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Ljubljana

Mestna uprava

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Co-funded by the Intelligent Energy Europe Programme of the European Union

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Mestna občina Ljubljana
Mestni svet

Zadeva: **Odgovor energetske upravljavke MOL, vodje projekta ELENA - EOL, na pobudo mestne svetnice ge. Irene Kuntarič Hribar**

Pobuda:

Ga. Irena Kuntarič je prosila za posredovanje polletnega poročila projekta ELENA -2011-029.

Odgovor:

V prilogi vam pošiljam povzetek Projekta ELENA EOL (Energetska obnova Ljubljane) po pogodbi ELENA-2011-029, ki je namenjen javnosti. Povzetek je, tako kot vsa poročila na projektu, pripravljen v angleškem jeziku in povzema vsa do sedaj pripravljena poročila. Prilagamo tudi neuradni prevod v slovenskem jeziku. Posamezna poročila si lahko ogledate pri vodji projekta.

V primeru dodatnih informacij ali vprašanj sem vam na voljo.

Alenka Loose
Energetska upravljavka MOL, vodja projekta

Prilogi:
1. Publishable Progress Report on the project EOL (Energetska Obnova Ljubljane) - Energy retrofit programme of the public buildings in Ljubljana (ELENA-2011-029) – Summary
2. Poročilo o napredku projekta EOL (Energetska Obnova Ljubljane) – program energetske obnove javnih stavb v Ljubljani (ELENA-2011-029) – Povzetek

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Publishable Progress Report on the project EOL (Energetska Obnova Ljubljane) - Energy retrofit programme of the public buildings in Ljubljana (ELENA-2011-029) – Summary

City of Ljubljana applied for Technical Assistance ELENA (**E**uropean **L**ocal **EN**ergy **A**ssistance) in September, 2012. In December, 2012 the contract No. ELENA-2011-029 was signed and on January 1, 2013, the EOL project officially started. The project ends on December 31, 2015.

This Progress Report covers the period of twenty-four months of the EOL project from January 1, 2013 until December 31, 2014. It includes information sent to European Investment Bank (EIB) in five reports (Inception Report, 1st and 2nd Bi-Annual Report, Interim Report and 4th Bi-Annual Report).

All reports were accepted by EIB.

1.1. Project objectives

The main objective of the EOL project is to finance "development services" to support the implementation of a large investment programme concerning the energy retrofit of the public buildings owned by the City of Ljubljana (COL), which will be implemented also by the Energy Service Companies (ESCOs). This is the largest programme of this kind in Slovenia and can become the model for similar projects in the country.

a) Technical Assistance (TA)

The Technical Assistance work programme that is being financed by ELENA is composed of six activities:

- Project Implementation Unit (PIU) Management;
- Simplified Energy audits;
- Checking energy baseline
- Project tender documentation
- Preparation of energy performance contracts (EPC)
- Legal and financial advise

The Technical Assistance work programme will be performed by employees of the COL (the Energy Manager of COL and a Technical Assistant) and external experts. The costs related to the additional staff are estimated at EUR 180.000 and the total amount requested for external expertise is estimated at EUR 1.318.400. The total project costs are EUR 1.498.400.

b) Investment Programme

Third party financing (TPF) performed by ESCOs is the main approach adopted for the implementation of the energy efficiency investments in the COL, due to the limited capacity to finance them from the COL budget. Several tenders for groups of similar buildings (schools, kindergartens, etc.) or buildings with the same EE technology measures (lighting in libraries, PV & CHP plants, etc.) will be issued to achieve economies of scale. Two basic ESCO contracting models which have often been used in the past contracting projects in Slovenia will be used for implementing investments from the Investment Programme. Investments to be mobilised are amounted to EUR 27.000.000 up to 50.700.000. Minimum leverage is 20 of the ELENA technical assistance funding.

1.2. Work performed during the reporting period

Within the reporting period the following activities were realised:

I. Organisation:

a) Nomination of **Steering Committee** (in month 5) and **PIU** (in month 2).
Steering Committee is composed of:
Ms. Jelka Žekar, Vice-Mayor
Ms. Jožka Hegler, Director of the City Administration
Ms. Darja Lesjak, Director of the Office for Development Projects and Investments (SRPI)
Ms. Nataša Jazbinšek Seršen, Head of Department of Environmental Protection (OVO)
Ms. Mateja Duhovnik, Director of Ljubljana Parking and Markets Public Utility (JP LPT)
Ms. Alenka Loose, Energy Manager of the City of Ljubljana (director of PIU) – for reporting

b) **Project Implementation Unit (PIU)** was set up. In month 2 of the contract implementation, the PIU's Director was nominated from the internal City of Ljubljana's staff (Ms. Alenka Loose). The PIU Director's salary is entirely covered by the City of Ljubljana's budget outside the ELENA project. PIU consists of the Core group and the Extended group. Its members come from COL departments, offices and public utilities.

c) **External support to PIU unit – company ZEL-EN** (contract signed in month 16)

II. Technical assistance:

- ✓ Most of the project development services with a direct impact on realisation of the Investment Programme (IP) were implemented in educational, cultural and sports objects and their infrastructure.
- ✓ In month 4 the draft of tender documentation for external experts to back up PIU Director has been prepared and approved within COL. Afterwards, it was also sent to EIB for approval on July 23, 2013.
- ✓ The tender for external experts to support PIU unit was published on October 11, 2013 (also in the OJ EU) and amended on November 29, 2013. Two eligible offers arrived within due time on December 13, 2013. The contract with the company ZEL-EN was signed on April 24, 2014, in the amount of 206.180,00 EUR VAT included.
- ✓ The draft proposal of changes in the Act on City Administration structure (systemisation) has been prepared to enable the temporary employment in the EOL project office and adopted by the City Council in month 10. The employment of the senior expert in COL was implemented in month 12. It was realised after the new systemisation had been adopted by the City Council.
- ✓ Due to the long procedure, needed to change the systemisation, the employment was delayed for 4 months, yet a corrective action was taken and the work was outsourced for the period from July 1, 2013 till October 31, 2013.
- ✓ At numerous meetings with the representatives and members of the extended PIU group, the most important projects to be realised were identified and started.
- ✓ In November 2013 the "Updated analysis of energy use in public buildings of COL" was prepared. It should be noted that the analysis gave relevant data on the energy savings that have been achieved by retrofit actions and changes of energy carriers, realised in the period from 2009 (after the year of the last analysis) until 2012. Some realised projects concerning the use of renewable energy sources

(RES) and improvement of energy efficiency (EE) were awarded the subsidies by ECO fund (Public ECO fund of the Republic of Slovenia).

- ✓ In the reported period COL also applied (through open calls) for co-financing (subsidies) from the energy supplier Public Utility Energetika Ljubljana - JPE, earmarked for assessment of energy baselines. Contracts for 13 objects were signed, assessment of energy baselines for one object (Mestno gledališče Ljubljansko – MGL) was completed. The expected co-financing rate by JPE is between 20%-50% and in total reaches the amount of 28.052.50 EUR.
- ✓ External experts to support PIU unit (from the company ZEL-EN) were introduced in regular work of PIU at the end of April 2014. Since then the PIU unit has had regular weekly meetings with external experts and, if needed, also additional meetings are held, related to particular technical or implementation issues.
- ✓ From April to June 2014 PIU focused on possibilities of energy performance contracting application (EPC) that is foreseen for the implementation of EOL projects, specified in the Investment programme. The analyses have been done to find an optimal way of the use of private public partnership (PPP) legislation for the implementation of EPC. As there were still no clear guidelines on how to apply the EPC in public sector, the efforts were focused on collaboration with the Ministry of Infrastructure and Spatial Planning and Ministry of Finance, where the special working group was formed that prepared the Guidelines for EPC (EPC guidelines). The Director of the PIU unit and the member of ZEL-EN took part of this group.
- ✓ In May and June 2014 the drafts of different PPP documents were prepared. All frameworks and baselines for PPP were prepared (including: draft of public procurement documentation for promoters).
- ✓ Quality data on the energy performance for all public buildings of COL was obtained by providing Energy baselines, which were the basis for defining groups of buildings with the corresponding energy retrofit investments. Those activities were necessary to prepare the Energy performance contracts (EPC).
- ✓ 16 energy audits were prepared (1 administration building, 1 cultural building, 10 kindergartens and 4 healthcare buildings). The energy audits were prepared in order to identify potential investments that would be carried out by private investors. We analysed the actual energy use and prepared guidelines on necessary measures to decrease energy consumption.
- ✓ In order to carry out the optimal energy retrofit of buildings and introduce new highly efficient ventilation systems that would improve the users comfort, a particular attention was paid to the preparation of the technical guidelines and project tasks (TORs). Five (5) TORs for public kindergartens were prepared. The TORs covered renovation of the building envelope, building furniture and retrofit of mechanical and electrical installations.
- ✓ On the basis of data that had been obtained from: energy audits and energy suppliers, information from services within COL, the database which includes all public buildings owned by COL was constantly updated (the data covered: state of the facillity and equipment, use of energy, type of energy, planned and implemented energy retrofit, etc.).
- ✓ In December 2014 the EPC guidelines (legal framework) were prepared and therefore the barriers for EPC were finally removed.
- ✓ Groups of public buildings in which to carry out energy retrofit following the principle of EPC were defined. The first set consisted of 29 buildings. For that set of buldings, the first call for promoters for EPC was published on October 14, 2014 and it was opened until November 20, 2014. We received two offers from companies GGE and Eltec Petrol. Promoters proposed simplified measures for the first set of 29 buildings, due to the fact that in recent years several buildings were already subject to partial retrofit. The proposed solutions were not satisfactory for the City of Ljubljana,

therefore the set of buldings was modified: buildings with recent partial retrofit were removed from the list and other buldings were added. In total, a new set of 40 buildings was defined. A consolidated call for promoters for EPC was published for the new set of 40 buldings on December 24, 2014 and it is opened until February 18, 2015. The consolidated call was published on international level, so we expect to receive offers from national and foreign promoters.

- ✓ The energy accountancy in 128 public buildings was implemented with the purpose to establish conditions for energy use monitoring and implementation of measures to reduce energy consumption.
- ✓ In October 2014 the contract with the company for the provision of consultancy on legal aspects for the first three groups of PPP EPC was signed. The consultancy company is also responsible for the preparation of PPP EPC draft contracts.
- ✓ Detailed analyses of 11 city administration buildings and their energy performance, as well as measurement of electricity consumption profile of one primary school, were implemented. The analyses are aimed to give relevant data on the energy consumption and possible energy savings.
- ✓ Investment documentation for Sport hall Tivoli and Ice hall Zalog was prepared.
- ✓ Contracted provider of technical support to the PIU unit prepared guidelines for technical equipment that should be installed during the retrofit of public buildings. The equipment has to enable the automatic data collection. The specifications on software and information system for energy management were also prepared.

III. Investment programme (IP)

In the first year, the realisation of IP had exceeded the plan. Namely, implementation activities were accelerated due to the fact that Slovenia was lagging behind in preparatory work for the new financial perspective. Knowing that there would be only limited funding available in 2014 and 2015 (life-time of EOL project) from the Cohesion/structural/Eco funds, some activities were anticipated.

By using the available co-financing sources, we have exceeded the expected investments within the first year of the EOL-ELENA project for more than 6 mio EUR. Instead of the planned total investment of 1.000.000,00 EUR, the energy efficiency investments (EE) on public buildings in 2013 reached the amount of 6.156.395,43 EUR, while the investments in renewable energy – PV plants reached the amount of 305.809,84 EUR and the investments in district heating improvements (district heating network) in the same year amounted to 1.183.177,85 EUR; in total therefore the investments amounted to 7.645.383,12 EUR.

In 2013, a general energy retrofit investments in 14 kindergartens and 2 primary schools started as well as investments in 4 cultural buildings (3 heating systems improvements and 1 partial energy retrofit), 1 PV investment (1 solar power plant on a public building) and 5 investments in energy supply public infrastructure (district heating network) have started.

Investments, started in 2013, have obtained the subsidies for EOL IP implementation from the Cohesion fund and energy suppliers subsidies amounting to 3.429.421,36 EUR, the rest of 2.726.974,07 EUR was assured through the city budget. Public Utility Energetika Ljubljana also carried out and directly financed the investments in the amount of 1.183.177,85 EUR and Public Utility SNAGA Ljubljana carried out and directly financed the investment in the amount of 305.809,84 EUR

In 2014, 3 investments in district heating and EE investments in 2 administrative buildings have started. The total amount of implemented investments in 2014 was 372.421,87 EUR.

Investments implemented in 2014 will be covered through Energy suppliers subsidies in the amount of 9.294,70 EUR and through the city budget amounting to 52.118,26 EUR. Energetika Ljubljana will invest 311.008,91 EUR for the retrofit of the district heating network.

1.2.1. Tehnical assistance, Investment Programme and Staff costs within the reporting period

Table 1 summarises the Staff costs of "Senior expert".

Table 1: Overview of Staff costs within the reporting period

Line N°	Category name (e.g. senior expert, engineer, etc.)	Number of man-hours	Hourly rate [EUR]	Staff costs amount [EUR]
1	Senior expert	2.422	14,5463	**35.231,20**
	Total	**2.422**	**14,5463**	**35.231,20**

Table 2-3 summarises the costs of "Technical assistance"

Table 2: Overview of expected total costs of subcontracts committed/completed during the reporting period (per year)

Year	Expected total costs of subcontracts [EUR], without VAT	Expected total costs of subcontracts [EUR], including VAT
2013	21.220,00	25.481,40
2014	389.719,09	473.675,29
Total	**410.939,09**	**499.156,69**

Table 3: Overview of realised total costs of subcontracts during the reporting period (per year)

Year	Realised total costs of subcontracts [EUR], without VAT	Realised total costs of subcontracts [EUR], including VAT
2013	21.220,00	25.481,40
2014	117.595,80	143.466,88
Total	**138.815,80**	**168.948,28**

Table 4 summarises the costs of "Investment Programme"

Table 4: Overview of expected total costs of started/planned implementation of the Investment Programme during the reporting period (per year)

Year	Estimated total costs [EUR] with VAT
2013	7.645.383,12
2014	372.421,87
Total	**8.017804,99**

1.3. Main results achieved so far

Table 4: Calculation of the leverage factor achieved within the reporting period (per year)

Reporting time (end of year)	**Estimated budget Project Development Service**	**Milestones for Investment Programme implementation**	**Leverage factor according to phasing + milestones**

	Staff costs [in EUR]	External experts / subcontracts [in EUR]	Sub-total [in EUR]	Short description of area, technologies concerned	Identifi-cation of investor	Estimated total costs [in EUR]	Estimated annual final energy saved for EE projects [in GWh]	Estimated annual- final energy production by RES [in GWh]	Estimated annual reduction of CO_2eq [in t]	
2013	1.848	21.220	**23.068**	**EE investments** **District heating**	COL, Cohesion fund, National funds, Energetika LJ	**7.645.383**	2,34947	0	461,45	368
2014	33.383	389.719	**423.102**	**EE investments** **District heating**	COL, Cohesion fund, National funds, Energetika LJ	**372.422**	0,63730	0	196,83	1
TOTAL	**35.231**	**410.939**	**446.170**			**8.017.805**	**2,98677**	**0**	**658,28**	**20**

The table shows only the costs of investments and subcontractors, which are finished and paid for and those that COL has already signed a contract and are in the implementation phase. The same goes for the staff costs, only staff costs that have been already paid were used for calculation of the leverage factor achieved.

Table 5: Overview of achieved results within the reporting period (per year)

Year	Estimated annual final energy saved for EE projects [in GWh]	Estimated annual final energy production by RES [in GWh]	Estimated annual reduction of $C0_2$ eq [in t]
2013	2,349467	0,00	461,45
2014	0,637301	0,00	196,83
Total	**2,986768**	**0,00**	**658,28**

1.4. Expected final results

Expected results of the EOL project are increase in energy efficiency, decrease in energy consumption, renewable energy production and reduction of the greenhouse gas emissions.

The implementation of measures from the IP will result in final energy savings of about 79 GWh (at least 8 GWh of electricity, the remainder being fuel and heat from district heating network), of which 8 GWh due to introduction of energy management, 10 GWh due to improvement of energy performance of buildings, 20 GWh from other energy efficiency measures and 41 GWh from improved efficiency of the district heating network (heating sub-stations).

Almost 8 GWh of electricity should be produced by CHP units and by PV (more than half of electricity generation is from RES).

Consequently achieved energy savings will result in emission reduction of 24.500 t CO2 per year, of which 9.600 t CO2 due to energy efficiency measures in buildings, 11.500 t CO2 from measures in the district heating network, and 3.400 t CO2 of indirect emission reduction achieved by CHP and PV electricity generation.

1.4.1. Expected other relevant results

Implementation of the IP in Ljubljana as the capital of Slovenia will have an important demonstration and motivation effect at the state and local level. Technical assistance will qualify new COL staff for the planned

Energy Unit (SEAP) and will significantly contribute to the capacity building in terms of sustainable energy management and energy policy of the COL.

Energy efficiency projects will contribute to improved air quality mitigating a huge problem of particulate emissions in Ljubljana. Investments in the public sector will have an important demonstration effect on the private investors. Planned water management (within energy management system) will result in reduced and more sustainable water consumption in COL public buildings.

As energy contracting and ESCOs are still in a developing phase in Slovenia, the volume of planned investments will significantly underpin and contribute to further development of existing ESCOs and energy service market in Slovenia with a very positive effect on the implementation of the energy saving and renewable energy potential, especially in the public sector.

Implementation of the investment will have a perceivable influence on the whole economy of Slovenia, especially in the construction sector, green technologies and energy services, enabling new jobs (it is estimated that at least 440 direct and 310 indirect "green" jobs will be created) and contributing to the sustainable economy recovery.

Project Director:

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Ljubljana, March 3, 2015

Sources: Inception Report, 1st and 2nd Bi-Annual Report, Interim Report and 4th Bi-Annual Report

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Neuradni prevod

Poročilo o napredku projekta EOL (Energetska Obnova Ljubljane) – program energetske obnove javnih stavb v Ljubljani (ELENA-2011-029) – Povzetek

Mestna občina Ljubljana (v nadaljevanju MOL) je zaprosila za tehnično pomoč ELENA (**E**uropean **L**ocal **EN**ergy **A**ssistance) septembra 2012. V decembru 2012 je bila podpisana pogodba številka ELENA-2011-029 in 1. januarja 2013 se je projekt EOL uradno začel. Projekt se zaključi 31. decembra 2015.

Poročilo o napredku pokriva obdobje 24 mesecev izvajanja projekta EOL od 1. januarja 2013 do 31. decembra 2014. Vključuje informacije, ki so bile poslane Evropski investicijski banki (EIB) v petih poročilih (začetno poročilo, 1. in 2. polletno poročilo, vmesno poročilo in 4. polletno poročilo).

Vsa poročila so bila sprejeta s strani EIB.

1.1. Cilji projekta

Glavni cilj projekta EOL je financiranje storitev, ki podpirajo izvajanje obsežnega investicijskega programa energetske obnove javnih stavb v lasti MOL, ki se bo izvajal tudi preko ponudnikov t.i. energetskega pogodbeništva (angl. ESCO podjetij). Gre za največji program te vrste v Sloveniji, ki bi lahko postal model za podobne projekte v državi.

a) Tehnična pomoč

Program tehnične pomoči, ki se financira s sredstvi ELENA, je sestavljen iz šestih aktivnosti:

- Vodenje Skupine za izvedbo projekta;
- Poenostavljeni energetski pregledi;
- Preverbe energetskih izhodišč;
- Dokumentacija javnih razpisov projekta;
- Priprava pogodb za energetsko pogodbeništvo (angl. EPC);
- Pravno in finančno svetovanje.

Program tehnične pomoči bodo izvajali zaposleni MOL (energetska upravljavka in strokovnjak tehnične stroke) ter zunanji strokovnjaki. Stroški, ki se nanašajo na dodatno zaposlene, so ocenjeni na 180.000,00 EUR; celotni zaprošeni znesek za zunanje strokovnjake pa je ocenjen na 1.318.400,00 EUR. Celotni stroški projekta znašajo 1.498.400,00 EUR.

b) Investicijski program

Financiranje s tretje strani, ki ga izvajajo ESCO podjetja, je po projektu poglavitni princip za izvajanje investicij v izboljšave energetske učinkovitosti v MOL, ker so zmožnosti financiranja teh investicij iz proračuna MOL omejene. Objavljenih bo več javnih razpisov za sklope podobnih objektov (šole, vrtci, itd.) ali objektov z isto vrsto ukrepov (razsvetljava v knjižnicah, fotovoltaika in soproizvodnja toplote in elektrike), da bi se dosegla ustrezna ekonomičnost. V praksi sta se v preteklosti za izvedbe podobnih investicij uporabljala dva modela energetskega pogodbeništva. Obseg investicij v energetsko obnovo znaša od 27.000.000,00 do 50.700.000,00 EUR. Minimalni obseg investicij je 20-kratnik zneska tehnične pomoči ELENA.

1.2. Opravljeno delo v obdobju poročanja

V obdobju poročanja so bile realizirane naslednje aktivnosti:

I. Organizacija:

a) Imenovanje **Skupine za nadzor nad izvajanjem projekta** (v 5. mesecu) in **Skupine za izvedbo projekta** (v 2. mesecu).
Skupino za nadzor nad izvajanjem projekta sestavljajo:
Jelka Žekar, podžupanja
Jožka Hegler, direktorica Mestne uprave
Darja Lesjak, direktorica Službe za razvojne projekte in investicije (SRPI)
Nataša Jazbinšek Seršen, vodja Oddelka za varstvo okolja (OVO)
Mateja Duhovnik, direktorica javnega podjetja Ljubljanska parkirišča in tržnice (JP LPT)
Alenka Loose, energetska upravljavka Mestne občine Ljubljana (direktorica Skupine za izvedbo) – poročevalka.

b) Imenovana je bila **Skupina za izvedbo projekta**. V 2. mesecu izvajanja projekta je bila za direktorico Skupine za izvedbo projekta imenovana Alenka Loose, zaposlena na MU MOL. Plača direktorice Skupine za izvedbo projekta se izplačuje iz proračuna. Skupina za izvedbo projekta sestoji iz Ožje skupine in Razširjene skupine. Člani obeh skupin so iz posameznih oddelkov in služb MOL ter javnih podjetij.

c) **Zunanja podpora Skupini za izvedbo projekta – podjetje ZEL-EN** (pogodba podpisana v 16. mesecu izvajanja projekta)

II. *Tehnična pomoč*

- ✓ Največ razvojnih storitev z neposrednim učinkom na realizacijo investicijskega programa (IP) je bilo izvedenih na šolskih, kulturnih in športnih objektih in infrastrukturi.
- ✓ V 4. mesecu izvajanja projekta smo pripravili začetno poročilo in ga posredovali Evropski investicijski banki (EIB).
- ✓ Razpis za zunanje strokovnjake v podporo Skupini za izvedbo smo objavili 11. oktobra **2013** (v Uradnem listu EU in RS) in ga dopolnili 29. novembra 2013. Dve popolni ponudbi sta prispeli v roku 13. decembra **2013.** Pogodbo s podjetjem ZEL-EN smo podpisali 24. aprila **2014** v znesku 206.180,00 EUR z DDV.
- ✓ Pripravili smo osnutek predloga sprememb v Pravilniku o sistemizaciji delovnih mest MU MOL, da bi omogočili začasno zaposlitev strokovnjaka na projektu EOL. Osnutek je bil sprejet na MS MOL v 10. mesecu. V 12. mesecu smo po sprejetju nove sistemizacije delovnega mesta na MS MOL zaposlili strokovnjaka (eksperta) v Kabinetu župana.

- ✓ Zaradi dolge procedure, potrebne za spremembo sistemizacije, se je zaposlitev zakasnila za štiri mesece, zato smo angažirali zunanjega izvajalca za obdobje od 1. julija 2013 do 31. oktobra **2013.**
- ✓ Na številnih sestankih s predstavniki in člani Razširjene skupine za izvedbo projekta smo identificirali in začeli izvajati najpomembnejše projekte.
- ✓ V novembru **2013** smo pripravili "Posodobljeno analizo rabe energije v javnih stavbah MOL". Analiza je dala relevantne podatke o prihrankih energije, ki so bili doseženi z ukrepi energetske prenove in prehodom na nove energente v obdobju od leta 2009 do leta 2012. Nekateri projekti, ki se nanašajo na rabo obnovljivih virov energije (OVE) in izboljšanje energetske učinkovitosti, so bili izvedeni s pomočjo subvencij Eko sklada.
- ✓ V obdobju poročanja se je MOL prijavila tudi na odprte razpise za sofinanciranje (subvencije) energetskih pregledov (javno podjetje Energetika Ljubljana (JPE)). Podpisane so bile pogodbe za trinajst objektov, zaključen je bil Razširjeni energetski pregled za Mestno gledališče Ljubljansko (MGL). Pričakovana stopnja sofinanciranja s strani JPE je med 20 % in 50 % ter skupno znaša 28.052,50 EUR.
- ✓ Zunanje strokovnjake za podporo Skupini za izvedbo (Skupina) iz podjetja ZEL-EN smo uvedli v redno delo Skupine ob koncu aprila **2014**. Od takrat ima Skupina redne tedenske sestanke z njimi in, če je potrebno, tudi dodatne sestanke, ki se nanašajo na posebne tehnične ali izvedbene zadeve.
- ✓ Od aprila do junija **2014** se je Skupina osredotočila na možnosti uporabe energetskega pogodbeništva, ki se predvideva za izvedbo projektov, specificiranih v investicijskem programu EOL. Opravili smo analizo optimalne uporabe zakonskih izhodišč za izvedbo javno-zasebnega partnerstva energetskega pogodbeništva (JZP EP). Ker še vedno ni bilo na voljo jasnih smernic, kako uporabiti energetsko pogodbeništvo v javnem sektorju, smo se aktivno vključili v sodelovanje z Ministrstvom za infrastrukturo in prostor ter Ministrstvom za finance. Ustanovljena je bila posebna delovna skupina za pripravo Smernic za izvedbo javno-zasebnega partnerstva v energetskem pogodbeništvu, kjer sta aktivno sodelovala Direktorica Skupine za izvedbo in član podjetja ZEL-EN.
- ✓ V maju in juniju **2014** smo pripravili osnutke različnih dokumentov o javno-zasebnem partnerstvu po principu energetskega pogodbeništva in osnutek dokumentacije javnega razpisa za poziv promotorjem.
- ✓ Z energetskimi pregledi javnih stavb MOL smo pridobili kvalitativne podatke, ki so bili osnova za opredelitev sklopov stavb z ustreznimi investicijami v energetske obnove. Te aktivnosti so potrebne za pripravo pogodb po principu energetskega pogodbeništva (angl. EPC).
- ✓ Izvedli smo šestnajst energetskih pregledov stavb (ena upravna stavba, ena kulturna stavba, deset vrtcev in štirje zdravstveni domovi). Energetski pregledi so bili pripravljeni za identifikacijo potencialnih investicij, ki bi jih izvedel zasebni investitor. Analizirali smo dejansko porabo energije in pripravili smernice za ustrezne ukrepe zmanjšanja porabe energije.
- ✓ Z namenom izvedbe optimalne energetske obnove in uvedbe novih visoko učinkovitih sistemov hlajenja, ki bi izboljšali udobje uporabnikov, smo bili še posebej pozorni na pripravo tehničnih smernic in projektnih nalog, od tega pet za vrtce. Projektne naloge so obsegale: obnovo ovoja stavbe, stavbnega pohištva in obnovo mehanskih ter električnih inštalacij.
- ✓ Na osnovi podatkov, ki smo jih pridobili iz energetskih pregledov in od dobaviteljev energije, ter podatkov iz posameznih služb/oddelkov MOL, smo nenehno posodabljali podatkovno bazo, ki vključuje stavbe v lasti MOL. Podatki so obsegali: stanje objektov in opreme, rabo energije, vrsto energenta, načrtovano in izvedeno energetsko obnovo, itd.
- ✓ V decembru **2014** so bile objavljene Smernice za izvedbo javno-zasebnega partnerstva po principu energetskega pogodbeništva, s tem so bile končno odpravljene ovire za energetsko pogodbeništvo.

- ✓ Javne stavbe smo razdelili v več sklopov za energetsko prenovo po principu energetskega pogodbeništva. Za sklop 1, ki je bil sestavljen iz 29 objektov, smo 14. oktobra **2014** objavili prvi poziv promotorjem, ki je bil odprt do 20. novembra 2014. Prejeli smo dve ponudbi podjetij GGE in Eltec Petrol. Promotorji so za sklop 1 predlagali poenostavljene ukrepe, ker so bili v zadnjih letih na več od teh objektov že izvedeni delni ukrepi energetske obnove. Predlagane rešitve niso bile sprejemljive za MOL, zato smo spremenili nabor objektov: objekte z delno energetsko prenovo smo odstranili s seznama in ga dopolnili z novimi objekti. Skupno je bilo v novem sklopu 40 objektov. Dopolnjen poziv promotorjem za energetsko pogodbeništvo za 40 objektov, ki smo ga objavili 24. decembra **2014,** je bil odprt do 18. februarja **2015.** Objavljen je bil tudi na mednarodnem portalu, zato smo pričakovali ponudbe domačih in tujih promotorjev.
- ✓ Začeli smo izvajati Energetsko knjigovodstvo za 128 javnih objektov z namenom zagotavljanja pogojev za spremljanje porabe energije in izvajanje ukrepov energetske učinkovitosti.
- ✓ V oktobru **2014** smo podpisali pogodbo za zagotavljanje svetovalnih storitev glede pravnih vprašanj za prve tri postopke sklepanj JZP EP. Svetovalno podjetje je tudi odgovorno za pripravo osnutkov pogodb za JZP EP.
- ✓ Izdelali smo podrobno analizo enajstih objektov mestne uprave in njihovih energetskih karakteristik, kot tudi profil meritev porabe električne energije za izbrano osnovno šolo. Cilj analize je podati ustrezne podatke o porabi energije in možnih prihrankih energije.
- ✓ Pripravili smo investicijsko dokumentacijo za športno dvorano Tivoli in drsališče Zalog.
- ✓ Pogodbeni izvajalec tehnične podpore je s pomočjo Skupine za izvajanje projekta pripravil smernice za tehnično opremo, primerno za vgradnjo ob energetski obnovi javnih stavb. Oprema mora omogočiti avtomatsko zbiranje podatkov. Pripravili smo tudi specifikacije za računalniški informacijski sistem za energetsko upravljanje objektov.

III. Investicijski program (IP)

V prvem letu je realizacija investicijskega programa presegla plan. Sicer so se izvedene aktivnosti pospešeno izvajale zaradi dejstva, da je Slovenija zaostajala v pripravah na novo finančno perspektivo. Upoštevajoč, da bodo v letih **2014 in 2015** (življenjska doba projekta EOL) na voljo zgolj omejena sredstva iz Kohezijskega/strukturnih/Eko sklada, so bile pripravljene in izvedene določene investicije v energetske obnove.

Z uporabo razpoložljivih sredstev sofinanciranja smo presegli pričakovane investicije v prvem letu projekta EOL-ELENA za več kot 6 milijonov EUR. Namesto planiranih skupnih investicij v znesku 1.000.000,00 EUR, so skupne investicije dosegle vrednost 7.645.383,12 EUR in sicer: investicije v energetsko učinkovitost javnih objektov v letu 2013 6.156.395,43 EUR; investicije v obnovljive vire energije – fotovoltaične (sončne) elektrarne 305.809,84 EUR in investicije v izboljšave daljinskega ogrevanja (omrežje daljinskega ogrevanja) v istem letu 1.183.177,85 EUR.

V letu **2013** so se začele investicije energetske obnove v štirinajstih vrtcih, dveh osnovnih šolah in štirih kulturnih objektih (izboljšave sistemov ogrevanja v treh stavbah in delna energetska obnova v eni stavbi), ena investicija v fotovoltaično (sončno) elektrarno in pet investicij v energetsko infrastrukturo (omrežje daljinskega ogrevanja).

Za izvajanje investicijskega programa projekta EOL, ki se je začel v letu **2013**, smo pridobili subvencije iz Kohezijskega sklada v znesku 3.429.421,36 EUR; ostala sredstva v znesku 2.726.974,07 EUR so bila zagotovljena v proračunu MOL. Javno podjetje Energetika Ljubljana je prav tako izvedlo in neposredno

financiralo investicije v znesku 1.183.177,85 EUR, SNAGA Ljubljana pa je izvedlo in neposredno financiralo investicije v znesku 305.809,84 EUR.

V letu **2014** smo pričeli izvajati investicije v daljinsko ogrevanje in energetsko učinkovitost dveh objektov mestne uprave. Skupni znesek izvedenih investicij je znašal 372.421,87 EUR.

Investicije, izvedene v letu **2014,** se bodo financirale s subvencijami dobaviteljev energije v znesku 9.294,70 EUR in sredstvi proračuna MOL v znesku 52.118,26 EUR. Energetika Ljubljana namerava investirati 52.118,26 EUR v obnovo omrežja daljinskega ogrevanja.

1.2.1. Tehnična pomoč, Investicijski program in stroški dela zaposlenih za obdobje poročanja

Tabela 1 povzema stroške eksperta.

Tabela 1: Pregled stroškov dela za obdobje poročanja

Št.	Naziv kategorije (npr. ekspert, inženir, itd.)	Število delovnih ur	Urna postavka [EUR]	Strošek [EUR]
1	Strokovnjak ekspert	2.422	14,5463	**35.231,20**
	Skupaj	**2.422**	**14,5463**	**35.231,20**

Tabela 2-3 povzema stroške "Tehnične pomoči"

Tabela 2: Pregled pričakovanih skupnih stroškov zunanjih izvajalcev za obdobje poročanja (letno)

Leto	Pričakovani skupni stroški zunanjih izvajalcev [EUR], brez DDV	Pričakovani skupni stroški zunanjih izvajalcev [EUR], z DDV
2013	21.220,00	25.481,40
2014	389.719,09	473.675,29
Skupaj	**410.939,09**	**499.156,69**

Tabela 3: Pregled realiziranih skupnih stroškov zunanjih izvajalcev za obdobje poročanja (letno)

Leto	Realizirani skupni stroški zunanjih izvajalcev [EUR], brez DDV	Realizirani skupni stroški zunanjih izvajalcev [EUR], z DDV
2013	21.220,00	25.481,40
2014	117.595,80	143.466,88
Skupaj	**138.815,80**	**168.948,28**

Tabela 4 povzema stroške izvajanja "Investicijskega Programa" (IP)

Table 4: Pregled pričakovanih skupnih stroškov začetih/planiranih investicij IP za obdobje poročanja (letno)

Leto	Ocenjeni skupni stroški [EUR] z DDV
2013	7.645.383,12
2014	372.421,87
Skupaj	**8.017804,99**

1.3. *Rezultati, doseženi v obdobju poročanja*

Tabela 4: Kalkulacija finančnega vzvoda vrednosti tehnične pomoči, dosežena v obdobju poročanja (letno)

Obdobje poročanja (konec leta)	**Ocenjena vrednost tehnične pomoči**			**Mejniki za izvedbo Investicijskega Programa**						**Finančni vzvod v skladu s fazami in mejniki**
	Stroški zaposlenih [EUR]	**Pogodbe z zunanjimi izvajalci [EUR]**	**Skupaj [EUR]**	Kratek opis področja in tehnologije	Identifikacija investitorja	**Ocenjeni skupni stroški [EUR]**	Ocenjeni letni končni prihranki energije za projekte energetske učinkovitosti [GWh]	Ocenjena letna končna proizvodnja energije iz OVE [GWh]	Ocenjeno letno zmanjšanje CO_2eq [t]	
2013	1.848	21.220	**23.068**	**Investicije v energetsko učinkovitost** **Daljinsko ogrevanje**	MOL, Kohezijski sklad, državni skladi, Energetika LJ	**7.645.383**	2,34947	0	461,45	368
2014	33.383	389.719	**423.102**	**Investicije v energetsko učinkovitost** **Daljinsko ogrevanje**	MOL, Kohezijski sklad, državni skladi, Energetika LJ	**372.422**	0,63730	0	196,83	1
SKUPAJ	**35.231**	**410.939**	**446.170**			**8.017.805**	**2,98677**	**0**	**658,28**	**20**

Prikazani so zgolj stroški investicij in zunanjih izvajalcev, ki so zaključeni in plačani, ter tisti, za katere je MOL že podpisala pogodbo in so v fazi izvajanja. Enako velja za stroške zaposlenih: samo tisti stroški, ki so bili že izplačani, so bili upoštevani v kalkulaciji doseženega finančnega vzvoda.

Tabela 5: Pregled doseženih rezultatov za obdobje poročanja (po letih)

Leto	Ocenjeni letni prihranek končne energije za projekte energetske učinkovitosti [GWh]	Ocenjena letna končna proizvodnja energije iz OVE [GWh]	Ocenjeno letno zmanjšanje $C0_2$ [t]
2013	2,349467	0,00	461,45
2014	0,637301	0,00	196,83
Skupaj	**2,986768**	**0,00**	**658,28**

1.4. *Pričakovani končni rezultati*

Pričakovani rezultati projekta EOL so: povečanje energetske učinkovitosti, zmanjšanje porabe energije, proizvodnja energije iz OVE in zmanjšanje izpustov ogljikovega dioksida.

Izvajanje ukrepov investicijskega program bo rezultiralo v prihrankih energije okrog 79 GWh (najmanj 8 GWh električne energije, ostanek pa goriva in toplota iz omrežja daljinskega ogrevanja), od tega 8 GWh iz naslova energetskega upravljanja, 10 GWh zaradi izboljšane energetske učinkovitosti stavb, 20 GWh iz ostalih ukrepov energetskega upravljanja in 41 GWh iz izboljšane energetske učinkovitosti sistema daljinskega ogrevanja (toplotne pod-postaje).

Cca 8 GWh električne energije bi moralo biti proizvedeno s pomočjo soproizvodnje toplote in električne energije in fotovoltaiko (več kot polovica električne energije iz OVE).

Posledično bodo prihranki energije rezultirali v zmanjšanju izpustov ogljikovega dioksida v obsegu 24.500 t CO2 letno, od tega 9.600 t CO_2 zaradi izboljšanja energetske učinkovitosti v stavbah, 11.500 t CO_2 iz ukrepov na omrežju sistema daljinskega ogrevanja in 3.400 t CO_2 iz posrednega zmanjšanja izpustov doseženih s soproizvodnjo toplote in električne energije in fotovoltaiko.

1.4.1. Ostali pomembni rezultati

Izvajanje investicijskega programa v Ljubljani kot glavnem mestu Slovenije bo imelo pomemben demonstracijski in motivacijski učinek na državni in lokalni ravni. Tehnična pomoč bo usposobila nove sodelavce na MOL za načrtovano notranjo organizacijsko enoto za energetiko in bo pomembno prispevala h krepitvi temeljev v smislu trajnostnega energetskega upravljanja in energetske politike MOL.

Projekti energetske učinkovitosti bodo prispevali k izboljšanju kakovosti zraka in reševanju problematike emisij trdnih delcev v Ljubljani. Investicije v javni sektor bodo imele pomemben demonstracijski učinek na zasebne investitorje. Načrtovano spremljanje porabe vode (v okviru sistema energetskega upravljanja) bo rezultiralo v zmanjšani in bolj trajnostno naravnani porabi vode v javnih stavbah MOL.

Ker sta energetsko pogodbeništvo in ESCO podjetja v Sloveniji še vedno v razvojni fazi, bo obseg planiranih investicij pomembno podpiral in prispeval k nadaljnjemu razvoju obstoječih ESCO podjetij in trgu energetskih storitev v Sloveniji, z zelo ugodnim učinkom na izvedbo prihrankov energije in potenciala energije iz OVE, še posebej v javnem sektorju.

Izvajanje investicij bo imelo občuten vpliv na celotno gospodarstvo v Sloveniji, še posebej v gradbenem sektorju, zelenih tehnologijah in energetskih storitvah, in tako omogočilo nova delovna mesta (ocenjeno je, da bi se lahko ustvarilo vsaj 440 direktnih in 310 indirektnih "zelenih" delovnih mest) ter tako prispevalo k trajnostnemu razvoju gospodarstva.

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