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## Jamaica NWC takes smart metering to the next level



**In December 2017, Jamaica's National Water Commission (NWC) successfully signed a contract with Diehl Metering for the delivery of 450,000 static**

**HYDRUS ultrasonic water meters. As a result, NWC can now exploit new opportunities to ensure accurate revenue over the next decades and protect their precious water resources.**

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**The roots of the evolutionary step**

The Caribbean island of Jamaica is subject to extreme environmental conditions that are the cause of a high level of material wear on the many mechanical water meters installed outdoors. In addition to high humidity and direct sunlight, with temperatures of up to 50° Celsius, the sand and stones often deposited in the pipelines present a great risk to the moving parts of the legacy mechanical meters.

In an initial project involving the installation of 60,000 smart meters, the HYDRUS ultrasonic water meter has proven to be the ideal technology for the NWC. As the static ultrasonic water meter does not have any moving parts, it is immune to deposits and, thanks to its robust construction, can easily withstand pressure surges. Ultrasonic metering cannot be manipulated and always shows the exact consumption at both high and low flow rates.

“Static ultrasonic measurement has become established as the new standard in the Caribbean over the last three years. All water usage is measured to a high degree of precision and is clearly visible for the customer on the meter’s display. The technology also recognizes existing leaks and thereby sustainably reduces wastage of this important resource,” says Stefan Raeder, Caribbean Regional Manager from Diehl Metering.

### **Benefits for NWC and its clients**

Billing plays a crucial role in guaranteeing customer satisfaction; one of NWC’s first and foremost objectives. By implementing the HYDRUS ultrasonic water meter solution, NWC will now be able to supply precise and accurate billing for actual water consumption.

The NWC is also improving and intensifying its interaction with customers through the use of these static ultrasonic water meters. The HYDRUS water meter is the first “customer service touch point” for consumers. Accessible and transparent presentation of water consumption data has had a positive impact upon customer satisfaction: HYDRUS has an easily readable display and offers a variety of alerts for problems such as leaks. Given that 75–80% of NWC customer complaints concern billing or doubts regarding the accuracy of bills, Jamaica’s National Water Commission hopes to

drastically reduce customer complaints by improving the transparency and visibility of consumption data.

### **Increasing revenues with smart technology**

Revenue gained through the use of HYDRUS ultrasonic water meters enables NWC to eliminate the causes of continuing NRW (non-revenue water) losses.

The legacy mechanical water meters had movable parts that were prone to damage by silt or sand deposits and gradually slowed down after around three years of use. The result was inaccurate consumption data and excessively low readings. The HYDRUS static ultrasonic water meter has no moving parts, so it will help NWC to increase its future turnover by taking accurate readings of actual consumption at all times without losing any of its precision over the years. These readings are the basis for accurate billing.

The use of innovative technologies is crucial for suppliers who wish to increase efficiency.

However, companies in the water sector – all over the world – are very hesitant in this regard. The NWC, on the other hand, wants to play a leading role and show its commitment to changing this position.

In an earlier project, the National Water Commission installed 60,000 Diehl Metering HYDRUS water meters in Kingston, Jamaica's capital. Here, NWC managed to increase its turnover by 16% thanks to the smart technology described above, which enabled it to provide correct consumer billing.

The cost of purchasing an old mechanical water meter was around half of the cost of the new HYDRUS ultrasonic water meter. However, its robust construction, which is free of moving parts, and a battery life of up to 15 years, means HYDRUS can top the average life expectancy of three mechanical water meters.

Thus, in the long run, the NWC can make further savings thanks to the smart technology.

### **Protecting a precious resource**

Toilets are one of the biggest causes of household leaks – in Jamaica and in many other countries. Water can often continue to leak for long periods of time without being noticed and without repair measures being taken.

In order to curb this unnecessary waste of resources, the HYDRUS ultrasonic water meter includes an integrated intelligent leak detection function that triggers a meter alert when a certain event occurs (e.g. permanent flow without at least 15 minutes of stoppage over a whole day) and shows this on the display for the NWC customer.

### **AMR/AMI for Jamaica**

Thanks to an integrated radio module, the HYDRUS ultrasonic water meters are ready for mobile meter reading (automatic meter reading) from the moment they are installed. The NWC employees are equipped with a radio receiver and a mobile reading device, such as a tablet, allowing them to conveniently collect automatic consumption data while passing by each meter.

With manual meter reading in the past, the collection of consumption data has often proven difficult for meter readers because access to the meter is blocked or the meter is completely covered – now this will no longer get in the way of reliable water consumption readings.

As part of the NWC's 'Delivery & Services' improvement strategy, the authority will be deploying a Diehl Metering Fixed Network by the end of 2018 to allow for fully automated, continuous readings of all integrated HYDRUS meters via permanently installed high performance radio receiver. The high resolution data enables the NWC to introduce an effective customer interface: a mobile app for checking individual consumption and bills and for receiving alerts.

In order to demonstrate a clear commitment to NWC customers, the additional revenue generated by the Diehl Metering solution is being directly reinvested into the water supply network to continuously improve the service and the customer experience.

The NWC is now part of an elite circle of suppliers who have put a large-scale smart metering solution into operation, thus proving their leading role in the region.

No other supplier in the Caribbean can demonstrate such ambitious activities as the implementation of over 450,000 smart HYDRUS ultrasonic water meters.

“Experience tells us that water suppliers in our region are behind the times when it comes to technology. This evolutionary step in the use of innovative measurement technology will take our industry to the next level,” said Mark Barnett, president of the NWC. MI

### **About the author**

Stefan Raeder is a regional manager for Diehl Metering. He is specialized in consulting with international water companies to transform their business to save revenue and to streamline their business processes with redundant and manual tasks. With more than 9 years of experience in the water, energy and AMR/AMI market, Stefan has supplied a large number of metering projects to various countries in the Middle East and the Caribbean.

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