



EMPRESA NACIONAL DE
ENERGÍA ELÉCTRICA
ENEE

Case Study

Company

National Company of Electric
Energy (ENEE) - Honduras

Company Details

The Empresa Nacional de Energía Eléctrica (ENEE), is a government-owned and operated electrical power company, operating within the electricity sector in Honduras. ENEE employs over 4,500 people, serves 1.3 million households, and over 100,000 commercial and industrial customers.

Wearable Solution

- VisualSpection software platform;
- RealWear HMT-1 hardware.

Use Case

- Distribution pole inspection;
- System analysis.

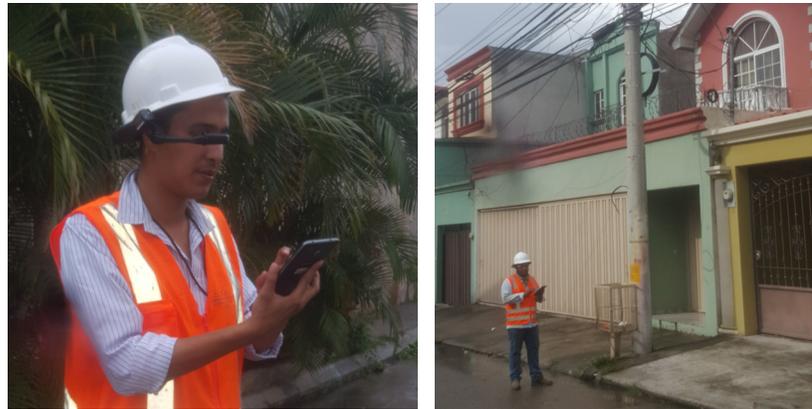
Benefits

- 66% quicker collection of pole information.

Distribution Line Inspections via the VisualSpection Platform

Executive Summary

Manitoba Hydro International Ltd. (MHI) has been tasked to inspect the distribution system for ENEE. The scope of the project is 135 km of medium voltage (tension) poles and 135 km of low voltage totalling 270 km, which equates to over 8,900 individual poles. Each pole has an average of 35 to 55 different items or values to be evaluated with a total range from 311,000 to 490,000 items validated for the project.



ENEE workers collect data using VisualSpection

The pole inspection process consists of GPS validation, photo documentation, and data entry via tablets verifying the assets of the distribution network. Previously, the inspection process consisted of validating all the assets on selected poles via a printed sheet with the information to be validated, cameras to document the assets being inspected, and a manual GPS to validate the coordinates assigned per pole. These pictures were then downloaded to a computer, renamed, and inserted into a folder system. The GPS coordinates were imported onto Google Earth creating a reference route of the inspection. The printed inspection sheets were then digitalized into an Excel database.

Using the VisualSpection solution, not only are personnel working hands-free, all photos are GPS-tagged in a route, timestamped, translated into Spanish, and hosted in one central location. The route line, distance, and duration are also displayed. This solution has resulted in a 3 to 1 process as a whole, which helps backup the inspection project in a more visual and efficient process.

“At the end of the day, we have enhanced our project times by 74%. VisualSpection gives us a huge boost in time and efficiency to the bottom line,” says Henry Galeas, MHI subcontractor.

Project Overview

Since 2016, MHI has been assisting the Government of Honduras to improve the efficiency of the Honduran electric distribution system. The government and other energy sector stakeholders have split distribution and energy commercialization from the ENEE and initiated a seven-year managing service contract with an investment component.

Acting as the Supervisor of this project, MHI is providing technical and commercial assistance to enhance financial cash flow. MHI is also responsible for the oversight and reporting of the Operator on the distribution system and customer service of the ENEE. MHI is working to achieve the following project objectives:

- Improve the quality of technical and commercial service for customers;
- Improve monthly invoicing and reduce accounts receivable levels;
- Reduce the accumulated debt;
- Reduce technical and non-technical losses.



MHI executives in Tegucigalpa, Honduras. From left to right — Daniel Jacobowitz, Wesley Mueller, Nigel Wills, Dan Lohr, Eduardo Saavedra, and Arturo Iporre.

“MHI is making significant contributions to the conceptual engineering of projects— especially in matters of strategic planning, operation, supervision, and project control,” says **Arturo Iporre**, Senior Project Consultant, MHI. “After two years of working on this project, we are extremely proud of the apparent results and positive trends that we have been able to put in motion so far.”

“ It used to take our field crews 1.5 hours to inspect each km, and 1.3 hours to organize all the pictures and coordinates on a KMZ file on Google Earth. By using the VisualSpection platform, our field workers now only spend 40 - 50 minutes per km. We save all the time organizing the project information, thanks to the integration of GPS referenced pictures and route identification on the VisualSpection Portal. VisualSpection has now become the major tool we use in our toolkit. ”

– **Henry Galeas**, MHI subcontractor

Contact **Adam Vitt** to receive a webinar or to schedule a complimentary workshop: avitt@mhi.ca

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Available in accessible formats upon request.