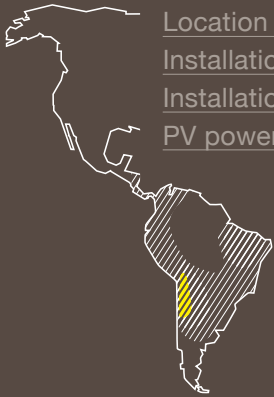


Case Study: PV system for agriculture



Subject	Subsole S.A.
Location	Copiapó, Chile
Installation	January 2012
Installation time	3 weeks
PV power	307,2 kWp

Modules	Canadian Solar CS6P 240P
Inverter	Power-One PVI-330.0
Mounting System	Zimmermann PV-Stahlbau

“We aim to set a new standard of innovation and environmental awareness in Chile’s industry that hopefully will be followed by many more.”

Miguel Allamand
President, Subsole S.A.

KRAFTWERK Renewable Power Solutions specialize in the development and implementation of intelligent solar power plant solutions for agricultural use.

KRAFTWERK planned, designed and built a photovoltaic (PV) plant for one of Chile’s largest exporters of table grapes. More than 90 percent of the generated solar energy is used directly for crop irrigation. The company, which now is no longer affected by high Chilean electricity prices, is planning to expand up to 2 MWp, thus creating a new means of income by selling solar electricity to the spot market.





Objectives

Reduce company's long-term energy and production costs

Achieve independence from Chile's rising energy costs

Increase use of clean energy

Solution

Grid-connected PV plant for self-consumption

Irrigation schedule which "follows the sun"

Energy and water management system

Benefits

>90% solar energy used directly for crop irrigation

~390 metric tons/ year CO₂ reduction on carbon footprint

New business opportunities for landowners

Challenges

To achieve a thorough understanding of the energy usage, the load profiles of each pumping station were measured. According to the seasonal water demand, power profiles were simulated for each month, each week, and each day.

Achievements

KRAFTWERK creates opportunities for the agricultural industry. Companies, as well as individuals, not only optimize their energy costs but also create new business by producing and selling energy.

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