



Interreg

CENTRAL EUROPE



European Union
European Regional
Development Fund

PROSPECT2030



TAKING
COOPERATION
FORWARD

- 📍 • Combined PPL sessions - 15 December 2020
- 💬 • The Experience of Piemonte in managing ERDF
- 👤 • Stefano Caon, Energy Department - Piemonte Region

ROP PIEMONTE 2014-2020: AN OVERALL VIEW



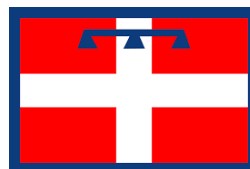
ERDF
483 M€

+



State funds
338 M€

+



R.P. funds
145 M€

=



ROP Piemonte
966 M€

6 main priorities (Axes)



I) Research & Innovation

III) Competitiveness of SMEs



V) Environment & culture



II) Digital agenda



IV) Sustainable energy

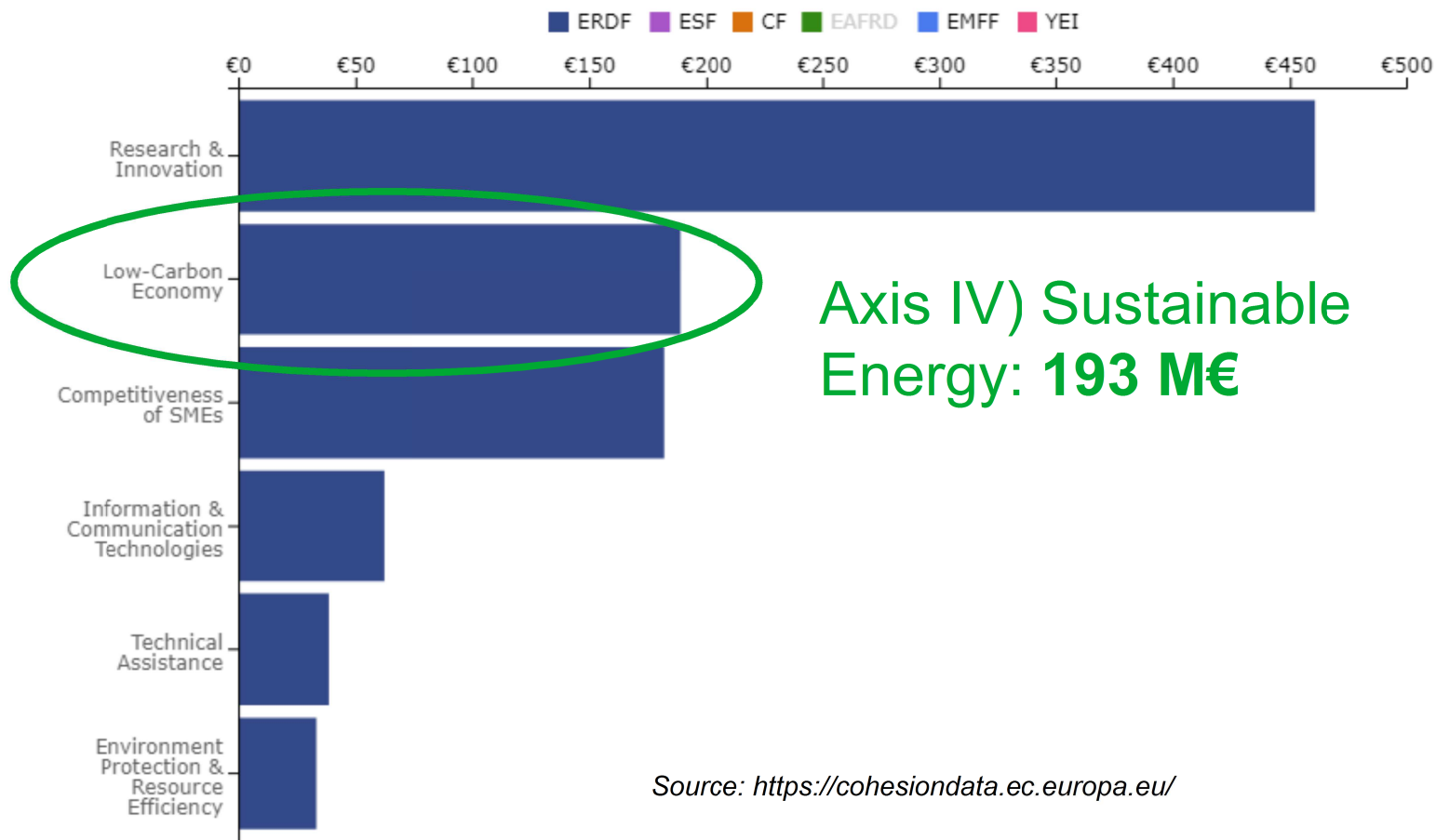


VI) Urban Development



ROP PIEMONTE 2014-2020: AN OVERALL VIEW

ESIF 2014-2020: Total Budget by Theme (daily update): Piemonte - ERDF, EUR billion



Source: <https://cohesiondata.ec.europa.eu/>

Refresh Date: 10/12/2020



ROP PIEMONTE 2014-2020: AXIS 4 - PRIORITIES

Two priorities (including one or more ‘actions’):

- **4b:** Promoting energy efficiency and renewable energy use in enterprises
- **4c:** Supporting energy efficiency, smart energy management and renewable energy use in public infrastructures, including public buildings, and in the housing sector

All calls of the two axes are now **closed**.

Nowadays it is under decision the allocation of additional budget saved thanks public procurement procedures by previous awarded projects.



Action: IV.4b.2.1



Actions: IV.4c.1.1, IV.4c.1.2, IV.4c.1.3

TAKING COOPERATION FORWARD



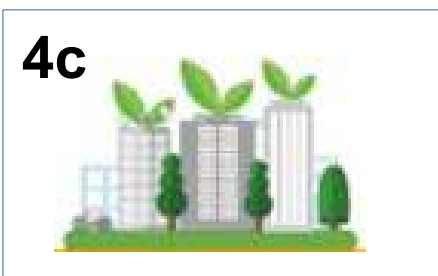
ROP PIEMONTE 2014-2020: AXIS 4 - RESOURCES



Action:
IV.4b.2.1

97 M€

ENTERPRISES



Actions:
IV.4c.1.1
IV.4c.1.2
IV.4c.1.3

57,7 M€

BUILDINGS

18,94 M€

**STREET
LIGHTING**



Action IV.4b.2.1: Primary energy saving and CO2 emissions reduction in enterprises plants, including RES systems for self-consumption



Call was opened in 2016, recast in 2020 (now closed), total funds: **97 M€**

Beneficiaries: **Small, medium and large enterprises** (some activities excluded)

80% funding (mixed 0-interest rate ROP loans and bank loans), 20% grant, maximum funding intensity based on the enterprise dimension

Call included two “Lines”:

“Line 1-energy efficiency”:

- 1.a) high efficiency **CHP**;
- 1.b) **energy efficiency** improvements in **manufacturing processes** (heat recovery, electric engines, new inverters,...)
- 1.c) **energy efficiency** improvements of **buildings** (thermal insulation, heating systems replacement,...)



ROP PIEMONTE 2014-2020: PRIORITY 4B - ENTERPRISES

- 1.d) installation of **more efficient components and systems** (LED relamping, compressors or inverters replacement...)
- 1.e) **new high efficiency production lines** in existing plants



Action: IV.4b.2.1

“Line 2-RES”: installation of RES systems

Further eligibility requirements based on the category of beneficiary or interventions (e.g. energy saving/CO2 emissions saving per euro invested)

Eligible Investment cost: € 50.000 - 5.000.000

Total ‘operations’ funded: 202 (refresh date 12/19)



ROP PIEMONTE 2014-2020: PRIORITY 4B - PUBLIC AUTHORITIES (BUILDINGS)

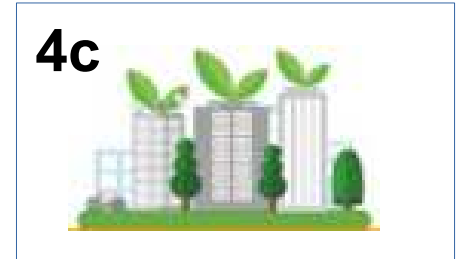
Action: IV.4b.2.1: Indicators summary table (refresh date: 11/2020)

	1.a) CHP	1.b) processes	1.c) building efficiency	1.d) efficient components	1.e) new lines	2) RES	Total/ average
% €	23	25	3	8	7	34	100
n. projects	15	40	28	60	6	135	284
% projects	5	14	10	21	2	48	100
Average energy saving (%)	38	27	2	7	3	23	100
Total energy saving (MWh)	116.238	82.051	6.061	20.389	9.923	70.477	305.139
CO2 emissions saving (ton)	27.075	18.950	933	6.385	880	15.697	69.919
% CO2 saving	39	27	1	9	1	22	100
kWh/€	4,90	3,10	2,10	2,30	1,40	2	2,90
kgCO2/€	1,14	0,71	0,32	0,72	0,12	0,45	0,67



ROP PIEMONTE 2014-2020: PRIORITY 4C - PUBLIC AUTHORITIES (BUILDINGS)

Action 4c.1.1: primary energy saving and eco efficiency in public buildings



Thermal insulation



Insulated glazing



Condensing boilers



LED relamping



Solar shading



ROP PIEMONTE 2014-2020: PRIORITY 4C - PUBLIC AUTHORITIES

Action 4c.1.1: RES systems installation in buildings for self-consumption

4c



Photovoltaic systems



Biomass boilers*

Heat pumps



Solar thermal systems



*With huge restrictions due to critical air quality in Piemonte Region plains



ROP PIEMONTE 2014-2020: PRIORITY 4B - PUBLIC AUTHORITIES

4 calls (different categories of beneficiaries) opened in 2017-2018, now closed

- 1) **“Small” public local authorities:** municipalities and their unions or groups with a population lower than 5.000
- 2) **“Large” public local authorities:** municipalities and their unions or groups, provinces with a populations higher than 5.000, provinces and Turin metropolitan Area
- 3) **Public housing sector:**
 - Medium size apartment blocks
 - Transformation to nZEb needed for eligibility! (pilot projects)
- 4) **Hospitals**
 - Thermal insulation not compulsory, **20% minimum energy saving** needed

4c



**Action: IV.4c.1.1 &
IV.4c.1.2**



ROP PIEMONTE 2014-2020: PRIORITY 4B - PUBLIC AUTHORITIES

Target: Existing and heated public building, with a low or medium envelope quality, for institutional use

Grants: from 80% to 90% maximum intensity

24 months to complete the works

Seismic safety had to be assessed

Sustainability protocols and environmental criteria (GPP) compulsory

Deep refurbishment needed (thermal envelope insulation is necessary)

Main energy requirement: except for hospitals, kWh/€ higher than 0,4 (payback time has not to be too high!!!)

4c



**Action: IV.4c.1.1 &
IV.4c.1.2**



ROP PIEMONTE 2014-2020: PRIORITY 4B - PUBLIC AUTHORITIES (BUILDINGS)

Actions IV.4c.1.1 & IV.4c.1.2 - Indicators summary table (Refresh date: 11/2020)

	“Small” local authorities	“Large” local authorities	Housing sector	Hospitals	Total/average
M€	18,54	18,75	7,18	13,23	57,7
Operations (admitted)	76	20	7	5	108
buildings	118	28	7	5	158
Cost per net floor area (€/m2)	316	301	692	271	-
Average energy saving (%)	60%	76 %	92%	34%	-
Total energy saving (MWh)	18.488	20.655	2.895	13.343	55.381
CO2 emissions saving (ton)	4.804	3.596	689	3.211	12.273
kWh/€	0,98	0,78	0,41	1,05	-
kgCO2/€	0,24	0,14	0,083	0,25	-



ROP PIEMONTE 2014-2020: PRIORITY 4B - PUBLIC AUTHORITIES

Action 4c.1.3: LED relamping/retrofitting in street lighting and transformation into smart lamppost

Call was opened in 2018 (now closed), total funds: **18,69 M€**

Target: **existing streetlighting systems** owned by municipalities

Beneficiaries: **municipalities**

Grants **80%**

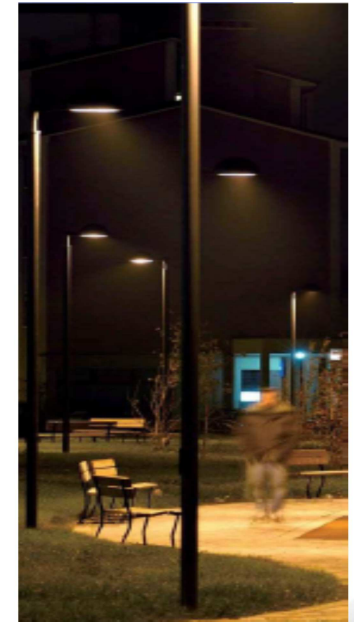
18 months to complete the interventions

Energy requirement: **minimum 40% electricity saving**

Smart systems using the SL infrastructure are **eligible** (max 20% of the total costs)

Maximum cost: **800 Euro/lamppost**

4c



ROP PIEMONTE 2014-2020: PRIORITY 4B - PUBLIC AUTHORITIES

Total funds	18,94
Operations (admitted)	133
Average lamp number per operation	268
Average cost per lamp (Euro/lamp)	704
Average Energy saving (%)	58%
Total energy saving* (MWh)	13.440
CO2 emissions saving (ton)	3.211
kWh/€	1,46
kgCO2/€	0,32

In the **43%** of the total operations, the beneficiary will also install some smart systems; most chosen smart systems were **video-surveillance, pollution or weather sensors and digital information panels**

4c

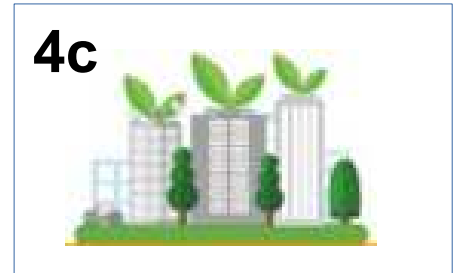


Action: IV.4c.1.3



ROP PIEMONTE 2014-2020: PRIORITY 4B - PUBLIC AUTHORITIES

- **Key points (1/2)**
- **Complex calls** (participants found them interesting but characterized by high level of bureaucracy); policymakers very interested
- **Very high energy saving** achieved: we have the technology to deeply renovate our building stock!
- An **accurate energy audit** (compulsory to participate to the calls) is a **must**: the best level of cost effective renovation has always to be achieved, especially when public fundings are used
- The level of professionals specialization in energy designing in our region still has to be improved by **proper training activities**
- Most installed heating/cooling system: **air condensed heat pumps**, sometimes with a back-up condensing boiler; in buildings with PV systems, we get **zero local emission buildings!**



ROP PIEMONTE 2014-2020: PRIORITY 4B - PUBLIC AUTHORITIES

- **Key points (2/2)**
- **Sinergy** with other public funds is possible (and nearly always used by participants), but sometimes difficult due to different schemes and rules: a **higher level of integration** between ERDF and national funds **has to be achieved**
- **Seismic quality** of target building is **very low**, but lack of public resources limits a combined seismic-energy renovation
- A **monitoring for a 5 years period** is required to beneficiaries: our goal is to verify through disposable real data the effective saving
- **EPCs**, which were allowed in every call, were only used by one beneficiary among hundreds: **still too many administrative barriers?**

4c



ROP PIEMONTE 2014-2020: PRIORITY 4B - PUBLIC AUTHORITIES

- THANK YOU FOR YOUR ATTENTION... ANY QUESTIONS ?



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