

Round table on financing energy efficiency measures and deep renovation of public buildings in the Republic of Croatia

Proceedings

Introduction

As a part of the project [SMAFIN](#) (*Supporting smart financing implementation for energy efficient Balkan Buildings*) funded by the EU program Horizon 2020 and following the successful organisation of the first National Round Table on financing energy efficiency measures in the Republic of Croatia – [SEIF \(eng. Sustainable Energy Investment Forum\)](#), North-West Croatia Energy Agency (REG EA) alongside [Interreg MED Efficient Buildings Community](#) and Energy Cities network has organised a virtual round table with a focus on financing energy efficiency measures and the complete renovation of public buildings in the Republic of Croatia.

The aim of the round table on financing energy efficiency measures and renovation of public buildings in the Republic of Croatia is to encourage dialogue between key Croatian stakeholders on improving the availability and allocation of funds for investments in energy efficiency measures in order to contribute to the goals of the Long-Term Strategy for Encouraging Investment in the Renovation of the National Building Fund. The plenary session also built on experiences from local authorities that designed and tested investment evaluation and planning tools in the framework of Interreg MED projects like NewFinance, PrioritEE and Impulse.

The objectives of the Long-Term Strategy for Encouraging Investment in the Renovation of the National Building Fund will be impossible to achieve without securing private investments and combining it with public funds. In addition to useful tools and methodologies from the Interreg MED Efficient Buildings Community, the roundtable will also highlight good practices in neighbouring countries, such as Slovenia, where projects funded by both private and public funds are successfully implemented. Pointing out good examples will provide space for discussion and pave the way for the implementation of beneficial practices in the new financial perspective. Involving experts from the research and business sectors in policymaking will create opportunities for cooperation, but also shed new light on responding to the challenges of aligning all available funding sources and strategic documents.

By pointing out examples of good practice in neighbouring countries of the Republic of Croatia where combined financing projects have been successfully implemented, the round table created a space for discussion and indicated the direction for the implementation of good practices in the new financial perspective 2021-2027.

The round table was held as a virtual (online) event. The first part of the event addressed possibilities of combining the European Structural and Investment Funds and private capital to finance energy efficiency measures and deep renovation of public buildings in Croatia. The second part of the event was dedicated to the discussion between panel members and other participants focused on future implementation steps.

More details about the round table and the presentations of the panel members are available on the [Round Table website](#).

Summary

Of the total EUR 750 billion available **through the Next Generation EU instrument, Croatia was allocated ca. EUR 9,92 billion, of which ca. EUR 6,31 billion in grants and the remaining EUR 3,61 billion in loans.** These funds are primarily intended to finance the implementation of key structural reforms in areas where the consequences of the crisis and the need to strengthen resilience are largest and to ensure the implementation of the green and digital transition. In order for the funds to be used, the Member States, including Croatia, need to prepare a National Recovery and Resilience Plan and submit it to the European Commission by April 2021. **In addition to the funds available through the European Recovery Plan, Croatia will also have funds from the multiannual financial framework (2021-2027, ca. EUR 9,68 billion).** The development of operational programmes for these funds has officially begun and the first draft is expected in May.

Although grants are the most commonly used mechanism in Croatia, the use of financial instruments offers a number of advantages to final recipients. Due to the way the system is structured, as in the previous period, and based on the latest unofficial version of the Common Provision Regulation (CPR), the final recipient of a financial instrument is not a subject to public procurement requirements, VAT at the investment level of final beneficiaries is an eligible cost, and the realization of net income does not cause a reduction in funding, which is not the case with grant recipients.

In the financial perspective 2014-2020, the managing authority (Ministry of Regional Development and EU Funds) designated the Croatian Bank for Reconstruction and Development (HBOR) as the body implementing financial instruments for energy efficiency, i.e., the beneficiary, and accordingly allocated to HBOR funds for funding financial instruments. In addition to energy efficiency loans for the public sector (EUR 73 million allocation) from the European Structural and Investment Funds (ESIF), HBOR should have also implement ESIF energy efficiency loans for the private sector (in addition to the EU allocation of EUR 35 million, private capital of commercial banks in the amount of EUR 32,24 million was attracted), but due to the coronavirus pandemic and expected decline in market demand for such loans, the granting of loans to the private sector has been halted, and the allocated EU funds have been converted into grants. Also, due to the pandemic, the Ministry of Physical Planning, Construction and State Assets postponed indefinitely the publication of the call "Energy renovation of apartment buildings" within the Operational Program Competitiveness and Cohesion 2014-2020 (OPCC) because funds have been diverted to the health system and economic measures.

Using the available funds, Croatia needs to start making sustainable investments in energy efficiency, climate change adaptation and mitigation actions. Ambitious energy efficiency targets should not be seen as a burden but as an opportunity to grow, develop, generate new revenues and create added value.

EU's 2050 ambitions indicate that significant funds are needed to achieve the decarbonisation targets, for which it will be necessary to combine public and private capital. With the EU Renovation wave strategy, the European Commission has set a course for achieving double renovation rates in the next ten years and thus ensure greater energy efficiency in buildings. However, according to preliminary calculations, EUR 275 billion a year are needed to achieve this ambitious target. **The use of an Energy Performance Contract (EnPC) which transfers technical and performance risks to the service provider and the renovation is financed from energy savings, creates the possibility of mobilising private capital, which could be a solution to achieving ambitious goals.**

The draft JRC report, which analyses the state and development of the energy services market in the Member States, lists some of the most common challenges observed in the Member States (in 2020):

- In the many Member States, relatively low energy prices prevail, while the public sector has easier access to favourable financing with lower interest rates compared to the private sector, resulting in the lack of the interest in implementing energy services for the public sector.
- Complex public procurement procedures prevent the aggregation of projects and the consequent reduction of administrative costs. As one of the solutions to this challenge, the authors of the research state the standardization of documentation and the use of consulting services for project preparation.
- Lack of information on Maastricht neutral treatment of contracts, in line with Eurostat recommendations, which allows such investments to be recorded outside public debt, especially in combining grants with other sources of funding. By clearly communicating Eurostat treatment and allocation rules, it is possible to reduce public sector distrust and encourage them to make greater use of alternative procurement models (such as EnPC or public-private partnership (PPP)).
- Scarcity of available and verified information causes mistrust in the EnPC model, related risks and achieved savings and results of energy renovation. Therefore, it is necessary to work on increasing transparency, quality assurance and improving local public capacity as much as possible through one-stop shops.

The EnPC model (ESCO model), combined and aligned with standardized documentation, standardized measurement and verification process, and a good understanding of project finance and costs, can help achieve higher rates of renovated public buildings.

Standardization of documentation is key to increasing the number of energy renovation contracts because it develops elements of the contract that are known to all and reduces non-transparency. At the same time, it can be used by a larger number of stakeholders thus reducing project preparation costs and preparation time. Another important detail outlined during the plenary session is that based on the

standardized documentation, financial instruments can be created in which ESCO partners, i.e., companies in the form of service providers, would be nominated as final beneficiaries.

By using the EnPC model for the energy renovation of public buildings (excluding government and ministry buildings) in the financial perspective 2014-2020, Slovenia has renovated more than 1.9 million m² of public buildings, thus succeeding to achieve better results than those defined by national strategic documents. Slovenia decided to use the EnPC model because the allocated funds from the Cohesion fund were not sufficient to achieve set targets in the renovation of public buildings. The current objective is to generate EUR 3 of investment with EUR 1 of grants. About 600.000 m² public buildings' area out of 800.000 m² renovated so far, have been renovated using the EnPC model.

The Slovenian EnPC model has taken over all the features of the classic EnPC model (measuring and verifying savings, guarantees and other characteristics), and has been supplemented with some features of the PPP model, such as being structured as a service concession, and including additional EUROSTAT requirements.

The key to the successful implementation of this model was a well-established legal and policy framework, which defined goals and the organization of the project office that worked on the preparation of the project portfolio.

For the successful implementation of the EnPC model, facilitators play a significant role. They are experts who help and facilitate the preparation of projects and represent a link between investors and contractors, i.e., the public sector and the company offering energy efficiency services.

In the Slovenian example facilitators played an important part and it was noticed that the projects in which the facilitators participated achieved greater savings, and the quality of implemented measures was much higher.

An additional advantage in the Slovenian case was the possibility of using about EUR 7 million for technical assistance through four ELENA calls. The use of these funds enabled the preparation of a portfolio of projects that were ready for execution. **In addition to setting up the project office, standardization of documentation and processes proved to be a prerequisite for using the EnPC model. Such an approach ensured transparency of procedures, faster project preparation and better access to information, which resulted in lower costs throughout the process and by establishing a project office all necessary information was available in one place.**

The third element for the successful implementation of the EnPC model is the size of the ESCO market. In countries such as Slovenia and Croatia, competition in the ESCO market is low and the available financial instruments are not sufficient to finance demand.

To be on track with other ESCO markets in EU countries, it is necessary to provide favourable financial instruments that would allow the mobilization of private capital for energy efficiency investments in public buildings and access to affordable and dedicated project financing for ESCO companies.

Guarantee funds can also contribute to the development of the energy services market, especially in cases where the energy services market is underdeveloped or in its inception. In such cases, national guarantee funds can be used to accept the risk and support local businesses. The application of this Slovenian EnPC/PPP model proved to be extremely effective in practice. In the energy renovation of local government buildings in the period 2016-2020, almost the same number of projects was performed by the traditional model (32) as by the EnPC / PPP model (25). Using the EnPC / PPP model, about 80% of the area was renovated and energy savings were 15% higher than for investments made using public procurement, which indicates that more savings can be achieved with less money (table below).

Table 1 Comparison of the use of the EnPC / PPP model and the traditional procurement model in the energy renovation of local government buildings 2016-2020 in Slovenia

Total number of projects	57	100%
Number of projects implemented using EnPC/PPP model	25	44%
Number of projects implemented using the traditional model	32	56%
Total net renovated area, m²	507.374	100%
Total net renovated area using EnPC/PPP model, m²	410.161	81%
Total net renovated area using traditional model, m ²	97.213	19%
Energy savings, kWh/m²a	149,9	
Energy savings using EnPC/PPP model, kWh/m²a	80,3	115%
Energy savings using traditional model, kWh/m ² a	69,6	100%
Investment costs, EUR	103.806.480	
Total eligible costs within the national operational programme, EUR	99.706.767	100%
Eligible costs for EnPC/PPP model, EUR	76.121.133	76%
Eligible costs for traditional model, EUR	23.585.634	24%
Costs of energy renovation using EnPC/PPP model, EUR/m²	99.706.767	100%
Costs of energy renovation using EnPC/PPP model, EUR/m²	186	-24%
Costs of energy renovation using traditional model, EUR/ m ²	243	100%

The buildings of the so-called narrow public sector (government and ministry buildings) did not achieve set targets, and one of the reasons is the lack of the central project office to support the project, as well

as inadequate internal capacities for project preparation and implementation and lack of technical assistance.

Financing the energy renovation of public buildings

In the new financial perspective 2021-2027 in Croatia, around EUR 6,46 billion have been allocated for the new operational programme “Competitiveness and Cohesion 2021-2027”, of which over 55% of the allocation will be dedicated to achieving the Smart Croatia and Green Croatia objectives. Increasing energy efficiency is one of the specific objectives within the Green Croatia objective, and part of the funds will be earmarked for it. As energy efficiency projects generally generate net revenues, it is expected that the allocated funds will be in the form of financial instruments. **In the next period, it will be possible to introduce capital rebate for financial instruments for achieving public policy objectives, which will enable swapping up to 49% of loans into grants.** In the next financial perspective, the Ministry of Physical Planning, Construction and State Assets plans to continue with the activities of co-financing energy renovation using funds from the Recovery and Resilience Facility and the multiannual financial framework 2021-2027. In addition to energy renovation, fire and earthquake protection measures are also planned, as well as investments in the development of green infrastructure in urban areas and in the development of circular management of space and buildings.

In order to mobilize private capital and combine it with publicly available funds, **it is crucial to ensure a pipeline of projects** with the investment potential of EUR 40-50 million so that commercial banks are interested in negotiating the possibility of establishing a new financial instrument. In addition, it is necessary to educate all stakeholders about the benefits of financial instruments, because if there are grants with the same purpose, the success of a similar financial instrument is questionable, which was the case in other Member States. Guarantees financed by ESIF funds will reduce risk and reduce the cost of capital, but they are often not a sufficient incentive for commercial banks to decide to finance an ESCO company, amplifying the need to develop a solution which would address this market failure.

Experiences and needs of the public sector

Experience in the implementation of specific objective 4c1 *Reduction of energy consumption in public sector buildings* leads to the conclusion that it is necessary to take into account implementation deadlines and ensure own financial sources when using grant funds, especially because the situation in the construction market is changing very quickly and users rarely plan for it adequately. By using financial instruments, this problem is adequately solved because financing is fully received in advance.

The most frequently observed irregularities during the implementation of projects in SO 4c1 were mostly related to public procurement. This included discriminatory eligibility conditions, tender selection criteria, non-contractual eligibility conditions and discriminatory technical specifications. **All these irregularities could be lessened by preparing standardised documentation, which would contribute to reducing the number of irregularities and simplifying the preparation of projects.**

Currently, the public sector does not have enough capacity to prepare investment projects based on the EnPC / PPP model, and from that aspect technical assistance in the public sector is necessary, not only to prepare and implement projects but also to change the mindset and business-as-usual operation.

The City of Zagreb is currently implementing two programmes for the renovation of public buildings ("ZagEE" & "EOZ"), which include over 130 facilities in various stages of implementation, and since 2017, 53 facilities have been renovated within these projects, which is an extremely small number in comparison with the needs of the City of Zagreb. The City of Zagreb manages over 1.000 public buildings and the vast majority of them require energy renovation. The renovation of the buildings within these two projects was carried out using the traditional procurement model, where the preparation and implementation were entirely carried out by the City of Zagreb, and EU grants and ESIF loans from HBOR were used for financing.

Given the extremely demanding and ambitious energy and climate goals by 2030 and 2050, it is necessary to intensify efforts in the implementation of energy and climate projects and start applying innovative and advanced financial models that must be considered as a necessary (and only) option if Croatia strives to make a significant step forward in the field of energy and climate. The City of Zagreb has started applying alternative financial models to increase the energy efficiency of public lighting ("RePubLEEC" ELENA for public lighting), but **to achieve ambitious goals Zagreb can and should be a leader in using advanced financial models to increase volume, quality and speed of works. An example of this is Ljubljana, which, using the EnPC model for the renovation of public buildings, achieved financial savings of EUR 1 million per year and reduced CO₂ emissions by around 400,000 tonnes.**

Online poll results

Following the plenary session, all attendees were invited to participate in an online poll session and the results of the poll session are given in the figure below.

Majority of the attendees had the opportunity to use other funding models besides grants for the implementation of EU projects. 53% of the attendees used EPC/ESCO model, PPP model or both models for the implementation of the EU funded projects. A third of the participants did not use anything besides grant funds and 13% used other funding models.

80% of respondents believe that EU grants can be used outside the traditional procurement models, 13% of the participants consider that EU grants can only be used with traditional procurement models and 7% is not sure or does not know.

Majority of the attendees, 53%, who participated in the online poll believe that energy renovation of buildings is feasible and profitable by using the EPC model, 26% does not know and 21% assumes that EPC model renovation is not feasible. However, 88% of the participants are more inclined to implement projects using the EPC or PPP model if standard processes and documentation were defined and all of the participants consider that technical assistance funded by the EU grants is necessary to reach set targets in energy renovation.

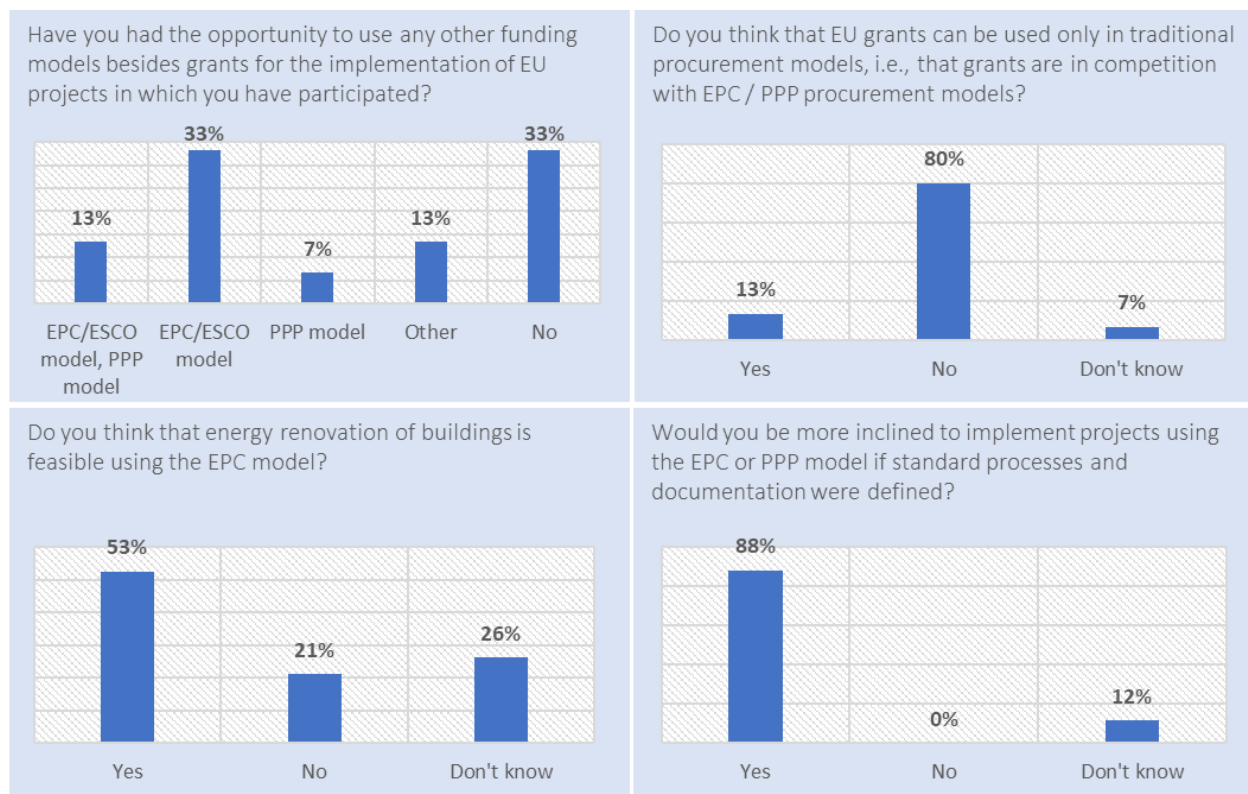


Figure 1 Results of the online poll session

Conclusions

- Standardization of contract and tender documentation for EnPC was highlighted as an important factor in stimulating the ESCO market, investments in energy renovation of public buildings and mobilising private capital in this area.
 - The development of a dedicated financial mechanism to support EnPC projects can be key leverage to encourage the ESCO market to participate in EnPC projects, providing them with access to more favourable dedicated capital, but also guarantee and equity programmes.
 - Setting up and the establishment of permanent technical assistance for project preparation (primarily intended for public sector representatives) was highlighted as a fundamental aspect due to the currently low capacity of the public sector in the preparation and implementation of projects using alternative procurement models.
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Recommendations

- Initiate the preparation of extended standardized contract and tender documentation for EnPC in order to improve the essential properties of buildings and the inclusion of non-energy services in EnPC, which will have a significant impact on the development of the ESCO market. Given that the standard EnPC contract was prepared by the Agency for Legal Transactions and Real Estate Brokerage (APN), the Ministry of Economy and Sustainable Development has been recognized as a relevant ministry for the preparation of an extended standardized documentation, while the Ministry of Regional Development and EU Funds is assumed to be the relevant ministry for developing a dedicated financial mechanism (prepared on the basis of standardized contractual documentation).
 - Develop a dedicated financial mechanism to support EnPC projects, which would allow ESCO companies access to more favourable allocated capital guarantee and equity programmes, but it would also encourage participation in EnPC projects.
 - Establish a mechanism of permanent technical assistance for project preparation (primarily intended for the public sector), which would encourage the strengthening of the capacity of the public sector in the preparation and implementation of projects under alternative procurement models. (EU grants from the line ministry (MPUGIDI) or from the EU allocation of the Body implementing the financial instrument since from 2021-2027 technical assistance for the preparation of the project stock is an eligible cost of the financial instrument).
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Attendees satisfaction survey

After the roundtable event, all attendees were sent an e-mail containing the presentations presented during the plenary session and the link for the event. satisfaction survey.

The survey was created using Microsoft Forms (Figure 3) and consisted of nine questions, out of which six were obligatory.

In the figure below are given average scores for the first four rating questions.

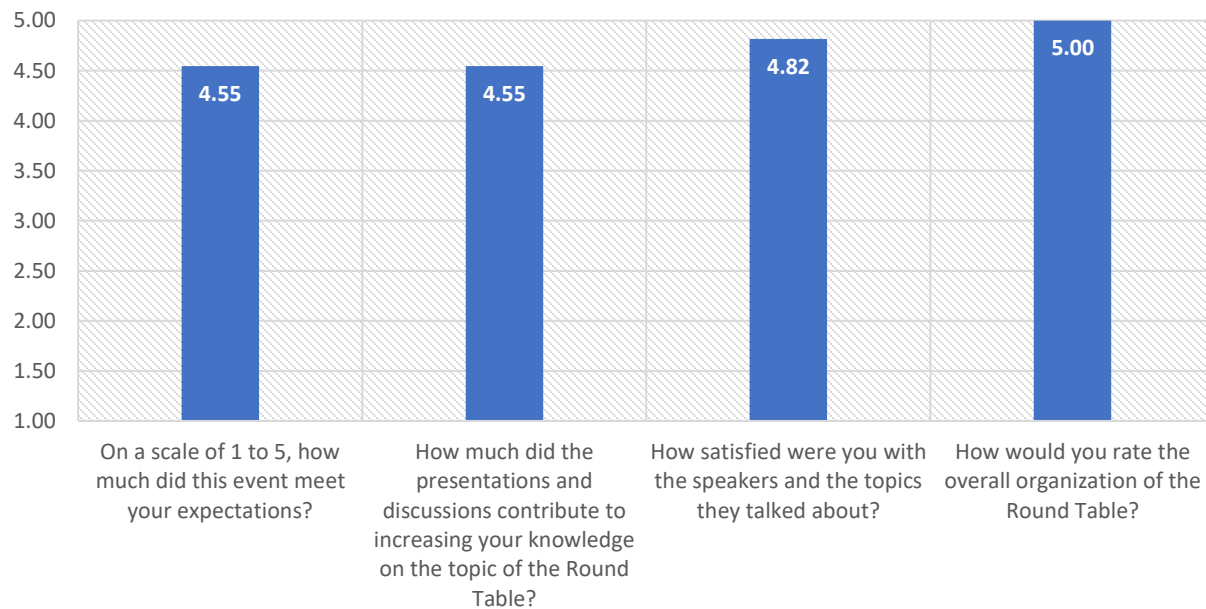


Figure 2 Average scores of the participants' satisfaction with attending the roundtable.

All voters in the survey would recommend this event to their colleagues and consider that the duration of the roundtable was appropriate, not too long nor too short.

In the future round tables, participants would like to hear more about the following topics:

- applying alternative procurement models in the field of EE, RES and decarbonisation,
- standardization of procedures and aggregation of energy projects,
- more examples of good practices in PPP and EPC model from Croatian immediate environment (Slovenia, Baltic countries).

Vrednovanje zadovoljstva sudionika Okruglog stola

Vaše mišljenje nam je važno te Vas stoga molimo da ispunite anonimni upitnik o zadovoljstvu sudjelovanja na Okruglom stolu o financiranju mjera energetske učinkovitosti i cjelovite obnove zgrada javne namjene u Republici Hrvatskoj.

* Required

1. Na ljestvici od 1 do 5, koliko je ovo događanje ispunilo Vaša očekivanja? *

1 2 3 4 5
nisu ispunjena u potpunosti ispunjena

2. Na ljestvici od 1 do 5, koliko su izlaganja i rasprava doprinijeli povećanju Vašeg znanja o temi Okruglog stola? *

1 2 3 4 5
uopće nisu doprinijeli značajno su doprinijeli

3. Na ljestvici od 1 do 5, koliko ste zadovoljni izlagačima/govornicima i temama o kojima su govorili? *

1 2 3 4 5
Nezadovoljavajuće Izvrsno

4. Kako biste ocijenili cjelokupnu organizaciju Okruglog stola? *

1 2 3 4 5
Nezadovoljavajuće Izvrsno

5. Trajanje Okruglog stola bilo je *

☐ Prekratko
☐ Primjereno
☐ Predugo

6. Biste li ovo događanje preporučili Vašim kolegama? *

☐ Da
☐ Ne

7. Koji dio Okruglog stola Vam je bio najzanimljiviji i najrelevantniji?

Enter your answer

8. O kojim temama biste voljeli više čuti na sličnim budućim događanjima?

Enter your answer

9. Ovdje možete ostaviti komentar o Vašim dojmovima s Okruglog stola

Enter your answer

Submit

Figure 3 Participant satisfaction survey

Agenda

Zagreb, 21st of January 2021

09:00 – 12:00

Virtual (online) event

09:00 - 09:15 Welcome to SMAFIN/EBC round table

Ivana Belić, REGEA

09:15 - 09:30 SEIF and SMAFIN results – How to connect stakeholders, projects and policies?

dr.sc. Julije Domac, Managing Director, REGEA

09:30 - 09:45 Combined financing in EPC (JRC EnPC Report findings)

Paolo Bertoldi, PhD, Joint Research Centre

09:45 - 10:30 Combining structural and investment EU funds and private capital for financing energy efficiency measures and complete renovation of public buildings in the Republic of Croatia (analysis of the potential application of the Slovenian EPC model)

- Energy Performance Contracting as Deep Renovation Programme in Slovenia
Damir Staničić, Jožef Stefan Institute
- Possibilities of financing the implementation of the energy transition from EU funds,
Dijana Bezjak, Ministry of Regional Development and EU Funds
- Co-financing the energy renovation of public buildings,
Olja Milošević, Head of Sector for Public Buildings, Ministry of Physical Planning, Construction and State Assets
- The public sector needs in the period 2021 -2027,
Ivan Ivanković, City of Zagreb

10:30 - 10:45 Break

10:45 - 11:55 Discussion including questions and answers session

11:55 - 12:00 Concluding remarks (REGEA)