

**Title:**

A unified platform for simplifying the design of wind and solar installations in three different geographic regions in Lebanon.

**People:**

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**Collaborators:**

Students from ME and EE department

**Grant:**

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**Short Description:**

Lebanon is one of the countries in the Middle East that are endowed with climatic conditions which are predominantly sunny and characterized by hot summers and mild winters. Since 1990, the end of the civil war that lasted for about 15 years, the power crisis in Lebanon has worsen due to shortage in the supplied power by EDL which has a monopoly on power generation, transportation and distribution. This shortage in the generation of electricity was increased by the absence of any investments in new power plants since 1996 and the increased demand on power which was approximated by the World Bank as being an increase of 8% yearly. The proposed project will provide a thorough assessment of the potential of solar and wind renewable energy sources for the three most densely populated cities in Lebanon. The impact of solar and wind energy resources on alleviating the energy deficiencies for those cities will be analyzed. Practical sizing and most efficient installation of the renewable energy source or combination of sources that are most convenient to the particular region and to the end user are to be made available depending on the geographical location, the grid connectivity and the space availability.