The electricity production industry has always seen safety as an absolute priority. The size of the installations coupled with the high voltage, very high water and steam pressure, and the increased use of chemical products and sub-fuels make this imperative. Incident and occupational illnesses are extremely rare at the production stage; however, they can occur at the maintenance level or during project execution in companies that don’t have a proper safety culture in place.

**Challenge**

Until the late 1990s, the entire utility industry in Benelux was in the hands of the State. All utility companies had a similar corporate culture which suffered from a lack of transparency, unreliable data reporting, a limited focus on results and poor communication. As a result, safety awareness in the industry was low and so was safety performance.

Until privatisation in 2002, E.ON Benelux, a leading European power and gas service provider that produces and supplies electricity and heat for private and commercial customers, had a safety performance similar to its industry counterparts. Following a number of ‘near-misses’ within the organisation and a major incident at a competitor in the Netherlands, the newly appointed management team decided to make a radical change to improve safety.
Roel van der Stok, Senior Manager, asset and maintenance management at E.ON Benelux, explains, “When E.ON Benelux was privatised in 2002, the new CEO decided that the company needed to evolve towards a more result-driven, transparent, process-oriented organisation. Safety should be used as a key driver to make this change happen. To facilitate this revolution, E.ON contracted DuPont, a company valued highly for its unquestioned safety expertise both at the consultancy and operational level.”

**Solution**

In 2003, with the help of DuPont, E.ON carried out a management evaluation using a self-assessment tool. Based on the results of this evaluation, the company established several focal points for improving its safety culture. They included management commitment, safety awareness, employee involvement and training, organisation and communication, safety procedures, safety systems and equipment, contractor safety, auditing and results recognition.

**DuPont recommends Management-driven Safety Programme**

One of the first challenges in the improvement process was to gain the commitment of the whole E.ON Benelux board. DuPont found that E.ON Benelux already had a good safety structure in place before the new safety programme started. However, safety results weren’t meeting expectations because safety was seen as the sole responsibility of the safety department rather than being driven by management.

Management commitment was therefore formalised in E.ON Benelux’ strategy and safety was incorporated in the company’s vision: *Safety is number one in our thinking and our working environment is open and stimulating.* As Joost F.M. van Dijk, E.ON Benelux CEO, says, “The role of the safety departmentis to advise on policy, set procedures, train personnel, implement systems and execute audits. Management commitment towards safety is essential and should be visible.”

DuPont consequently trained the management team using the *Improve Leadership in Safety* training programme. This was specifically designed to help E.ON line supervisors improve their safety management skills and gain the active participation of employees in improved safety practices. Through the *DuPont Safety Training for Managers* programme, all managers learned how to integrate safety management practices into their overall management systems, conduct audits and investigate incidents. Finally, all technicians received general safety training with external certification to learn how to execute safety inspections and recognise unsafe behaviour patterns.

Following recommendations by DuPont, E.ON Benelux set up a safety steering committee – represented by senior managers of the Health, Safety, Environment and Quality, production and maintenance departments – to lead and to monitor safety improvements. In addition, the company created a safety and health commission within the works council. To support the safety organisation, it also implemented various safety systems such as an incident management system (IMS) which all employees can use to report incidents, near-misses and unsafe situations.

Moreover, E.ON Benelux introduced so-called safety focal points to spread the safety culture further within the organisation. A group of 20 volunteers, from senior management down to work-floor employees, received special training for this purpose. They participate in regular safety meetings and incident investigations. They also initiate safety improvements and advise colleagues on safety issues.
Setting clear safety goals

To make sure employees in the organisation all work towards the same goal, safety objectives are translated into specific and measurable safety goals for departments, teams and individuals. William de Jong, senior technician at E.ON Maasvlakte power station, says, “All employees have a personal target to report at least one incident, near-miss or unsafe situation per year. In 2006, the company went a step further by introducing a new employee assessment system — which sets specific goals for each employee — and a bonus system, both incorporating safety targets. For example the LTIFR (Lost Time Injuries Frequency Rate) indicator, also known as the number of incidents with leave per million man-hours worked, was included in the bonus system for all E.ON Benelux employees, no matter whether they have administrative or technical roles. Technicians have additional goals such as notifying near-misses and unsafe situations.”

In 2005, E.ON decided to focus more specifically on contractor safety due to the high number of incidents registered with contractors at E.ON Benelux sites. Monitoring contractor safety is crucial for E.ON Benelux, especially during plant shut-downs, as this involves contracting a high number of external workers. The company therefore started a dedicated safety project in 2005 in preparation for the Maasvlakte plant shut-downs in Rotterdam, scheduled at the end of 2006 and mid-2007.

Here’s how van der Stok describes the new contractor safety management system, “We improved the contracting process by introducing revised contractor safety conditions such as the obligation for contractors to report near-misses and carry out safety observations and incident investigations. We also introduced a safety test for contractors at the site entrance and a shut-down work permit system. At the same time, we set up a new tool for safety inspections that enabled us to monitor the safety statistics during plant shut-downs. Communication on safety was intensified via safety kick-off sessions, weekly contractor safety meetings and a weekly safety magazine.”

During the first shut-down in 2006, two DuPont consultants remained on site to monitor safety constantly. After the first shut-down, E.ON Benelux made a safety evaluation and drafted an action plan for the shut-down of the second unit in 2007. DuPont also carried out two audits and prepared an overall evaluation.

Results

The number of incidents at E.ON Benelux shows a spectacular drop over the past few years. For the first time in E.ON Benelux’ history, on 8 August 2007, the company reported an LTIFR of 0. With this rate, E.ON Benelux is now seen as the safety leader within the E.ON group, one of the world’s leading power and gas companies employing 88,000 people worldwide.

But the most notable safety performance was achieved during the last two shut-downs of the Maasvlakte plant in 2006-2007. Van der Stok explains, “Over a period of 10 weeks each, over two million hours were spent on site projects and maintenance activities, involving up to 1,500 contractors and employees of more than 15 nationalities. These shut-downs marked the biggest projects executed since the plants were built in the mid 1970s and not a single lost-time incident was registered.”

Van Dijk, E.ON Benelux CEO, adds, “We succeeded in executing the projects within planning and budget without a single lost-time incident. What’s more, the safety improvement has served as a blueprint to start-up an internal cultural turnaround towards business excellence within other key business processes. As the number one focus, safety has changed the whole company culture towards a result and process-oriented organisation where safety, transparency, data reporting, cooperation and communication have become key values.”
E.ON Benelux wins DuPont Safety Award for best improvement

According to DuPont consultants, E.ON Benelux is a clear example of a company where safety is truly management-lead, from the CEO downwards. The driving force has been the management team whose commitment to safety has cascaded down the whole organisation at an impressive pace. As a result, in 2007, E.ON Benelux’ fast improvement was recognised with a DuPont Safety Award in the ‘Best Improvement’ category.

The E.ON group is currently working on a large number of new build projects worldwide, including a new power plant at the Maasvlakte site, for a total investment of €30 billion. E.ON Benelux is leading a safety working group to redefine contractor safety conditions and provide procurement departments with essential information for future projects. Van der Stok says, “Based on our experience, we have introduced a safety approach that the E.ON group will adopt worldwide to build these plants. This underlines the front runner position that E.ON Benelux takes with safety within the E.ON group.”

The challenge for E.ON Benelux now is to make sure the new safety culture is fully integrated into all employees’ work practices. DuPont consultants are confident this will happen as there are already signs that the whole organisation is on track. As van der Stok concludes, “The implementation of the safety programme was a revolution at E.ON Benelux. The challenge for us today is to go through an evolution process and focus on a culture of continuous improvement.”

About E.ON Benelux
Established in 1941, E.ON Benelux operates five gas-fired power stations, a coal-fired power station on the Maasvlakte — a major industrial harbour in Rotterdam, the Netherlands — and two co-generation units supplying utilities to chemical companies. Together these installations produce 1,860 MW of electricity. E.ON Benelux has an annual turnover of €1.2 billion and employs over 700 people. Since 2000, E.ON Benelux has been part of E.ON Energie AG, Europe’s leading integrated power and gas service provider.

About DuPont Safety Resources
DuPont has been focused on safety for more than 200 years. Through DuPont Safety Resources, its safety consulting arm, the company brings this knowledge to its clients every day across many global markets. The comprehensive range of safety training products helps organisations develop a safe workplace and workforce, and also reap the benefits of increased worker morale and an improved bottom line.