

- Project Title** SCADA/EMS Replacement and Development and Implementation of Market and Metering Management System at ETESA, Panamá
- Contracting Agency** Empresa de Transmisión Eléctrica (ETESA), Panamá with funding from the Inter-American Development Bank (IADB)
- Project Organization** Prime Contractor: Savu C. Savulescu, from SCS Computer Consulting, as an Independent Consultant
- Summary** The project aimed at replacing the SCADA/EMS existing at ETESA with new, state-of-the-art supervision and control facilities, and developing and implementing, with in-house resources, a Market and Metering Management System. The project entailed the: assessment of the existing SCADA system; identification of requirements; design of an integrated information architecture SCADA/EMS - Market System; development of technical specifications; preparation of bidding documents; bid evaluation; and assistance during project implementation
- Background** The National Dispatch Center (Centro Nacional de Despacho CND) is an operational unit of ETESA, with full responsibility for the monitoring and control of generation and transmission both in Panama and in the regional (Central American) context, including the entire range of economic, energy accounting and information management functions assigned to ETESA within the bulk electricity market (Mercado Eléctrico Mayorista) in the country. In 1975, the CND was equipped with Leeds & Northrop (L&N) SCADA and Automatic Generation Control facilities, including Economic Dispatch and Interchange Transaction Scheduling. This early system was replaced in 1988 with a PC based ILEX 9000, which was acceptable at that time but became totally obsolete in the late 1990s. The obsolescence of the ILEX solution became even more evident when the electricity market was enacted by the “Ley No. 6” from February 3, 1997. On this basis, it became clear that the only way to move forward would be to replace the existing ILEX from scratch and, in addition, to develop and implement a Market and Metering Management System. In August 1998, ETESA invited bids from internationally recognized consultants to conduct the project *Determinación de la Actualización de Herramientas para el Centro Nacional de Despacho Según las Nuevas Responsabilidades en la Reestructuración del Sector Eléctrico* and selected Savu C. Savulescu to provide the full array of consulting services entailed in this important undertaking. Eventually, the scope of the original contract was expanded to also encompass the: development and implementation of an in-house interim solution that would allow circumventing the “year 2000 bug” in the ILEX system; and assistance during project implementation, including participation in FAT and SAT.
- Objectives**
- Assess the existing ILEX 9000 system
 - Identify functional, operational, user-interface, performance and implementation requirements
 - Design an integrated information architecture SCADA/EMS - Market

System

- Develop technical specifications
 - Prepare bidding documents
 - Develop a bid evaluation methodology and assist during the bid evaluation and vendor selection phase
 - Assist during project implementation and participate in the FAT and SAT activities
- Scope of Work**
- Phase 1: assess the existing SCADA/AGC and population of RTUs; develop a diagnostic and establish general design and implementation criteria for the new system; document the initial findings in a diagnostic report (Informe de Diagnóstico de la Situación Actual y Estrategia para Migración Futura del Sistema Informático de Tiempo Real y Fuera de Línea de ETESA)
 - Phase 2: conduct a Feasibility Study and Training Plan aiming at the: design of the conceptual solution; identification of migration alternatives; development of preliminary cost estimates; and design of the conceptual approach to the Market and Metering Management System to be designed and implemented in-house by ETESA
 - Phase 3: development of technical specifications and preparation of bidding documents
 - Phase 4: bidding, vendor selection and Statement of Work, including the: development of the bid evaluation methodology; assistance during bid evaluation; recommendation for vendor selection; and assistance during contract negotiations and the preparation of the Statement of Work
 - Phase 5: assistance during project implementation, including: review of project documentation prepared by the Vendor; and participation in system testing (FAT and SAT) and final system commissioning
- Period of Performance** January 1999 – May 2002