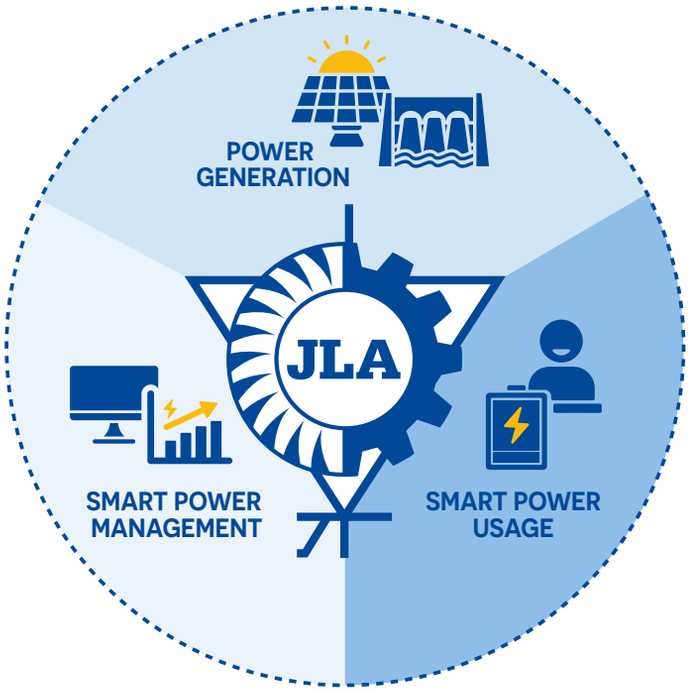
Smart Grid Solutions

JLA Hydro develops innovative hybrid solutions for smart grids, bringing clean and sustainable energy to businesses and local communities.



Hybrid Energy Solutions

JLA Hydro is capable of meeting all its customers' needs by offering **innovative hybrid solutions that combine various renewable energy sources**, particularly hydropower and solar energy.

From its extensive experience in setting up hydroelectric power plants, JLA Hydro can also offer 100% solar solutions of up to several hundred kilowatts, which can be paired with **energy storage** if necessary.

JLA Hydro can supply the equipment, as well as the complete installation and commissioning of these systems.

The hybrid or solar plants installed by JLA Hydro can naturally benefit from the technical solutions in control and automation that we offer, including remote control and management.

Energy Management Systems

Decentralized green energy production through the installation of a hydroelectric or hybrid power plant is a sustainable way to effectively meet long-term energy needs.

The energy distribution network must be managed optimally to maximize the use of production assets to meet the rapidly evolving energy demand.

Proper management and control of an electrical grid is essential when combining and synchronizing various energy production sources.

Maintaining a reliable and secure balance between supply and demand is critical in managing an electrical network. A mini grid is less flexible; any variation in production or consumption must be immediately compensated.

To achieve this, various measures can be implemented, including storage systems or frequency regulation systems, as JLA Hydro can offer.

Optimizing the use of electrical energy by the different consumers on the network is also a key aspect of network management. To achieve this, JLA Hydro offers the installation of various metering systems and bidirectional communication between the electrical grid and its customers. This system allows better understanding of consumption patterns, helping to mitigate peak demand.

**Our Passion,
Your Energy**

Experts in hydro power and renewable energies.

Regulation and Storage Systems

For the installation of turbo-generator units operating as mini grids, JLA Hydro has developed an electronic card for frequency regulation through load control: the **Electronic Load Controller.**

This system is directly integrated into the control panels and allows for the regulation of the turbo-generator unit's frequency in areas that are not connected to an existing electrical grid. For grid-connected sites, this solution helps limit overspeed in the event of grid disconnection.

Regulation is primarily achieved by dissipating energy using an electrical load bank, also known as a «ballast». This approach ensures **highly accurate frequency regulation**, even during rapid load variations on the user network.

In addition to this system, JLA Hydro offers on-site energy **storage solutions**, which help stabilize loads, manage supply and absorption of energy, optimize integration of various energy sources, and shift energy use between the time of production and consumption. Energy storage can also be used for providing network support services.

Electrical Lines and Equipment

In projects led by JLA Hydro, the installation of electrical distribution lines plays a crucial role in enabling the entire community to benefit from locally produced green energy.

This is why we offer services for the installation of **low and medium voltage electrical lines**, including the installation of transformers and protection cells.

JLA Hydro also provides and installs ancillary equipment such as **meters**, **charging stations** for cars, bicycles, and motorcycles, or public lighting systems.

CONTACT US NOW TO DISCUSS YOUR PROJECT!

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