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Ameresco's state-of-the-art global emissions tracking tool helps IPL Global target emissions reduction.

A global packaging manufacturer has collaborated with a cleantech integrator to create an emissions tracking tool which accelerates its transition to a low carbon future.

IPL Global (IPL) partnered with Ameresco to capture and collate data from 20 plants to help identify key opportunities for strategic investment.

Nicole Ballantyne, Knowledge Transfer Manager for Digital Manufacturing at KTN, said: "This collaboration is helping a global business tackle a global challenge."

"Gathering robust data is essential to running an efficient factory and driving industrial carbon and energy reduction. This technical innovation not only makes that process frictionless, but brings hearts and minds along."

"Joining communities together to drive positive change and transform UK manufacturing is exactly what we are looking to achieve with the Made Smarter Innovation Network over the next four years."

THE INSPIRATION

IPL works across a wealth of sectors including food, consumer, agricultural, logistics and environmental, manufacturing products such as wheelie bins, returnable transit boxes, paint containers and consumer packaging solutions.

It has a strong focus on circularity and sustainability. Half of the plastic it uses in the UK is recycled - more than 25,000 tonnes in 2021- and the ambition is to increase this in coming years as it accelerates its journey to lower carbon products in the marketplace.

But to understand its global carbon footprint and what changes and potential investments were needed at each of its manufacturing facilities across America, China and Europe, IPL wanted to create an auditable mechanism for capturing scope 1, 2 and 3 carbon emissions.

Conor Wall, Global Head of Sustainability at IPL Global, said: "To address climate change risks and opportunities we needed to understand the flow of carbon coming in and out of the organisation to establish the baseline for our plants. Once we had real data then we could make decisions."

"Off the shelf solutions weren't smart enough or flexible enough to capture everything we wanted to understand and achieve for the future of the organisation, which is growing considerably."

"We needed to develop a global GHG emissions tracking tool. This tool initially had to focus on Scope 1 and Scope 2 emission sources, but with additional capabilities to track all GHGs across our value chain."

"We began talking to Ameresco, and the partnership has been a game changer for the business."

THE INNOVATION

The global GHG emissions tracking tool is a bespoke integration of software solutions which feed into the Microsoft Power BI platform.

The system captures emissions sources and a host of other sustainability KPIs such as raw material virgin resins and recycled content data into a single place. IPL's plants are tracked globally, with over 24,000 invoice data points representing a spend of over \$100 million and over 1.5 million tonnes of CO₂.

Through the dashboard users are able to visualise the interactive data, use AI to enhance data preparation, and create bespoke sustainability reports and audits.

Karthik Suresh, Management Consultant at Ameresco, said: "To be able to make decisions you need good quality information. While the market offers good software for analysis that is based on starting with good quality data. The reality, especially for large organisations, is that data is stored in different formats and comes from a multitude of sources and stakeholders from around the world. Collating and analysing that data is very difficult. They also have to consider IT procurement policies, cybersecurity and data management."

"For three years we have worked with IPL to dig down into its complex data sources to organise the pipeline of data capture and management. We could then patch that data to create a toolkit and structure where trained individuals can easily source auditable data such as consumption data, emissions data and performance data."

"But the route to net zero is much bigger than just factory energy use. Our platform has laid the groundwork to expand the reporting tool and integrate more complex technologies as and when they are needed to add to the commercial value."



THE IMPACT

Data in the system has enabled IPL to accurately measure the absolute and relative Scope 1, 2 and 3 emissions in the organisation, allowing management to target resources and investment in the areas that will have the greatest impact on the carbon footprint of the global portfolio. This has informed challenging but achievable targets for recycling rates and reductions in Scope 1 and 2 emissions.

The technology has enabled a zero-friction methodology to be introduced globally that is capable of guiding strategic investment in IPL's vision to achieve a lower carbon future.

IPL now has the overview to be able to set clear and actionable targets and communicate with customers and stakeholders.

The result is a platform hailed by our assurance partners as a best in class example for carbon reporting.

Conor Wall said: "It has allowed us to understand, and help begin the building of a net zero strategy. It allows us to build a picture of previous years for comparative analysis. It helps us understand what is happening in the business and what levers are available for us to understand to identify opportunities."

"It has helped us understand the flow of carbon before we start to invest significant capital."

"We are very early on our journey. But we now have the data to qualify and quantify our decision process."