



Med-EcoSuRe

MED beX.Live webinar

MED beX live

Mediterranean Cross Border Living Lab
live the experience of university building environment

Topic: How to implement the techno-economic
assessment of on-grid PV system?

Date: 21-07-2020

Host:

An Najah National University – ANNU



DISCLAIMER

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Med-EcoSuRe Project

Project Title	Mediterranean University as Catalyst for Eco-Sustainable Renovation
Project acronym	Med-EcoSuRe
Funding scheme	European Union under the ENI CBC Mediterranean Sea Basin Programme 2014-2020
Start date	September 1st, 2019
Duration	36 months

Med-EcoSuRe is a project funded by the European Union, under the ENI CBC MED programme 2014-2020. The programme is managed by the Autonomous Region of Sardinia (Italy) and aims to promote cross-border cooperation in the Mediterranean region.

The main objective of the project is to propose and implement innovative and eco-sustainable energy renovation solutions for Mediterranean university buildings and introduce an active collaborating approach for decision support, among key actors involved, in the framework of a Living Laboratory: MED beX.Live (Live the eXperience of university building environment).

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TARGET AUDIENCE

- Energy managers and technicians from the “Infrastructure and Buildings” departments in universities;
- Professors and students interested in techno-economic assessment of on-grid Photovoltaics (PV) systems;
- Decision-makers/managers within the Energy and Natural Resources Authority in charge of Energy Efficiency (EE) in public buildings;
- Key Actors (experts, auditors, manufacturers, architects, etc.) with activities related to energy management in buildings.
- Public Bodies, companies, and Municipalities engaged in EE interventions on public buildings

ADDRESSED ISSUES

- The objectives and the approach of the Mediterranean Cross Border Living Lab;
- Palestinian Renewable Energy (RE) and EE Strategy;
- The legal framework of Palestinian regulation on EE in buildings;
- Implementation the techno-economic assessment of on-grid PV system;
- The benefits of energy renovation of buildings in students living comfort;

INVITED SPEAKERS

- The Palestinian Energy and Natural Resources Authority “PENRA”;
- The Palestinian Electricity Regulatory Council “PERC”;
- Representatives of Universities and research centers;
- Technicians and expert of energy efficiency field will be present as well.

EXECUTIVE SUMMARY

On July 21, 2020, 11-13 AM Nablus time, the 4th MED BeX.Live webinar was held virtually using google meet application.

Med-EcoSuRe MED BeX.Live 4th webinar focused on “**The techno-economic assessment of on-grid PV systems**”, the webinar was hosted by the Energy Research Center of An Najah National University (ANNU), partner of Med-EcoSuRe project.

Prof.Imad Ibrik, Med-EcoSuRe project local coordinator in Palestine welcomed the participants and thanked them for their interest in the webinar, Prof.Imad mentioned that the series of webinars organised by the project partners aims to stimulate the knowledge sharing and the stakeholders’ participation while addressing various topics and challenges related to public buildings in the Mediterranean region.

Prof.Imad started by giving the participants an overview about Med-EcoSuRe Project, objectives and technical Outputs. In this context, Prof. Imad mentioned that two Solar PV systems will be installed soon in two faculties at ANNU.

The second presentation was about the RE Strategy 2030 in Palestine, presented by the key invited speaker Eng.Basel Yasin, the director of RE and Environment unit at the Palestinian Energy and Natural Resources Authority”PENRA”. Basel presented the Energy situation in Palestine , RE Assessment in Palestine, RE Strategies during the last years, Palestinian Solar Initiative (PSI) , RE And EE Law in Palestine , The Approved Mechanisms for the implementation of RE Projects , Purchase Prices of electricity generated by PV , and the RE Incentives for Commercial Projects.

The third session was presented by the key speaker from the Palestinian Electricity Regulatory Council “PERC”, who talked about the Solar Energy Laws and Regulations in Palestine, and in details he presented the electricity market structure, and RE Programs in Palestine.



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During the third session, which was the core of the webinar, Prof.Imad presented in details how to implement the techno-economic assessment of on-grid PV system, by discussing the Technical and Economic Metrics Modelling, highlighting that the use of appropriate performance parameters facilitates the assessment of EE of PV systems connected to the grid which can be affected by design, technology used or geographic location.

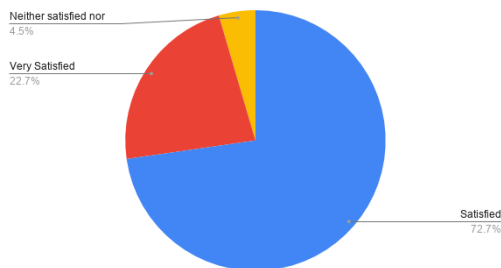
Finally, a two real case studies were presented in details, the first one about an assessment of 2.5 MW PV Solar Power Plant in Palestine, designed and supervised by the Energy Research Center at An-Najah National University, and the second was about the Impact of Solar PV Projects on Distribution Network.

CONCLUSION&RECOMMENDATIONS

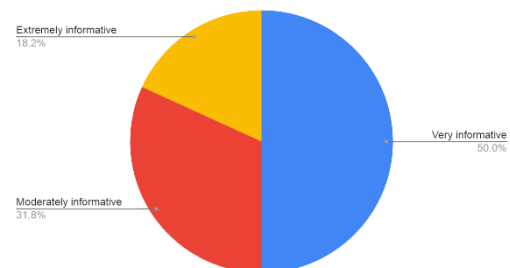
- Palestine suffers from lack of conventional supply.
- Solar PV technology is getting popular in Palestine, both on the utility's side and for roof top use.
- The impact and assessment of PV solar projects are the focus of many researches on the integration of RE with grid.
- When planning to implement a new solar project, the requirements and the specifications of the photovoltaic panel are usually unclear, incomplete and not integrated with design process. If the project is already implemented and errors are detected, we have to re-design or perform extra tests, which are costly, in order to reduce the damage. Thus, the performance evaluation of PV systems is an important step to help identify the future needs of a project and it is recommended to develop and test the system before implementation to get estimated results for operation and output. Using appropriate performance parameters facilitates the assessment of EE of PV systems connected to the grid which can be affected by design, technology used or geographic location.

PARTICIPANTS FEEDBACK

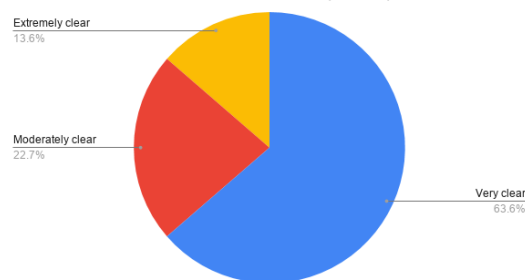
1. Overall how satisfied were you with this webinar?



2. How informative did you find our webinar?



3. How clear were the ideas and concepts we presented?



4. Were there any technical issues that prevented you from seeing or hearing the webinar? If so, what were they?

77% answered No

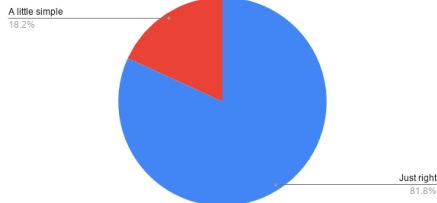
The remained answers were:

- Few technical regarding the voice
- Yes, a little bit in the voice, and sometimes in internet connection
- Yes, in the voice and internet interruption
- Yes, internet interruption
- Yes, internet connection

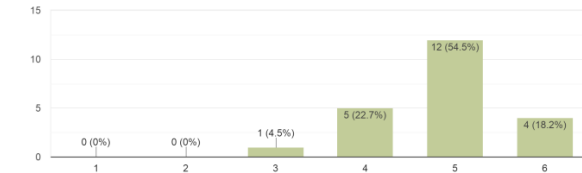


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5. Was the subject matter of this webinar too simple, too involved, or at the right level?



6. How likely is it that you would recommend this webinar to a friend or colleague?
22 responses



7. Are there any topics you'd like to see covered in future webinars?

- Wind, bioenergy and waste to energy
- Energy efficiency in buildings
- Energy conservation in Buildings
- PEA Rules
- Other renewable resources, for example: wind, biomass
- Yes, may be energy efficiency retrofit in higher education buildings
- Case studies
- Solar Cooling and heating system in public building
- Energy efficiency techniques in HEIs
- More successful case studies in the same topics as the ones you presented in the webinar
- Energy audit in buildings
- Photovoltaic, energy storage solutions and demand side management hybrid technology
- Cost-effective policies to increase the use and local consumption of photovoltaic energy
- Impact if on- grid PV projects on network
- Power Flow Analysis with Large-Scale
- Solar Photovoltaic in Distribution Networks
- Impact of Implementation Energy Efficient Appliances
- Green buildings
- More real case studies in PV system
- Energy Management in public buildings and Industries



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8. Do you have any other comments or feedback?
Biography for each speaker involved



ANNEXES

1. Invitation



"How to Implement the Techno-Economic Assessment of On-Grid PV System"

The Energy Research Center at An-Najah National University is honored to invite you to attend:
The webinar on: How to Implement the Techno-Economic Assessment of On-Grid PV System.

The webinar will be hosted by the Energy Research Center-ANNU, partner of Med-EcoSuRe project, and is scheduled to take place:

Event Date: 21 July 2020 -11-12:30 –Palestine Time

Issues to be addressed:

- The objectives and the approach of the Mediterranean Cross Border Living Lab;
- Palestinian Renewable and Energy Efficiency Strategy
- The legal framework of Palestinian regulation on energy efficiency in buildings;
- Implementation the techno-economic assessment of on-grid PV system;
- The benefits of energy renovation of buildings in students living comfort;

Dr. Imad Ibrik-Energy Research Center Director



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2. Agenda









MED bex live
 Mediterranean Cross Border Living Lab
 live the experience of university building environment

**Mediterranean University as Catalyst for Eco-Sustainable Renovation
WEBINAR**

How to implement the techno-economic assesment of on-grid PV system

Tuesday, 21 July 2020 11:00 - 12:30 AM GMT+3
 link to connect: <https://meet.google.com/vyn-poci-hsb>

Organized by: **Energy Research Center - An-Najah National University**

<p>h. 11:00-11:20 I. IBRIK / Med-EcoSuRe Project Coordinator Energy Research Center - An-Najah National University <i>Presentation of Med-EcoSuRe Project Objectives & Findings</i></p> <p>h. 11:20-11:40 B. YASINE Director of R.E Unit- Palestinian Energy and Natural Resources Authority "PENRA" <i>R.E. Strategy in Palestine by 2030</i></p> <p>h. 11:40-11:50 Q. SAMARAH Licensing Director-Palestinian Electricity Regulatory Council "PERC" <i>Solar Energy Lawso-Reguqations in Palestine</i></p>	<p>h. 11:50-12:00 I. IBRIK / Med-EcoSuRe Project Coordinator Energy Research Center - An-Najah National University <i>Techno Economic Impact of Implementation R.E Systems in Palestine</i></p> <p>h. 12:00-12:10 F. HASHAIKA Expert <i>Case Study 1-Assessment of 2.5 MW PV Solar Power Plant in Palestine</i></p> <p>h. 12:10-12:20 F. SALAMEH Expert <i>Case Study 2-Impact of Solar PV Projects on Distribution Network</i></p> <p>h. 12:20-12:30 Debate and conclusion</p>
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3. Webinar news

<http://www.enicbcmec.eu/med-ecosure-oragnises-series-webinars-launch-its-bexlive-ll>

<http://www.enicbcmec.eu/med-ecosure-upcoming-med-bexlive-will-discuss-how-implement-techno-economic-assesment-grid-pv-system>

4. Registered Participants

Full Name	Oragnisation	Position within your organisation	Country
Imad Ibrik	An-Najah National University	ERC Director	Palestine
Souha Ferchichi	Mediterranean Renewable Energy Centre (MEDREC)	Technical expert	Tunisia
Basel Tahseen Yaseen	Palestinian Energy & Natural Resources Authority	PEERC-PENRA Director	Palestine
Khaled Salahat	Excellent Systems	Manager	Palestine
abdelrahim abusafa	ANU	chemical and energy engineering	Palestine
Fadi Abu Samra	BAZY Co.	Projects Engineer	Palestine
Touaiti bilel	ENSIT	Researcher	Tunisia
Marwa Mejri	GEEM	Engineer	Tunis
MAHMOUD M. ABURABIE	An-Najah National University	Supervisor Electrical Engineer	Palestine
Daniel Castro Medina	US	Student	Spain
Teresa Palomo Amors	Grupo Termotecnia, Universidad de Sevilla	Tecnico de investigaci3n	Espa±a
Maria del Carmen Pav3n Moreno	Universidad de Sevilla	Investigator	Espa±a
Fadia Hashaika	Energy Research Center - An-Najah National University	Energy Research Engineer	Palestine
Fida Salameh	ERC-An-Najah National University	engineer	Palestine
mohammed ajaj	ERC-ANNU	technician	Palestine
MCarmen Guerrero	Universidad de Sevilla	Investigator	Espa±a
Bahaa Majadleh	Palestinian electricity regulatory council	Renewable energy engineer	Palestine
Ameen sameer Masad	An-Najah national university	Electrical engineering	Palestine
Bara Horani	An-Najah National University	Student	Palestine
Ahmad Qaneer	An-Najah National University	Student	Palestine
Ahmad Gazi	An-Najah National University	Student	Palestine
Ameen Mused	An-Najah National University	Student	Palestine
Aws Zebdeh	An-Najah National University	Student	Palestine
Gafar Qadi	An-Najah National University	Student	Palestine



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Husni saleh	An-Najah National University	Student	Palestine
Deyana shaer	An-Najah National University	Student	Palestine
Raghad Hasheesh	An-Najah National University	Student	Palestine
Reem Baker	An-Najah National University	Student	Palestine
Zeyad Dweekat	An-Najah National University	Student	Palestine
Sami Habash	An-Najah National University	Student	Palestine
Saga Nasasrah	An-Najah National University	Student	Palestine
Shaymaa Ahmad	An-Najah National University	Student	Palestine
Suhaib Snober	An-Najah National University	Student	Palestine
Talal Dweekat	An-Najah National University	Student	Palestine
Adnan Basha	An-Najah National University	Student	Palestine
Ata Jawabreh	An-Najah National University	Student	Palestine
Alaa Atabeh	An-Najah National University	Student	Palestine
Omar Azamtah	An-Najah National University	Student	Palestine
Omar Brik	An-Najah National University	Student	Palestine
Amro Aqraa	An-Najah National University	Student	Palestine
Qusi Nazzal	An-Najah National University	Student	Palestine
Qais Abu Shaqdam	An-Najah National University	Student	Palestine
Kazem Nazzal	An-Najah National University	Student	Palestine
Karam Hattab	An-Najah National University	Student	Palestine
Malek Younis	An-Najah National University	Student	Palestine
Marwan Hamad	An-Najah National University	Student	Palestine
Mustafa Alawneh	An-Najah National University	Student	Palestine
Noor Hamdan	An-Najah National University	Student	Palestine
Waleed Dweekat	An-Najah National University	Student	Palestine
Leena Amous	Palestine Technical University - Kadoorie	Academian	Palestine

5. Presentations

https://drive.google.com/file/d/1Zm_0uUvb9Kp0iC_hkT_hhROMvVxTqAWf/view?usp=sharing

6. Recording of the webinar

<https://drive.google.com/file/d/1sVkanG18aptS3ZD6NiH5WPdxYuWuR-oT/view>

7. Webinar Feedback Online Questionnaire

<https://docs.google.com/forms/d/e/1FAIpQLSc-hMlqmJFf4FpgO6C9BBhg-WvsgRbPwSYhJaP60Co1A1HOUQ/viewform>



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8. Photos

