# OceanWise

## *where your data matters*

AES Dominicana
*la energía de ser globales*

# Real-Time Wind and Wave Monitoring for Itabo Coal Terminal

> "The monitoring system that **OceanWise** supplied met my client's requirements exactly. The equipment has proven robust and reliable and the cloud based data management system, Port-Log.net, is cost effective and efficient. **OceanWise** were a delight to work with and I look forward to working with them again on other projects in the near future."
>
> *Alexander T. Holsteinson, Gerente General, Geomedicion Instrumentos y Sistemas, S.R.L.*

The Itabo Coal Terminal and Power Station provides electrical power to the Dominican Republic. This region is often hit by hurricanes so monitoring winds, waves and water level at the terminal is critical to the movement and berthing of vessels unloading coal. When wave height or wind speed exceeds set levels vessels are unable to berth.

Local engineering company, Geomedicion, Instrumentos y Sistemas, S.R.L. (G.I.S.), was asked by the terminal and power station operator, international energy company, AES, to source a solution comprising sensors, data telemetry, management and display. After considering all of the options, G.I.S. decided on an integrated system provided by **OceanWise**.

## Key Benefits to AES



- **Combines data from best in class sensors into a single system**
- **Cost effective, quick and easy secure cloud based data storage and publishing**
- **Calibration, configuration and monitoring of equipment via web interface**
- **Real-time data available for fast response to changing conditions**
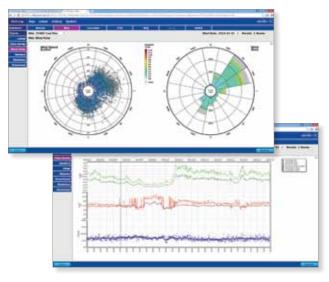
## Methodology

To fulfil the requirement **OceanWise** designed the system to incorporate best in class sensors, primarily a Met Station from Gill Instruments and a Water Level Radar and a seabed mounted Directional Wave Recorder from Valeport. **Port-Log.net** is instrument independent and can read data from multiple sensors from a range of manufacturers.

The data from the sensors is collected and transmitted via GPRS using **OceanWise**'s **Smart Telemetry** modem which can store data in case of interrupted transmission e.g. during a hurricane, and then transmit when reconnected. Additionally, this provides bi-directional communication which allows the status of sensors, battery levels and solar panel power output to be monitored.

The data is transmitted to **OceanWise**'s cloud based data management and display system, **Port-Log.net**. The cloud based subscription service was selected as it provides economical and fast access to the data to a variety of end users, including those on the vessels via the web based display.



**Port-Log.net** provides loading and storage of the data in an installation of **Ocean Database** and delivers a variety of displays for all the required data. Data can be viewed in real time or historically at any location with access to the Internet, including in the Coal Terminal's Control Room and by AES personnel's smart phones or tablets. The data is held securely and in this case is only accessible to authorised users by entering a username and password. However, the system can be configured to make all or a subset of the data available publicly, if required.



**Enjoy the confidence of working with marine data experts**
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