Solar Power Lighting with Photovoltaic Panels and LED Lamps

Expected project CAPEX : 300’000 €
Mandating Authority : Bmaryam Municipality

Summary
Street Lighting with Photovoltaic Panels and 100W LED Lamps.

Lebanese Republic
Bmaryam Municipality - Mount Lebanon

R20 Secretariat:
48, Chemin du Grand Mont-Blanc
1295, Versoix, Geneva
Switzerland

Beirut, August 18, 2016

Mandate Letter

We undersigned Bmaryam Municipality represented by the president Mr. Petro Achkar are committed to taking concrete action and to be an active partner in working to deliver the climate objectives committed to by the 195 signatory nations of the Paris Agreement. Low carbon, climate resilient and sustainable development is amongst the very highest of our priorities. For these reasons, we hereby adhere to the R20 Charter and we confirm that we share the values and objectives that this document describes.

We welcome R20’s initiative to work alongside government, industry and investors in accelerating the emergence of low carbon climate resilient infrastructure projects. We hereby mandate R20 to explore opportunities for the development of such projects within our city/region, specifically and not confined to the following:

- Project 1 : LED Street Lighting
- Project 2 : Street Lighting by Solar System and LED Lighting
- Project 3 :

We confirm that these projects, and any projects that we may subsequently identify in reference to this mandate, are part of our sustainability strategy and contribute to our intended nationally determined contribution (INDC). In support of the mandate conferred by this letter, we hereby commit to work as an active partner alongside R20 and its partners in the design, financing and implementation of these projects.

Yours sincerely,

Social and environmental impact
Lower electricity bill; Improved quality of life for citizens; Improved security; Reduced GHG emissions; Eliminate the need for trench excavation for cable laying

Main stakeholders
Bmaryam Municipality

Location and population
Bmaryam – Hammana Area, Lebanon

300'000 €
### Project maturity (IFC / World Bank Categories)

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STAGE 1</strong>: Concept Development, Site identification</td>
<td></td>
</tr>
<tr>
<td><strong>STAGE 2</strong>: Pre-Feasibility Studies</td>
<td></td>
</tr>
<tr>
<td><strong>STAGE 3</strong>: Feasibility Studies</td>
<td></td>
</tr>
<tr>
<td><strong>STAGE 4</strong>: Permitting / Financing / Contracts</td>
<td></td>
</tr>
<tr>
<td><strong>STAGE 5</strong>: Engineering / Construction / Commercial Operation</td>
<td></td>
</tr>
</tbody>
</table>

### STAGE 1: Concept Development, Site identification

- **Number of Lighting points**: 160
- **Mapping of the street lighting system**: YES
- **Current installation**
- **Expected energy / expenses savings**

### STAGE 2: Pre-Feasibility Studies

- **Pre-feasibility study**
  - Yes

### STAGE 3: Feasibility Studies

- **Feasibility study**
  - Yes

### STAGE 4: Permitting / Financing / Contracts

- **Contract with municipality**: Tbd
- **Building permits signed**: Tbd
- **Environmental impact study**: Tbd
- **Identified sources of fundings**: No

### STAGE 5: Engineering / Construction / Commercial Operation

- **Engineering, Procurement and Construction Contractor**
- **Operation and Maintenance Contractor**
- **Comments**