



Energy Efficiency as part of National Energy Strategy

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Ministry of Economic Development

Energy Efficiency: how to make it sustainable
Assolombarda - EXPO2015 Milano, July 10 - 2015



4 main objectives of the NES:

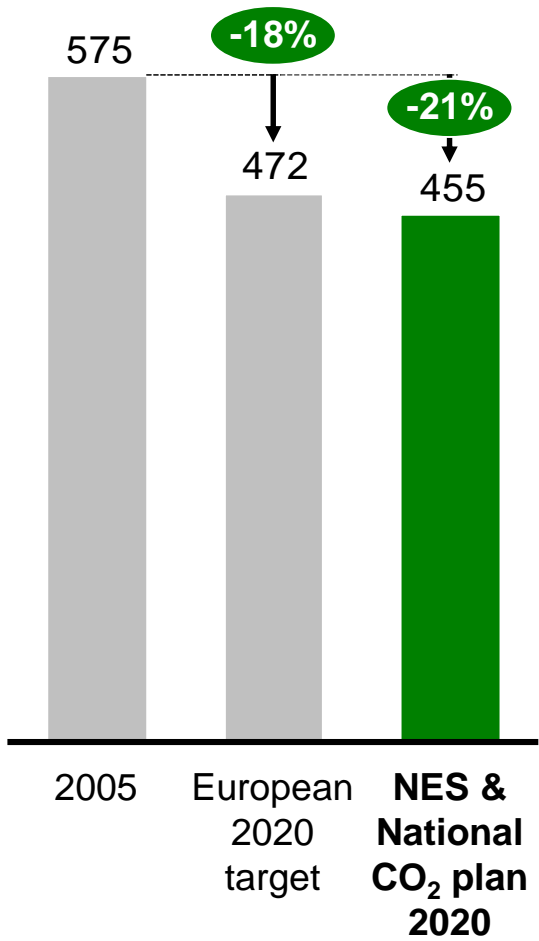
- 1** **Competitiveness:** Significantly reduce the energy cost gap for consumers and businesses, with a gradual alignment to European prices
- 2** **Environment:** Outperform the environmental targets set by the '20-20-20 Package' and take a lead role in the European 'Roadmap 2050' decarbonisation process
- 3** **Security:** Strengthen security of supply, mainly in the gas sector, and reduce the external energy dependence
- 4** **Growth:** Enhance sustainable economic growth through the development of the energy sector



Going beyond the 2020 European targets

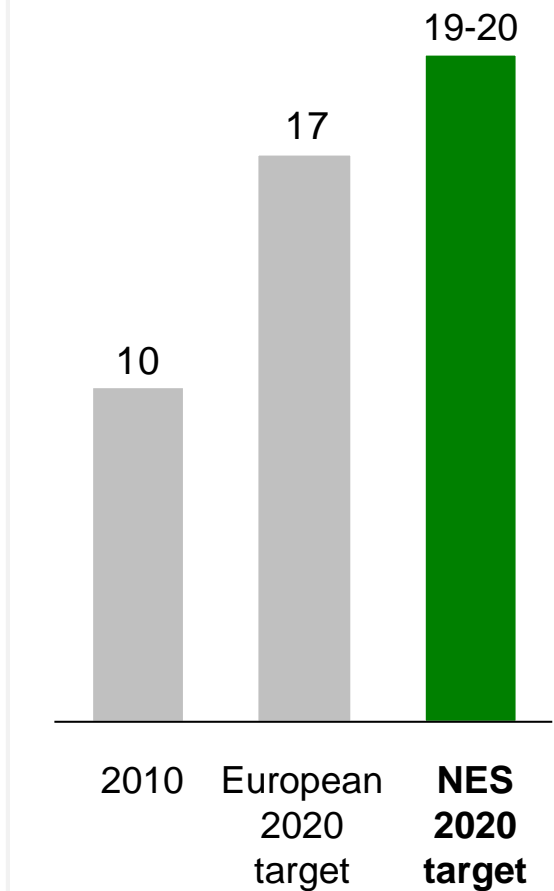
GHG emissions reduction

Millions of tonnes of CO₂/year



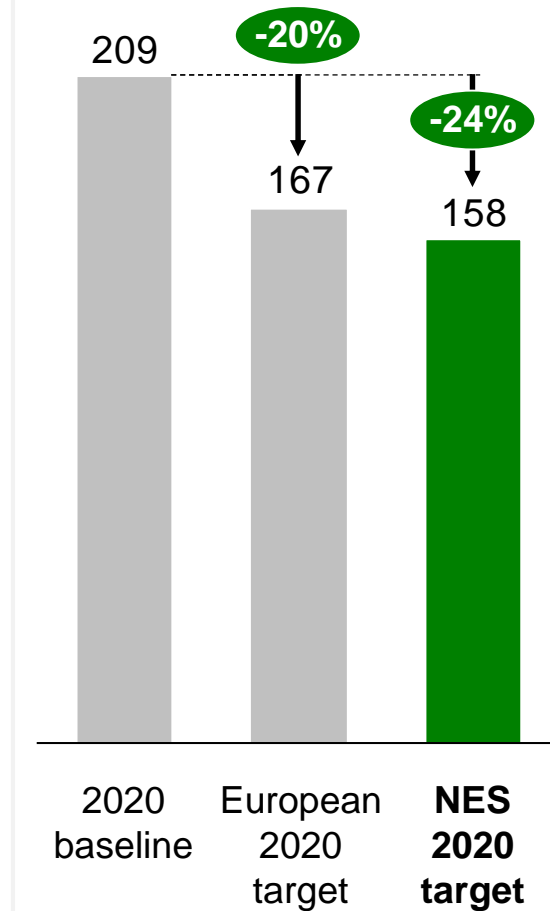
Renewables

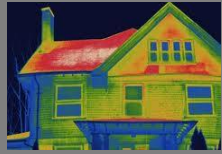
Share on total final consumption, %



Energy efficiency

Total primary energy supply, Mtoe





1 Energy Efficiency



2 Development of a **competitive natural gas market** and of a **southern European gas hub**



3 Sustainable development of **renewable energy**



4 Development of a **competitive electricity market** and of **infrastructure**



5 **Restructuring of refining** and of the **fuel distribution network**



6 Sustainable production of **domestic hydrocarbons**



7 Modernisation of **energy governance**



CC

Energy
R&D



Energy Efficiency: Key choices

Launch of a comprehensive **programme that puts energy efficiency** at the center of the National Energy Strategy, and that will allow for:

- **Going beyond the European 2020 targets** through initiatives cutting across all sectors of the economy
- **Pursuit of industrial leadership** in order to capture the growth opportunities in the sector in Italy and abroad.

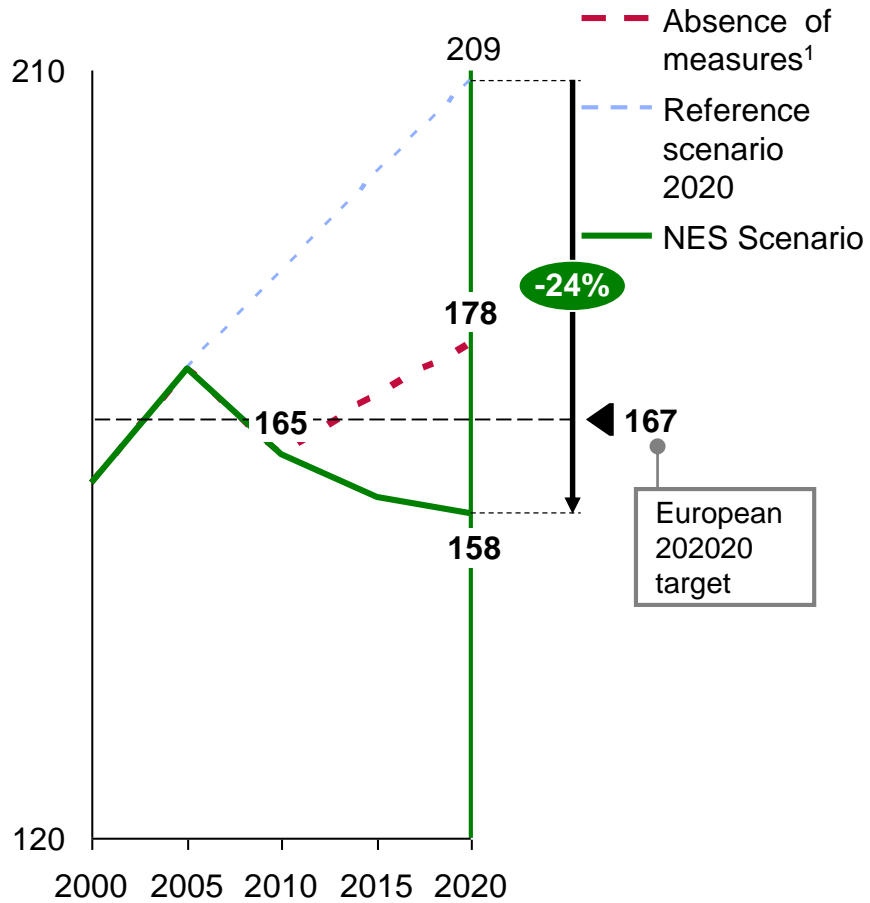
Contribution to NES objectives

Competitiveness	✓
Security	✓
Growth	✓
Environment	✓



Reduction of primary energy consumption

Mtoe



Reduction of energy imports and CO₂ emission by 2020

Savings in imports

~8 MLD €/year

Vs. 2011 bill 62 MLD €

Reduced CO₂ emissions

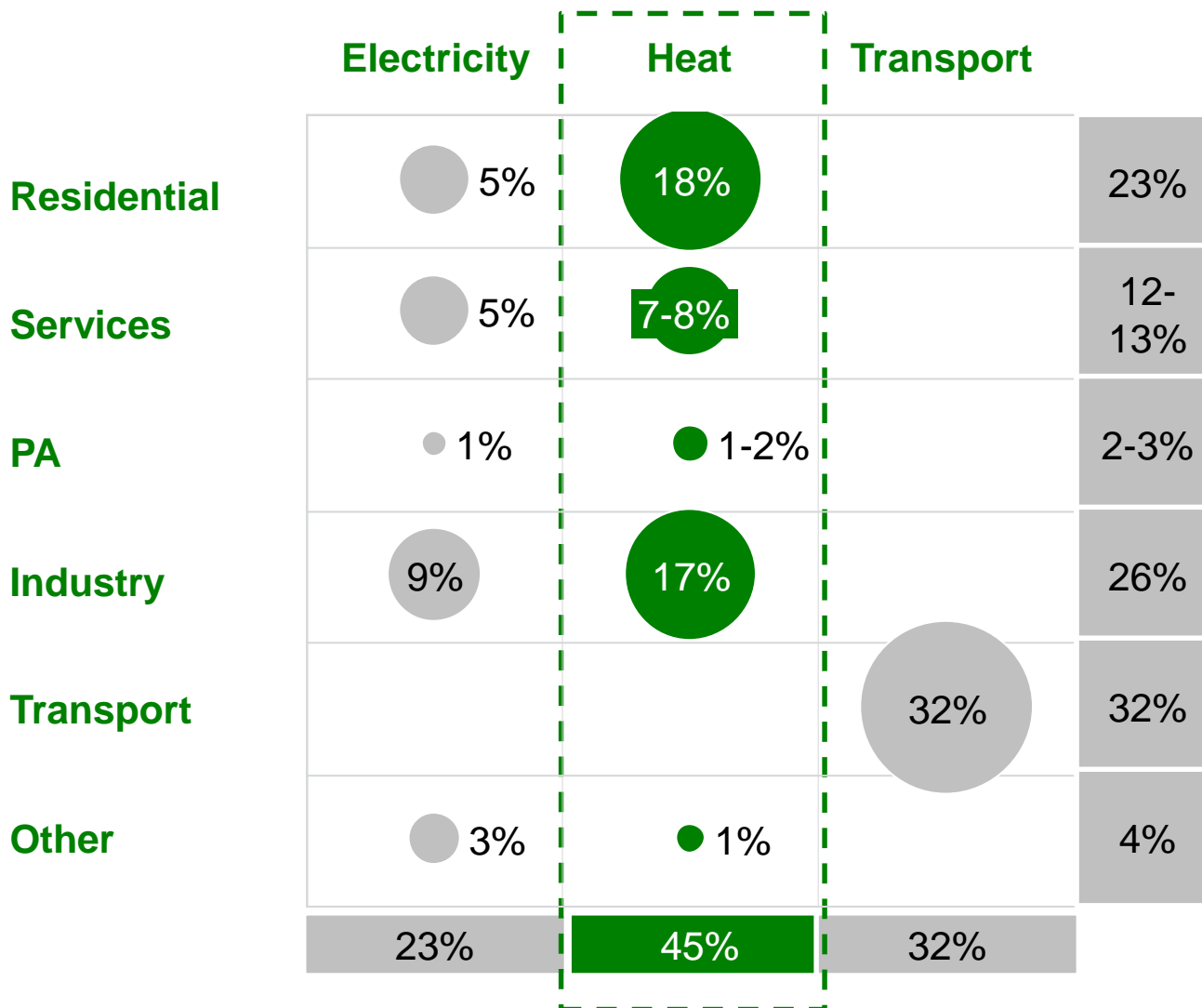
~55 Mt/year

~50% of the 2020 target

¹ Inertial scenario of consumption growth assuming absence/interruption of all energy efficiency measures. Source: MiSE; ENEA



Final energy consumption in 2010 in% of total consumption





Main measures for energy efficiency in Italy

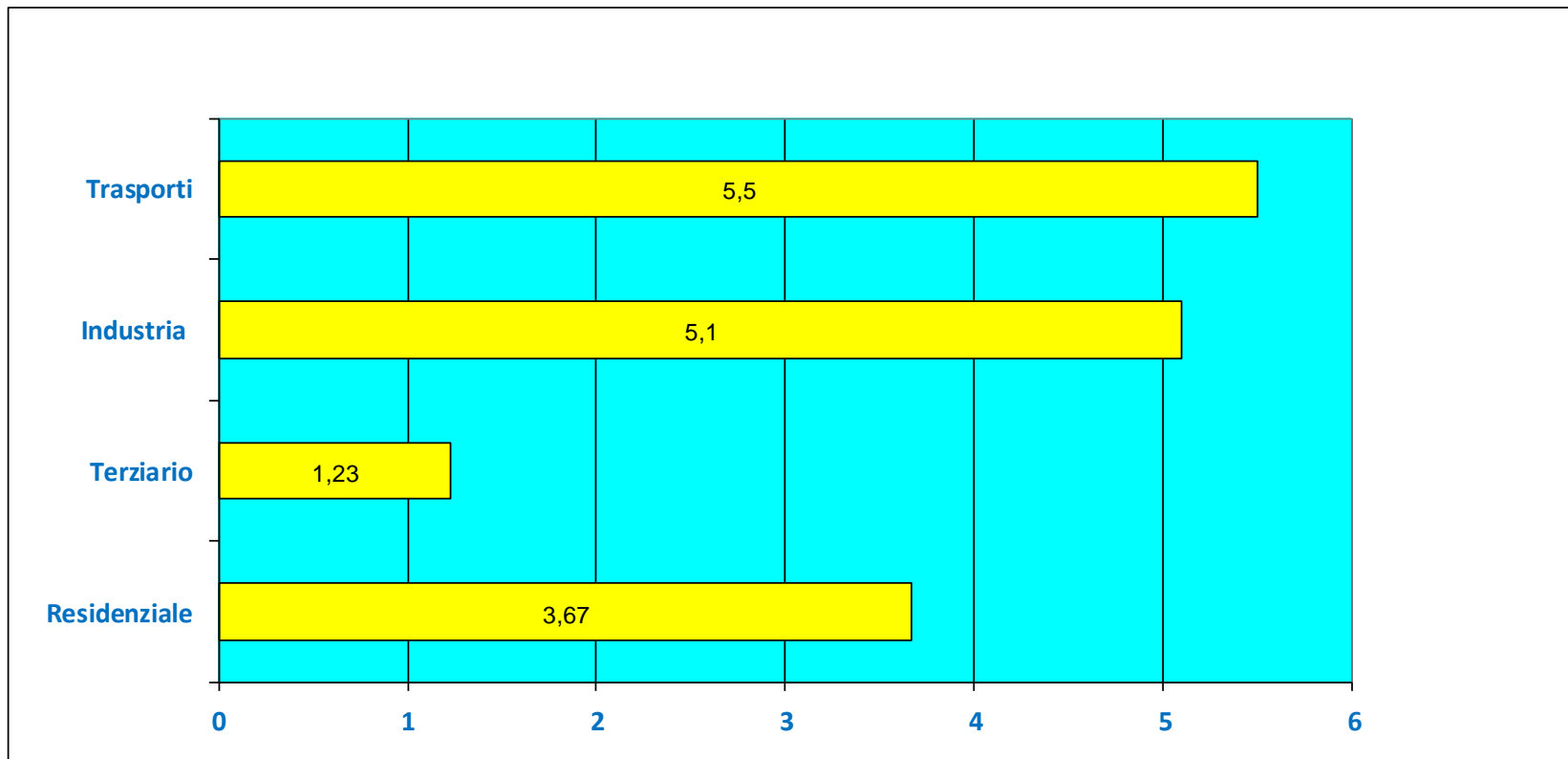
Area	Main measures for energy efficiency in Italy				Relevance
	Rules/ Standards	White Certificates	Incentives (Heating Account)	Tax reliefs	
Residential	✓	✓	✓	✓	✓ ✓ -
Services	✓	✓	✓	✓	
PA	✓	✓	✓	-	
Industry	-	✓	-	-	
Trasport	✓	✓	-	-	

Envisaged actions

- Strengthening specifically for **buildings and transport**
- **Increased supply** (new standard projects and areas)
- **Rev. mechanism** (timeframe, premiums, bureaucracy, market)
- **Introduction of a direct incentive** 'Heating account'
- **Ext. in time of the 65% scheme**
- **Improvements**, e.g.: diff. benefit, cost parameters, elimination of overlaps



Expected savings by end-use sectors

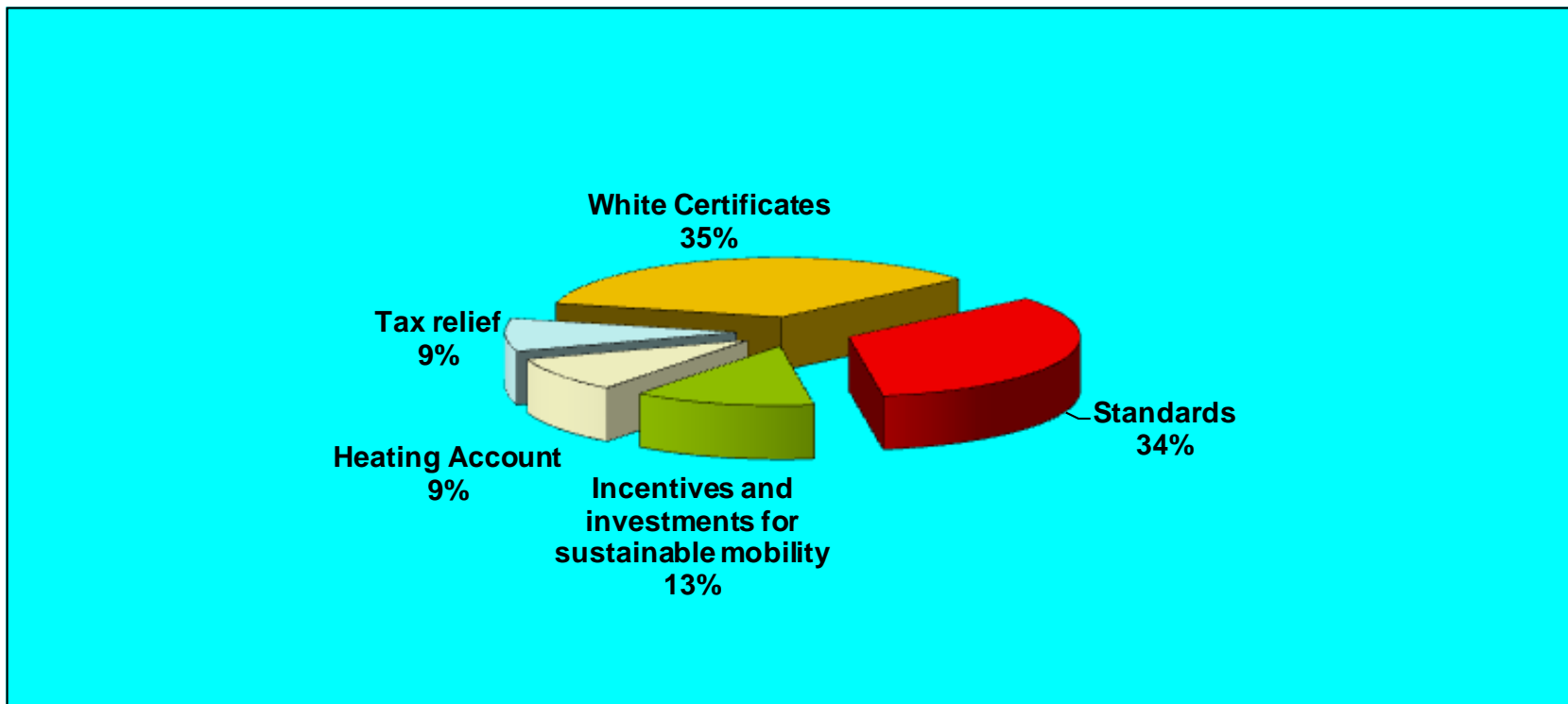


2.32 Mtep

About 15% of the 2020 target
achieved in 2011-2012

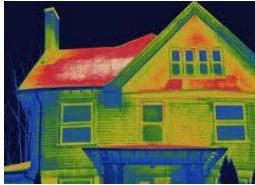


Expected savings by policy measures



66% of expected savings comes from incentive schemes

34% from standards and legislative provisions



EPB directive

Minimum primary energy requirements for new buildings

Minimum performance requirements for air conditioning systems

Energy certification for buildings

Integration of renewables in new buildings

RES directive

Purchasing by Public Bodies of high efficiency products

Heating metering

Qualification schemes for energy operators

Energy efficiency directive

Minimum requirements for specific products

Energy labelling

Ecodesign/Ecolabel directives

Emission Trading Scheme

ETS directive

Low greenhouse gas emissions for vehicles

Reg. 443/2009





Enabling factors

Strengthening the 'ESCO' model

Control and enforcement of measures

Communication and awareness raising

Support to research and innovation

Interventions

- Introduction of **certification/qualification criteria**
- Creation of dedicated **guarantee or revolving funds** for larger projects in order to overcome the challenges to obtaining long-term financing for energy efficiency as the EEFGI Group's Report has recently addressed.
- Development of innovative **contract models** for financing through third parties
- Strengthening of **controls and sanctions on the implementation** of rules and standards and on attainment of targets of energy savings by obliged parties.
- Improvement of the **monitoring and accounting system** of attained energy savings
- Launch of an extensive **communication and awareness raising programme** in close cooperation with Regions and with the industry and consumers associations. Making the final consumer more aware and active is in fact an essential factor for the success.
- Promotion of **energy audits** in the civil and industrial sectors.
- Strengthening the **role of ENEA** in raising awareness
- **Introduction of financial incentives** for the promotion of **research projects**, development and technological innovation (e.g., Fund for the Electricity System R&D, Fund for sustainable growth, Revolving Kyoto fund to support companies and technological innovation) and innovative start ups



EED implementation – Industry (I)

Obligation schemes

- The Italian obligation scheme is made up of the White Certificates Mechanism (WCM) that was established in 2000 and implemented from 2004 on
- The WCM will have to ensure the achievement of energy savings by 31 December 2020 no less than 60% of the national energy savings target
- Need to adapt the scheme to the new rules on state aid.
- New proposals to amend the guidelines on the WCM that will be subject to public consultation

Energy audits and qualification schemes

- Guidelines for energy audits in large and energy-intensive enterprises have been issued
- Co-financing of programs implemented by the Regions to encourage SMEs to undergo energy audits (allocated € 15 million / year for the period 2014-2020)
- Introduction of accreditation and certification schemes for providers of energy services
- Qualification of energy audits providers and installers of energy-related building elements
- Publication of lists of ESCOs, energy-management experts and ISO 50001 certified companies



EED implementation – Industry (II)

Promotion of efficiency in heating and cooling

- By 30 October 2015 preparation of a report containing an assessment of the national potential for the application of high-efficiency cogeneration and efficient district heating and cooling and identification of measures to be taken to exploit this potential.
- The Regulatory Authority (AEEGSI) on address of the Ministry of Economic Development , sets up the standards of heating and cooling service , establishes criteria for determining tariffs for utilities connection and heat transfer.

National fund for energy efficiency

- Establishment of a revolving fund for the granting of guarantees and / or loans for energy efficiency measures implemented by the Public Administration, ESCOs and enterprises. The size of the fund is approximately 70 million €/year for the 2014-2020.
- A decree for the Fund implementation will be issued shortly.

SET 20 Plan 14 CONFERENCE

Strategic Energy Technology (SET) Plan

Towards an Integrated Roadmap:
Research & Innovation Challenges and Needs
of the EU Energy System





An Integrated Roadmap

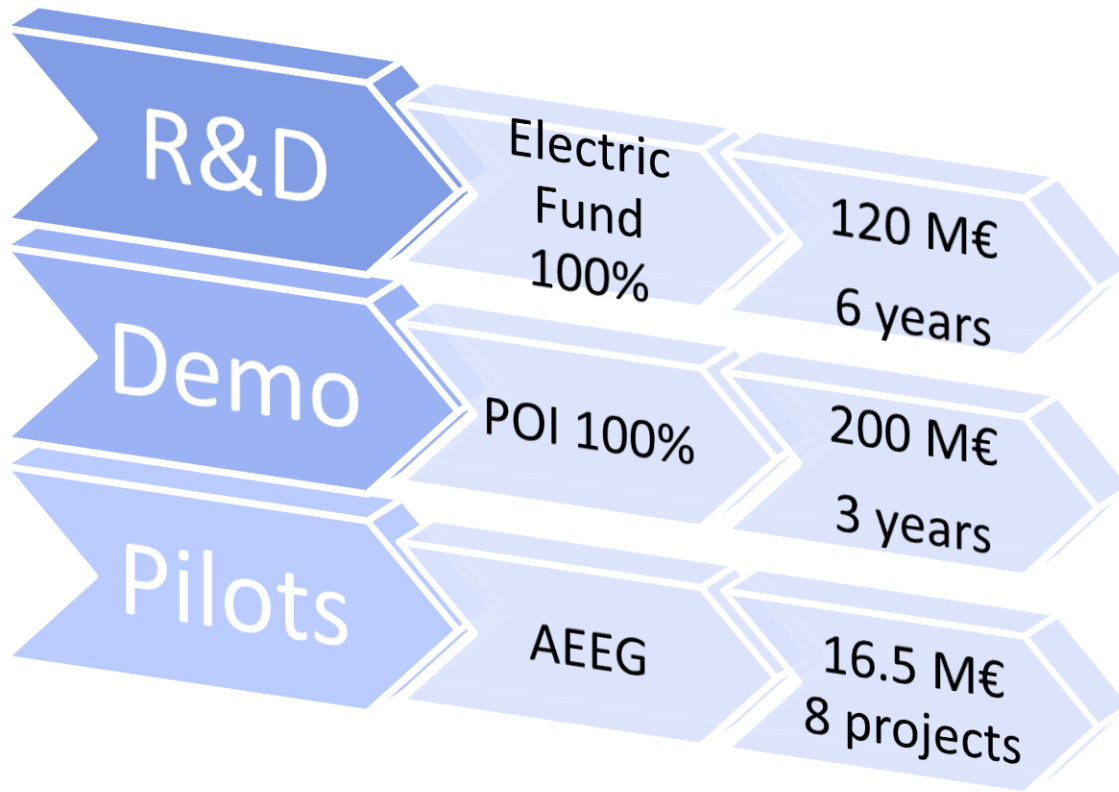
The European Commission with the Energy Union strategy has confirmed the strategic role of the SET Plan and calls for the implementation of the integrated roadmap:

- **covering the whole research and innovation chain, from basic research to demonstration and support for the deployment**
- **clearly stating the roles and duties of the R&D organizations, businesses and universities and investors by promoting synergies and interactions**

On the basis of the roadmap, the MS and the Commission are preparing an Action Plan setting out the investments in R&D on the basis of a principle of "joint co-operation".



The innovation chain for Smart Grids in Italy



Renewable integration	Scenario analysis
Planning	Operation
System management	Component technologies innovation
ICT	Power electronics
Storage	Electric vehicles
PQ	Environment



With the implementation of the EE Directive into national law (Legislative Decree 102/2014) Italy has made an important step forward.

It is necessary to rapidly proceed with the issuing of all the implementing measures in order to implement the provisions of the decree.

In this exercise, it is appropriate to refine and further develop the instrumentation made in the field, taking into account the need to:

- Improve the governance of the system by coordinating actions and responsibilities of the different actors in different ways involved in the promotion of energy efficiency.**
- Develop and apply methodologies for monitoring, evaluation and control of implemented measures in order to ensure more effectiveness in achieving the objectives.**
- Optimize the allocation of scarce public resources available addressing them towards interventions of higher cost-effectiveness.**

The route is complex even if we believe that with the active and constructive cooperation by all the Italian actors involved we will be able to achieve the ambitious targets set and enable Italy to maintain a leadership position in the field of energy efficiency.



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