



## Project Brief

**Project Title: ALKU Campus Solar Power Plant and Integrated Sustainability Actions**

### Coordinating Institution:

Alanya Alaaddin Keykubat University (ALKU)  
Energy Management and Sustainability Coordination Office

### Project Summary:

The ALKU Campus GES Project introduces a holistic sustainability model tailored for public institutions in Türkiye, integrating Energy Performance Contracting (EPC) with technical, social, and educational sustainability practices. As Türkiye's first public university EPC-based solar power initiative, the project was fully financed by the private sector without upfront public capital and established a 1.7 MW solar system across rooftops and parking areas.

### Key Achievements:

- Achieved full daytime energy autonomy and generated over **2,300 MWh of clean electricity** in the first year.
- Prevented **1,168.64 tons of CO<sub>2</sub> emissions**, equivalent to saving **950 tons of coal**.
- Created **€300,000 in returns**, reinvested in green and inclusive infrastructure.
- Awarded **3rd place in Türkiye's 2024 Public Sector Energy Efficiency Awards** by the Ministry of Industry and Technology.
- Created **20–30 new green jobs** and stimulated the local circular economy.
- Certified with **ISO 50001, ISO 14001, and I-REC** for renewable energy traceability and energy management excellence.

### Social, Educational, and Academic Impact:

- Delivered climate and EPC finance training to over **1,000 participants**, including students, SMEs, and disabled individuals.
- Represented in the national “**Binalarda Enerji Dönüşümünde Başarı Öyküleri – 2**” campaign, sharing replicable experience with public and private institutions.
- Developed on-campus sustainability practices:
  - **Zero-waste dining hall**
  - **Solar-powered compost and pet food production**
  - **EV and e-wheelchair charging stations**
  - **Smart, inclusive campus systems**

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• **Academic Publications:**

- Akbulut, L., Coşgun, A., et al. (2025). *Solar-Powered Biomass Revalorization for Pet Food and Compost: A Campus-Scale Eco-Circular System Based on Energy Performance Contracting*. **Energies**, **18**(3869). <https://doi.org/10.3390/en18093869>
- Akbulut, L. (2025). *Circular Economy in Public Universities: Integrating Renewable Energy and Waste Valorization under EPC Frameworks*. **Rocznik Ochrona Środowiska (Annual Set the Environment Protection)**, **27**.

**Financing Model:**

Implemented via a **15-year EPC contract** with Endüstriyel Elektrik Elektronik A.Ş., with repayments based solely on verified energy savings. This model ensures financial sustainability without state capital expenditure and is adaptable across the public sector.

**Policy Alignment & Replicability:**

The project complies with **Presidential Circular 2023/15**, mandating **30% energy savings** in public buildings by 2029. ALKU's model exemplifies how performance-based sustainability investment can be scaled nationally and legally aligned with Türkiye's climate commitments.

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