



Hydropower Program

2019

Bamdad Industry & Trade of Energy Co.

“Bamdad Industry & Trade of Energy Co.” was established in 2013 by emerging of some well experienced engineers in the field of industrial utility supply.

Entity’s Main field of activity is utility supply for industries by special concentration on power supply.

In modern era, electricity as a clean energy is essential for all industries, so demand of it is relatively high. Even more than the demand, the growth rate is high too! In addition, environmental concerns has been raised rapidly as a social responsibility. Hydro power generation projects as the oldest clean renewable source of electricity could be considered as the best solution for emission free power generation and “Bamdad Industry & Trade of Energy Co.” Hydropower Program has been designed to satisfy this need.

Our hydropower program spans low to high flow rate and low to high pressure head, based on each project requirements by use of various types of turbines such as Francis, Pelton, Kaplan, Ossberger, etc. In another aspect, our hydropower program covers the capacity range of up to 10 MW for a single turbine unit.

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Professional Performance

To guarantee professional performance of “Bamdad Industry & Trade of Energy Co.” and satisfying client’s needs in a predefined and well established manner, we have bounded ourselves to strictly follow acceptable standards. Based on this background we have implemented:

- ISO 9001 standard for quality management system.
- ISO 14001 standard for environmental management system.
- ISO 18001 standard for occupational health and safety management system.
- And the most important one, which serves project handling concerns, is ISO 21500 standard for guidance on project management.



Consultation Services to the Clients

It is a bit hard to make a decision independently for clients who are not familiar with hydro power generation field, so we provide technical and financial consultation to potential clients to assist them to make a right decision to implement the project or not and how to do it if it is economically reasonable.

It depends on many technical parameters such as available flow rate, stability of flow rate, available pressure head, topography of site location, and distance from electricity consumer or network, price of electricity etc.

“Bamdad Industry & Trade of Energy Co.” as a specialist group would provide technical and commercial proposal for each project and even more could provide financial and business plan for the project life cycle in case of client request.

Engineering

“Bamdad Industry & Trade of Energy Co.” with its well trained and experienced technical personnel would provide tailor made solution based on specific requirements of any project.

Engineering activities include basic design, detailed design, power block design and auxiliary system design in a way that the client could freely choose in the range of just power block to the complete power plant package.



Control Systems

Based on requirements of each client, control system of power plants could be modified. All modern control and monitoring systems such as SCADA, PLC & remote controlling could be used. Turbine blocks could work independent from the network as island or synchronized with it or with each other. Using modern mechanized control facilities make it possible to achieve ultimate flexibility.



Installation

“Bamdad Industry & Trade of Energy Co.” provides installation and commissioning services for small scale hydro power plants for clients all around the country. It includes erection, pre-commissioning and commissioning activities, trial run of power plants and system debugging & trouble shooting.



Operation & Maintenance

“Bamdad Industry & Trade of Energy Co.” provides wide range of operation and maintenance services to the client from just providing original spare parts and consumables to guaranteed power production.

Operation and Maintenance service levels could be as follow:

- ***Spare parts delivery***
- ***Pre-planned repairs***
- ***Overhauls***
- ***On-Call and Emergency repair and maintenance***
- ***Full package of Operation and Maintenance by guaranteeing power production***

Operation & Maintenance Personnel Training

“Bamdad Industry & Trade of Energy Co.” provides technical training for operation and maintenance personnel of clients in Bamdad Academy or in client’s premises. This training includes knowledge and experience transfer from well trained and extensively experienced trainer to the attendees in a way that they could operate power plants autonomously in a safe and sound and economical manner.

Small Scale Hydro Power Plants

Small scale hydro power plants could be installed in a wide range of locations such as potable water pipe lines, distribution pipe lines, dams downstream channels, local & small rivers etc. They may be used as local consumer power supply source or generated electricity could feed national grid as distributed power supply project.

“Bamdad Industry & Trade of Energy Co.” is well equipped to run small scale hydropower plant projects by the capacity of up to 25 MW based on clients requirements



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Turn key projects

Some clients are not willing to engage in technical difficulties of making a power plant or simply it is not their field of interest and activities. In this case “Bamdad Industry & trade of Energy Co.” is ready to take complete responsibility of project and run any small scale hydro power plant project on turnkey basis.



