

DEMO 5 – SPAIN

Empowering villages with Renewable Energy Communities (REC)



DEMO LEADER:
CUERVA

Cuerva*



Domain

Electricity, Heat



Partners involved

Cuerva, Vergy, Aggregering, European Dynamics, Schneider Electric, AIR Institute, Universidad de Málaga, LIST

“In a small rural village, a Renewable Energy Community connects neighbors, public buildings, and local infrastructure through shared 58 kW solar installation on the municipal rooftop, ensuring fair access to clean, affordable electricity for all.”



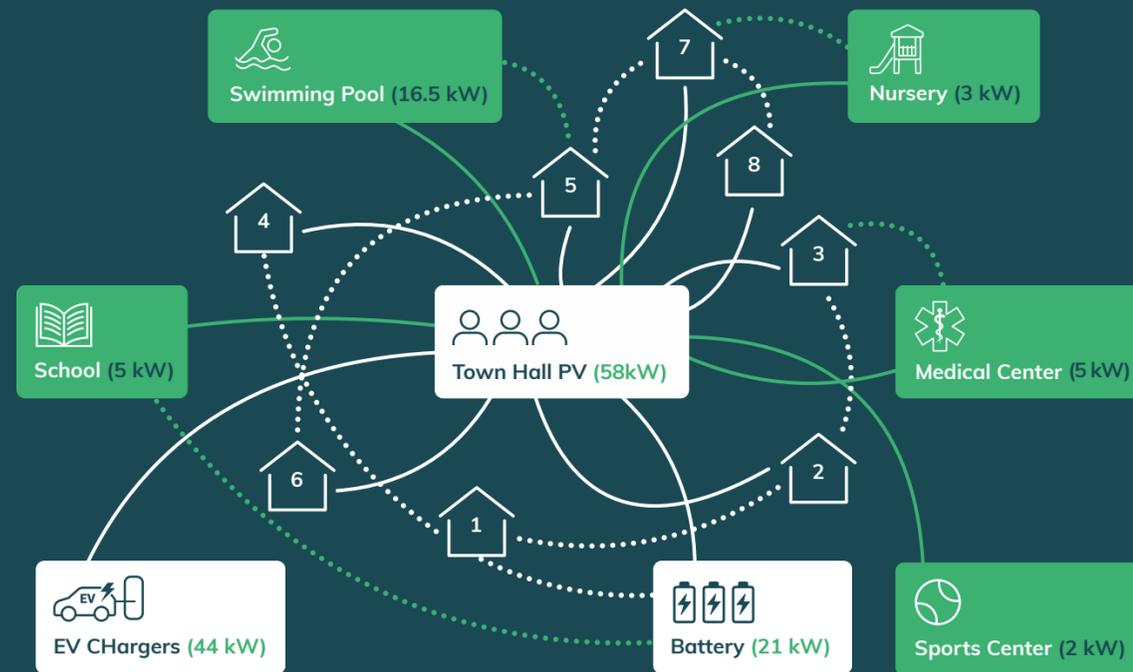
[weforming.eu
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KEY TECHNOLOGIES

Solar energy is produced collectively, shared fairly among users, stored when surplus, and managed digitally for maximum community benefit.

- Village with residential homes
- Public buildings connected to the system
- Shared rooftop solar installation (municipal building)
- Community battery storing surplus energy
- Shared EV charging point
- Digital platform & AI node monitoring and optimizing energy flows



TECHNICAL CHARACTERISTICS



Mobility

- 22 + 22 kW EV charger



Public Infrastructure

- 6 public buildings



Shared Solar

- 58 kW PV installation



Residential Users

- 25 households
- 17 with smart meters



Energy Storage

- 15 kWh community battery (grid-connected)



Monitoring

- Wireless sensor network (temperature, humidity, light, consumption, HVAC actuators)



IMPACT

- Reduced energy poverty
- Fair access to clean energy
- Stronger local energy independence
- Empowered rural communities
- Scalable model for future smart villages