

<b>Project Title</b>	New SCADA/EMS, RTUs, Fiber Optics and PABX Communications Systems of ENEL, Nicaragua
<b>Contracting Agency</b>	ENEL, Nicaragua with funding from the Inter-American Development Bank (IADB)
<b>Project Organization</b>	Prime Contractor: Savu C. Savulescu as Independent Consultant responsible for technical and project management for the SCADA/EMS, RTU and Substation Automation components and for assistance and coordination during the implementation of the entire project, including the Fiber Optics and PABX Communications
<b>Summary</b>	The project aimed at commissioning and installing new SCADA/EMS, RTUs, Fiber Optics and PABX Communications systems for ENEL, and encompassed the: review of existing specifications and preparation of new technical specifications and bidding documents; bid evaluation; vendor selection; and assistance during project implementation
<b>Background</b>	<p>At the time when the project started, the National Control Center (El Centro Nacional de Despacho de Carga) CNDC, located in Managua, Nicaragua, was an operational unit of Empresa Nicaragüense de Electricidad ENEL, was responsible for the monitoring and supervisory control of the power system, and was equipped with a Siemens R-30 SOSYNAUT SCADA system. The system had been expanded with a PC based SCADA developed in house aimed at performing primarily post-disturbance analysis. The motivation for implementing new SCADA/EMS and communications support facilities stem both from the obsolescence of the existing system and due to the introduction of a wholesale competitive market in Nicaragua. While the project was being implemented, the RTUs and communications system were transferred under the jurisdiction of Empresa Nacional de Transporte ENTRESA (National Transmission Company) and CNDC became an independent operational unit. In August 1999, ENEL selected Savu C. Savulescu to perform the project <i>Determinación de la Actualización de Herramientas para el Centro Nacional de Despacho Según las Nuevas Responsabilidades en la Reestructuración del Sector Eléctrico</i>. The first phase of this undertaking encompassed reviewing and upgrading of the existing SCADA/EMS, RTUs and Communications specifications. The second phase covered the development, testing, implementation and commissioning of the integrated SCADA/EMS, RTUs and communications support solution.</p>
<b>Objectives</b>	<ul style="list-style-type: none"><li>▪ Review and assess the existing SCADA/EMS, RTU and Communications specifications</li><li>▪ Develop new technical specifications and assemble a set of complete bidding documents</li><li>▪ Assist ENEL during the bid evaluation, vendor selection and Statement of Work</li><li>▪ Provide assistance and coordination support during project implementation</li></ul>
<b>Scope of</b>	<ul style="list-style-type: none"><li>▪ Task 1: review the existing SCADA/EMS, RTUs and Communications</li></ul>

<b>Work</b>	<p>specifications, propose changes and amendments and, after approval by ENEL, issue a brand new set of technical specifications</p> <ul style="list-style-type: none"><li>▪ Prepare the bidding documents as per the rules of IADB</li><li>▪ Develop the bid evaluation methodology to be subsequently used for all the project components</li><li>▪ Present the bid evaluation methodology and the bidding documents to ENEL and IADB</li><li>▪ Perform the bid evaluation together with the CNDC and ENTRESA Project Teams and recommend the vendors for the two major project components, i.e., SCADA/EMS and RTUs and, respectively, Fiber Optics and PABX Communications</li><li>▪ Assist CNDC and ENTRESA during the Statement of Work, including the preparation of the project implementation schedule</li><li>▪ Assist CNDC and ENTRESA during the: design, implementation, testing, installation and commissioning of the SCADA/EMS/RTUs component of the project, including the translation of the existing RTUs and Power Line Carrier (PLC) equipment system from the substations that will be equipped with new RTUs to substations not yet equipped with RTUs and communications support; design, implementation, testing, installation and commissioning of the Fiber Optics and PABX Communications component of the project; design, purchase and site implementation of “Mejoras de Ergonomía y Equipos Anti-Incendio”</li></ul>
<b>Period of Performance</b>	February 2000 – April 2004