

PYLON NETWORK:

An open-source, peer-to-peer energy trading platform.



Unlocking the cooperation potential in smart energy systems of the future.

DOMENICO HAS A PROBLEM



FRANCESCA HAS ANOTHER PROBLEM



Energy
needs

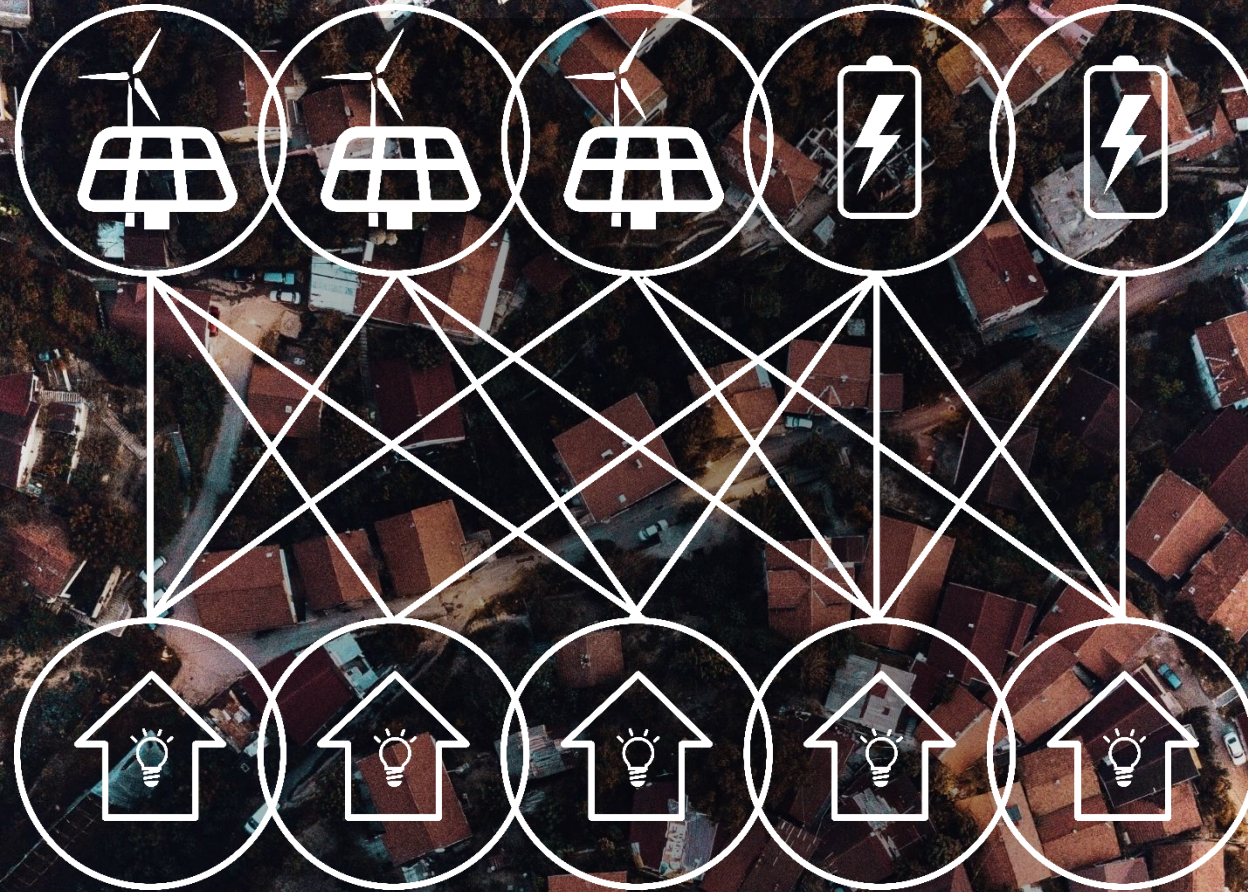
Energy
Generated

An aerial photograph of a residential neighborhood. The houses have reddish-brown roofs and are interspersed with green trees. A road or path winds through the center of the neighborhood. The lighting suggests it might be dusk or dawn, with some lights visible on the houses.

**AND THE GRID IS CAUSING BOTH
PROBLEMS**

**PASSIVE. NOT-SO-SMART GRID.
COSTLY.**

NOW PICTURE THIS:



**REAL-TIME || P2P | LOCAL | DECENTRALISED ||
TRANSPARENT | TRACEABLE || INCLUSIVE**



AN EXPERIMENTAL MARRIAGE: BLOCKCHAIN & ENERGY

1. WHAT IS BLOCKCHAIN?

2. WHAT PROBLEMS CAN THIS MARRIAGE SOLVE?

BENEFITS FOR THE ENERGY SECTOR

P2P transactions unlock unprecedented abilities for the electricity market:

Traceability & Certification

Transparency

“Smart-Grid” Operations



CHALLENGES FOR BLOCKCHAIN

SCALABILITY

THE 3Ds IN THE DISTRIBUTED ELECTRICITY MARKET

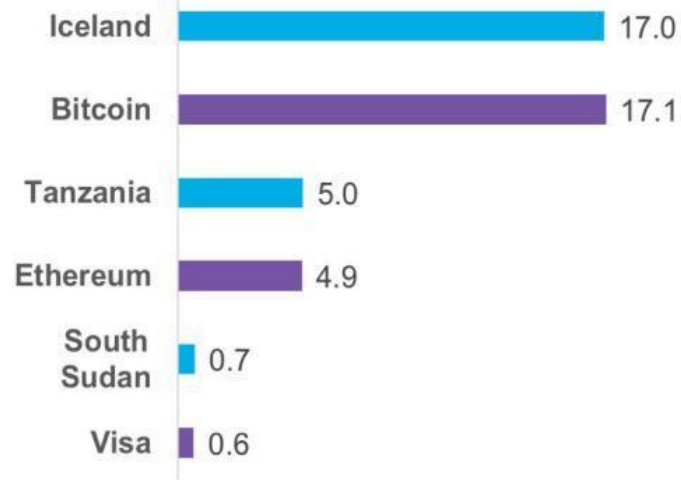
MARKET IMPLEMENTATION - KNOWLEDGE

REALISTIC (ENERGY SECTOR) APPROACH

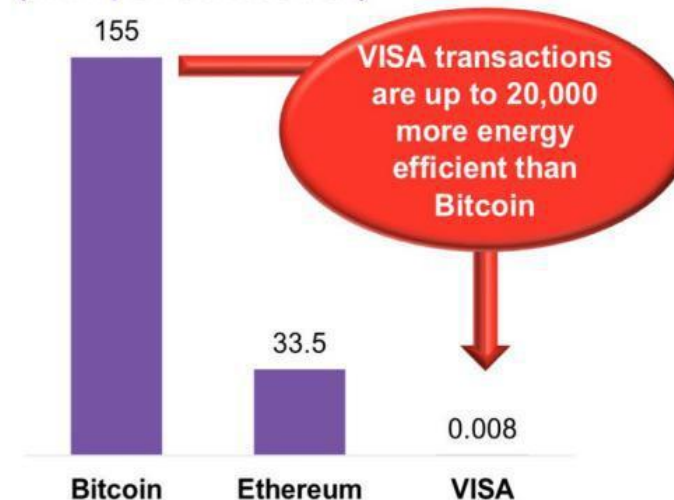
AND WHAT ABOUT ENERGY DEMAND?

Blockchain energy demand

Total power consumption
(TWh/year)

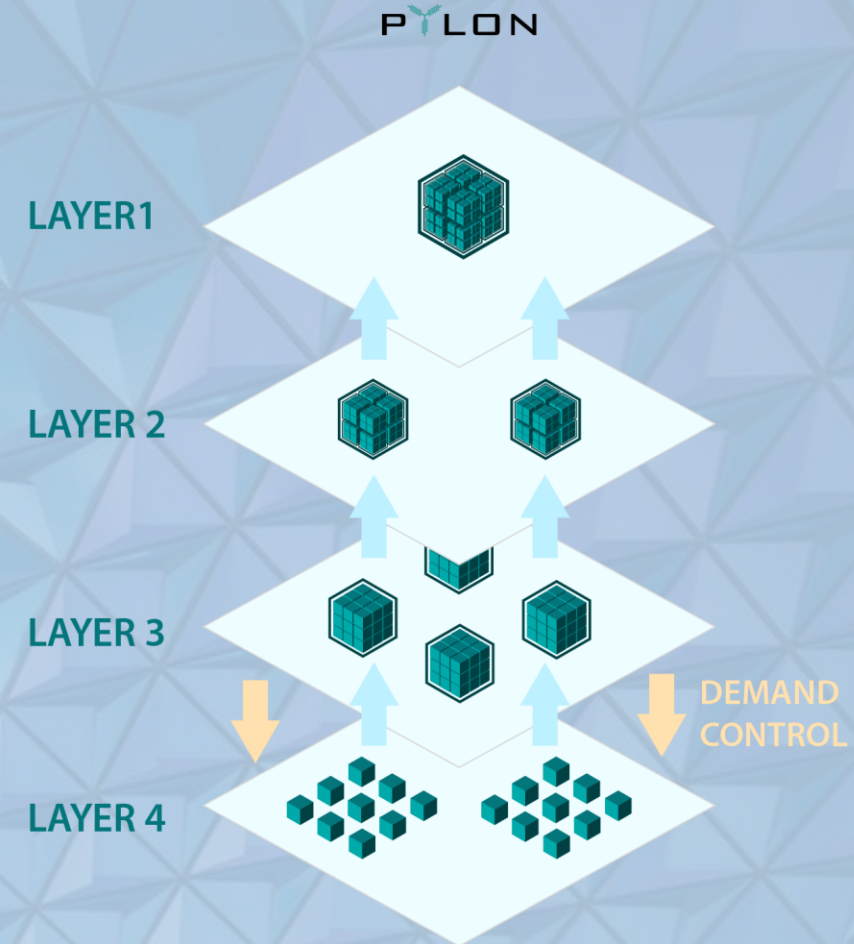
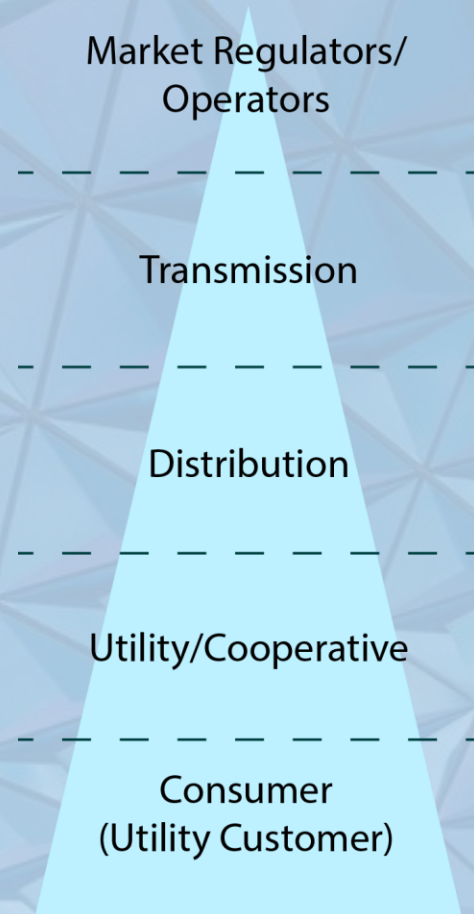
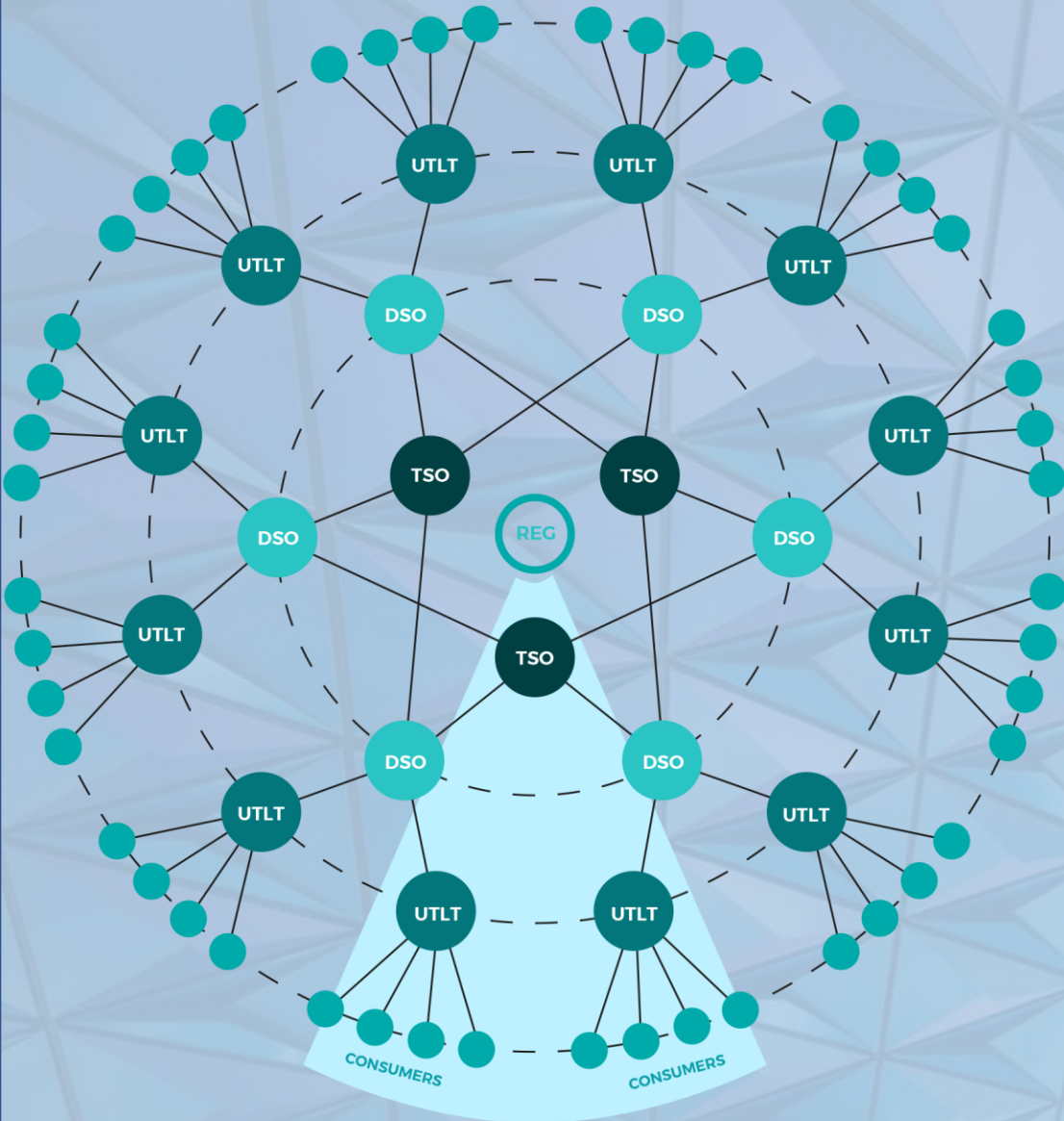


Power demand
(kWh per transaction)



Source: Bloomberg New Energy Finance; VISA; Digiconomist Bitcoin/Ethereum Energy Consumption Index

PYLON NETWORK



PYLON OPEN-SOURCE CODE



Up to 7,000 tx/sec



Federated nodes



Non competitive
mining



Minimum energy costs
per tx



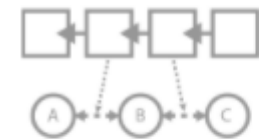
Segwit



Digishield



Atomic swaps

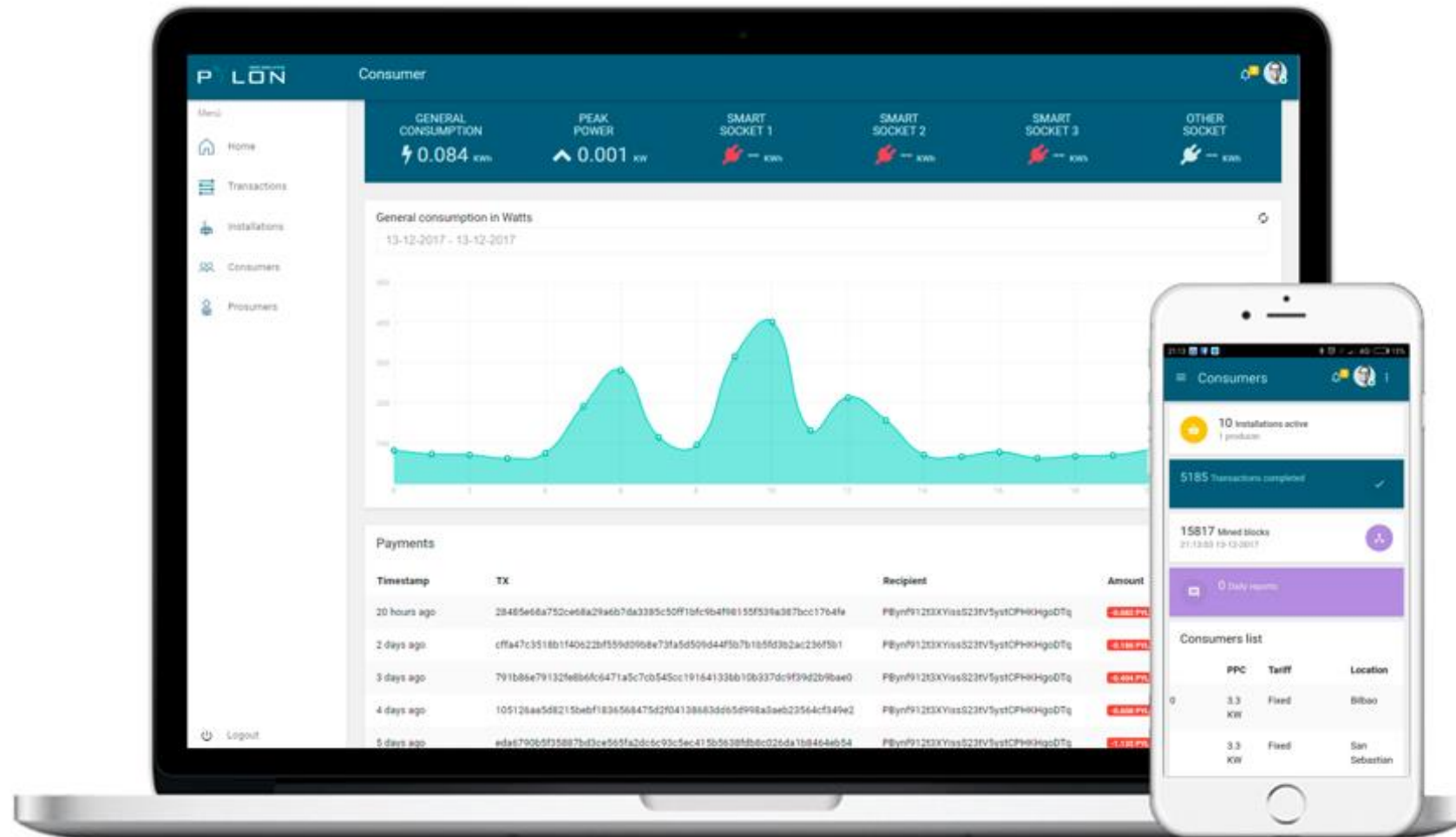


Lightning network

PYLON NETWORK PILOT PROJECT

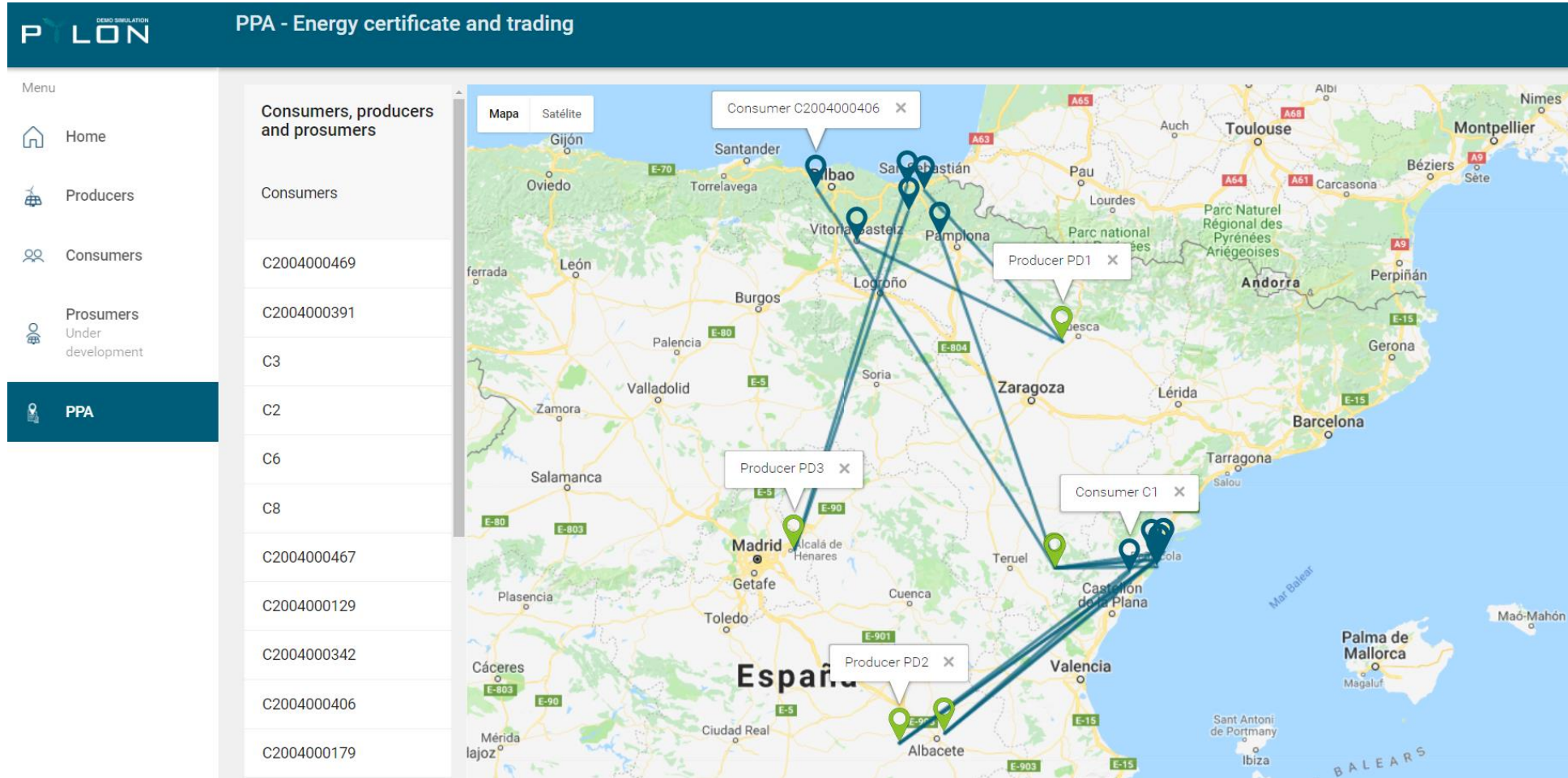


PYLON NETWORK DEMO



<https://pylon-network.org/#demo>

PYLON NETWORK DEMO – ENERGY CERTIFICATION

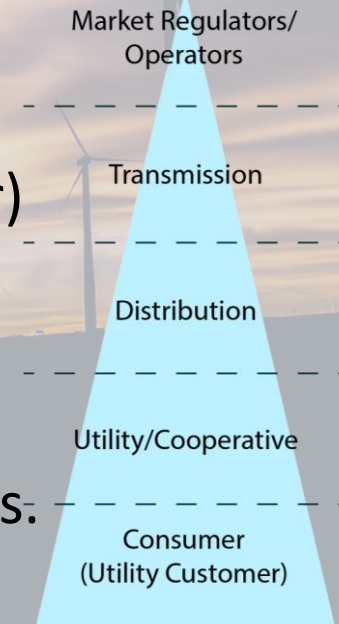


<https://pylon-network.org/#demo>

VALIDATION MILESTONES



- Scalability
- Energy demand / Environmental Impact
- Benefits from smart-metering (consumer, GoiEner)
- Impact of multi-point PPAs
- Demand response/aggregator potential
- Financial impact of daily settlement/billing cycles
- Cost comparison with “traditional” IT architectures.
- DSOs/TSO participation in demo



THE REVOLUTION WILL NOT BE CENTRALISED

The background of the entire image is a photograph showing the silhouettes of numerous wind turbines scattered across a dark, hilly landscape. The sky is a vibrant mix of orange, yellow, and blue, indicating a sunset or sunrise. The turbines are of various sizes and are positioned at different heights and angles, creating a sense of depth and scale.

P Y L O N

**PYLON NETWORK
PROJECT**



KLENERGY

ALWAYS ON

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