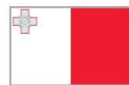


# The Maltese experience in supporting Investments in EE and RES (CBAs for non-major projects)

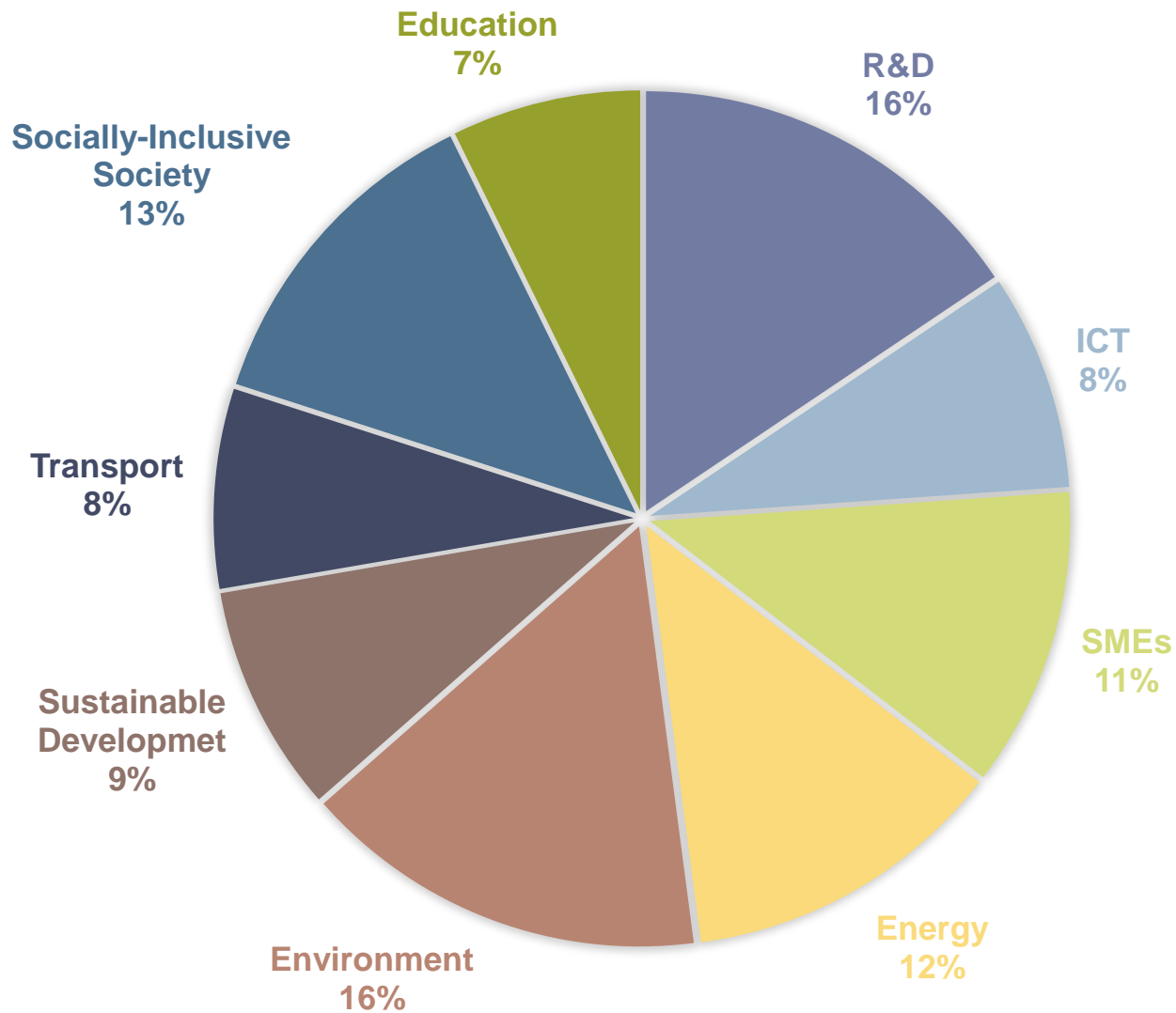
Meeting 15<sup>th</sup> May 2018



European Union  
European Structural and Investment Funds



# Planned Investments: ERDF/CF OP



# Investment Priorities: Energy

Selected thematic objective	Selected investment priority	Financial allocation in OP	% Allocation of the programme
Supporting the shift towards a low carbon economy in all sectors	4a - Promoting the production and distribution of energy derived from renewable sources	€15M	3%
	4b - Promoting energy efficiency and renewable energy use in Enterprises	€15M	3%
	4c - Supporting energy efficiency, smart energy management and renewable energy use in public infrastructure, including in public buildings, and in the housing sector	€27.7M	6%
		€57.7M	12%

# Appraisal Required

Appraisal is dependent on the value of the proposed project

Total Project Cost	Revenue Generating?	Study required
€0 - €1,000,000	No	None
	Yes	Financial Assessment
€1,000,001 - €5,000,000	No	Financial Feasibility Study
	Yes	
More than €5,000,000	No	Full Cost Benefit Analysis
	Yes	

## Rationale

- Malta has its own onerous 2020 targets to achieve in the area of energy
- Projects should be prioritised on the basis of their contribution to the national target
- ERDF/CF is planned to 26% achievement of national 2020 RES target
- The focus of the financial analysis is to determine the right level of financing
- The economic analysis assess the relevance of planned investments

# Setting the Context and the Objectives: Malta's experience

In the case of Energy there a tension between the organisational context and the wider context which has an impact on the definition of the project objectives

This has a direct impact on how well the users, the cost and the benefits are identified

Resulting in no differentiation between project objectives and outputs

E.g. the context is contributing to Malta 2020 RES/EE/Emission targets

- ▶ Reduce GHG Emission
- ▶ Increase Security of Supply
- ▶ Reduce Emission from the primary energy source in the country

# Project Identification and Demand: Malta's experience

The rationale leading to the project investment not provided

Such section were very brief and the data provided was not substantiated

No or limited detail presented of the assumptions used

# Identification and Assessment of Options

## Malta's experience



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Weak/inappropriate identification of options

Alternatives were not genuine solutions but simply constructed to show that they are worse than the preferred option

Limited expertise results in the fact that there are no alternative strategies listed to achieve the intended objectives

The options presented are not assessed against a counterfactual scenario

Failure to use a scoring or criteria approach to determine the 'Do Project' option



# Financial Analysis: Malta's experience

- It is always a challenge to ensure the all operating costs (*maintenance costs*) and revenues (*Feed in tariff/Cost Savings*) have been factored in especially in the case of EE
- Benchmarks are easier to identify in the case of RES projects as opposed to EE project
- In the case of EE there are not enough empirical information against which the MA can assess the information provided
- No standard have been developed in the case of the Malta's climate
- Limited technical input is provided in the preparation of the studies for projects to be submitted under PA 4

# Economic Analysis: Malta's experience

- The identification of the right economic benefits is a challenge especially as a result of limited academic work in the area of EE
- Absence of national shadow prices for common economic benefits results in different approach/unit values for identified economic benefits such as:
  - Reliability of energy supply
  - Reduction of GHGs
  - Reduction of emissions
- The quantification of unrelated benefits

# Case Study A – RES project

Project	Assessment	Energy generated by RES before scheme	Energy generated by RES by 2020	Increase of RES due to project
RES Domestic scheme	RES generation	1.69%	2.14%	0.45%

## Case Study A – RES Project

Typical issues discussed by the selection committee when reviewing the CBA:

- What is the value that would be appropriate to be used for an increased generation from RES? What consideration should the analysis take? Is a standardised approach be adopted in such cases?
- Is the generation enough to quantify the benefits of energy generated from RES?
- Security of supply when there is no infra. in relation to storage of energy? How realistic is such economic benefit?
- How important is the local context of energy generation?

# Case Study B – EE projects

Project	Total annual GHG emissions – baseline do nothing scenario	Preferred option – GHG emissions	Incremental savings
Retrofitting of street lighting	898.80 tonnes	254.24 tonnes	644.56 tonnes
Energy efficient system St. Vincent De Paul	1,859.41 tonnes	1,250.35 tonnes	609.06 tonnes

## Case Study B – EE Project

Typical issues discussed by the selection committee when reviewing the Economic Analysis:

- What is the value that would be appropriate to be used for emissions saved?
- Should the analysis be linear or should the analysis and the shadow price vary on the basis of changes that should occur throughout the lifetime of the investment?
- Is it a real benefit?

# Comparison of key CBA indicators (1)

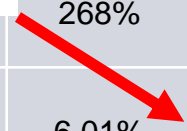
## Sample of projects

		Financial Analysis				
Project Name	Total Investment Cost	FNPV (C)	Funding Gap	FRR (C)	FNPV(K)	FRR (K)
RES- Domestic scheme 2012	€25,670,003.10	-€19,470,906.00	100%	<0	-€2,920,636.00	<0
Public Buildings Energy Efficiency and Reduce GHG (Phase I)	€4,377,194.51	-€16,160,527.00	>100%	<0	-€1,708,892.00	-9.00%
Street Lighting (07-13)	€3,257,812.15	-€7,016,086.00	100%	<0	€2,018,374.00	<0
RES – Domestic Scheme	€15,524,474.00	-€13,420,138.00	100%	<0	-€2,867,637.00	<0
Street Lighting	€2,157,762.24	-€1,615,587.00	100%	-5.63%	€3,646,775	64.30%
St. Vincent De Paul	€2,428,347.00	-€1,150,347.00	100%	-2.83%	€325,751	22.09%

# Comparison of key CBA indicators (2) Sample Projects

		Economic Analysis		
Project Name	Total Investment Cost	ENPV	ERR	B/C Ratio Economic
RES – Domestic scheme 2012	€25,670,003.10	€17,537,000.00	12.97%	1.28
			308%	3.08
Street Lighting (07-10)	€3,207,012.10	€10,000,440.00	268%	2.68
RES – Domestic Scheme 2016	€15,524,474.00	€1,183,834.00	6.01%	1.026
Street Lighting	€2,157,762.24	€3,305,613.00	26.63%	2.74
St. Vincent De Paul	€2,428,347.00	€715,311.00	11.31%	1.42

Changing Energy Landscape:  
 Change from Heavy Fuel Oil to Gas had a deep impact on  
 the economic assessment





## Concluding remarks

- ▶ Finding the right expertise to undertake such assessment presents a challenge and more benchmark established at a national level would ensure consistency in assessments presented
- ▶ There is the need to establish national benchmarks
- ▶ Still the changing energy landscape has a deep impact and places challenges in setting such benchmarks including capacity to update established benchmarks
- ▶ The biggest limitations is that one cannot show the impact of irrational behaviour in this area especially consideration the challenge between the impact of the investment is the result yielded

# Looking forward

- ▶ A European competence centre establishing benchmarks to be used in this area would be welcome
- ▶ Notwithstanding the limitations, the need for CBAs is not questioned
- ▶ CBA preparation ensures that there is a level of assessment when the applicant is preparing the project application
- ▶ Standardisation in the assessment would facilitate the implementation of projects in this area

## Contact Details

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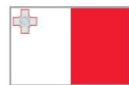
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# More Information

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**For info or further questions on this seminar and the activities of the JASPERS Networking Platform, please contact the JASPERS Networking and Competence Centre at the following email:**

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**JASPERS Networking Platform:**

**[www.jaspersnetwork.org](http://www.jaspersnetwork.org)**

