



Mr. Hervé Bibollet

Managing Director
Webdyn

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Energetica India speaks to Mr. Hervé Bibollet; Managing Director ,Webdyn on the company's entry in India's solar sector and future plans.

ENERGETICA INDIA: Please introduce your company Webdyn to the Indian readers.

HERVÉ BIBOLLET: Webdyn develops and commercialises data loggers dedicated to the monitoring of solar installations of small or average sizes.

These gateways enable to control the production and the consumption of solar energies. It allows:

- Automatic collection of functional parameters, job data and data of environment of an installation
- Collection of the alarms on equipments
- Remote intervention on equipment
- Optimisation of the production and the energetic level of consumption

efficiency

ENERGETICA INDIA: What products/services does Webdyn offer in the solar sector, globally?

HERVÉ BIBOLLET: WebdynSun: The WebdynSun gateway is used to monitor and collect data from a solar plant installation. The gateway brings together on a single unit all the indicators from the inverters, the electric meters and the environmental sensors (sunshine intensity, temperature, wind speed, etc.).

Functional advantages of the WebdynSun gateway:

- Possibility for the software editors to develop their of overlayer
- Flexibility regarding managed equipment, compatible with the

main inverters of the market

- Frequency of data collection to monitor equipment
- Very low consumption of GPRS data
- Up to 100 inverters monitor with a single gateway
- Plug and play gateway
- Management very flexible of the alarms, including power break.

In such competitive market as India is, Webdyn has two interesting competitive advantages:

- High quality of service
- Robustness of equipment
- high-end positioning which differentiate us from the competition.



Furthermore, some clients have a custom use of the gateway: they monitor quite different typical of installations.

WebdynModbus: The WebdynModbus gateway is used to pilot or to collect data from all equipments which use the modbus communication protocol.

On a single gateway there are one Modbus RTU or Modbus TCP interface and one GPRS interface to communicate with the information system.

ENERGETICA INDIA: Which of your products are you bringing to the Indian market?

HERVÉ BIBOLLET: Webdyn brings to the indian market both of its solar products. The main one is WebdynSun.

Webdyn helps two types of customers:

- Large companies operating installations on multi-sites or constructions. Here the objective is to

collect data from the field and to send it to their own information system.

- Software editors of data monitoring from PV installations.

Regular issues on solar panels that Webdyn helps to manage:

- Dust
- Bad configuration
- Consequence of these issues: breakdown or dysfunction which can cost several thousand euros

The objective of the gateway is to collect heterogeneous field data and to send it to the information system to enable a preventive and curative remote maintenance of the installations and optimize their efficiency and their life expectancy.

To enable it, Webdyn analyses 3 levels of data:

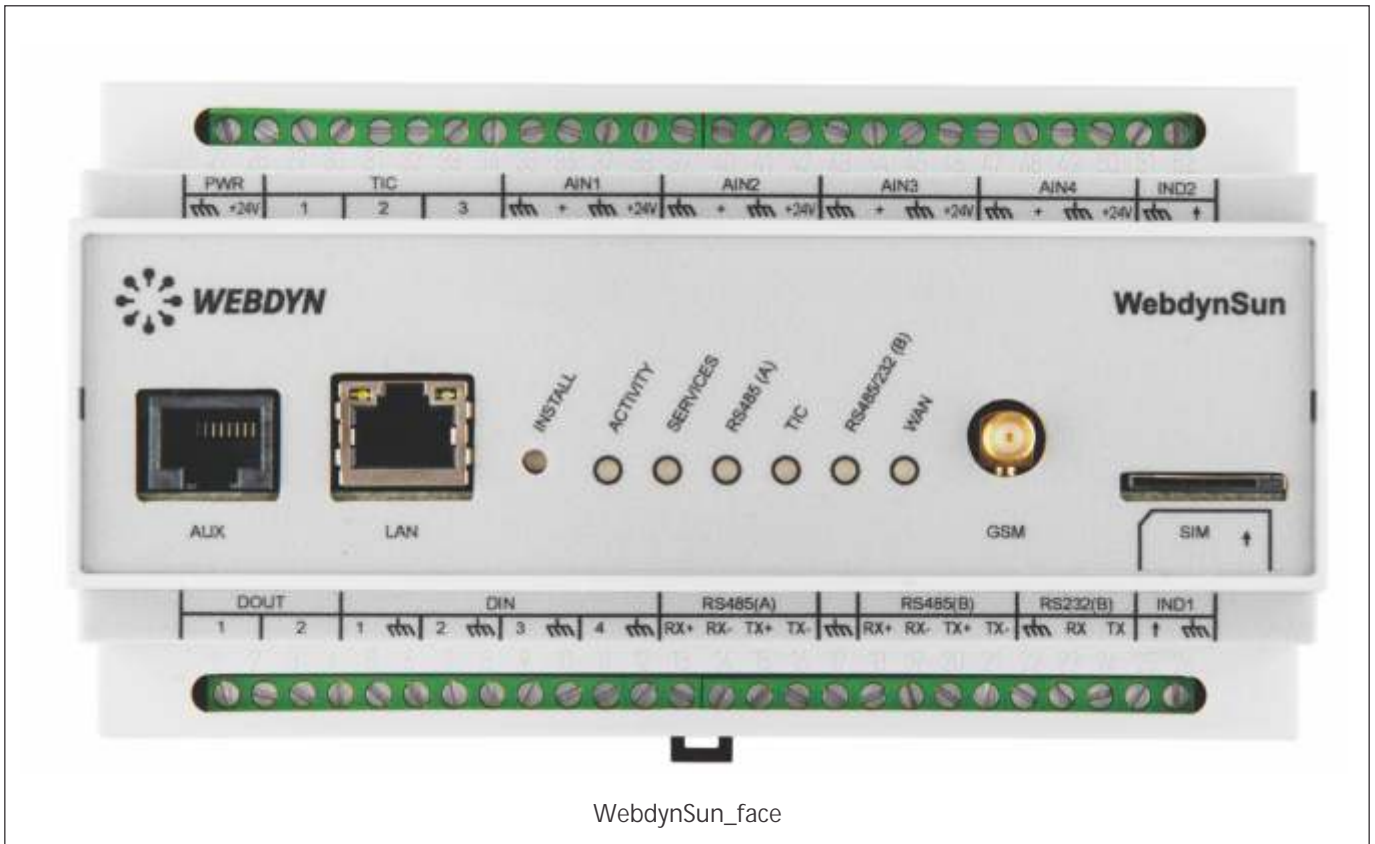
- The first level of data i.e the meters. The meters will provide you an explicit information which is the exact status of your production or consumption, and an implicit information which is: is it working or not?
- To improve the quality of the monitoring, one needs access to the second level which is the parameters and alarms coming from the central device of the installation (inverters of solar plants, boilers or HVAC in buildings, etc.). With these information one can have a much understanding of the site situation. But still one will not exactly know if the performance is good or not.
- This is why you need the third level of information to get a complete view. This level is constituted of all the environmental information, coming from sensors (irradiance, temperature, hygrometry, wind speed, etc.)

Our products help in managing, in a single way, heterogeneous photovoltaic plants (various brands of inverters, meters and sensors). It also enables collection of data for any portal: the one developed specifically by the customer or the one of the partner specialized in the monitoring.

ENERGETICA INDIA: What are your thoughts on the Indian solar market.

HERVÉ BIBOLLET: The solar energy in India has seen a fast growth since the launch of Jawaharlal Nehru National Solar mission by the government. The photovoltaic sector supplied only 0.4 % of the national production of electricity in 2014, but 2015 saw India installing 2GW. Today India is amongst the fastest growing solar markets globally.

With an economy rapidly expanding, an increasing request of electricity and a high level of sunshine, India is one of the big emerging markets of the solar energy. What helps is the fact that the



WebdynSun_face

government wishes to give India a leading position world in the global energy industry.

Figures speak themselves, and we can notice this in view of the considerable project requests that our company has received from India. The progress of the market benefits from the reduction in the costs of the photovoltaic panels since the last few years. The price

of generation of the solar electricity is expected unless 4 rupees/kWh in this beginning of this year, making solar energy the source of energy the least expensive.

ENERGETICA INDIA: What role do you see Webdyn (solar plant gateway) playing in the Indian solar sector?

HERVÉ BIBOLLET: Renewable energies represent less than 12 % of the total production in India. However, in its commitments to UN, India has assured to raise this percent from 12 % to 40 %

whereas the he solar production of the country should achieve 100 GW on the horizon 2022!

According to the electricity need, we will see different sizes of solar plants:

- Residential rooftop (typically less than 10 kW)
- Commercial and industrial rooftops and shade structures (10 kW to 1,000 kW)
- Ground-mounted systems (often greater than 1,000 kW)

To reach the objective announced to UN, India needs to optimize the production (long term performance), the quality of service and the profitability of all its PV systems.

To improve these criteria of optimization, the Webdyn's monitoring gateways enable the administrator of the installation to set up a preventive and curative maintenance and so:

- Increase considerably the production

of the installation

- Decrease the maintenance cost
- Increase the reactivity in front of breakdowns or dysfunctions

Consequences:

- The lifetime of the equipments increase
- The profitability of the installation is strongly increased
- Reduction of power failures
- Operational solar installations almost 100 % of time

Furthermore, India requires technical products of good quality follows by strong service. Our product WebdynSun completely fits this description because it is a strong product which enables the industry to set up services at diverse levels from the simple installation to the finest monitoring.

ENERGETICA INDIA: Has the company done any installations in India? What has been the feedback?

HERVÉ BIBOLLET: Webdyn has already installed almost 1000 gateways in India and has more than 12000 installations across the world.

Below two kinds of examples in India:

Case Study -

Metro City (Urban Area)

A 1.5MWp grid-tied solar PV system was installed on the rooftop of the TVS Lucas, Chennai. The performance monitoring system for the installation is provided by Webdyn. The system is supported by Webdyn's latest developed version of WebdynSun in France.

2 numbers of WebdynSun were installed on the site since the SCB units were far apart from Inverter & Meter. TMEiC inverter over TCP MODBUS & Secure energy meter over MODBUS RTU were connected in single WebdynSun to monitor their data & performance based on the custom frequency, similarly all the Strings were connected through SCB onto another WebdynSun in order to monitor individual Module as that helps to reach the particular module in case of any error or an event.

Complete information is being transferred to the portal of the Cleanmax for the deeper analysis. The main USP here with WebdynSun is that it can work with any portal suitable to process CSV file formats & hence more deeper analytics like Performance Ratio, Specific yield, Reduction in CO₂ & Real cost saving etc. can easily be calculated.

Case Study -

Rural Area

A 6KW off grid battery based micro grid solar PV system was installed in the very remote village named Bhatipara in Jawhar district of Maharashtra. The local tribes there do not have any grid supply

or clean water or proper approach road & hardly any 2G mobile signal.

So it is very hard to reach the site for the microgrid developers in case of any minor fault / event & cost them a lot in terms of time & money.

That system is supported by Webdyn's latest developed remote monitoring version of WebdynSun in France.

One WebdynSun with Vodafone 2G SIM card & extended GSM antenna for better signal reception was installed onto this microgrid site to monitor the crucial information about Batteries, Total Generation through Inverters, Active forward energy from Energy Meter & most of the relevant parameters from the Inverters to track the events & errors remotely.

The data in the form of zipped CSV files are being transferred onto the FTP server of CES, Pune & they are providing the relevant analyses to Gram Oorja to monitor their site on regular basis remotely.

This practice has not only saved their time & lot of money to visit the microgrid every time for any unknown reason of fault but is also providing them a lot more crucial information on to the battery system like: temperature, gravity, charging, discharging etc. along with the Grid Supply information.

Hence setting up best O & M practice as above with Webdyn that also gives you the freedom to choose the devices (Inverters, Meters, Sensor, SCBs & other Modbus devices) & the Portal of your choice based on the project requirements contributing greatly to reduce power failures and make solar plants operational nearly 100% of the time. The output and the quality of service are strongly increased.

ENERGETICA INDIA: What kind of installation target does Webdyn have for the years 2017 & 2018 in India?

HERVÉ BIBOLLET: From 2017: First, the range of products proposed in India is going to extend with a data logger which communicates in radio frequencies and is used in the energy efficiency in a more global way = > wider cover of the monitoring of energy.

Secondly, Webdyn is focused on its integration into the local development and has keen desire to follow government's "Make in India". Webdyn plans to locally manufacture its products in India.

We are now open to technological partnerships, in particular with the manufacturers of inverters and the developers of monitoring portals, to grow up our sales.

In the medium term:

- Webdyn wants to become a major actor of the smart metering and the PV monitoring in India.
- To be solidly implanted in the landscape of the renewable energy in India
- Webdyn's products to be used in utility projects as well supporting the government's objective of "100GW on horizon 2020"
- Development of the Delhi office and generation of direct and indirect jobs