Muhammad Yahya, P.Eng.

Electrical Lead

EMPLOYMENT HISTORY

A Designs Inc., Edmonton
April 2022 to Present
Lead Electrical Engineer

QEC, Nunavut
2019 to 2022
Project Manager/Lead Electrical Engineer

Veolia North America
2014 to 2017
Electrical Engineering Manager

WorleyParsons, Edmonton
2011 to 2014
Electrical Design Engineer

Rota Flow Controls, Fort McMurray
2010 to 2011
Electrical Specialist

SABIC, Saudi Arabia
2005 to 2010
Electrical Design Engineer

Schneider Electric, Saudi Arabia
2004 to 2005
Schneider Electric, Riyadh, Central Province, Saudi Arabia

Siemens, Saudi Arabia
2003 to 2004
Electrical Design Engineer

ABB Contracting Co., Saudi Arabia
2001 to 2003
Project Engineer

Pakistan Hydro Consultants
2000 to 2001
Senior Electrical Engineer

PES, Pakistan
1994 to 2000
Electrical Engineer

EDUCATION

EMBA in Project Management
Preston University, Pakistan, 1997
B.Sc. Electrical Engineering
University of Engineering and Technology, Pakistan, 1994

PROFESSIONAL CERTIFICATIONS

- P.Eng. APEGA Alberta, Canada
- Professional Electrical Engineering Member of APEGA and NAPEG.
- 2018-2021 - Member of Enforcement Review Committee of APEGA

Courses

- High Voltage Transmission and Distribution Operation Philosophies and Principles workshop conducted by Dr. Hyde Merrill, Member (IEEE)
- OSSA Regional Orientation Program
- OSSA Safe Work Permits Course, Suncor
- Extraction Orientation, Suncor
- Confine space training, Veolia North America
- Fall Protection training, College of New Caledonia.
- DCS Training of 40 MW Biomass Power Plant

Career Highlights and Expertise

Team Lead (Electrical Engineering) with more than 27 years of work experience in project management, design, installation, testing, and commissioning of HV substations (AIS&GIS) and HV transmission lines in utilities, petrochemical plants, oil sands, hydel and biomass power projects in Canada and abroad. Well aware of CSA, IEC, ANSI, IEEE, NEC, NEMA, CEC, National Building Code, National Fire Code, and other design practices.

Muhammad has recently worked with the Government of Nunavut as Project Manager/Lead Electrical Engineer. In this role, he prepared RFPs, project brief and cost estimate, frontend engineering package and detailed design documents for genset replacement Rankin Inlet, pond Inlet and Clyde River and Iqaluit. He completed bid evaluation documents for pond inlet and Clyde river genset replacement, tender documents, technical specifications, technical drawings and cost estimates. Muhammad also prepared ETAP short circuit, arc flash and grounding studies, as well as completed replacement of diesel genset 950 KW in Rankin Inlet, Power Plants. Completed base design and detail design drawings, ETAP arc flash studies and testing and commissioning of Genset.

Relevant Project Experience

40MW Biomass Power Plant, Fort St. James, BC

Role: Electrical Engineer, **Scope:** Completed base and detailed design review of 72KV Substation; review of single line diagrams, control and protection drawings of BC Hydro 66KV Substation in Fort St James; design of MV and LV power cable voltage drop calculations, grounding calculations and relay settings of GE and Schneider relays; design power plant load flow and short circuit and arc flash studies; testing and commissioning of CTs and PTs of 72KV Substation. Muhammad participated in CT/PT circuit verification and test, final setting applied and relay test, control circuit test, breaker failure (BF) initiation and trip test, control circuit test, manual synchronizing test, alarm test, Interlock test, trip test, SOE system test, SCADA system test, DFR system test, end-to-end test. He also performed testing and commissioning of, 72KV main step up transformer, 13.8KV MV and 600V LV switchgear and 600 V MCC, 1250 KVA emergency generator, 120V UPS and 125V DC system, SCADA and PLC systems.

Fort Hills Project, Suncor Energy

Role: Electrical Engineer, **Scope:** Prepared base and detailed design of MV (4.16, 13.8kV) power distribution system and 600V single line diagrams preparations for EDS phase of extraction and tailings; technical bid evaluation for the air compressors (ore preparation); 600V single line diagrams for EDS phase for ore preparation; completed grounding, short circuit and load flow studies and Arc flash studies for ore preparation and hydro transport corridor and booster station. Muhammad prepared Area Classification drawings; prepared power system design criteria and substation protection and control philosophy; 600V stand by generator arc flash energy calculations; load flow and short circuit studies; grounding analysis; and design criteria for communications network topology, relay and HMI communications, communication cabinets, HMI, IP addressing and communications cyber security.

P300 RT BPH Project, Suncor Energy

Role: Electrical Engineer, **Scope:** Prepared 72kV substation above ground EWP package. Prepared 72kV substation equipment layout and section drawings, power and control block diagrams and cable schedule, panel schedules, cable tray layout diagram, area lighting drawings and voltage drop and relay setting calculations.

TransCanada Keystone XL Oil Pipeline Project

Role: Electrical Engineer, **Scope:** Prepared base design and detail design and IFC drawings of Nederland Delivery Station. Prepared electrical hazardous area classification layout ,480V single line diagrams, distribution panels schedules, building equipment layout, cable try layout, grounding layout, cable tray and lighting layouts, electrical installation details, cable schedule, schematic and wiring diagrams, cable calculations, interconnection diagrams, and electrical equipment list. Prepared detail engineering IFC Package for Cushing and Market Link.

HT Capacity Increase Plant 300 Project, Suncor Energy, Fort McMurray

Role: Electrical Engineer, **Scope:** Prepared detailed design and IFC drawings for E-House 210 and E-House 274. Prepared single line diagram, grounding calculations and drawings, and relay setting calculations. Participated in testing and commissioning of 2750 hp motors and 125 hp motors and VFDs

HDPE Plant Project Saudi Kayan, Jubail, Eastern Province, Saudi Arabia

Role: Electrical Engineer, **Scope:** Prepared front end engineering package for 34.5/4.16 kV Substation. Prepared single line diagram, AC/DC load calculations, grounding calculations and equipment layout drawings. Participated in testing and commissioning of Main 60 MVA transformers and protection and control panels of 34.5/4.16KV substation.

Third Expansion Project SHARQ, Jubail, Eastern Province, Saudi Arabia

Role: Electrical Engineer, **Scope:** Completed base design and construction work package for 230 kV and 34.5/4.16 kV substation. Prepared single line diagram, AC/DC load calculations, grounding calculations and equipment layout drawings. Participated in testing and commissioning of main transformers, protection and control panels of 34.5/4.16kv substation.

Sea Bulk Loading Project, Petrokemya, Jubail Saudi Arabia

Role: Electrical Engineer, **Scope:** Completed front-end engineering package and construction work package. Prepared +/- 10% cost estimate, project schedule, electrical single line diagram, ETAP load flow study, grounding layout drawings, area lighting drawings and calculations.

MV Power and Control Cables Damage investigation and Design Modification Project, Petrokemya Saudi Arabia

Role: Electrical Engineer, **Scope:** Completed investigation report for damaged MV and control cables inside 34.5 KV substation. MV cables and control cables were not properly installed as per standards as a result due to heat accumulation the out jackets of cables damaged. Chief Design Engineer TOYO Japan accepted violation of SABIC design specifications and agreed to pay the cost of design modification and construction of the project. Prepared new cable routing design and relay setting calculations and participated in testing and commissioning.

Other Experience

- SEC CO., Je – 380/110 kV GIS PP3 Substation
- 33/13.8KV Substation
- 115/34.5 KV GIS Main Substation
- 1450 MW Hydro Power Complex