



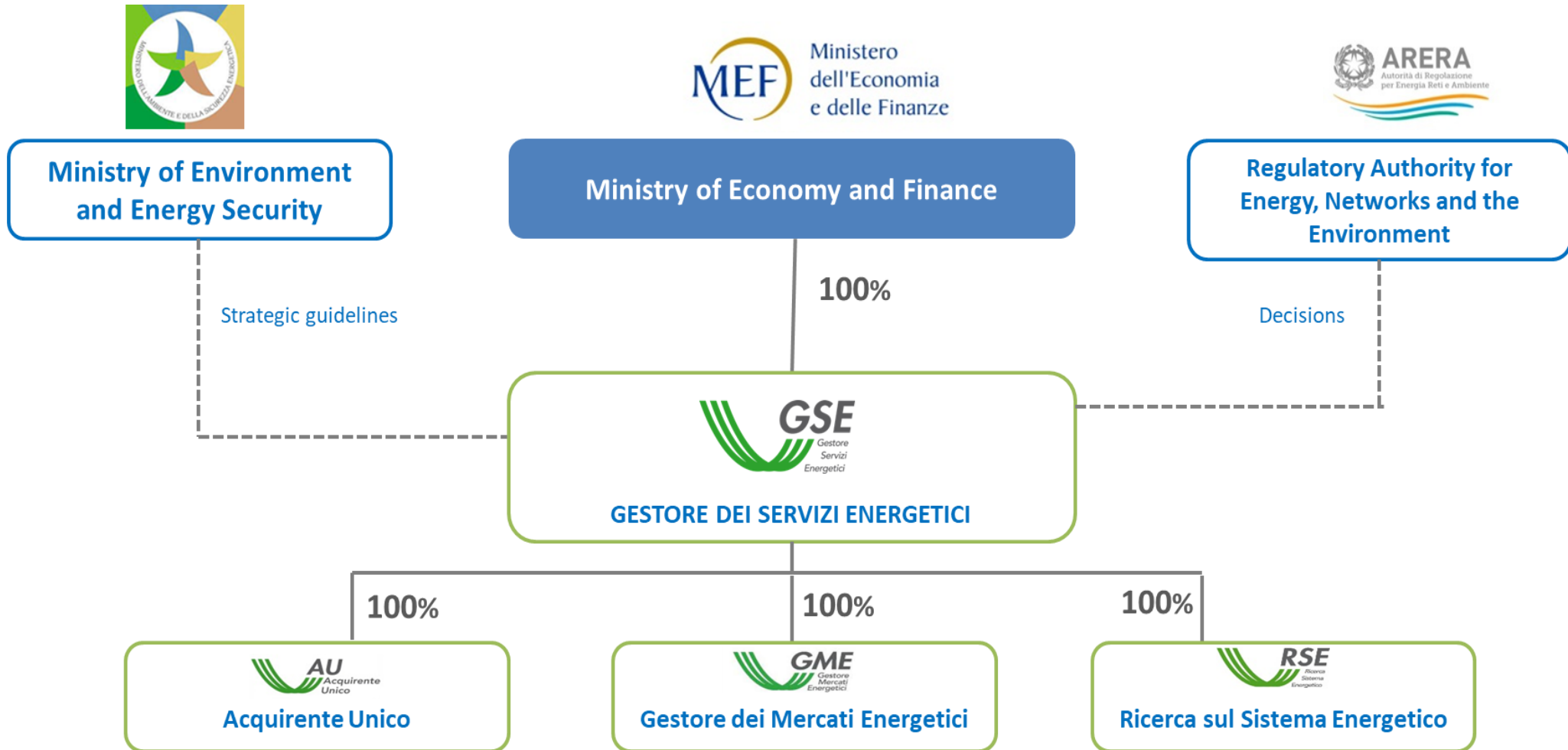
**GSE**  
**The Italian**  
**Agency for**  
**Energy**  
**Transition**

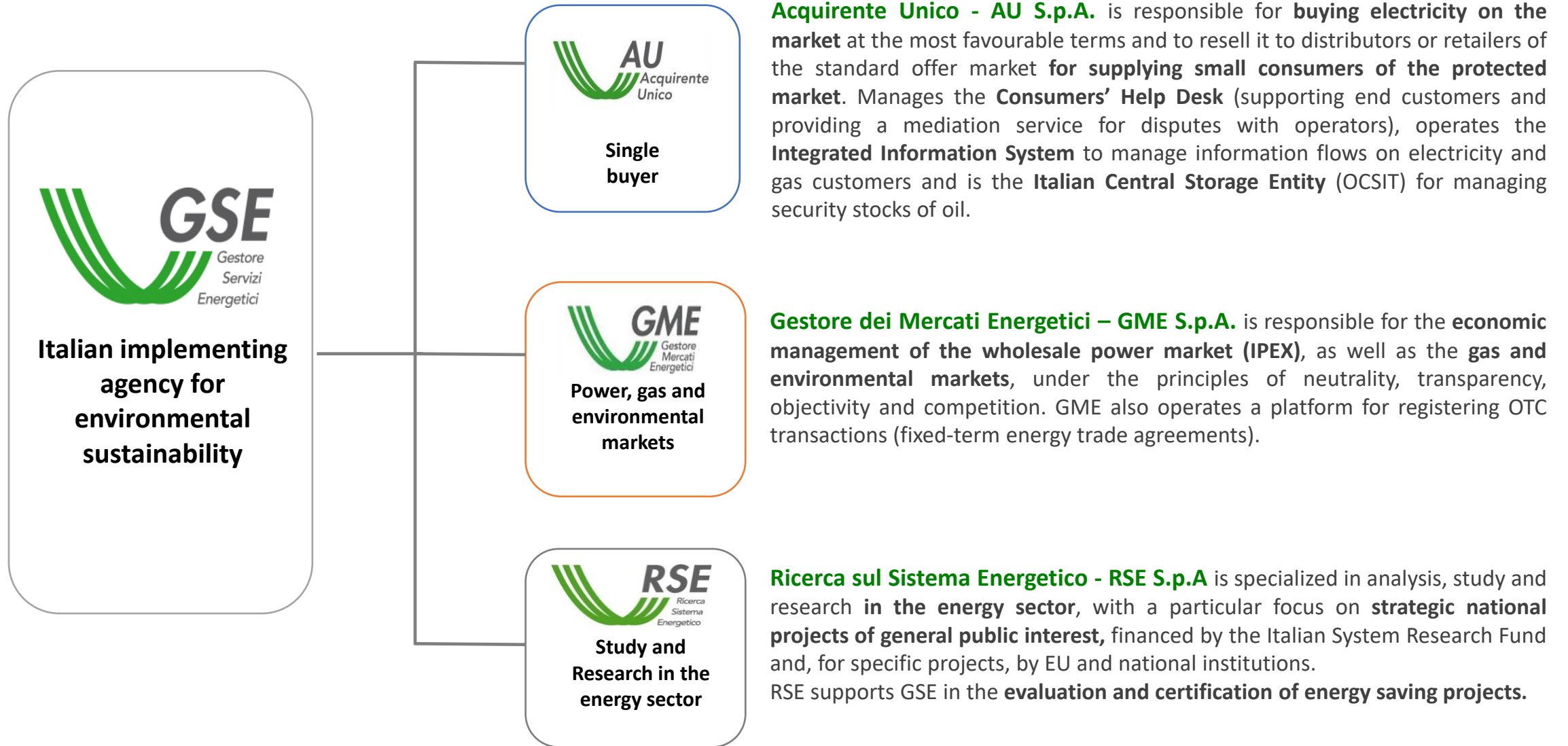
# AGENDA

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- **THE GSE GROUP**
- **THE ITALIAN ENERGY SYSTEM**
- **ENERGY EFFICIENCY SUPPORT AND PROMOTION**
- **SOME REMARKS**

# THE GSE GROUP





# GSE – MAIN ACTIVITIES



## INCENTIVES AND MARKET ACTIVITIES FOR RES-E POWER PLANTS

- Power plants **qualification activities**
- **Support schemes** management, energy **trading**, and **certification** of RES energy
- Energy production **selling** and **forecast**



## RES-H AND ENERGY EFFICIENCY SUPPORT AND PROMOTION

- **White certificates**
- **Conto Termico**
- High Efficiency **CHP**



## SUSTAINABLE MOBILITY SUPPORT MECHANISMS

- **Biomethane**
- Advanced **biofuels**
- **Electric vehicles charging support**



## VERIFICATION ACTIVITIES

- On **RES** power plants
- On **energy efficiency** interventions
- On **CHP** plants also combined with **DHC** networks



## PUBLIC ADMINISTRATION, CITIZENS AND COMPANIES ASSISTANCE

- Assistance to Local **Authorities, Governmental Bodies** and other kinds of **Public Administration** for energy efficiency improvements and public services renovation.
- **Training and Information** for sustainable energy initiatives
- Best cases promotion

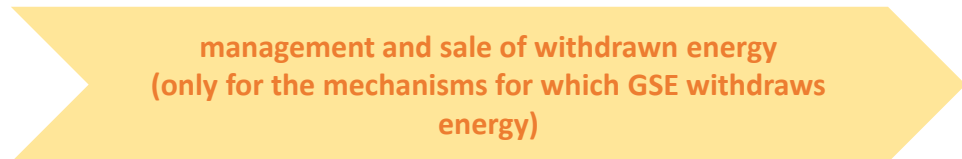


## INSTITUTIONAL AND TECHNICAL SUPPORT ACTIVITIES

- **Statistics, technical – economic analyses** and support for the elaboration of plans and programs and during their **monitoring process** (ES, NECP, etc.)
- **Emissions Trading**
- Communication
- **International** relations and projects

# GSE MANAGEMENT OF SUPPORT MECHANISMS

GSE manages **the support mechanisms** from both **technical and economic-administrative** perspectives: receipt of the projects applying for the incentives, plants qualification and verification, energy measurements analysis, calculation and issue of incentives, sale of withdrawn energy



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# THE NATIONAL INTEGRATED ENERGY AND CLIMATE PLAN (NECP)

## Energy and climate targets by 2030

L'Italia a **giugno 2023** ha definito la **proposta di aggiornamento del PNIEC**, definendo uno **scenario di policy con i target al 2030**

	unità di misura	Dato rilevato 2021	Stime 2022	Proposta PNIEC 2023: Scenario di policy <sup>1</sup> 2030	Obiettivi FF55 RepowerEU 2030
<b>Emissioni e assorbimenti di gas serra</b>					
Riduzione dei GHG vs 2005 per tutti gli impianti vincolati dalla normativa <b>ETS</b>	%	-47%	-45%	-62%	-62% <sup>2</sup>
Riduzione dei GHG vs 2005 per tutti i settori <b>non ETS</b>	%	-17%	-19%	-35,3% / -37,1%	-43,7% <sup>3, 4</sup>
<b>Energie rinnovabili</b>					
Quota di energia da <b>FER</b> nei consumi finali lordi di energia	%	19,0%	19,0%	40,5%	38,4% - 39%
Quota di energia da FER nei consumi finali lordi di energia nei <b>trasporti</b> (criteri di calcolo RED 3)	%	8,2%	8,2%	30,7%	29% <sup>5</sup>
Quota di energia da FER nei consumi finali lordi per <b>riscaldamento</b> e raffreddamento	%	19,7%	20,4%	36,7%	29,6% <sup>3</sup> - 39,1%
Quota di energia da FER nei consumi finali del settore <b>elettrico</b>	%	36,0%	36,7%	65,0%	non previsto
<b>Efficienza energetica</b>					
Consumi di energia <b>primaria</b>	Mtep	145	140	122	112,2 (115 con flessibilità +2,5%)
Consumi di energia <b>finale</b>	Mtep	113	110	100	92,1 (94,4 con flessibilità +2,5%)
Risparmi annui nei consumi finali tramite regimi obbligatori <b>efficienza</b> energetica	Mtep	1,4	3,7	73,4	73,4 <sup>3</sup>

1) scenario costruito considerando le misure previste a giugno 2023, sarà aggiornato con la sottomissione del piano definitivo entro giugno 2024

2) vincolante solo per le emissioni complessive a livello di Unione europea

3) vincolante

4) vincolante non solo il 2030 ma tutto il percorso dal 2021 al 2030

5) vincolante per gli operatori economici

Fonte: proposta di PNIEC 2023, tranne la colonna con le stime 2022



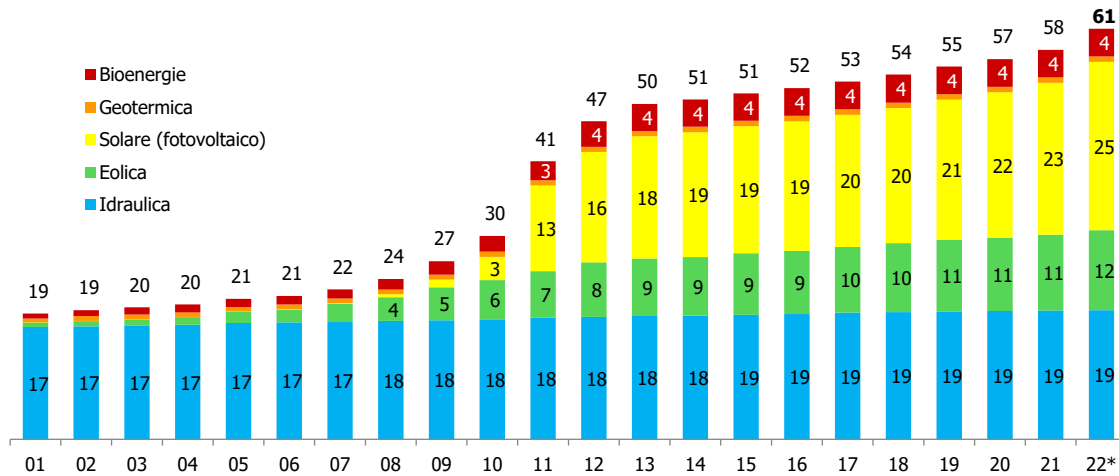
# THE ITALIAN RENEWABLE ENERGY DEVELOPMENT

Italy is deeply involved in the clean energy transition through the implementation of a secure, sustainable and affordable energy system.

In **2022 renewable energy power plants generated (101 TWh)**. RES promotion policies made an important contribution to these results.

**At the end of 2022, approximately 61 GW of RES plants were installed in Italy in the electricity sector; solar sources concentrate the greatest gross efficient power (25 GW), followed by hydro (19 GW) and wind (12 GW).**

Gross efficient power of electricity production plants powered by renewable sources [GW]

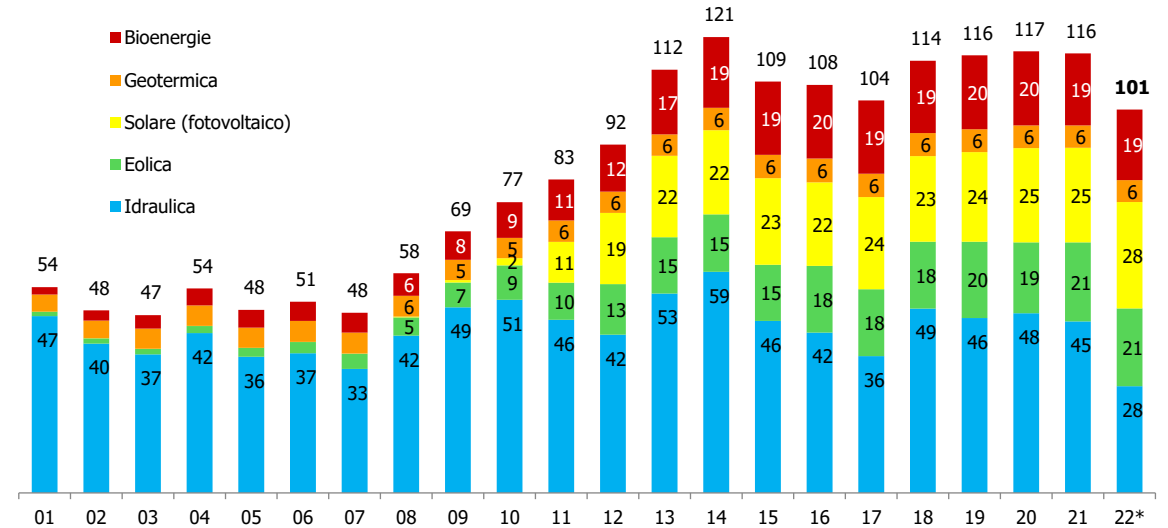


Fonte: TERNA-GSE

**In 2022, the overall production from RES stands at around 101 TWh, a sharp decrease compared to the previous year (-13%), mainly due to the strong contraction in hydroelectric production (-38%); solar production grows by +12%; slight variations for the other sources.**

Solar source and the water source (a total of 56 TWh almost equally distributed) represent 56% of the total renewable electricity generation.

Gross production of electricity production plants powered by renewables [TWh]



Fonte: TERNA-GSE

## Thermal account

The scheme supports the **production of thermal energy from RES**, as well as **small-scale interventions of energy efficiency** for private subjects and the Public Administration.

The incentive provides a **capital grant**, which, according to specific parameters, criteria and expenditure limits, **can cover between 40% and 65% of the investment cost**.



## White Certificates

**White Certificates** (also known as Energy Efficiency Certificates - EECs) are **tradable titles** which certify energy savings in final energy uses.

The scheme promotes a large number of **energy efficiency projects in almost all sectors**, with particular emphasis on the **industrial sectors**.



## High efficiency cogeneration

A **cogeneration unit** is defined as **highly efficient (CAR)** if the resulting primary energy saving (PES) value is at least 10% or, in the case of micro-cogeneration units (< 50 kWe) or small cogeneration (< 1 MWe), if it takes on any positive value.

The GSE annually provides final recognition of the CAR operation and grants an **incentive proportional to the fuel savings**.



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# WHITE CERTIFICATES MECHANISM AND OBLIGED PARTIES

- **White Certificates, or Energy Efficiency Certificates («TEEs»)**, are negotiable titles that certifies the achievement of end-use energy savings through energy efficiency improvement initiatives and projects.
- **1 White Certificate = 1 saved TOE (Tonne of Oil Equivalent)**
- The electricity and natural gas distributors with more than 50,000 customers (**Obligated Parties**) are obliged to achieve a **minimum energy saving threshold**.
- **The incentive is provided after the intervention.** The aim is not to provide financial coverage, but to make the investment of private and public funds more attractive.

AN ECONOMIC  
VALUE TO  
ENERGY  
EFFICIENCY

- **Electricity distributors** with more than 50,000 end customers connected to their distribution network, as of 31 December of two years prior to each year of obligation;
- **Natural gas distributors** with more than 50,000 end customers connected to their distribution network, as of 31 December of two years prior to each year of obligation;

Obligated  
Parties



## ▪ Voluntary Parties

- Non-obliged electricity and natural gas distributors;
- Public/private entities that possess (alternatively):
  - UNI CEI 11352 "*Energy Service Company (ESCO)*"
  - UNI CEI 11339 "*Energy management expert (EGE)*"
  - ISO 50001 Energy management system

As concerns energy efficiency projects, the GSE carries out the following activities:

- The **projects assessment** aimed at allowing access to the mechanism;
- **Monitoring of energy efficiency interventions** through document checks, inspections and on-site visits;
- The **provision of White Certificates** based on energy savings achieved and measured through a measurement program approved during the project presentation, for an incentive period that varies between 3 and 10 years depending on the type of intervention;
- The submission, supported by GME (“Gestore dei Mercati Energetici”), of a **report on the activities** and the projects carried out, to: the Ministry of the Environment and Energy Security (MASE), the Unified Conference and ARERA;
- The verification of the **obligations achievement level** of the obliged parties.

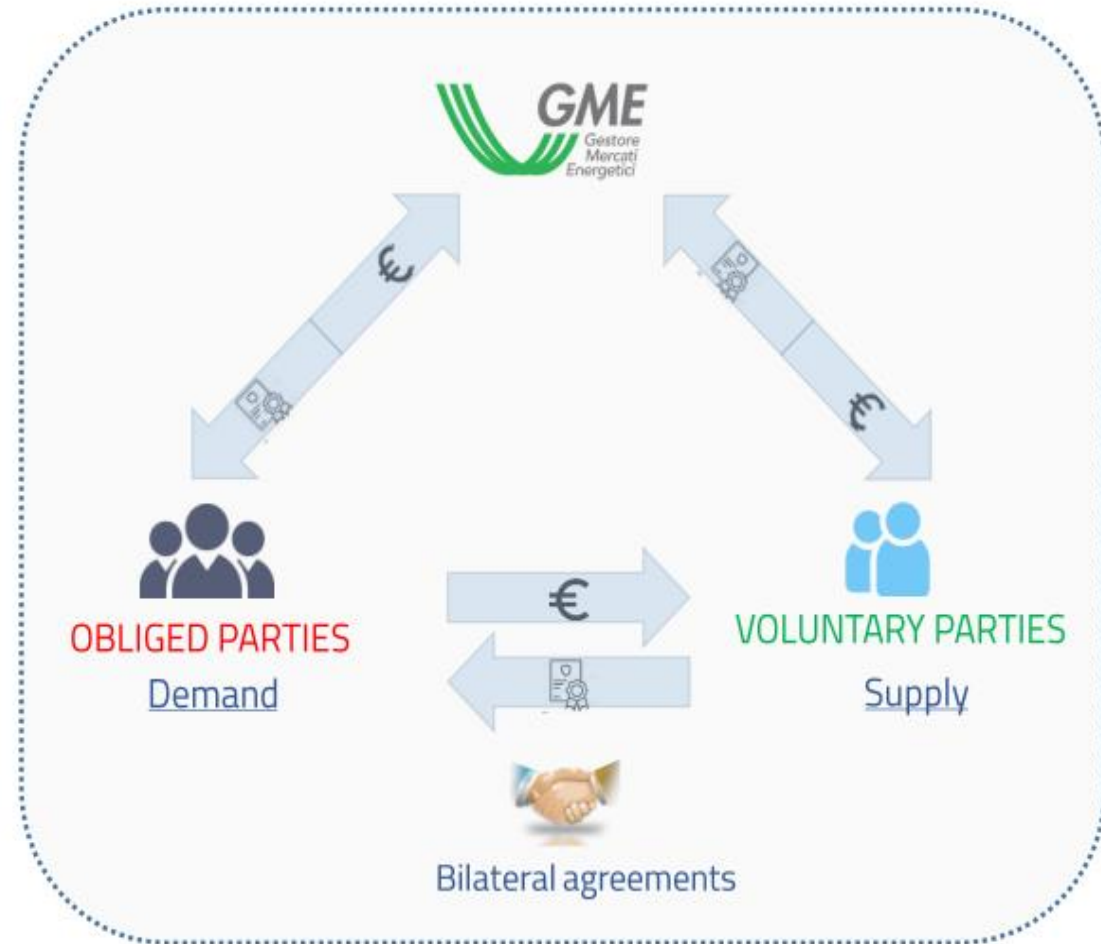


Implementing Decrees



# TEE EXCHANGE

- The Obligated Parties can fulfill the minimum energy savings obligation by:
  - Directly implementing **energy efficiency projects** eligible for the mechanism
  - **Purchasing TEEs** in two different ways:
    - With bilateral agreements
    - In the centralized market managed by GME
- The economic value of White Certificates is defined in **market trading sessions** or as part of the agreement between the parties
- Functioning of TEEs market:  
[https://www.mercatoelettrico.org/it/mercati/tee/cosa\\_sonotee.aspx](https://www.mercatoelettrico.org/it/mercati/tee/cosa_sonotee.aspx)



# THERMAL ACCOUNT – REGULATORY FRAMEWORK

Directive  
2012/2027/UE

Decree Legislative  
102/2014

Ministerial Decree  
DM 16.02.2016

«**Thermal Account**» (Ministerial Decree 16.02.2016)

Incentive scheme to encourage Public Administrations and private parties to implement energy efficiency improvement actions in buildings and technical installations as well as for the generation of renewable thermal energy

- **Yearly** cumulative spending limit **900 € mln**: incentives support part of investment costs up to **65%**.

500 mln €  
Private parties



Generation of renewable thermal  
energy

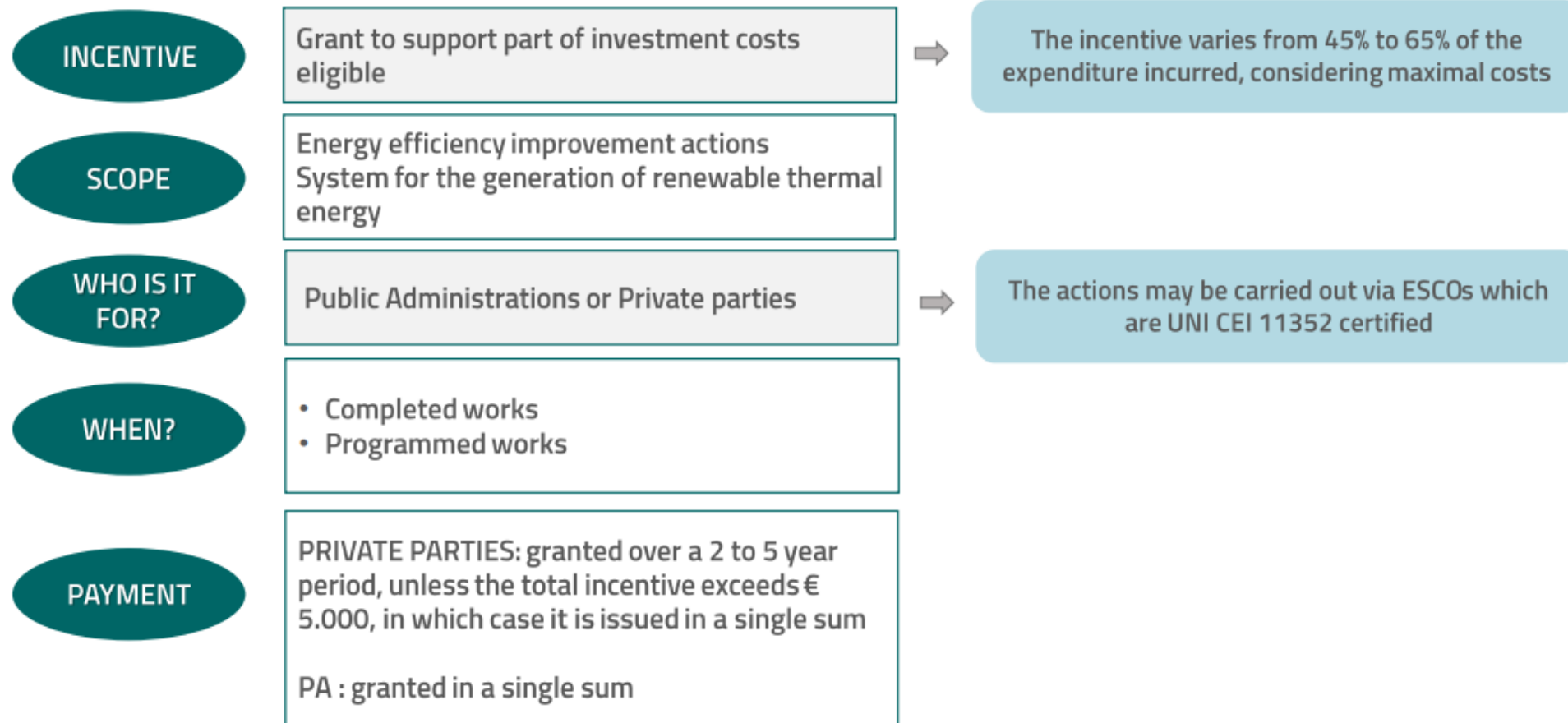
400 mln €  
Public Administrations



Generation of renewable thermal  
energy

Energy efficiency actions

# THERMAL ACCOUNT – MAIN FEATURES



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## SOME REMARKS

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- An **Agency can play a relevant role** in the regulation as well as in the management of a well functioning energy system
- **Norms and standards**, however **suitably defined**, need proper **enforcement**
- Moreover, another important role can be to act as **one-stop-shop** providing **technical help** on the support schemes managed for end users
- In these areas an **Agency** can play a **significant role**
- The **Government/Ministries**, the **Regulator** and the **Local Authorities** can hardly manage **some functions** (i.e., plants verifications, payments of incentives)
- The **Agency** can also be considered an **important pool of information and expertise** that the Government as well as the other Authorities can use, both in national **policy-making** and in the **international context**
- There is **no one-size-fits-all solution**, but there are **some important experiences**, such as the Italian one, that can be usefully exploited and adapted to the Georgian system



**THANK YOU  
FOR  
YOUR ATTENTION**

**GSE  
THE ENERGY  
OF THE PRESENT**

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