SECOND PROJECT MEETING
October 29-30, Budapest

Friuli-Venezia Giulia: Individual regional baseline report on low-carbon investments funding - Progress & Status

PROSPECT2030 | PP5 – Energy Management Agency of Friuli – Venezia Giulia

CONTENTS

STRUCTURE OF THE REVIEW

Decentralised ESI funds made available through the Partnership Agreements

- National/federal horizontal (sectoral) operational programmes
- Decentralised regional operational programmes

Other EU low-carbon/green economy transition initiatives

- EU initiatives managed by the European Commission
  - Horizon 2020Programme
  - LIFE Programme
  - INTERREG and other EU initiatives
- Joint initiatives of the EU with International Financial Institutions (IFIs)
  - European Fund for Strategic Investments (EFSI)
  - European Local Energy Assistance (ELENA)
  - Joint European Support for Sustainable Investment in City Areas (Jessica)
  - Green Energy Finance Facility (GEFF) of EBRD

National/federal funding schemes

Cooperation with private stakeholders

Partnership Agreement for Italy 2014-2020

revised with Decision C(2018) 598 *final*

breakdown by thematic objective and fund (M €)

THEMATIC OBJECTIVE	ERDF European Regional Development Fund	ESF European Social Fund	EAFRD European Agricultural Fund for Rural Development	EMFF European Maritime and Fisheries Fund	TOT
4. Supporting the shift towards a low-carbon economy in all sectors	3 378,3	0	439,3 M €	12,7 M €	3 830,3

Complementary actions for less developed regions: 72,5 M € under complementary operational programme «Energy and territorial development»

Partnership Agreement for Italy 2014-2020

revised with Decision C(2018) 598 *final*

Expected results

- **Reduction of energy consumption** in public buildings, residential and non-residential, and integration of RES >> ERDF
- **Reduction of energy consumption** and emissions in commercial buildings and integration of RES >> ERDF + EAFRD
- Increase of energy supply share from **smart distribution systems** >> ERDF + EAFRD
- Increase of energy supply share from **cogeneration & trigeneration** >> ERDF + EAFRD
- Increase of sustainable exploitation of **bioenergy** >> ERDF + EAFRD
- Increase of **sustainable mobility** in urban areas >> ERDF
- **Reduction of CO_2** emissions and increase of forestry and agriculture **CO_2 sequestration** >> EAFRD
- Increase energy efficiency in **fisheries and aquaculture** >> EMFF

National Operational Programme on Enterprises and Competitiveness

- funded under ERDF
- 1 676 M €
- less developed and transition regions of Italy under the "Investment for growth and jobs goal“
- 4 operational priorities: (4) **supporting shift towards a low-carbon economy**
- Funding priorities: **promoting use of renewable energy** in enterprises and implementation of **smart distribution systems**, to **maximise available production potential of renewable energies** (21.2%)
- **Expected result:** 9% increase in the share of renewable energy consumed

National Operational Programme on Metropolitan Cities (*multi-fund*)

- part of the **Italian national Urban Agenda and Sustainable Urban Development**
- joint effort and cooperative method between **14 Metropolitan Cities**
- Funding priority: **sustainability of public services** and **urban mobility** (210,8 M €, ERDF: 36%)
- **Expected results:** more than 92 000 lights (LED technologies) for a reduction of 18 GWh and 1 900 tons of $C0_2$/1000; decrease of annual primary energy consumption of public buildings (2.2 GWh / year) through 38 000 m2 rehabilitated

ERDF Regional Operational Programme 2014-2020 Friuli-Venezia Giulia

Axis III - TO4: Support the transition towards a low-carbon economy in all sectors
TOT public funds 57 M €

Specific objective: **energy conversion of public buildings and RES integration**

Activities:

(a) decrease of primary energy consumption in school buildings > **ERDF 14 M €**

(b) decrease of primary energy consumption in health hubs and nursing homes / rest homes > **ERDF 14.5 M €**

Expected impacts:

(a) + (b) 15% reduction in annual primary energy consumption

Challenges and tips

challenges

- beneficiaries struggle with *financial reporting* and with *assessment procedures*
- *multi-funded projects* are more troublesome (ERDF + Thermal Energy Account 2.0)

tips

- perform *energy auditing* of each building owned by FVG Region
- provide support to LPAs involved in EU-funded projects through the establishment of *dedicated offices*

OTHER EU INITIATIVES (1)

EU INITIATIVES OF THE EUROPEAN COMMISSION + INTERREG

Programme	Acronym	Key words	Takeaways
H2020 Energy Efficiency – 2016/2017	**NOEMIX**	e-mobility, RES-plant investments	methodology based on transition from a ‘fully public-owned fleet’ model to a ‘public-private mobility service partnership’ exploiting regional demand aggregation
LIFE Integrated projects	**prepAIR**	air quality, biomass burning, energy efficiency	DDS *work in progress*
INTERREG Italy - Slovenia	**ENERGY CARE**	energy efficiency in public buildings, soft mobility	cross-border model of participatory territorial planning
	LightingSolutions	public lighting, SEAPs	
INTERREG Central Europe	**CE-HEAT**	waste heat, endogenous RES	comprehensive model of waste heat utilization in CE regions; transnational waste heat platform; waste heat cadastre

OTHER EU INITIATIVES (2)

JOINT INITIATIVES WITH IFIS

Work in progress

NATIONAL/REGIONAL FUNDING SCHEMES

RELEVANT Funding scheme/supporting measure	Sector/bene	Managing authority	Investiments 2018 (M€)	Energy saved 2018 (Mtoe)	€/toe
Thermal Energy Account Nationwide direct incentive scheme that addresses the generation of renewable thermal energy (through biomass plants) and mitigation measures such as energy efficiency improvement in buildings and technical installations. **Payment procedures:** the grant will be disbursed in one, two or five annual instalments, depending on the size and type of the project. **Fund amount per year: 900M€** - 700M€/year households and businesses - 200M€ reserved for public authorities.	Households Businesses Public authorities	GSE	400	0.036 Mtoe (36.000 toe)	11
White Certificates The Italian White Certificates (WhC) scheme is an Energy Efficiency Obligation (EEO) scheme in which the electricity and gas distributors with more than 50,000 clients are obliged to reach increasing annual energy efficiency targets. White certificates are used to certify the energy savings and the obliged distributors can buy them from voluntary parties or obtain them directly.	Companies	GSE & other National Authorities	-	0,09 Mtoe (90.000 toe)	
Ecobonus Tax relief on projects designed to upgrade the energy efficiency of buildings. Tax relief is guaranteed for 10 years and corresponds to 1/10 of (65% or 50% of the investment) that shall be subtracted from annual due tax by the company or citizen.	Households	ENEA, Agenzia delle Entrate	3.300	0,099 Mtoe (99.000 toe)	33

NATIONAL/REGIONAL FUNDING SCHEMES

OTHER Funding scheme/supporting measure	Sector/bene	Managing authority	Investiments 2018 (M€)	Energy saved 2018 (Mtoe)	€/toe
National energy efficiency fund Revolving fund that offers guarantees and loans at a subsidized rate to support energy efficiency measures carried out by public authorities, ESCOs and businesses to increase the energy efficiency of their own buildings, systems and production processes. **Revolving fund amount:** 25M€ for 2019 (first year) + 40M€ for 2020 + 40M€ for 2021	Businesses ESCOs Public authorities	MiSE, INVITALIA	-	-	
Structural Funds	Businesses Households Transport Public authorities	National and local public authorities	29	0,0005 Mtoe (500 toe)	58

Sources:
RAEE report 2019 by ENEA
Italian Energy Efficiency Action Plan 2017
The Italian white certificates scheme_EPATEE

NATIONAL/REGIONAL FUNDING SCHEMES

Tax relief Ecobonus is the **most effective measure in terms of toe** (99.000 tons oil equivalent). The immediate cost is on the State in terms of less taxes paid and has the highest cost 3.300 M € even though the interventions foreseen are highly labour intensive. A **complete cost/benefit analysis is rather complex and the simple €/toe ratio** of 33 **cannot be a final indicator**.

White certificates yield 90.000 toe and **do not require direct funding from the State** since this kind of scheme imposes the **cost on obliged clients** (businesses). The translation **effects on** the **final consumer are difficult to evaluate** and the measure is not easily increasable. Prices of certificates have varied a lot in 2018.

Thermal energy account yields the **less interesting energy saving** 36.000 toes **but** also has a **lower cost per toe** compared to Tax relief costing 11€/toe instead of 33.

The measure has not been a success since, **in 2019,only around 27% of the fund was used.**

Other schemes: **National energy efficiency fund** and **Structural Funds**, the latter have proved **not** to be **relevant in 2018 in terms of direct impacts** while the National energy efficiency fund has started in 2019.

MITIGATION MEASURES

Private stakeholders: ESCOs/enterprises

Business models that work:
PPP Public Private Partenships between public authorities (mainly municipalities).

Description: a private organisation (ESCO/enterprise) implements a project to deliver energy efficiency and uses the stream of income from the cost savings to repay the costs of the project, including the costs of the investment.

Sectors of success:
- Public lighting;
- Thermal plant renovations of buildings.

Critical factors:
PPPs **do not work when investments compared to savings** (positive cashflows for the private investor) **do not allow the project to yield the minimum desired rate of return** that's why other energy efficiency measures on buildings are NOT working, especially:
- envelopes
- glazing

RES - Renewable Energy Sources

Private stakeholders:
Households/ESCOs/businesses

Business models that work:
Up to now only **Feed-in tariffs** principally **for the production of green electricity attracted investment in RES from private stakeholders.** A Feed-in tariff is a funding scheme not a business model.

Critical factors:
Without a proper financial support (**funding scheme**) the **investments in RES are not competive** when **compared to fossil production systems** in terms of investment financial indicators, these projects are **not bankable**.

A starting point for overcoming barriers

Getting private stakeholders investing their funds revolves around **bankability** and **profitability**.

Investments do **NOT** take place if the **IRR** (Internal Rate of Return) **of mitigation or RES projects is below the minimum level required by the market for its bankability**.

When the IRR of a project is below the minimum level for its bankability (market threshold in terms of a minimum IRR defined by empirical evidence provided by investors), a **subsidy (generally public funding) is needed** and it should sum up to the *exact amount* that makes the project's new IRR reach the required minimum level.

Subsidies need to be minimised (**defining the minimum IRR that make projects bankable**) and *must NOT be based on a flat rate or fixed %* combining effectiveness with public funding optimisation as soundly developed with the EU SISMA (Supporting Innovative Schemes in the MED Area project) project.

Thank you for your attention!