Project: Italian Consulate
Client: FIAMM
Application: Solar plant and energy storage
PV Power Installed: 40 kW

The challenge:
To increase renewable energy production and ensure a continuous emergency power supply

The power supply in developing nations, such as Morocco, is not always as reliable as some foreign consulates’ needs demand.

Wishing to reduce its own dependence on the local power grid, while also serving as an example to other consulates with aspirations of “going green,” the Italian Foreign Ministry in Casablanca undertook a program to become a laboratory of sustainable energy production. In particular, it wished to create a source of renewable energy that could supplement the power it received from the grid and, in emergency situations, replace it.

The solution:
Solar production and energy back-up system

A green initiative launched by the Italian Foreign Ministry includes multiple projects to increase its energy independence, including a 40 kW solar plant installed on the roof of the Italian consulate in Casablanca, which connects to an Energy Storage system.

The solution not only provides the Italian consulate with its own independent energy supply for emergency situations, it also will lower carbon emissions by approximately 31.72 tonnes a year.

When Chiara read about the Foreign Ministry’s plans to “go green”, it gave her the inspiration she needed. Her dream is to become a diplomat.

Nidec ASI, turning dreams into results
### Power Conversion System Converter technical data

<table>
<thead>
<tr>
<th></th>
<th>Grid Side (AC voltage)</th>
<th>Battery Side (DC voltage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>400 V</td>
<td>500 V</td>
</tr>
<tr>
<td>Power</td>
<td>30 kVA</td>
<td>30 kW</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Air Cooled</td>
<td></td>
</tr>
</tbody>
</table>

The Battery Management System (BMS) is linked to Nidec ASI’s PCS controller which provides the control functions and monitoring tools to manage and optimize energy productions.