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## COMPANY PROFILE

**Simple Engineering** is one of the distinguished service suppliers for mini/micro hydropower sector, energy auditing services for industries and consultancy services for industrial machineries and process enhancements.

Our success is driven by our people and their dedication for the work they do by applying innovative technologies, experience and skills.

Our panel of experts carries over 30 years of experience in hydropower sector and over 6 years of experience in energy auditing sector. We researched and developed various electronic control systems for hydropower sector which have been recognized in both locally and internationally.

Being a registered Energy Services Company (ESCO), we strive to give the best service at all times. Due to our

commitment and contribution to hydro power sector in international arena, we have been actively participating as a resource for HPNet's training sessions and knowledge transfer sessions.

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### **Vision**

We at Simple Engineering strive to preserve the world for future generations. We envision a world powered by renewable energy, blessed with less waste and surrounded by clean air.

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### **Mission**

Research & develop products which will use modest and right technology to extract nature's full potential and services which will allow customers to extract maximum out of their business by minimizing waste.

## Company Roots

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We were consultants operating independently until 2012. Synergy of years of experience in various industries and disciplines of directors gave birth to Simple Engineering in 2012. Another milestone is that we partnered with a Chinese turbine manufacturer to source turbine equipment.

## Hydropower

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We involved in feasibility study, complete lifecycle of hydropower plant development, maintenance, rehabilitation and upgrading of estate sector hydropower plants. We use state of the art tools and technologies and our solutions improve reliability and profitability by reducing maintenance cost, minimizing downtime and minimizing operator involvement by use of automation.

In addition, we are capable of

- Design and fabricate turbines up to 200kW and import higher power turbines depending on the project.
- Design and fabricate steel structures such as, penstock, trash rack, log barriers and sluice gates for hydropower projects.
- Hydrological and silt data collection
- Investigation of available construction materials
- Power utilization/evacuation facilities
- Access to different components of the scheme

## Off-grid

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We design & develop off-grid hydropower plants with locally manufactured electro-mechanical equipment. Our dedication for hydro

sector has paved the way to research & develop one of the most reliable and popular off-grid hydropower plant controllers. It has been in operation for years without any interruption giving the power plant owner peace of mind and assurance.

In addition, we provide technology transfer on all aspects of off-grid hydropower technology especially rural community development projects.

## On-grid

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Connecting hydropower plant with the mains grid has proven to be a profitable venture since the produced energy may be in excess than the local demand. We provide all the services required by a plant to be connected to mains grid. Simple Engineering has developed synchronizer which is the main tool used in this process. Our dynamic power generation module

optimizes the power production based on available water level.

## **Solar Power**

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As renewable energy specialists, we are committed to provide our customers various alternatives to get away from fossil fuels and ever increasing energy bills. In pursuing this noble effort, we are happy to introduce you to the next big thing in renewables - Solar Energy.

We have teamed up with some of the world renowned top solar manufacturers to give our customers the best possible solar PV solution at affordable prices. Simple Engineering will never confine the customer to zero bill paranoia. We study your energy demand and suggest a solution which is appropriate, efficient and right technology. Count on us for a brighter '*energy*'tic future!

## **Energy Services**

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We are energy auditors registered under Sri Lanka Sustainable Energy Authority (SLSEA). We have been able to advise various industries to save energy and reduce harmful gas emissions thereby minimizing the environmental impact.

## **Energy Auditing**

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Our energy auditing services have enabled industries to gain maximum profits while minimizing wastage and energy consumption. We precisely calculate energy wastages and provide cost effective solutions to minimize or eliminate wastage. In addition, we calculate carbon footprint of various industries and processes and give recommendations for improvement and obtain green certification.

## **Project Implementation**

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We undertake complete implementation and offer technical guidance to achieve estimated benefits suggested by the energy audit.

## **Technical Consultancy Services**

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We have been exposed to various types of industries (local and foreign) and acquired skills, tools and equipped with knowledge to test and validate different machineries, industrial processes and protocols. We have expertise in following key areas.

## **Machine Selection**

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We carefully analyze the process and help them to select best possible machinery by considering durability, cost effectiveness and energy efficiency.

## Quality & Performance Assessment

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We assess the quality of machineries in terms of energy efficiency & durability and provide recommendations for upgrading and quality & performance enhancement.

## Troubleshooting

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We are well accustomed in both modern and imperial or legacy machinery and have knowledge and experience to troubleshoot and solve all forms of technical issues of the machines with a guaranteed performance.

## Our Achievements

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Over the past years we have achieved a lot due to our dedication and constant improvement of our processes.

## Hydropower

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- We were a registered hydropower developer and equipment supplier for the Renewable Energy for Rural Economic Development (RERED) Project administered by World Bank and DFCC Bank from 1998 to 2011.
- Technology Development Group coordinator of Hydro Empowerment Network (hpnet.org)
- We have contributed to implement HPP, capacity building of engineers and existing system studies in overseas (India, Rwanda, Myanmar, Bhutan, China, Nepal, and Vietnam).
- We have developed Electronic Load Controller (ELC) for off-grid hydro and Synchronizer for grid connecting applications.

## Energy Auditing

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- We have conducted energy audits for numerous industries such as, tea, ceramic, steel, rubber, food processing, hotel, commercial institutions, etc.
- We have undergone numerous local and foreign training programs on latest energy auditing technologies and techniques.
- Have participated in the 'Training Course for Energy Auditors' sponsored by 'Asian Productivity Organization'.

## Awards

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- 'Domestic Pico Hydro Unit' was awarded the second place in the open category at 'Sahasak Nimavum 2012' exhibition.

## Publications of Our Team

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- Micro Hydro Design Manual - A guide to small-scale water power schemes, Adam Harvey, Andy Brown, Priyantha Hettiarachchi, Allen Inversin, Intermediate Technology Publication (1993)
- Micro-Hydro Design Manual: A Guide to Small-Scale Water Power Schemes, Ajith Kumara P G, Practical Action (2009)
- Advance Control System for Small Hydropower Project, Ajith Kumara P G, National Energy Symposium-Sri Lanka Sustainable Energy Authority (2014)
- Is a Community Based Micro Hydro Scheme Suitable for Your Village?, Ajith Kumara P G, Practical Action (2009)
- Operation & Maintenance of Community Based Micro Hydro Village Electrification Schemes, Ajith Kumara P G, Practical Action (2009)
- Development of a Rainfall forecasting model for Sri Lanka using Artificial Feed-Forward Neural Network, Dharmaratne W.G.D. and Premarathna L.D., Proceedings of the 2nd Science Symposium- University of Ruhuna, Sri Lanka (2004) 29-36