

Terms of Reference for a NKE – Database expert and trainer

Date	19 June 2018
Programme Title	Access to Sustainable Energy Program in the Philippines (ASEP)
Service required	Database expert and trainer
Donor	European Union (EU)
Programme Beneficiary	Department of Energy
ASEP-TA Team Leader	Mads Christensen mads.christensen@giz.de
Responsible Assigned Expert	Verena Streitferdt v.streitferdt@pertiwi-consulting.com
Work day inputs and duration of assignment	45 days
Location of assignment	Manila
Documents in Annex	ToR ASEP, Time Sheet
Project website	http://www.eu-asep.ph/

1. Programme Background

The Philippine Development Plan 2012-2016 (PDP) acknowledges the need to spread growth opportunities more evenly across the country. In line with the PDP, the Philippine Energy Plan 2014-2030 outlines the on-going plans and programs of the government to develop the power sector, expand renewables, and promote energy efficiency. The main concerns in the current Philippines energy sector can be themed around the following topics: (1) Secure energy supply for a fast-growing economy; (2) Expand access to electricity in unelectrified areas; and (3) Increase energy efficiency to generate electricity savings.

In this connection, the European Union's development cooperation has allocated EUR 60 million for the Access to Sustainable Energy Program (ASEP) to support the Philippines government in reaching its electrification and energy efficiency objectives. ASEP follows the general provisions of the UN Sustainable Energy for All (SE4All) Agenda and is in line with government policies. As an overall target, at least 1.5 million people will be reached by activities under ASEP.

The Department of Energy (DOE) has updated its comprehensive Energy Efficiency Roadmap for 2017-2040 to guide the economy-wide and sectoral improvements. Targets within this roadmap are set in a context of strong economic and energy demand growth during this period. The action plan calls for a 24% energy saving by 2040, compared to business-as-usual (BAU). This is the result of a targeted 3% per year improvement in energy intensity (energy input per GDP).

Generally, the Philippines' policy approach to increasing a energy efficiency combines mandates (including minimum energy performance standards) and conduct of extensive information and education campaigns (IEC) and programs.

In the residential sector, for example, it has been estimated that increasing the energy efficiency of major energy-consuming appliances (including lighting) in the Philippines could reduce cumulative energy consumption between 2010 and 2030 by as much as 150 TWh, which forms roughly 45% of Philippines' goal of achieving total energy savings of 10% by 2030 (APEC, Energy Working Group, 2010). A significant proportion of those energy savings is coming from the substitution of incandescent lamps.

2. CONTEXT OF THE TOR FOR THIS ASSIGNMENT

ASEP rests on the following pillars that all serve to assist DoE and relevant stakeholders in the energy sector: 1) Technical Assistance; 2) Investment Support, under the administration agreement between the EU and the WB; and 3) Call for Proposals.

The NKE assignment takes place within the remits of the contract "Technical Assistance for Access to Sustainable Energy in the Philippines", Contract reference number 2016/373-020, through which the EU provides technical assistance under ASEP. The contract aims at providing technical assistance, policy advice and capacity-building services to the Department of Energy and other stakeholders in the energy sector under the Access to Sustainable Energy Programme (ASEP).

In the Inception Report approved by the Steering Committee, Capacity Development on the Organizational level was identified as a field of intervention. In this regard, this TOR defines specific interventions in regards to improving the organizational capacity of the DOE in regards to its database management. As also the need for increasing the capacity of database management was identified on the individual level, this TOR combines interventions targeting at specific segments of the organizational level and a specific defined target group for increasing the individual capacity (database programmers, staff managing the databases in DOE).

The present TOR describes the role of one of the Database Expert and Trainer NKE position.

3. DESCRIPTION OF THE SPECIFIC ASSIGNMENT

This chapter provides a detailed description of the specific assignment.

3.1 Assignment strategy

This section outlines the specific strategy for the implementation of the assignment, describing specific activities and listing corresponding outputs.

3.1.1 Overall Objective

Support database and knowledge management in DOE. The assignment focuses on the development of 1 specific database solution and a general support for the relevant units of DOE on database management, especially PRC-data management.

3.1.2 Specific Objective

Set up database solutions and provide training and on-the-job-support on database management for DOE:

- 1) Provide trainings, trainings-on-the-job and advisory (CapDev-support) to selected divisions within DOE to strengthen the individual capacity of database programmers and staff involved in database management. The purpose is to improve the database quality within DOE and by that strengthen data availability, accessibility and management within DOE and towards relevant other stakeholders.
- 2) Provide inputs to the PRC-database which is currently integrated in the Infosys "Programs and Projects Archive". The objective is to provide suggestions for improvement of the PRC-data management in regards to projects in DOE.
- 3) Develop an ASEP-CapDev database to manage participants' data of ASEP participants.

This database should be aligned to DOE-HRIS. The objective is to have a CapDev participants' management system within ASEP in place, which can be used for monitoring, evaluation and reporting purposes. The system should be usable later on by DOE-Administrative Services.

Tasks and outputs

1) To achieve objective 1 (Trainings and Trainings on the job and Advisory (CapDev-support)), the implementation of the following tasks is foreseen:

a. Conduct trainings on trainings on the job for database programmers in DOE

i. Topics for training:

- Specify below stated training needs and adjust it to the specific participants during the first assignment in country.
- Provide relevant training materials and provide information on further self-learning options.
- Databases ascripting. Administration, optimization (Training event)
- Database architecture, Database table normalization (simplifying the tables relationship) (Training event)

(Used languages and frameworks within DOE: MySQL, PHP, PHP frameworks (Yii1), HTML, CSS, Ajax/Jquery, Javascript)

b. On-the-job-coaching and consultancy:

- Coach and cooperate closely with existing units on database-development (training-on-the-job), especially the HIRS, EUMB on database development. Provide "in-house-consultancy" and on the job training to relevant database-programmers.

Work up to **10 days** on the coordination and conduct of the 1 training event and provide up to **10 days** of in-house-consultancy and on-the-job-training on demand by the different DOE-divisions.

2) To achieve objective 2 (support of PRC-database development/rework), the implementation of the following tasks is foreseen:

a. Coordinate with DOE-PRC and DOE-ITMS in regards to specifications and adjustments

b. Revisit Infosys "Programs and Projects Archive" and point out improvements Coordinate with M&E expert regarding necessary database categories and adjustments of the PRC database.

Work up to **5 days** on adjustments of the "Programs and Projects Archive" so it can better meet the demands of the PRC (activity has to be conducted in cooperation with the ITMS)

3) To achieve objective 3 (ASEP-CapDev database development), the implementation of the following tasks is foreseen:

a. Develop a database for the administration of participants of CapDev-initiatives supported by ASEP which is aligned to HRIS of DOE and can be handed over and integrated into the HRIS.

b. Coordinate with ASEP Team Leader and CapDev-Team on database categories

and necessary data-entries. Coordinate on needed reports to be programmed.

- c. Coordinate with DOE-Administrative Services HR and DOE-ITMS on aligning the developed database to HRIS of the DOE

Work up to **20 days** on coordination on data-categories and reports and program front-end and back-end of the database which is compatible to DOE-HRIS.

3.1.3 Expected Reports for each objective

Submission of Reports described below each in soft copy and 3 hard copies. Reporting language shall be in English. The reports will be the property of the DOE and EU.

3.2 Period of Engagement

The Expert will provide an input of **45 days** until May 2019 starting August 2018 or on the day the contract of assignment is signed by the Expert. The assignment will comprise desk work at the consultant's home base, visits to offices of stakeholder agencies and meetings, as needed, at the DOE or other agreed venues.

3.3 Methodology

Not applicable

3.4 Resource requirements

Not applicable

3.5 Responsibilities

The Expert will report to the ASEP Team Leader and international CapDev expert to coordinate the mission time-plan and schedule his/her appointments with sufficient foresight and flexibility in order to meet the requirements of this assignment.

4. ASSUMPTIONS AND RISKS

5. EXPERT'S PROFILE

The minimum professional qualifications of the expert should be as follows:

- Minimum Bachelor degree in computer science, statistics, data science, or a similar relevant field;
- At least 10 years of experience and proven track record of database development and programming
- Excellent computer skills, especially strong knowledge of MVC (Model View Controller), excellent knowledge of Excel, excellent knowledge of PHP, MySQL, PHP frameworks (Yii1), HTML, CSS, Ajax/Jquery, Javascript
- Strong knowledge of crafting specifications of requirements for database systems /

Understanding of Business analysis / BPM (Business Process Management)

- Strong knowledge management skills
- Experience in the electricity market strongly preferred (database development in the electricity market)
- GIS-based database knowledge highly appreciated
- Outstanding analytical skills;
- Excellent written and oral English
- Experience of working with international organizations and governmental organizations in partner countries, experience in the region, especially in the Philippines is an additional asset.

6. REPORTING

All draft documents (e.g. workshops/event agenda drafts) and recommendations will be submitted to the Team Leader of ASEP for initial review. Once approved by the Team Leader of ASEP, all documents will be submitted from the ASEP office in English (in MS Word file), in 3 hard copies and a soft copy to the relevant bureaus, and EU/DOE for comments and final approval.