

## **Yak Goc, P.Eng.**

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**B.Sc. Electrical Engineering (Power Systems)** --- 17 years experience in EPC & the electrical power industry. Experienced in substation design, commissioning, low, medium and high voltage equipment, voltage drop calculation, power system studies, wiring, power distribution equipment troubleshooting, installation, maintenance and operation, area classification development, electric heat tracing designs, layouts, equipment sizing, single line drawings, and motor schematics.

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### **EDUCATION**

1990-1994 B.Sc. in Electrical Engineering (Power Systems)

University of Khartoum, Khartoum, Sudan

2006 Degree certified by IQAS, recognized by APEGA and listed on CCPE (FDL)

### **EXPERIENCE**

#### **Electrical Engineer**

Aug.2011-Present **ABB Inc., Calgary, Canada**

- Produced electrical engineering calculations and designs for facilities including, heat loss calculations, single line drawings, grounding layouts, schedules, protective devices / equipment sizing, cable sizing, tray filling, UPS / Battery sizing, electrical datasheets, lighting / lightning protection layouts and load lists for SAGD plant
- Prepared Operations and Maintenance Manuals, conceptual and metering & protection single line diagrams, 13.8kV switchgear layouts, and 120/208VAC & 125VDC power distribution systems for 144kV/13.8kV Synchronous Condenser substation
- Prepared reports for RFQ and RFP with project specific specifications to procurement and provided electrical engineering support including package engineering and Vendor document review for ore preparation plant including Crusher, Surge Bin Feed Conveyor, Crusher Discharge Conveyor, and Surge Bin facilities
- Prepared power system studies using ETAP/SKM software, engineering man-hours estimate, and key deliverables for FEED/Detailed phase
- Site visits with project teams to establish project execution plans and Scope of Works

#### **Electrical Engineer**

Oct.2010-Jul.2011 **Three Streams Engineering Ltd., Calgary, Canada**

- Produced electrical engineering calculations and designs for facilities including area classification development, heat loss calculations, voltage drop calculations, single line drawings, power distribution layouts, schedules, tray filling, load lists and heat trace designs by using HTSX & FP heating cables

- Prepared reports for RFQ and RFP with project specific specifications to procurement and provided electrical engineering support including package engineering and vendor document review for heavy oil (SAGD) facilities
- Prepared power system studies using SKM software, engineering man-hours estimate, protective devices / equipment sizing, and key deliverables for FEED/Detailed phase
- Site visits with project teams to establish project execution plans and Scope of Works

## **Electrical Engineer**

Oct.2009-Sep.2010      **AMEC Americas Ltd., Calgary, Canada**

- Produced electrical engineering calculations and designs for facilities including area classification development, heat loss calculations, single line drawings, power distribution layouts, cable sizing, schedules, tray filling, heat trace designs, LV/MV datasheets, technical bid evaluations, specification deviations, load lists and technical requisitions
- Prepared reports for RFQ, RFP, BOM, RFI, with project specific specifications to procurement and provided electrical engineering support including package engineering and vendor document review for oil sands facilities
- Prepared control and protection memorandum for existing and new facilities
- Prepared power system studies using ETAP software, engineering man-hours estimate, protective devices/equipment sizing, and key deliverables for Gates and FEED/Detailed phase
- Site visits with project teams to establish project execution plans and Scope of Works

## **Electrical Engineer**

Nov.2006-Dec.2008      **Tri Ocean Engineering Ltd., Calgary, Canada**

- Produced electrical engineering calculations and designs for facilities including area classification development and fugitive emissions study, single line drawings, power distribution layouts, cable sizing , tray filling, heat tracing designs, switchgear, MCC, VFDs, UPS, motor schematics and engineering packages for RFQ, RFP, BOM, and RFI with project specific specifications to procurement
- Prepared power system studies using SKM software, engineering man-hours estimate, protective devices/equipment sizing, package engineering and key deliverables for FEED/Detailed phase
- Site visits with project teams to establish project execution plans and Scope of Works

## **Electrical Consulting Engineer**

Feb.2002-Mar.2004      **Rasco Engineering Consulting Ltd., Cairo, Egypt**

- Prepared designs, protective devices / equipment sizing, calculations, schedules, load lists, tray filling, schedules, power distribution layouts, verified contract documents, vendor drawings and specifications for EPCM projects
- Presented detailed explanation regarding drawings and installation procedures

- Analyzed data and information for clients and provided technical solutions for the installation of capacitor bank for power factor correction

### **Sr. Electrical Substation Engineer**

Dec.1999-Jan.2002     **National Electricity Corporation, Khartoum, Sudan**

- Prepared contract documents including drawings and specifications for the construction, design, analysis, grounding studies/ layouts, grid resistance / soil resistivity testing, power quality, and commissioning of substations. These activities comply with global standards and practices such as IEEE/IEC
- Participated in construction of substations including installation of LV/MV switchgear/MCC, stationary DC distribution systems, and control/protection systems
- Participated in the rehabilitation of 11 kV and 33 kV circuit breakers, ring main units, and the 4x135 MVA power transformer tap changers project, which saved 6% of budget for the company
- Developed and designed wiring layouts for automated operations of 33/11 kV substations
- Performed and evaluated vibration, reliability and stability for steam turbo generators of 60MW

### **Electrical Substation Engineer**

Oct.1994-Nov.1999     **National Electricity Corporation, Khartoum, Sudan**

- Planned and designed transmission / distribution substations up to 220 kV voltage level
- Developed engineering calculations, grounding studies / layouts and installations based on IEEE / IEC standards
- Carried out insulation tests for grounding transformers, reactors, and capacitor banks
- Prepared designs, operation / maintenance, construction, and trouble-shooting
- Monitored and analyzed the performance of actuators, motors and starters
- Developed schematics for MCCs and VFDs; and prepared power system studies
- Prepared layouts for switchgear and stationary DC distribution systems including UPS

### **PROFESSIONAL AFFILIATIONS**

- Association of Professional Engineers and Geoscientists of Alberta (APEGA), Professional Engineer designation, P.Eng.

### **REFERENCES**

- Available upon request