



KOALA

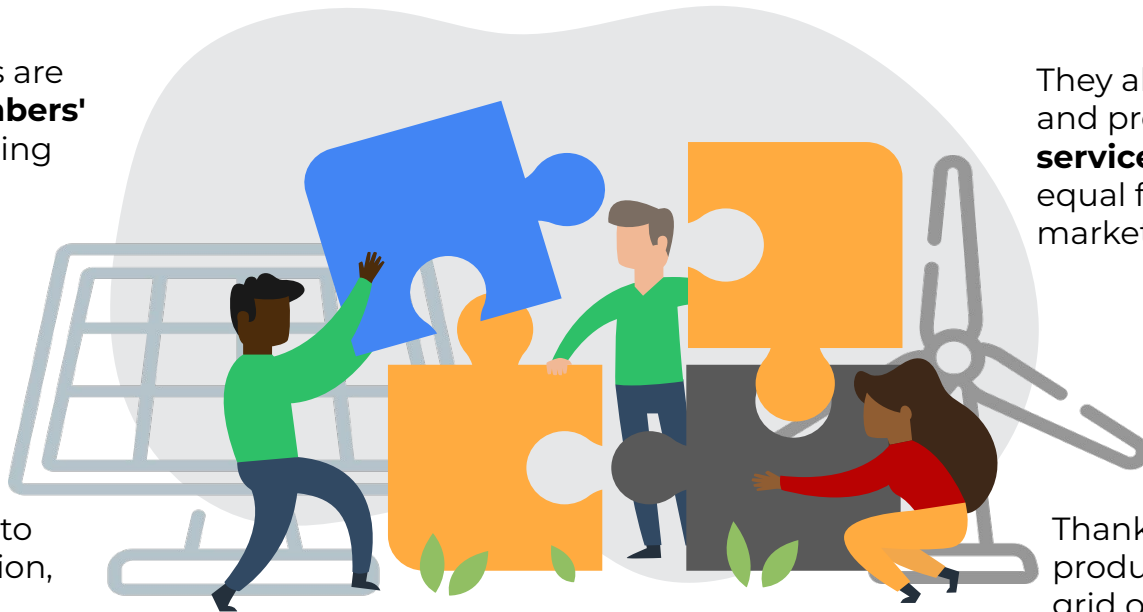
**We want to simplify energy sharing,
making it accessible to everyone**



Energy Communities are here

Thanks to them citizens are becoming **'Active members'** producing and consuming energy collectively...

They empower citizens to drive the energy transition, enhancing **energy efficiency** and **reducing bills...**

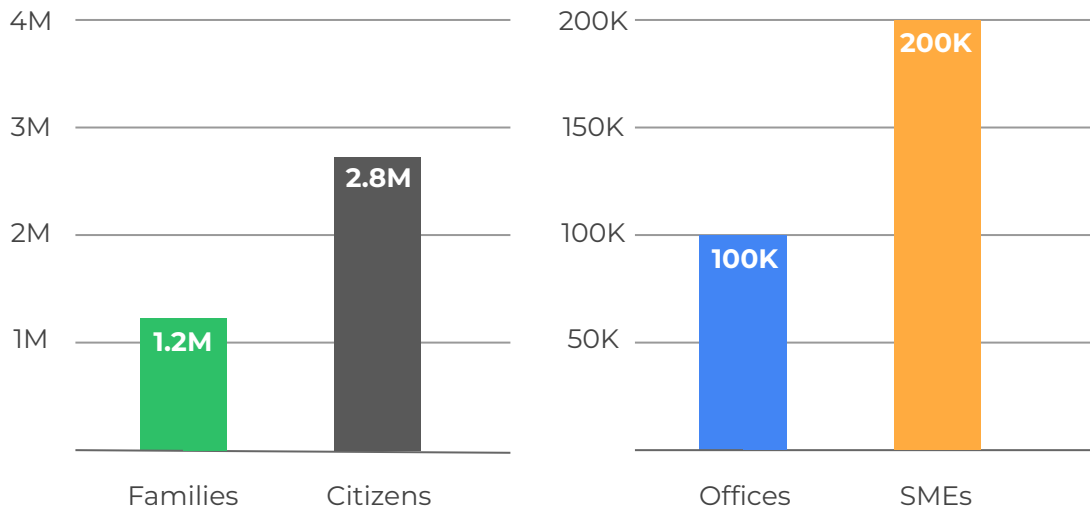


They allow to sell electricity and provide **flexibility services**, participating on equal footing with larger market actors...

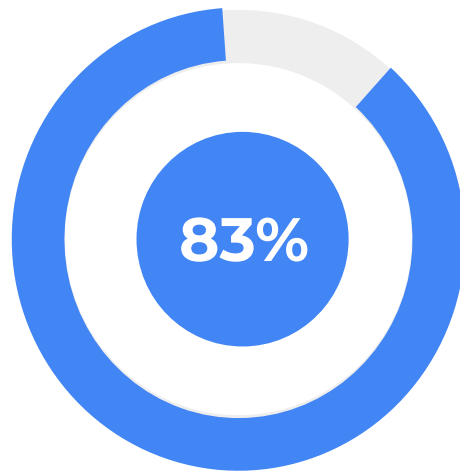
Thanks to the local production, they help the grid operators with the **congestions...**



The **Timing** is perfect



The Italian market of Energy Sharing is about to establish itself, with the spread of over **40.000 RECs by 2026**



Percentage of EU households to contribute to renewable energy production **by 2050**

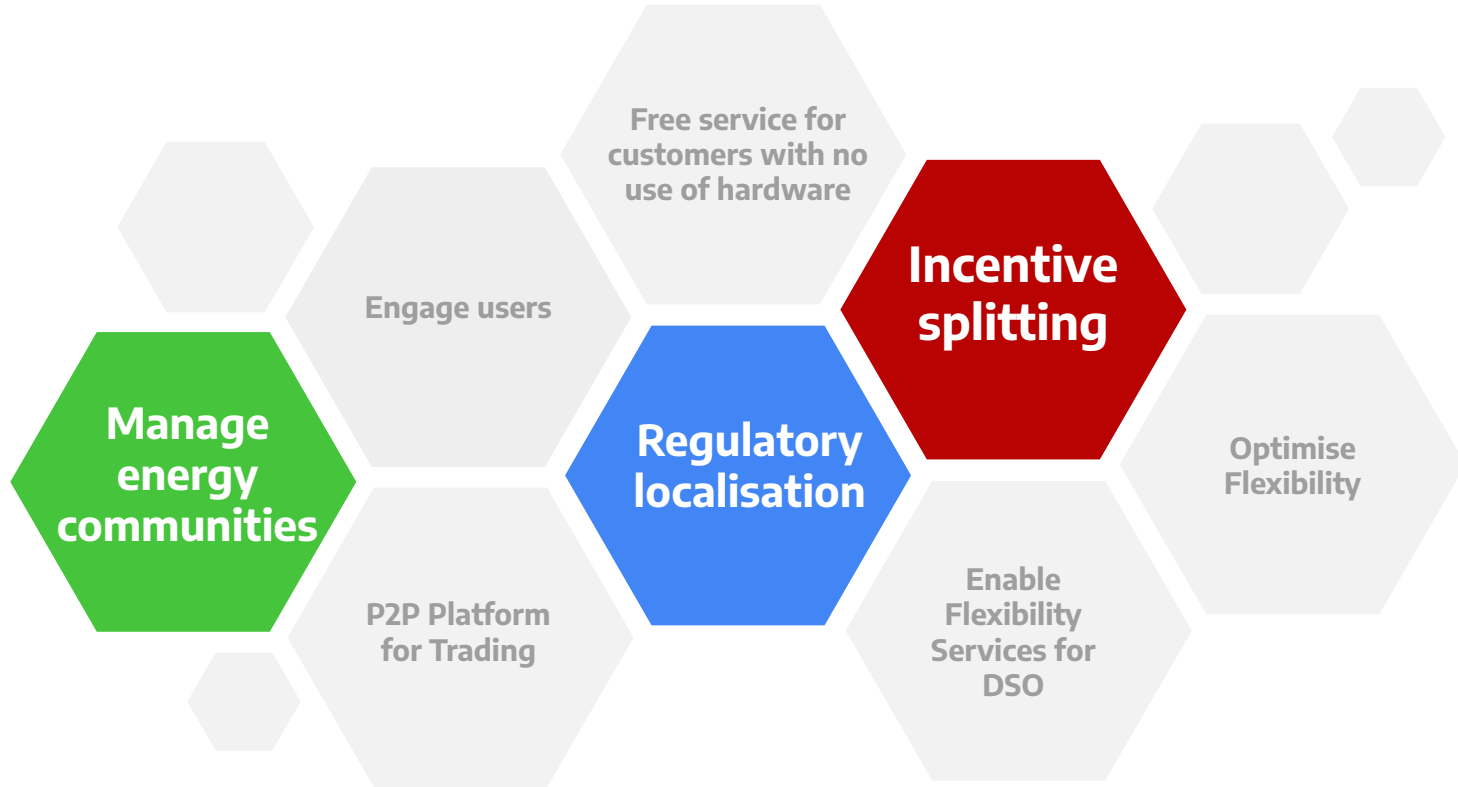


There are still some **issues...**





Other **Attempts** to solve the problem





What is really needed: **Digital Revolution**



One company did it with the **social connections...**

- Captured our social graphs, preferences, and interactions
- Created a digital representation of our social selves
- Enabled new ways to connect, share, and even advertise



Another company did it with the **job market...**

- Mapped our careers, skills, and networks
- Built a digital profile of our professional identities
- Opened doors to opportunities and talent matching



KOALA aims to do the same in the **energy world!**

- Catching energy consumption, production, and preferences
- Creating a verified digital energy profile
- Unlocking **DIGITALIZATION, DEMOCRATIZATION, DEMATERIALIZATION** and **DECENTRALIZATION**



Introducing **EnergyID**

KOALA identifies your unique energetic behavior and combines it with the personal information that characterizes you...

KOALA creates a certified digital energy profile for its users, offering...



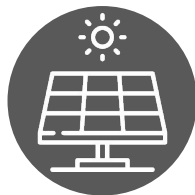
Month Wise
Usage and
Appliance wise
Disaggregation



Community
behaviours
and suggestions



Anomaly and
fault detection
and its
maintenance



Optimal PV
Sizing and
Performance
Monitoring



Energy and
Demand
Prediction





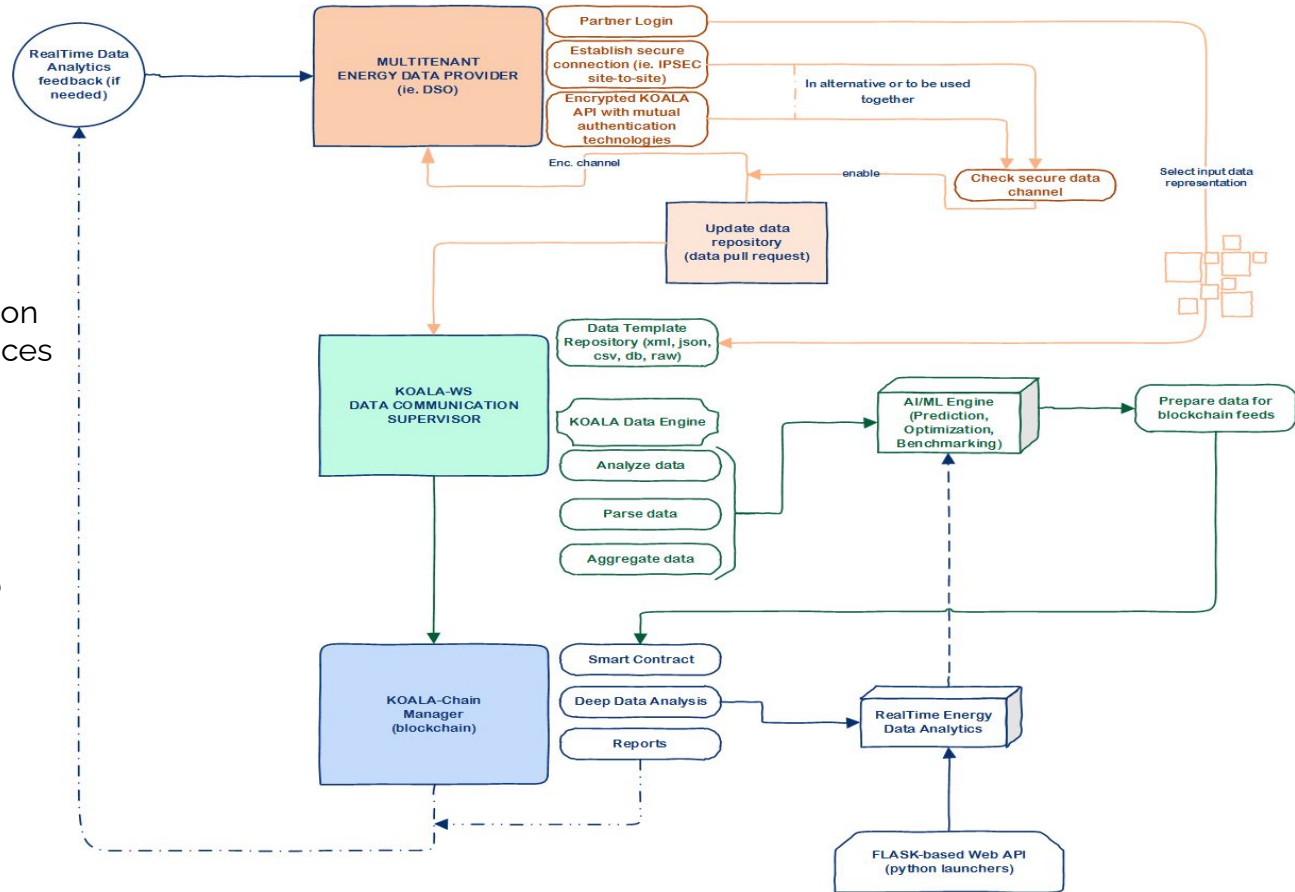
How do we get the data

1. Directly from the DSO

Establish secure communication channel through its Web Services with DSO (IPSEC, sftp, ssh or other secure protocol)

2. Domotic Solution

Usage of the meter in order to get high frequency data





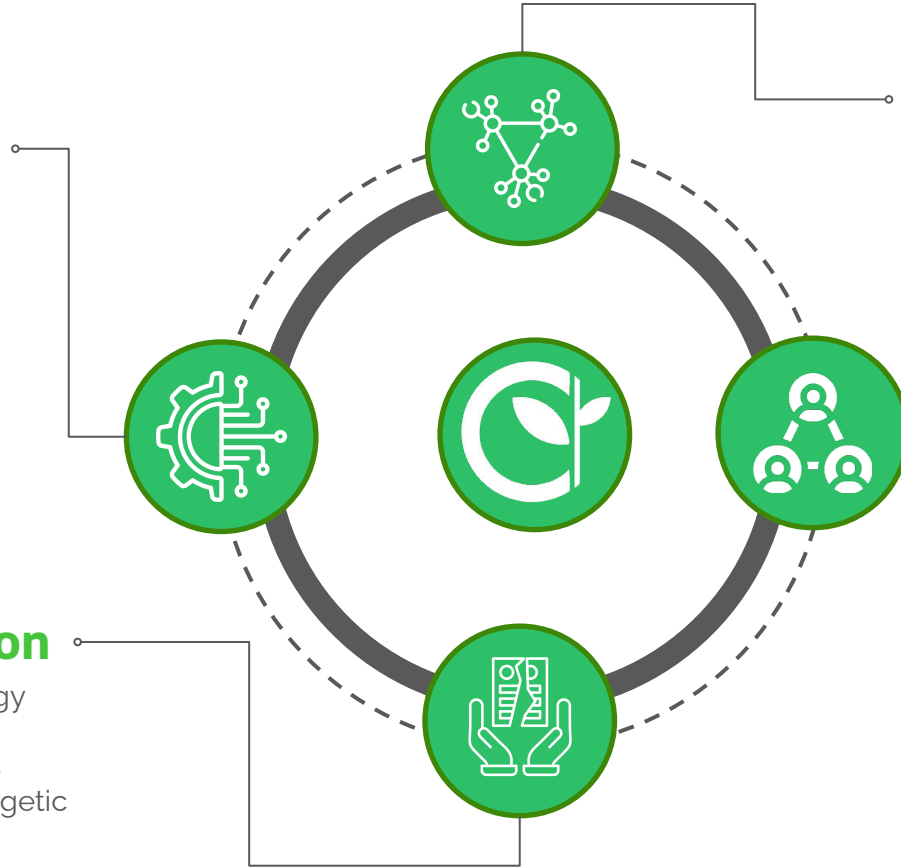
Using AI Engine and Blockchain KOALA offers

Digitalization

- Allowing digital creation and management of RECs
- Producing and managing legal, administrative and technical documents

Dematerialization

- Virtual replica of energy users
- Virtual replica of RECs
- Virtual replica of energetic assets like production plants



Decentralization

- P2P Energy Trading
- Facilitating RECs participation in electricity markets

Democratization

- Monitoring of your energetic condition
- Suggestion to optimize your behavior
- Promoting interoperability
- Smart match-making



Two practical examples



#1 - Behavioral Optimisation using KOALA's AI Engine

Input: Consumption Data

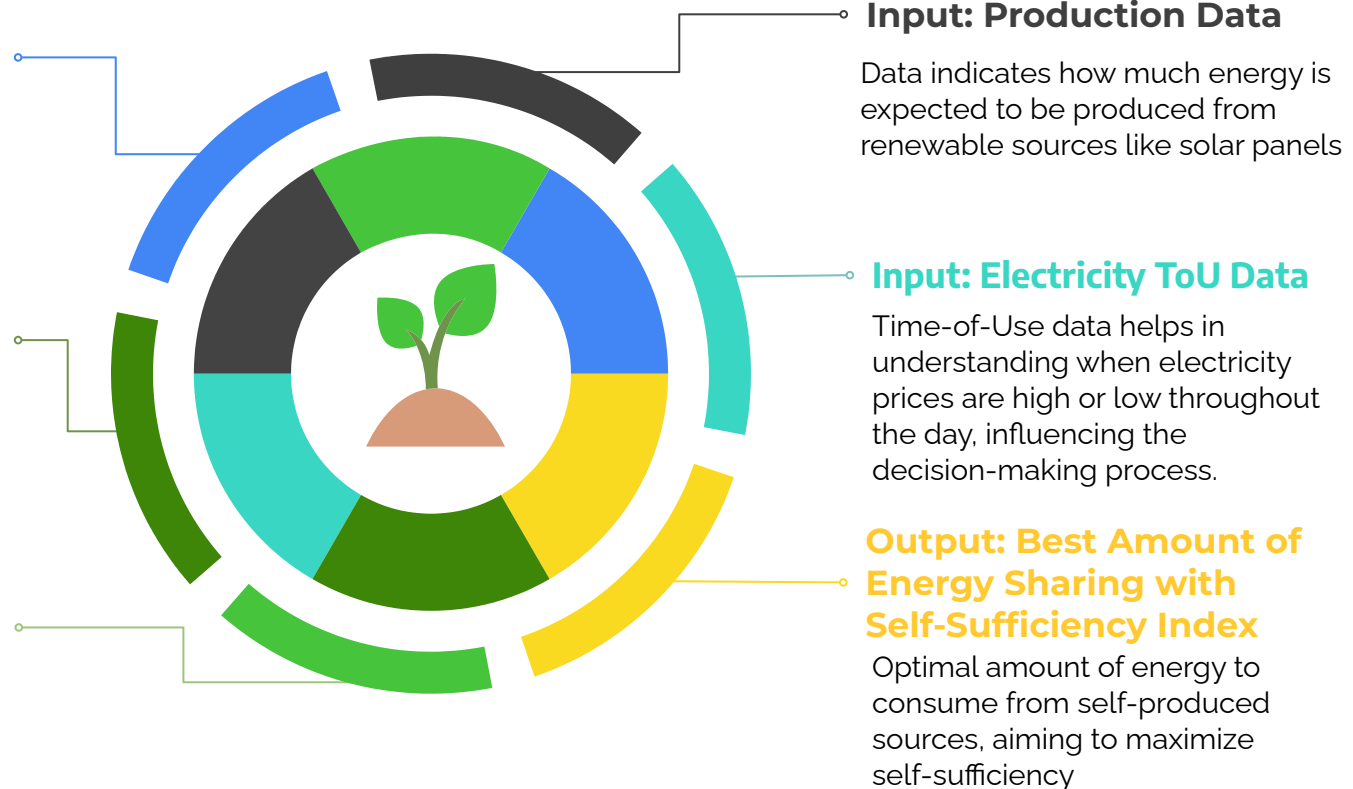
Day or week ahead consumption data is fed to the optimisation algorithm

Output: Net Energy Exchanged with the Grid

Overall balance of energy exchanged with the grid, considering both imports and exports

Output: Max economic benefits

Financial gains earned from using the optimization algorithm compared to not using it





#2 - Blockchain based P2P Energy Trading

Matching of users through EnergyID

Matching buyers with sellers based on their specific needs and capabilities

Enable users to sale

List their available surplus energy for sale or express their demand for energy to purchase. Sellers can set prices, while buyers can place bids or accept listed prices.

Automated bidding and negotiation

Use algorithms to automatically match buyers with sellers based on their preferences, location, energy requirements, and pricing



Secure transaction through KOALA Credits

Flexible trading options

Offer various trading options such as spot trading, contracts, and options contracts to accommodate different trading strategies and risk preferences

Feedback and Ratings

Allow users to leave feedback and ratings for their trading partners after completing transactions



We've laid the **foundation**...

March 2024 - Build the platform

Planning, Design and Development

1

2

July 2024 - Deploy the platform

Unit Testing, Integration Testing, User Acceptance

3

August 2024 - Beta Release for Pilot Customers

Monitor usage and gather feedback, Fix bugs and make improvements, Optimize performance and security

4

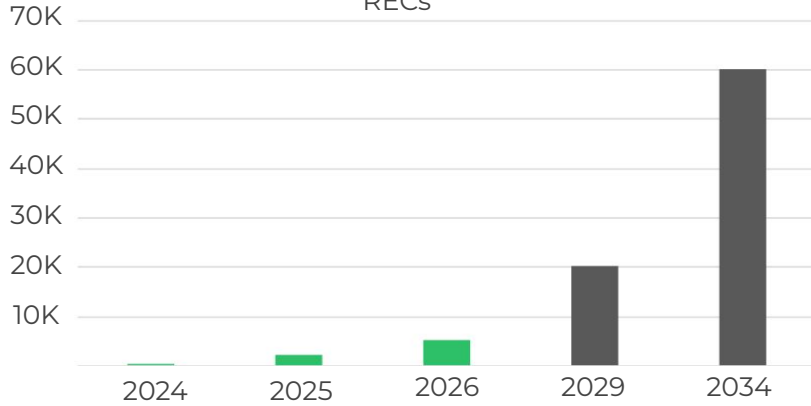
September 2024 - Make it live for the final users

Deploy to production environment, Monitor the launch, Provide support

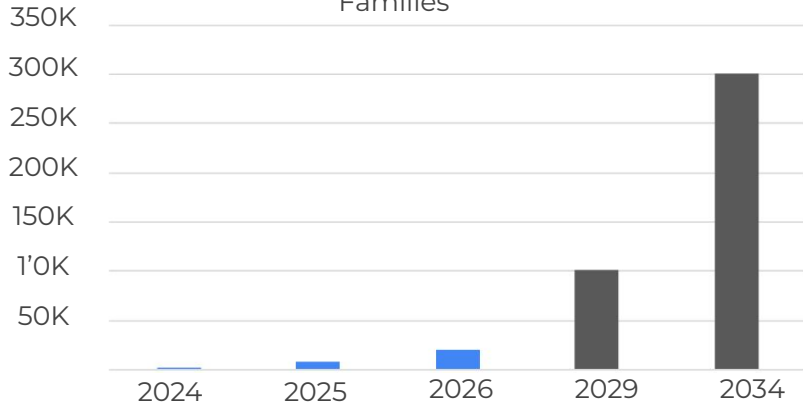


Customer Projections

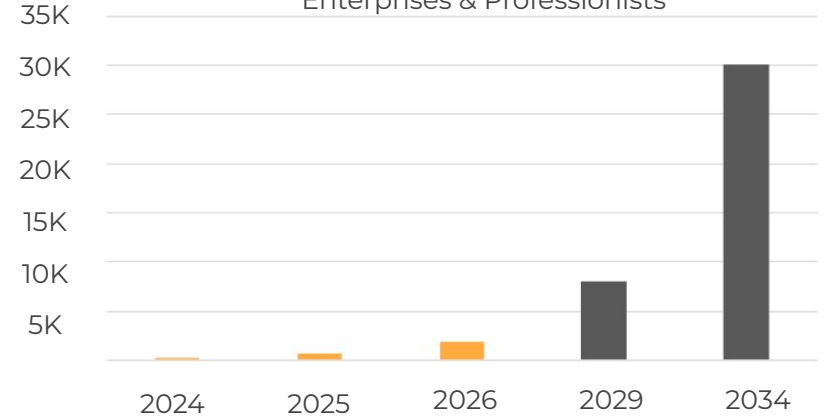
RECs



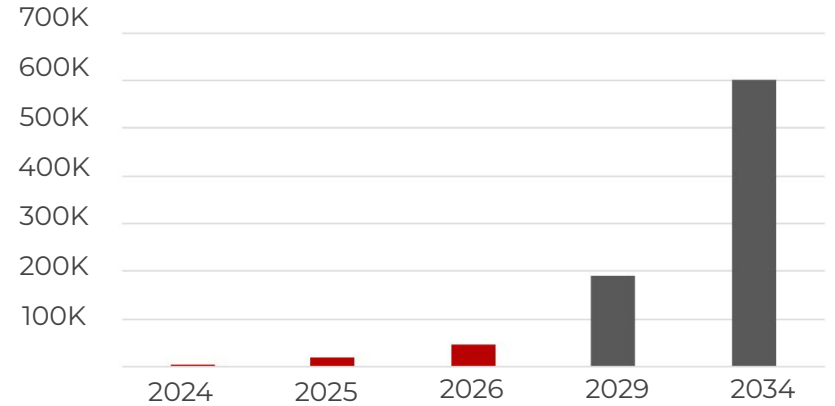
Families



Enterprises & Professionals



Citizens





Team



Emmanuele Maria Petruzzello
Chief Executive Officer



Massimo Capaldo
Chief Financial Officer



Harpreet Sohal
Chief Technology Officer



Ezgi Efe
Software Developer



Akram Mohammad
PhD Research



Giuseppe Ferrara
Project Engineer



Elvira Pettorossi
Sales Technical Engineer



Pasquale Tirino
Energy Data Analyst



Ilenia Perugini
Energy Data Analyst



Antonio Urciuolo
Legal Advisor



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