

**Serban Alexandru Draghicescu, P.E.**  
***Senior Engineering Manager***

**EDUCATION**

1980

M.Sc., Electrical and Instrumentation Engineering

1988

Chartered Engineer

Member of Institute of Power Studies (Nuclear Power Plants components Certification Committee)

2009-to date

KBR University annual training courses in engineering, management, government procurement, contractual legal and ethics.

**COMMUNICATION**

Fluent in English, French, Romanian.

Understanding and reading capabilities in Italian, Spanish

Forty years continuing experience in a wide range of utility engineering design, construction management, program management, and design-build construction at locations in Europe, Middle East, Asia, South America and Africa. Twenty four years of experience in the UAE, in managerial design and construction positions in major infrastructure projects in Abu Dhabi and Dubai. Employed with Kellogg Brown & Root (KBR) since 2009. Responsibilities include management of engineering and design, management of construction, quality control and quality assurance, planning, project progress, budget, and subcontractors.

**PROJECT EXPERIENCE**

**KBR Federal Construction Services International, Engineering Manager, 2009 to Date**

- Management of design, construction and commissioning of the Abu Dhabi International Airport extension. New midfield terminal, central utility plants, utility services for the new airport and upgrade of the existing facilities.
- Preliminary MEP Design for a military airport extension and upgrading in Djibouti, East Africa. The scope included power distribution, Airfield lighting, Security lighting, Fire pump station, Fire alarm systems, Public address systems, Domestic water network, sewage collection system, telecommunication systems, HVAC systems.
- FEED for the DOS EBO project in Shield, Baghdad. The engineering effort included concept design, preparation of specifications and material submittals, followed by detailed design review. The project consists of a secured complex including accommodation and office space for more than 1500 people and is designed as stand alone for all utilities. The power is provided by an own power plant and distributed at MV (11 kV) as well as LV (400 V). There are Water treatment (RO units) and Sewage Treatment plants.
- Design review, construction supervision, and commissioning for the Schlumberger Main Operation Base, Rumaila Oil Field, Basra, Iraq.
- Design review and design delivery Prime Power Plant, Airport Traffic Control Tower, RO water treatment plant, runaway apron lighting in Tallil air base-Iraq.
- Technical evaluation of Electrical installation in hazardous areas, Beddam ISR hangars, Balad Airfield, Iraq
- Technical evaluation of electrical plant for Forward Support Depots and Battalion Garrisons in Afghanistan
- Design and Construct Site management
- Technical support for electrical and instrumentation CSC II and CABB projects, Tallil, Iraq.

**CH2M Hill Intl, Senior Manager Utilities, 2008 to 2009**

- Part of Project Management Team for Jumeirah Gardens project in Dubai.
- Energy simulation of typical buildings to assess the unit utility demands.
- Calculation of project wise utility loads.
- Review of infrastructure consultant design.
- Preparation of design guidelines, RFPs for electrical substations and district cooling plants.
- Preparation of detailed time schedules for the design, construction and commissioning of utility plants and networks.

**CH2M Hill Intl, Senior Client Services Manager, 2008**

- Business Development

**Nakheel, Design and Development, Head of Utility Design, 2007 to 2008**

- Design guidelines for MEP services, Water networks, sewage systems, gas distribution, and waste to energy facilities.
- Mathematical models for evaluation of utility demands for all Nakheel projects.
- Coordination with local authorities like DEWA, for the infrastructure upgrade and development required to support all Nakheel projects. Feasibility studies for the introduction of renewable energy sources like Aeolian, tidal, geothermal, and solar.
- Design briefs for tendering as DBOO contracts of District cooling plants, Sewage treatment plants, Waste to energy facilities, Desalination plants, Gas storage and distribution installations.
- Management of the competitive process of awarding concessions for utility services to Independent Service Providers.
- Tender technical evaluation. (Lead evaluator)
- Technical analysis and evaluation of electrical plant for Forward supply depots, battalion garrisons, in Afghanistan
- Application of sustainability principles in utility design.

**Nakheel, The Design Group, Senior Manager Utility Services Department, 2005 to 2007**

- Design briefs, review of infrastructure design for all Nakheel projects.

- Detailed planning for procurement of utility plants and networks. Interface with DEWA, DM, JAFZA.
- Management of the utility services procurement process.

**Nakheel, Senior Electrical Engineer, 2003 to 2005**

- Project manager for five 132/11 kV substations, 120 MVA capacity each for the power supply of Palm Jumeirah. Total project value: 200 million dirham.
- Concept and schematic design of the whole electrical distribution system of Palm Jumeirah. (132, 11, 0.4 kV networks)
- Developed a comprehensive database and system simulation model applicable to any electrical supply system for a major urban development.
- Developed a calculation method for all utility services demand, plant supply and associated costs for prospective future developments. The model is used during budget evaluation and master planning for all Nakheel projects. (Palm Deira, Jumeirah villages, etc.)

**Parsons International Ltd, Assistant Resident Engineer Electrical & Instrumentation, 2000 to 2003**

Upgrading both trains of Mafraq Sewage Treatment Plant by adding sludge management and odor control facilities. The Project required new power distribution systems, including a 11/0.415 kV transformer substation, twelve new Motor Control Centers supplying approx. 250 new electrical loads, instrumentation, control and monitoring equipment integrated in the MWTW SCADA system.

Responsibilities included submittal approvals, detail design checking and validation, monitoring of construction, pre-commissioning and commissioning activities.

**Parsons International Ltd, Lead Electrical Engineer Electrical & Instrumentation, 1998 to 2000**

Lead Electrical Engineer for the 260 MLD expansion of Al Awir Sewage Treatment Plant in Dubai, construction value US\$80 million.

- Approval of detail design, material and equipment submittals, installation, pre-commissioning and commissioning procedures.
- Equipment manufacturing and acceptance tests.
- Scheduling of the electrical works.
- Monitoring and validation of construction and commissioning activities. Approval of the final documentation packages.
- Financial control of the electrical works. Design solutions

for cost savings.

**Dar El Emara Consultantes, Electromechanical Consultant Engineer, 1998**

Approval of drawings, material submittals, installation procedures for the State Security Headquarters Building, Abu Dhabi. Supervision of the quality and progress of work on site. The project included: High voltage and low voltage distribution, lighting systems, fire alarm and fire fighting systems, air conditioning systems, CCTV, MATV, boundary and interior control access systems.

**Industrial Control Services, Fabrication And Testing Supervising Engineer, 1997 to 1998**

Involved in the procurement of materials, fabrication and testing of the equipment for a large water system SCADA. I was part of the installation and commissioning team which successfully started-up the system on site (south Sahara). I designed and installed special testing facilities like: Heat soak room for function testing of various equipment under thermal cycles, various interface equipment simulation (sensors, controllers, PLCs). I organised and conducted Factory Acceptance Tests. I performed Operation and Maintenance of the whole SCADA system. I held introductory courses in SCADA and instrumentation systems operation for the owner personnel. The courses included basic knowledge of communications, hardware and software, RTU's, modems, Central Stations, protocols, communication standards, etc.

**Control & Applications Emirates (Denion Group), Site Manager, 1995 to 1997**

Installation of four Boiler Control Systems based on ICS PLC Triplex in the LNG plant of ADGAS, on DAS Island. The project included installation of two control rooms each with two PLC cabinets, cables, instruments and junction boxes, fire protection (conventional based on R3 system and early detection based on laser technology) I participated to all the phases of the project from design to commissioning, including planning, procurement, issuing of procedures and application software. I was responsible of the work on site. The project was commissioned in time and handed over successfully to the owner. After the completion of the project I took charge of all the existing ADGAS documentation which needed updating to reflect the changes done in the LNG plant.

**AECL - Ansaldo Consortium Cernavoda, Romania Electrical Superintendent, 1992 to 1995**

Management of the contracts and work packages with all the electrical/ instrumentation contractors. Preparation of all the EQR

(engineering quotation requests) for the procurement of plant equipment. Responsible for the installation of the HV,(400 KV and 110 KV substations), MV( 10 KV , 6.3 KV) and LV distribution systems, Power transformers (2x400 MVA 24/400 KV, 40 MVA 110/6/10 KV , 40 MVA 24/10/6 KV , 1600 KVA 6/0.4 KV, 2000 KVA 10/0.4 KVA) Bus Bar Feeders , Cable System, Power Centers Motor Control Centers , Diesel Generators , Cathodic protection , Earthing system, Lightning protection system, Control Room system, reactor instrumentation systems (Rosemount, Foxboro, BBC, Leeds & Northrup etc.), cables and connections, fire protection and communication systems, Security systems (boundary and access control areas) and communication systems.

**Institute Of Power Study And Design, Cernavoda Site Office,  
Head Of Design Authority Electrical & Instrumentation, 1988 –  
1992**

In this quality I was responsible of implementation of the design solutions, Non Conformity Reports, Site Dispositions, any design revisions imposed by the situation in the site of Cernavoda Nuclear Power Plant.

I was part of the Romanian delegation to participate at the IAEA (International Atomic Energy Agency) “Chernobyl Forum” which issued, in 1993, its second analysis of the RBMK Chernobyl reactor accident occurred in April 1986. The report concentrated on “lessons learned”, recommending a series of measures meant to improve the design and operation procedures of the nuclear power plants.

**Institute Of Power Study And Design, Bucharest Romania  
Electrical Design Engineer, 1982 to 1988**

Design of electrical systems associated with power plants (oil, coal, gas) Control rooms, MV switchgear, MCC's cable distribution systems, etc. Design of 4x 12 MW power plant for Anadolou Refinery - Turkey. Control room, generator protections for a hydropower station in Medellin - Colombia. Design of a 660 MW CANDU Nuclear Power Plant: Transformers, Cables, MV and LV distribution systems, Emergency Diesel generators.

**Cerna - Motru - Tismana Hydropower Complex, Romania  
Head Of Electrical Maintenance And Services, 1980 To 1981**

20 KV overhead lines, 20/0.4 KV power transformer posts, HV and LV distribution systems, lighting and electrical motors.

