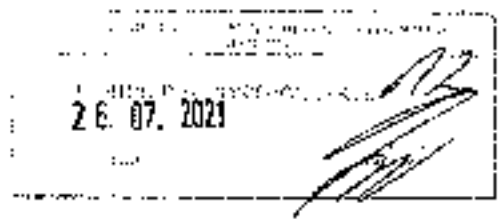
interreg
Balkan-Mediterranean
PRO-ENERGY



PROJECT

PRO-ENERGY - PROMOTING ENERGY EFFICIENCY IN PUBLIC BUILDINGS OF THE BALKAN-MEDITERRANEAN TERRITORY

Work Package:	*WP4: Capacity Building for Energy Managers*
Activity:	*4.2. Capacity Building for Energy Managers - Training Curricula*
Activity Leader:	Department of Electrical and Mechanical Services - Ministry of Transport, Communications and Works
Deliverable:	*D4.4.2 Training Curricula*

Version:	*Draft 1.0*	Date:	11/06/21
Type:	*Report*		
Availability:	*Confidential*		
Responsible Partner:	Department of Electrical and Mechanical Services		
Editor:	*Frederick University*		

Interreg
Balkan-Mediterranean
PRO-ENERGY

26. 07. 2021

Interreg
Balkan-Mediterranean
PRO-ENERGY

PROJECT

PRO-ENERGY

CONTENTS

DISCLAIMER

DENTIFICATION SHEET

[redacted]	

[redacted]	

PETROBRAS

26. 07. 2021

SECTION 1

1. Scope

2. Methodology for the implementation of the activity

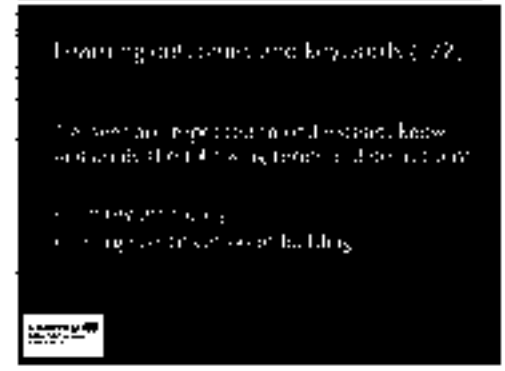
1. Legislative framework for energy efficiency

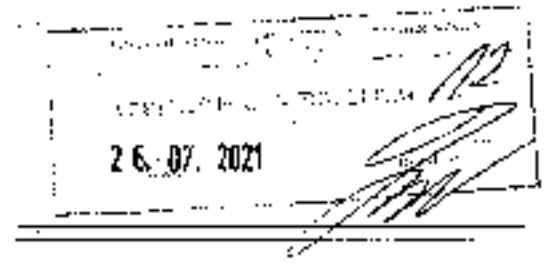
1.1 Legislative framework for energy efficiency at EU level

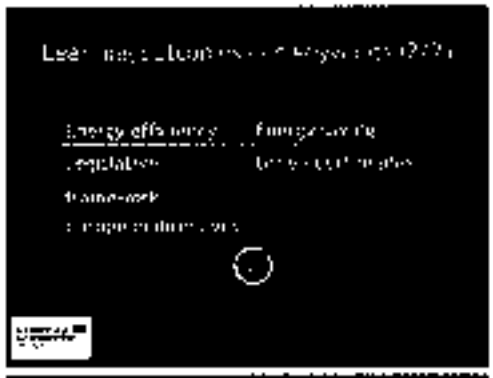
interreg

Legislative framework for energy efficiency at EU level

Module 1.a







Measures adopted under Energy Efficiency Directive (3/3)

Directive 2009/28/EC (1/2)

Directive 2009/28/EC (2/2)

EU energy production grade (1/2)

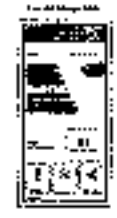
- [illegible]
- [illegible]
- Directive 2010/30/EU [illegible]

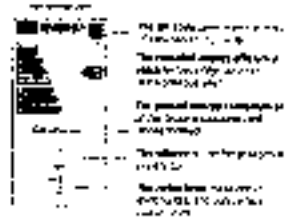
EU energy production grade (2/2)

Recalling in 2011

EU energy production grade (2/2)

How to recognise a measured product?





REFERENCES

[illegible]

1.1 Legislative framework for energy efficiency at national level

1.1.1 Greece

Interreg
Balkan-Mediterranean
2010-ENEGOV

Legislative framework for energy efficiency at national level (Greece)

Module 1.1

Module Aim

- [illegible]
- [illegible]

Learning outcomes and keywords (1/2)

- [illegible]

Learning outcomes and keywords (2/2)

[illegible]	[illegible]
[illegible]	[illegible]

- [illegible]
- [illegible]

Introduction (1/2)

- [illegible]
- [illegible]

Introduction (2/2)

- [illegible]
- [illegible]

Energy Efficiency Requirements of Buildings (EPBD) (1/2)

- [illegible]
- [illegible]

Energy Efficiency Regulations in Buildings (KENAK) (2017)

Energy efficiency policy making trends

Covenant of Mayors for Climate and Energy (2012)

Covenant of Mayors for Climate and Energy (2012)

Energy Consumption Framework

THANK YOU!

Interreg

Legislative framework for energy efficiency at national level (Cyprus)

Module 1.2

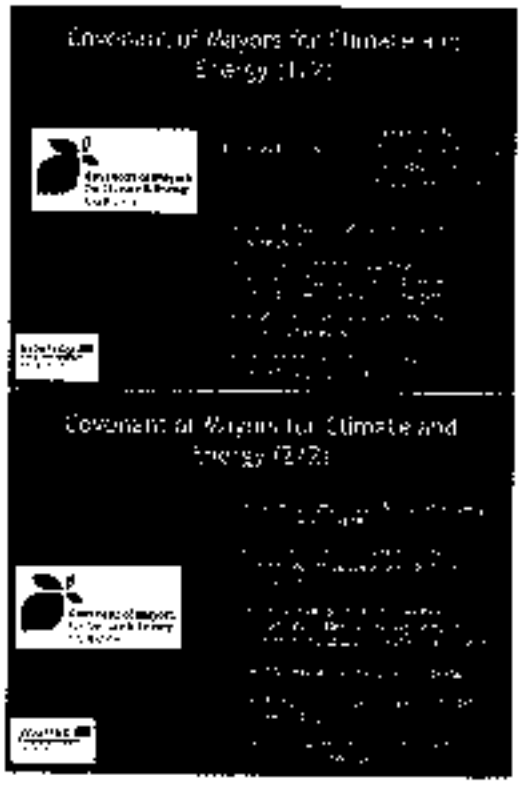
Learning outcomes and keywords (1 / 2)

Learning outcomes and keywords (2 / 2)

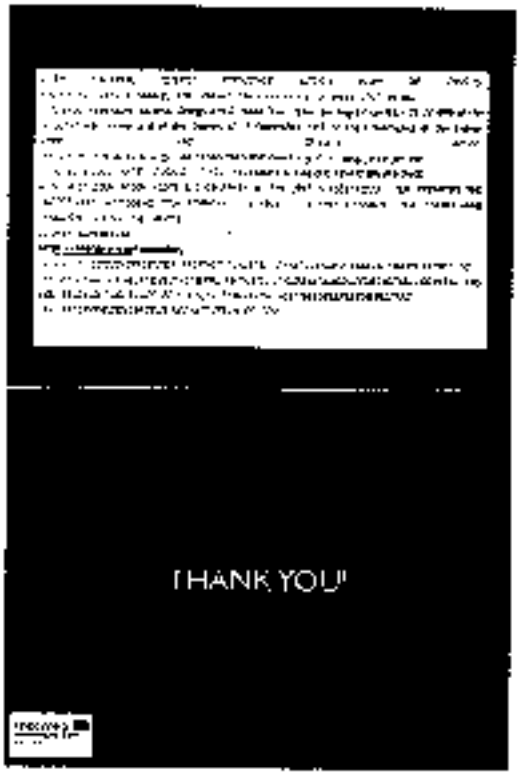
Energy efficiency
Legislative
Framework
European directives
Energy saving
Green certificates

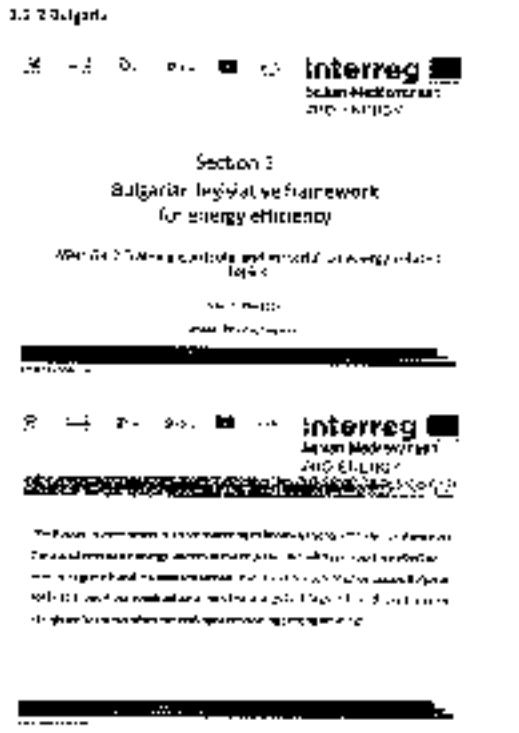
Introduction (1 / 2)

Introduction (2 / 2)


Covenant of Mayors for Climate and Energy (CoM)
Covenant of Mayors for Climate and Energy (CoM)


Smart Islands Initiative
Other activities


THANK YOU!


Section 3
Bulgarian legislative framework
for energy efficiency

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg

PRO ENERGY

Interreg

PRO ENERGY

Interreg

PRO ENERGY

Interreg

PRO ENERGY

Interreg

PRO ENERGY

Interreg

PRO ENERGY

Interreg

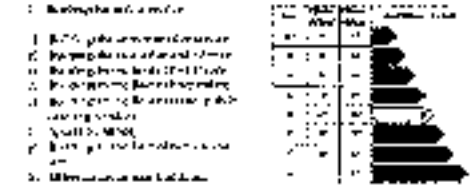
PRO ENERGY

Interreg

PRO ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY



Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg
Balkan-Mediterranean
PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

4. Energy Efficiency of Buildings

4.1 Objectives of the European Union

Energy Efficiency of buildings:

Objectives of the European Union

Module 2.6

Learning outcomes and keywords (2 of 3)

Learning outcomes and keywords (3 of 3)

Energy efficiency Energy consumption

Energy monitoring Energy use

systems

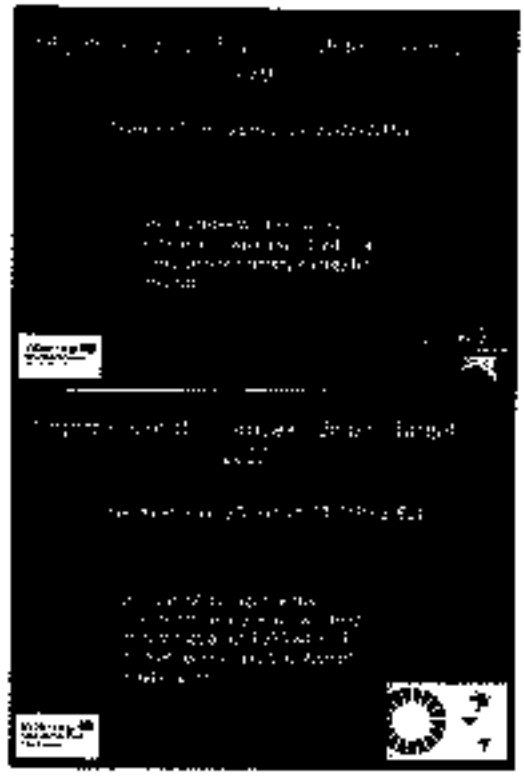
Energy

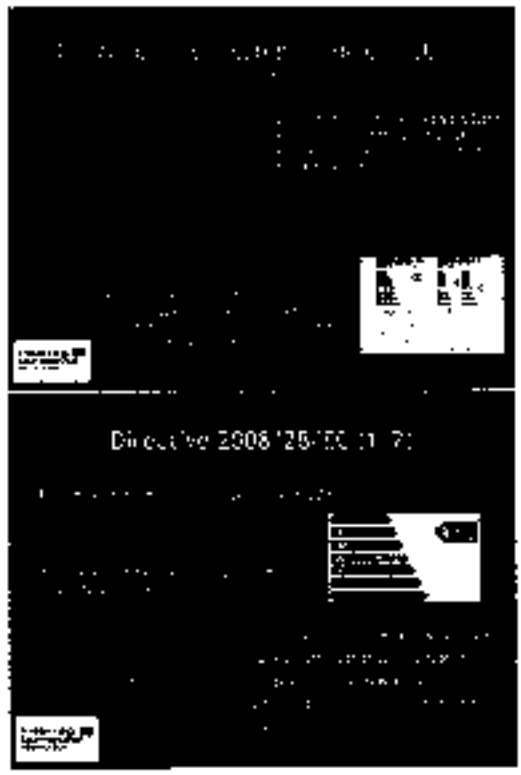
management

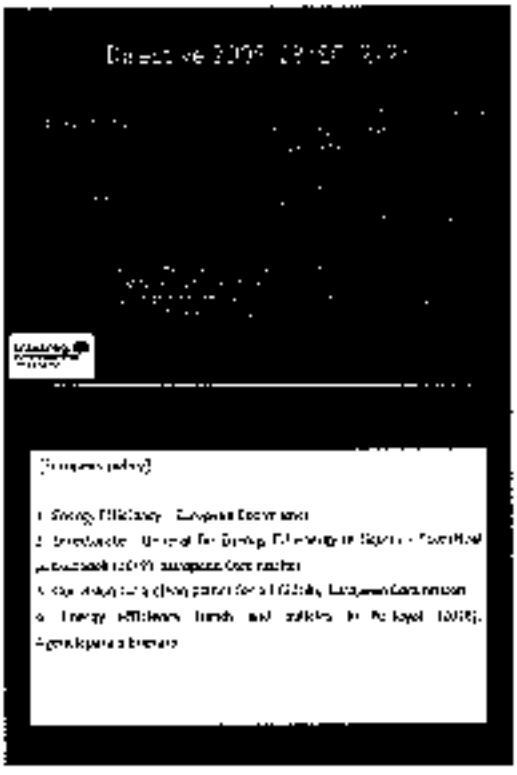
Energy Efficiency in Buildings (1 of 3)

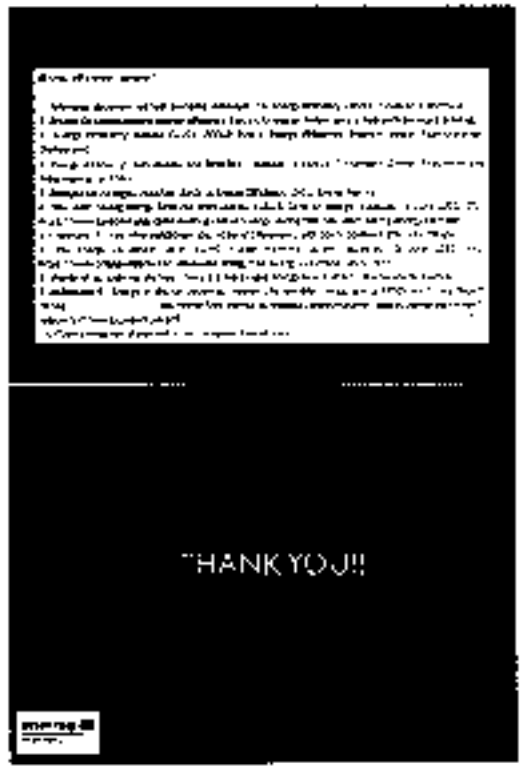
Energy Efficiency in Buildings (2 of 3)

Energy Efficiency in Buildings (3 of 3)




Directive 2006/32/EC




THANK YOU!!

Energy Efficiency of buildings:

Energy control

Module 2.b

Module Aim

Learning outcomes and keywords (1 / 3)

Learning outcomes and keywords (2 / 3)

Learning outcomes and keywords (3 / 3)

Energy efficiency Energy consumption

Energy monitoring Energy use

system

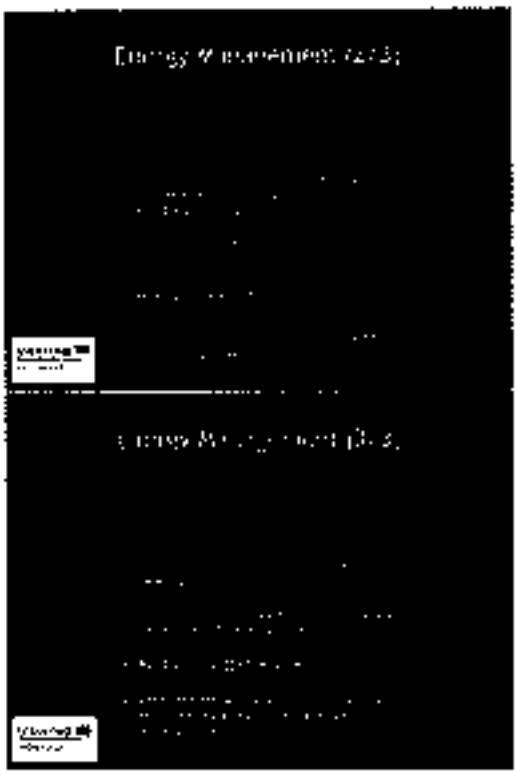
Energy Behaviour solutions

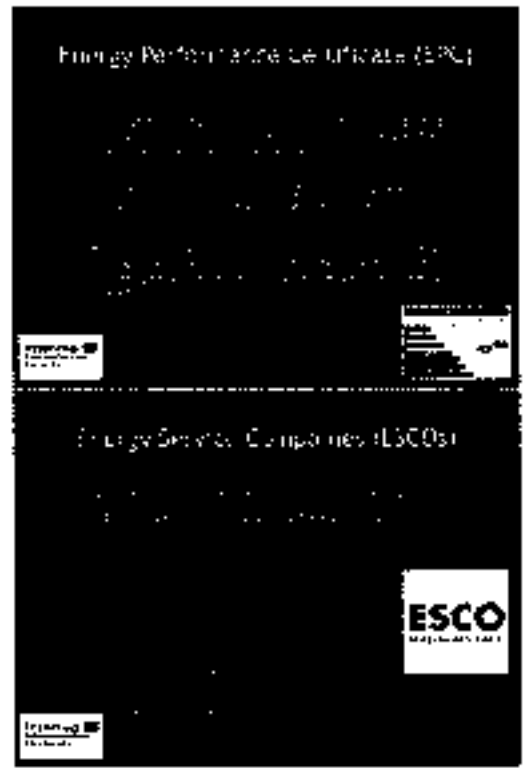
and agreement

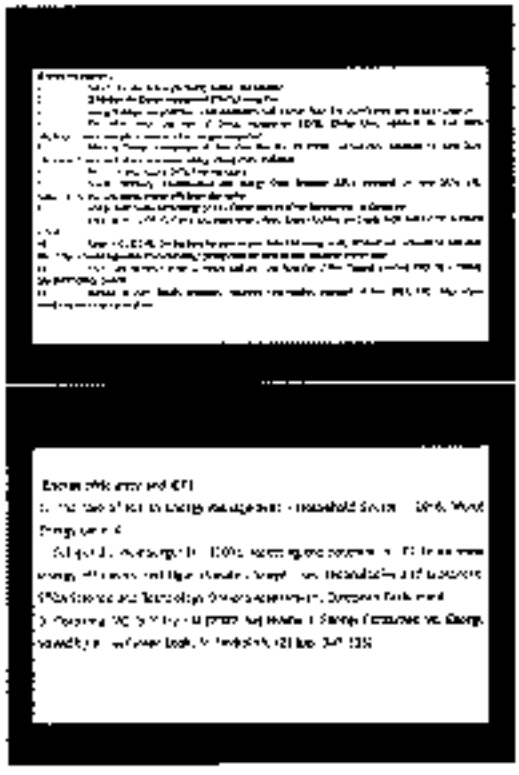
Energy Efficiency (1 / 2)

Energy Efficiency (2 / 2)

Energy Management (1 / 2)







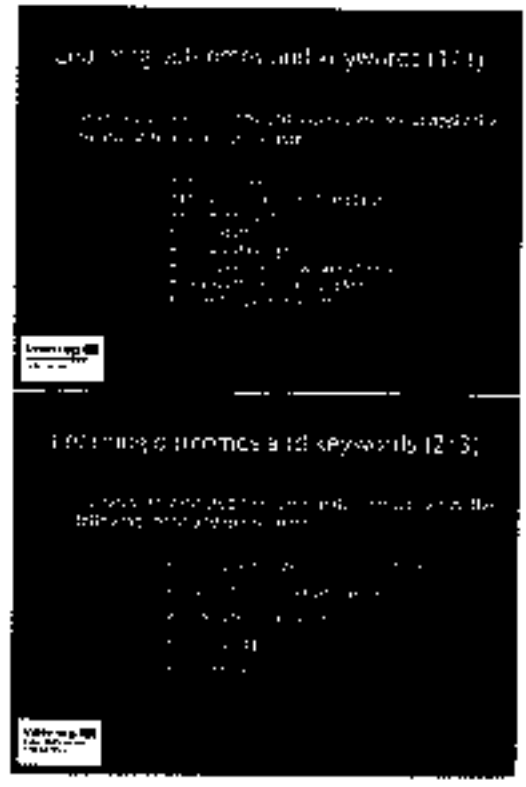

THANK YOU!!

Interreg
Balkan Mediterranean
PRO ENERGY

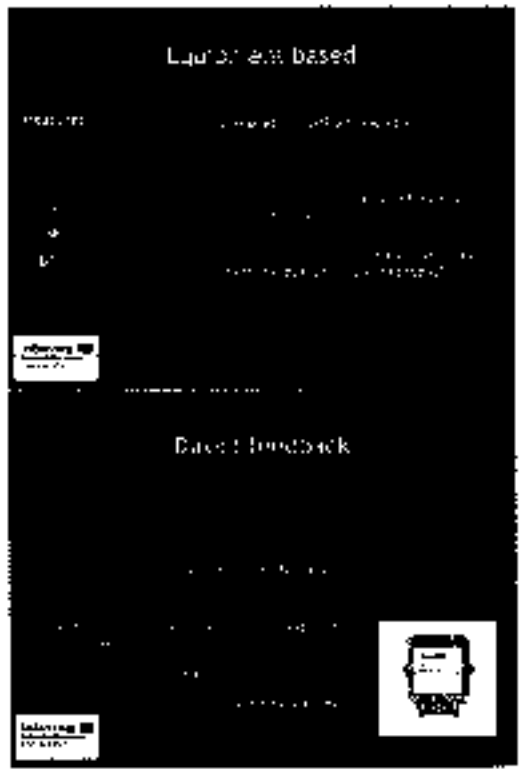
Energy Efficiency of buildings:

Energy efficiency measures

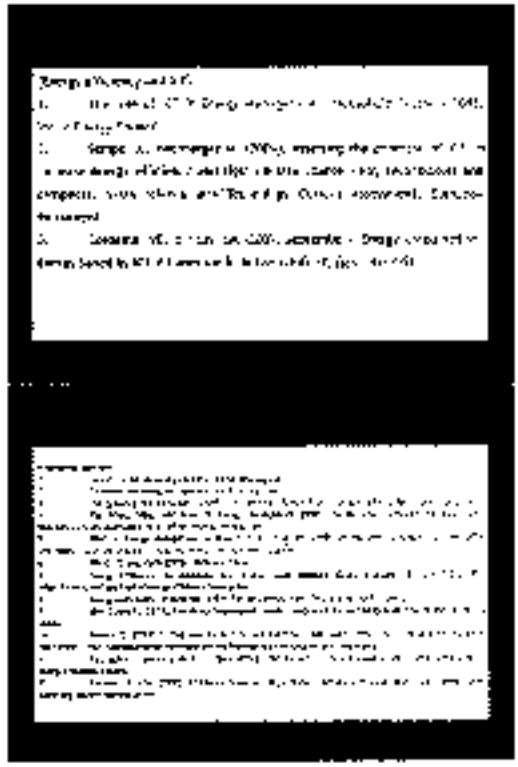
Module 2.c




Community based initiatives (1/2)
Community based initiatives (2/2)


Expert led based
Direct feedback


Interactive approach



THANK YOU!!

5. Energy Savings

Interreg

1. Introduction to Energy

Interreg

Energy concept

Interreg

Non-Renewable Energy

Interreg

Renewable Energy

Interreg

Renewable Energy

Interreg

Renewable Energy

Interreg

Renewable Energy

Interreg

Renewable Energy

Interreg

Renewable Energy

Interreg

2. Solar Energy

Interreg

Solar energy - General aspects

Interreg

Characteristics of solar radiation

Interreg

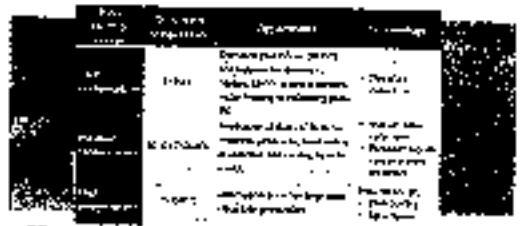
Transformation of solar energy and storage

Interreg

Basic criteria of solar systems PROGRESSIVE

Interreg

Classification of solar thermal energy PROGRESSIVE



Interreg

Classification of solar thermal energy PROGRESSIVE

Interreg

Low temperature solar thermal energy PROGRESSIVE

Interreg

Low temperature solar thermal energy PROGRESSIVE

Interreg

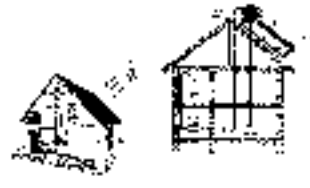
Description of capture subsystem PROGRESSIVE

Interreg

Main components of a system PROGRESSIVE

Interreg

Description of storage subsystem PROGRESSIVE



Interreg

3. Photovoltaic Solar Energy

Interreg

Introduction to photovoltaic energy

Interreg

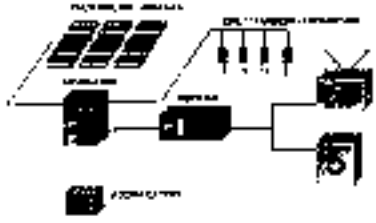
Solar cells

Interreg

Description of PV systems

Interreg

Description of PV systems

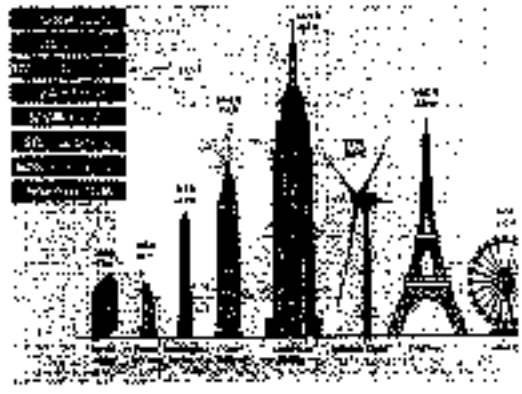


Interreg

4. Wind Energy

Interreg

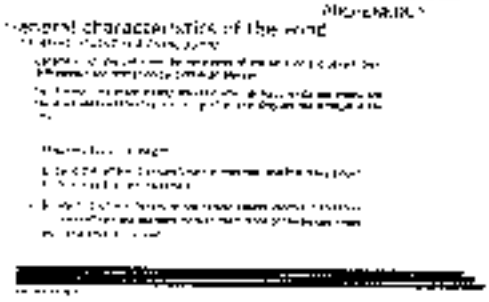
Wind Energy - Introduction



Interreg

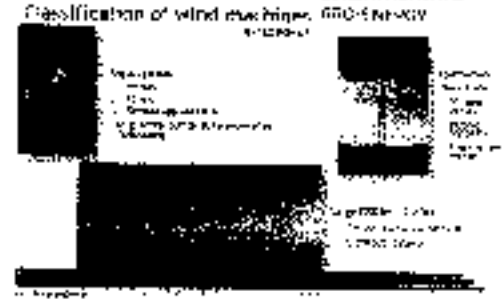
Wind energy - Introduction

Interreg



Interreg

Classification of wind machines



Interreg

Wind power Applications

Interreg

5. Biomass

Interreg

Introduction to Biomass

Interreg

Status

Interreg

From biomass to advanced biofuels and bioproducts

Interreg
Balkan-Mediterranean
PRO-ENERGY

The biomass and energy vector

Interreg
Balkan-Mediterranean
PRO-ENERGY

Energy efficiency of biofuels

Interreg
Balkan-Mediterranean
PRO-ENERGY

Waste used by biomass

Interreg
Balkan-Mediterranean
PRO-ENERGY

Advantages of biofuels

Interreg
Balkan-Mediterranean
PRO-ENERGY

Anaerobic digestion processes and biodigesters

Interreg
Balkan-Mediterranean
PRO-ENERGY

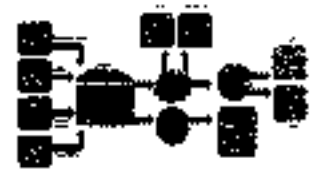
Characteristics of biogas

Interreg
Balkan-Mediterranean
PRO-ENERGY

Biogas

Interreg
Balkan-Mediterranean
PRO-ENERGY

Biogas uses



Interreg

Balkan-Mediterranean

PRO-ENERGY

Introduction to hybrid system

Interreg

Balkan-Mediterranean

PRO-ENERGY

Introduction to hybrid system

Interreg

Balkan-Mediterranean

PRO-ENERGY

Introduction to hybrid system

Interreg

Balkan-Mediterranean

PRO-ENERGY

Introduction to hybrid system

Interreg

Balkan-Mediterranean

PRO-ENERGY

Combining res with diesel generators

Hybrid microgrids

Interreg

Balkan-Mediterranean

PRO-ENERGY

Combining res with diesel generators

Hybrid microgrids

Interreg

Balkan-Mediterranean

PRO-ENERGY

Off grid microgrids

Interreg

Balkan-Mediterranean

PRO-ENERGY

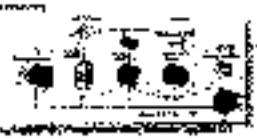
Off grid microgrids

Interreg

Balkan-Mediterranean

PRO-ENERGY

Off-grid microgrids



Interreg

Balkan-Mediterranean

PRO-ENERGY

7. Energy storage systems

Interreg

Balkan-Mediterranean

PRO-ENERGY

Energy storage systems

Interreg

Balkan-Mediterranean

PRO-ENERGY

Types of energy storage

Interreg

Balkan-Mediterranean

PRO-ENERGY

Types of energy storage

Interreg

Balkan-Mediterranean

PRO-ENERGY

Battery technologies

Interreg

Balkan-Mediterranean

PRO-ENERGY

Types of Batteries

Interreg

Balkan-Mediterranean

PRO-ENERGY

8. Shell thermal insulation

Interreg

Introduction to thermal insulation PRO-ENERGY

Interreg

Introduction to thermal insulation PRO-ENERGY

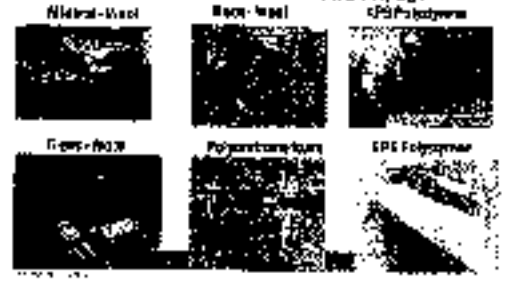
Interreg

Introduction to thermal insulation PRO-ENERGY

Interreg

Thermal Insulation Materials PRO-ENERGY

Mineral-Wool | Glass-Wool | EPS Polystyrene



Glass-Foam | Polyurethane-foam | EPS Polystyrene

Interreg

Thermal Insulation Materials PRO-ENERGY

Stone/Bricks | Foam concrete | Thermal insulating Plasters

Interreg

Lighting

Interreg

Suitable Glazing Windows

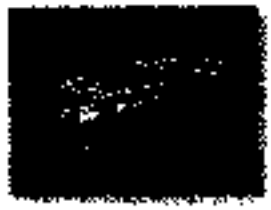
Interreg

External Shading

Interreg

PRO-ENERGY

Green Roofs



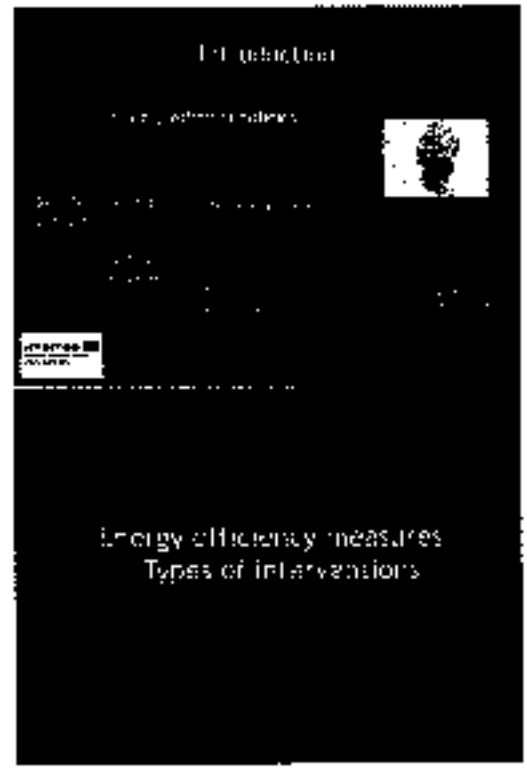
5. Energy Behavior

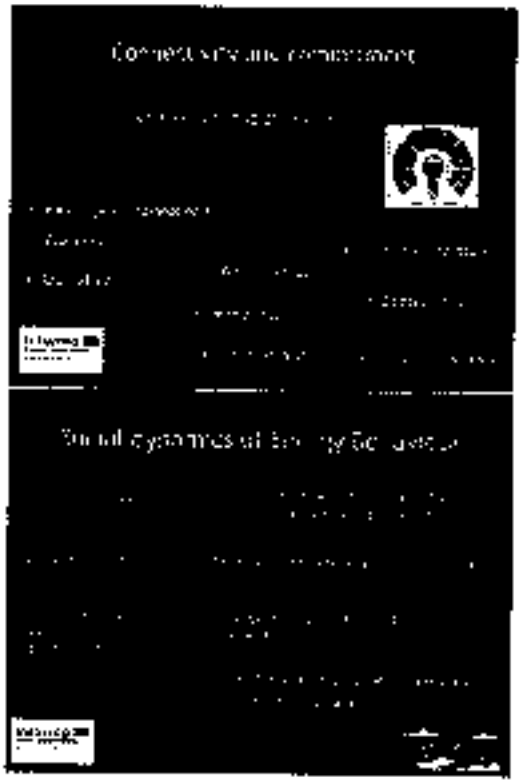
Interreg

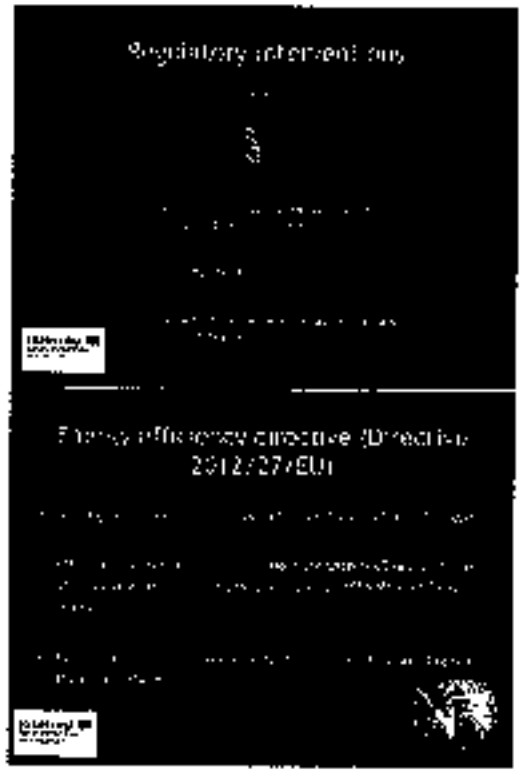
PRO-ENERGY

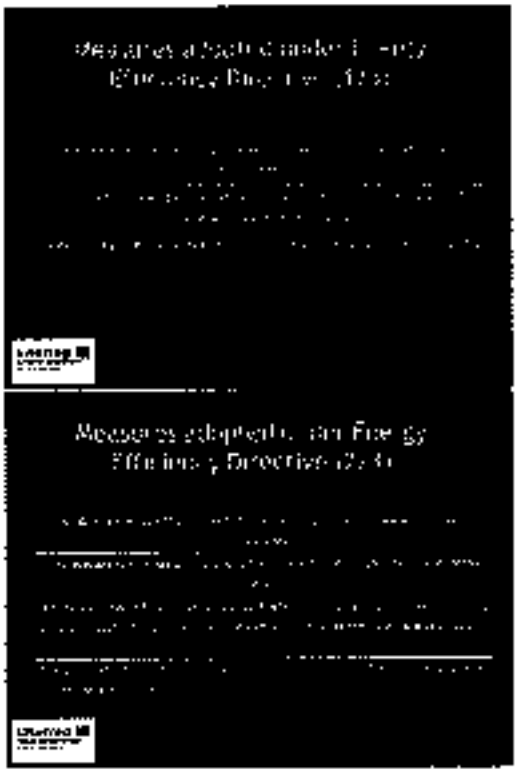
Energy behavior

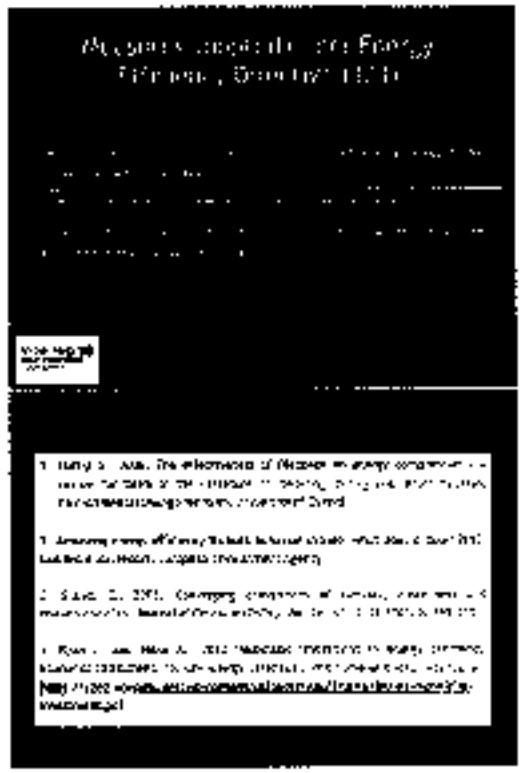
Module 4.a











6.1 Feedback measures

Energy behavior

Feedback measures

Module 4.b

Learning outcomes and keywords (1/2)

- Feedback
- Feedback mechanisms
- Direct and indirect feedback

Learning outcomes and keywords (2/2)

Energy behavior | Energy consumption

Energy security | Employee awareness

Introduction

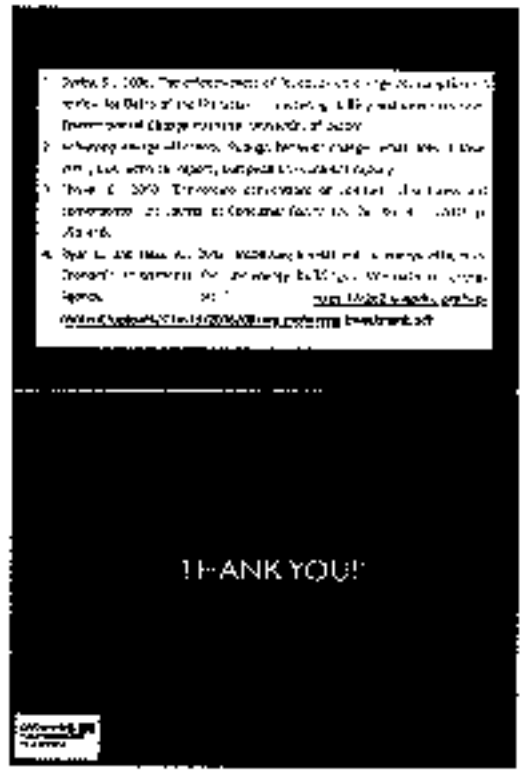
Types of Feedback

Feedback types (1/3)

Feedback types (2/3)

Feedback types (3/3)

Direct feedback



interreg
Espace Méditerranée
MED-ENERGY

Energy behavior

Feedback measures

Module 4.c

Introduction

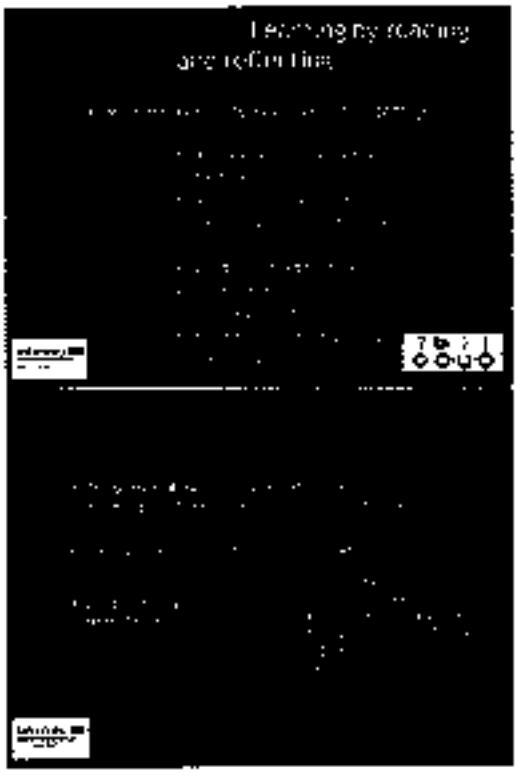
Social dynamics of Energy Behaviour

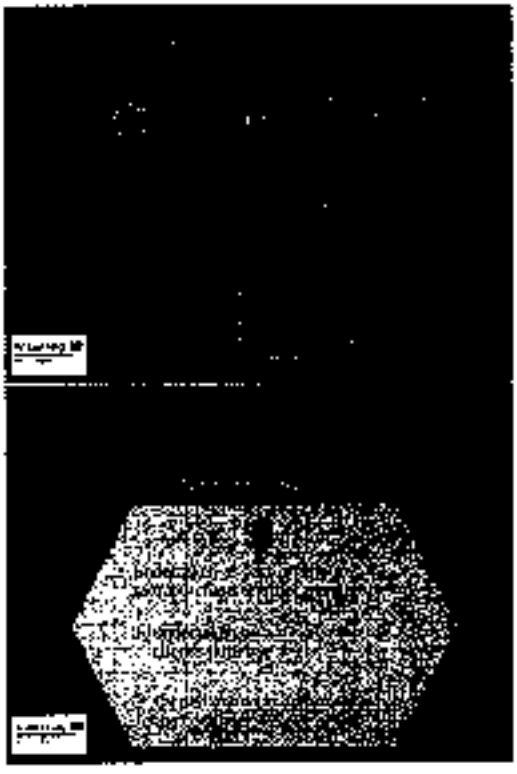
Feedback measures (1/2)

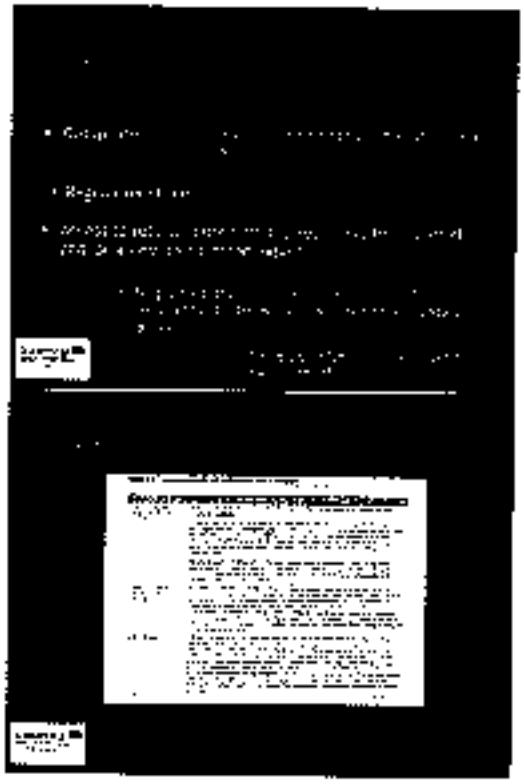
Feedback measures (2/2)

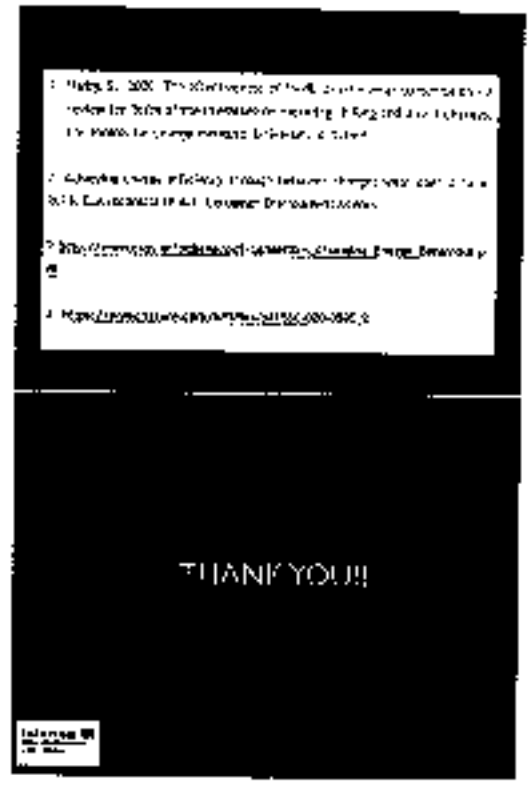
Learning by looking or doing

Direct feedback (EPA, 2013)







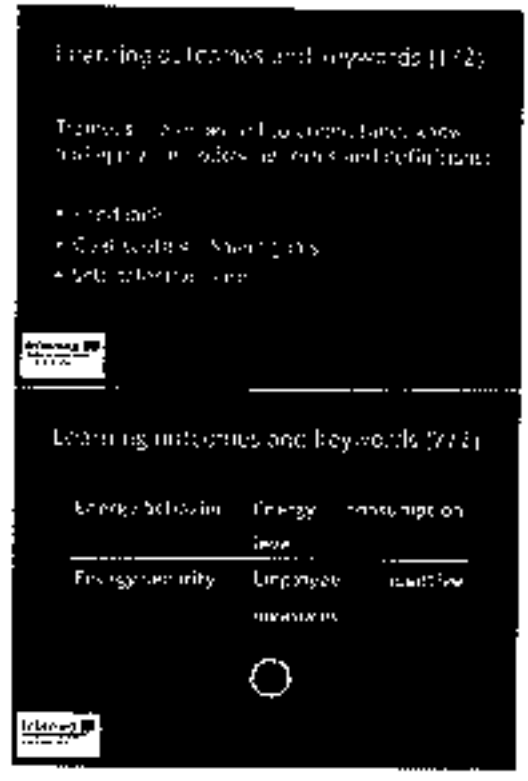


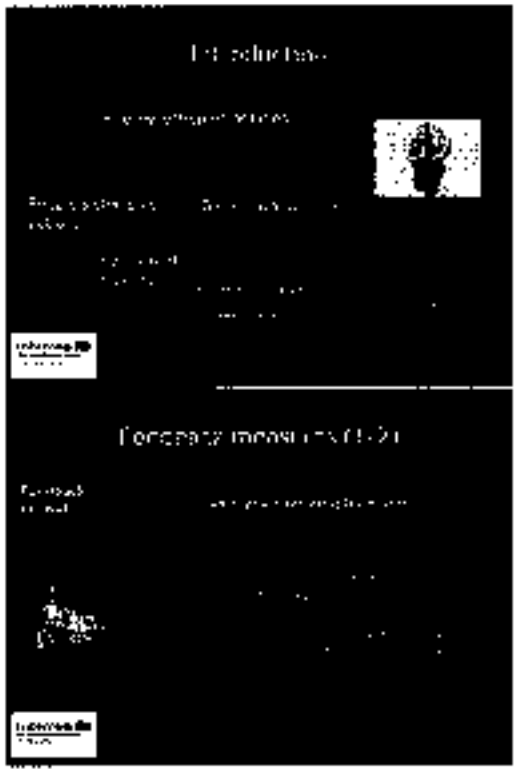
Interreg

Energy behavior

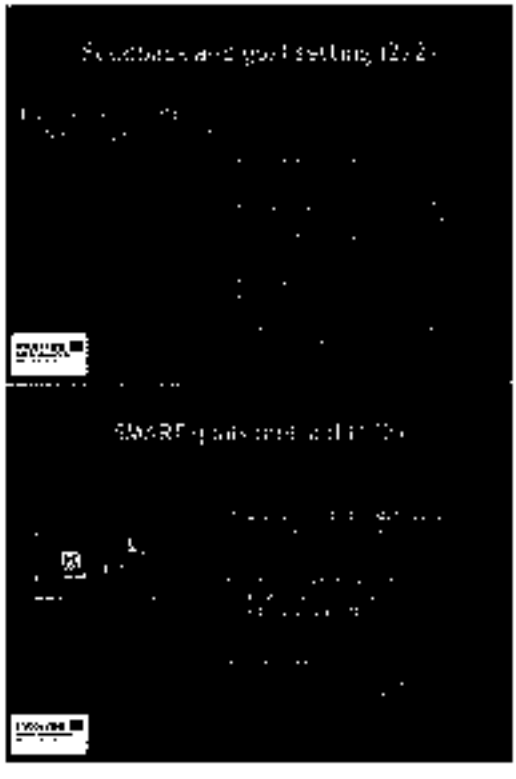
Feedback and goal setting

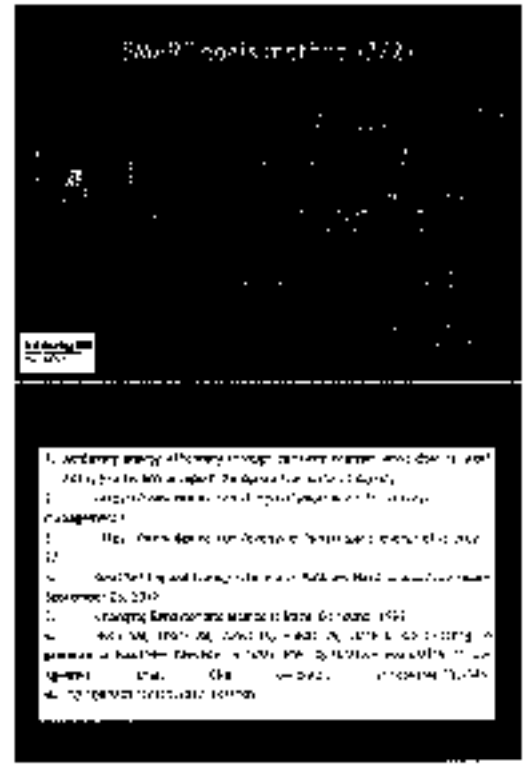
Module 4.d




Feedback and goal setting (1/2)


Feedback and goal setting (2/2)


SMART goals and self-efficacy (1/2)


SMART goals and self-efficacy (2/2)

THANK YOU!!

Ways to save energy

Section 5

Ways to save energy

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

PRO-ENERGY

Interreg

Balkan-Mediterran

PRO ENERGY

Interreg

Balkan-Mediterran

PRO ENERGY

Interreg

Balkan-Mediterran

PRO ENERGY

Interreg

Balkan-Mediterran

PRO ENERGY

Interreg

Balkan-Mediterran

PRO ENERGY

Interreg

Balkan-Mediterran

PRO ENERGY

Interreg

Balkan-Mediterran

PRO ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

Balkan-Mediterranean

PRO-ENERGY

Interreg

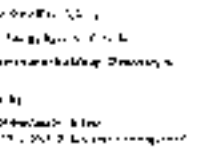
Balkan-Mediterranean

PRO-ENERGY

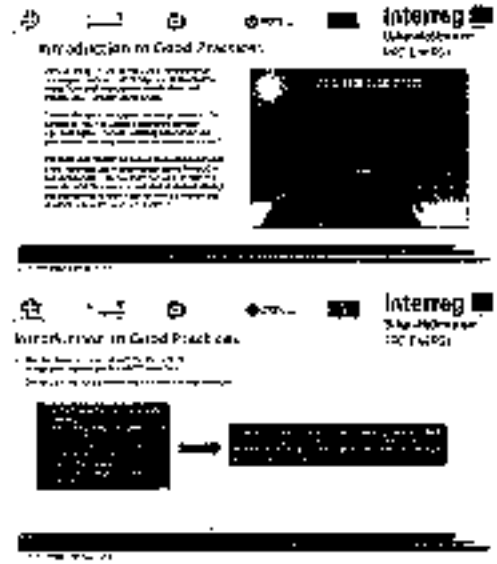
Interreg

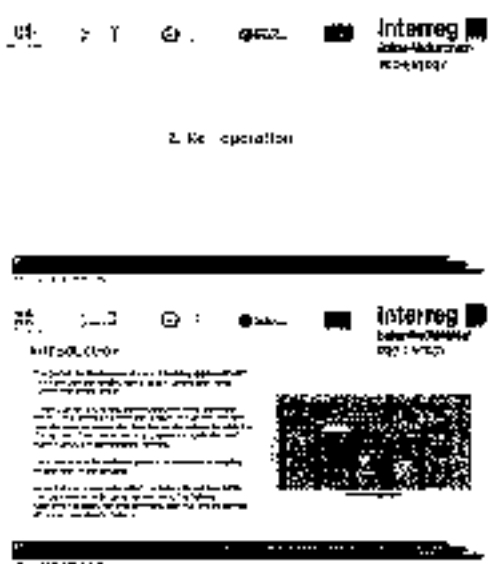
Balkan-Mediterranean

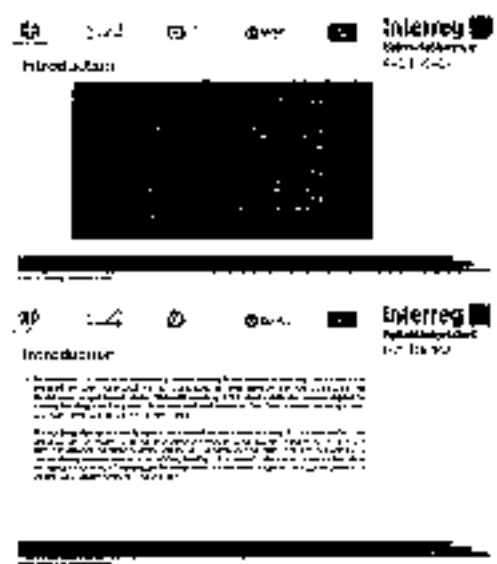
PRO-ENERGY

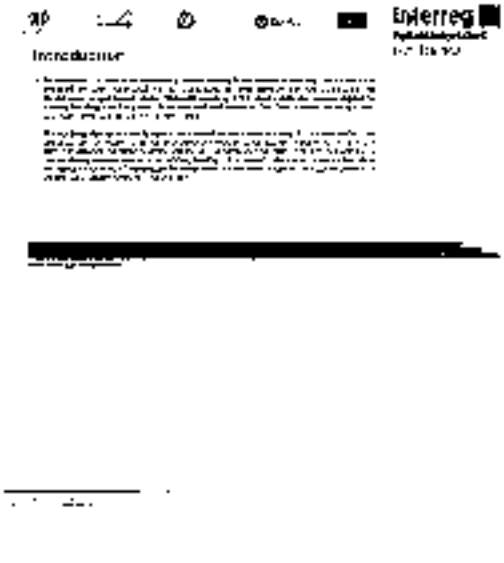


8. Good practices










Interreg


Interreg


Interreg

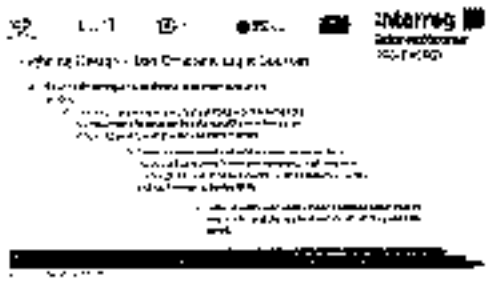

Interreg

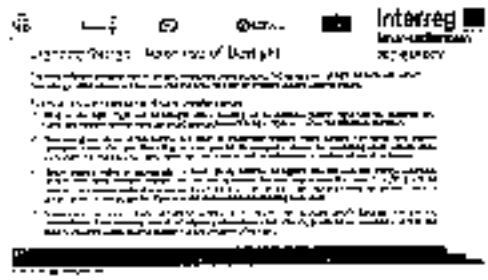

Interreg

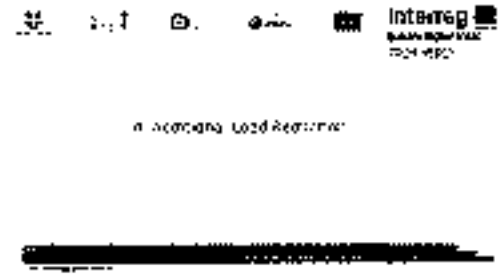

Interreg

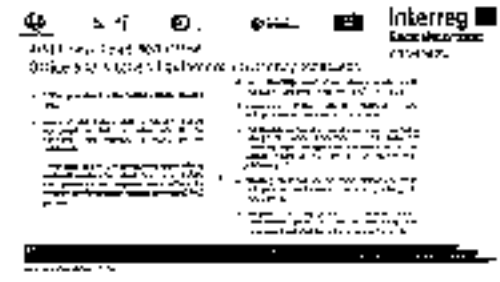

Interreg

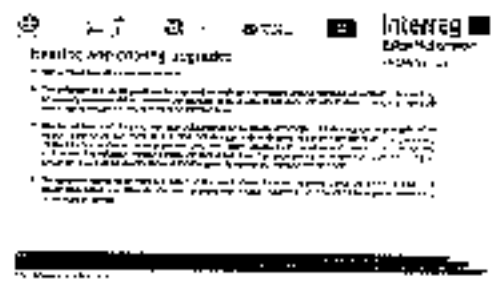

Interreg

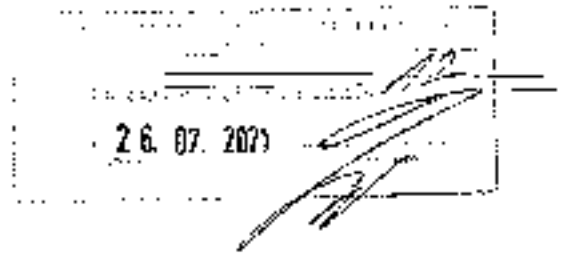


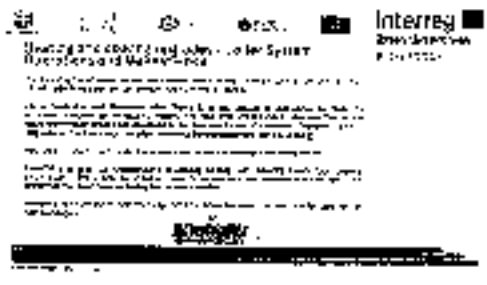


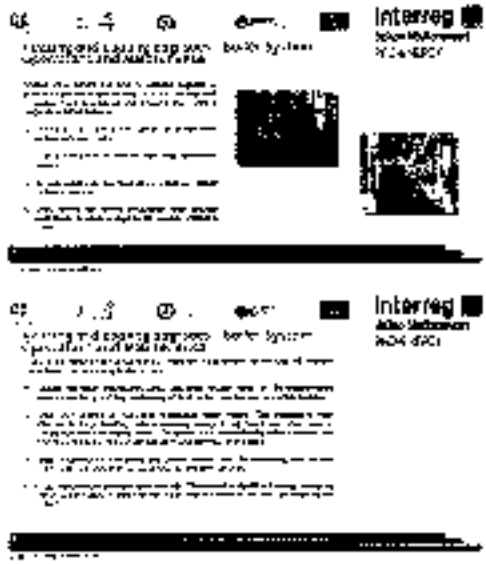


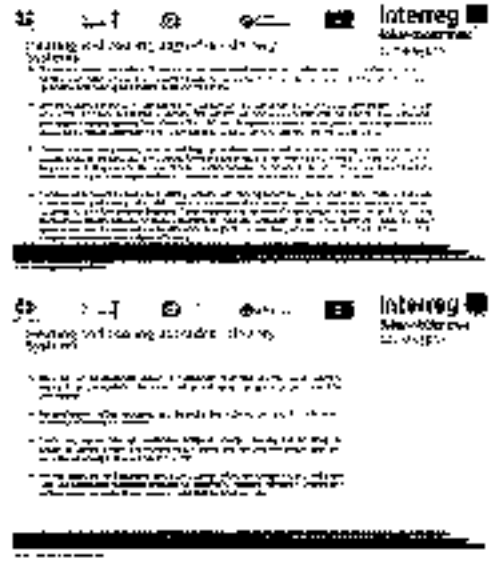





26. 07. 2023








26. 07. 2021