

Project Title	Vietnam Electricity National Power Transmission Company (EVNNPT) IT Infrastructure Roadmap
Contracting Agency	Tangible International Corporation
Project Organization	Subcontractor: Savu C. Savulescu from Energy Consulting International, Inc. as an Independent Consultant, responsible for addressing various tasks and subtasks of the project
Summary	<p>On this project, Savu will share responsibility with Vietnam Power Project Power Ltd. (Vietnam PRP) on the execution of the following tasks:</p> <ul style="list-style-type: none">▪ Evaluate System Requirements, including:<ul style="list-style-type: none">▫ High Level Plan for Fully Automated, State of the Art, Transmission System▫ High Level Systems Requirements Assessment▫ Detailed Assessment and Technical Evaluation of Proposed Systems▪ Develop the Power Transmission Grid Management Systems architecture<ul style="list-style-type: none">▫ Enterprise Technical Architecture▫ Data and Communications Systems▫ IT application systems for power transmission as well as other units of the power sector such as the Dispatch Center, the electric distribution companies, including:▪ Substation controlling and protection system<ul style="list-style-type: none">▫ Information system for power transmission grid operations▫ Remote control center▫ Smart grid applications▫ Technical Management System: to manage the status and history of technical assets, manage maintenance services and experiments▫ Operation Management Systems: Incident Tracking System, GIS▪ Develop an Enterprise Management Systems architecture encompassing<ul style="list-style-type: none">▫ Human Resources Management System;▫ Financial and Accounting System;▫ Project Management System;▫ Logistic Management Systems;▫ Asset Management System;▪ Support the execution of the tasks<ul style="list-style-type: none">▫ Economic, Financial and Cost Benefit Analysis of Proposed Systems

- Prioritize Investments based on Economic, Financial and Cost Benefit Analysis of Proposed Systems

which are under the responsibility of other subcontractors

- Attend the Mid-Project Stakeholder Working Group Meeting

Background The overall project aims at developing a 10-year Roadmap for the modernization of the EVNNPT power transmission grid system through IT technologies, with specific focus on introducing new technologies and IT systems and integrating existing systems to achieve EVNNPT's management and operational goals and objectives.

- Objectives**
- Understand NPT's IT system requirements by reviewing NPT's objective and business functions, and relevant regulations regarding to NPT
 - Assess and determine the target IT system of NPT
 - Perform economic-financial assessment of proposed IT system

Scope of Work Evaluation of operational, functional and interoperability requirements for state of the art, fully automated:

- Power Transmission Grid Management Systems integrated into a fully interoperable architecture of
 - Substation Automation Systems (SAS)
 - Operations Technology (OT) Systems and Applications including, on a preliminary basis, the:
 - Wide Area Monitoring System (WAMS)
 - Advanced Metering Infrastructure (AMI/MDM)as well as additional applications such as a Fault Locator, Lighting Forecasting and other intelligent grid applications to be identified
- Enterprise Management Systems aimed at
 - Human Resources Management
 - Financial and Accounting
 - Project Management
 - Logistic Management
 - Asset Management

over a 10-year horizon, taking into account the parameters of the National Power Transmission Corporation of Vietnam (EVNNPT) and based on the best international practices.

Period of Performance July - November, 2015