



Enhancing Storage Integration in Buildings with Photovoltaics

Data collection & analysis

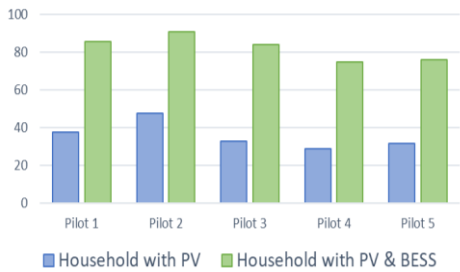
Data collection parameters



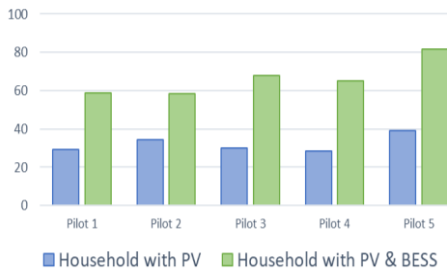
- Mandatory electricity data
- Optional electricity data
- Optional thermal data
- Other

- Different parameters available for monitoring & collection in the 14 implemented PV-BESS pilots.
- Significant increase in self-consumption (SCR) & self-sufficiency (SSR) in Cyprus for 2019.
 - SCR: the share of PV generation utilized by the household
 - SSR: the share of demand covered by the PV generation
- More than 50% of total energy consumption was covered by the implemented PV-BESS in Cyprus in 2019.
- Similar results observed for the rest participating countries.

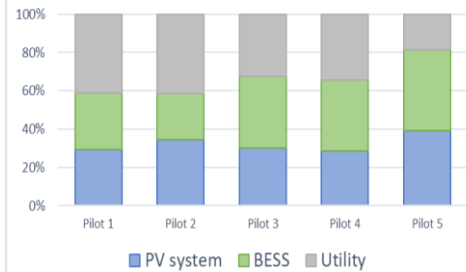
Self-consumption in Cyprus (2019)



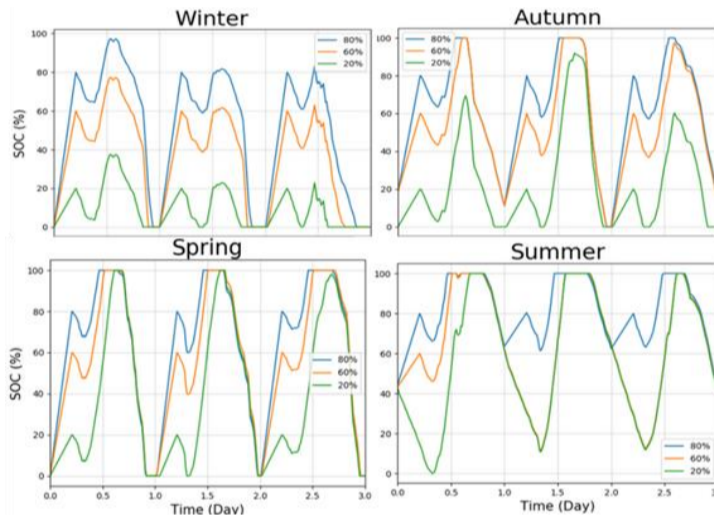
Self-sufficiency in Cyprus (2019)



Energy consumption in Cyprus (2019)



Innovative Management Scheme for residential PV-BESS



Overnight Charging Level Optimization depended on three parameters:

- Seasonality (time period)
 - Battery sizing (energy capacity)
 - Power sizing (power converter rating)
- Necessary to achieve both the higher utilization of the PV system and reduced electricity bills for the end-users.

38 events

- Organised international events
- Organised national workshops
- Workshop/fair participations

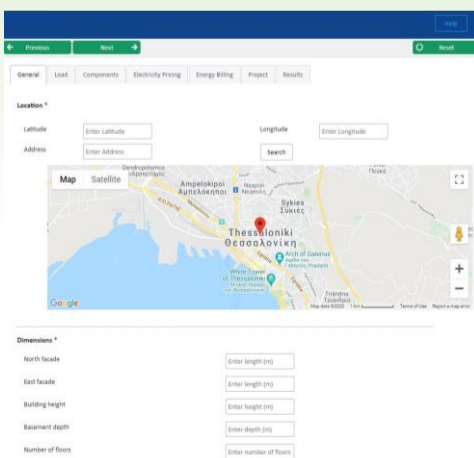
28 papers

- Local media articles
- Scientific publications

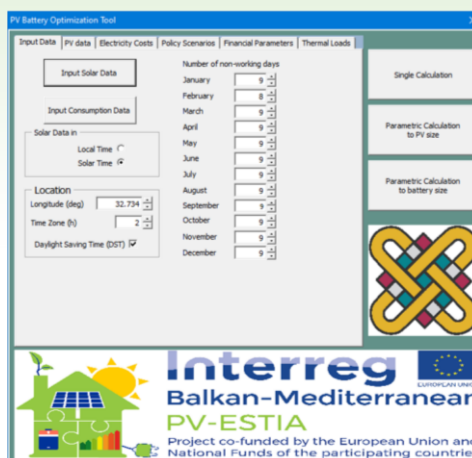
Dissemination activities

Developed tools

Online user-friendly tool



Special advanced-user tool



The tools aim to facilitate the design of PVs and battery storage in buildings.

The online tool portrays the optimal combination of PV and BESS sizes for a chosen configuration that yields the highest profits for the prosumer. The special tool targets mainly policymakers and can perform a parametric analysis for PV and BESS sizes that outputs the optimum combination in terms of maximizing profits.



UNIVERSITY OF WESTERN MACEDONIA



ЕНЕРГИЙНА АГЕНЦИЯ ПЛОВДИВ



ΥΠΟΥΡΓΕΙΟ ΠΕΡΙΒΑΛΛΟΝΤΟΣ ΕΝΕΡΓΕΙΑΣ & ΚΛΙΜΑΤΙΚΗΣ ΑΛΛΑΓΗΣ



Αρχή Ηλεκτρισμού Κύπρου
 Electricity Authority of Cyprus



EVN Group