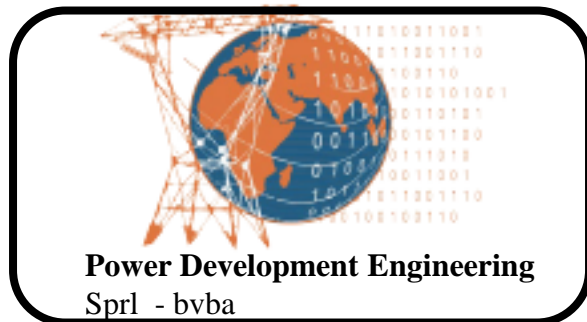


POWERDEV.eu
Power Development Engineering
sprl-bvba

Consultancy services for your Power Networks



D. d'Hoop

2022

I. Structure

- **Small is flexible: 1 person**

plus subsidiary in Latin America

- **With a network of collaborators:**

- Subcontracting of free-lances as needed
- RenDev: specialists of PV, Wind Energy and Finance

Potential resources from its own clients:

FR: AETS, IED, SOFRECO,...

DE: Fichtner, GOPA-Intec, LI, iiDev...

BE: Elia, COWI, STANTEC-MWH, Tractebel...

- **Founded:** in 2000, experience since 1990

II. Main Services



1. Transmission, Interconnections Planning, Integration of vRE
2. Distribution Planning
3. Demand forecasting
4. Demand Side Management
5. Generation Planning, interconn. planning
6. Other Services: benchmarking, softw. design

II. Main Services (1/3)

1. Transmission, Interconnections Planning and RES integration :

- Load Flow, contingency studies (N-k...), NTC
- Short-circuit: compliance with breakers, means for reducing the Scc currents,..., check data...
- Dynamics: transient and dynamic stability (prevention of overload cascades, out-of-steps, voltage collapse, frequency collapse, inter-area oscillations, analysis of max exports/imports, reduction of load sheddings, AFLS)
- Reliability studies: Energy Not Served, SAIDI
- Investment plans and economic analysis

II. Main Services (2/3)

2. Distribution Planning and RES integration

- Similar computations but with other criteria, other tools → investment plans, reliability KPI's

3. Demand forecasting

- Typically 4 methods, selected as per scope of the study and the type of data available

4. Demand Side Management

- Estimate of potential for peak reduction
- Design of plans for interruptible loads
- Economic impact for: customers, TSO, suppliers

II. Main Services (3/3)

- 5. Generation Planning, interconn. planning
 - Comparison of strategies with various types of future power plants and related mixes
 - Introduction of storage, economic analysis
 - Reliability study (Energy Not Served, LOLP)
- 6. Other (benchmarking, softw. design, training)
 - Set-up of Key Performance Indicators (KPI)
 - Benchmarking of methods (NTC calculations...)
 - Benchmarking of generation performance
 - Design of software tools (KPI monitoring, DSM)

III. References :

Integration of RES plants



- Mauritius: 25% RES target for 2025 (2017-2018)
- Guinea: 40 MW PV power plant for Koumaguély (2017)
- Mali : 40 MW PV power plant for Selingué (2017)
- Mauritania: 15 MW PV power plant for Zouerate (2016)
- Belgium: hydro power plant stability study for Lixhe (2014)
- Nigeria : 150 MW PV power plant for Damaturu (2014)
- Belgium: Wind Farm connection to the grid for Burg-Reuland (2014)
- Mali : 30 MW PV power plant for Scatec (2014)
- Guinea: 80 MW PV power plant for Koumaguély (2013)
- Mauritania: 15 MW Wind farm power plant for Nouadhibou(2012)
- Djibouti : connection of a 20 MW wind farm to the grid (2012)
- Guadelupe: Analysis of the maximum RES power penetration (2010)
- Mali: Wind farm connection to the grid for Tombouctu (2009)
- Belgium: Wind Farm connection to the grid for Erquelinnes (2009)
- Belgium: Wind Farm connection to the grid for Bévercé (2008)

III. References :

Transmission Planning

(1/6)

□ Transmission Master Plans:

- Nepal (2015, with AETS and EDF for NEA)
- Kenya (2015, with LI for KPLC and Ketraco)
- Kenya (2011, training with EGIS for KPLC)
- Mauritania (2011 with Intec for Somelec)
- Jordan (2009, with AREVA for NEPCO)
- Guinea (2006, with Decon for Enelgui)
- Belgium (2005, about 20 studies for ELIA)
- Serbia (2004, with THALES for EPC)
- Kuwait (2001, with SE for MoE)
- Syria (1996, with EDF for PEEGT)

□ Transmission Regional Studies:

- Belgium North East and software benchmarking (2017, ELIA)
- D.R. Congo (2017, Kivu South 225 kV line)
- Alps (2002, with AREVA for RTE)
- Bretagne (1995, with BCEOM for local administrations)
- Lot (1994, with BCEOM for local administrations)

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