

## TC Abstract

### Basic Project Data

|   |   |
|---|---|
| • Country/Region:   | BRAZIL/CSC - Southern Cone  |
| • TC Name:  | Sao Paulo's Energy Matrix support for diversification   |
| • TC Number:  | BR-T1340  |
| • Team Leader/Members:  | Alarcon Rodriguez, Arturo Daniel - Team Leader; Snyder, Virginia Maria; Hernandez-Santoyo, Joel; Suber, Stephanie Anne; Celeste Marzo, Cristina; Massini, Marina; Cardenas Valero, Juan Carlos; Larrea, Sylvia Virginia; Vieira De Carvalho, Arnaldo; Haratsu, Misa; Tachlian-Degras, Edwin Julien Edouard. |
| • Indicate if : Operational Support, Client Support, or Research & Dissemination: | Client Support  |
| • Reference to Request:   | 40404332  |
| • Date of TC Abstract:  | 05 Dec 2016   |
| • Beneficiary:  | Secretaria de Energía y Minería del Estado de São Paulo   |
| • Executing Agency:   | IDB   |
| • IDB Funding Requested:  | \$ 600,000.00   |
| • Local counterpart funding, if any:  | \$ 100,000.00   |
| • Disbursement period (which includes execution period):                          | 36 months   |
| • Required start date:  | n/a   |
| • Types of consultants:   | Individuals, Firms  |
| • Prepared by Unit:   | INE/ENE   |
| • Unit of Disbursement Responsibility:  | INFRASTRUCTURE AND ENVIRONMENT SECT DEPT  |
| • Included in Country Strategy:   | No  |
| • TC included in CPD:   | No  |
| • Strategic Alignment:  | Addressing climate change, renewable energy, environmental sustainability and food security   |

## II. Objective and Justification

The general objective of this Technical Cooperation (TC) is to support the State of Sao Paolo to develop, implement and demonstrate sustainable energy measures, in order to promote their implementation at a large-scale. The specific objectives are: (i) to develop financial mechanisms to achieve distributed generation (DG) with solar energy and its implementation at a large-scale; (ii) to support both the development and implementation of DG projects with solar energy in public buildings ; (iii) to support both the development and implementation of electricity generation projects from solid waste; and (iv) to disseminate the results obtained for a potential replication of this type of projects.

It is expected that this TC will help promote new public policies on DG, reduce: public expenditure, CO2 emissions, energy dependence, and help diversify the state's energy matrix. It is important to highlight the replication potential of the measures and projects developed with this TC, in other states and cities of Brazil.

Power generation. Electricity consumption has increased 17% in the last 10 years in the State of Sao Paolo. Among the major consumers we can find: (i) industrial (35.6%); (ii) residential (30,3)% (iii) commercial (23.2)%; (iv) public sector (8,5%) ; and (iv) rural and others (2.4%). In the last years, electricity tariffs have also seen a considerable increase (40%), due to the hydric crisis in the sector. The expansion in electricity demand that has occurred in the last 10 years has had an important impact on: (i) the depletion of resources used to produce conventional power (for instance, areas for the placement of large-

scale hydropower plants); (ii) environmental impact; and (iii) high investments for the construction of new power plants. As such, Distributed Generation (DG) of electricity, defined as small-scale electricity generation that is connected to the distribution grid, offers different opportunities such as: (i) reduction of technical losses in transmission and distribution lines (by having electricity generation close to the demand); (ii) reduction of power outages in the power supply; (iii) to allow the exploitation of non-conventional energy resources (solar, wind, biomass), with the alternative to interact with the grid through the purchase or sale of electricity and simultaneously reducing fossil fuel consumption.

### III. Description of activities and outputs

#### Components

##### Development of Solar Distributed Generation in the State of São Paulo

Description: Under this component the following activities will be carried out for public buildings and spaces in the SSP (which will be selected previous to the beginning of the execution of this TC):

- (i) consultancy for the evaluation of the potential of solar PV use with DG, and results monitoring mechanisms;
- (ii) financing a pilot project of DG;
- (iii) development of financing mechanisms for PV solar systems in DG;
- (iv) support authorities within public entities to establish guidelines and manuals on how to install PV in their facilities, next steps, financing mechanisms, monitoring schemes;
- (v) educational campaign to promote solar energy in DG in the public sector.

##### Solid Waste Management

Description: Under this component the following activities will be carried out:

- (i) Consultancy for the analysis of the power generation potential in the SSP's solid waste;
- (ii) Development of a basic project of power generation with the SSP's solid waste (that can be implemented as a pilot project in the future).

##### Audit, Evaluation and Project Management

Description: Audit, Evaluation and Project Management

- (i) Coordination reports

### IV. Budget

#### Indicative Budget

| Activity/Component  | IDB/Fund Funding | Counterpart Funding | Total Funding |
|---|------------------|---------------------|---------------|
| Development of Solar Distributed Generation in the State of São Paulo | \$ 365,000.00    | \$ 70,000.00        | \$ 435,000.00 |
| Solid Waste Management  | \$ 135,000.00    | \$ 30,000.00        | \$ 165,000.00 |
| Audit, Evaluation and Project Management                              | \$ 100,000.00    | \$ 0.00             | \$ 100,000.00 |

## **V. Executing agency and execution structure**

To the request of the SSP's Secretary of Energy, this TC will be executed by the IDB in order to minimize the execution time

To the request of the SSP's Secretary of Energy, this TC will be executed by the IDB in order to minimize the execution time

## **VI. Project Risks and issues**

A risk assessment will be completed during the preparation of the TC document.

## **VII. Environmental and Social Classification**

The ESG classification for this operation is "C".