



ELENA PROJECT BY GOLEA

Rajko Leban, Irena Pavliha, GOLEA

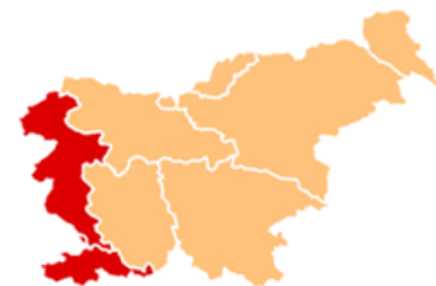


Ustvarjamo obnovljivo prihodnost



GOLEA – GORiška Local Energy Agency

- **Founded** in 2006 by Nova Gorica municipality. Co-financed by EU-Intelligent Energy Europe – IEE programme.
- **Mission of GOLEA:** promotion of **Renewable Energy Source - RES** and **Energy Efficiency – EE**
with focus to the energy self-handling region, focus to the sustainable region within Primorska region
- **Our motto:** creating renewable and sustainable future.



Ustvarjamo obnovljivo prihodnost



GOLEA – Energy Manager of Primorska Municipalities

GOLEA activities:

- elaboration of local energy concepts and SEAP-s,
- elaboration of feasibility studies (energy refurbishment of buildings, public lightning improvement, district heating systems, etc.),
- investments studies for energy projects,
- energy audits and thermo – vision reviews,
- elaboration of energy performance certificates,
- introduction of energy monitoring and targeting technique within selected public buildings - a management technique for controlling costs and consumption of energy on the basis of key energy indicators and establishment of web energy supervisory information system,
- introduction of Energy accounting information system (EnAIS) within selected public buildings - for gathering the information on heat, electricity and water consumption, n. of users, treated floor area, etc. This system provides effective control of energy use and costs at monthly level,
- definition and introduction of new financial model for energy refurbishment – ESCO model (ELENA-EIB)
- dissemination and training activities
- activities as Energy manager for 23 Primorska municipalities



GOLEA – International Programmes & Projects 2007-2014

where the Agency GOLEA is a partner



2007-2013
cooperazione territoriale europea
programmata per la cooperazione
transfrontaliera
Italia-Slovenia
evropsko-teritorialna sodelovanje
program čezmejnega sodelovanja
Slovenija-Italija



Swiss Contribution



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra



Ustvarjamo obnovljivo prihodnost



GOLEA BEST PRACTICE – Energy refurbishment of public buildings

MUNICIPALITY	BUILDING	AMOUNT of the GRANT (€)	ENERGY SAVINGS (MWh)
ILIRSKA BISTRICA	HOME AT VIDEM 1.	823.007,25 €	919
NOVA GORICA	CENTRAL KINDERGARTEN and KINDERGARTEN MOJCA 5.	355.643,87 €	297
BRDA	PRIMARY SCHOOL DOBROVO 30.	574.865,73 €	296
KOPER	KINDERGARTEN SEMEDELA 44.	271.424,63 €	105
KOPER	PRMARY SCHOOL PRADE 98.	566.347,72 €	210
PIRAN	PRIMARY SCHOOL PIRAN 51.	812.096,44 €	371
*CERKNO	PRIMARY SCOOOL CERKNO 67.	1.121.732,49 €	461
DIVAČA	PRIMARY SCHOOL DIVAČA 110.	602.632,40 €	226
DIVAČA	and SUBSIDIARY SENOŽEČE 81.	311.002,17 €	119
TOLMIN	SCHOOL CENTRE TOLMIN 98.	2.310.854,57 €	1.071
Secondary School for Forestry	and Wood Technology POSTOJNA (2011)	954.537,64 €	356
UNIVERSITY of LJUBLJANA	FACULTY of ECONOMICS (January 2013)	1.607.127,61 €	1.177
TOGETHER		10.311.272,52 €	5.608 MWh

REDUCTION OF GREENHOUSE EMISSIONS - CO₂: 1.499 tons

Ustvarjamo obnovljivo prihodnost



GOLEA BEST PRACTICE – Energy refurbishment of public buildings

MUNICIPALITY	BUILDING	AMOUNT of the GRANT (€)	ENERGY SAVINGS (MWh)
IDRIJA	PRIMARY SCOOOL IDRIJA 66,61	440.712,45 €	536
KOPER	PRIMARY SCHOOL DUŠANA BORDONA 64,13	404.372,74 €	350
KOPER	KINDERGARTEN KEKEC 64,13	191.019,52 €	137
KOPER	KINDERGARTEN MARKOVEC 63,91	292.944,12 €	166
KOBARID	PRIMARY SCHOOL KOBARID 63,5	343.833,49 €	357
MIREN-KOSTANJEVICA	PRIMARY SCHOOL BILJE 63,44	106.479,18 €	78
ŠEMPETER-VRTOJBA	PRIMARY SCHOOL VRTOJBA 62,45	198.072,53 €	157
TOLMIN	PRIMARY SCHOLL PODBRDO 62,05	232.949,63 €	218
TOLMIN	MEDICAL CENTRE TOLMIN 61,64	117.301,64 €	105
RENČE-VOGRSKO	PRIMARY SCHOOL RENČE 60	258.828,85 €	234
PIRAN	KINDERGARTEN MORNARČEK PIRAN and KINDERGARTEN SEČOVLJE 60,81	331.377,49 €	220
KANAL	KINDERGARTEN DESKLE 52,86	163.179,62 €	72
AJDOVŠČINA	KINDERGARTEN BY HUBLJ 47,22	155.657,30 €	64
ILIRSKA BISTRICA	PRIMARY SCOOOL DRAGOTIN KETTE	334.077,52 €	352
TOGETHER		3.570.806,08 €	3.046 MWh

REDUCTION OF GREENHOUSE EMISSIONS - CO₂: 792 tone

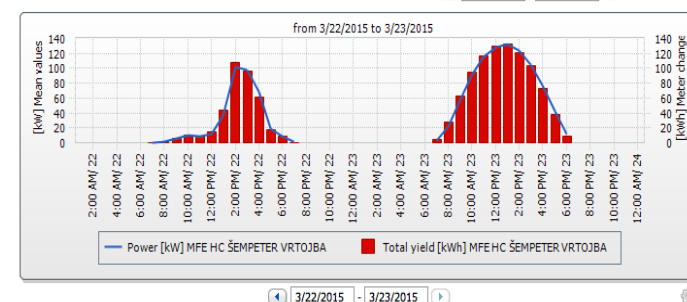
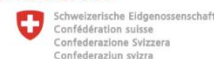
Ustvarjamo obnovljivo prihodnost



GOLEA BEST PRACTICE – Public tenders

MUNICIPALITY	PROJECT
MUNICIPALITY of TOLMIN	ENERGY RECONSTRUCTION of the ROOF SC - School Centre TOLMIN
MUNICIPALITY of PIVKA MUNICIPALITY of BRDA MUNICIPALITY of CERKNO MUNICIPALITY of TOLMIN MUNICIPALITY of ILIRSKA BISTRICA MUNICIPALITY of PIRAN MUNICIPALITY of KOPER TRIGLAV NATIONAL PARK MUNICIPALITY of NOVA GORICA	REPLACEMENT FUEL BOILERS WITH FOREST BIOMASS BOILERS AND SUPPLY HEAT FOR A PERIOD 15 YEARS The first such call in Slovenia. ESC – Energy Supply Contracting (Project RES in Primorska Municipalities – Swiss Contribution)
CLOSING PROCEDURE, IN IMPLEMENTATION	

Swiss Contribution



GREEN PUBLIC PROCUREMENT:

MUNICIPALITY	PROJECT
MUNICIPALITY of ŠEMPETER VRTOJBA	SUPPLY and OFFTAKE of ELECTRICITY for the period 2013 – 2016 (Electricity is produced from photovoltaic power plant on noise barriers on highway Vrtojba - Podnanos)



GOLEA BEST PRACTICE – Energy reconstructions of street lightings

MUNICIPALITY	TENDER	AMOUNT of the GRANT (€)	ENERGY SAVINGS (MWh)
AJDOVŠČINA	UJR	116.953,39 €	589
AJDOVŠČINA	PETROL URE	25.675,43 €	97
KANAL	UJR	83.629,25 €	262
<u>BRDA</u>	<u>PETROL URE + ESCO</u>	<u>175.249,20 €</u>	<u>292</u>
<u>MIREN – KOSTANJEVICA</u>	<u>UJR + ESCO</u>	<u>46.511,40 €</u>	<u>133</u>
NOVO MESTO	UJR	435.492,84 €	1.522
TOGETHER		883.511,51 €	2.895 MWh

REDUCTION OF GREENHOUSE EMISSIONS - CO₂: 1.620 tons

Energy reconstruction of public lighting in Municipalities Brda and Miren-Kostanjevica ruled through ESCO EPC – Energy Performance Contracting

Ustvarjamo obnovljivo prihodnost



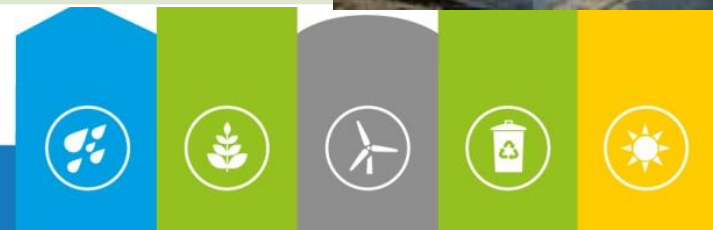
GOLEA BEST PRACTICE – District heating on forest biomass

MUNICIPALITY	PROJECT
MIREN – KOSTANJEVICA	MIREN (realized)
BOVEC	BOVEC (in process)
KOBARID	Joinery Peter Koren Kobarid (realized) Primary school KOBARID (in process)
ILIRSKA BISTRICA	ILIRSKA BISTRICA (in process)
HRPELJE	Primary school and Kindergarten Hrpelje (in process)
TOLMIN	Business zone Na Logu - Tolmin (realized) Retirement home Podbrdo (realized) School centre TOLMIN (in process)
IDRIJA	Primary school and Kindergarten Črni vrh (in process)



In project of district heating systems on forest biomass we used ESCO model of ESC – Energy Supply Contracting.

Ustvarjamo obnovljivo prihodnost



GOLEA – International Programmes & Projects 2014-2020



SEADRION

ENERGY CARE

Lighting Solutions

SECAP



Ustvarjamo obnovljivo prihodnost



GOLEA – Project SISMA – best practices of EPC

- Energy renovation of recreational buildings in Celje
- Energy renovation of municipal buildings in Kranj
- Energy renovation of educational buildings in Kranj
- Energy renovation of recreational buildings in Kranj
- Energy renovation of municipal buildings in Kranj
- Energy renovation and management of buildings of the University of Maribor
- Energy renovation of day-care and educational facilities in the City municipality of Maribor
- Energy renovation of municipal buildings in Koper **GOLEA**
- Energy renovation of municipal buildings in Brda **GOLEA – MARIE MED**

NEW BEST PRACTICES IN 2017

- Energy renovation of municipal buildings in Novo mesto
- Energy renovation of municipal buildings in Hratsnik
- Energy renovation of municipal buildings in Črnomelj

IN PROCESS

- Energy renovation Primary school and Heath center in Idrija **GOLEA – TA EIB ELENA**
- Energy renovation of municipal buildings in Postojna **GOLEA – TA EIB ELENA**



GOLEA – EPC – energy renovation of municipal buildings in Brda

- **Pilot characteristic:** Energy wasteful public office building owned by the municipality,
built in 1945, energy using indicator 190 kWh/m², usable area 460 m²
- **Area:** Brda Municipality
- **Population:** 5.765 inhabitants of Municipality
- **Number / type of buildings:** 1 public office building
- **Actors:** GOLEA, Brda Municipality, subcontractors
- **Motivation:** Energy consumption improvement
(Energy efficiency action)
- **Image**



GOLEA – EPC – energy renovation of municipal buildings in Brda



	SCHOOL DOBROVO	SCHOOL KOJSKO	MUPICIPALITY BUILDING	TOTAL
MUNICIPALITY	266.747,00 €	2.879,04 €	0,00 €	269.626,04 €
SUBSIDY	504.088,00 €	128.394,74 €	0,00 €	632.482,74 €
ESCO	9.430,00 €	37.500,00 €	316.783,00 €	363.713,00 €
TOTAL	780.265,00 €	168.773,78 €	316.783,00 €	1.265.821,78 €

ANUAL SAVINGS MWh/a	187,38	42,28	25,49	255,15
ANUAL SAVINGS €/a	36.521,00 €	5.061,00 €	8.059,37 €	49.641,37 €

- Preparation of ESCO tender: March 2014
- Opening session: 30.6.2014
- Signing of Contract: till 30.8.2014
- Beginning of works: 1.10.2014
- Completion of works 30.11.2014

EPC + = EPC + ESC

Ustvarjamo obnovljivo prihodnost



GOLEA – EPC – energy renovation of municipal buildings in Brda

Contractor under the contract guarantees that its actions to save energy since the beginning of the obligation to implement the main service until the end of the contract to reduce the reference quantity of energy consumption for the amount of the guaranteed energy savings.

	MWh	€ without VAT	€ incl. VAT
Guaranteed savings of electricity	7,50	1.005,38 €	1.226,57 €
Guaranteed savings of heat	247,70	48.635,99 €	59.335,91 €
Guaranteed savings together	255,20	49.641,37 €	60.562,48 €

Guaranteed savings the contractor and the municipality shared 90: 10, the excess savings shared 50 : 50

The service is € 44.677 € (90% of 49.641,37 €)

Concession fee: € 46.930 € (ESCO school Dobrovo and school Kojsko)

If the contractor does not meet the guaranteed savings, it is determined negative difference is charged to the contractor.

Contract duration: 15 years.



ELENA TECHNICAL ASSISTANCE

ELENA is a joint initiative by the EIB and the European Commission under the Horizon 2020 programme. ELENA provides grants for technical assistance focused on the implementation of energy efficiency, distributed renewable energy and urban transport projects and programmes.

The grant can be used to finance costs related to feasibility and market studies, programme structuring, business plans, energy audits and financial structuring, as well as to the preparation of tendering procedures, contractual arrangements and project implementation units.



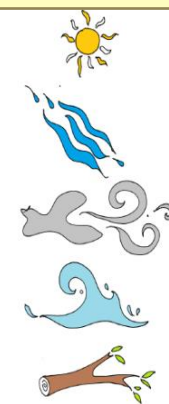
What kind of projects does ELENA support?

Programmes above EUR 30 million over a period of around 2-4 years

ELENA can cover up to 90% of technical assistance/project development costs.

Smaller projects can be supported when they are integrated into larger investment programmes.

The annual grant budget is currently around EUR 20 million. Projects are evaluated and grants allocated on a first-come-first-served basis.



What kind of projects does ELENA support?

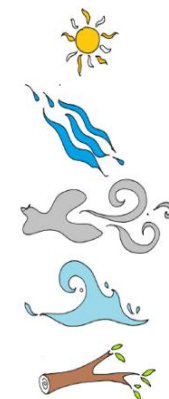
ELENA may co-finance investment programmes in the following fields:

1. Energy efficiency and distributed renewable energy

- public and private buildings (including social housing), commercial and logistic properties and sites, and street and traffic lighting to support increased energy efficiency
- integration of renewable energy sources (RES) into the built environment – e.g. solar photovoltaic (PV) on roof tops, solar thermal collectors and biomass
- investments into renovating, extending or building new district heating/cooling networks, including networks based on combined heat and power (CHP), decentralised CHP systems
- local infrastructure including smart grids, information and communication technology
- infrastructure for energy efficiency, energy-efficient urban equipment and link with transport

2. Urban transport and mobility

- investments to support the use and integration of innovative solutions for alternative fuels in urban mobility
- investments to introduce on a large-scale new, more energy-efficient transport and mobility measures in urban areas including passenger transport, freight transport, etc

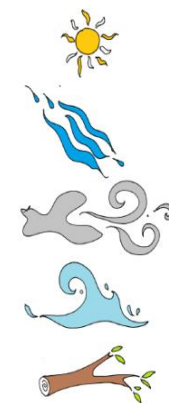


CONTRACT FOR FUNDING OF PROJECT DEVELOPMENT SERVICES

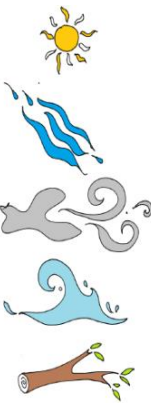
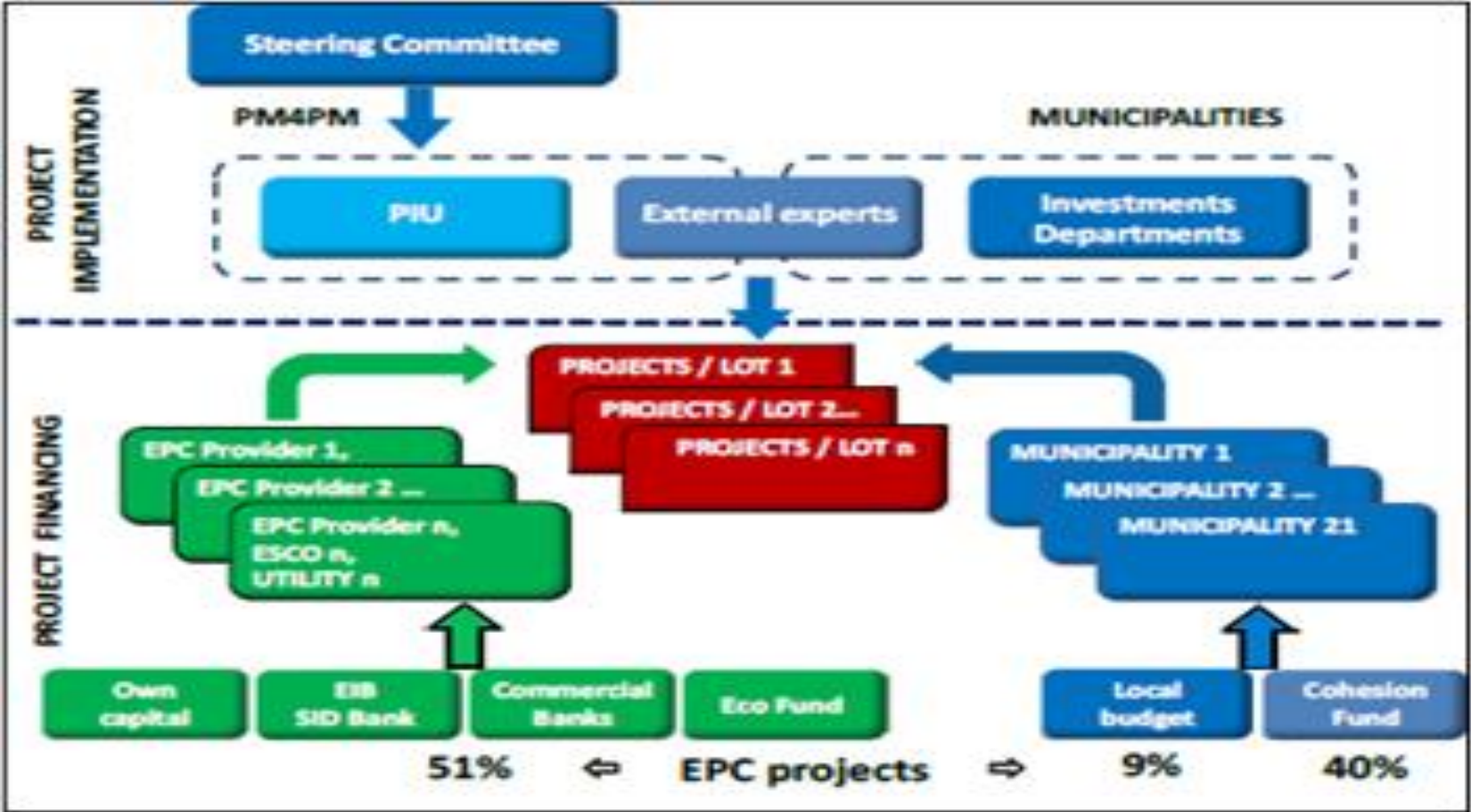
CONTRACT NUMBER ELENA-2014-060

relating to the implementation of Project Development Services entitled
“Preparation and Mobilisation of Financing for Sustainable Energy Investments in
Primorska Region Municipalities (PM4PM)”

- The total Eligible Costs EUR **2,250,000 EUR**;
- The EIB contribute a maximum **90 %** of the total Eligible Costs with a maximum of EUR 2,025,000 EUR;
- **LEVERAGE FACTOR:** The amount of the Investment Programme to be prepared under the Project Development Services supported by this contract must represent at least **20** times the amount of the total contribution – 45 MIO EUR.

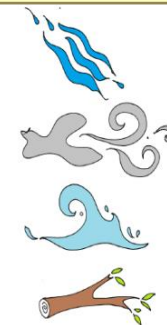


Approach to implement the Investment Programme



Project Implementation Unit

As part of GOLEA, the Project Implementation Unit (**PIU**) is set up to manage the preparation and implementation of the PM4PM investment programme. The PIU is assisted by various subcontracted external experts and several municipalities and utilities departments to:



Analyse the pool of investment projects in terms of being suitable for EPC or public procurement;

Conduct a technical and economic feasibility analysis necessary for the project preparation process

Prepare and provide support to the municipalities in submitting applications for cohesion funds;

Support the tendering process and public procurement

Assist in the preparation of works/Energy Service Company (ESCO) contracts

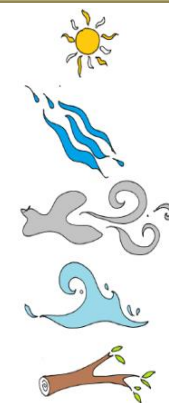
The PIU currently employs 7 persons.

Ustvarjamo obnovljivo prihodnost



Documents and activities

Various documents were drawn up and activities were carried out for the projects realised within the PIU related to the nature and requirements of each investment project.



Type of document	No of documents / activities		
	ITA	ETA	TOTAL
Baseline for EPC model		1	1
Energetic Certificate	6	9	15
Energy Audit, EA Update	40	46	86
Decrees, Legal acts	1	10	11
IP: Project identification fiche	16	22	38
IP: Pre-Feasibility study	1	2	3
IP: Feasibility study, FS update	6	23	29
IP: Call for EPC promoters	2		2
IP: Test PPP: Feasibility study – PPP, FS update	3	7	10
TD: Public procurement procedure	4	13	17
TD: PPP procedure	3	8	11
TD: PPP negotiations		1	1
TD: preparation of work contracts		4	4
PDD: Conceptual Design, Inventory of works, Project tasks plan	1	16	17
PDD: Building permit design		14	14
PDD: Detailed design		40	40
PDD: Other design documentation		2	2
APP: Application form for cohesion funds	14	3	17
APP: Compilation of formulars for APP		3	3
APP: Preparation of consortium contract		1	1
APP: Energy measurement verification plan	15	13	28
APP: Plan for continuos optimisation of the HVAC systems	15	13	28
TOTAL	127	251	378



Investment programme

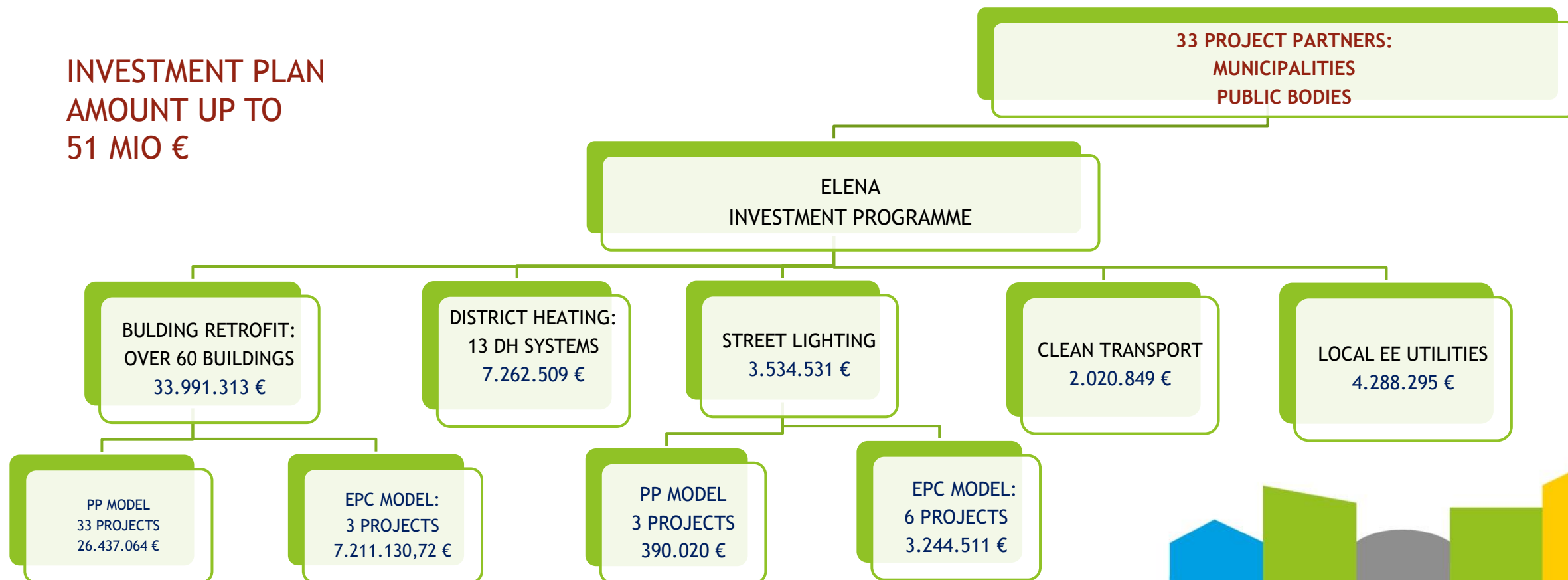
ELENA support is assigned to help prepare and ensure a full-scale implementation of planned Investments Programme in the field of:

- **Building Retrofit:** improving the energy efficiency of public buildings in municipalities which have been identified to have the most energy saving potential
- **District heating:** renovation of existing small-scale and building integrated district heating systems and installation of new ones.
- **Street lighting:** improving the energy efficiency of street lighting systems.
- **Clean transport:** introduction of electric vehicle charging stations, electric vehicles for public services, and compressed natural gas stations.
- **Local energy efficient utilities:** installation of IT technology for energy management and optimisation of infrastructure systems operation.



INVESTMENT PROGRAMME PLAN

INVESTMENT PLAN
AMOUNT UP TO
51 MIO €

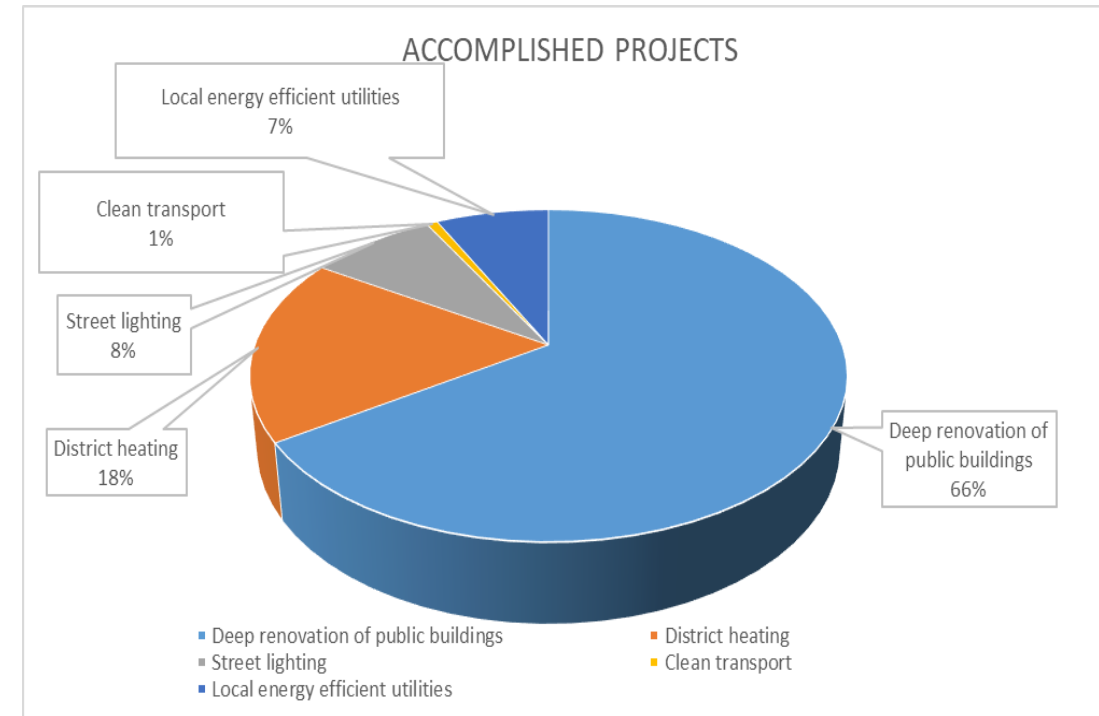


Ustvarjamo obnovljivo prihodnost



Work progress and achieved results on the Investment Programme after 2.year

	ACCOMPLISHED	IN PROGRESS	PLAN	TOTAL
AJD	1.678.445,76	-	-	1.678.445,76
BOVEC	2.246.944,76	708.000,00	-	2.954.944,76
BRDA	62.781,60	-	-	62.781,60
CERKNO	750.942,39	296.800,00	500.000,00	1.547.742,39
DIVAČA	523.139,34	-	-	523.139,34
HRPELJE	1.006.904,66	-	-	1.006.904,66
IDRIJA	5.444.797,08	2.040.001,89	-	7.484.798,97
ILIRSKA	1.297.598,73	1.607.000,00	-	2.904.598,73
IZOLA	928.358,85	860.000,00	-	1.788.358,85
KANAL	38.462,60	270.000,00	-	308.462,60
KOBARID	435.996,17	500.000,00	-	935.996,17
KOPER	2.607.463,11	2.640.217,03	-	5.247.680,14
LOGATEC	1.143.622,55	-	-	1.143.622,55
LOG-D.	1.089.258,79	-	-	1.089.258,79
MIREN	69.817,80	110.000,00	-	179.817,80
MONG	3.466.328,20	2.745.280,60	388.418,40	6.600.027,20
POSTOJNA	4.098.898,28	-	-	4.098.898,28
PIVKA	335.955,00	243.118,00	-	579.073,00
RENČE	230.791,51	200.000,00	-	430.791,51
SEŽANA	-	1.300.000,00	-	1.300.000,00
ZAGORJE	112.019,02	1.700.000,00	-	1.812.019,02
KOVOD	329.799,15	-	-	329.799,15
SS MONG	-	-	-	-
SS MOK	-	180.000,00	-	180.000,00
METLIKA	1.088.053,86	481.900,00	-	1.569.953,86
TOLMIN	188.470,42	767.160,37	-	955.630,79
D.DOM	-	1.000.000,00	-	1.000.000,00
ŽUŽEMBERK	-	1.212.448,55	-	1.212.448,55
GRADIŠČE	1.317.600,00	-	-	1.317.600,00
JEZERSKO	351.920,00	-	-	351.920,00
UN NG	-	500.000,00	-	500.000,00
GOLEA	2.781,60	-	-	2.781,60
SKUPAJ	30.847.151,24	19.361.926,44	888.418,40	51.097.496,08





THANK YOU

Irena Pavliha, GOLEA



Ustvarjamo obnovljivo prihodnost