



Solar PV / Thermal Feasibility Study for 4 Flower Farms & 1 Juice-Maker



Client:
DEGINVEST, KFW Banking Group

Location:
Thika, Kitale, and Naivasha, Kenya

Start Date:
December 2013

Completion Date:
July 2014

Key Services:
▷ Feasibility Study

In 2013, ASD ran a feasibility study for DEGINVEST to assess the potential for solar PV and solar thermal systems for reducing the energy costs for 4 flower farms and 1 juice-maker in Kenya. The areas covered in Kenya were Thika, Kitale and Naivasha.

OVERVIEW

ASD analyzed the existing use of energy using available reports and documentation on energy studies and on-site observations. An exploration was then made for the possibility for Solar PV and/or Solar thermal. The viability was based on solar radiation, available (roof) space, electricity consumption pattern, and available solar PV & solar thermal technologies (including solar foil that could be used on the roofs of green houses). An assessment was also made on the current energy/electrical system after which estimates of the potential update and costs were made to ensure the ability to integrate the electrical output of the PV systems and/or energy output of the solar thermal system. In case of no grid power, an assessment was made on the options of solar/diesel hybrid system. Thereafter, ASD advised DEGINVEST on the size and type of Solar PV and/or solar thermal most suitable to the sites.

Along with the systems that were recommended, ASD provided an estimate of the total cost of implementing solar PV and/or solar thermal, based on equipment costs, and installation costs (including, if applicable, roof reinforcements, foundations, etc.). Additional costs were also estimated such as the maintenance costs and life span of the equipment. ASD provided financial key indicators such as cost/kWh, IRR, simple payback period, based on current energy/electricity costs and expected Solar PV/Solar thermal output. ASD provided all the technical data that is required for tender documents to suppliers of Solar PV/Solar Thermal systems.

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