



Utility Program

2019

Bamdad Industry & Trade of Energy Co.

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“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.

In general, all ancillaries and auxiliaries that support the main process of industrial plants in any industry are called utility which is a very diverse and vast domain. Some major fields of utility activities are piping, power supply & cabling, water & wastewater treatment, compressed air supply, nitrogen supply, fuel oil storage & distribution, fuel gas treatment & distribution, safety & firefighting, steam & hot water supply, Heat Ventilation & Air Conditioning (HVAC) and so on. “Bamdad Industry & Trade of Energy Co.” Utility Program has been designed to satisfy these kind of needs in various industries.

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 proper decision independently for clients who are not familiar with utility field, so we provide technical and financial consultation to potential clients in order to assist them to make a right decision regarding the implementation of the right and affordable utility supply projects.

Utility system designing of any project depends on too many technical parameters such as sensitivity of industrial process, durability, plant life time, site geographical and ambient conditions, and required capacity of each utility etc.

“Bamdad Industry & Trade of Energy Co.” as a specialist group could provide complete package of technical and commercial proposal for each project in a way that put the client in a right decision making point.

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 and internationally accepted standards such as ANSI, ASME, API, BS, DIN, NFPA, IPS, ISIRI etc.

Engineering activities include conceptual design, basic design, detailed design, sizing calculations, 3D modeling, material take off and all other required subsystem designs.



Procurement

Based on requirements of each project and engineering activities results, “Bamdad Industry & Trade of Energy Co.” could procure required equipment and materials by considering projects constraints like time schedule, quality and price.

Installation

“Bamdad Industry & Trade of Energy Co.” provides installation and commissioning services for utility supply projects all around the country. It includes pre-commissioning and commissioning activities, systems test running, system debugging & trouble shooting.



Operation & Maintenance

“Bamdad Industry & Trade of Energy Co.” provides a wide range of operation and maintenance services to the clients from simply providing original spare parts and consumables, to guaranteed system operation.

Operation and Maintenance service levels could be listed as follows:

- *Spare parts delivery*
- *Pre planed repairs*
- *Overhauls*
- *On-Call and Emergency repair and maintenance*
- *Full package of Operation and Maintenance*

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 will be able to operate auxiliary systems autonomously in a safe and sound and economical manner.

Turn Key Projects

Some clients are not willing to engage in technical difficulties or simply it is not their field of interest and activity. In this case “Bamdad Industry & Trade of Energy Co.” is ready to take complete responsibility of projects and run any industrial utility supply project on a turnkey basis.

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Some distinguished field of utility supply which “Bamdad Industry & Trade of Energy Co.” is engaged in, could be listed as follows:

Power Supply & Distribution

Now a day almost all equipment use electricity as the source of power so it has an important role in industries. Electricity supply to consumers encompass two main parts which are power generation and power transmission & distribution.

Required electricity could be supplied from national network or it could be generated locally in the place of consumption. "Bamdad Industry & Trade of Energy Co." is well equipped to run small scale engine based power plant projects by the capacity of up to 25 MW based on clients requirements in a complete range of low to high speed engines; liquid, gaseous or dual fuel options; 400 V up to 20 kV voltage levels; to run on emergency basis or continuous power generation.

In addition, to maximize efficiency of the engine generator sets, complementary cycles could be added to the base engine generator packages which includes "combined cycle", "combined heat & power (CHP)" and "combined cooling, heating & power (CCHP)" or "Tri Generation". These complementary cycles generally use engines waste heat as source of energy for generating steam for extra power generation by steam turbines or use produced steam or hot water for utility consumers and even more for cooling purposes via chillers or other cooling equipment.

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Some different systems such as substations, various kinds of switchgears, bus bars and cabling are required to transmit and distribute electricity from main source to consumers. “Bamdad Industry & Trade of Energy Co.” could provide substations up to 230 kV voltage levels, medium and low voltage switchgears and cables and all other auxiliaries and ancillaries on turnkey or EPC basis based on client requests.



Compressed Air Supply & Distribution

In most industries, compressed air is required to run pneumatic systems, control and instrumentation systems or simply it could be used for general purposes.

The quality of compressed air would be regulated based on consumer's requirements. The most important parameters of compressed air are temperature, humidity, oil content, dust and particles. Some special equipment would be used to adjust and control the above mentioned parameters.

To reduce compressed air oil content, screw type compressor could be used which has some other side benefit like higher efficiency in comparison to reciprocating type or lower noise level etc. Heat exchangers would be used to reduce temperature of compressed air to normal temperature after compression process, air dryer would be used to absorb humidity content of compressed air and make it dry and various types of filters from rough to fine would be used to absorb contaminations or oil content of compressed air. By use of these auxiliaries a very clean compressed air is accessible which could pass all requirements for use as instrumentation compressed air.

“Bamdad Industry & Trade of Energy Co.” is well equipped to execute compressed air supply and distribution projects and all required auxiliaries and ancillaries based on clients' request.

Nitrogen Supply & Distribution

Nitrogen normally would be used in industrial plants to protect equipment against oxidation and corrosion or purging of flammable or harmful materials from equipment and pipes. Based on delicacy and sensitivity of equipment, the purity of used nitrogen would be changed from low purity (i.e. 90% to 99.998%) to high purity (i.e greater than 99.998% up to 1 PPM impurities). Based on the capacity and quality of required nitrogen, various kinds of nitrogen generation packages could be used and “Bamdad Industry & Trade of Energy Co.” is ready to execute nitrogen generation and distribution plants projects based on request of clients.

Fuel Oil Storage & Distribution

Fuel oil handling is an important part of energy supply programs. Various kinds of fuel oils like light fuel oil, heavy fuel oil, gasoil, mazut and even crude oil is used in industries.

Storage tank farms are essential to guarantee continuous supply of fuel oil to consumers. "Bamdad Industry & Trade of Energy Co." would execute storage tank farm projects based on clients' requests by fixed and floating roof types and the capacity of up to 20.000.000 liters per each tank. All required auxiliaries and ancillaries would be supplied. Fuel unloading facilities, fuel forwarding and required pump stations, filtration systems from rough to fine and micro filter range, heat tracing of fuel pipes and heating of storage tanks by bottom heaters, insulation and cladding of distribution piping are some of auxiliaries which normally would be done in fuel oil handling projects by "Bamdad Industry & Trade of Energy Co."



Fuel Gas Treatment & Distribution

Fuel gas handling is a very sensitive and important process in energy supply programs. To make it suitable for use, fuel gas should be treated in some aspects including pressure regulation, temperature regulation and filtration.

To ensure continues and reliable fuel gas stream supply, “Bamdad Industry & Trade of Energy Co.” would execute fuel gas supply projects including Gas Pressure Reducing Station (GPRS) in the pressure range of 1000 psi, 250 psi and 60 psi; filtration process including rough filtration, fine filtration, micro filtration by the use of various types of filters such as cyclone and distribution piping and measures for safety and emergency shot off.



Water & Waste Water Treatment & Distribution

In almost all of industrial plants, presence of water is essential. Based on various types of demands it could include irrigation water, service water, potable water, demin water and sewage & waste water. Based on consumption's standards, treatment of water or waste water could include a very wide range of processes including physical refinement, chemical refinement, biological refinement or the project could be just a water transfer or distribution one and "Bamdad Industry & Trade of Energy Co." has been prepared to execute these kind of projects.



Safety & firefighting

Our safety & firefighting program encompasses automatic fire detection & alarm systems, control and monitoring systems, portable and fixed water based firefighting systems and equipment, portable and fixed foam based firefighting systems and equipment, portable and fixed gaseous based systems and equipment.

Safety & firefighting system design of any project, basically depends on that project's risk factors. Based on occurrence probability and effect magnitude of each risk in a project, a customized and tailor made safety & firefighting solution would be provided for that project.



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Engineering activities include risk assessment, conceptual design, basic design, detailed design of safety & firefighting systems and all auxiliary and ancillary systems such as hydraulic calculation, piping etc.

Based on requirements of each project, “Bamdad Industry & Trade of Energy Co.” can procure all required safety & firefighting equipment.



Water based equipment includes fixed and portable monitor, remote control monitor, self-oscillating monitor, various kinds of hydrants, fire box, hose & hose reel, safety shower & eye wash, deluge valve, alarm valve, siamese connection, water nozzle, Spray nozzle, sprinkler, fire water pump and jockey pump.



Foam based equipment includes various kind of foam monitor, foam nozzle, bladder tank, foam proportioner, foam chamber & pourer.

Detection and alarm systems include equipment such as heat detector, smoke detector, various kinds of gas detectors, sounders & flashers. Gaseous systems include various type of extinguishers, total flooding gas systems by various types of agents such as CO₂, INERT gas or artificial gases like FM200. Control and monitoring system would be designed based on requirements of any project. Control and monitoring system could be as simple as a data logger or as complicated as possible by using SCADA, PLC & remote controlling facilities. Using modern mechanized control equipment make it possible to achieve ultimate flexibility.



Steam and Hot Water Supply & Distribution

Steam and hot water are used frequently in a wide range of industries. Steam could be used to generate mechanical power or electricity via steam turbine generator, or it could be used in industrial processes or simply it could be used for warming purpose. The same concepts apply for hot water and it could be used in industrial processes and warming purposes. “Bamdad Industry & Trade of Energy Co.” would execute steam and hot water supply and distribution projects based on clients request by use of fire tube boilers by the capacity of up to 20 ton per hour complete with all required auxiliaries and ancillaries such as super heater, de super heater, deaerator, chemical dosing equipment, control and monitoring systems, distribution piping, insulation & cladding and so on.



Heat Ventilation & Air Conditioning (HVAC) - Refrigeration

More than a century has been past from the days that heat ventilation and air conditioning got popular in residential places and even more in industrial premises such as factories and stores. To control air quality and condition, a wide range of parameters should be taken in account such as ventilation, temperature, pressure, contaminants, humidity and so on.

“Bamdad Industry & Trade of Energy Co.” is ready to execute complete range of HVAC and refrigeration projects on a turnkey basis based on client’s request in variety of packaged and split units. It includes heating and heaters systems, boilers, absorption & compressors chillers, air blowers, air filtration units and so on.

Piping

Piping is essential for distribution and transfer of fluids and in almost all industrial plants piping quality has a very crucial role in acceptable performance of it. "Bamdad Industry & Trade of Energy Co." with its well experienced personnel is fully equipped to execute any piping project which covers the complete range of metallic materials such as normal carbon steel, stainless steel, alloy steel or non-ferrous alloys to nonmetallic materials including HDPE, GRP or GRE and up to 72 inches in size. It encompasses underground & above ground piping and all required auxiliaries such as providing pipe racks, painting and coatings, various kinds of tests from welding to final hydro test, insulation & cladding and so on.



Cabling

Cabling is essential for power transfer, control & monitoring and protection of plants. These activities include usage of low, medium or high voltage cables by a wide variety of types such as armored vs. normal, power vs. control and so on. Even bus bars could be used instead of cables based on technical requirements of projects. “Bamdad Industry & Trade of Energy Co.” is ready to execute any cabling projects based on clients request complete with all required auxiliaries and ancillaries such as cable supports, connectors, sockets, cable lugs & shoes, glands etc.

Control & Monitoring

Now a day, digital word has changed everything including control and monitoring systems. Modern control and monitoring systems such as SCADA, PLC & remote controlling make it possible to achieve ultimate flexibility. “Bamdad Industry & Trade of Energy Co.” with its well experienced personnel is ready to execute control and monitoring projects based on clients requests on a turnkey basis.

