

# E3P

# **European Energy Efficiency Platform**

http://e3p-beta.jrc.nl/



isabella.maschio@ec.europa.eu



# Why an European Energy Efficiency Platform?



# **Energy efficiency in the European energy policy agenda**

- Energy Union: 5 dimensions
  - Energy security, solidarity and trust
  - A fully-integrated internal energy market
  - Energy efficiency as a contribution to the moderation of energy demand
  - Decarbonisation of the economy
  - Research, innovation and competitiveness
- > SET Plan: 4 core priorities
  - Leader in renewable energy sources
  - Smart EU energy system
  - Efficient energy systems
  - More sustainable transport systems



# **Multi-faceted policy**

- Energy efficiency directive
- Energy efficient products, energy labelling and ecodesign
- Energy performance of buildings directive
- Covenant of Mayors
- Smart cities
- Cogeneration of heat and power
- Heating and cooling
- Financing energy efficiency



# Policy support needs data

# **European data and information providers**

- Eurostat: Member State statistics
- EEA: datasets and analysis
- Odyssee-Mure database indicators and measures
- > BPIE: buildings data hub
- > eceee:publications

# **European projects**

- bigEE: buildings, information dissemination
- > BuildUP: buildings, dissemination, education



# Challenges in data gathering

- Multi-sectorial → scattered data
- Rapidly evolving sectors → updated data
- Geographical coverage → comparability
- Harmonized methodologies → consistency
- National statistical organisations → granularity
- Sectorial organisations → completeness
- Reuse of data → accessibility
- Exchange of data and good practices → collaboration



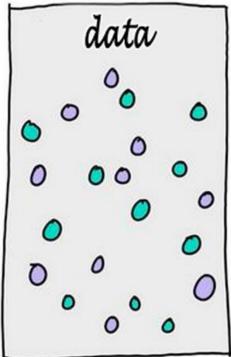
# **Energy Union Strategy roadmap**

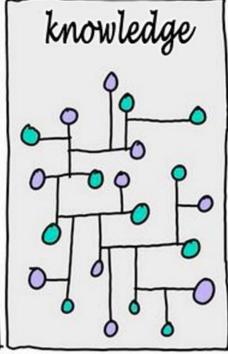
"Data, analysis and intelligence for the Energy Union:

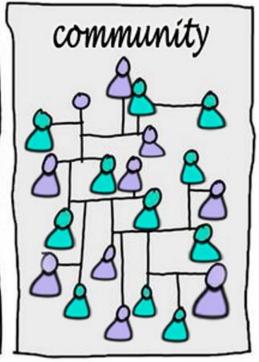
initiative pooling and making easily accessible all relevant knowledge in the Commission and Member States"



# the E3P concept









# The objectives

- > A **single European entry point** to give direct access to comprehensive knowledge
- > A tool to:
  - pool resources from all stakeholders: researchers, national agencies, consultants, policy-makers, manufacturers, financing sector, consumer associations.
  - create a collaborative environment to build new knowledge
  - connect data and information available and their providers
  - enable all experts to participate in a bottom-up data collection (expert crowd sourcing) and complement existing data providers



# The novelty

- Experts
  - upload their data and knowledge
  - create working groups and collaborate to create new knowledge
  - post a Call for content or expertise
- Content (datasets and articles)
  - cross-linked with internal and external content
  - readily accessible for reuse
  - validated

# a user-centric virtual lab



# E3P tour





Institute for Energy and Transport (IET)

European Commission > JRC > IET > E3P

THEMATIC AREAS

NEWS & EVENTS PUBLICATIONS

ABOUT LOGIN



**European Energy Efficiency Platform** 



# III Data Hub



## WikEE



## Community

Browse and share datasets and graphs.

Write and share articles, connect knowledge, data and publications.

Browse and learn more about working groups

#### Thematic Areas



Buildings



Products



Transport and Mobility



Urban Areas



Industry



Energy Generation and Distribution

## What's new on E3P

- France's Hollande says climate talk promises must now... (@ 31 Mar)
- Third renewable energy progress reports in the EU (2013-2014) (@ 30 Mar)
- Covenant of Mayors: Monitoring Indicators (@ 30 Mar)
- Energy Efficiency and GHG Emissions: Prospective Scenarios for... (@ 30 Mar)
- NREAPs and progress reports interactive database (02 30 Mar)

# Feedback

Help

Contact

Terms of Use

#### Most viewed

#### Content

#### Experts

- RSS feeds





WikEE



Browse and share datasets and graphs.

Start sharing

Write and share articles, connect knowledge, data and publications.

Start writing

Browse and learn more about working groups

Start a Group





# Thematic Areas

Toward









STEE N.





# Community

wse and learn more about working groups

Start a Group

## 's new on E3P

ince's Hollande says climate talk imises must now... (2731 Mar)

ird renewable energy progress reports the EU (2013-2014) (08'30 Mar)

venant of Mayors: Monitoring dicators (02 30 Mar)

argy Efficiency and GHG Emissions: pspective Scenarios for... (08:30 Mar)

EAPs and progress reports interactive tabase (02 30 Mar)







Institute for Energy and Transport (IET)

European Commission > JRC > IET > E3P



THEMATIC AREAS

**NEWS & EVENTS** 

PUBLICATIONS

**ABOUT** 





Financing energy renovations in the European building stock











Created by M. ECONOMIDOU





#### Introduction

With the right set of policy tools, it is generally accepted that governments can play a crucial role in promoting energy efficiency and leveraging more investments in the building sector, especially in the existing stock. Buildings are responsible for 40% of total energy consumption of the EU and their modernisation is considered to be pivotal in our shift towards a low carbon economy.

Current experience shows that actual energy efficiency investments in this segment of the building stock neither meet the scale nor the quality aligned with its overall potential. There is a wide range of policies at EU level which require Member States to set a number of regulatory, informative and economic measures with the aim to improve the energy performance of buildings. For now, economic instruments appear to dominate the policy framework for existing buildings, while the need for more market action and enhanced private sector involvement is increasingly highlighted as this offers the only sustainable route for scaling up existing efforts.

#### Economic instruments for energy renovations

Economic instruments for energy renovations are divided in financial instruments such as loans, grants and subsidies, fiscal instruments such as tax credits or VAT reductions and market-based instruments such as energy saving obligations or white certificates.

Types of conventional economic instruments

FINANCIAL INCENTIVES	FISCAL INSTRUMENTS	MARKET-BASED INSTRUMENTS
Loans, Grants, Subsidies	Income tax credit or deduction; Accelerated depreciation; VAT reduction; Property taxation; Tax rebates	Energy saving obligations; White certificates;

#### Contents

- ▶ Introduction
- Economic instruments for energy renovations
- ▶ Evaluation of economic policy instruments
- ▶ European landscape of economic instruments for energy renovations
- Depth of renovations targeted
- Disbursed budget
- Interaction with other policy instruments
- Impact assessment

#### **External References**

 Financing building energy renovations 2014

#### Tags

Geographical area: EU-28

a



## JOINT RESEARCH CENTRE

#### Institute for Energy and Transport (IET)

European Commission > JRC > IET > E3P

THEMATIC AREAS y

**NEWS & EVENTS** 

PUBLICATIONS

MY TOOLS AROUT

LOG OUT



Dataset

Author: Paolo ZANGHERI



Assessment of Member States' building renovation strategies

View published New draft Moderate Replicate Track Translate Convert





# <u>△</u> 🖨 📵

#### Contents

▶ Introduction

Copyright license:

▶ © European Union

Source: ▶ IET Database

- ▶ 4(a) Overview of building stock
- ▶ 4(b) Identification of cost-effective approach to renovation
- 4(c) Policies to stimulate cost-effective renovation
- 4(d) Forward-looking perspective to quide investment decisions
- ▶ 4(e) Estimate of expected energy savings and wider benefits

#### **External References**

Synthesis Report on the assessment of MSs' building renovation strategies

#### Unselect dataset

The JRC undertook an assessment of 31 national/regional building renovation strategies submitted by the Member States in the framework of the EED. The analysis assessed and evaluated the compliance with all the items of Article 4 and checked if they were adequately addressed in each national renovation strategy.

The evaluation assessed compliance of each strategy to EED Article 4 provisions in the five relevant areas (Article 4 sub-paragraphs). The level of details and accuracy of the information provided in each section was evaluated. In the appraisal of the strategies each section was scored on a 0-5 scale, where:

0 (missing):

the item is not covered at all, or only described in another source;

1 (unsatisfactory):

only the most cursory coverage of the item;

2 (inadequate / partially compliant):

item addressed poorly, with insufficient detail, or with important aspects missing;

3 (adequate):

meets the basic minimum requirements;

4 (good):

topic is described in some detail;

5 (excellent):

exemplary coverage of the topic.

#### 4(a) - Overview of building stock

The following aspects have been considered for the evaluation of the requirement of Article 4(a):

- A. Identification of main building categories,
- B. Identification of age bands having a material bearing on building energy performance,
- C. Distribution of Energy Performance Certificate ratings by building sector/type,
- D. Information on climatic zones which have a material bearing on building energy performance,
- E. Information on ownership (i.e. public, private or mixed),
- F. Information on tenure (i.e. Owner occupied, rented or mixed),
- G. Identification of energy use and performance characteristics of each building combination.

#### 4(b) - Identification of cost-effective approach to renovation

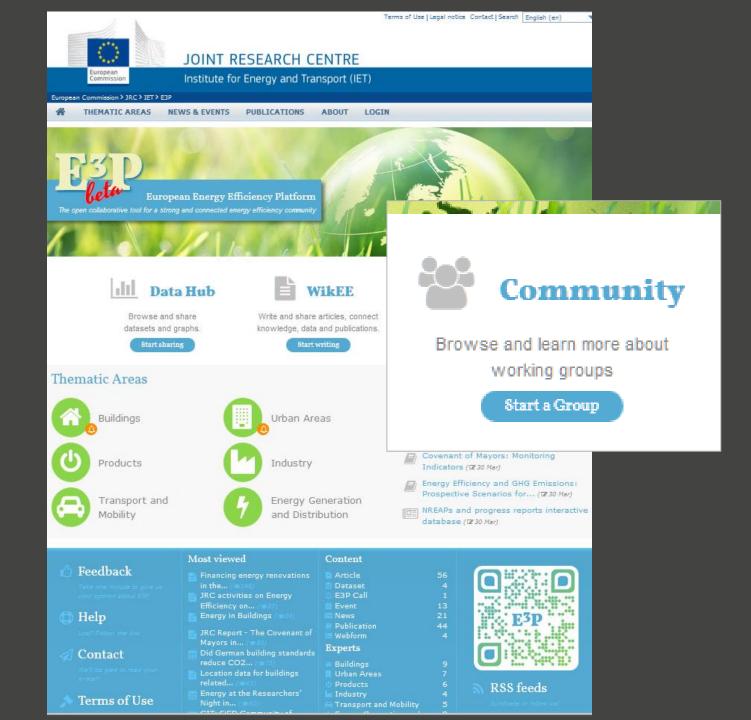
The "Commission's guidance for NEEAP" translates this point in the following key questions:

A. What technical opportunities for retrofit of energy efficiency measures for each building category have been identified? What technical opportunities for retrofit of renewable energy measures have been identified? Has the apportunity to connect to a district heating system hear considered?











Institute for Energy and Transport (IET)

European Commission > JRC > IET > E3P



in

THEMATIC AREAS

**NEWS & EVENTS** 

PUBLICATIONS

ABOUT

LOGIN



The Energy and Location group has been created as a follow up of the workshop Spatial data for modelling building stock energy needs, held at JRC-Ispra on 24-26 November 2015 as an informal network to take part in further discussions and actions.

The workshop was organised by the Institute for Environment and Sustainability (IES) - Digital Earth and Reference Data Unit and the Institute for Energy and Transport (IET) - Renewable and Energy Efficiency Unit of the European Commission Joint Research Centre.

The main objective of this workshop was to share experience in data collection and methodologies to support energy efficiency policies and scope a possible pilot to establish a harmonised approach supporting EPBD, EED and COM using INSPIRE as a 'location' framework.

The outcome of the workshop are available in the proceedings Spatial data for modelling building stock energy needs.

It was agreed that the pilot study envisaged in the JRC Energy and Location project should focus on issues of: scaling (from building to building stock), data requirements and treatment (including anonymization and uncertainty), connecting databases by conversion and control routines. The list of the use cases will be reported soon.

16-02-16 This group is launching a Call for experts

23-02-16 The Proceedings of the workshop have been published, along with the Annex to proceedings which contains the presentations given by the participants.

#### Group Content

- Proceedings of the workshop Spatial data for modelling building stock energy needs
- △ Call for Experts in the area of Energy and geolocation data
- Follow up of the workshop
- Location data for buildings related energy efficiency policies









#### Created by

Isabella Maschio

#### Created On

Tuesday, December 1, 2015 - 15:58

#### Language(s)

English

#### Group members



#### pignafr



#### Rav Boguslawski

Consultant

DG JRC, Institute for Environment and Sustainability, European Commission



#### Maria Teresa BORZACCHIELLO

Consultant

DG JRC. Institute for Environment and Sustainability, European Commission

1 of 3 <u>next</u>>



datasets and graphs.

Start sharing

knowledge, data and publications.

Start writing

working groups

Start a Group

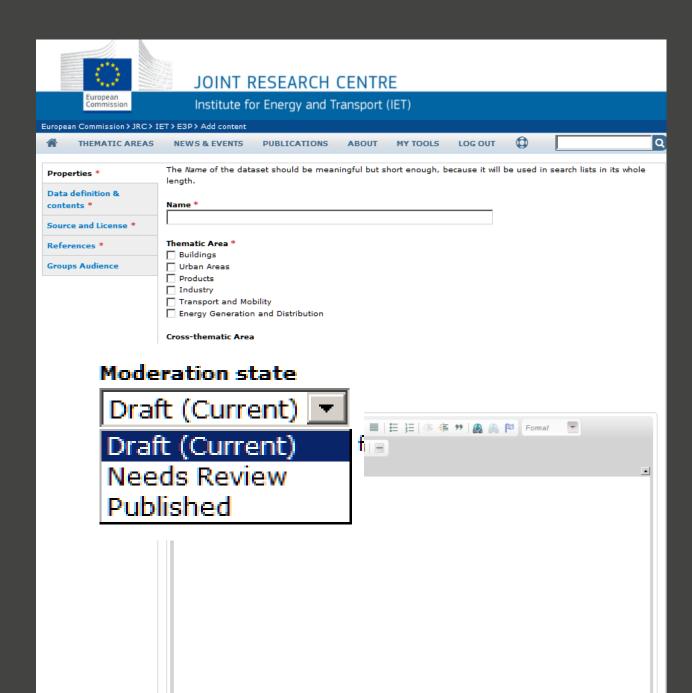




Institute for Energy and Transport (IET) Commission European Commission > JRC > IET > E3P > Add content THEMATIC AREAS NEWS & EVENTS PUBLICATIONS ABOUT MY TOOLS The Name of the dataset should be meaningful but short enough, because it will be used in search lists in its whole Properties \* length. Data definition & contents \* Name \* Source and License \* References \* Thematic Area \* ■ Buildings Groups Audience Urban Areas Products Transport and Mobility Energy Generation and Distribution Cross-thematic Area Policies and Targets Technology and Standards Economics and Financing Behaviours and Social Body (Edit summary) B Source B I U abe X² X₂ E E E E E E E SE E 99 & B P Format ■  $\leftrightarrow \; \Rightarrow \; |\; \not | \; \; | \hat{\ \ |} \; \; | \hat{\ \ |} \; | \hat{\ \ |} \; | \hat{\ \ |} \; | \; | \hat{\ \ |} \; | \; | \hat{\ \ |} \; |$ 



Institute for Energy and Transport (IET) European Commission > JRC > IET > E3P > Add content NEWS & EVENTS PUBLICATIONS The Name of the dataset should be meaningful but short enough, because it will be used in search lists in its whole Properties \* Properties \* Data definition & contents \* Source and License \* 🚎 99 🙈 🦺 🏳 Format References \* **Groups Audience** 





Institute for Energy and Transport (IET)

European Commission > JRC > IET > E3P

THEMATIC AREAS

NEWS & EVENTS PUBLICATIONS

ABOUT LOGIN



**European Energy Efficiency Platform** 



# III Data Hub



## WikEE



## Community

Browse and share datasets and graphs.

Write and share articles, connect knowledge, data and publications.

Browse and learn more about working groups

#### Thematic Areas



Buildings



Products



Transport and Mobility



Urban Areas



Industry



Energy Generation and Distribution

### What's new on E3P

- France's Hollande says climate talk promises must now... (@ 31 Mar)
- Third renewable energy progress reports in the EU (2013-2014) (@ 30 Mar)
- Covenant of Mayors: Monitoring Indicators (@ 30 Mar)
- Energy Efficiency and GHG Emissions: Prospective Scenarios for... (@ 30 Mar)
- NREAPs and progress reports interactive database (02 30 Mar)

# Feedback

#### Help

#### Contact

Terms of Use

#### Most viewed

#### Content

#### Experts



# Thematic Areas









Urban Areas



Energy Generation and Distribution

# Community

vse and learn more about working groups

Start a Group

### s new on E3P

nce's Hollande says climate talk mises must now... (12 31 Mar)

d renewable energy progress reports ne EU (2013-2014) (12/30 Mar)

enant of Mayors: Monitoring cators (@ 30 Mar)

rgy Efficiency and GHG Emissions: spective Scenarios for... (@30 Mar)

APs and progress reports interactive abase (12'30 Mar)



# Most viewed Financing energy renovations in the... RC activities on Energy

Efficiency on...
Energy in Buildings

JRC Report - The Covenar

Mayors in... (20)
Did German building standards reduce CO2...
Location data for buildings

Energy at the Researchers'
Night in...

# Content Article Dataset E3P Call Event

rent aws iblication ebform

Experts

Buildings
Urban Areas

Products
Industry





Commission	Institute for Energy and Transport (IET)		
European Commission > JRC > IE	T>E3P> Buildings		
THEMATIC AREAS	NEWS & EVENTS PUBLICATIONS ABOUT MY TOOLS LOG OUT		
Save search Thematic Area	Date changed •		
Mematic Area  ✓ Buildings  ☐ Urban Areas (56)  ☐ Products (44)  ☐ Energy Generation and Distribution (38)  ☐ Industry (21)  ☐ Transport and Mobility (19)	Financing energy renovations in the European building stock  With the right set of policy tools, it is generally accepted that governments can play a crucial role in promoting energy efficiency and leveraging more investments in the building sector, especially in the existing stock. Buildings are responsible for 40% of total energy consumption of the EU and their modernisation is considered to be pivotal in our shift towards a low carbon economy. Current experience shows that		
Cross-thematic Areas  Policies and Targets (32) Technology and Standards (21)	Assessment of Member States' building renovation strategies		
Economics and Financing (15) Behaviours and Social (6)	Introduction The JRC undertook an assessment of 31 national/regional building renovation strategies submitted by the Member States in the framework of the EED. The analysis assessed and evaluated the compliance with all the items of Article 4 and checked if they were adequately addressed in each national renovation strategy.  © 31 Mar 2016 © 21 (2)		
Type of Content			
Article (19)  Publication (18)  News (3)  Dataset (2)  Event (2)  E3P Call (1)  Created by  E3P team (16)  Isabella Maschio (8)  cunibba (2)  econmar (2)  lucaand (2)  Maria-Teresa Borzacchiello (2)  maschis (2)  mathifa (2)  Albana Kona (1)  castluc (1)	CoM Final Energy Consumption in Buildings		
	Final energy consumption in Buildings, as declared by CoM signatories in Baseline Emission Inventories (BEI), aggregated per Member States and per year.		
	□ 31 Mar 2016 @ 5 (□		
	Call for Experts in the area of Energy and geolocation data  This is a call for Experts in the area of energy performance of buildings, sustainable energy planning at local level and/or geolocation data.		
	☑ 31 Mar 2016 ® 72 (🗒		
	Energy Savings Calculation Methods under Article 7 of the Energy Efficiency  Directive  The present report aims to provide an overview of the main issues at stake with the calculation methods for		

The present report aims to provide an overview of the main issues at stake with the calculation methods for



Institute for Energy and Transport (IET)

- |

			3.
uropean	Commission > JRC > IET	>E3P > Buildings	
A	THEMATIC AREAS	NEWS & EVENTS	PUBLICATIONS

Date changed

#### Thematic Area

**✓** Buildings

Urban Areas (56)

Products (44)

Energy Generation and Distribution (38)

Industry (21)

Transport and Mobility (19)

#### Cross-thematic Areas

Policies and Targets (32)

Technology and Standards (21)

Economics and Financing

(15)

Behaviours and Social (6)

#### Type of Content

Article (19)

Dublication (18)

News (3)

Dataset (2)

Event (2)

E3P Call (1)

#### Created by

E3P team (16)

☐ Isabella Maschio (8)

cunibba (2)

econmar (2)

L lucaand (2)

Maria-Teresa

Borzacchiello (2)

maschis (2)

mathifa (2)

Albana Kona (1)

astluc (1)

### MY TOOLS LOG OUT



With the right set of policy tools, it is generally accepted that governments can play a crucial role in promoting energy efficiency and leveraging more investments in the building sector, especially in the existing stock. Buildings are responsible for 40% of total energy consumption of the EU and their modernisation is considered to be pivotal in our shift towards a low carbon economy. Current experience

#### Ø 31 Mar 2016 @ 151 (☑ 4)



Introduction The JRC undertook an assessment of 31 national/regional building renovation strategies submitted by the Member States in the framework of the EED. The analysis assessed and evaluated the compliance with all the items of Article 4 and checked if they were adequately addressed in each national renovation strategy.

#### Ø 31 Mar 2016 @ 21 (♥ 21)



#### 🛢 CoM Final Energy Consumption in Buildings

Final energy consumption in Buildings, as declared by CoM signatories in Baseline Emission Inventories (BEI), aggregated per Member States and per year.

#### △ Call for Experts

This is a call for Experts i level and/or geolocation

























The present report aims to provide an overview of the main issues at stake with the calculation methods for





Terms of Use | Legal notice | Contact | Search | English (en)



# JOINT RESEARCH CENTRE

Institute for Energy and Transport (IET)

European Commission > JRC > IET > E3P



THEMATIC AREAS

**NEWS & EVENTS** 

PUBLICATIONS

ABOUT

LOGIN



# Call for Experts in the area of Energy and geolocation data



Object: Expert

Deadline: Sunday, April 10, 2016 - 17:30

This is a call for Experts in the area of energy performance of buildings, sustainable energy planning at local level and/or geolocation data.

The JRC has carried out the feasibility study "Location data for buildings related energy efficiency policies" to investigate how location data can support energy efficiency policies, in particular for the assessment of energy performance and needs of buildings and urban areas.

The study confirmed that the use of geolocated data (such as cadastrial data e.g.) can improve the quality of the input data for the assessment of the energy performance of buildings and the energy need of buildings and districts. They can also contribute to improve sustainable energy planning and monitoring in urban areas.

The JRC is now launching a pilot project for the application to the local and regional levels of the methodologies identified in the pilot study for the assessment of energy needs and for the scaling up from building, to district, cities and regions.

Experts are expected to participate in the working group and to contribute with knowledge of methodologies for the assessment of energy performance of buildings, of energy needs at local level and of geolocation data for energy applications.

#### Internal References

- Location data for buildings related energy efficiency policies
- European Union Location Framework
- ▶ MESHARTILITY project : A roundtable to discuss data-related challenges in local authorities
- ▶ The Covenant of Mayors initiative for local sustainable energy

#### Tags

#### Keywords:

▶ **№** Energy and Location





Institute for Energy and Transport (IET)

European Commission > JRC > IET > E3P

THEMATIC AREAS

NEWS & EVENTS PUBLICATIONS

ABOUT LOGIN



**European Energy Efficiency Platform** 



# III Data Hub



## WikEE



## Community

Browse and share datasets and graphs.

Write and share articles, connect knowledge, data and publications.

Browse and learn more about working groups

#### Thematic Areas



Buildings



Products



Transport and Mobility



Urban Areas



Industry



Energy Generation and Distribution

### What's new on E3P

- France's Hollande says climate talk promises must now... (@ 31 Mar)
- Third renewable energy progress reports in the EU (2013-2014) (@ 30 Mar)
- Covenant of Mayors: Monitoring Indicators (@ 30 Mar)
- Energy Efficiency and GHG Emissions: Prospective Scenarios for... (@ 30 Mar)
- NREAPs and progress reports interactive database (02 30 Mar)

# Feedback

#### Help

#### Contact

Terms of Use

#### Most viewed

#### Content

#### Experts



Institute for Energy and Transport (IET)

# European Commission > JRC > IET > E3P



THEMATIC AREAS

**NEWS & EVENTS** 

PUBLICATIONS

ABOUT

LOGIN





# III Data Hub



#### WIKEE



## Community

Browse and share datasets and graphs.

Write and share articles, connect knowledge, data and publications.

Browse and learn more about working groups

#### Thematic Areas



Buildings



Products



Transport and Mobility



Urban Areas



Industry



Energy Generation and Distribution

## What's new on E3P

- France's Hollande says climate talk promises must now... (@ 31 Mar)
- Third renewable energy progress reports in the EU (2013-2014) (0730 Mar)
- Covenant of Mayors: Monitoring Indicators (@ 30 Mar)
- Energy Efficiency and GHG Emissions: Prospective Scenarios for... (@ 30 Mar)
- NREAPs and progress reports interactive database (02 30 Mar)

# Feedback

# Help

## Contact

#### Terms of Use

#### Most viewed

#### Experts





Institute for Energy and Transport (IET)

European Commission > JRC > IET > E3P

THEMATIC AREAS

NEWS & EVENTS PUBLICATIONS

European Energy Efficiency Platform

# Feedback

Help

Contact

Terms of Use

Terms of Use

#### VikEE

articles, connect and publications.

eas

# Community

Browse and learn more about working groups

## What's new on E3P

- France's Hollande says climate talk promises must now... (@31 Mar)
- Third renewable energy progress reports in the EU (2013-2014) (@ 30 Mar)
- Covenant of Mayors: Monitoring Indicators (@ 30 Mar)
- Energy Efficiency and GHG Emissions: Prospective Scenarios for... (@ 30 Mar)

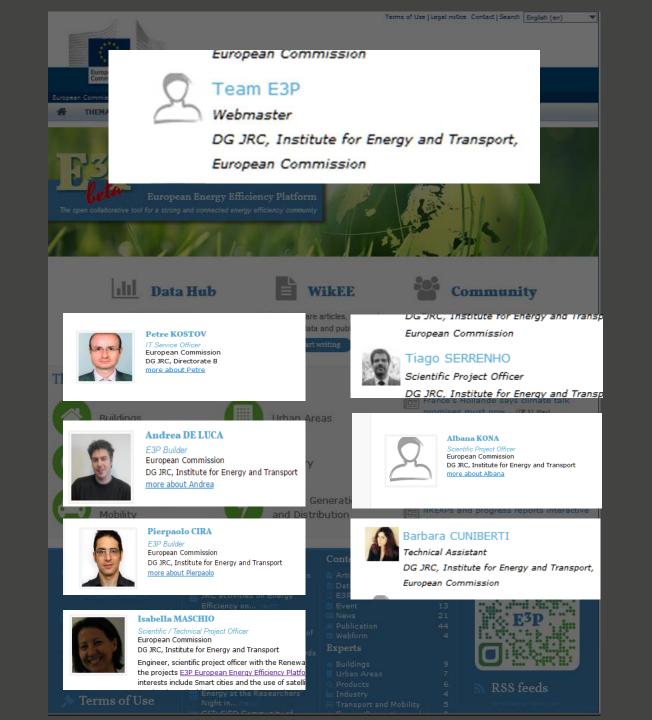
NREAPs and progress reports interactive database (02 30 Mar)

eneration

ibution

#### Experts







# **First questions**



# What is my added value for contributing to the E3P (1)?

- Researcher: share data and findings to get expert feedback; share models and call for data for their validation
- Policy maker: share monitoring reports for exchange of **best practices**; open informal discussion groups with **stakeholders**, share legislation for **dissemination**
- Consultant: share analysis with targeted and large European audience



# What is my added value for contributing to the E3P (2)?

- Manufacturer: share market data and call for models for analysis of trends
- National agency: share national data for comparison and benchmarking
- International organisation: share publications and analysis with wider audience



# What can other experts do with my data or content?

- > all users must agree on the E3P Terms of Use
- they agree that data and all content are shared under the conditions set by the Creative Commons Attribution 4.0 international (CC BY 4.0 int.)

Reuse is authorised, provided the source is acknowledged.



# How do we prevent misuse of the E3P?

- 1. Users who want to contribute need:
  - to be authenticated via the European Commission Authentication System (ECAS)
  - to have completed their E3P profile in order to receive rights to contribute
- 2. All content in the E3P undergoes a **validation procedure** before being published
- 3. After publication, the E3P team can **un-publish** content if deemed inappropriate (E3P Terms of Use)



# How do we avoid duplication with existing data providers?

- we contact data and information providers and collaborate in order to avoid overlapping and useless development
- users are recommended to make links and connections to pre-existing content rather that re-uploading it
- we are evaluating the possibility to develop interoperable applications and tools in the future

# Next steps





# Phase $1 \rightarrow Dec. 2016$

- > JRC
  - defines and implements E3P development
  - analyses feedback and proposal by participants and implements IT improvements, adds Geographical Information System and Models to Data Hub
  - continues content management and monitoring of the E3P
- > users
  - build content focusing on Buildings and Products (not exclusive)
  - provide feedback and recommendations



# Parallel sessions: buildings and products

- ➤ How is **JRC** using the E3P
- > What will **participants** contribute
  - Content: articles, datasets
  - Groups, experts
  - Other
- > Improvements and suggestions
- > Work plan



# Phase 2 - Dec. 2016 →

- > JRC
  - plans E3P development
  - continues IT development and maintenance
  - progressively transfers content management and monitoring of the E3P to dedicated users and ultimately reaches a fully peer-reviewed process

# > users

- build content in all sectors
- provide feedback and recommendations
- progressively take over from JRC content management and monitoring
- contribute to plan the development of the E3P 44



# "Knowledge grows when shared"

Bhartrihari (Indian poet and grammarian c 450-510)