

DTE Energy Moves Beyond Compliance with ESP Software

Utility industry environmental management is increasingly driven by business concerns beyond compliance obligations. With SO2 and NOx emission allowances and credits now tradeable commodities, there are strong incentives for proactive environmental management. Furthermore, the move toward sustainable business practices has led many in the utility industry to undertake programs such as ISO 14001 certification. As the focus of environmental departments broadens, the need for good data management systems also increases. For DTE Energy, the environmental management information system (EMIS) software from ESP has helped keep things running smoothly for almost a decade, from compliance to the trading floor.

Utility Leader and Environmental Leader

DTE Energy is a leading energy and energy technology provider, and a growing leader in energy trading. Its Detroit Edison subsidiary is the nation's seventh largest utility, transmitting and distributing electricity to 2.1 million customers in Southeast Michigan. The utility derives its electricity primarily from coal, but also from nuclear fuel, natural gas and solar energy. Like most utilities, it faces a plethora of environmental challenges, ranging from Title V compliance to the EPA Acid Rain program. In addition to U.S. EPA regulatory compliance, DTE Energy has also demonstrated environmental leadership by committing to ISO 14001 certification of its power plants. With multiple facilities and a vast body of data with which to contend, environmental management at DTE Energy was a time-consuming and labor-intensive process. So in 1995, the company decided to invest in an environmental management information system (EMIS) in order to streamline its environmental management program.

Power Industry Expertise

After reviewing the options, DTE Energy elected to implement a software solution from ESP, a company particularly known for its expertise in power industry environmental issues and its long list of electric utility customers. The first project DTE Energy undertook was an implementation of ESP's *opsEnvironmental* software for air emissions management. The project was successful, and was followed the next year with ESP's ATW, now *ecoAsset Manager*, a software suite designed specifically for managing emissions portfolios.

Armed with these two complementary products, DTE Energy now had at its disposal the most complete EMIS solution available, and the only software on the market that unites compliance management with emission portfolio management. The result: a powerful and flexible system that lets the company manage all types of environmental data straight through from compliance to emissions trading.

Answering the Title V Challenge

As Title V operating permits come into effect, the permitted facilities are saddled with hundreds or even thousands of compliance requirements, and are obligated to document continuous compliance with these requirements. Yet there is often no increase in staff to accommodate the greatly increased administrative burden brought about by the permits.

With responsibility for overseeing the data for 11 Title V facilities, James Keehn, Specialist - Licensing at DTE Energy, is all too familiar with this dilemma. If the data collection and reporting for Title V were conducted manually, Keehn might have found the burden overwhelming. But thanks to *opsEnvironmental*, the workload is contained and compliance can be demonstrated in real time. Keehn uses the software's data import capabilities

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to automatically bring in data from each of the facilities into the software's database. From there, *opsEnvironmental* generates reports documenting compliance status, which Keehn sends back to the facility managers. Keehn also has configured the software to send compliance-related e-mail notifications to plant environmental staff. The automated e-mail notifications help staff keep on top of the large quantity of permit requirements to which they are subject, thereby reducing the risk of accidental non-compliance and the costly fines and shutdowns which could ensue. The result: an efficient, centralized system for managing Title V compliance, and clear visibility at both the facility and corporate level into compliance status.

Keehn has plans to streamline this system even further by having field staff make use of the web-based reporting capabilities provided by *opsEnvironmental*. So staff anywhere, at any time, will be able to easily generate the reports needed to demonstrate compliance.

While Title V is one of the largest compliance challenges, it is not the only regulatory driver behind DTE Energy's EMIS system. And with its capability to generate just about any type of report, the software helps DTE Energy feel more confident about its overall compliance status. "I am very happy that using this software is permitting us to examine data more closely," says Keehn. "I recently prepared a report in which we are comparing year-to-date data against a chart. Without the chart, we would have missed something. The report allowed us to look at the data easily. Now that the report has been prepared, it will take just seconds to run it in the future, and all this data will be there."

From Compliance to the Trading Floor

With SO₂ and NO_x emissions as tradeable commodities, utilities that participate in the EPA Acid Rain program need to have the ability to transmit data beyond the EHS department to the company's emissions trading department. Typically, there is little direct communication between these two departments. However, thanks to the synergy between *opsEnvironmental* and *ecoAsset Manager*, DTE Energy can easily oversee not only regulatory compliance, but also its emissions allowance trading. This gives the company an advantage on the trading floor by connecting plant environmental data with the traders who need it to make buying and selling decisions, and vice versa. "Plants have an emission factor approved by EPA," says Keehn. "The software pulls the fuel usage data for coal and natural gas in from an Oracle database, then runs calculations which are used to compare against permit limits." Keehn then runs a monthly report and supplies it both to plant managers -- who are responsible for meeting environmental requirements-- and to emissions traders. "Through these reports, the emissions traders know how much they need to buy or sell to meet compliance requirements. At the same time, the info can be shared with plant managers so they can decide whether it is more cost-effective to change operations to reduce emissions, or else authorize traders to go ahead and buy allowances."

The software continues to assist DTE Energy even after the trades are executed. Each transaction is logged into *ecoAsset Manager*. At the end of the year, Keehn performs an automatic reconciliation of the *ecoAsset Manager* transaction records with EPA's database. With this, the cycle is complete: ESP software has assisted DTE Energy from permit limits through to emissions allowances.

ISO 14001

As part of its commitment to sustainable business practices, DTE Energy has begun obtaining ISO 14001 certification for its plants. "The main driver behind our decision to pursue ISO 14001 certification is a wish to increase environmental awareness and accountability to the front line employees," says Kathy Shields, Principal Engineer at DTE Energy. "We thought that the best way to achieve this was through ISO 14001 certification. The regular surveillance audits keep this in the forefront rather than the program of the month."

With five plants certified and plans to have all its operating power plants certified by the end of 2004, DTE Energy faces considerable data management challenges. By far the stack emissions is the most extensively monitored significant aspect. But thanks to the EMIS system,

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this data is easily tracked companywide at DTE Energy. The company uses the software to track and report on a variety of metrics covering air, water and waste. Metrics include stack emissions, NPDES discharges, TRI chemicals, and others. "Waste is tracked by truckload, in tons or volume depending on what is available at the plant. Coal is tracked by weight. Bulk chemicals and oil volume is monitored," says Shields. Through *opsEnvironmental*, ISO 14001 data is efficiently gathered and stored in a central location, and reports are then easily generated. "We even have a metric for reports turned in on time," says Keehn.

Proactive Environmental Management

One of the added benefits to DTE Energy of the ESP software is that it has encouraged staff to be more proactive instead of reactive in their environmental management tasks. "People really like the software's email ticklers," says Keehn. "Recently they have been asking for more. It's so nice to see the software making our staff more proactive with their environmental requirements."

To learn more about how opsEnvironmental can help your company streamline its environmental data management, please contact ESP.



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