Consultant/Electrical Engineer



First Name Norbert Last Name Semitala Date of Birth 21st January, 1967

Country Uganda Nationality Ugandan

Academic Qualifications Masters of Business Administration (Finance), Makerere

University

2001

Post Graduate Diploma in Electrical Power Distribution 1996 Systems, Norwegian University of Science and Technology,

MSc. Electrical Engineering, Makerere University

University of Trondheim

Plot 13 Buganda

Bsc. Electrical Engineering (Hons), Makerere University 1992

Road

Second Floor

Mukwano

Courts

Experience

2012- to date Managing Director, NS Engineering Associates Ltd 2007-2012 Director Technical Regulation, Electricity Regulatory

Tel: +256-414253514

Authority

Mob:+25677240

2003-2007 Electrical Engineer/Consultant, NORPLAN(U) Ltd,

2472

Kampala

+256775402472

Electrical Engineer/Consultant, NORPLAN As, Oslo, Norway 2002-2003

Email:

Principal Projects Engineer, UEB 2000-2002

nsemitala@nsen gineering.co.ug

Planning/Standards and Specifications Engineer, UEB 1994-1999

Graduate Trainee Electrical Engineer, UEB 1991-1993

Industry Experience

Project Management and Consultancy

Contract Management

Power Sector Regulation

Operation and Maintenance of Power Systems and Power Equipment

Power Systems Planning and Design

Power infrastructure Construction and Power Systems Equipment

Installation

Languages

English Norwegian

Luganda

Swahili

Registered Engineer, Uganda Engineers Registration Board, No.534

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Membership to professional bodies

USA

Member, Uganda Institution of Professional Engineers(UIPE)

Member, IEEE Power Engineering Society, USA

Member, Institute of Electrical and Electronic Engineers (IEEE) Inc,

Key Qualifications and Experience With over 28 years working experience, Norbert's working career began at Uganda Electricity Board (UEB) where he served in various capacities, rising gradually through the various ranks to the senior post of Principal Projects Engineer, in 2001, a post he held until April, 2002 when he left UEB to take on a new assignment with an international Engineering Consultancy firm, *Norplan AS Consulting Engineers and Planners* and worked in *Oslo, Norway* as Senior Consultant, and returned to Uganda in March 2003.

In the over ten or so years spent at UEB, he acquired significant experience in power system planning, standards and specifications preparation, operations, analysis and design, project planning, coordination and supervision, project and contract management for power transmission and distribution projects, having been in the planning and projects divisions and also having worked closely with international consultants as either counterpart and/or co-ordinator on various project assignments at the utility.

On return from Oslo, he was employed at the NORPLAN (U) Ltd, Consulting Engineers and Planners office in Kampala, doubling both as Senior Consultant Engineer and as the Manager of the Power and Renewable Energy Division, and finally as Quality Assurance Manager, handling various tasks as either Project Manager and/or Senior Consultant for the different Energy sector related developments as detailed in his CV.

He has also been extensively involved, at various stages of his carrier, in the process of procurement of engineering equipment, (specified principally on the basis of IEC); contractors and consultancy services based on both Local and/or International Competitive Bidding procurement procedures. He therefore has extensive knowledge on local procurement guidelines and those of international development partners.

He later concluded a 5 year contract which ran from September, 2007 to September, 2012, in a senior management position, with the Electricity Regulatory Authority, as the Director, Technical Regulation, which he elected, not to have renewed. During that period, he was

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responsible for providing regulatory oversight of all technical aspects of utilities from Generation through Transmission to Distribution. Among several responsibilities, he was by virtue of this position the Chairman of the Grid Code Committee (GCC), which is the Supreme technical supervisory arm of all Grid operations. He also chaired the Installation Permits Committee (IPC), the Authority that certifies and licenses all Electrical wiremen in the country, for installations up to and including 220 kV. He has since founded and is currently the Managing Director/Lead Partner of a new establishment, NS Engineering Associates Ltd, providing Electrical Engineering and Management Consultancy Services.

Referenceassignments/ clients

Managing Director/Lead Consultant- NS Engineering Associates Ltd

 Team Leader: Consultancy Services to undertake a Technical Assessment of the State of the Electricity Distribution Network System for the Period 2005 to 2021.

Client: UMEME Limited

Consultant: Aster Integral Private Limited in association with NS Engineering Associates Limited

Status: On-going

 Team Leader: Consultancy Services to handle a feasibility study of an 8 MW Cogeneration Power Plant..

Client: Pramukh Steel Limited

 Co-team Leader: Consultancy Services for Tender Assistance and Project Management of the Kampala Metropolitan Transmission System Improvement Project.

Country: Uganda. Client: UETCL

Consultant: Joint Venture of Yachiyo Engineering Co. Ltd (YEC), Japan, and Tokyo Electric Power Services Co. ltd (TEPSCO), Japan in Association with NS Engineering Associates Ltd

Status: Ongoing

 Provision of Quality Control and Assurance Support to the OAG in the Consultancy to Undertake the VFM (Engineering) Audit of the Construction of Karuma Hydropower Plant (600MW) and Isimba Hydopower Plant (183MW) and Associated Interconnection Projects

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Client: Office of the Auditor General, Kampala, Uganda

Short term Consultant to assist the Rural Electrification
 Agency (REA) in the Project Management implementation of
 the World Bank funded project USD 135 million , ERT-3
 (Uganda Energy for Rural Transformation Phase III)

Client: REA, under World Bank support

Status: Ongoing

Consultancy Services for the Development of interventions
 To scale up wiring Installations across the Country
 Client: Private Sector Foundation Uganda(PSFU), World
 Bank support.

Status: Complete

 Sub consultant for the review and signing off of Electrical Engineering drawings for the 10 MW Tororo Solar North Power Plant.

Client: LeadEPC, South Africa

• Sub consultant for Consultancy Services for the Review of the Power Sector Reforms in Uganda

Client: Ministry of Energy and Mineral

Development(MEMD)

Consultant: AF Mercados of Spain

 Technical Advisory services for utility operations for Ferdsult Engineering services on rural grid operations on retainer basis

Client: Ferdsult Engineering Services Ltd

 Local Co-ordinator/ Counterpart Engineer for feasibility study for the Feasibility Study for the 400kV Masaka – Mbarara transmission line being undertaken by Feedback Infra (Pvt) of India

Client:Uganda Electricity Transmission Company Ltd(UETCL)

Status: Completed in April, 2015

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 Local Counterpart for Consultancy services on Readiness for Investment in Sustainable Energy (RISE)-country level data collection

Client: World Bank Group Status: Completed in 2015

 Consultant for Technical consultancy services in respect of the case between BM Technical Services versus Umeme Limited

Client: Umeme Limited
Status: Completed in 2015

 Technical Advisory services from a regulatory perspective, in respect to Umemes Capex programme.

Client: Umeme Limited Status: Completed in 2014

 Project Engineer for Distribution Project Management Consultancy Services for major system upgrades in and around Kampala.

Consultant: Mott MacDonald

Client: Umeme Ltd

Status: completed in February, 2014

 Electrical Engineer/Energy Specialist for the Ministry of Energy and Mineral Development assignment to prepare Stragetic Investment Plan, M&E framework for the medium term.

Client: Ministry of Energy and Mineral

Development(MEMD)
Consultant: CPMER

Status: Completed in November, 2014

 Independent Verification Engineer for the World Bank funded Output Based Aid (OBA) project for verification of Rural Electricity Household connections made by Umeme.

Client: Rural Electrification Agency (REA)

Consultant: KPMG

 Energy Expert in the Project for Technical Planning, Design and Constuction Supervision for Solar Powered Mini-piped Water schemes in Rural Areas.

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Client: Directorate of Water Development(DWD)
Consultant: JW Technologies Ltd

 Energy Expert (Local Counterpart) on technical assistance to kick-start the Implementation phase of the Sustainable Energy for All (SE4ALL) UN initiative in Uganda.

Client: EU/MEMD

Consultant: MWH, Belgium Status: Completed in June, 2014

Technical Regulation Department- Electricity Regulatory Authority

The Technical Regulation Department of ERA plays a key role in implementing its manadate in project licensing and ensuring technical compliance of licensed power sector players. During his tenure as the Technical Director, Eng. Norbert Semitala played the lead role in the following:

- The Licensee Investments Verification Exercise.
- Technical compliance monitoring of generators, distributors and the transmission company
- Appraisal/Review of Business Plans for prospective licensees, prior to licensing of Generation companies, distributors etc.
- Processing of licenses for generators and distributors.
- Technical capacity planning for the power sector.
- Development and implementation of policies and strategies for the regulation of generation, transmission and distribution of electricity
- Technical support to the tariff review/setting process.
- Development of Demand Side Management(DSM) tools and performance benchmarks on production efficiency, customer and environment impact and capital cost technologies.
- Supervision of evaluation of new project application including simulation.
- Chairing the Grid Code Committee and the Installation Permits Committee
- Technical oversight of projects;18MW Mpanga Small Hydro power project (\$27m/),6.5MW Ishasha minihydro power

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- project(\$14m),13MW Bugoye small hydro power project(\$52m)
- Successful arbitration of billing disputes between the main distributor Umeme and consumers. These include the following:
 - Pramukh steel vs Umeme Ltd
 - Ngege Ice plant vs Umeme Ltd
 - United General Engineering Works vs Umeme Ltd
 - GM sugar Ltd vs Umeme Ltd

NORPLAN(U) Consulting Engineers and Planners

- Independent consultant to translate transboundary projects for upscaling power trade and investment incentives under the Nile Basin Initiative for Nile Equatorial Lakes Subsidiary Action Program-Co-ordination Unit(NELSAP – CU)
- Team Leader/Electrical Engineer for the feasibilty studies for the grid power supplementation with off grid private power producers. This project was done for Electricity Regulatory Authority and Ministry of Finance and Economic Development
- Lead local counterpart consultant with NORPLAN AS Oslo for the development of financial forecasting model for Uganda Electricity Transmission Company Ltd
- Local Counterpart Transmission Engineer to Norplan AS of Norway for the feasibility study for the development of four mini hydropower sites of Bugoye, Waki, Muzizi and Nengo Bridge. Client is SN-Power of Norway.
- Electro-Mechanical Engineer responsible for the design of the power system for the sewage pumping station in the Makerere – Katanga – Mulago area. Client is National Water and Sewarage Co-operation(NWSC)
- Project Manager, Kabale Rural Electrification Project –
 Extension of Phase I, funded by Sida. Client is Ministry of
 Energy and Mineral Development.
- Local Counterpart Substation Engineer for the Feasibility Study for Kawanda-Masaka 220 kV line for the Norplan AS/Statnett SF JV of Norway. Client was UETCL
- Team Leader/Substation Engineer; on the Economic and Financial Feasibility Study for the Proposed Namanve

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- 132/33 kV, 3 x 40 MVA substation under the World Bank funded Power IV Project for UETCL
- Contributed in the supervision of Electrical Installation works for a new 4000 square metre, three storeyed building complex for the Department of Food Science & Technology, Makerere University.
- Electrical Consultant in the design and supervision of Electrical Installation works for Arapai Agricultural College (work involved rehabilitation of eight existing buildings and construction of up to 15 new buildings of which some are double storeyed). Client was Ministry of Education and Sports
- Electrical Consultant in the Electro-mechanical design of the Proposed Relocation of Shimoni Core PTC and Shimoni Demonstration Primary School complex (work involved construction of a number of buildings ranging from 4-level to 1-level, and includes accommodation facilities, classroom blocks, laboratories, libraries, administration and recreational facilities among others). Client was Ministry of Education and Sports
- Nominated representative to witness Factory Acceptance and type tests on behalf of UETCL for 132/11kV, 2 x 20 MVA

 Power Transformers for delivery to UETCL, Mutundwe Substation, at ABB PowerTech factory in Pretoria West, in South Africa between 5/05/03 to 13/05/03, 7/07/03 to 11/07/03, 31/08/03 to 07/09/03, 15/10/03 to 19/10/03 and 8/12/03 to 12/12/03 respectively. (Total value of Transformers was NOK 5,533,106 equivalent to USD 922,184).
- Resident Engineer/Project Manager for Norplan AS of Norway, Supervised the implementation of the NORAD funded project for Phase III -Extension and refurbishment of UEB 132/33/11 kV for the Substations of Nkenda, Nkonge and Opuyo - Contract 1, and for Lugogo and Mutundwe -Contract 2
- Substation Engineer on the assignment to carry out field investigations and subsequently prepared a report for UETCL on the" Feasibility study for the Economic and Financial Analysis for the Rehabilitation and Extension of the 132/33 kV substations of Mbarara North, Masaka West,

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- Lira and Lugazi", under Nordic Development Fund (NDF) financing. Client was UETCL
- Energy Specialist on the consultant's team for the "Monitoring and Evaluation" component of the ERT (Energy for Rural Transformation) World Bank funded project for the Ministry of Health. Client was Ministry of Health
- Procurement Specialist/Alternate Project Manager on the consultant's team for the "Implementation" water component of The ERT (Energy for Rural Transformation) World Bank funded project for the Ministry of Water, Lands and Environment, with the Directorate of Water Development as implementating agency. Project involves design and supervision for the installation and commissioning of over 700 solar panels of 120 Wp each. (Project Budget -approximately USD 4.2 Million). Client was the Directorate of Water Development
- Preparation of Evaluation Report for the NORAD funded Extension and Refurbishment of 132/33/11kV Nkenda, Nkonge and Opuyo Substations in Uganda. (Contract 1-Phase III) - Approximately 40 million NOK (approx.USD 6.5 Million). Client was UEB
- Preparation of various winning Technical Proposals, among which include:
 - Rural Electrification Project (HV Substation and Distribution lines) for Ethiopia Electric Power Corporation (EEPCO) in association with Nor Consult AS of Norway.
 - II. Tanzania's Rural Electrification Master Plan Study in joint venture with ELETROWATT-EKONO of Finland and in association with COWI AS of Denmark.
- Submitted various documents for expression of interest to the following Clients, Electricite de Laos (Laos), UEB, UETCL and EEPCO (Ethiopia)

Uganda Electricity Board (UEB)

Before its unbundling, UEB was the sole generator, bulk supplier and distributor of electric power in Uganda.Eng Norbert Semitala started

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Training and conferences

as a graduate trainee in UEB, rose through the ranks, and served in various capacities from 1993 up to 2002. His contributions included but were not limited to:

- Urban Power Rehabilitation Project (approx. 25 million USD), was responsible for co-ordination of all project activities (including the turnkey construction of 140 km, 33 kV Apac Masindi line) on the side of client. ADB Funded
- Contract management, supervision and coordination of activities for the JICA IV Rural Electrification Project
 (approx.12 million USD), JICA Funded which involved
 Installation of 4 x 33/11kV substations and construction of 4
 lines (Njeru-Kayunga-Baale, Budondo-Mbulamuti, Hoima-Munteme, Wabigalo-Migyera) approximately 200 km in total of 33kV (i.e. 2 components, substation and line constructions)
- Planning and procurement for *Owen Falls Extension Project* (OFE)- POWER III, Multilateral financing (NORAD, SIDA, WORLD BANK, NDF, ADB, UEB). This involved extension of three 132/33/11 kV substations of Kampala North, Lugogo and Mutundwe, Supply of Air Break Switches and Fused Disconnectors, Installation of a 33 and 11 kV distribution fault finding system, supply of two 40 MVA, 132/33 kV and 132/11 kV Transformers, relay co-ordination and planning system
- Counterpart Planning Engineer for Load forecast Uganda's Load Forecast and Hydrology of the Nile River Optimisation Study conducted by Electricité de France (EDF)
- Counterpart Engineer for IVO Consulting Engineers of Finland for the Update of Distribution Standards for UEB, that were eventually used in the Loss reduction study described below
- Participated in the Distribution Loss Reduction Planning Study as Counterpart planning Engineer for the urban towns of Kampala, Jinja and Tororo conducted by IVO Consulting Engineers of Finland
- Planning of power system by carrying out computer aided load flow analyses using PSSE software, in order to initiate system improvements as a graduate trainee.
- November (18th-21st) 2014, Grand Copthorne Waterfront Hotel, Singapore

- International training course on "Power Purchase Agreement"
- April 2012 -Fairmont Hotel, Dubai, UAE
 Five day (April 8 -12)-"Leading and Managing People"
 course, conducted by Management Training and consultancy
 Ltd (MTC) of London, UK
- March 2011, African Utility Week, Cape town International Conference Centre, Cape Town, South Africa.
- Attended a number of presentations which included aspects of smart grids, Renewable energy Technologies, Financing infrastructure projects and many aspects of Transmission and distribution.
- April 2010, International Conference Centre, Abuja, Nigeria Presented a paper (Addressing Africa's Infrastructure Development Challenges -What Regulators in Africa and elsewhere are doing) at a three day conference on the theme Global Economic Crisis: Implications and challenges for utility regulation in Africa.
- Sept 2010, Renewable Academy (RENAC), Berlin, Germany
 5 day TREE seminar on Wind/PV Hybrid Systems and Micro
 Grids
- July 2010, Conducted by Public Utility Research Centre, University of Florida at Serena International Conference Centre Kampala Uganda. Workshop on Executive Leadership, Strategic Planning and Organizational Development in Utilities Regulation
- March 2010, Mombasa Serena Beach Hotel, Mombasa, Kenya
 Five day (March 22nd-26th) Corporate Governance training for Company Directors.
- Dec 2009, GTIEA/EATTA/UNEP training workshop on small Hydro power project (SHP) finance for Bankers and Insurance Companies. Participated as *resource person* on aspects of policy and regulatory issues in SHP held in Nairobi, Kenya
- July2009, IP3 (Institute of Public Private Partnerships), Arlington, Virginia, USA-Training on Regulating Quality of Service: Planning, Compliance Monitoring and Enforcement for PPP projects.
- April 2009, The Power& Electricity World Africa Conference Sandton Convention Centre, Johannesburg, South Africa

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- Nov 2008, IP3 (Institute of Public Private Partnerships),
 Washington DC, USA Training on Independent Monitoring and Evaluation of Development Projects.
- Sept 2008, The East African Power Industry Convention -Grand Regency Hotel, Nairobi Kenya
- July 2008, GTIEA/EATTA/UNEP Study tour on hydropower development conducted in Sri Lanka and Nepal -Study tour to appraise Small Hydro power developments
- March 2008, Applied Energy Solutions, Sandton, South Africa
 - Training on Power Systems Simulation. Course is accredited to South Africa Institute of Electrical & Electronic Engineers (Code:SAIEE 0072V
- Jan 2008, PURC (Public Utilities Research Centre),
 University of Florida, Gainesville, Florida, USA-Training on
 Public Utility Regulation and Strategy.
- Sept 2007, CREEC (Centre for Research and Energy Conservation), Makerere University, Kampala - Training on Pico Hydro design and Implementation
- March 2007,CECORE(Centre for Conflict Resolution)/SAFERWORLD training Imperial Resort Beach Hotel, Entebbe - Training on conflict-sensitive approaches to development
- June 2004, International Center for hydropower (ICH),
 Trondheim, Norway Hydro Power Development and
 Management in the context of integrated water resources
 Management.
- Aug 2001, Mauritius Sugar Authority/AFREPREN, Quatres Bornes, Mauritius
- Energy training Course on Power Sector Reforms-Implications for the Co-generation industry
- Dec, 2000, Fintech (Uganda) Ltd
 Training on Microsoft packages, MS- Word, Excel, Access,
 PowerPoint and MS Projects.
- Aug Sept 2000, International Center for hydropower (ICH),
 Trondheim, Norway. Hydropower and the Environment
- May 2000, Stat Kraft SF and Statnett SF, Oslo Norway.
 Economic Power Dispatch in liberalized / deregulated Power Markets
- July, 1998 ,Electricité de France (EDF), Paris & Rene',
 France
 Load Forecasting Techniques

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- Aug –Oct, 1997, Swed Power, Stockholm, Sweden;
 Advanced training in Electricity Distribution Management
- Aug, 1994, Management Training and Advisory Centre (MTAC), Kampala, Uganda
 Project Planning and Implementation
- Mar 94 Sept 94, Makerere University, Kampala, Uganda
 Post graduate training in Project Planning and Management

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismmissal, if engaged.

Date: 25th 05-2022

Signature.