



# Company Profile



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# About Us

Hydrosys Engineering is a boutique consulting and construction firm specializing in small hydro power development. Its key team members have participated in over 150 hydro projects with capacities up to 50 MW in Canada, Latin America, Caribbean, France, Africa and elsewhere in the world. Our expertise in hydraulic, geotechnical engineering and structures as well as our understanding of the specific needs of dam owners and developers of hydroelectric projects allows us to find solutions adapted to the real needs of our clients. Hydrosys is a World Bank and IFC experienced consulting company specializing in energy development projects including detailed technical studies, Environmental and Social Impact Assessment, Project Planning and Construction Management in developed and emerging markets. Hydrosys has a working partnership with a leading Canadian engineering firm with over 2,000 employees.



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# We Think Success

Over 90% of hydro projects end up with cost and time overrun during construction.

In Hydrosys Engineering we know how much is at stake. Our main focus is "owners first." That enables us to design optimum and reliable solutions that guarantee maximum returns for our clients while reducing risk along the way from concept to operation.





# Technical Team

Our team is composed of over 60 engineers dedicated to the design and construction of hydraulic structures and hydropower renewable energy. Hydrosys' key staff has participated in over 150 projects with capacities from 100kW up to 50MW in Uganda, Sierra Leone, Rwanda, Canada, Latin America, Papua New Guinea, the Caribbean, France and elsewhere in the world.

The Hydrosys team has expertise in hydraulics, geotechnical engineering and structures, provision of management services, detailed engineering and management and supervision of construction. Our team also has expertise in environmental and social impact assessment, environmental and social management plan, and supervision of resettlement.



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## + Hydroelectric Projects

Hydrosys possesses both the specialized expertise and multidisciplinary skills to implement projects from start to finish, beginning with feasibility studies and permit applications through the detailed design to construction, commissioning and operations. The services provided by Hydrosys focus on the fields of expertise required during each step of the process. A thorough understanding of the renewable energy market and Hydrosys' involvement in the development of hydroelectric projects has allowed Hydrosys to help many private and public developers to analyze the technical and economic feasibility of hydroelectric projects.



## + Dam Safety, Condition Assessment & Rehabilitation

Hydrosys staff has assisted many private and public developers in Canada and Internationally in evaluation of the safety of their dams. Hydrosys' skills in hydraulics, geotechnical engineering and structures, combined with our understanding of the specific needs of industrial owners and hydroelectric developers enables Hydrosys to recommend solutions that are tailored to the real needs of the client. Because of this, Hydrosys has an enviable record of producing feasibility studies which go on to be developed as projects. Furthermore, the teams' understanding and experience of the various national and International laws and regulations facilitate the obtaining of the necessary government approvals for construction, rehabilitation or upgrading to the current standards for dams and hydroelectric structures.





## + Project & Construction Management

Over the years, Hydrosys has assisted many clients with project and construction management services, ensuring proper documentation, execution and quality of the work. We offer a complete range of services in engineering, procurement, and construction management.



## + Environmental Studies and Assessments

Hydrosys clearly realizes that environmental and social issues are integrated parts of every project, especially hydropower projects. The most effective mitigating measures should be introduced during the early planning process and the potential impacts must therefore be identified at the earliest possible date. Hydrosys' multi-disciplinary staff puts us in the forefront to deal effectively with environmental and social aspects of project development.



Managing Director – Abe  
Daly, B.Eng. , M.Eng. P.Eng.

# Key Members responsible for projects in Africa

Mr. Daly has over 35 years' experience in the development and construction of hydroelectric projects in Canada and overseas. He combines solid technical expertise with managerial capabilities. For the last 5 years, he has worked as a resident engineer, technical director, project manager, and construction site manager for major hydroelectric projects. Has experience as part of owner's Engineer team managing various types of contracts, EPC type FIDIC Yellow and Red Books contracts for International Hydroelectric Projects such as the Rusumo Hydro project (80MW) as well small Hydro projects ( 5MW) in Rwanda. Currently leading Hydrosys Africa.



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Sébastien Vittecoq, P.Eng.,  
M.A Sc.

Mr. Vittecoq has over 22 years of experience in the Civil Engineering and Hydropower engineering specialties. His experience covers principally the engineering of hydraulic structures and hydroelectric facilities, inspections of structures, dam safety and condition assessment studies, stability studies, numerical modelling of structures and rehabilitation projects. He has also been in charge of financial and economic feasibility analysis for preliminary studies of new small and medium size hydroelectric plant developments, government construction authorizations and management of the engineering and construction of various hydropower projects and other civil work constructions.

His combined experience and academic background in engineering science and administration helped Mr. Vittecoq in the successful management of engineering teams and all construction aspects of projects for various types of private, municipal and governmental clients. His overall understanding of hydropower projects combined with excellent strategic and planning skills are key elements for the good understanding and direction of projects at their early planning stages and during the technical/financial feasibility studies.



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Hydropower Engineer  
Expert – Pentti Sjöman,  
P.Eng.

Mr. Pentti Sjöman is a senior civil engineer specializing in small-scale hydropower projects. He has over 40 years of experience in micro, mini and small-scale hydropower projects ranging in size from 30 kW to over 30,000 kW.

Pentti's experience includes identifying potential small-scale hydro projects from available mapping, undertaking field reconnaissance visits, doing hydrology studies, pre-feasibility and feasibility level studies. In addition, Pentti has done detailed designs of power intakes, penstock-pipelines (using various materials including high density polyethylene, ductile iron and steel), powerhouse buildings and tailrace conduits and channels.

In addition, Pentti has been involved with turbine-generator selection including installation and commissioning of micro and mini turbine-generators.



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Niko Kozobolidis, P.Eng.

Mr. Niko Kozobolidis is a civil engineer with a specialty in small-scale hydropower engineering (100kW – 50MW) and has expertise in the design of hydraulic structures.

His experience includes identifying potential small-scale hydro projects, field reconnaissance & site survey, undertaking hydrology studies, pre-feasibility and feasibility level studies. In addition, he has completed detailed designs of small dams & weirs, intakes & settlement basins, canals, reservoirs & forebays, penstocks (PVC, HDPE, GRP & steel), and powerhouse buildings.

He has experience in Dam Safety Reviews, rehabilitation designs and has undertaken several dam inspections including the provision of OMS manuals and Dam Emergency Plans (DEP).

His Canadian engineering experience has been in British Columbia, Alberta, Ontario and Northern Canada. His many years of international hydropower work have been in Honduras, Guatemala, Nicaragua, PNG, Sierra Leone, and Uganda. He continues to have an interest in community development with a depth of experience in village water supply, and hydropower for remote communities & rural electrification.



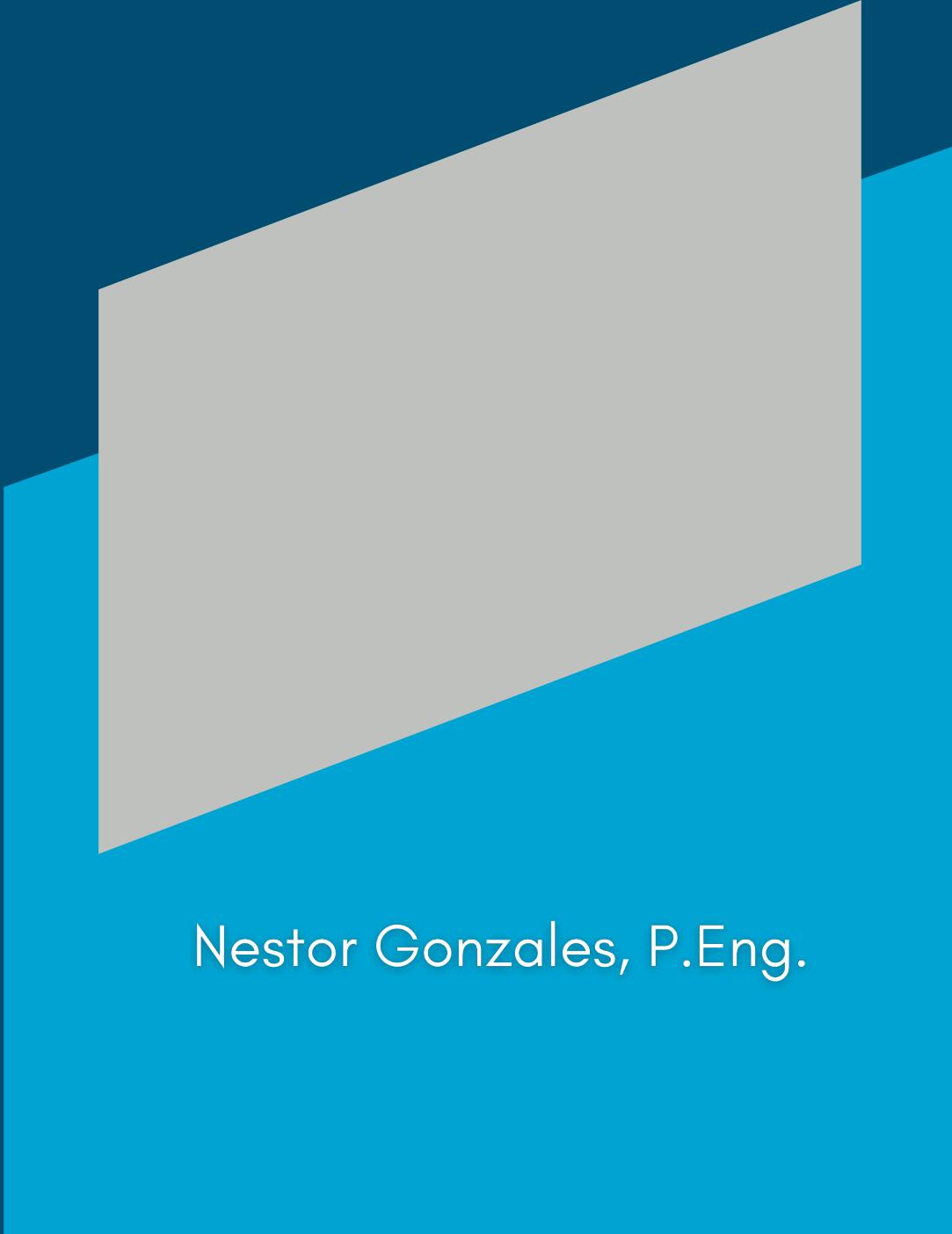
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Nestor Gonzales, P.Eng.

Mr. Gonzales has more than 36 years of experience, 26 of which in electrical projects, supervision, trouble-shooting, Commissioning and protection studies of hydroelectric power stations. He has 8 years of experience in maintenance of electro-chemical plants and 2 years in teaching electrical courses to post-secondary students. Nestor has been part of commissioning teams on Esen II in Turkey, Electrical Interconnection between Ethiopia and Djibouti, Sainte Marguerite in Quebec, El Canada Hydroelectric Complex in Guatemala and Eastmain-1 Hydroelectric Powerhouse in Quebec.



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Yannick Méthot, P.Eng.,  
M.Eng.

Yannick Méthot is an engineer with more than 15 years of experience relating to the design and refurbishment of hydraulic turbines and generators.

Yannick started his career working for a major turbine manufacturer, for 5 years he held several engineering roles, including mechanical and hydraulic design of turbines, model and prototype test engineer and proposal engineer for small and large hydro projects. During his 7 years as an engineering consultant, Yannick had the role of project engineer and project manager and executed several feasibility studies, unit refurbishment projects and the mechanical and hydraulic sizing of new powerhouse for small and large hydro projects. He also acted as owner's engineer for 2 large projects in Quebec and Ontario.

Yannick also worked for a second major turbine manufacturer where he started as a project engineer and had the opportunity to start the engineering of the Site C project as the lead project engineer where he was responsible for the entire design of the unit, including the turbine, generator, governor and excitation system. Finally, he held the position of head of technical proposals and was responsible for all aspects related to engineering for the technical proposal in Canada.



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Godfrey Wambua Maina,  
M.Sc.

Godfrey is a discerning professional with 9 years of experience in environmental and social management. He provided environmental expertise for RE projects in Kenya, Uganda, Rwanda, Cameroon and Sierra Leone. Godfrey was the environmental and social expert on the Lihanda Hydropower Project in Kenya, and he is a Lead Expert qualified by the National Environment Management Authority



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Have any questions or would like to learn more  
about our services?

## Contact Us

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