**Design of a Grid-Connected System on a Building Rooftop in ÇAKU**

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| **Abstract**The energy need, which has increased with the rapidly rising demands after Covid19, has increased even more with the developing tension between Ukraine and Russia. In addition to this cost increase, the climate crisis also makes people look for ways to produce energy from new sources. The first thing that comes to mind is undoubtedly solar energy, when it comes to renewable energy. Electrical energy is possible by using photovoltaic cells in solar energy. These systems must be carefully designed and simulated before installing them. Simple mistakes can cause the systems not to work and even some components to be damaged. In this study, a grid-connected solar energy system was designed and simulated on the roof of Çankırı Karatekin University Engineering Faculty using the PVSyst program. In the designed solar energy systems, the data obtained by changing the distance between the panels, the tilt angle and the azimuth angle are given as a result. |
| Keywords: Photovoltaic, PVSyst, Grid-connected, Rooftop PV Model |

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