PPA Committee

Shaping Italian PPA Market

Virginia Canazza ref4e

RE-Source 2019
European platform for corporate renewable energy sourcing
2-3 October Amsterdam

Organised by: SolarPower Europe, Wind EUROPE

In collaboration with: RE100, CDP, wbcsd

PPA Committee main goals

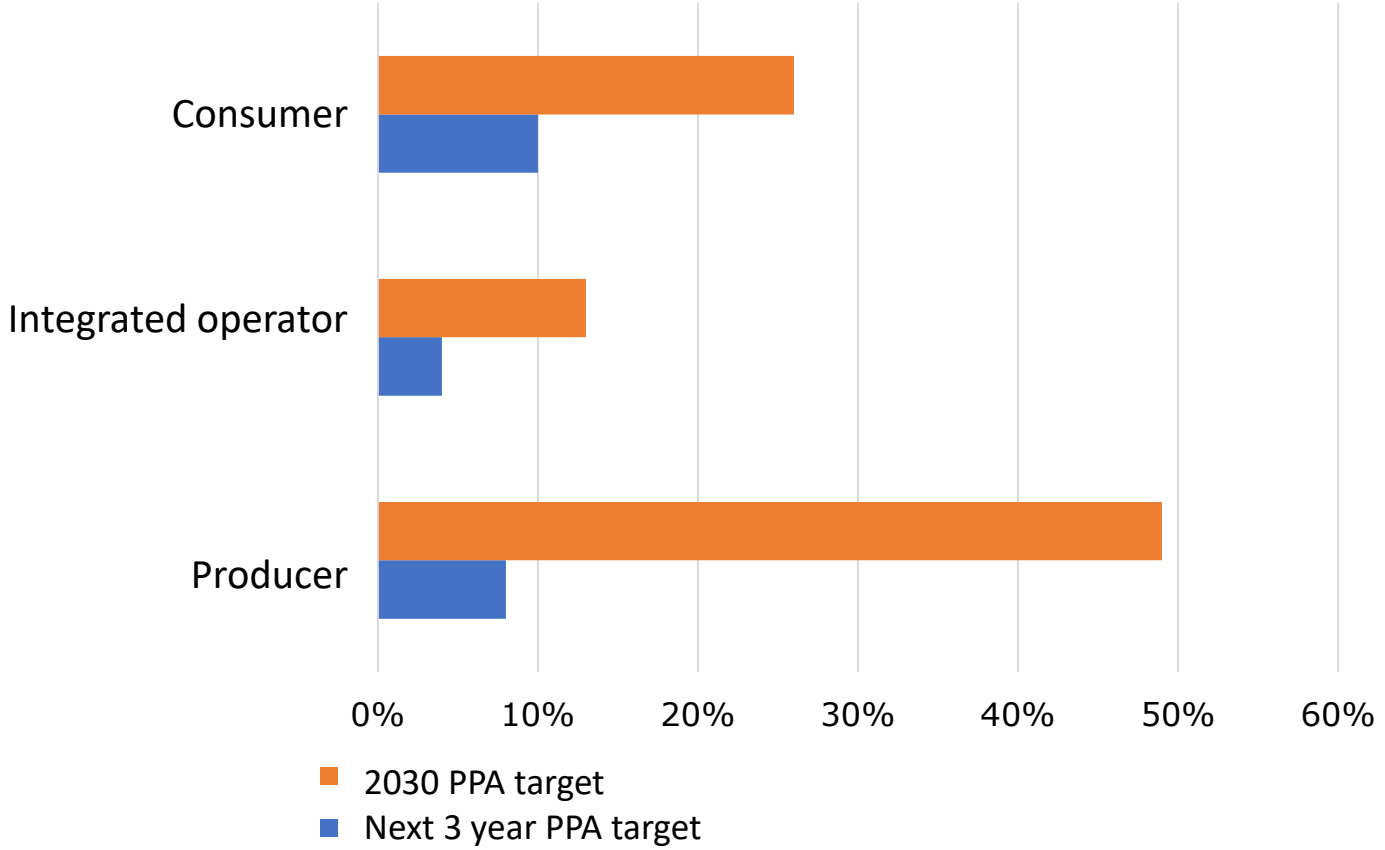
- Review PPA perception and experiences from participants
- Understand the risks and opportunities offered by the contractual instrument for the different market players
- Identify a range of best practices to refer to or to meet counterparties' expectations
- Identify Italian market possible barriers for PPA diffusion
- Review possible actions to remove possible barriers
- Make proposals shared by the *Committee* itself

The *PPA Committee* has verified the existence of a community of interests and a widespread consensus around PPA as a market tool for the development of renewable capacity

Operators' expectations of the use of PPA in the short and long term

Questionnaire

Target % of electricity volumes to be covered by PPA for

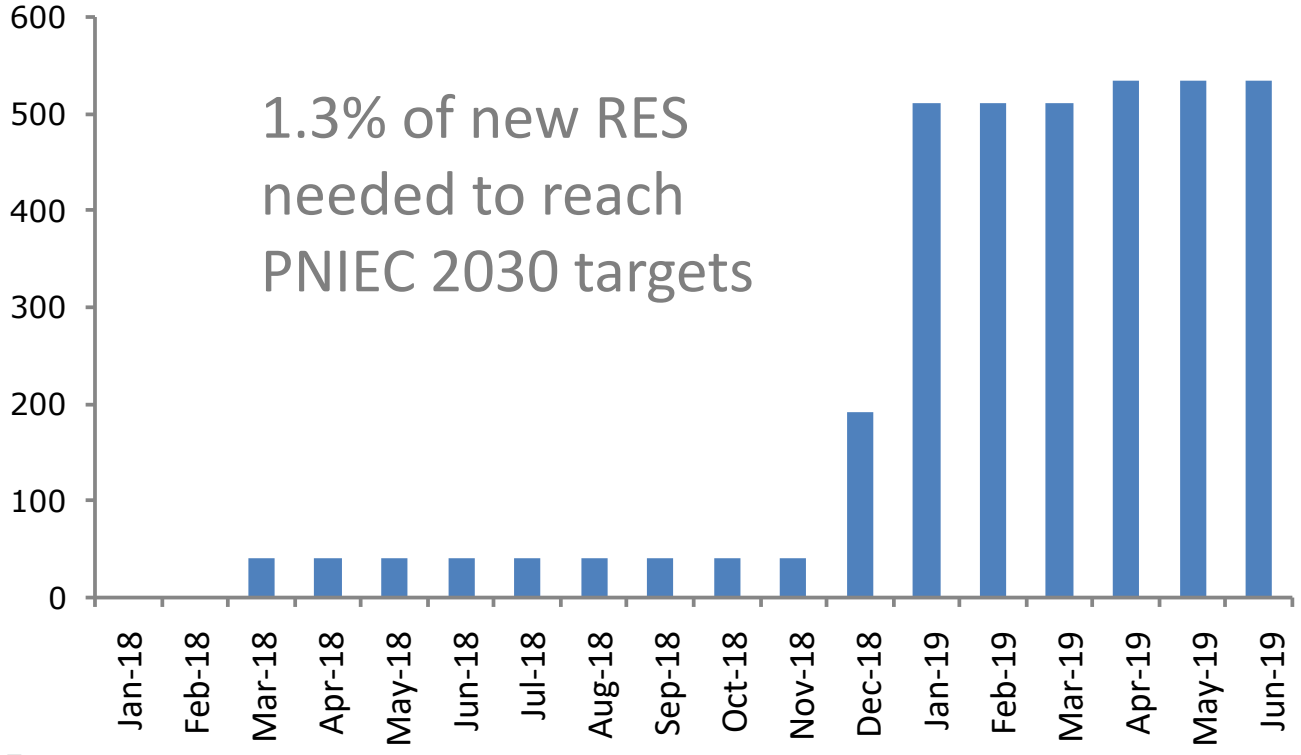


The prevailing trend identifies as more effective the Corporate PPA or in any case a PPA of a physical nature in which there is an off-taker aggregator of end consumers (trader or utility)

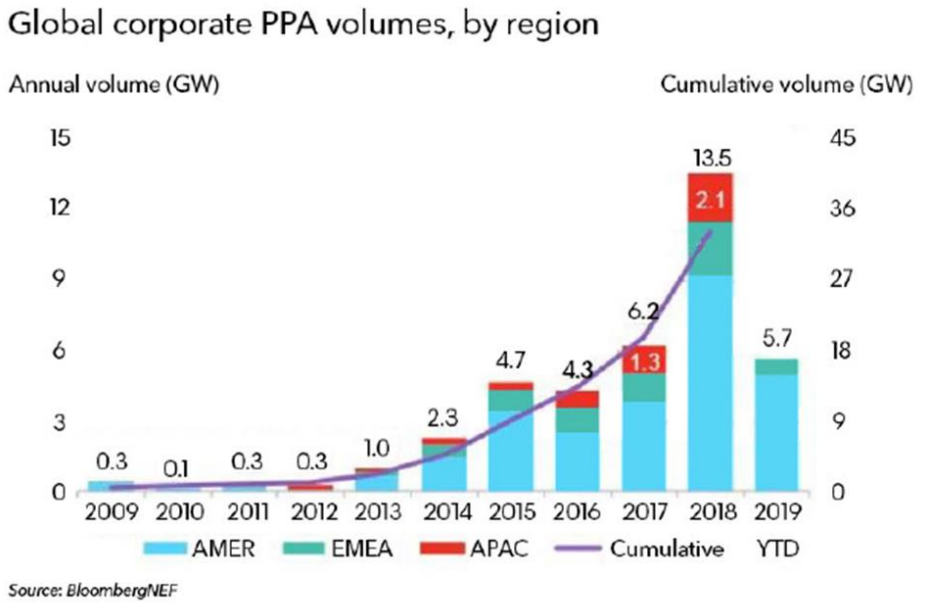
About 500 MW of PPA signed (July 2019) in Italy, about 4% of PPA in the world

Evolution of the contracted power through PPA in Italy

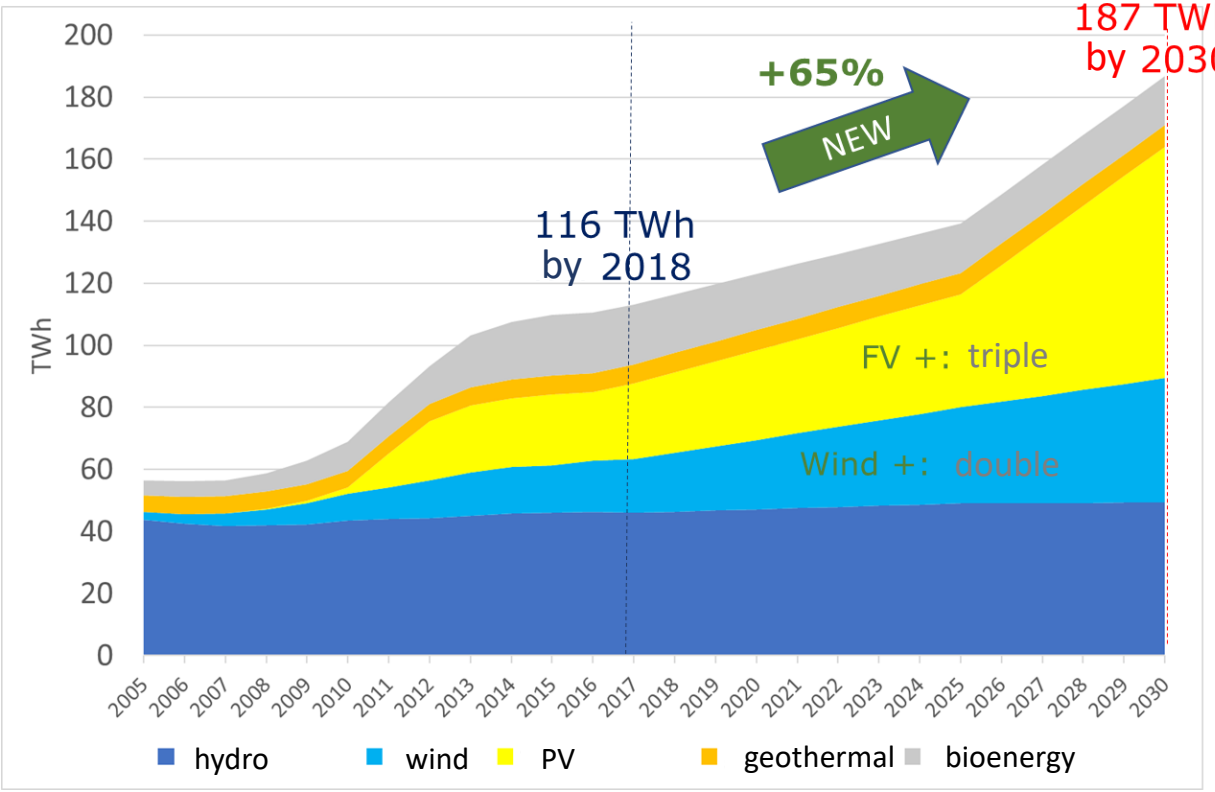
(MW)



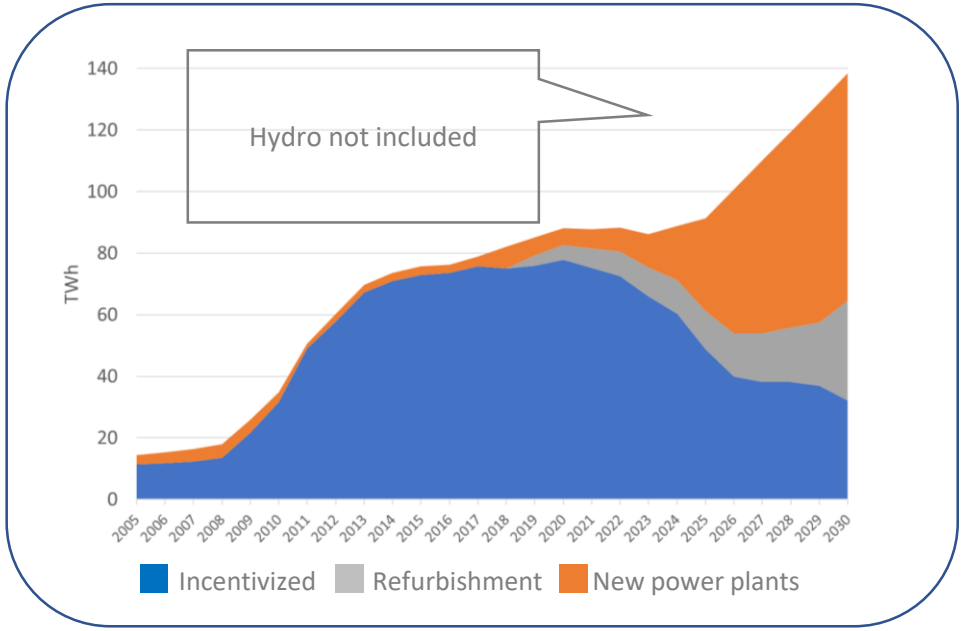
Source: REF-E elaborations



Offer: PNIEC 2030 +71 TWh vs 2018, 100 TWh renewable energy on the market

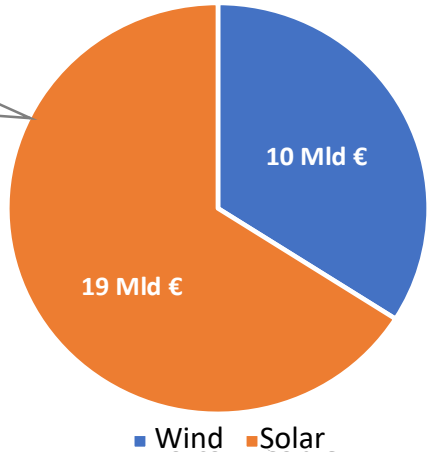


Source: REF-E elaborations based on data from PNIEC, GSE. Normalized Yearly producibility



Potential turnover for new investments

without including the refurbishment of existing installations and the development of network infrastructure and storage



estimate based on average capex as at 2019

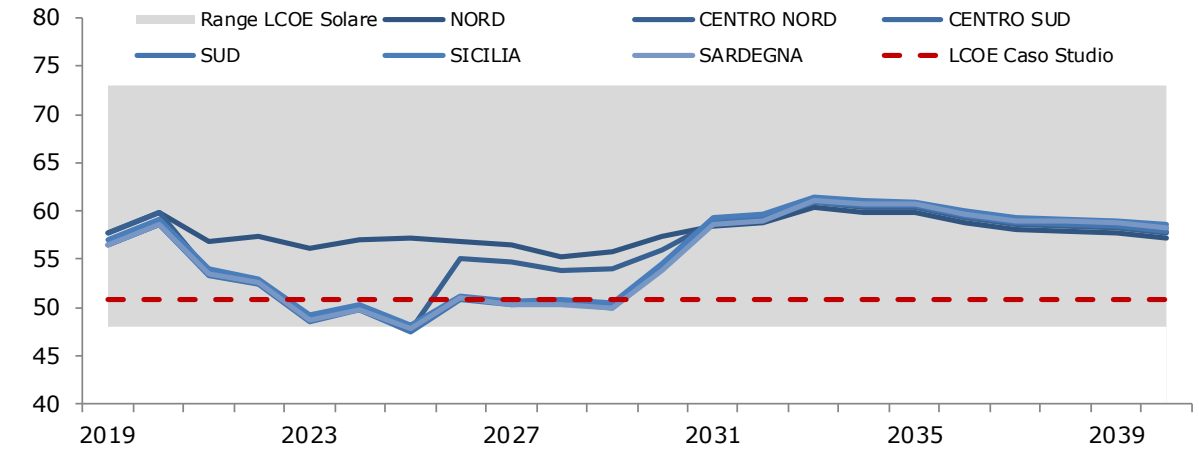
RE-Source 2019
European platform for corporate renewable energy sourcing
2-3 October Amsterdam

ref4e

Market conditions are in place for the development of PPA as a model for energy trading and growth of RES

CAPTURED PRICES SCENARIO REFERENCE E RANGE LCOE SOLARE

(€/MWh)

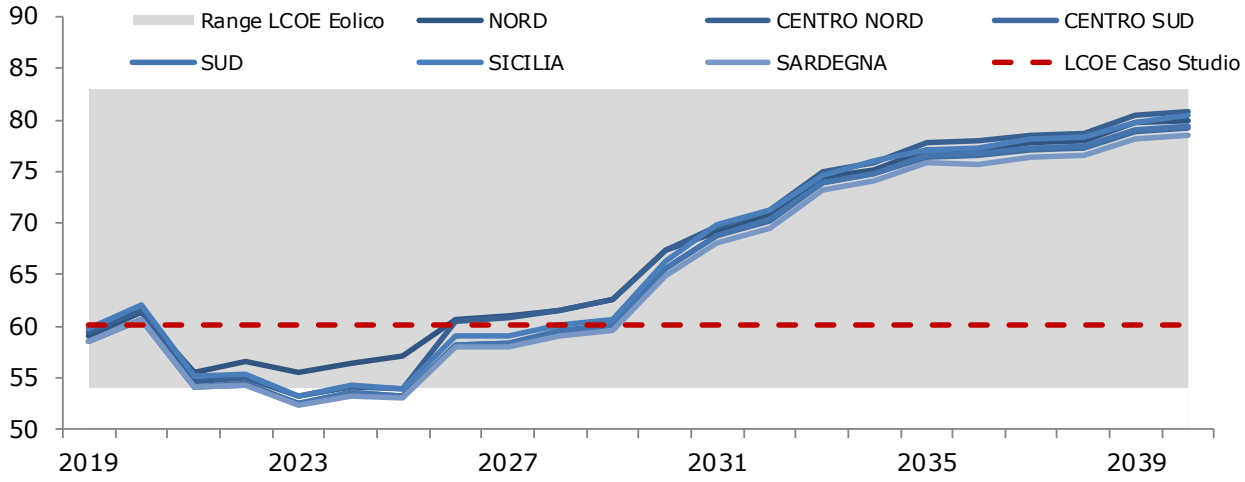


Source: REF-E forecasts

- *Market parity* under consolidation for PV and wind power
- Potential interest of end users in subscribing to PPAs against the expected rising electricity price in the long term

CAPTURED PRICES SCENARIO REFERENCE E RANGE LCOE EOLICO

(€/MWh)



Source: REF-E forecasts

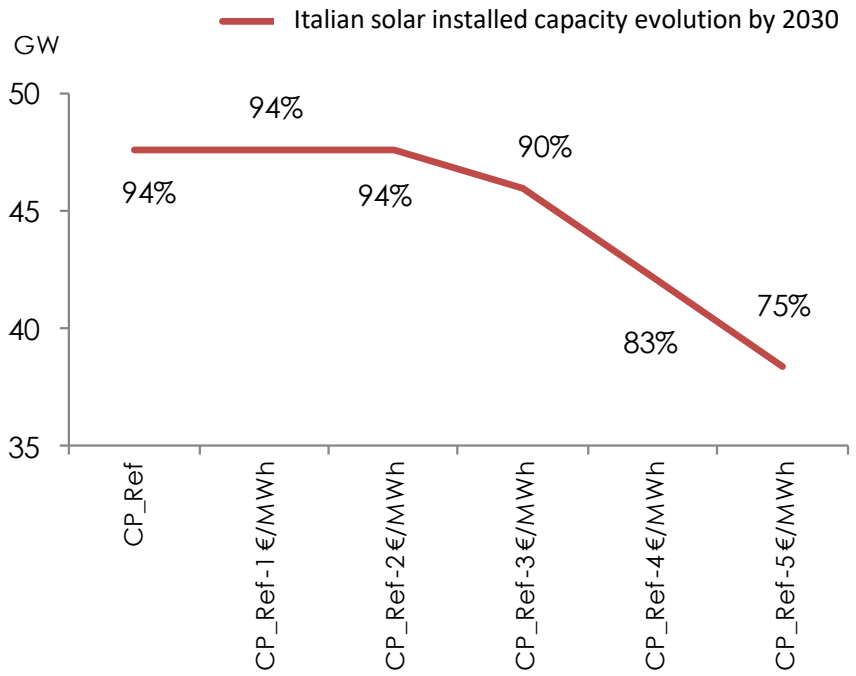
Potential countereffects:

- "cannibalization" effect
- Commodity trends, particularly in the ETS
- Transmission capacity cost risk
- imbalance charges

Bearish effects on the market could limit the development of new capacity

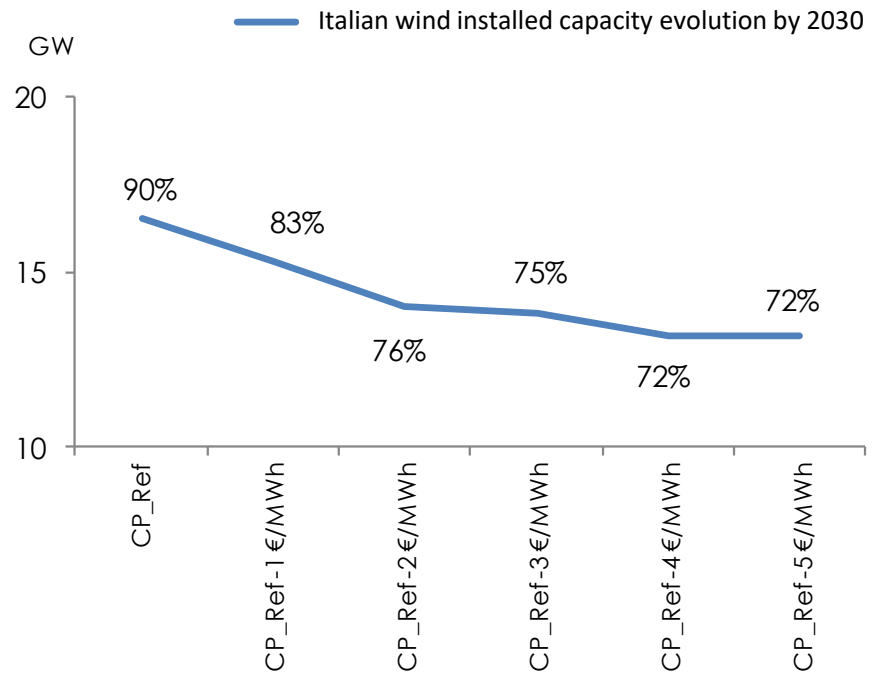
EVOLUTION OF SOLAR AND WIND INSTALLED CAPACITY AS A FUNCTION OF THE LEVEL OF CAPTURED PRICES

The values shown in the graph express the % of achievement of the PNIEC objective



Source: REF-E elaborations

- **With reference trends, 35 GW are developed at 2030 compared to the 40 GW required for the PNIEC targets.**
- **With a lower trend of 5€/MWh 20 GW are developed**



Source: REF-E elaborations

Average PUN 2019-2030 baseline scenario: 61.7 €/MWh (real terms)

Theoretical demand 2030: 70-110 TWh - enabling role of consortia to limit exposure to competition and counterparty risk

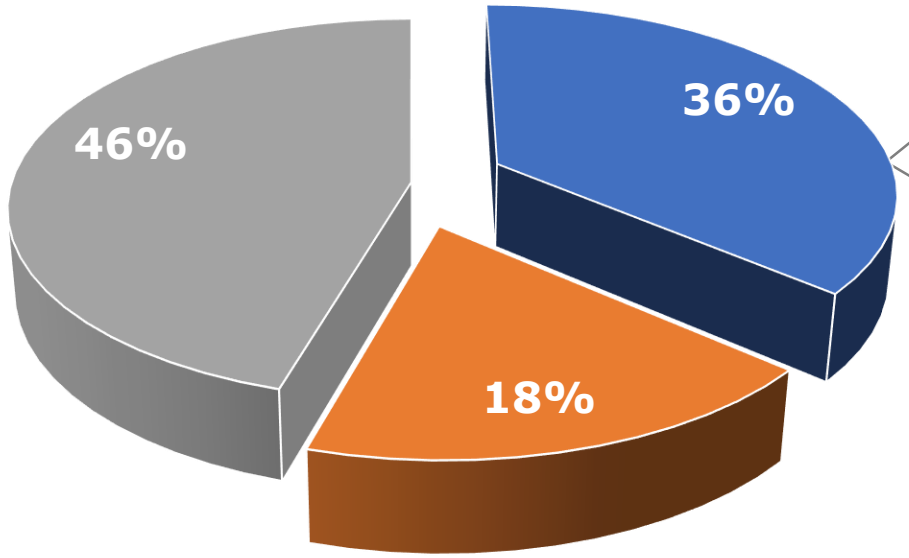
Utilities/traders

- have adequate expertise and portfolios for risk management
- End customers in LV with right of withdrawal but low exposure to the energy component

Public demand potentially subject to public procurement (also through CONSIP):

- **4.5 TWh PA**
- **6 TWh Public Lighting**

75% of free market sales are for consumers < 100GWh



Source: REF-E elaborations

- Mainly highly fragmented non-core manufacturing industry

Corporate:

- 55% energy intensive: exposure to competition mitigated through consortia
- 15% trade: large consumers on high number of connection points, aggregated by utilities/traders
- 30% communications and transport: concentration in a few companies with limited risk on the final price energy, potential off-takers

Lesson learned from international experience: favourable context elements stimulate the meeting of stakeholders


✓ Increasing cost competitiveness of renewables in relation to market prices


✓ Adequate availability of renewable projects in substantial market parity

✓ Ambitiousness of environmental and decarbonisation objectives at corporate level and imposed at public level


✓ Level of pressure from institutions and stakeholders about these objectives

✓ Motivation of final consumers


✓ Proactivity and support of governmental/institutional bodies


✓ Stability and transparency of the regulatory environment

✓ Availability of tools to mitigate risks of various kinds


✓ Phase out incentives

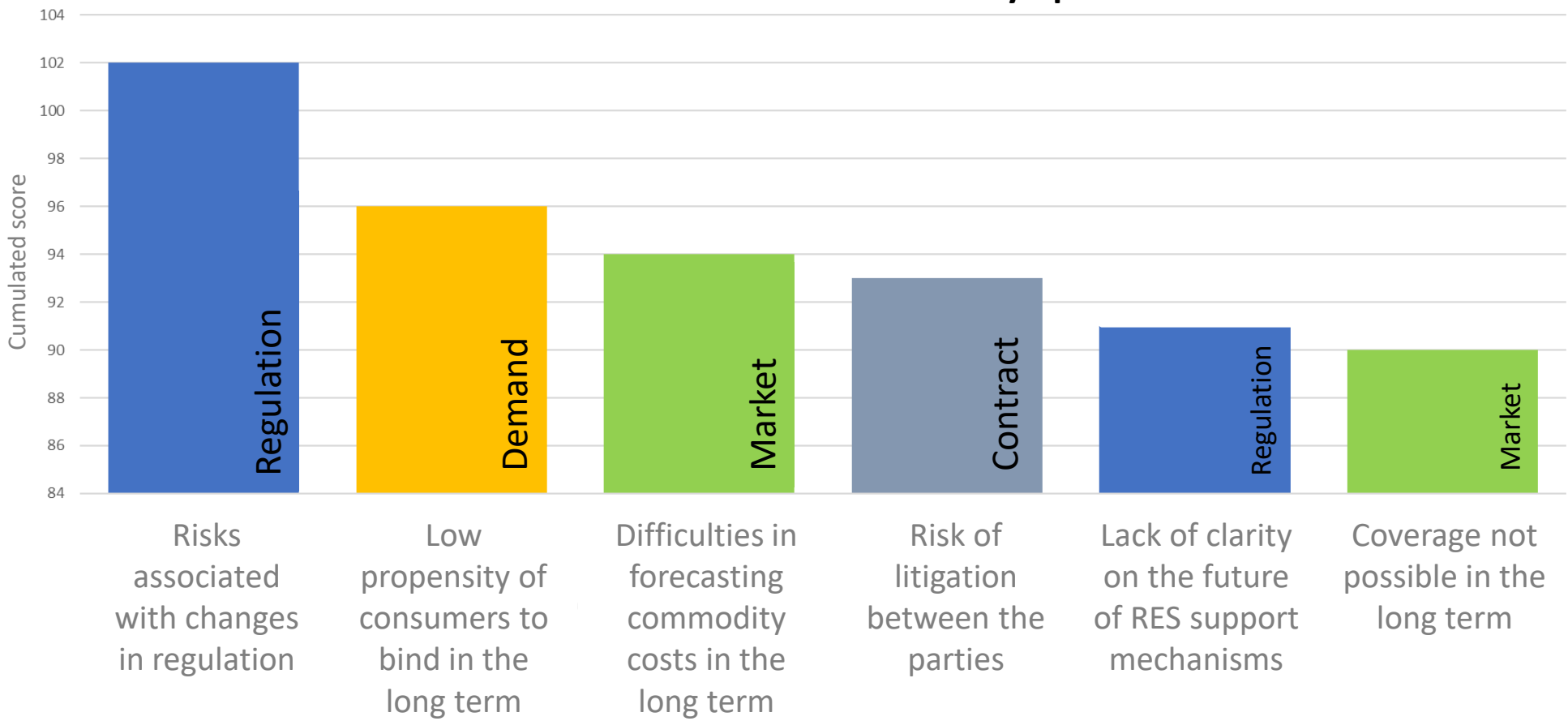

✓ Tax credit


✓ Last resort buyer

Despite favourable fundamentals, barriers and risks persist

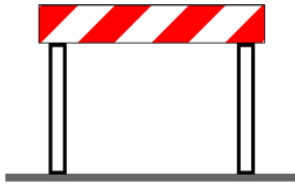
Questionnaire

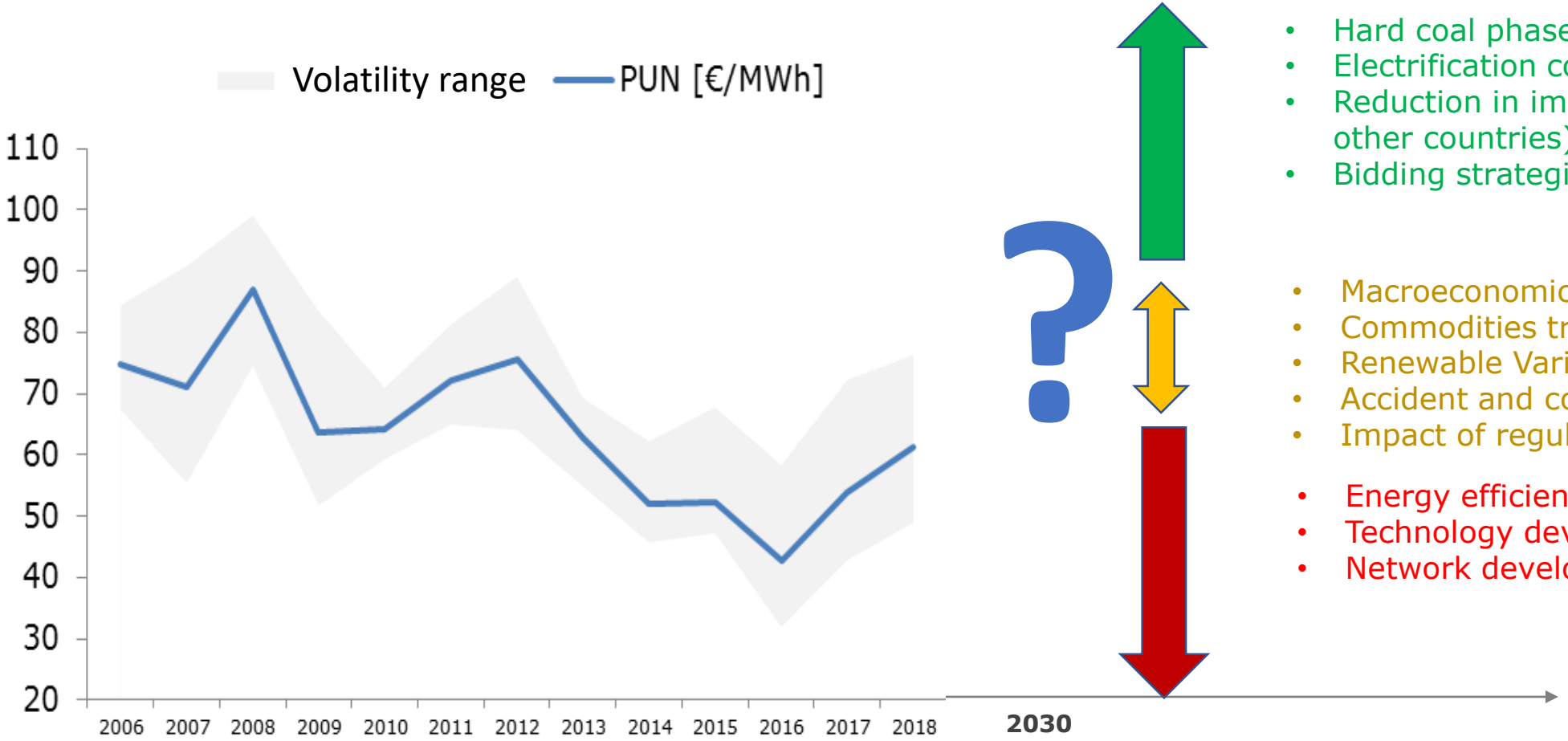
Main barriers identified by operators



Barriers related to authorization processes for RES not compatible with the needs of a competitive market

Uncertainty of the future scenario: complexity of opposing factors





- Hard coal phase out
- Electrification consumption
- Reduction in imports (energy policies in other countries)
- Bidding strategies

- Macroeconomic drivers and demand
- Commodities trends
- Renewable Variability
- Accident and contingent phenomena
- Impact of regulatory reforms

- Energy efficiency
- Technology development (accumulation)
- Network development

Source: REF-E elaborations on GME data

The use of flexible pricing formulas and best contractual practices allows for an optimal allocation of market risk between counterparties and agreement endurance

- Probability that the PPA will go out of the money during the validity period
- Risk of leakage, triggering greater possibilities of default and compromising bankability requirements

Fixed price

- Adequate only on short deadlines (up to about 5 years)
- On longer contractual deadlines (10 years and more) the fixed price is risky also in consideration of the impossibility of implementing adequate hedging instruments available on the markets

Flexible price

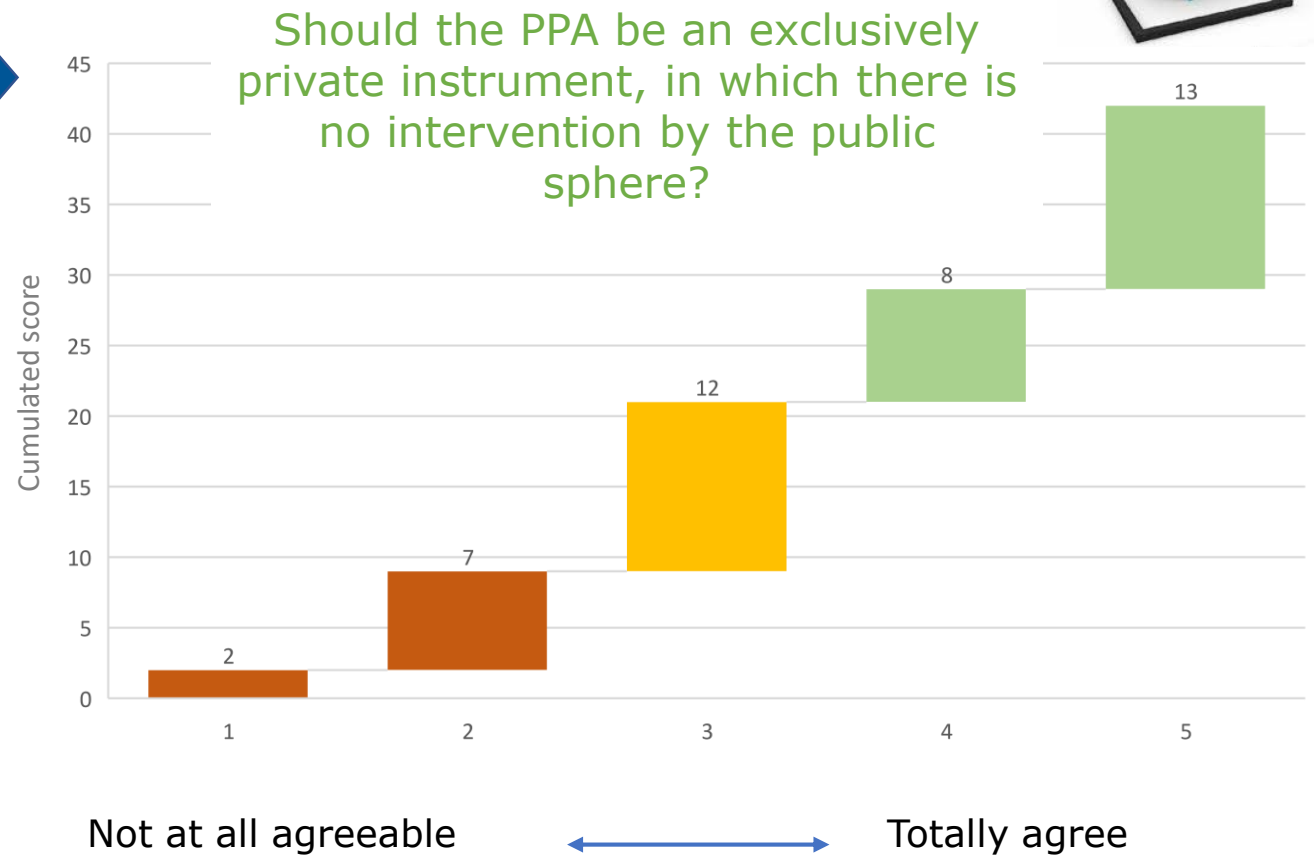
- They can allow for a dynamic rebalancing of opportunities and risks between counterparties in relation to the dynamics that take place in the markets

PPA as a private instrument

Questionnaire

The main orientation is to exclude public intervention to support PPA

- Subscribeable PPA volumes depend on market variables and parties' expectations in the LT
- Option to develop renewable capacity in line with national policy but cannot in itself guarantee the achievement of the objectives of the PNIEC



Shared position within the PPA Committee

Market conditions for the development of PPA are met

- Presence of market parity conditions for renewables
- Quantitatively more and more challenging and unsustainable RES objectives with public intervention

PRIORITY

FIRST STEP: Strengthening of authorisation and market mechanisms

- **efficient and timely authorisation processes**
- **completion of dispatching market reforms, including by fostering storage**
- **acceleration in completing network reinforcements**

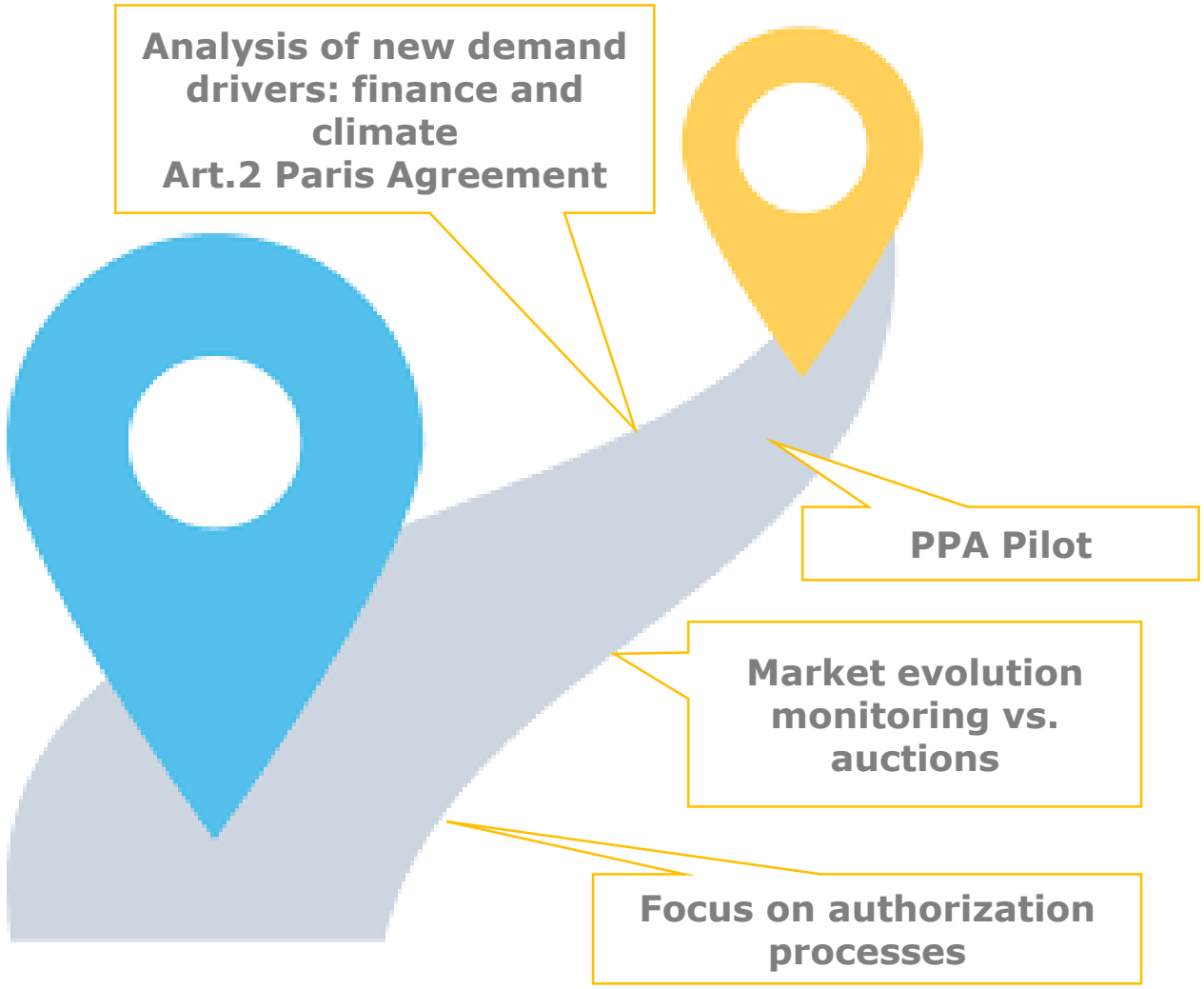
Field experience

EVENTUAL SECOND PHASE: Public intervention in support of PPA

- **Demand incentive**

PPA Committee: not an end, but a new starting point!

- Italian companies are ready to establish themselves as conscious protagonists in the transition process
- PPA, a model for energy trading and growth of RES in the absence of incentives, are now the most appropriate response
- Decision-makers and policy makers can (and must) contribute by ensuring a robust market organisation and efficient authorisation processes
- In a context of certain rules, the market will be able to find contractual forms that establish themselves as best practices, allowing the appropriate distribution of risks and the spread of PPA



Thank you for your attention!

Q&A

virginia.canazza@ref-e.com

REF-E: excellence in energy market

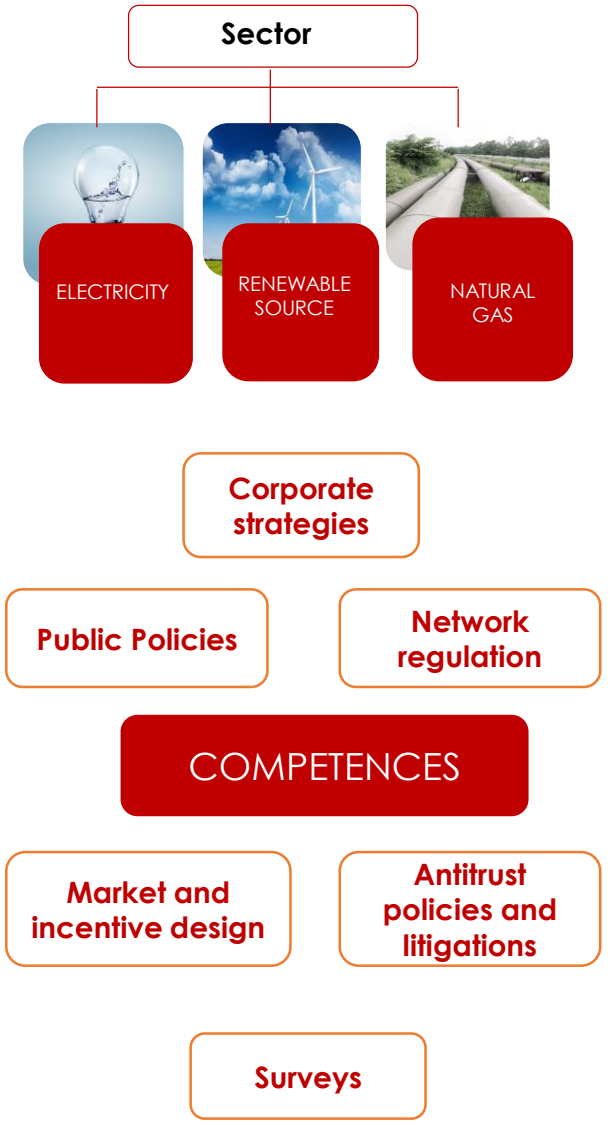
REF-E operates in **energy markets** and provides

- research and customised **consulting services**
- independent **market observatories**
- **training**

It supports companies, institutions, government bodies in their decision making processes

FOUR WORDS FOR REF-E

- for **economics**: independent analysis, underpinned by solid understanding of the fundamentals
- for **engineering**: technical expertise, to handle complex modelling
- for **energy**: specialist expertise and up-to-date information on prices, forecast scenarios, regulations and competition for a sector that is constantly changing
- for the **environment**: policies, products and services that are always compliant with the latest regulatory developments, to meet the challenges of the future



REF-E SERVICES

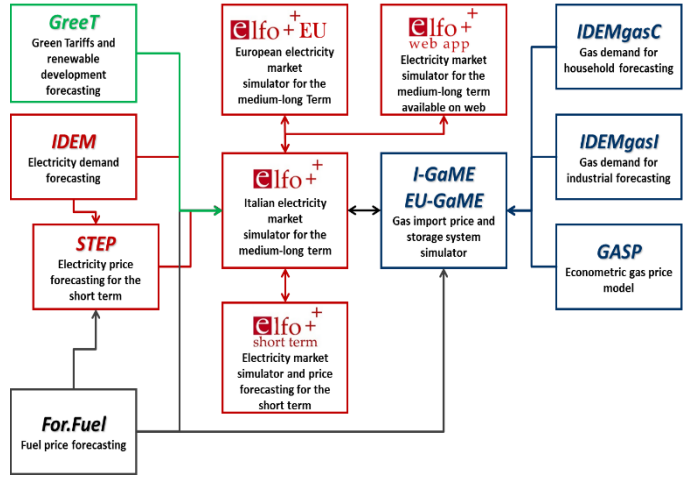
In-depth understanding of all energy sectors enables **REF-E** researchers to offer a wide range of services and products.

- **REF-E Products** to solve operational and strategic problems are customised to meet client requirements.
- **REF-E Publications** to provide full and constantly up-to-date technical knowledge, available to everybody
- **REF-E Modeling Tools**, the result of our advanced modeling skills acquired and employed over the years by REF-E professionals, are released on a standard or tailor-made basis.
- **REF-E Databases** allow advanced access to many complex data gathered in the years and constantly updated.

PUBLICATIONS

- **Energy Observatory Newsletter**, a monthly in-depth focus on regulatory changes, tariff and price trends, corporate strategies.
- **Energy Outlook**, a four-monthly forecasting periodical for the electricity and the gas market, based on the Elfo++ model.
- **Energy Report**, an annual report which provides in-depth information on trends and outlooks for electricity, natural gas and renewable power generation sectors.
- **Working Papers**, in depth studies which address current issues in the Italian energy sector, based on the theoretical literature.

FORECASTING MODELS



WE HAVE WORKED FOR …

…and many others!