

**The role of policies and
agencies in the energy
transition**

-

**The Italian Experience
(Gestore dei servizi
energetici)**

SUSTAINABLE ENERGY WEEK – Exchange of experiences on how to increase the uptake of renewable energy – Case studies for a dedicated energy efficiency and renewable energy agency in Georgia

Alberto Biancardi – GSE

- **Preliminary remarks**
- **Why an energy-climate agency can be useful**
- **The Italian Incentive System (overview)**
- **The GSE Group and its main activities**
- **Conclusions**

Preliminary remarks

The **role of policies** is, basically, to **identify the tools** needed to achieve pre-defined objectives

Some useful/necessary **features**:

- ✓ efficiency
- ✓ fairness
- ✓ reasonable risk allocation
- ✓ stakeholders' engagement / trust
- ✓ transparency
- ✓ stability

Typically, the **agency** has the **role of supporting** investors, local authorities, institutions and all stakeholders in the **implementation of policies**

These **two roles** must be **played** in a context where:

- ✓ Action in **urgently needed**
- ✓ Action must be taken as **uniformly** as possible

Climate change is a **very serious problem** that requires **effective** responses

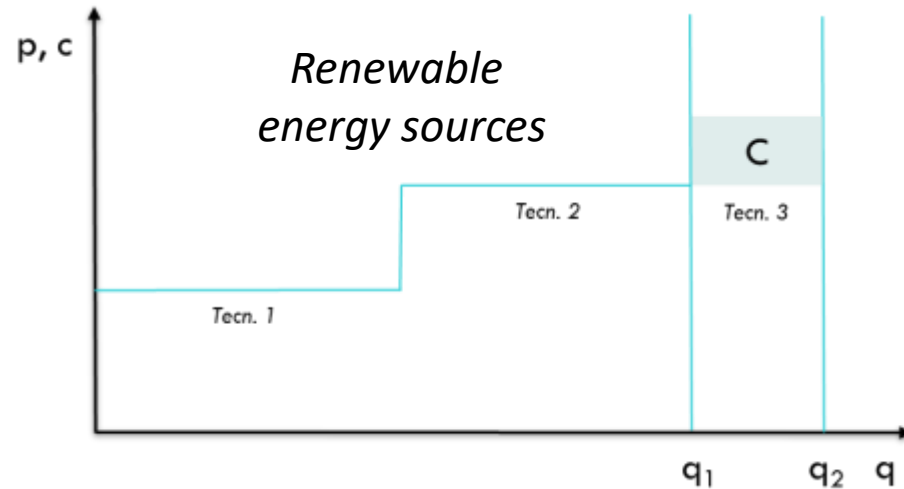
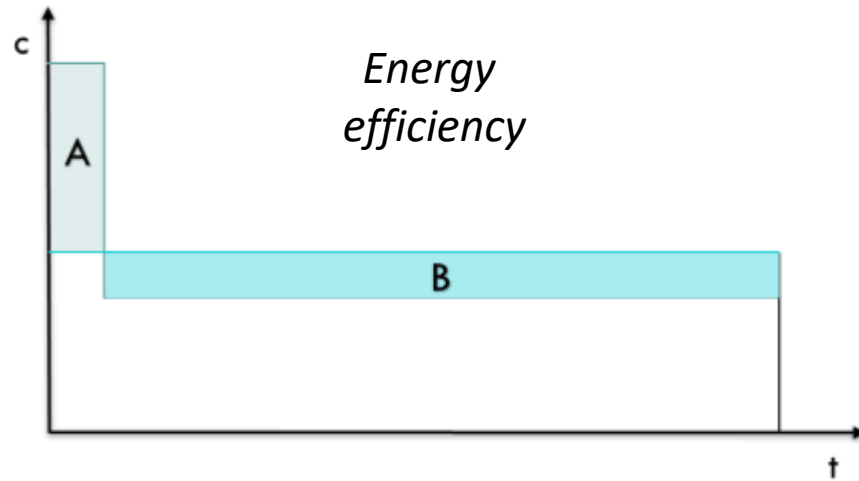
Climate change must be tackled **by all countries, regardless** of their level of **development** as well as individual **institutional context**

AGENDA

- Preliminary remarks
- Why an energy-climate agency can be useful
- The Italian Incentive System (overview)
- The GSE Group and its main activities
- Conclusions

Why an energy-climate agency can be useful

The two typical situations



Market failures

- Information
- Externalities (positive)

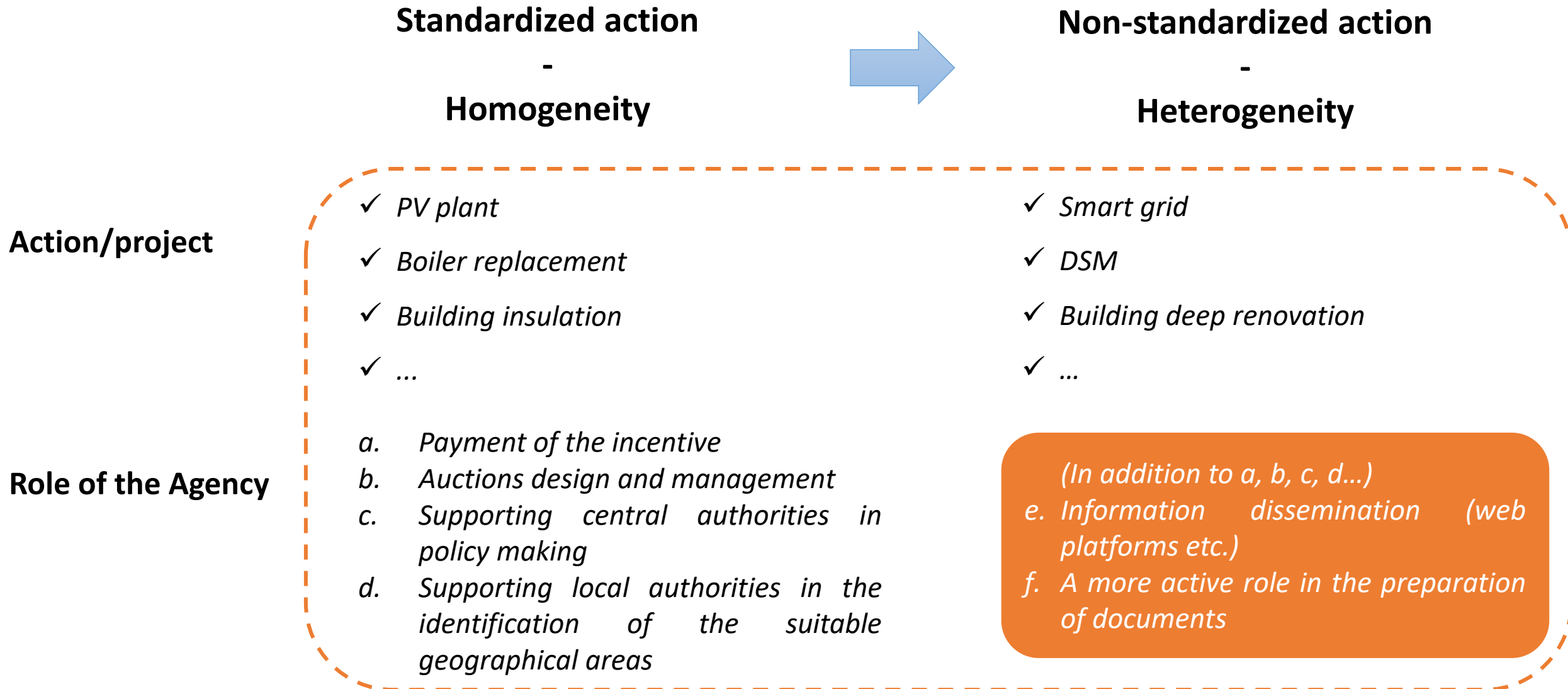
Other barriers

- Cognitive bias
- Option-to-wait effect

Tools

- Certificates (quota systems)
- Tariffs (price systems)
- Auctions
- Standards / Obligations

Why an energy-climate agency can be useful



AGENDA

- Preliminary remarks
- Why an energy-climate agency can be useful
- The Italian Incentive System (overview)
- The GSE Group and its main activities
- Conclusions

Main scenario indicators and targets on energy and climate for 2030 (PNIEC 2024)

	Unit of measure	Collected data	PNIEC 2024: Reference scenario	PNIEC 2024: Policy scenario ¹	FF55 REPowerEU goals
		2022	2030	2030	2030
Greenhouse gas emissions and absorptions					
GHG reduction vs 2005 for all plants bound by ETS regulation	%	-45%	-58%	-66%	-62% ²
GHG reduction vs 2005 for all ESR sectors	%	-20%	-29,3%	-40,6%	-43,7% ^{3, 4}
GHG emissions and removals from LULUCF	MtCO ₂ eq	-21,2	-28,4	-28,4	-35,8 ³
Renewable Energy					
Share of RES energy in gross final energy consumption (RED 3 calculation criteria)	%	19%	26%	39,4%	38,7%
Share of RES energy in gross final energy consumption in transport (RED 3 calculation criteria)	%	8%	15%	34%	29% ⁵
Share of RES energy in gross final consumption for heating and cooling (RED 3 calculation criteria)	%	21%	24%	36%	29,6% ³ - 39,1%
Share of RES energy in final consumption of the electricity sector	%	37%	53%	63%	not expected
Share of hydrogen from RES in total hydrogen used in industry	%	0%	4%	54%	42% ³
Energy efficiency					
Primary energy consumption	Mtep	140	133	123	111
Final energy consumption	Mtep	112	111	102	93
Cumulative annual savings in final consumption through mandatory energy efficiency schemes	Mtep	3,8		73,4	73,4 ³

¹. Scenario built considering the measures planned in June 2024

². binding only for overall emissions at European Union level

³. binding

⁴. binding not only for 2030 but for the entire period from 2021 to 2030

⁵. binding for economic operators

https://www.mase.gov.it/sites/default/files/PNIEC_2024_revfin_01072024%20errata%20corrigere%20pulito.pdf

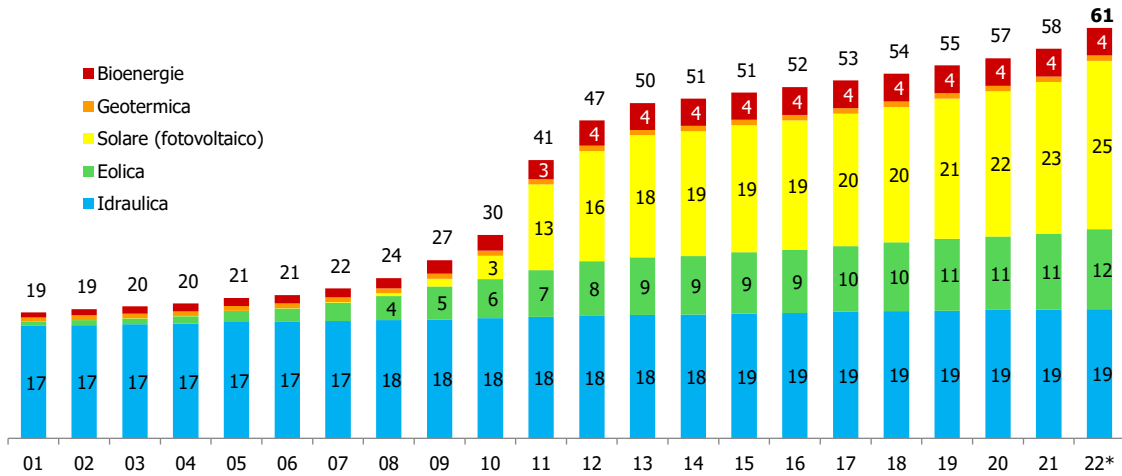
THE ITALIAN RENEWABLE ENERGY DEVELOPMENT

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]

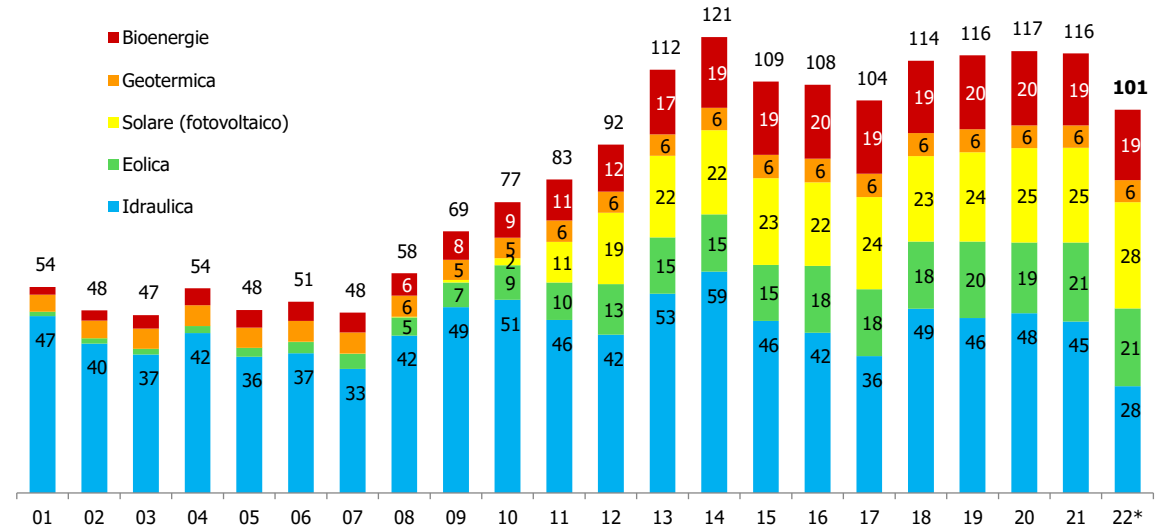


Fonte: TERNA-GSE

In **2022, 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.

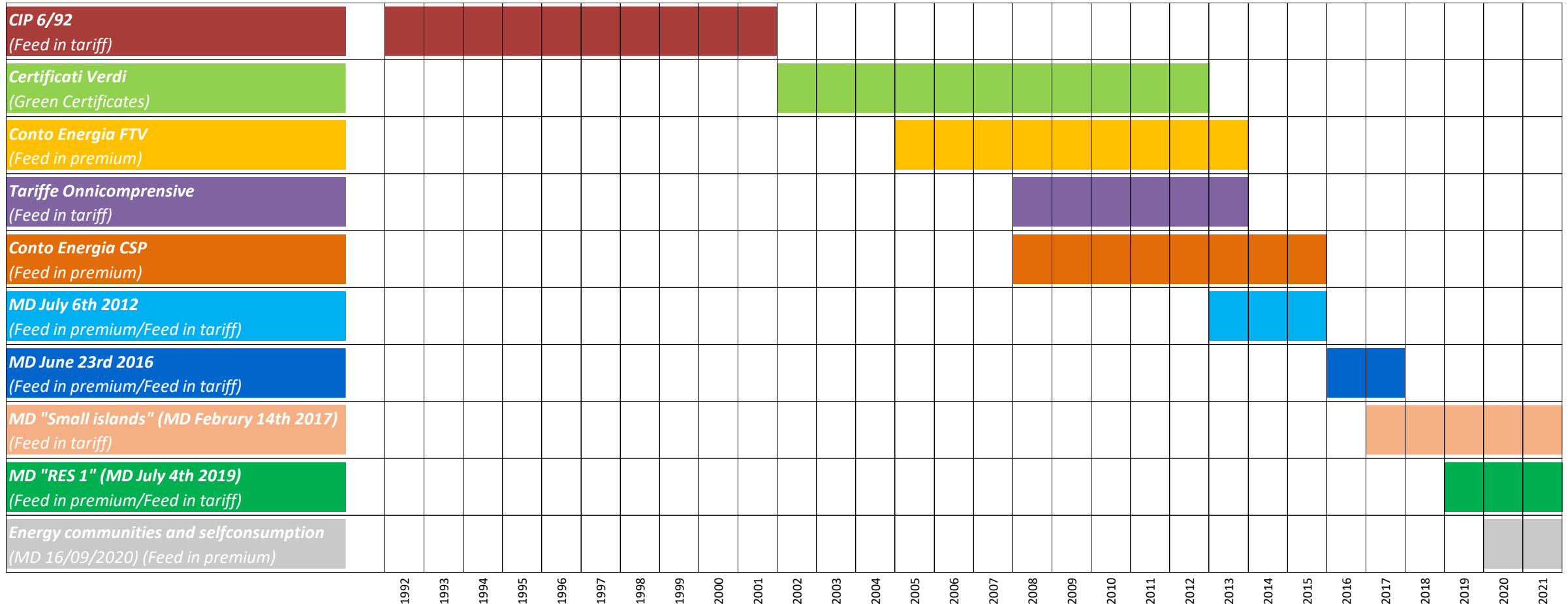
Gross production of electricity production plants powered by renewables [TWh]



Fonte: TERNA-GSE

ITALIAN RES-ELECTRICITY SUPPORT SCHEMES

- Several incentive mechanisms have been deployed to support RES power plants evolution
- From 2012 support schemes were more based on **competitiveness**, through the introduction of auction and registries



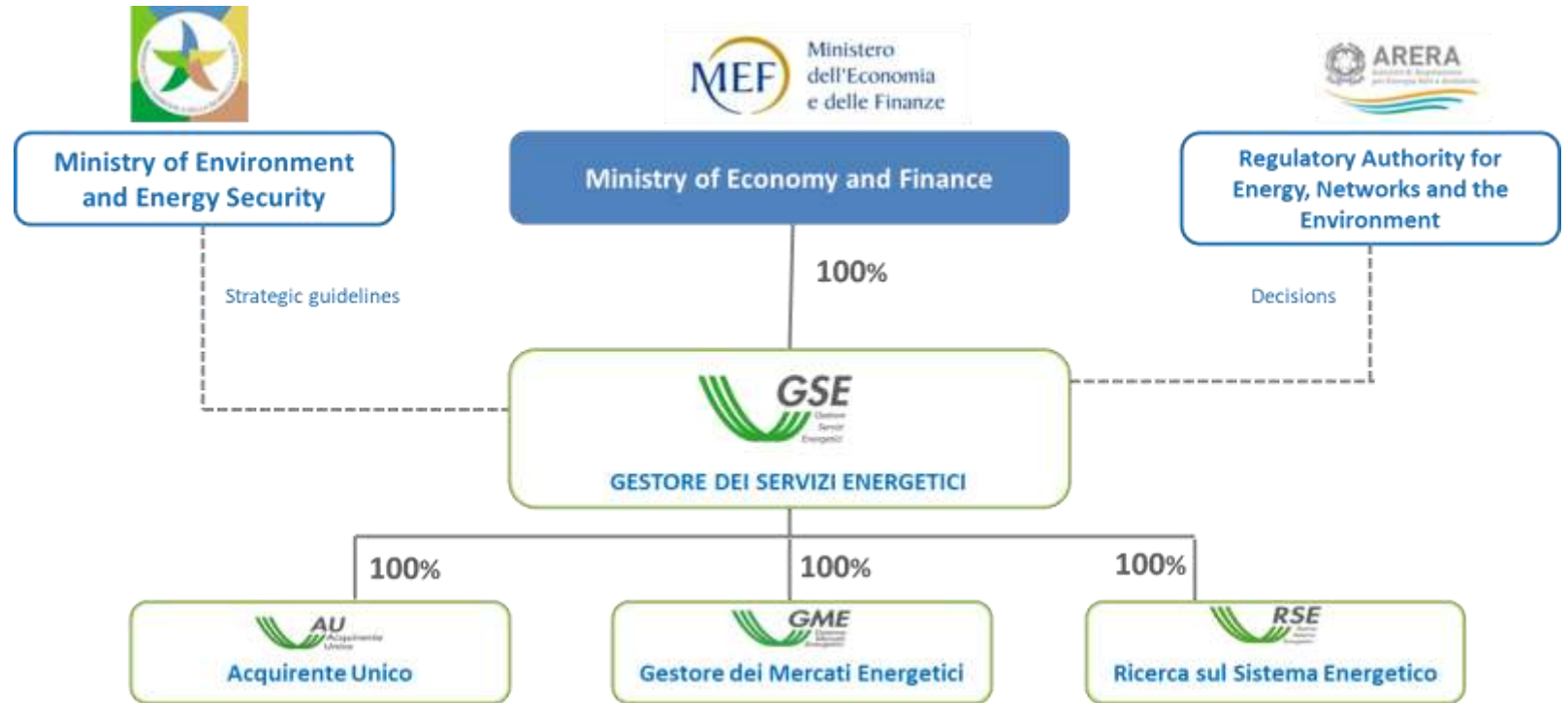
AGENDA

- Preliminary remarks
- Why an energy-climate agency can be useful
- The Italian Incentive System (overview)
- The GSE Group and its main activities
- Conclusions

THE GSE GROUP

Our Mission is to Promote Sustainable Development

Italy has invested in the Promotion of Environmental Sustainability and in the transition to Low Carbon economy



GSE is the Italian Implementing Agency for Energy Sustainability

€12.06 billion group turnover in 2022

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

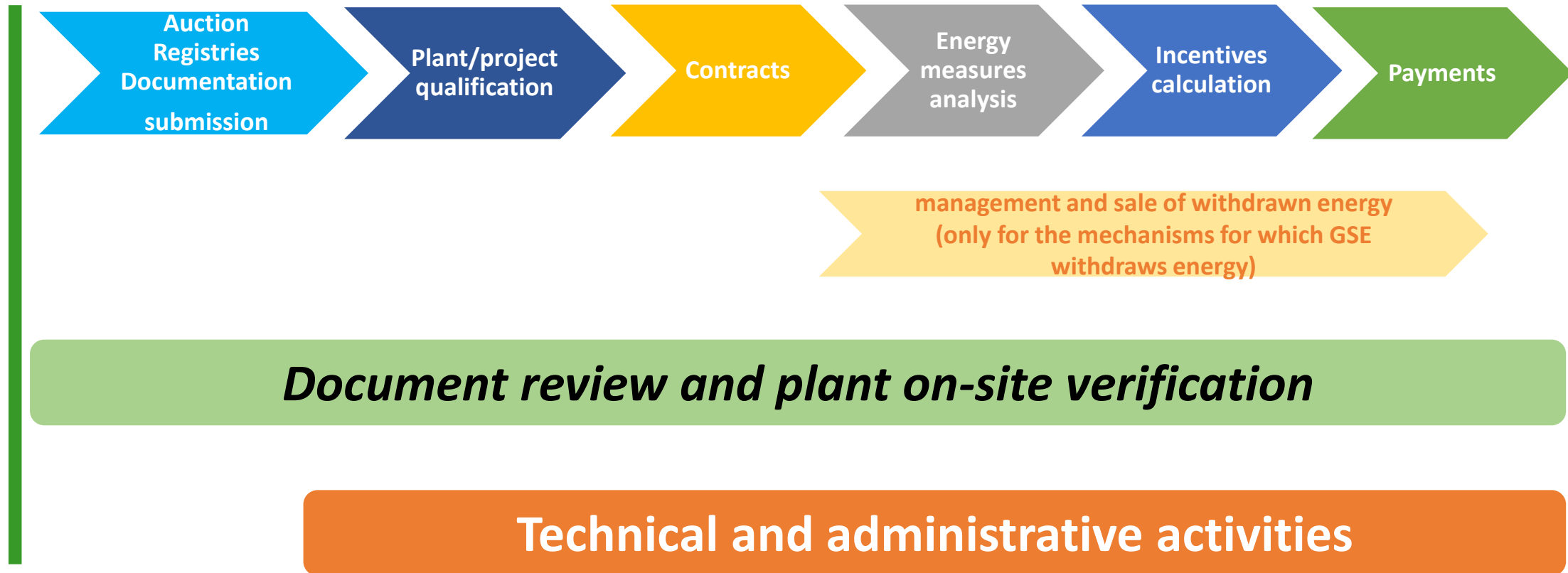


INSTITUTIONAL AND TECHNICAL SUPPORT ACTIVITIES

- **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



Document review and plant on-site verification

Technical and administrative activities

AGENDA

- Preliminary remarks
- Why an energy-climate agency can be useful
- The Italian Incentive System (overview)
- The GSE Group and its main activities
- Conclusions

Conclusions*

- ✓ An energy-climate **agency** can be **useful** in the **enforcement** of a regulatory system
- ✓ To this end, its main task is **to support** central and local authorities, as well as the operators
- ✓ The **Italian** regulatory and institutional system of climate-energy sectors, like those of the other **EU Member States**, has gained a deep **experience**, as well as a lot of **information**
- ✓ In the international contexts, **GSE operates with the aim of sharing its experience and knowledge**
- ✓ Among other things, this sharing is **also very useful to GSE itself and to the Italian system**, because it provides an opportunity to **verify**, for example, the functioning of similar instruments applied in **different institutional contexts**

The challenge of climate change must be tackled with joint actions

() The views expressed do not necessarily reflect the views of the United Nations*

**THANK YOU
FOR
YOUR ATTENTION**

alberto.biancardi@gse.it

**GSE
THE ENERGY
OF THE PRESENT**

THE VIEWS EXPRESSED ARE THOSE OF MR. ALBERO BIANCARDI (GSE) AND
DO NOT NECESSARILY REFLECT THE VIEWS OF THE UNITED NATIONS.