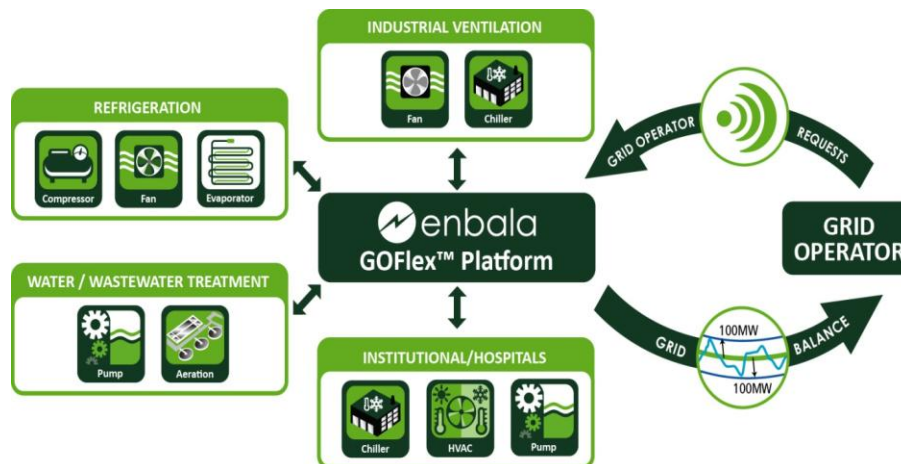


GOFlex™ Platform: The Power of the Network

ENBALA recognizes the advantages of making demand as valuable as supply, delivering innovative tools to utilities that engage the demand side to support the effective management of the grid. ENBALA’s technology platform has an advanced level of automation which is capable of responding to the real-time needs of the power system. The GOFlex platform receives a signal from the grid operator as often as every four seconds and then provides an aggregated response in near real-time within the availability and operating parameters of each customer. The intelligence of the platform determines the best way to leverage the participating demand side loads to satisfy the needs of the power system. All of this is performed without disrupting individual customers’ operations.

The GOFlex platform is a constraint-based real-time optimization and control system. The platform consists of a central optimization node that utilizes advanced real-time information and communication infrastructure to control the power usage distributed demand-side loads. ENBALA engineers work with facility operators and load owners to understand and identify *flexibility* in their process. This aggregated *flexibility* translates into a band of controllable power, which ENBALA utilizes to adjust the total demand at the facility according to the real-time or forecasted needs of the power system - without disrupting the underlying process of the load. The main features of the platform are:

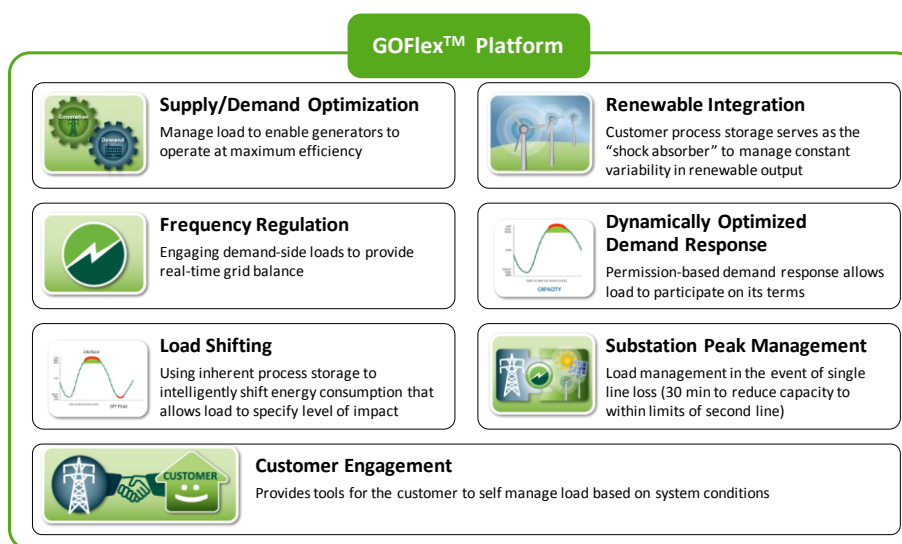
- Operating parameters are defined by participating facilities and are highly customizable.
- Continuous communication is enabled between the connected facilities and the central optimization node to monitor the real-time health status and capability of each load.
- An awareness of the real-time capability to increase or decrease power, which is then telemetered to the utility on a continual basis.



A single commercial or industrial facility on its own may not provide enough flexibility to be of value to the grid. However, ENBALA’s sophisticated technology continuously connects a network of commercial and industrial facilities, while maintaining all loads within their operating constraints and providing utility operators the ability to adjust demand on a broad scale. The network can include facilities such as cold storage warehouses, commercial buildings, hospitals, water/wastewater treatment plants, or other commercial and industrial facilities that demonstrate flexibility in how they use electricity.

A Versatile Platform with Multiple Value Offerings

ENBALA's multi-purpose GOFlex™ platform delivers grid operational flexibility by continuously connecting a network of distributed energy resources that includes large commercial and industrial electricity customers, aggregated residential loads, and physical storage assets. The platform provides an innovative tool for grid operators that can address many operational challenges emerging in today's increasingly complex power system. ENBALA's suite of solutions is shown below in Figure 2.



Operational Implementations

United States

- ENBALA's innovative and proven technology has been active in the PJM Interconnection market since 2011, after leading significant rule changes to enable commercial and industrial facilities to participate in Regulation Service.
- In 2012, ENBALA was hired by Oak Ridge National Laboratory in conjunction with the U.S. Department of Energy to quantify the amount of untapped flexibility available from process loads within commercial and industrial facilities in the United States.

Canada

- In two Canadian utilities in the Maritime Provinces, New Brunswick Power and Nova Scotia Power, ENBALA's Wind Integration solution is helping to mitigate wind ramping events and provide the necessary operational reserves since September 2012.
- In 2012, the Ontario Independent Electricity System Operator contracted ENBALA for the company's patent-pending technology to also provide Regulation Service to Ontario, Canada.
- Currently, ENBALA is engaged with BC Hydro, a western Canadian utility company that has commissioned a study to investigate how ENBALA's Dynamically Optimized Demand Response solution could be leveraged to defer substation upgrades on overloaded feeders by providing local capacity, as well as consider how the GOFlex platform could provide additional value throughout the year.

SCE Preferred Resource Living Pilot

Southern California Edison is facing a significant challenge due to the San Onofre Nuclear Generating Station (SONGS) closure. Given the country's focus on utilizing preferred resources to address the capacity shortage created by the SONGS closure, one potential solution is through demand response.

Demand response programs have long needed to be engaging, effective and economic. However, these programs are increasingly required to deliver more services to the utility. Specifically, demand response must be flexible (able and available to respond frequently, quickly, accurately, automatically, bi-directionally and with no notice), reliable (guaranteed to respond) and adaptable (adaptable to a range of future grid conditions and challenges). From a utility planning perspective, adaptability is becoming increasingly more important. In many regions, transmission is more difficult to permit and develop, renewable energy (non-firm, intermittent generation) continues to enter the grid and regional load growth is increasingly unpredictable and difficult to schedule.

To address LCR needs, Southern California Edison has defined a continuum of operational and planning characteristics for different products that expand upon traditional demand response offerings. To get the best possible operational use out of demand response programs, it is becoming increasingly evident that short notification and high frequency products are necessary. That means utilities will need to call on loads far more often than they have in the past. In general, this higher frequency of curtailment events will not be attractive to customers unless utilities find a way for participating facilities to define operating parameters that are sensitive to their own dynamically changing needs.

A continuously connected, controllable network of flexible loads is needed to provide the utility with advanced demand management capabilities. This type of intelligent load management platform delivers a robust and reliable product with increased utilization. ENBALA's turnkey Dynamically Optimized Demand Response solution is the next generation of demand management, delivering permission-based demand response and providing utilities with greater control and adaptability. Utilities can now offer a more flexible and dynamic program which is able to fine tune the required amount of curtailment with greater precision; only curtailing amounts required at that given point in time. This dynamic fine-tuning opens the door for a wider audience of commercial and industrial customers to participate in the program on their own terms. Additionally, utilities have the ability to manage localized demand response, which aids in relieving feeder constraints and supports the deferral of otherwise required capital expenditures.

ENBALA's Dynamically Optimized Demand Response solution combines advanced information, controls and communication technology with a detailed knowledge of how loads operate to deliver a local capacity offering that can be called on frequently with automated activation. By working together and utilizing ENBALA's real-time, demand-management platform, Southern California Edison and ENBALA will successfully demonstrate that commercial and industrial facilities can offer advanced demand response that meets the LCR needs due to SONGS closure.

ENBALA Company Profile

ENBALA Power Networks is a technology company established in 2003 with offices in Toronto, Ontario, North Vancouver, British Columbia and operations in the United States. ENBALA Power Networks is the recognized industry leader in leveraging demand-side loads to provide real-time flexibility to the power system without impacting the productivity of the participating loads.