

Special Issue

Renewable Energy Powered Irrigation Systems: Addressing the Challenge to Improve Performances, Sustainability and Economy of Agricultural Productions

Message from the Guest Editors

In recent decades, the cultivation of agricultural products has been improved through more competitive management practices. Moreover, the agricultural phase uses the main quota of the total energy demand for the production of food, with irrigation as one of the main energy-demand activities. The need to promote more sustainable agricultural production with respect to natural resources and human health is leading farmers and stakeholders to invest in renewable energy systems. Recently, several renewable energy technologies have been implemented in pressurized irrigation systems to reduce energy requirements while also reducing the related greenhouse gas emissions. This Special Issue may include but is not limited to:

- Energy and environmental advantages of renewable powered irrigation systems;
- Precision irrigation technologies;
- Performances evaluation of renewable powered irrigation systems;
- Mathematical modeling of on-farm irrigation energy requirements;
- Solar-powered water pumping;
- Economic assessments associated to renewable powered irrigation systems.

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