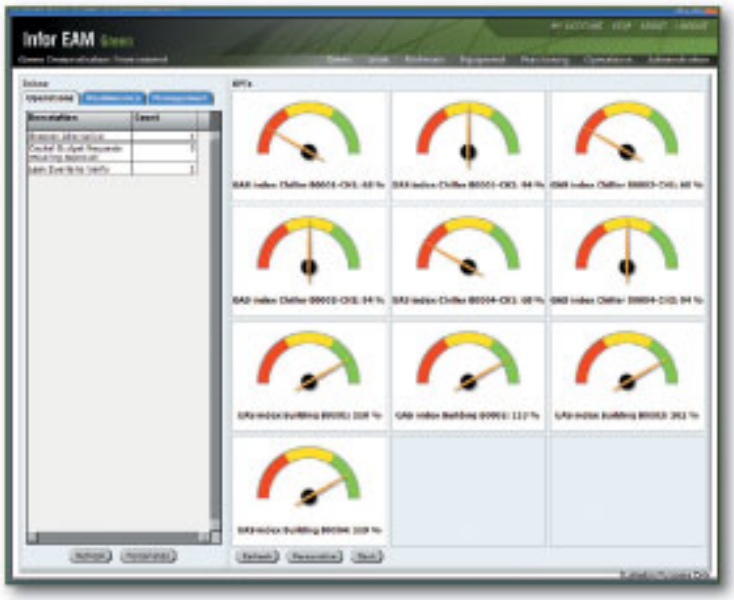
A Green View

Anna Wells

Infor introduces products to help improve EAM and supply chain issues relating to energy cost and carbon emissions



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In response to an increasing emphasis on energy visibility as a cost calculation, Infor has developed Infor EAM Asset Sustainability Edition, a new solution that integrates energy management with asset management. With Infor EAM Asset Sustainability Edition, Infor has redefined enterprise asset management from a solution that helps you maintain and extend the life of your assets to a solution that also can help you lower costs by reducing your energy consumption.

Rod Ellsworth, Infor's Vice President of Business Solutions Consulting, Enterprise Asset Management, gives a real-world example of how this type of incremental visibility can be beneficial when it comes to energy costs.

“As an example,” he explains, “we’ve done some audits lately of manufacturing operations, and this particular manufacturer had a 100HP motor out on their plant floor. That type of motor normally costs $10,000, according to their procurement agent, and it was designed at a certain percent efficiency—in this case, 94 percent.

“That $10,000 motor, over its life expectancy, was operating 40,000 hours. After

40,000 hours, they say there is degradation in the motors and you probably should replace it—if you adhere to the OEM recommendation. Over the course of that 40,000 hours—and that's five years—the question I asked this manufacturer is, 'do you have any idea of how much energy that motor is consuming?' And the answer was 'no.' They said 'my job is to maintain that asset, because I want to extend the life of it as long as possible.' So I shared with them that, if they were paying about 10 cents/kwh, that $10,000 motor would cost over $300,000 in energy over a five year life expectancy—and that's if it were running at 94 percent energy efficiency. So the bad news was, we tested it, and that motor was running at less than 50 percent energy efficiency, and that was going to cost them over $600,000 a year to run that one motor.

"Here was the issue: they never would have known that unless you can measure the amount of energy being consumed by that specific piece of equipment. You can't manage what you don't measure—so we measure the energy consumption, along with the other information, on a piece of equipment, and then we proactively go out and maintain that for peak energy efficiency, as well as peak OEE."

Maintenance vs. Replacement

Adds Ellsworth, "The paradigm is going to shift. Instead of extending the life of an asset, it may be more economically viable for a company to replace their older assets—because all the OEMs are now being very proactive in coming to market with energy efficient products—so if there's a 95 percent efficient motor over a 94 percent efficient model, that would translate to $20,000-some in energy efficiency savings coming to that customer every year. Would it make sense to extend the life of a $9,000 asset, or spend another $10,000 and buy this new asset and install it, and gain the $20,000?

"That thought process has to be integrated into the way people are going to operate and maintain their facilities from now on. When you buy a new piece of equipment, do you factor energy efficiency into your total lifecycle costs? If you do, you're going to have to understand what your current equipment is consuming, to make the viable economic decision. People are going to have to look at replacing their assets, probably more often than they had anticipated because now the business case will be there because of the cost of energy.

"We not only take your energy consumption at the asset level, but we understand it at the aggregate level as well—so we can tell you the energy intensity, per product produced, or the energy intensity per square foot in the facility managed," says Ellsworth.

"The point being, to take your energy intensity, but then translate your energy consumption into the related carbon emissions—because in the asset sustainability, we bring in the fuel mix from your energy provider, and we understand their related carbon emission. So if you're consuming a Kw of energy in FL, you have a certain carbon emission—but in CA it may be a lot higher. It's depending on who your specific energy providers are—so we understand and calculate all that."

Greening The Supply Chain

In other company developments in this area, Infor has recently begun offering the latest version of SCM Network Design, incorporating green into its modeling capabilities."

Andrew Kinder, director of product marketing, supply chain, explains some of the key functional elements.

"From an Infor customer standpoint—our customers being manufacturers, distributors, retailers—this is probably one of the biggest challenges they are going to face over the next ten years. Our belief, and part of our go-to-market strategy is to provide a number of different solutions in and around the green agenda," says Kinder.

"I think, largely, the driver is necessity—so fuel and energy prices pragmatically will make people want to do things differently from a supply chain perspective," says Kinder. "We're also now seeing customer mandates from the large retailers—they're actually setting down the guidelines for what you will do as a manufacturer or supplier. That determines supplier behavior as well. And we're beginning to see this more and more; companies see this as an opportunity for competitive advantage—either because of their image, or because of the products they want to promote, which help reduce energy or fuel usage, and at the same time reduce carbon emissions. Those are the drivers, and what I am hopeful for is that manufacturers, distributors, and retailers will lead the way."

Creating Carbon Benefits

"For example, we might consider that a reversal of offshoring to onshoring might help in certain carbon supply chains," says Kinder. "It could well be that a different way in which you package your products, or the amount of recycling content that you can drive into the product from a material use perspective, will help in terms of carbon reduction. So in respect to the supply chain, finding out the major source of the emissions, and then working with your suppliers in a collaborative effort to do things differently—I think we're seeing a lot of customers that are prepared to do that, for purposes of both saving money and saving carbon."

Relating to carbon, this edition has a few main objectives for the supply chain:

- **Benchmarking:** By calculating usage, based on a standard values of carbon per kilogram per mode of transport, companies can at least realize a base point. "You can't improve what you can't measure," says Kinder.
- **Product Modeling:** If you had to pay for carbon, what would that do to your supply chain? Currently, says Kinder "we can all flow as much carbon into the atmosphere as we want; we're certainly not paying for it. The purpose for having a model such as this is, if the government happens to change its mind, and did start to tax it and put limits on it, then you have to know what that will do to your supply chain, and maybe to your product costs as well."
- **Setting Targets:** "You could say 'I want to reduce carbon from the supply chain by 30 percent. Tell me how I do it'," he explains. "It tells you what

mode shifts you'd have to do, or how you'd have to sort things differently to get a 30 percent cut in your carbon emissions—and tells you what the price difference is as well."

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