



**Czech
Republic**

**Financing
baseline**

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1. INTRODUCTION

This report is part of the baseline analysis of the E-FIX project. The E-FIX project aims at triggering private finance for sustainable energy projects using innovative financing mechanisms. In the target countries of Central and South-Eastern Europe as well as the countries of the Caucasus region there is considerable idle potential for sustainable energy products and services. Both potential energy project developers and financiers face diverse financing barriers. An innovative energy financing mix is needed in order to activate new source of finance and facilitate an increased implementation of sustainable energy projects. Accordingly, the objective of the E-FIX project is to facilitate the take up and intensified usage of innovative energy financing mechanisms in the energy sector.

In order to accurately assess the idle potential of both financing sources and energy project implementation in each of the focus countries the E-FIX experts are conducting a baseline study including Gap Analysis. The present report presents one part of the baseline analysis focusing on the financial sector for the Czech Republic.

2. FINANCIAL SECTOR OVERVIEW

In 2017, financial products were offered in the conditions of the economic growth which started already at the end of 2013. The Czech economics has grown thanks to the foreign demand and the consumption of the households and also the investment activity revived. On these circumstances, the volume of the non-banking financing in 2017 increased inter-annually .

Data of the development of CR's economics, relevant for non-banking financing:

- GDP grew inter-annually (in the 1st quarter 2017 by 2,9%, in the 2nd quarter by 4,5%, in the 3rd quarter by 5%), inter-annual growth has continued also in the 4th quarter
- industrial production has grown inter-annually (in November by 8,5%)
- investments have been growing
- from the beginning of the year, the sales in the retail have grown inter-annually really (in November by 7,8%)
- The average inflation rate for the whole year 2017 was 2,5%, which is the highest value in the last 5 years.
- Unemployment rate achieved an enormously low level in December 3,8% (in comparison with 5,2% at the end of the year 2016)

A certain part of the demand of financing the investment or consumer intents was connected with the increased risks and they could not be accepted when applying prudent criteria for the evaluation of the customer as well as financed commodities. The share of the credit financing in the trade of the leasing companies increased and the volume of financing through factoring has grown. The volume of consumer financing with the mildly decreased volume of provided consumer credits and the growth of consumer leasing stagnated.

(Report on condition and development of non-banking leasing, credit and factoring market in the CR in the year 2017 – Czech leasing and financial association)

2.1. BANKING SECTOR

The banking sector of the Czech Republic is based on the two-degree bank system, a number of business banks exist besides the central bank. After the formation of the Czech Republic in 1993, the Czech National Bank became the central bank. This was independent, from the very beginning, on the political influences and its target was the stability of the currency and prices. Czech National Bank issues the banknotes and coins, it executes the supervision of the banking sector, capital market, insurance industry, pension insurance, cooperative savings banks, electronic money institutions and exchange. It provides the banking services to the state and public sector and it performs simultaneously the banking regulation and supervision.

(ČNB – Czech National Bank. [online]. Czech National Bank, 2003 [2016–04–20]. Available from http://www.cnb.cz/cs/o_cnb/)

The following items are typical of the basic characteristics of the financial and first of all of the banking sector in the Czech Republic:

- The banks predominate in the financial sector in the Czech Republic (CR);
- From the viewpoint of the owner structure the banking sector in the CR is considerably internationalised;
- It is concentrated in the considerable extent and the large banking houses predominate;
- In spite of the high extent of concentration, a quite significant competition between individual banks persists, although we can perceive the differences between the individual segments of banking market;
- Middle-sized banks continue to intensify their activity and represent one of the moving forces focused on the continuous supply/feed of market innovations, also big bank houses in some selected segments of bank markets represent real competition;
- The banks are leaders in almost all the financial groups active in the Czech Republic, so that we may speak about the financial market where the main role have the financial conglomerates lead by banks;
- The financial sector in the Czech Republic is supervised and regulated by the Czech National Bank (ČNB), which represents from April 2006 the institution in which the supervision activities of the whole financial market and of all its sub-segments are concentrated i.e. except for banks:
 - cooperative saving banks,
 - insurance companies,
 - pension funds,
 - investment companies, investment and shares funds,
 - leasing companies etc.
- In the last years, the banks devote intensive attention to developing retail banking, which are, a.o. the credits for households, consumers credits as well as credits for satisfying the need of own housing. Retail crediting is a quite dynamic segment of bank market.

<https://www.czech-ba.cz/cs/bankovni-sektor>

The activity of banks shall follow the Act No. 21/1992 Coll. of Banks, in which the definition of the bank is contained. The bank is shareholding company based in the Czech Republic, accepting the deposits from the public and providing credits and simultaneously, the bank licence was provided to the bank for these activities. If permitted by the licence, the banks may, besides accepting deposits and providing credits, execute additional activities stated in the section 1, (3) of the Act No. 21/1992 Coll. of Banks, particularly: investing into the securities at their own account, financial leasing etc.

Among the basic bank functions are:

- financial intermediation
- issue of cashless money
- performing the cash-less payment system

The function of financial intermediation follows from the definition of banks. Moreover, the banks are the only institutions besides the central bank, which are authorized to issue cashless money and simultaneously they effect payments in economics.

Acquiring the bank licence means for the banks not only the start of their activity but also the duty to observe the fixed rules formulated for the purpose to get under the control the risks by which the banking sector is threatened and to eliminate them. Basic duties of banks is e.g. observing the appropriateness of the capital and liquidity, rules of credit engagement, providing information, keeping obligatory minimum reserve at the account in the central bank etc. The inspection of bank activities and observing the rules is carried out by the institutions for bank regulations and supervision determined for this.

(REVENDA, Zbyněk. *Pecuniary economics and banking. Issue 4. Prague: Management Press, 2005. ISBN 807261-132-1, s.120*)

In April 2018, in total 46 banks and subsidiaries of foreign banks are active in the Czech Republic (without ČNB).

Based on the data published by the Czech National Bank, the interest rates of the new deposits of households are still very low. The rate of deposits with the agreed maturity was 0,87%. The rate of one-day deposits was 0,10%. The lowest interest rates were at the current accounts and moved on the level of 0,04%. The usually used client products have the interest rates significantly under the level of inflation which is 1,8%.

On the contrary, the credit products have considerably higher interest rates. The interest rate for the new credits for housing was 2,50%. The rate of consumer credits was considerably higher 8,81%. Credit cards have the highest rate of the usual credit products up to 20,08%. The high difference between the interest rate of deposits and credits is caused by insufficient financial means of the Czech financial institutions. They do not need to acquire new means thanks to the better revaluation of deposits.

https://www.cnb.cz/cs/statistika/menova_bankovni_stat/bankovni_statistika/bank_stat_komentar.html

2.2. MICROFINANCE SECTOR

The history of the sector of micro-financing in the Czech Republic is associated with the historical boom of cooperative savings banks, the goals of which was, originally, to finance, similarly as MFI (Monetary financial institutions) also the entrepreneurial activities of its members, in the group, on the principle of collective responsibility. This intention, however, disappeared gradually and the cooperative savings banks became purely profitable business model. The present condition of the credit market is not focused on the inhabitants with the low income and their activity is, usually, not included into the subsidy policy of government bodies and international organisations.

The micro-financing market in the Czech Republic cannot be precisely defined and mapped. The opinions on the availability of micro-financing tools are considerably different. Many publications concerning micro-financing refers to the fact that credit financing (or guaranteed financing) is available to the small and middle-sized enterprises. Banking sector in the Czech Republic has available sufficient sources in the form of primary deposits and the segment of small and middle-sized enterprises is all the time attractive for the competitive market of 45 banks active in the Czech Republic. However, it is simultaneously stated that the access to financial means is difficult for the micro-enterprises and the financial securing of formation of enterprises (investment into technologies, buildings, knowledge - human resources) is very problematic and risky.

(this is a reviewed text based first of all on: Micro-financing and possibilities of its use in the Czech Republic; VÚPSV, v. v. i. Prague, 2017 – output of the project "Analysis of the use of the European tool for

micro-financing and analysis of the possibilities how to increase the participation of the Czech Republic in the axis of micro-financing and social entrepreneurship“) This is original:

We have objectively quite a lot of possible micro-financing sources (see the complete survey). A number of publications focused on micro-financing states that credit financing (or financing thanks to provided guarantees) is available for the small and middle-sized enterprises (MSP), see the conclusions on credit financing and investment activities of the small and middle-sized enterprises, particularly microenterprises in the chapter 4.2 or hereinafter e.g. MPO /Ministry of Industry and Commerce/ (2014): "It may be stated generally that in 2013 the Czech MSP /small and middle-sized enterprises/ had no significant problem with the access to the bank financing. The higher support of alternative (i.e. non-banking) sources of financing would have, with a highest probability, practically no important impact in the Czech Republic, as the most enterprises do not plan high investments and wait for the development of the situation. The banking sector in the CR has available sufficient sources in the form of primary deposits (ratio of deposits to credits achieved the level of 146,4% of deposits to credits at the end of 2013) and the MSP segment is attractive all the time for 45 banks active at the Czech highly competitive market."97 LUKEŠ, JAKL and ZOUHAR (2014) state that "in a summarizing way: experts refer that a good idea finds its way to the investment, only the way in the Czech Republic may be a little protracted and more difficult."

Further publications state that the access to financing is difficult for micro-enterprises. E.g. IREAS centre (2014): "Securing the start of entrepreneurial activity by financing (investment into technology, buildings, knowledge - human resources) is very problematic and risky. A problem occurs also with assuring financing during entrepreneurial activity (operating capital, extension of invoice maturity)." The already quoted publication PwC (2012) sees the situation similarly.

The problems consists in the fact that the whole segment of microenterprises (incl. MSP) is quite manifold and the access to them shall be selective. The definition of the microenterprise, a small and middle sized enterprise as per the EU is wide, identically as the definition of micro-financing – the microcredit is, as per the EU, the credit in the maximum amount of EUR 25,000 (see the definition in the first part of study), however, under PwC (2012) a credit is an average credit amounting EUR 10 000 in the "old" members states and EUR 3.800 (i.e. ca. CZK 102 300 as per the current exchange rate) in the new member states. 100 The cause of these - in many cases opposing statements is the heterogeneous character of MSP – enterprises from both ends of the whole spectrum (microenterprise x middle-sized enterprise) may have various needs and possibilities concerning the access to financing - it depends on the size of enterprise (0-250 employees), branch, in which the enterprise is active (capital-intensive branches x capital non-intensive branches), entrepreneurial intent (innovative x without major innovations), initial situation of the enterprise (enterprise with the history at the market x newly established subject) etc.

Present state and the weak spots of financing of the small and middle-sized enterprises may be summarized as follows:

- 1) Some public sources (HORIZONT 2020, InnovFin, Inostart, OPPIK) accentuate too much the innovative character of the entrepreneurial intent (project). However, it is clear that not all the entrepreneurial intents may be innovative (typical crafts, personal services of hairdresser type, cosmetics etc.). The entrepreneurial intents not including innovations are excluded from these programs in advance.
- 2) Offered (micro)credits or guarantees are over-dimensioned for the needs of micro-enterprises. Small entrepreneurs (traders) need often dozens thousand CZK for starting the entrepreneurship. Particularly European sources are prepared to provide the credits as well as the guarantees often

in much higher price relations, however such extensive administration is connected with their acquisition which the micro-entrepreneurs are not able to manage (program HORIZONT 2020).

- 3) Public sources are limited to the certain branches defined in the individual programs (OPPIK, HORIZONT, 2020). These are "strategic branches", i.e. health service, power engineering, nanotechnologies etc., i.e. branches where the research and putting the results of this research into practice is supposed. Again, these sources are not available for the most MSP.
- 4) Subsidy from the European public sources is subject to change and is not stable in time. Each programming period has different targets, other forms of subsidy, other preferred branches etc. Also the implementation of European program in the Czech Republic is subject to the decision of public bodies. E.g. in the programming period 2007-2013 the program PROGRES (OPPI) was terminated already in 2011, two years before the end of programming period. A similar situation occurs in the program GUARANTEE 2015-2023 (COSME), submitting the applications for the year was terminated already as on September 18, 2015 and renewed again in February 2016. However, it is important for the entrepreneur, to have available the required means when he needs them without necessity to find out if (and when) the financial tools from the public sources will be available.
- 5) Possibility of acquiring a lower credit for the starting entrepreneur (ca. up to the amount of CZK 200,000) from the private sources, or from the banking institutions are very limited and reduced, in fact these are consumer credits not being micro-credits under the EU definition.
- 6) Private sector, be it the banking institutions or well-introduced non-banking institutions require a security in the form of a real estate or proving the income from employment. Information stated on the homepage of banks are often incomplete and may evoke the feeling that the loan is provided without any requirements on security. During the visit in the subsidiary, the applicant is informed about all the pre-conditions of providing the credit, the most important of which is the necessity to prove the income, or providing a security in the form of a real estate. This security in the form of a real estate is mostly unavailable for a starting entrepreneur. The exception are consumer credits provided without any security up to the amount of CZK 5,000, however, it is unimportant amount for the purposes of entrepreneurship. The gap at the market is filled in by the alternative forms of providing a credit, which becomes more and more important in connection with electronic media. The role of these alternative forms is reflected also by significant financial players who allocate a part of their investments in this direction. It is too early for evaluation of these alternative forms of (micro) financing, but it is possible that even these forms will replace the missing sources of (micro)financing.

An interesting and hopeful new product of Komerční banka could be Profi credit Start. The guarantee to the credit is provided, up to the amount of 80% EIF within EaSI and COSME programs and Komerční banka undertook, by signing the contract with EIF, to provide credits to small, middle-sized enterprises as well as to natural persons (self-employed), including the starting disadvantaged entrepreneurs; these credits should be available also for the entrepreneurs requiring the credit of dozens thousands and having no "history", by which they could prove their bonity. In spite of the declared support for the disadvantaged entrepreneurs we shall be aware that these credits are provided by the commercial institution and the reasons leading the institution to entering the contract between EIF had no social dimension. 103 The principal criterion for providing this credit remains the entrepreneurial intent, in other words, if the applicant is not able to submit a quality entrepreneurial intent, Komerční banka does not provide a credit to him, regardless to the size of the enterprise or the degree of disadvantage of the starting entrepreneur.

The interest for micro-loans is also associated with the branch structure of the national economy visible on the example of Romania, where the quite extensive agricultural production represents an interesting market for the companies providing microcredits in spite of the fact that the interest rates are higher in case of these credits in view of their risk rate. The branch structure of microcredits in Slovakia is different in comparison with Romania, more than one third of the means were allocated into the business and it seems that the market with microcredits is not saturated.

(Micro-financing and the possibility of its use in the CR; VÚPSV, v. v. i. Prague, 2017 – project output "Analysis of the use of the European tool for micro-financing and analysis of possibilities of the increase of participation of the CR in the axis of micro-financing and social entrepreneurship")

In the area of power engineering, renewable sources of energy and energetic efficiency, some advantages are provided more and more by the producers and distributors of services (ČEZ, e-on etc.). Very important are the National and Regional Programs for the increase of energy efficiency of buildings (Green for Savings) and exchange of boilers (subsidy for boiler).

2.3. LEASING SECTOR

From the beginning of the nineties, dozens of leasing companies were founded - small as well as big ones, generally focused as well as specialized in commodities - active nation-wide, regional, inland companies and companies the capital of which is connected with foreign banks or with important Western leasing companies. The general awareness of usability, advantages and limits as well as regularities and specifics of leasing was spread. The dynamic growth of the volume of leasing of individual commodities, spreading of its use in the individual groups of customers corresponded to this state. Hand in hand with it, also the legal framework for leasing developed - the private law as well as public law framework, including the tax law.

In the CR, leasing started to develop well only after 1991. The most important growth of the subjects providing non-banking financing was between the years 1991– 1995. In the time of privatization and restitution, many banking institutions got bankrupt and for this reason, a new form of financing in the form of leasing was search for. The low administrative demands associated with entering the leasing contract contributed to the popularity of leasing in the Czech Republic. For the last two dozens of years, leasing contributed considerably to the support of investments of a number of entrepreneurial subjects, particularly of the small, middle-sized enterprises and starting entrepreneurs.

<https://www.mmspektrum.com/clanek/vyvoj-leasingoveho-trhu-v-cr.html>

In the Czech Republic, the leasing provider is a natural person or trading company which complies with general conditions for private entrepreneurship. To provide leasing services in the CR, it is necessary to acquire only usual trade licence for the purchase of its further sale. Leasing companies in the Czech Republic do not need to acquire a special licence for their commercial activity. The activity of leasing companies does not fall into the sphere of the application of the applicable Bank law and is not subject to the bank supervision.

(Financial education 2007. WebMagazine. [cit. 2012-02-01]. Available from WWW: <http://www.financnivzdelavani.cz/webmagazine/page.asp?idk=273>)

Among the most important forms of leasing in the Czech Republic for the time of existence of leasing are unanimously three basic types differing at the beginning and at the end of the contract from the viewpoint of

property relationships. This is financial leasing, operative leasing and reverse leasing. The main differences between these types of leasing may be found in the property relationships and in the risks which are transmitted on the leasing recipient by the leasing company.

It may be expected that the leasing boom will continue and the macroeconomic role will not diminish in the following period, in spite of the drop of its tax attractiveness for the entrepreneurs after accepting the changes in a number of tax laws within the reform of public finances. The hitherto development trends of our leasing markets have a long-term character and will not change, even after joining (of the CR) the European Union, as our leasing is, in a number of aspects, a part of the inter-connected and globalizing European leasing markets.

Statistical data

In 2017, the member companies ČLFA provided by leasing, factoring, through credits for consumers as well as entrepreneurs:

- The total financed amount of CZK 163.28 mld. (by CZK 8,32 mld. more than in 2016 – inter-annual growth by 5,4%)
 - thereof: CZK 132.09 mld. for financing movable as well as immovable investments and operation of entrepreneurial subjects
 - CZK 31.19 mld. for financing goods and services for households
- They financed road motor vehicles (mainly new ones) by the amount of CZK 92.99 mld., thereof CZK 63.39 mld. were for the acquisition of cars incl. CZK 49.92 mld. for the acquisition of 120.440 new cars (they financed 44,3% of new cars firstly registered in the CR in 2017)
- They provided also CZK 27.94 mld. for financing the machines and equipment
- They concluded 678,120 new leasing and credit trade transactions
- At the end of 2017 they administered 1,294,366 active leasing and credit contracts
- Claims from the running leasing and credit transactions achieved CZK 270,28 mld. at the end of 2017

(Report on the condition and development of the non-banking leasing, credit and factoring market in the CR in 2017; ČLFA)

2.4. CROWD-FUNDING SECTOR

Active crowd-funding webs are rare in the CR for the time being. The most of them are focused on the remuneration crowd-funding. The most important portal is Hithit.cz existing two years in January 2015; more than CZK 16 mil. were sent to projects.

The second portal deserving surely the attention is Startovač.cz. In March 2015, it was in the first place in the most successful Czech campaign. Within the project In Trabant through Pacific more than 2 mil. CZK were collected thanks to the support of almost three thousand contributors at the beginning of 2015.

In October 2015, the portal Peněždroj.cz was started bringing a combined crowd-funding as the first one in the Czech Republic. Through Peněždroj we can offer to the contributors thanks, remuneration as well as the share.

Among other players in the field of the Czech remuneration crowd-funding, we can find the portal Kreativcisobe.cz or Nakopni.me. Both portals helped to implement dozens of successful projects.

In the Czech Republic, crowd-funding has also its imaginary graves. One of them has Fondomat, a crowd-funding portal founded in 2011 with a considerable medial hype up. After the following move of Fondomat from Prague to London, this project was officially terminated at the beginning of the year 2015.

At the end of 2014, Raiffeisen Bank announced starting its crowd-funding platform Odstartováno.cz. Raiffeisen Bank became in this way the first Czech bank providing financing through crowd-funding. Odstartováno.cz acquired quickly attention of the public, but after several months, the portal was closed.

In the Czech Republic, the year 2015 is the year of starting the first portals focused on the debt crowd-funding. In February, servers pujcmefirme.cz and symcredit.com were started, focused on the direct loans for small companies and entrepreneurs. Simultaneously, CreativeDock announced the development of the portals concentrated on the debt crowd-funding at which it co-operates within PPF with the Home Credit group.

The first portal enabling the share crowd-funding in the CR became Peněždroj.cz. It opened its gates in October 2015 and took the first place and “has robbed” it of the long expected project Fundlift.cz.

(<https://www.crowder.cz/crowd-funding-v-cr/>)

In a year and a half, the minor investors invested 150 mil. CZK. This is the hitherto balance of crowd-funding platform Fundlift being in the portfolio of Roklen financial company. A short time ago, Fundlift completed two record campaigns with the cost of eight million CZK each.

The trend of the systematic growth applies to the whole segment of community financing. This segment was transformed in the last year; after the initial boom, several projects were terminated, e.g. Katalyzátor (accelerator) from the music publishing house Supraphon. “Up to fifteen various companies were at the market simultaneously, however, most of them were wound up,” explains Martin Brykner from the remuneration crowd-funding portal Starter. Besides this, Hithit company remained at the market. “In comparison with the same period in the last year, we have the lead of 34 per-cent,” explains Jana Ecksteinová from Hithit. It assembled already 43 mil. CZK from the investors in this year. The community of supporters of the platform doubled. The Starter (Startovač in Czech) announced the growth of fifteen per-cent; it assembled approx. twenty mil. for the various project in the last year.

(More at <https://www.e15.cz/byznys/finance-a-bankovnictvi/cesky-crowd-funding-trha-rekordy-fundlift-uzavrel-kampane-za-osm-milionu-1340184>)

3. ENERGY EFFICIENCY/RENEWABLE ENERGY FINANCE ACTIVITIES

In the Czech Republic there is funding of energy efficiency increasing measures possible above all from public support mechanisms ((New) Green Savings Program, Subsidy replacement of old boilers for low-emission types, Program EFEKT). The renewable energy finance activities are partly possible also from public support mechanisms or through green investments funds. The EPC and ESCO market is also functional and developed. (*můj text*)

3.1. INTERNATIONAL AND LOCAL FINANCE INSTITUTIONS WORKING IN EE SECTOR

Česká spořitelna (member of ERSTE group) - TOP ENERGY EFFECT – for small enterprises with the turnover exceeding of CZK 60 mil., middle-sized and big enterprises. Energy consulting, subsidies and credits for consulting, subsidies and credits for saving measures, evaluation of the state of operation and suggestions of saving measures - professionally and free of charge, thanks to using subsidies, the time of investment return may be shorter by one half. It includes the cashless evaluation of suitable measures for the particular operation. The survey of the present consumption and energy cost, the visit of bank representatives with the energy specialist – evaluating the operation and documentation is necessary for this. Within 10 days, the bank sends the suggestions of saving measures with quantification of cost, savings and return rate. It offers the suitable structure of financing with the advantageous conditions, including the possible subsidies. It assures the subsidy consulting and management.

(<https://www.csas.cz/cs/korporace/aktualni-temata-kampane/energie>)

Komerční banka (KB) – Financing energy-saving measures for the purpose of savings of operating cost, higher effectiveness associated with renewal of production facilities and technologies, extension of life-time of production halls or administrative buildings etc. Forms of savings are e.g.:

- Modification of lighting – inside buildings / public lighting
- Reconstruction of heat distributing system, building insulation including the exchange of the windows and doors
- Technological exchange of fuel, installation of cogeneration unit
- Reconstruction of the system of cooling
- Energy management – measuring the consumption and regulation, purchase of energies, suitable selection of tariffs etc.

Within the co-operation with KB, it is possible to acquire the cashless elaboration of the basic study of the feasibility, which evaluate the scope of savings of a certain energy project, i.e.:

- Short description of the current state of energy management
- Description of suggested savings measures
- Estimate of the amount of investment cost and future savings of energy and other operating cost
- Calculation of the simple return and suggestion of further procedure

KB offers the services of the team of specialists for power engineering, being able to evaluate not only economic but also technical specifics of each project and KB EU Point – consulting service of experts assuring the complex financing including acquiring subsidies from European as well as other public sources.

Possible forms of measures implementation:

- Continual renewal of the property in the scope of usual operation
During the property renewal, the economical technologies are used during the property renewal in the natural way.
This is not the comprehensive solution mostly. Potential for savings is not completely used in this way. Financing is assured by the investor from own sources or through the bank
- The professional summarizing evaluation of the possibilities and individual implementation of measures
The principal has the energy saving measures (energy audit) quantified and suggested by a specialised consulting company. He selects the suppliers (more suppliers) for the implementation of measures.
The guarantees for the quantified savings are often limited.
Financing is assured by the investor from own sources or through the bank.
- Implementation of energy savings measures by the method of the service with the guaranteed result /savings (EPC)
The principal has a solution suggested by ESCO company and the supplier provides for its implementation. It monitors, evaluates and guarantees the energy savings for the time of the contract term. The achieved savings serve for paying back the project cost. If the guaranteed savings are not achieved, the supplier compensates the occurred difference to the principal.
Financing is assured mostly by the supplier (ESCO), selling, after completing the implementation, the occurred long-term claim to factoring companies (Factoring KB).

Thanks to the long-term successful co-operation with the international financial institutions (EIB, EIF) and the high volume of provided credits, KB succeeded to acquire sources for providing the most advantageous forms of financing, be it in the form of a lower interest rate or lower requirements on assuring the credit:

- EUROENERGIE – lower requirements on securing and the interest rate decreased by 0,30% p.a.
Basic parameters:
Credit amount from 1 to 136 mil. CZK
Credit maturity minimally 3 years
MSP, VP for big enterprises, the credit is limited to CZK 30 mil. CZK
The measures are recommended by the energy audit or opinion and savings of energy cost exceeds 50% of investment amount (suitable e.g. for projects with allocated subsidy from OPPIK) (Program EuroEnergie uses the program LIFE European Union)
- EUROINNOVATION –Lower requirements on securing and a mildly decreased interest rate. Basic parameters:
Credit amount from 0,7 to 190 mil. CZK
Credit maturity from 1 to 10 years
MSP, Mid-Cap up to 500 employees in the group

Some of the conditions of innovation rate of the company/project were complied with (Program EuroInovace uses the European Fund for strategic investment (EFSI))

https://www.kb.cz/getmedia/41fd5a24-efbe-4bb5-8086-82d6a330ec01/kb-euroenergie-brozura-energeticke-uspory_2018.pdf.aspx

MONETA – Financing eco-energy projects, financing projects using the renewable energy sources. Eco-energy projects are among the priority areas of MONETA Money Bank, offering to the entrepreneurs an easy access to the expert consulting, subsidies and credits in the area of renewable energy sources. Besides the credits for eco-energy projects we offer also the comprehensive consulting service in co-operation with the company Agroteam CZ. The example of the possibility of financing the biogas station:

- Use the specialized offer and co-operation with trained company bankers.
- Financing up to 100% investment costs (depending on projects type and investor's economics)
- Time of credit maturity is max. 15 years (depending on projects type and investor's economics)
- The postponement of payments of credit security for the time of biogas station construction (up to 18 months)
- Offer of complete insurance of the investment on very advantageous conditions
- Co-operation with the leading technologies suppliers
- Help with negotiations about a more advantageous purchase price for electrical energy
- Help with negotiations with business partners
- We finance also the non-agricultural BPS (biogas station).
- Inputs into BPS may be own inputs or external inputs based on the contracts with suppliers.
- Also refinancing to the already existing credit for a biogas station may be provided in this way.

<https://www.moneta.cz/firmy/zemedelstvi-a-ekoenergie/uvery/financovani-ekoenergetickyh-projektu>

ČSOB – *Purpose credit for municipality*, for financing the municipality development. It may be used among others for:

- Support of energy and environmental projects
- Financing energy savings measures (EPC projects)
- Co-financing development projects supported from EU funds and state funds

Financing EPC PROJECTS – by the purchase of established receivables. In this way, investor's requirements on the long maturity as well as supplier's requirement to get the payment as soon as possible after the project completion may be met. By ceding the receivable by the supplier to the bank, the character of financing does not change, i.e. it is a credit of the supplier for the investor all the time (in the form of payment calendar) not the bank credit – financing does not become a part of the direct engagement of the investor, the investor does not have to provide any additional guarantee. Thanks to energy savings guaranteed by the supplier, the project payments are each time lower than the annual savings in comparison with the initial state; the project is paid back from the operating cost. The purchase of the receivables from the supplier towards the investor on the base without a sanction is an alternative for financing to all the credit types. If the project supplier (ESCO) needs to take a short term credit from the bank for the time of project construction, it is ideal to pay back this credit to the bank from the payment for ceding the receivable which came into being after the project completion.

Procedure during the purchase of receivables:

- Co-operation of ESCO with the bank ideally already before joining the tender, or generally before entering the EPC contract
 - offer of ČSOB of obligatory discount rate for the whole time of project term
 - calculation of the nominal value of the claim, i.e. payment calendar of the project
- Result of tender – acquiring the order by the supplier, EPC contract between the supplier and the customer
- Contract of the future ceding receivables between the bank and the supplier
- Recognizing the obligations by the customer towards the bank
- Contract of ceding the receivable between the bank and the supplier
- Payment of the receivable by the customer to the bank

http://www.apes.cz/uploads/konference%202013/konference%20131126_8_Cada_CSOb.pdf

SBERBANK – Financing renewable sources. Financing the construction and operation of photovoltaic power plants, biogas stations, small water power plants or wind power plants. This is financing of renewable sources for existing as well as new purposefully formed companies.

Provided advantages:

- Postponement of payments for the whole time of drawing
- Payment from the future cash flow project

Forms of financing renewable sources:

- Investment credit for the construction and operation of the production site of electrical energy from a renewable source (financing photovoltaic power plant, wind power plant, small water power plant, biogas station)
- Current account for VAT financing during the construction
- Documentary letter of credit for financing technology purchase
- Exchange rate assurance of technology price purchased in foreign currency

Unicredit – financing renewable sources of energy production. At present, it provides financing in the following areas of renewable energy sources:

- small water power plant
- wind power plant
- photovoltaic power plant (including refinancing existing projects)
- biomass
- biogas station

Taking into consideration specifics associated with financing renewable sources:

- long-term investment horizon - credit with the maturity of 10 - 15 years
- high entrance cost - credit up to the amount of 80% investment cost
- a short-term credit for pre-financing VAT
- assurance of interest rate
- possibility of premature credit payments after the construction completion

- consulting and support from our specialists in the course of the whole project cycle

Example of investment credit for financing the construction as well as the operation of biogas station:

Basic conditions

- size of biogas station is appropriate to the sowing area of agricultural enterprise
- the project has a valid building permit and the future connection to the distribution network
- the biogas station will be the property of the agricultural enterprise or the project company where the agricultural enterprise is the shareholder
- general supplier has provable references

Financing

- long-term investment credit with the maturity up to 12 years
- a short-term credit for pre-financing VAT
- possibility of credit payments after the completion of station construction
- assuring the interest rate during the whole term of credit payment
- in case of quality projects we finance up to 100% of Work Contract

(<https://www.unicreditbank.cz/cs/velke-firmy/financovani/pujcky.html#energetikaobnovitelnezdroje>)

Certain possibilities of financing renewable sources are offered also by producers and energy distributors:

e.on solar – Solar system with the Virtual battery – warming water and the electricity production with storing into the Virtual battery. Solar system with the Virtual battery represents a possibility how to use 100% of produced energy. When you do not consume all the energy in the moment of production, it is saved simply into the Virtual battery instead of sending it into the grid free of charge. When you need the energy, in winter or in bad weather, you shall draw it from the Virtual battery at first and then from the grid. Thanks to this you can save money and increase your self-sufficiency. Initial investment may be assured through E.ON Solar by the Loan with the interest rate of 4,7%. Another service is arrangement of the subsidy with assuring all the administrative requirements.

(https://www.eon-solar.cz/?gclid=EAlalQobChMlyOGS9Lru2wIVxBbTCh0lsQsPEAAAYASAAEgLDXPD_BwE)

ČEZ – Turnkey photo-voltaics. Possibility of installation of FTV system including the battery storage place. The photovoltaic power plant from ČEZ may be financed by the ČEZ credit for technologies:

- advantageous interest rate for ČEZ' customers
- providing, keeping and premature repayment free of charge
- possibility of credit drawing up to 60 days from approval
- financing the purchase of technology as well as the cost associated with project implementation
- help with acquiring the subsidy from the program Green for savings

We offer to owners of photovoltaic power plants without licence installed by ČEZ for the consumption not covered by the own production the product ELECTRICITY FOR SOLAR PLACE through which you decrease the energy cost and as bonus you acquire free of charge the service of monitoring the functionality and efficiency of FVE.

- discount of electricity for consumption which cannot be covered by your own production
- guarantee of the advantageous price of electricity generation for 36 months with the possibility of extension
- monitoring of functionality and efficiency of your photovoltaic power plant free of charge

https://www.cez.cz/cs/sluzby-pro-zakazniky/fotovoltaika.html?qclid=EA1a1QobChMImez2pbzu2wIVC54bCh3GgQo7EAAYASAAEqKnP_D_BwE

3.2. EPC AND ESCO MARKET

From 1994 to 2014, the investments were implemented in more than 800 buildings, in more than 170 projects by EPC method. In the monitored period (1994 – 2014), almost CZK 2.5 mld, thereof CZK 0.8 mld. were invested in the last 3 years into the buildings and technologies. If we suppose that 95% of buildings achieve savings up to now (which is possible as a number of large projects particularly in the last years did not exceed the guaranteed period), the total savings of CZK 2.4 mld. were achieved.

The composed annual growth rate (CAGR) in the last 10 years is 16,75%. This means that the EPC market has been growing by 16,75% in the last decade. If we recalculate this value to the savings of greenhouse gas production, the result is the unbelievable number 454 k tons CO₂.

It was estimated in 1999 that one of the potential segments for applying EPC method are panel houses. As it turned out by the time, insulation brings considerable energy savings, but, in view of the quite high investment the returnability is a long-term matter. For this reason, these buildings are unsuitable for the projects with the guaranteed savings. At present, a new possibility to combine the EPC method with EU subsidies opens for the isolated objects.

In view of the number of buildings of medical facilities and schools, these segments appear to be the segments with the highest potential for applying EPC method. Newly the possibility appeared to use the CRAB database for the reconstruction of state administrative buildings and the complete opening the market for the method with the guaranteed savings in the area of army buildings is expected. The next potential for future is the property returned to the church and the extending demand of the private companies, mainly production enterprises.

It follows from the analysis that there are more than 5 000 administrative buildings in the property of state, 188 hospitals, 158 health institutes, almost 12 000 school of all the types, 2 500 buildings in the property of church, around 6 000 army buildings and 2 300 industrial objects in the Czech Republic. This represents in total more than 28 thousand objects. Surely not all of them are suitable for the application of energy services with the guarantee, but only 5% of these objects could be reconstructed applying EPC method – it would be more than 1 400 objects. If we compare it with 800 objects, for which EPC projects in the last 20 years were implemented, it is a lot of work.

Potential of EPC market purely from the statistic viewpoint:

- In 20 years 800 buildings = CZK 2,5 mld. investments incl. VAT = CZK 3.125 mil. investment for the building
- For EPC 5% = 1400 suitable objects shall be selected of 28 000 objects

- Theoretical investment potential for EPC = 1400 * 3.125 = CZK 4 375 mil. = Almost CZK 4.5 mld. investments
- Time potential for EPC = CZK 4.375 mld. investments / CZK 301 mil. (amount of investments 2013) = work for 14,53 years

It follows the above mentioned data, analysis of the market, experience and general knowledge associated with the treatment of real estates in the last years that in the Czech Republic is a considerable potential for EPC projects in all the market segments in the Czech Republic.

In October 2010, the interest group of legal entities for the support of the development of energy services in the CR (APES, www.apes.cz) was formed. It was founded by the companies AB Facility, ENESA, Siemens, Centre for Energy Savings, SEVEN, Centre for effective use of energy, Dalkia Czech Republic, MARTIA and ENVIROS. The mission of APES is to contribute to the permanent development of the energy services at the Czech market. The executive body of the association is the council. It consists of three representative of ESCO companies and two representatives of consulting companies. The council meets once in a month.

The auxiliary tool e.g. for ESCO system is CRAB – central register of administrative buildings. In the Czech Republic, there are more than 670 state institutions managing the real estates of the state at present. These are almost 5 thousand real estates. With several exceptions, these subjects manage the entrusted property based on the same legislation, nevertheless, the common rules for the registration of the state property do not exist. CRAB brings the unified methodology of the registration of administrative buildings and it becomes the primary system for their registration for some institutions.

https://issuu.com/siemenscz/docs/analyza_trhu_epc_pro_ve_ejnost

3.3. INVESTMENT FUNDS

The following investment products were currently found in the offerings of financial institutions:

NOVA Green Energy is open share fund of qualified investors (hereinafter referred to as "Fund") investing into the property participation in the companies operating small and middle sized equipment (1-4 MW) producing the energy from the renewable energy sources in the region of the Central and Eastern Europe, particularly in the Czech Republic and in Slovakia. The Fund revenues are stabilized as they are based on the purchase price of electricity guaranteed by the law for 15 to 20 years; these purchase prices exceed considerably the usual market prices of electricity. Together with the effective management of assets under the Fund administration, these factors reflect subsequently the results of Fund management. The risk rate of the investment is similar to investments into the state debentures with the maturity of 10 to 15 years, but with a considerably higher expected revenue exceeding 6% p. a. The Fund target is to be the choice for the conservative investors expecting a stabile, by the law guaranteed income and the appropriate appreciation of capital in the area of renewable energy sources. A strict regulation framework, the well defined motivation of managers, a renowned administrator, expert and auditor or other institutional and project guarantees assure the maximum transparency of NOVA Green Energy, opened share fund based on the model of investment funds in the Western Europe.

The Investment into the Fund is determined exclusively for persons corresponding to the definition of qualified investor under the Act No. 240/2013 Coll. of Investment Companies and Investment Funds and it

is necessary to invest at least EUR 125,000 (CZK 3,500,000) and to sign the declaration of awareness of risks associated with this type of investment including the investment experience. The fund provides a unique opportunity anchored in the investment environment protected by the legislation. It is suitable for careful investors, looking for stable revenues.

The fund issues the dematerialized registered investment certificates with the nominal value of EUR 0,1 or CZK 1.

The purchase of the investment certificates of the Fund takes place continuously all the year round and the terms for arranging the purchase by the investment company are given by the volume of the required amount for purchase. If this is investment up to 10 mil. CZK, the term is maximally 4 months from the end of the month in which the investment company received the application for the purchase. In the time from submitting the application for purchase up to the purchase of the investment certificate, the investment certificate bears no interest.

Investment into the fund is not bound as for time. Minimum recommended investment horizon is 3 years.

Fees

- The entrance fee is maximally 3%
- The exit fee is maximally 5% (2 years from the entrance)

The purchase of investment certificates by the natural as well as legal entities takes place as “direct investment” most frequently. In case of a direct investment, the investor sends the money directly to the account of Fund kept by its depository, subsequently the share certificates in the aliquot value are credited to its property account kept by some participant of the Central Securities Depository. If the investor does not have the property account at his disposal, it is possible to use the services of the Fund administrator concerning opening the account and settlement of the whole transaction.

The share fund is focusing on the investments into the trade shares respecting their specific specialization. The fund is focused on the companies associated with the production of electricity and heat from renewable energy sources or cogeneration. Among the key risks in this region generally is the technological risk, risk of project implementation and moreover also the nature risk. All these risks represent particularly the possible non-functionality of technology or failure to achieve the expected technical parameters, in the consequence of which the facility will be operated ineffectively and with higher cost than expected. Very important is the specific risk of non-stability of the state energy policy which may negatively influence the Fund property value. An additional specific risk is also the technological risk of the renewable energy sources, moreover the operating risk of sources for the production of electricity and heat from renewable sources which is connected only with the nature influences and cannot be influenced. It applies to such sources that inter-annual average values of wind, sunshine or other non-modifiable nature influences may oscillate. Investments, on which the fund is focused are subject to state regulations in the Czech Republic as well as abroad and a change may be caused in the law in the Czech Republic as well as in other countries in which the fund invests and the legal relationships, applying to the fund investments, may differ considerably from the current situation after such change.

<https://www.redsidefunds.com/cs/funds/nova-green-energy>

NOVA Green Energy is an open-end mutual fund of qualified investors (hereinafter only “Fund”) investing in equity of companies operating small and medium facilities (1-4 MW) that generate power from renewable sources of energy in the Central and Eastern Europe, particularly in the Czech Republic and Slovakia. The

yield of the Fund is steady because it's based on feed-in tariffs of electricity for a period of 15 – 20 years; moreover these prices exceed a common market electricity price. Those factors together with effective asset management reflect in economic result of the Fund. Thus, this type of investment resembles in terms of risk government bonds with 10 – 15 year maturity; however the yield is significantly higher than 6% p.a. The Fund aims to be the best option for conservative investors expecting stable government guaranteed income and adequate capital appreciation in the area of renewable sources. Strict regulation framework, clearly set management motivation, a respected fund manager, expert and auditor as well as other institutional and project guarantees ensure maximum transparency of NOVA Green Energy, open-end mutual fund, following the model of Western Europe investment funds

The investment in the Fund is exclusively intended for persons matching the definition of a qualified investor in compliance with Act No. 240/2013 Coll., on Investment Companies and Investment Funds, therefore it is necessary to invest at least 125,000 EUR (3,500,000 CZK) and sign a Declaration of Risk Awareness concerning this type of investment and including investment experience.

Fees

- Entrance fee - max. 3%
- Exit fee - max. 5% (2 years from entry)

The purchase of unit certificates by individuals (natural) and legal persons is most often carried out through so called "direct investment". Direct investment means that the investor sends financial means directly to the Fund's account maintained by its depository and subsequently unit certificates are credited to its asset account maintained by one of the participants of the Central Securities Depository (CSD) at an aliquot value. In case the investor has no property account at its disposal, the services of fund's manager may be used in terms of account setting and the completion of the entire transaction.

In the first place, any investor interested in investing should read the information available about the Fund and its investment profile.

(<https://www.redsidefunds.com/en/funds/12>)

Generali Fund of life planet - it is determined for investors looking for interesting appreciation and are willing to tolerate a higher fluctuation of the value of their property. The fund focuses on the investments into the companies having a positive attitude to the climate change, which behave ecologically and are socially responsible. These are particularly companies active in the areas as e.g. water processing and treatment, ecological controlling, recycling, bio-food, alternative energy sources, new materials. In view of the ecological as well as economic problems which are caused by the climate change due to limited reserves of mineral resources the solutions in these sectors are desirable. In view of the fact that this is a fund focused on sectors, its share should not exceed the limit of 10% in the total volume of investor's portfolio.

Risk grade: 5 (middle – high), investment horizon: more than 8 years, appreciation: 10 high

(<https://www.generali-investments.cz/produkty/investice-v-czk/fondy/generali-fond-zive-planety.html>)

ERSTE WWF STOCK ENVIRONMENT VT – Global shares in the branch of the environment protection. ESPA WWF STOCK UMWELT fund invests in the whole world into the enterprises from the environment protection branch. The following topics are in the foreground: water treatment and water supply, recycling and waste treatment, renewable energy, energy efficiency and mobility.

<https://www.penize.cz/podilove-fondy/219278-erste-wwf-stock-umwelt-vt-erste-asset-management>,
https://cz.products.erstegroup.com/Retail/cs/Produkty/Fondy/Factsheety/Fund_general/index.phtml?ID_NO TATION=44824214&ISIN=AT0000A044X2,

(ČSOB) KBC Eco Fund Alternative Energy – invests into the companies which “create an essential part of their turnover” in the area of renewable energy sources.

(ČSOB) KBC Eco Fund Climate Change – This sub-fund invests into the shares of companies active in the fight against climatic changes and/or companies focusing on the decrease of the emissions of the greenhouse gases. It involves shares of the companies focusing on recycling and treatment of waste, new material, CO2 retaining and processing, environment-friendly transport and energy savings.

<https://www.csob.cz/portal/lide/produkty/investicni-produkty/podilove-fondy/akciov-fondy/detail-fondu/-/isin/BE0946844272/1>,

3.4. CROWD-FUNDING

In the Czech Republic there are no specific crowd-funding tools for financing the EE sector. Within the framework of the platform mentioned in the previous chapter (hitHit.cz, Fundlift.cz etc.), it is possible to finalize any plans.

3.5. PUBLIC SUPPORT MECHANISMS

3.5.1. National public funding

(New) Green Savings Program

The program of the Ministry of Environment, administered by the State Environmental Fund of the Czech Republic (hereinafter referred to as "Fond"), supports the energy-saving reconstructions of family houses and blocks of flats, exchange of the inconvenient sources of heating and using renewable energy sources. It represents the economically best pro-growth measures for the Czech economics, for the development of the entrepreneurial sphere in the building industry, mechanical engineering and other associated branches. An important effect of the program New green for savings (hereinafter referred to as "Program") is also the creation or maintaining dozens thousand jobs.

The main target of the Program is improving the environment by decreasing the production of emission of polluting substances and greenhouse gases (first of all of CO2 emissions), moreover the energy savings in the final consumption and the stimulation of economics of the CR with additional social benefits e.g. increase of quality of citizen's housing, improving the appearance of towns and municipalities, starting the long-term progressive trends.

The Czech Republic acquired for this program financial means by the sale of the emission allowances of EUA (European Union Allowance) under the Act No. 383/2012 Coll. of conditions for trading in greenhouse gas emissions allowances, as amended within EU ETS in the period 2013 – 2020. Financing the Program takes place through the state budget of the CR.

In the scope of the Program the measures are supported leading to the decrease of energy demands of buildings, e.g. insulation of external cladding and exchange of filling of building openings (windows and doors). Moreover the construction of new buildings with a very low energy demands (buildings approaching to passive standard), exchange of non-ecological heat sources for efficient, environmental-friendly sources (e.g. biomass boiler, heat pump or gas condensing boiler) and installation of technologies using the renewable energy sources and recuperation of heat from the waste air (solar thermal and photovoltaic systems and units of forced ventilation with recuperation) and also the implementation of green roofs is subsidized. The principles of allocation of the above mentioned subsidy is very simple. The more the energy demands are decreased after the implementation of measures, the higher is the amount of financial support.

Depending on the type of the subsidized object the Program shall be split in:

- subprogram New Green Savings – family houses
- subprogram New Green Savings – blocks of flats

In each subprogram the areas of supports are defined and are designated by capital letters. These areas and subsequently their sub-areas determine individual possibilities of subsidies.

AREAS OF SUPPORT FOR THE RESIDENTIAL HOUSES:

- A. Decreasing energy demands of the current blocks of flats
 - Subsidies for insulation of building cladding - exchange of windows and doors, insulation of peripheral walls, roof, ceiling, floor. These measures may be suitable combined with the exchange of the non-ecological heat sources for effective, environmental friendly sources, installation of technologies using the renewable sources of energy and reverse gain of the heat from the waste air etc.
- B. Construction of blocks of flats with a very low energy demands
 - Subsidy for the construction of blocks of flats with a very low energy demands
 - Subsidy for the construction of green roofs
 - Subsidy for the use of heat from waste water
- C. Effective use of energy sources
- D. Subsidy for the exchange of the original main sources with fossil fuel not achieving parameters of the 3rd emission class for the efficient environmental-friendly sources
 - For the exchange of the electrical heating against the systems with thermal pump
 - For the exchange of the gas heating against gas heat pumps
 - For the installation of the solar thermic and photovoltaic systems
 - For the installation of the forced ventilation systems with the reverse gaining heat from the waste air
 - For the use of heat from the waste water
 - Who may apply for subsidy

Justified applicants and the recipients of the subsidy are owners or investors of family houses and blocks of flats, i.e.:

- Natural persons doing business and not doing business
- Association of owners of units
- Flat cooperatives
- Towns and municipalities (including city districts)
- Entrepreneurial subjects
- Possible other legal entities

(<http://www.novazelenausporam.cz/zadatele-o-dotaci/rodinne-domy/3-vyzva-rodinne-domy/o-programu-3-vyzva/>)

Pot subsidies

The subsidy amounting CZK up to 127,500 may be acquired for the exchange of boilers for the solid fuel with the manual stoking against a new gas condensation kettle, heat pump, biomass boiler or automated combined boiler. You can use the subsidy for the acquisition of the source of heating and its installation in the family house, the new or reconstructed heating system, treatment of combustion products as well as elaboration of documentation. Newly it is not necessary to implement micro-energy measures e.g. a partial exchange of windows or roof isolation.

The citizens in the areas with the most polluted air may acquire the bonus amounting CZK 7,500. Everybody who decides to combine the pot subsidy with the application for support in the program New Green Savings may acquire another bonus up to CZK 40 000. The pot subsidies for the citizens are administered by the regional authorities.

(<https://www.sfzp.cz/dotace-a-puicky/kotlikove-dotace/kotlikove-dotace-2-vyzva/>)

Program EFEKT 2017 – 2021

The state program for the support of energy savings, i.e. " EFEKT program", is declared by the Ministry of Industry and Trade with the intent to participate in the implementation of the State Energy Conception. Its implementation and financing will be assured in accordance with the approved documentation in connection with the provision of sec. 13 (2) lit. b) of the Act No. 218/2000 Coll. of Budget Rules, as amended.

It is one of the tools of the Ministry of Industry and Trade for achieving the topical target fixed by the European Directive No. 2012/27/EU of energy efficiency. EFEKT program is a supplementary program for operational and national energy programs with the target to increase the energy savings.

In the last years, the program periods were open until exhausting the allocated means, currently the EFEKT program, precisely its two programs (investment event = subprogram 1, non-investment event = subprogram 2) is declared through independent calls for individual activities:

SUBPROGRAM 1

1A	Measures for decreasing the energy demands on the public lighting 2018	MČ, company owned of 100% by the municipality or city district, municipality	2000	50	15.12.2017
1B	Reconstruction of the	Social and health facility, region, MČ, municipality,	2000	50	THE CALL WILL BE NOT

	heating systém and heat sources	school – legal entity, allowance organisation			ANNOUNCED IN 2018
1C	Energy-saving measures in the buildings solved by the EPC method	Social and health facility, region, MČ, company owned of 100% by the municipality or city district, municipality, school legal entity, organisational component of state, allowance organisation	2000	50	THE CALL WILL BE NOT ANNOUNCED IN 2018
1D	Specific and pilot projects	As per call wording	5000	90	As per the wording of the call. THE CALL WAS NOT ANNOUNCED UP TO NOW

SUBPROGRAM 2

2A	Energy consulting and information centres 2018	Joint-stock company, association, company with a limited liability, MČ, non-profit organisation, municipality, school legal entity, charitable society, general partnership, public research institution, inland natural person doing business, association of legal entities, interest association etc.	300	100	31.10.2017
2B	Event focused on the active spreading of information and education in the area of energy savings 2018	Joint-stock company, chamber, association, company with a limited liability, school legal entity, charitable society, general partnership, public research institution, inland natural person doing business, allowance organization, association of legal entities	Event with deposited fee 40/day; Event without deposited fee 80/day	Event with deposited fee 50 Event without deposited fee 90	15.12.2017
2C	Publication, underlying documents and tools for spreading information and education in the area of energy savings incl. the support of international co-operation 2018	Joint-stock company, chamber, association, company with a limited liability, school legal entity, charitable society, general partnership, public research institution, inland natural person doing business, allowance organization, association of legal entities	200	70	15.12.2017
2D	Introducing the system of energy management in the form of energy management 2018	Region, entrepreneur, towns/municipalities and city district above 10 k. inhabitants	500	70	15.12.2017
2E	Evaluation of the suitability of objects for energy-savings projects	Region, MČ, company owned of 100% by the municipality or city district, state enterprise, municipality, school legal entity, organisational component of state, allowance organization, public non-profit medical facility (institute)	200	70	Depending on call wording
2F	Preparation of implementation of quality energy-saving projects with the principles of good practice 2018	Owners of blocks of flats, owners of objects for entrepreneurial purposes owning objects in the public sector, owners of family houses	owners of family houses 30 owners of block of flats 50 owners of buildings in the public sector 100 owners of objects	70	Depending on call wording

			for entrepreneurial purposes 200		
2G	Elaboration of the territorial energy conception 2018	Region, statutory town, Prague	Regions and Prague 800 statutory towns 400	50	15.12.2017
2H	Elaboration of the report on applying the territorial energy conception	Region, statutory town, Prague	Regions and Prague 200 statutory towns 100	50	CALL WILL BE NOT ANNOUNCED IN 2018
2I	Pilot projects, projects of education and studies	Chamber, association, charitable society, public research institution, inland natural person doing business, association of legal entities, inland legal entity doing business, university	5000	90	Depending on call wording

Operational Program Enterprise and Innovation for Competitiveness

Program Energy savings – program for small, middle-sized enterprises and big enterprises. In April 2018, the Call III. was terminated. Subsidized activities:

- Modernization and reconstruction of distribution of electricity, gas and heat in the buildings and in energy management of production enterprises for the purpose of efficiency increase
- Introduction and modernization of systems for measuring and regulation, e.g. measures for hardware and network including the respective software associated with the introduction of the energy management system under ČSN EN ISO 50001 standard
- Modernization, reconstruction of the current facility for energy production for the own consumption leading to the efficiency increase
- Modernization of the systems of lighting of buildings and industrial premises (only in case of the replacement of outdated technologies for the new efficient lighting systems, e.g. light diode – LED)
- Implementation of measures for the decrease of energy demands of buildings in the entrepreneurial sector (insulation of the peripheral cladding, exchange and renovation of filling of openings, additional constructional measures having provable influence on the energy demands of the building, installation of air-conditioning with recuperation of waste heat)
- Use of the waste energy in the production processes
- Decrease of the energy demands/increase of the energy efficiency of production and technological processes, outside the measures on sources for the production of energy for the distribution, not own consumption leading to the increase of its effectiveness
- Installation of OZE (renewable energy sources) for the own consumption of the enterprise (use of biomass, solar systems, heat pumps and photovoltaic systems)
- Installation of cogeneration unit using the electrical and thermal energy, or the coolness for the own consumption of the enterprise in view of its operating conditions

- Installation of the accumulation of electrical energy (accumulator shall be operated in the energy management, having its own sources of the electrical energy from OZE (e.g. FVE) or from KVET (except for coal, LTO /light heating oil/, TTO /heavy heating oils/).

[\(https://www.agentura-api.org/programy-podpory/uspory-energie/uspory-energie-vyzva-iii/\)](https://www.agentura-api.org/programy-podpory/uspory-energie/uspory-energie-vyzva-iii/)

Program Low-carbon technologies supports competitiveness of enterprises and sustainability of the Czech economics by introducing new technologies in the area of energy treatment and secondary raw materials. In September 2017, the III. Call was terminated, in which it was possible to acquire a new subsidy for acquisition of electro-mobiles in the categories of road vehicles supported by the call or for acquisition of (quickly)charging (non-public) stations with the possibility of supplementing by the battery for the electro-mobiles within entrepreneurial area for own needs.

[\(http://www.dotacni.info/nizkoughlikove-technologie/\)](http://www.dotacni.info/nizkoughlikove-technologie/)

3.5.2. European public funding and their implementation

Program for the competitiveness of enterprises with accent on small and middle-sized enterprises (COSME)

Program for competitiveness of enterprises with accent on small and middle-sized enterprises (Programme for the Competitiveness of Enterprises and small and medium-sized enterprises, COSME) is European program focused on the support and competitiveness of European enterprises with accent on the small and middle-sized enterprises for programming period 2014-2020.

From the viewpoint of micro-financing, the first target is relevant, particularly support of the access to finances. Within this target as provided:

1. Tools for credit guarantees (Loan Guarantee Facility, hereinafter: "LGF") - program provides guarantees and anti-guarantees to financial institutions (e.g. guarantee companies, banks, leasing companies), so that they can offer more credits to small and middle-sized enterprises. Expected number of subsidized enterprises in the programming period 2014-2020 is 220 000-300 000 small and middle sized enterprises in the total amount of EUR 14-21 mld..

2. Capital tools for growth (Equity Facility for Growth, EFG) – through this tool, EIF will provide the risk capital to capital funds investing into the small and middle-sized enterprises, particularly in the stage of the extension and growth. This tool helps in the programming period 2014-2020 360 to 560 enterprises to acquire capital investments in the total volume EUR 2,6-4 mld.

In the Czech Republic, LGF is partly implemented through the program GUARANTEE 2015-2023. This program is implemented by Czech-Moravian Guarantee and Development Bank (ČMZRB), to which EIF provided the anti-guarantee within COSME program, which is used in connection with the guarantees for the small entrepreneurs in the national program GUARANTEE 2015-2023. Within this program, three types of guarantees are distinguished: individual guarantee, portfolio guarantee and individual guarantee with financial contribution (for social entrepreneurs).

In January of 2016, Komerční banka and EIF signed COSME contract. In this framework, Komerční banka will provide during the following three years the so-called Profi credit Start for natural persons, small and middle-sized entrepreneurs in the amount of CZK max. 1 mil. with the interest rate of max. 9,9 % p. a. with the maturity term up to 5 years. The client need not prove any entrepreneurial history; a quality

entrepreneurial intent is sufficient for the credit acquisition. Advantageous credits may be used for financing current assets, operating and investment needs.

http://praha.vupsv.cz/Fulltext/vz_425.pdf

Horizon 2020

In the segment of small and middle-sized enterprises, there is H2020 Small and Middle-sized Enterprises Instrument. The target of the instrument is to enable small and middle-sized enterprises to bring their innovative ideas from the first idea up to the stage when launching at the market is possible. It is support of small and middle-sized enterprise, nevertheless, the innovation and support is possible among others in the area:

3. SC3 Secured, clean and effective energy,

In view of the risk rate of this scheme, the subsidy is split into three stages, only competitive products and services will advance into the stage three. The rate of EU financing is 70 % (except for SC1 Health, the clinical research for validation of biomarkers and /or diagnostic health means are supported - in view of prevailing research activities within this topic, the rate of financing by EU is 100%).

http://praha.vupsv.cz/Fulltext/vz_425.pdf

InnovFin - EU funds for innovators

InnoFin represents a new generation of EU financial tools and consulting services for innovative enterprises, first of all in the area of industry, power engineering, health service and environment. These financial tools are shielded by Horizon 2020 program; in total EUR 24 mld. are available. Financial tools are determined for the enterprises of all the sizes - credits and guarantees are available for large enterprises (the amount differs depending on the size of the applicant), only guarantees are available for the small and middle-sized enterprises.

The guarantee InnovFin for the small and middle-sized enterprises (InnovFin SME Guarantee) provides guarantees and anti-guarantees of the debt financing amounting EUR 25,000-7.5 mil. with the target to improve the access to the credits for innovative small and middle-sized enterprises, i.e. enterprises dealing with the research, development or innovations which needs finances for their investments and /or operating capital. This tool was implemented by EIF, and in practice, EIF uses financial intermediaries - banks and other financial institutions – in the member states of EU and joint countries. In the scope of this tool, the financial intermediaries get guarantees by EIF for the part of their loss which they may suffer during the debt financing provided within this tool.

In the Czech Republic, the first intermediaries became Česká spořitelna and Komerční banka (agreement between the institutions and EIF was concluded on March 31, 2015). The banks may, during the following two years, provide to companies total financial means amounting EUR 100 mil. (Česká spořitelna) and EUR 150 mil. (Komerční banka).

http://praha.vupsv.cz/Fulltext/vz_425.pdf

4. CONCLUSIONS

The possibilities of financing energy-saving measures and renewable energy sources in the Czech Republic are mainly national and international grant programs. For households, programs such as Green Savings Program and Boilers subsidies are important at national level, from which it is possible to finance the insulation of buildings and the exchange of old technologies for more efficient use of renewable sources.

Both national programs (EFEKT, Operational Program Enterprise and Innovation for Competitiveness) and international (COSME, Horizon, Innovfin) are important for companies.

There are several banking institutions in the Czech Republic in the form of a comprehensive service, including preparation, financing and project implementation. Products are aimed at both households, SMEs and large businesses.

For households, the main suppliers of electric power in the Czech Republic have prepared products in the form of a comprehensive photovoltaic system, including subsidy management.

The EPC and ESCO markets have been identified for the long-term and well-developed market, with around 1000 objects being innovated since 1994. There are several established consultancy and implementation companies on the market offering services in this area.

Several investment funds can also choose those interested in this way of financing renewable sources. On the contrary, they are totally inaccessible at national level with green bonds and only very limited possibilities are in the field of crowd-funding.

Financing activities

- > common practice
- > rarely used
- > not used
- > not applicable



Sources of funds	Projects in need of financing									
	Improvement in building sector		Financing of energy performance improvements incl. ee equipment			Project preparation and development		Renewable energy production plants		
	Public	Private	Industry	Large companies	SMEs	Public infrastructure	R&D projects	Start-ups	Large/ utility scale	Small-scale
Equity financing	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Financing through local finance institutes	Yellow	Green	Green	Green	Green	Yellow	Yellow	Yellow	Green	Yellow
Financing through intern. finance institutes	Yellow	Red	Red	Red	Green	Green	Yellow	Yellow	Red	Red
Microfinancing	Red	Green	Red	Red	Yellow	Red	Red	Green	Red	Green
Subsidies	Green	Green	Green	Yellow	Green	Green	Green	Green	Yellow	Green
Leasing	Yellow	Green	Green	Green	Green	Yellow	Red	Red	Yellow	Green
Energy Performance Contracting	Green	Red	Green	Green	Red	Yellow	Red	Red	Red	Red
Investment funds	Yellow	Red	Green	Green	Yellow	Red	Red	Red	Green	Red
Green bonds	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
Crowdfunding/ Energy Cooperatives	Red	Green	Red	Red	Yellow	Red	Red	Red	Red	Green