinafter also abbreviated to 'MIT'); the Ministry of Environment (hereinafter also abbreviated to 'MEnviro'); the Czech Republic State Environmental Fund (hereinafter also abbreviated to 'SEF'); the CzechInvest Investment and Business Development Agency (hereinafter also abbreviated to 'CzechInvest'); the Pardubice Regional Authority; Litvínov Town; Hrušovany Municipality in Chomutov District; Kněžmost Municipality; Zdíkov Municipality; ASOMPO Corp., of Životice/Nový Jičín 194; KRKONOŠSKÉ PAPIRNY (Giant Mountains Paper Mills Corp.), of Hostinné, Nádražní 266; Step TRUTNOV Corp., of Trutnov, Horská 695; SVEP Corp., of Ústí nad Labem, Bělehradská 6; VADS Corp., of Bohumín, Nový Bohumín 1183; BYSTRÁ Co. Ltd., of Bystrá nad Jizerou 41; in-Power Co. Ltd., of Planá 67, České Budějovice District; KOROWATT Co. Ltd., of Bušanovice 13; MVE Šestidomí Co. Ltd., of Trutnov, Hüttlova 871; NATUR ENERGO Co. Ltd., of Olomouc, Lošov, Pod Lesem 143/21; TEODICEA Co. Ltd., of Prague 2, Lužická 1538/10; Domov pro seniory Stachy-Kůsov (Residential Home for Seniors), of Kůsov 1, Stachy; Nemocnice v Ústí nad Orlicí (Hospital of Ústí nad Orlicí) of Čs. armády 1076, Ústí nad Orlicí; Sdružení obcí pro nakládání s odpady (Municipalities's Waste Disposal Association) of Čížkovice 104; and Společenství vlastníků Soukenická 725-728 (Homeowners' Partnership Soukenická St. 725-728) of Liberec 6, Soukenická 728.

The objections to the conclusions of the audit protocol raised by the MIT were resolved by the head of the groups of the auditors in his decision on objections. The said decision on objections was not appealed against.

**The SAO Board** at its XV<sup>th</sup> session held on September 14, 2009, **approved**, by its Resolution No. 8/XV/2009, **the Audit conclusion report** as follows:

## I. Introduction

The audit was focused on evaluating the progress reached in the areas of energy savings and of the use of renewable sources of energy (hereinafter also termed 'RES')<sup>1</sup>. The objective of the audit was to check on both the subsidy disbursing bodies ('subsidy providers') and the subsidy recipients ('beneficiaries') adherence to the principles of economical and expedient spending of funds sourced from the state budget, from the State Environmental Fund, and from any EU funds tapped for these purposes.

The audited central administration bodies, MIT and MEnviro, are endowed with competencies embracing, *i.a.*, the power and energy sector and the environmental impacts thereof. They draft the outline policies concerned with these issues, including the *National Program for Economical Energy Management and Use of Renewable and Secondary Energy Sources* (hereinafter also referred to as the 'National Program'). The implementation instrument of the said National Program has been the *State program in support of energy savings and the use of renewables* (hereinafter also termed the 'State Program'). Both these audited central administration bodies take part in managing and funding the State Program. The other funding sources of concern to the audit included the budgets administered by the Operational Programs (funded from EU Funds) for which the MIT and the MEnviro are the steering bodies.

During the audit period, the total spending of State funds in support of renewable energy sources and of energy savings amounted to ca. CZK 2,080 million.

Remark: The legislation quoted in this Audit conclusion report has been applied in the wording effective during the audit period in question.

## II. Facts ascertained by the audit

### 1. Objectives in the areas of energy savings and of energy generation from renewable sources as reflected in the policy outline documents and the fulfillment thereof

#### 1.1 State energy policy (hereinafter, also referred to as the 'SEP')

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<sup>1</sup> Pursuant to Section 2 of Act no. 180/2005 Coll. on the Promotion of electricity production from renewable energy sources and on amendments to certain acts (the Renewables Support Act), the renewable sources of energy are constituted by renewable natural fossil energy sources represented by wind energy, solar energy, geothermal energy, water (hydro) energy, soil energy, atmospheric energy, biomass energy, energy of the gases generated at waste dump sites, energy of sludge-derived gas, and energy of bio-gas.

The SEP sets out the priorities of the State in the area of long-term development of the energy sector for the next 30 years. Approved by the CR government in 2004, its implementation is in the province of responsibility of the MIT. The objectives included, *inter alia*, the development of RES as a contributory factor of strengthening the Czech Republic's energy self-sufficiency as well as of environmental protection. The pivotal indicator stipulated by the SEP and elsewhere is the national objective of attaining, by 2010, an 8 % share of electricity generated from RES in terms of the country's gross electricity consumption<sup>2</sup>. This parameter follows from EU Directive 2001/77/EC; the CR's commitment to meeting this objective stems from the *Treaty of accession to the EU*. The same commitment of the CR has also been promulgated in its Act no. 180/2005 Coll. on the Promotion of the electricity production from renewable energy sources and on amendments to certain acts (the Renewables Support Act). The chief objectives of the SEP also include the commitment to maximum economy and consideration vis-à-vis the environment, related to the task of providing for an effective level and structure of consumption of the primary energy sources (hereinafter also referred to as 'PES')<sup>3</sup>.

In 2006 the MIT produced an evaluation of the progress of implementation of the Outline Policy for the 2004–2005 period. Until 2005 the share of electricity generated from RES was less than 5 % in terms of gross domestic consumption, while the share of RES on the consumption of PES was 4.3 %. In cooperation of MIT, MEnviro, and the Energy Regulatory Office (hereinafter also referred to as 'ERO'), the share of electricity generated from RES is evaluated on an annual basis as part of reporting on the process toward the indicative objective of raising the share of RES-generated electricity; during the years 2006 and 2007 this indicator has never surpassed the level of 5%. The progress reports considered this to be an unsatisfactory rate of progress: for instance, according to the 2006 report it is highly probable that the indicative target for 2010 would not be met.

## **1.2 The National Program for Economical Energy Management and Use of Renewable and Secondary Energy Sources**

The National Program was a medium-term document elaborated by MIT in agreement with MEnviro in line with the stipulations of Act no. 406/2000 Coll. on Energy management, and one of its objectives has been to define the progressive targets that would at the end lead to a complete implementation of the long-term policies. Implementation of the program is the responsibility specifically of MIT and MEnviro. The National Program for 2002–2005 was approved by the government in 2001 and contained a number of targets. When evaluating the progress of its implementation it has been stated as early as 2006 that the target designated as *Attaining a 5.1 % share of electricity generation from RES in terms of gross electricity consumption by 2005* failed to be met, thus jeopardizing the attainment of the objective (a target value of 8 %) laid down for the year 2010.

The National Program for 2006–2009 set out detailed SEP requirements and targets in the areas of energy savings and RES and specified a set of instruments to be

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<sup>2</sup> Gross domestic electricity consumption is to be understood in the CR as the total of electricity generated, plus electricity imports, minus electricity exports [Section 2, paragraph 2, letter c) of Act no. 180/2005 Coll.].

<sup>3</sup> Within the context of the present Audit conclusion report, the PES are taken to be the sum total of all energy resources consumed in the CR (*i.e.*, fossil, renewable, and nuclear), including the balance of electricity imports and exports.

applied toward their implementation. In the area of enhancing the utilization of RES, indicative targets were set for 2009: according to these, the share of RES-generated electricity should become at least 7.5 % of the total electricity consumption. **This however failed to reflect the unsatisfactory progress experienced so far in meeting the share of RES generation in electricity consumption, which has transpired from the assessments of the National Program for the 2002–2005 period and also has come to light in the reports on progress toward the indicative target for RES-generated electricity; it also neither undertook any revision of the targets nor proposed any measures to change the direction of development.**

Pursuant to an amendment of Act no. 406/2000 Coll. the National Program for 2006–2009 was superseded by an annual State Program. The Czech government gave its approval only to the interim evaluation of the National Program for 2006–2007 and terminated the National Program for 2006–2009 by the year 2007. **Owing to the fact of prematurely terminating the National Program for 2006–2009, this document of nationwide applicability focused on economical energy management as well as on the utilization of RES, also stipulating medium-term targets that could be checked, has become defunct.**

This has left the State Program, updated on an annual basis, as a document having the character of an implementation instrument. The MIT was disbursing subsidies throughout the entrepreneurial sector while the MEnviro was oriented upon the nonprofit sector. In both these areas under scrutiny (and particularly in the case of MIT) the State Program funding was limited so that it became reduced to merely a program supplementary to the operational programs.

## **2. Instruments adopted to attain the targets set out for energy savings and RES generation**

Subject to auditing were the programs providing subsidies, as one of the instruments motivating toward investing in energy savings and in energy generation from RES. Throughout the period under scrutiny, the subsidies were sourced from the State Program. Additional funding sources included the EU Funds which were being tapped for the operational programs focused in part on energy savings and energy generation from RES.

### **2.1 The State Program in support of energy savings and the use of RES**

#### **2.1.1 State Program in support of energy savings and the use of RES – Part A, administered by MIT**

Since 2003 the State Program has been conducted in the mode of funding the assets reproduction programs, under the number 222 040. The MIT budget chapter served as the source of its funding. The sum total for the 2003–2007 period of the investment and non-investment requirements of the program # 222 040 has been set to CZK 3,710 million—this also including the sources put at the disposal of the program by the program participants themselves. The systemic expenditures of the State budget amounted to CZK 555 million. According to approved documentation, the results to be delivered in the terminal year of the program included, *i.a.*, electricity generation from RES to the tune of 1,000 GWh/year. The designated target

represented a share of ca. 4 % of the energy generated from RES in 2007.<sup>4</sup> The body charged with administering the disbursement of subsidies from the State budget until 2007 was the Czech Energy Agency which was dissolved as of December 31, 2007. Presently the entire process of disbursing the subsidies is managed and administered by the MIT, with no mediating subject involved. Implementation of this program was to end in December, 2007. In response to a submission by MIT the termination date has been moved forward by the Ministry of Finance, to a new deadline of October, 2009.

**Table 1 – Summary of annual assessments of Part A of the State Program (Program 222 040)**

Year		2003	2004	2005	2006	2007	Total
Number of supported projects (actions)	Total	299	228	228	208	264	1227
	investment	61	51	68	36	37	253
Subsidy provided (thousand CZK)	Total	102 274	100 719	95 493	85 310	67 216	451 012
	investment	69 851	69 984	75 386	48 929	34 591	298 741
Energy saving (GJ)		465	152				
		505	423	106 959	187 474	123 384	1 035 745

**Source:** MIT, Evaluation of Part A of the State Program.

**Remark:** The parameter 'energy saving' incorporates the RES-generated energy equivalent, as un-consumed energy from classical coal-fired power stations. It is difficult to compare this value with the target value ('generation').

It transpires from Table 1 that, among other things, both the volume and the number of investment projects have followed a downward trend. This trend relates to the gradual rollout of subsidies from the operational programs.

No type of RES within the province of MIT responsibility received preferential treatment and no type was excluded from subsidization until the end of 2006, and since 2007—due to an update of the terms—it has not been possible to subsidize wind energy and photovoltaics. The MIT is also extending subsidies to projects receiving support thanks to a preferential price of electricity.

Since 2008 the State Program has borne the designation 'EFEKT Program no. 122 040'. The balance sheet of funding requirements and sources reckons with a level budget drawing on sources to the tune of CZK 333 million annually, of which CZK 100 million would be supplied from the State budget. During the course of the 2008–2013 period, the sum total to be fed into this program from the State budget would be CZK 600 million. Activities eligible for support under the EFEKT program include energy generation from a limited range of RES—in the area of biomass the only projects receiving subsidies are those of cogeneration units with reciprocating engines fed with sludge gas and gas from biodegradable municipal wastes, compact hydroelectric power stations, and heat pumps combined with solar thermal systems. Thus, no support can be extended to e.g., wind energy; and solar technology or heat pumps and biomass utilization projects cannot receive support except in the cases

<sup>4</sup> According to the *Report of the independent professional commission for assessment of CR's energy needs in the long-term horizon*, the total of 2007 generation from all RES was ca.  $91.2 \cdot 10^6$  GJ of energy.

named above. No documentation has been brought forward in evidence of any relationship between the chosen types of supported RES and their development potential (for more details on this, see Section 3 of this Audit conclusion report). Thus the merits to be contributed by energy generation from RES under the EFEKT program during the 2008–2013 period should be nearly identical to those deriving from the State Program 2003–2007, that is, merely ca. 4 % of the present volume of energy generation from the RES.

The MIT has chosen a well-suited form of reporting of the project results, based on the values of energy savings and of abatement of CO<sub>2</sub> emissions.

The audit has mainly focused on the system of picking the projects for approval. The SAO audit has concluded that the selection method adopted was unbiased and transparent.

**The SAO audit has ascertained shortcomings in the documentation of the projects pursued under the Program # 222 040.** Except for its 'list of documents in the folder' the MIT has not elaborated any system that would keep tab of the documents delivered in respect of any given project, and in particular lacks any system of following up the deadlines laid down by the subsidy award rulings (hereinafter also referred to as 'Rulings') and the fulfillment thereof on the part of the recipients/beneficiaries.

**Shortcomings were identified in the final evaluations of projects** (hereinafter, also referred to as 'FEPs'). In the case of certain projects, the deadlines for submission of the FEPs elapsed as far back as in 2007, for the remaining projects the FEP submission deadlines were set for December, 2008 at the latest. Out of the 19 projects put to scrutiny by the audit, five contained no FEPs in their respective documentation folders; of these, four FEPs were yet to be submitted to the MIT by the respective recipients/beneficiaries.

**The definite awarding of the subsidy** (a term frequented by the MIT in the program documentation) **was an act that failed to be transacted by the MIT in all cases of the audited projects.**

**The SAO audit has also ascertained that the monitoring focused on the progress toward the designated project parameters was incomplete.** Pursuant to the terms and conditions of the Rulings the MIT was to receive annual surveys detailing the attainment of the target parameters from the recipients/beneficiaries; this was to be done for a period of two years from the definite subsidy award date. Some of the recipients/beneficiaries however failed to submit their progress reports informing of the degree of attainment of the target parameters, because the respective subsidies had never been awarded with definite validity by the MIT. There was no system in operation at the MIT that would follow up the progress toward the parameters laid down by the Rulings and, consequently, the MIT lacked comprehensive information on how these parameters were being met.

### 2.1.2 State Program in support of energy savings and the use of RES – Part B, administered by MEnviro

These projects were subsidized exclusively from SEF funds and, therefore, do not constitute a part of funding the assets reproduction programs. The terms and conditions governing these subsidies are laid down in the respective Annexes II, updated on an annual basis, attached to the MEnviro directive for disbursing the SEF funds. The funds sourced by this part of the State Program constitute a component of the SEF budget which is subject to annual approvals.

**Part B of the State Program** had not been conceived on the basis of any analyses or technical and economic assessments, and **has failed to specify any quantitative target, deliverable, or indicator.**

During the course of the 2005–2007 period, natural persons were able to draw on subsidies toward the acquisition of biomass-fired boilers, thermo-solar systems, heat pumps, and—in 2007—also of photovoltaics. Simultaneously, juridical persons were allowed to submit applications for subsidies mainly toward environmentally friendly methods of heating of buildings and of water, as well as toward economical municipal energy supply systems or toward the construction of equipment and installations for electricity and heat cogeneration from biomass and biogas. In 2008 the only subjects eligible for subsidy were the natural persons. Most of the funding was allotted to investment projects.

Most of the projects implemented by natural persons are less capital intensive, and this is why the programs focused on such projects tend to be receiving smaller amounts of support per unit installed output. The subsidies begin at the level of CZK 1.7 thousand per kW installed, in the case of biomass-fired boilers. The programs designed for juridical persons exhibit a higher degree of support received—in most cases, at a level between CZK 17 and 25 thousand per kW installed. The specific rate of support extended to natural persons with photovoltaic installations for electricity generation was simply beyond any comparison—ca. CZK 64 thousand per kW installed. Thus, in 2007, the greatest support was extended precisely to this program which returned the lowest benefits. Just under 11 % of the total volume of subsidies was disbursed on exclusive support to biomass; all the remaining funds earmarked for investment projects that year went to support solar systems and heat pumps.

**Table 2 – Summarized benefits of Part B of the State Program, by program years**

Year	2005	2006	2007	2008	Total	
Subsidy – Ruling (thousand CZK)	163 904	87 367	144 886	158 090	554 247	
Number of approved projects	774	929	1 811	3 045	6 559	
Heat generation (GJ/year)	72 489	56 683	110 747	148 833	388 752	
Electricity generation	(GJ/year)	5 173	176	1 466	12	6 827
	(MWh/year)	1 437	49	407	3	1 896

**Source:** MEnviro, Evaluation of Part B of the State Program.

For the 2005–2008 period, the Minister of Environment's decision was to fund subsidies to the tune of over CZK 554 million. It transpires from Table 2 that these

subsidies ought to provoke an upswing of energy generation from RES equivalent to 395,579 GJ (the sum of electric power and heat energy), representing a mere 0.45 % of all RES-derived energy generated in 2007<sup>4</sup>. This investment will not even give any substantial boost to electricity generation alone.

**Thus the subsidies disbursed from the SEF will not have any major impact on the generation of energy from RES.**

In the same manner as in the case of evaluation of the entire State Program performed by the MIT, it also applies to the **evaluation of Part B of the State Program that it was based on the level of subsidies to be disbursed pursuant to decisions taken during the given period and under consideration of the effects presumed to be achieved. The evaluation has failed to take into consideration the effects actually achieved.**

Implementation of Part B of the State Program has been the responsibility of the SEF, which at the same time has been elaborating the documentation required for the annual evaluations of the program's progress. In these evaluations, the supporting documentation reported indicators including both the expected **generation** of energy and the expected **savings** of energy. However, the support had not been intended to include any projects focused on energy savings. The reported savings have been computed from the energy generation data. The circumstance that both these indicators were used together may have resulted on overshoots of the reported performances. Moreover, the SEF failed to demonstrate that any transparent method of conversion of energy generation data to energy savings data has been adopted.

**The MEnviro kept accepting the SEF documents and processing them without checking on their correctness.** The SAO audit has detected errors in the documentation, of which some were corrected by the SEF during the audit. The audit has revealed errors of as much as an order of magnitude in determining the amount of subsidies in relation to the performance of the entire programs, thus causing a considerable distortion of the output data. The MEnviro failed to detect gross errors in the documentation and even failed to put to any scrutiny the occurrence of striking year-to-year differences. Some of the subprograms were evaluated by the MEnviro according to the government-approved methodology, *i.e.* using a method based on the net current value theory. However, the computations of net payback period or of internal percentage revenues as performed by MEnviro were ill-suited for use in these cases; the MEnviro failed to concern itself with the discrepancies that were evident.

## **2.2 EU-funded operational programs**

2.2.1 Within the MIT sector, administration of the disbursement of operational programs subsidies was entrusted to CzechInvest Agency. The funding process, with co-financing from the State budget, proceeded within the framework of two operational programs.

(a) The Operational Program *Industry and Enterprise* was destined for the 2004–2006 period; it comprised, *inter alia*, Measure 2.3 – *Reducing energy consumption and higher use of renewable sources of energy*. The Measure comprised two



subprograms—*Energy savings* and *Renewable sources of energy*. During the 2005–2008 period, the total amount of State budget funds (*i.e.*, incl. contributions from EU Funds) disbursed to implement these two subprograms was CZK 795.6 million. By decision of the European Commission the terminal deadline for implementation of these Operational Programs was extended to June 30, 2009. Hence, it had not been possible for the present audit to check on the evaluation of the full implementation of these two subprograms.

Pursuant to the Rulings issued, the total of all energy savings to be achieved through implementation of these projects should be 164 161 GJ/year. As long as the parameters stipulated in the Rulings are adhered to, the quantitative target of the *Energy savings* program will be met in full, or even surpassed.

(b) The Operational Program *Enterprise and Innovations* called for the 2007–2013 period also incorporates sections dealing with the use of RES and with energy savings. Implementation of Area of intervention 3.1 – *Energy savings and renewable sources of energy* proceeds by means of the ECO-ENERGY program, under which all kinds of RES can receive support, with none of them preferred over the others. Funding of the ECO-ENERGY program throughout its entire programming period has been taken care of by allocating EUR 243,305 thousand from EU Funds; additionally, the sum of EUR 42,936 thousand from national public sources is reckoned with. Until the date of termination of the audit, two calls were issued under this program inviting submission of applications for support.

**The objective of the ECO-ENERGY program, constituting a part of the Operational Program *Enterprise and Innovations*, is not comparable with the objectives of the foregoing Operational Program *Industry and Enterprise*.** The percentage share of electricity generation from RES in terms of gross domestic electricity consumption set out by the MIT as the target indicator of the ECO-ENERGY program for 2015 was ill-defined. This is a target that can only be applied nationwide, and its value will also be influenced by other instruments, other subsidization programs, etc.

2.2.2 In the MEnviro sector, the SEF was the mediating subject employed to disburse the subsidies originating from the operational programs. The funding process, with co-financing from the SEF, proceeded within the framework of two operational programs.

(a) Operational Program *Infrastructure* (hereinafter also referred to as 'OPI'), called for the 2004–2006 period, incorporates *i.a.*, Area of intervention 3.3.C – *Supporting the use of renewable energy sources*. **The OPI does not contain any quantitative target indicators in the area of RES.** The parameters defined as program indicators include the installed electrical and heat outputs; the heat and electricity generation; and the abatement of greenhouse gases emissions, but with no target values specified, in spite of the fact that both performance and production indicators are required and mandatory for every project, onwards right from the stage of application for support from the OPI. Subsequently, the Rulings also comprise the subsidy award agreements. Thus, for individual projects, their expected and actually achieved performances expressed by indicators that characterize the energy generation from RES can be compared. But the program itself cannot be evaluated because the target specifications are absent.

The part of the OPI concerned with environment, including the results thereof, has not been evaluated yet since the deadline for a summary evaluation of the entire OPI has not been known at the time of the audit; it was only set after the date of June 30, 2009, *i.e.*, past the deadline for presenting eligible expenditures for payment.

It follows from the data given in the annual reports that, as regards the fulfillment of the objectives set out in the outline policy materials (National programs), the significance of subsidies from the OPI is low. According to the Rulings, the sum total of the subsidies, amounting to ca. CZK 425 million, awarded within the framework of Area of intervention 3.3.C of the Operational Program, is supposed to boost the generation of electricity from RES by ca. 0.25 %. Raising electricity generation by 13.6 TJ (*i.e.*, 3.77 GWh) represents approximately a 1% share of RES-generated electricity in 2007.

(b) The Operational Program *Environment* (also referred to as 'OPE') called for the 2007–2013 period also incorporates a section focused on energy – the so-called Priority Axis 3 – *Sustainable use of energy sources*. Until the date of termination of the audit, two calls were issued within the framework of Priority Axis 3 inviting submission of applications for support. Unlike the OPI and unlike Part B of the State Program, the OPE also allows for support to be extended toward projects focused on energy savings. None of the various types of RES is excluded from support, and none is preferred.

**Not even the fact of meeting in full the indicators of Priority Axis 3 has any substantial impact of the achievement of the outline objectives set forth.** For example, energy savings to be achieved due to implementation of the OP Environment were to be 430 TJ/year. Compared to the savings as per the *Energy efficiency action plan* the subsidies from OPE ought to make a contribution of ca. 0.6 % to meeting the specified target. *The Energy efficiency action plan* has been designed by MIT in 2007, pursuant to art. 14 of Directive 2006/32/EC.

### **2.3 Subsidizing energy generation from RES by price regulation**

Price regulation has been applied to the purchasing of RES-generated electricity since 2006. Act no. 180/2005 Coll. stipulates that the sales price of electricity deriving from any kind of RES shall be one that would guarantee payback on the investment made. Thus the most capital intensive sources may secure the highest subsidies, regardless of the share they contribute to the generation of electricity from RES. The costs associated with extending support to the RES are reflected in regulated prices of electric power, applicable to all end-users in the CR in the form of a nationwide, standard bonus on RES-generated electricity. The amount of this contribution to the RES has been growing each year; the pertinent calculations are performed and the regulated prices are specified by the ERO.

In line with this principle and based on the regulated prices ordinance in force, it is photovoltaics which enjoys the greatest support by far per unit energy generated. For instance, the sales price of electricity generated in a photovoltaic installation commissioned after January 1, 2009 and having an installed output power of up to 30 kW is CZK 12.89 per kWh. The price of electricity generated by incineration of pure biomass in new electricity-generating installations constitutes CZK 2.57–

4.49 per kWh depending on category; in small-sized hydroelectric power stations commissioned after January 1, 2008 it is CZK 2.70 per kWh; and CZK 2.34 per kWh is the sales price of electricity generated in wind power stations commissioned after January 1, 2009. The fact that the generation deriving from the most capital intensive sources is growing (see the present-day rapid development of photovoltaics—in the 1<sup>st</sup> half of 2009 the generation of electricity from this source has grown almost nine-fold compared to the same period of 2008) has caused the over-all volume of support to grow significantly, too.

**The explanatory notes to the draft Act no. 180/2005 Coll. make it clear that the regulated price of electricity generated from RES ought to be so construed as to be able alone, just by itself, to ensure the economic effectiveness of the investment.** In spite of this, these projects (receiving support in the form of regulated sales prices of electricity) are also receiving support in the form of subsidies. To justify these subsidies, both MEnviro and MIT come forward with the reasoning that they take the investment intensiveness of specific projects into consideration when deciding on the subsidies.

### 3. Developments to date and analyses of the potential attributable to various types of RES

**Table 3 – Trends of the primary parameters characterizing the percentage share of RES**

Indicator	(in %)					
	2004	2005	2006	2007	2008	Target for year 2010
Percentage share of RES-generated electricity in the gross total electricity consumption	4	4,5	4,9	4,74	5,18*	8
Percentage share of RES energy in the total PES consumption	2,9	3,99	4,2	3,9	4,47*	6

**Source:** MEnviro

\* Preliminary data from working documents, yet to be approved by the CR government.

**It follows from the trend experienced by the indicator of the percentage share of RES-generated electricity in the gross total electricity consumption as shown in Table 3 that it would be unrealistic to expect this percentage share to attain 8 % by 2010.**

It can be stated that **at the present time there is an abundance of supporting data for deciding on which sources of energy should be given support, in view of their available potential, and what outcome can eventually be achieved in the CR.** Already at the stage of drafting the act of law that was to deal with the issues of support to electricity (and, initially, also heat) generation from RES (eventually adopted as Act no. 180/2005 Coll.), an analysis was made of the pathways to take in order to arrive at the indicative target of 8 % of RES-generated electricity by 2010. It transpires from the explanatory notes to this act that the incineration of biomass was regarded as offering the greatest growth opportunities. Equally, further analysis which had been available to the auditors made it clear that biomass was to have the decisive share in the use of the RES in CR. **For instance, according to the**

**National Program for 2006–2009, biomass is expected to account for nearly 80 % of all energy generation from RES.**

Government resolution no. 1322 of November 21, 2007 gave the seal of approval to the potential of RES in the CR (stemming from an analysis performed by MITO) estimated to reach 8.6 % of the consumption of PES by 2020. Out of the total production from RES that should be 146 thousand TJ in 2020 (a production boost of ca. 60 % on the year 2007), biomass including bio-fuels is supposed to exceed 87 %; this dominant share is limited mainly by the agricultural acreage that can be set aside for energy crops grown specifically for this purpose. According to available analyses, the other sources – wind, solar, and environment energy – when added all together should not exceed 4 % of total energy generation from RES.

The *Report of the independent professional commission for assessment of CR's energy needs in the long-term horizon* (hereinafter also referred to as 'the Commission') can be deemed to constitute yet another evaluation source. The Commission was established by the Government resolution no. 77 of January 24, 2007 and its report was published on September 30, 2008. According to one of the Commission's proposals, the issue of increasing the percentage share of RES should be dealt with primarily by the use of biomass.

*The energy efficiency action plan* sets out that the energy savings during the 2006–2016 period should amount to 9 %, but at the same time it counts on an absolute increase of energy consumption of ca. 17 %; in the case of electricity the expected growth of consumption is 12 %. Owing to the way in which the indicative parameter of electricity generation is designed (as the ratio of RES-generated electricity to domestic consumption), the percentage share of the RES keeps changing not only as a function of the volume generated but also as a function of consumption, so that any increase in consumption has to be compensated for by an increase in generation. According to statistics, the consumption of electricity—owing to the slumping national economy—has been on a downward trend since October, 2008. Thus, provided that the electricity generation from RES will remain steady, the indicative percentage will increase rather significantly. This trend however cannot be regarded as a sustained one, and a future upswing of energy consumption—including electricity—has to be reckoned with.

**A national outline policy that would set forth the priorities for using the various kinds of RES and would be conducive to a target-oriented channeling of the subsidies is yet to be determined. In particular, if the target percentage share of 8 % in electricity generation from RES in relation to gross domestic electricity consumption is to be reached in foreseeable future, the approach hitherto employed will have to undergo a radical change. However, neither MIT not MEnviro have come up with any suggested solution.**

#### **4. Facts ascertained in audits of selected recipients/beneficiaries**

The SAO audit performed at selected auditees—recipients of subsidies has put to scrutiny a total of nineteen projects, on which the total spending was CZK 167,886 thousand; of these, the EU, State budget, and SEF funds amounted to CZK 126,469 thousand, 33,555 thousand, and 7,862 thousand, respectively. As regards

the State Program, four projects were audited, of which three had been managed and coordinated by the MIT and one by the MEnviro. From the Operational Program *Industry and Enterprise*, nine projects were audited, plus six projects from the OPI. The audits were focused on those projects that ought to have been completed already, according to the original specifications of their respective terms and conditions.

**It has been found by the audits that the recipients/beneficiaries presented the true values of the mandatory indicators and parameters in their applications. The audits did not reveal any substantial differences between the indicators specified in the Rulings and the performance values/benefits actually attained.**

The following shortcomings were found during audits of the aforementioned projects:

- In public contracting, three recipients/beneficiaries failed to observe some of the stipulations of the Act on Public Procurement and of the methodology to be applied to the selection of contractors; the financial volume of these public procurement contracts was CZK 37,059 thousand excl. VAT.
- Ineligible costs were included under the budget lines for eligible costs by four recipients/beneficiaries. In two cases the subsidy providers—SEF and CzechInvest—approved the incurred costs as eligible costs even though they in fact were ineligible, in view of the terms and conditions under which the subsidies had been awarded—therefore, the invoices submitted should not have been accepted.
- The recipients/beneficiaries failed to inform the contact authority of certain changes to the projects; in five cases they failed to report on time the changes which eventually resulted in delaying the project completion dates.
- During the course of project implementation, nine beneficiaries/recipients failed to adhere to the original project termination deadlines as set out in the respective Rulings. The project term extension applications were accepted by the subsidy providers. Owing to this, the terms/deadlines for meeting the specified indicator values have not yet elapsed in the case of three recipients/beneficiaries at the time of the SAO audit.
- The recipient/beneficiary ASOMPO Corp. failed to discharge an obligation set out in the pertinent Ruling, inasmuch as it failed to implement (bring to completion and termination) the project by the deadline specified in the Ruling. Within the meaning of Section 3, letter e) and of Section 44, paragraph 1, letter a) of Act no. 218/2000 Coll. on Budgetary rules constitutes an infringement of budgetary discipline. The penalty for a failure to discharge the obligation of implementing (completing and terminating) a project by the deadlines specified in the Ruling is 5 % of the sum total of the subsidy disbursed, which in this case is CZK 90 thousand.
- Three recipients/beneficiaries were issued Rulings by the MIT (wherein the total amount of subsidy involved was CZK 6,346 thousand) containing distorted and erroneous values of the binding indicators. These erroneous values could not be used for evaluations of the degree of fulfillment of the binding indicators.

### III. Summary

The audits were focused on State funds to the sum total of CZK 2,080 million set aside during the 2005–2008 period for projects in support of renewable sources of energy and of energy savings. The audited projects were put to scrutiny as to their adherence to the designated parameters and to their attainment of the expected performance/benefits. The audits did not reveal any substantial differences between the indicators specified in the Rulings and the performance values/benefits actually attained.

As regards the spending of the subsidies, no serious shortcomings on the part of the recipients/beneficiaries were found that would significantly reduce the effectiveness of utilization of the subsidies. The only exception was constituted by infringements against budgetary discipline; this matter was remitted to the pertinent Tax Office.

The evaluations of the actual documentation and data submitted by the auditees make it clear that the indicative target of reaching an 8 % share of RES-generated electricity in the gross total domestic electricity consumption by 2010 is unattainable. This danger has already been reported by SAO audit # 05/08 – *Management of the funds earmarked for the State program of support to energy savings and the use of renewable energy sources* (of which the audit conclusion report was published in Issue 4/2005 of SAO Bulletin). In spite of this, neither the MIT which is wielding the decisive authority in the area of the State energy policy, nor the MEnviro has come up with any policy-level solution that would bring about a reversal in the trend experienced by this indicator.

The audit has determined that the programs scrutinized hereunder are those whose contributions to boosting the volume of energy generated from renewables or to energy savings are small or negligible.

In spite of analyses being available pointing to the fact that under the CR conditions the greatest development potential is that of generating energy from biomass grown specifically for that purpose, the support toward the application of renewable sources of energy is being disbursed indiscriminately. Regulation of the sales price of electricity generated from renewables guarantees profitability for all kinds of renewable energy sources. Extending support to sources having the greatest capital intensiveness pushes up, to a significant degree, the price at which electricity is sold to end customers (above all, this applies to photovoltaic power stations). The Czech Republic is yet to determine a national outline policy that would set forth the priorities for using the various kinds of RES and would be conducive to a target-oriented channeling of subsidies.

## Appendix

### List of abbreviations:

CzechInvest	CzechInvest Investment and Business Development Agency
CR	Czech Republic
ERO	Energy Regulatory Office
EU	European Union
Commission	Commission charged with assessing the Czech Republic's energy requirements in the long-term horizon
SEP	State energy policy
MIT	Ministry of Industry and Trade
MEnviro	Ministry of Environment
National Program	National Program for Economical Energy Management and Use of Renewable and Secondary Energy Sources
OPI	Operational Program ' <i>Infrastructure</i> '
OPE	Operational Program ' <i>Environment</i> '
RES	renewable energy sources
PES	primary energy sources
Ruling	Ruling on the disbursement of a subsidy
SEF	Czech Republic State Environmental Fund
State Program	State program in support of energy savings and the use of renewables
FEA	Final evaluation of audit

### List of international alphabetic symbols:

CO <sub>2</sub>	carbon dioxide
GJ	gigajoule
GWh	gigawatt hour
kW	kilowatt
kWh	kilowatt hour
TJ	terajoule