Ex – ante assessment analysis

- Financial Instruments and Energy Saving Projects in the Czech Republic

WP T2: A.T2.1 Preparation of PA1: CE ex – ante assessment analysis report

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Introduction

The overall goal of the FIRECE project is to contribute to the achievements of the targeted results of Regional/National Energy Plans through increased use of Innovative Financial Instruments in the Central Europe region. The main focus is on public support to industry to invest into energy efficiency and renewable energy sources. Innovative Financial Instruments (IFIs) are actually a leverage of the public resources available by Regional Authorities in charge to manage EU funds.

A comprehensive method for analysing existing market and establishing Financial Instruments is ex-ante assessment analysis. According to Article 37 of EU Regulation 1303/2013, support for Financial Instruments is based on an ex-ante assessment that establishes evidence of market failures or suboptimal investments, and the estimated level and scope of public investment needs, including the types of Financial Instruments to be supported.[1]

[1] Regulation (EU) No 1303/2013

Approach to the analysis

This report is prepared on the basis of different activities that needed to be undertaken in order to obtain information and get a picture of the Czech financial support for Industry's low-carbon energy transition. In particular, support for SMEs to invest in energy efficiency and renewable energy projects. These activities included:

- **Projects meetings and networking** with project partners including exchange of knowledge, sharing practices and experiences in and outside the project partner regions;

- **Desk research** of existing documents such as legislative framework, Czech national documents, guidelines, analytical reports, internet articles etc.;

- **Face to face consultations** with ENVIROS colleagues (energy auditors, policy and legislation experts) and representatives of the Ministry of Industry and Trade and the Czech-Moravian Guarantee and Development Bank managing the programmes to support (finance) energy saving projects.

Czech programmes to support energy efficiency projects

The Ministry of Industry and Trade (MIT) of Czech Republic is the Managing Authority of the investment support programmes for the business sector and partly for the public sector. In addition, the MIT is also the responsible body for setting the country's policies leading to the achievements of energy efficiency targets. Apart from the MIT, both the Ministry of the Environment and the Ministry for Regional Development are responsible for the support programmes to improve energy efficiency. Within the framework of non-investment support, the MIT offers a financial contribution to assist in the preparation of the project to individuals and legal entities and supports consultancy provided free of charge. Additionally, a new awareness- raising programme is provided to support quality energy-saving projects with good practice.

Energy-saving projects are often projects in which the lifetime of the installed measures is longer than the payback period. Currently, a number of support programs can be used to shorten the payback period, from which it may be possible to obtain subsidies for both technical assistance in project preparation and project implementation. The state supports energy-saving measures for various areas within individual subsidy programs financed by European Structural and Investment Funds and also by National Funds.

Support for investing in projects to reduce final energy consumption:

- Operational Programme Enterprise and Innovation for Competitiveness [2,3] (OP PIC)

- Managing Authority: Ministry of Industry and Trade (MIT) and the Czech-Moravian Guarantee and Development Bank (CMZRB)

The programme is designed for small, medium and large enterprises outside the capital city of Prague. It provides subsidies (MIT) and financial instruments - soft loans (CMZRB) to support reduction in energy consumption.

- Operational Programme Environment (OPZP)[4]

[2] https://www.mpo.cz/cz/podnikani/dotace-a-podpora-podnikani/oppik-2014-2020/vyzvy-op-pik-2017/uspory-energie---iii--vyzva--232978/

[3] https://www.cmzrb.cz/podnikatele/uvery/uspory-energie/

[4] https://www.opzp.cz/

- Managing Authority: Ministry of the Environment

The programme is focused on improving the living environment (air and water quality, waste management, energy savings, landscape and technical assistance) of the Czech population. The program provides funding to municipalities, state and local governments, research and scientific institutes, educational establishments etc.

- Integrated Regional Operational Programme (IROP)

- Managing Authority: Ministry for Regional Development

The programme supports the sustainable development of cities, regions and municipalities through improving infrastructure, public services and public administration. In terms of energy savings, the program provides subsidies for the renovation of residential buildings outside the capital city of Prague.

- New Green Savings Programme (NZU)[5]

- Managing Authority: Ministry of Environment

The programme supports the reduction of energy consumption and efficient use of energy sources and renewable energy sources in family houses and apartment buildings in Czech Republic.

- Programme ENERG[6]

- Managing Authority: Czech-Moravian Guarantee and Development Bank

The program is designed to support energy saving projects. ENERG provides interest-free loans to small and medium-sized enterprises in the capital city of Prague. The loans are supplemented by a financial contribution for achieving results of the project implementation and a financial contribution to cover the cost of the energy expert's assessment.

- Programme Panel 2013+

- Managing Authority: Ministry for Regional Development

The programme is financed by the State Housing Development Fund and provides loans for the revitalization of the housing stock, regardless of the construction technology.

[*] *The abbreviations of the programmes used in the text are the same as in the Czech language.*

[5] https://www.novazelenausporam.cz/about-the-new-green-savings-programme/

[6] https://www.cmzrb.cz/podnikatele/uvery/energ/

Support for preparing energy efficiency projects:

- Energy Consulting and Information Centres (EKIS)

- Managing Authority: Ministry of Industry and Trade

EKIS provides free energy consulting to citizens, public administrations and entrepreneurs in all regions of the Czech Republic. The consultancy is carried out by qualified energy consultants selected by the MIT and is provided in the forms of face to face consultations, telephone and online consultancy.

- Programme EFECT

- Managing Authority: Ministry of Industry and Trade

Programme EFECT is a newly designed state programme for the promotion of energy savings with focus on the implementation of energy-saving measures and the increase of the efficiency of energy use. The EFECT program is a complementary program to the operational and national energy programs. Small – scale investment projects (sub-programme 1) and non-investment projects (sub-programme 2) are supported throughout a period of five years.

The main tools for the implementation of energy saving measures in Czech Republic are operational and national energy efficiency programmes which provide the following financing type of support:

- Subsidies (investment support)

- Subsidies (non-investment support)

- Financial Instruments (soft loans)

Tab. 1 Overview on the programmes supporting energy saving projects

Programme	Programme support	Priority axis	Form of financing	Allocation in mil. CZK	Period of implementation	Focus on industry sector
Operational Programme Enterprise and Innovation for Competitiveness (OPPIK)	ERDF [a]	PA 3, Specific Objective 3.2 Improving the energy efficiency in the business sector	Subsidy (MIT)	20 000	2014-2020	Yes
			Soft Loans (CMZRB)	Loan amount 500 thous – 60 mil		
Operational Programme Environment (OPZP)	ESIF[b]	PA 5 Energy Savings	Subsidy	2 500	2014-2020	No
Integrated Regional Operational Programme (IROP)	ESIF	PA 2, SO 2.5 Energy savings in residential buildings	Subsidy/FI	17 000	2014-2020	No
New green Savings (NZU)	EUA[c], EUAA[d]	PA 5, SO 5.1 Reduction of energy consumption of buildings and increased use of renewables	Subsidy	19 360	2014-2020	No
ENERG	National Sources	PA 3, Specific Objective 3.2 Improving the energy efficiency in the business sector	FI: Soft Loan	129,8	2014-2020	Yes
Panel 2013+	SHDF [e]	In line with Government decree 468/2012	FI: Soft Loan	4 500	2013 +	No
EFECT	ESIF	Energy Services: Numerous programme activities for energy efficiency	Subsidy	750	2017-2021	No

(a) ERDF – European Regional Development Fund, (b) ESIF – European Structural and Investment Fund, (c) EUA - European Union Allowance, (d) EUAA - European Union Aviation Allowance, (e) SHDF - State Housing Development Fund

An overview of available programmes supporting energy saving projects is shown in Tab 1. Mostly of the programmes are focused on financing energy savings in buildings such as public buildings, state organisational units and private residential units. Support for the Industry sector exists only from two programmes: Operational Programme Enterprise and Innovation for Competitiveness (OP PIC) and Programme ENERG.

Leading factors to market failures in the Czech Republic

Czech Republic has a crucial problem in accomplishing the energy efficiency obligatory targets under Article 7 of the Directive 2012/27/EU. [7] According to the National Energy Efficiency Action Plan of the Czech Republic, the fulfilment of energy efficiency targets is mainly dependent on the efficient use of the ESIF funds and the revenues from the sale of emission allowances. [8] The actual combination of commitment schemes consisting of policy measures, national energy saving programmes and operational programmes were insufficient to meet the obligatory target. The major market problems in terms of energy efficiency projects in Czech Republic are the following:

- Failure to meet binding energy saving targets (Article 7, Directive 2012/27/EU);
- Lack of interest on the part of SMEs to invest in energy saving projects;
- Lack of information on energy saving potentials and its costs;
- Long lasting administrative processes;
- Subsidized financing is a well-known practice (lack of interest or risk-taking in trying innovative financial instruments).

A huge amount of finances were allocated for the realization of energy efficiency projects in the industry sector in Czech Republic. This allocation is not used because

[7] https://www.mpo.cz/assets/en/energy/energy-efficiency/strategic-documents/2017/11/NEEAP-CZ-2017_en.pdf

[8] https://www.mpo.cz/assets/cz/energetika/energeticka-ucinnost/strategicke-dokumenty/2018/4/cz_annual_report_2017_cz.pdf

of an insufficient number of projects. Entrepreneurs invest in projects for facilities reconstruction or implementation of new technologies, etc. and thus energy savings appears, but as a secondary benefit. Investments in energy savings are not yet a priority interest in the industrial sector.

Regarding the selection of financing support, subsidies are still prevalent, while financial instrument are the second option. There are several possible reasons why financial instruments are not attractive and are considered risky for SMEs in the Czech Republic. One of them and probably most important, is the long process of documents preparation. SMEs have the opportunity to get a loan with zero interest, but associated with it is a greater administrative work. Consequently, financial costs may be required for the preparation of the documentation.

Small and medium enterprises are not obliged to develop energy audits. If SMEs are not involved in energy-intensive productions, information on energy saving potential and its cost may not be readily available. This can result in a lack of knowledge on energy saving potential, benefits and financing options.

Conclusion

The effective use of financial support from investment and structural funds is of crucial importance for the country's low-carbon energy transition. The Czech Republic offers many programmes to support energy efficiency projects of which two programmes aim to support SMEs investments in the industrial sector. The actual national energy saving programmes and operational programmes were not used to their full capacity.

As a result of the analysis, the main problems are the strong barriers that cost the underutilization of the available Financial Instruments. All actors involved in this chain (Policy Makers, Managing Authorities, Energy Auditors, Consultants and SMEs) have to work together and find a feasible solution to make the Financial Instrument more accessible and attractive to SMEs.

MARKET FAILURES AND

SUB-OPTIMAL INVESTMENT SITUATIONS

We present a list of typical situations taken from the activities carried out in the FIRECE project, from the published analyses and from direct experience.

Structural macro-economic failures	*Applicable*		*Remarks*
	Yes	*No*	
Negative externalities A cost that is suffered by a third party as a result of an economic transaction: it's known as an externality because the actors that take part in the economic transaction do not internalise all of the costs. An example can be represented by the costs sustained collectively for the consequences on the environment and on health due to the use of fossil sources, which are reflected on the level of taxation of the companies and do not allow a correct economic evaluation of the investment	X		It was law energy price for previous period e.g. 2013 to 2018. It was reason, that industrial sector was not enough motivated for energy saving project realization. The particular externalities should be added into an energy price.
Lack of adequate regulatory framework • Adjustment to financial regulatory frameworks to better support capital market innovation, ensure that risk assessment and related capital requirements for long-term energy efficiency investments correctly reflect their risks and develop market potential more innovative sources of financing for energy efficiency		X	There is strong legislation framework concerning improving energy efficiency according to Energy efficiency directive 2012/27/EU. There was 20 billion CZK for realization of energy efficiency projects in SME and large company (industrial sector) in Operational programme of Ministry of Industry and trade financed from ERDF for period 2014 to 2020. This allocation won´t be use.

• Lack of regulatory certainty and stability	X		Examples: The differences between Programmes periods - The share of large enterprises was only 20% on the beginning of programme period, which did not correspond to the structure of the Czech economy; On the base of negotiations with the European Commission, in mid-2017 this share was increased to 60% in the Energy Saving Programme. Implementation of Article 61 of Regulation (EC) No 1303/2013 of the European Parliament and of the Council in the framework of the OP EIC 2014-2020 in terms of the definition of revenue-generating projects for large enterprises with total eligible expenditure above EUR 1 million; The exclusion of energy efficiency projects from the application of Article 61 (Omnibus – August 2018).
Demand-side failures			
Asymmetric and imperfect		X	The potential for more efficient

information Imperfect information is problematic when the project sponsor does not understand the potential for energy savings or resource generation. Moreover, even if the project sponsor understands the energy efficiency potential, it is often faced with competing priorities or the need for action on the core business that drains the available financial resources. MAs should identify the amount of marketing and project development activity that is currently being supported in the market and consult with public and private sector stakeholders as to whether this is sufficient.	X		energy savings in industry was largely realized in the previous period. „cheap saving was already done“. There is alternative scheme according to Energy efficiency directive 2012/27/EU article 9. It is not obligatory for energy distribution company to realize of energy efficiency projects. The potential for effective savings is limited by the condition that investments aiming at reducing greenhouse gas emissions from activities listed in Annex I to Directive 2003/87 / EC (EU ETS).
Small size of projects and high transaction costs One of the main problems for funds looking at investments in energy efficiency and renewable sources is the often reduced size of projects and the relatively high transaction costs needed to place them on the market: overcoming this failure requires standardized contracts or the possibility of merging multiple projects with different risk profiles and dimensions to create an attractive financial perspective. This approach may require significant financing of technical assistance. Furthermore, high transaction costs can be caused by long administrative procedures required for project approval.	X		We can confirm high transaction costs for small energy efficiency projects. For Programming period 2021 – 2027 is considered combination of financial instruments and grants for small projects from this reason (simpler and faster administration). Next it will be considered simplified cost options for small energy efficiency projects.
Scarcity of investment-ready projects			

• Even if there is access to finance, there is difficulty in preparing bankable projects, due to lack of information or inadequate technical preparation. • The benefits are in the form of savings rather than revenues, making it harder to secure cash flows. • Savings can be hard to measure due to the difficulties of metering and the influence of variables such as weather and changes of patterns of use. • There is little standardisation in the development and documentation of projects. • Projects are often part of larger projects with other purposes e.g. building modernisation. • Energy efficiency assets are usually embedded into buildings and processes which presents difficulties for asset finance models. • The split incentive in commercial property whereby the tenant benefits from energy savings whereas the landlord makes the investment.	X X X X X	X X	There are experience with realization of energy efficiency projects. In case of industrial sector can be energy saving only % from total operational cost.
Problems of bank reliability of the company • The financial leverage ratio, understood as debt to equity ratio, is considered too high.	X		Industrial sector prefers other priority than realization of energy savings project. From this reason debt to equity ratio can be considered too high.

Supply-side failures			
A lack of access to appropriate finance/ high project risks • Capital markets are not used to invest in energy efficiency and are unable to accurately assign the price of risk. Lack of finance, especially for SMEs and start-up • Investments in efficiency are considered at a level of risk such as to require high levels of interest rates or high level of subsidized financing.	X	X	Czech capital markets are used to invest in energy efficiency, but industrial sectors prefers very often Industrial sector prefers other priority than realization of energy savings project. Private sector very often requires net payback period maximally five years.
A lack of capacity or experience in the supply chain • Energy Service Companies (ESCOs) are very important in the market for, and implementation of, energy efficiency projects across the EU. ESCOs need a_strong legal framework including public procurement framework, some fiscal incentives, technical and practical experience of using EPC, the capacity to arrange and manage financing and sufficiently developed project pipelines: these conditions are not found uniformly across Europe. • Other issues are found further down the supply chain in terms of the contractors that undertake the retrofit works: many countries have a lack of skilled workers who know how to undertake the works required and this can be a real market failure	x		It would be available to optimize ESCOs legal framework with some fiscal incentives. There is a lack of skilled workers who know how to undertake the works required during last years.
Sub-optimal investment situations			
A project has a positive IRR (Internal	X		Private sector very often requires net payback period

Rate of Return), but is not attractive for private financing due to a variety of factors including: • high risk perception • unfamiliar asset class • long maturity or a lower IRR than deemed attractive The grant element in an FI and the information an FI can provide can make these investments more attractive			maximally five years.
There is a gap between the demand for investments in energy efficiency and the goals of the Regional Energy Plan Calculate the investment gap as the difference between the level of investment required to reach the target and the current level: use qualitative and quantitative analysis of project typologies, funding available and experience to identify the types of investments that could be appropriate for an FI; estimate the investment gap in the Programme priorities through calculating the difference between the amount invested to date and an estimation of the amount needed to meet identified objectives.	x		There is a gap between the demand for investments in energy efficiency and the goals of the Energy efficiency directive 2012/27/EU article 7. This goal is not real due to economic potential.