FOSS
Research Centre for Sustainable Energy

University of Cyprus
PV Technology

BERLIN:
Cost-effective rehabilitation of public buildings into smart and resilient nanogrids using storage

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ENI CBCMED
Cooperating across borders in the Mediterranean

Outline

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- The solution
- Main idea
- Main results with focus on the pilots
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BERLIN – In a nutshell

Title: Cost-effective rehabilitation of public buildings into smart and resilient nanogrids using storage

Funding source: ENI CBC MED Programme

Duration: 36 months (start October 2019?)

Budget: 2,868,390 EUR (ENI contribution: 2,581,551 EUR)

BERLIN - Partnership

Greece

- Technological Research Centre of Western Macedonia
- Municipality of Kozani *(Associated)*

Italy

- University of Cagliari
- Region Autonoma della Sardegna *(Associated)*
- Municipality of Ussaramanna *(Associated)*

Cyprus

- FOSS Research Centre for Sustainable Energy (Univ. of Cyprus)
- Deloitte

Israel

- Ben-Gurion University
- Municipality of Eilat
- Municipality of Eilot

The problem / Background

- **Address high energy consumption of buildings** that is primarily fossil-fuel based
- **Support areas of weak grids** common in MENA region & rural areas with low reliability and frequent outages
- **Achieve higher grid penetration of RES** whilst ensuring grid stability and power quality.
- **Fight energy poverty** which is increasing with financial crisis
- **Sustainable socio-economic development**

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The solution

Focus on increasing grid penetration of renewables in MENA countries combined with enhancement of building energy efficiency → to reach high levels of self-resilience in public buildings.

Focus on interventions that can make the buildings involved ***green(er)***, ***innovative***, ***smart***, and ***sustainable***, mainly in terms of electricity consumption and generation

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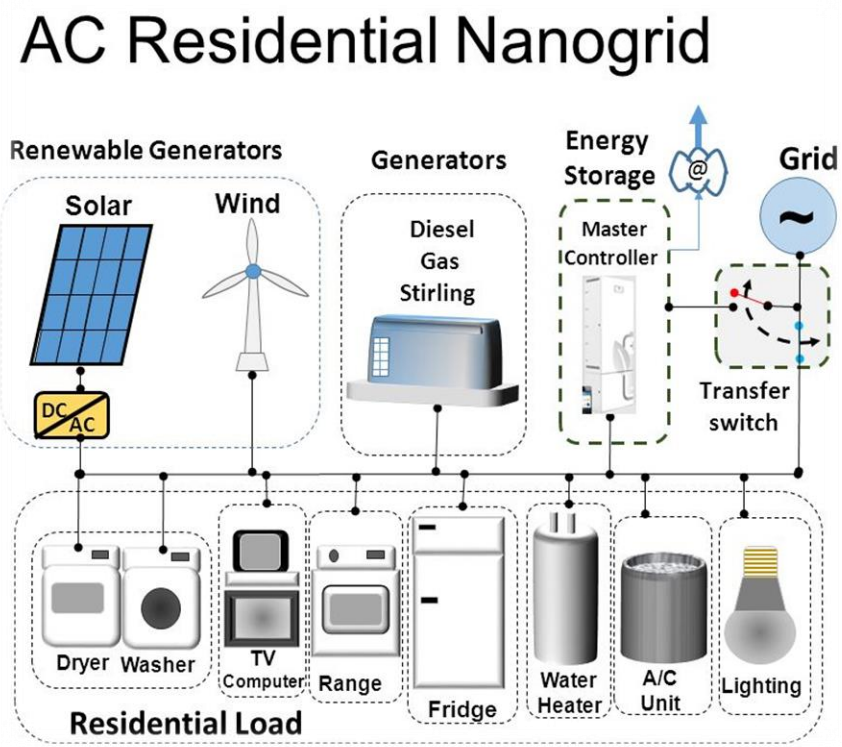
Main idea

The project proposes to develop, test and implement cross-border pilot measures to support innovative and cost-effective energy rehabilitations in public buildings based on the ***nano-grid*** concept, which is the building block for smart micro-grids.

Optimally integrate 3 technologies in cross-border pilot measures:

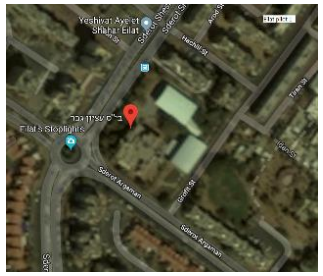
- Photovoltaics (PV)
- Energy Storage System (ESS)
- Demand Side Management (DSM)

To transform pilot buildings into smart nano-grids of high energy resilience



Pilots

- Design/benchmark/optimize the joint technical solution for building energy rehabilitations
- Data collection & validation at regional & central dataset points
- Data analysis and development of a consumption model for each pilot
- Development of regional dynamic electricity tariffs and testing effective DSM solutions



Israel (4 Pilots)

Italy (1 Pilot)

Main results

First time pilot testing in public buildings using PV+ESS+DSM hybrid and the evaluation of operation under the nanogrid concept.

- 8 pilot case studies in total (4 countries)
- Partners share existing knowledge
- Share lessons-learned
- Bring together stakeholders from MED region

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Start with the idea and the core team

- Start well in advance!
- Study the Call requirements
- Ensure the idea is compatible with the Call
- Prepare a concept note outlining your idea in order to share your vision with the other potential partners
- Select your core team that will handle the proposal writing. Ensure this consists of all the different disciplines (technical, financial, administrative)

How to identify your Consortium

- Attend info days and networking events
- Contact your National Agency
- Visit Programme webpage (see completed projects and respective partners' lists)
- Ensure a good geographical coverage
- Take into consideration eligibility requirements
- Build a balanced consortium
- Consider the inclusion of different types of partners (institutional, research, business/SMEs etc)
- Check their capacity from an operational and financial perspective
- Previous experience in other EU-funded projects (ENI, Interreg etc)
- **Mobilise your network of collaborators or current/past project partners**

Organization of proposal

1. Familiarization with programme requirements and the Call's specifics
2. Check eligibility requirements
3. Approach relevant departments/organizations well in advance
4. Select reliable partners from your existing network/contacts and beyond
5. Ensure commitment & continuous flow of info throughout preparation process
6. Propose a reasonable budget to assist negotiation with partners (check financial rules & thresholds)
7. Prepare documents to be signed (partner declarations, agreement etc.)
8. Careful design of the timeline from the beginning until submission
9. Communicate deadlines to the partners
10. Familiarization with e-tool for submission and testing prior to submission at different stages (e.g. section by section)

Tips

- ✓ Start planning early
- ✓ Identify the challenge and problem vs. proposed solution
- ✓ Align with Programme priorities and objectives of the Call
- ✓ Build a coherent and concise work plan
- ✓ Find a role for each Partner and assign a Work Package and/or Activity to them (shared ownership and commitment)
- ✓ Reflection on the budget (for equipment, sub-contracting etc. do some market research beforehand)
- ✓ Submit before the deadline!

Thank you for your attention

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