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The network of Horizon Europe Cluster 5 National Contact Point.



Recycling Photovoltaic Solar Panels Project Presentation

GREENET Brokerage Event

6th May 2025

T.C. SANAYİ VE TEKNOLOJİ BAKANLIĞI

#YEREL KALKINMA HAMLESİ

AHİLER Kalkınma Ajansı
Geleceğe Yön Verir

The GREENET project has received funding from the EU Horizon Europe programme under Grant Agreement No 101069604

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- **Your name:** Serhat Taşdemir
- **Name of your organization:** Ahiler Development Agency (public body)
- **Country in which it operates:** TR71 Region Of TÜRKİYE
- **Department within the organization:** Nigde Investment Support Office
- **Expertise of the department:** Promoting the business and investment environment for domestic and foreign investors and supporting potential investors in investment processes.

- **Contact Details:**

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Project proposal title: Recycling Photovoltaic Solar Panels
Topic to be addressed: Sustainable, secure and competitive energy supply
Efficient, sustainable and inclusive energy use

Project description (brief):

Solar energy is increasingly used as a clean and sustainable energy source. However, when solar panels reach the end of their lifespan and become waste, it is important to dispose of them in an environmentally friendly manner. Solar panel recycling minimizes environmental impact by reusing the valuable materials they contain. This process involves collecting the panels, separating the materials, and recycling them. Although not yet a fully established industry, studies on solar panel recycling continue to improve processes in this area and contribute to sustainable energy solutions.
It is thought that there will be many different technology applications regarding the recycling processes of PV panels and R&D studies are ongoing. As solar panels deteriorate and become damaged during their lifetime, recycling processes will become more important.

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Project description (brief):

In this context, A feasibility study has been initiated by Ahiler Development Agency in cooperation with METU-GÜNAM (Solar Energy Research and Application Center) on the recycling of Photovoltaic (PV) Panels. The aim of the study is to reveal the current technologies for the recycling of photovoltaic (PV) solar panels that have completed their economic life within the framework of circular economy principles, to make a prediction about the applicability of developing technologies, to examine the economic feasibility of these methods and to compile these studies.

Ahiler Development Agency plans to apply for a project proposal to Horizon program together with potential local, national and international stakeholders regarding recycling processes of (PV) solar panels.

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Current consortium: Ahiler Development Agency

Middle East Technical University GÜNAM (Solar Energy Research and Application Center)

Nigde Omer Halisdemir University

Eksim Enerji A.Ş.

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Middle East Technical University GÜNAM (Solar Energy Research and Application Center)

METU-GUNAM is well integrated into the European Union through the projects such as CHEETAH, EU-SOLARIS, and INSHIP through the institutions such as EERA (European Energy Research Alliance) and EUPVTP (European Photovoltaic Technology Platform). At the national level, METU-GÜNAM is working with many research institutes and universities all over Turkey, a well as public and private sector institutions. It has already been recognized nation-wide through new collaborations, already running projects, and national networks. In particular, with its laboratories and facilities, METU-GÜNAM is capable of producing photovoltaic cells with traditional and emerging PV technologies such as PERC/PERT/PERL, Bifacial, IBC, HIT, Perovskite. This makes METU-GÜNAM an attractive partner for institutional and industrial companies. METU-GÜNAM researchers have been involved in many national and international projects. Among them, the projects funded by EU Framework Programmes and nation-wide projects have special importance for international recognition.

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Nigde Omer Halisdemir University (Nigde OHU)

Nigde Omer Halisdemir University Research Center is working with many research institutes and universities all over Turkey, a well as public and private sector institutions. It has already been recognized nation-wide through new collaborations, already running projects, and national networks. In particular, with its laboratories and facilities, Nigde OHU Research Center is capable of developing photovoltaic cells with traditional and emerging PV technologies such as PERC/PERT/PERL, Bifacial, IBC, HIT, Perovskite.

Research Center consists of two separate units. The first of these is the analysis unit laboratories, which generally contain advanced instruments used to determine the physical (thermal, electrical, magnetic, optical, mechanical, morphological, surface, rheological, microstructural, etc.) and chemical properties of materials. The other is research and application units, which continue their work in different fields, and this unit consists of three separate research and application centers.

Researchers of Nigde OHU have been involved in many national and international projects. Among them, the projects funded by EU Framework Programmes and nation-wide projects have special importance for international recognition.

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Eksim Enerji A.Ş.

Eksim Energy Company carries out the installation of solar power plants, production of solar panels and R&D studies of panels in Türkiye.

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Best Regards….

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