

## ENBRIDGE GAS DISTRIBUTION

Enbridge Gas Distribution is Canada's largest natural gas distributor. The company has existed since the middle of the 19<sup>th</sup> century and has an enviable record for health, safety and efficiency. It is regulated by the Ontario Energy Board and is owned by Enbridge Inc.

The Woodhouse Partnership (TWPL) was invited to assess the Ontario operation with a view to providing a long-term roadmap to establish even further efficiencies in the use of the company's critical assets. Enbridge Gas Distribution is mindful of the introduction of a new regulatory regime in 2008 and wants to be ready for it. The company sees a fully implemented asset management plan as the way forward.

### Current situation

Enbridge Gas Distribution provides safe, economical and reliable distribution to 1.8 million residential, commercial and industrial customers in Ontario. The company distributes approximately 420 billion cubic feet of natural gas per year. Its distribution area includes Ottawa, the Niagara Peninsula and the Greater Toronto Area – one of the most populous regions of Canada. It generates approximately \$3 billion in annual revenues.

Enbridge Gas Distribution places safety and reliability of the distribution system at the top of its priority list. The utility has 33,000 kilometres of distribution mains. Proper maintenance and



monitoring of these assets is essential to sustain their safety and reliability record. *“We selected TWPL to create a plan for Enbridge Gas Distribution to further develop our asset management capabilities. We selected TWPL because we were impressed by their expertise in addressing the technical, people and financial issues related to infrastructure asset management. The TWPL team successfully identified our asset management strengths and gaps by completing a series of Interactive Assessment interviews and focus groups. They then ran a number of roadmapping workshops to develop a realistic, coordinated way forward. The resulting plan will now be fully executed.”* C. Graham, Manager, Integrity Management, Enbridge Gas Distribution, Toronto, Canada.

## TWPL’s approach

TWPL consultants carried out a series of interactive exercises whereby they talked to fifty people on a confidential one-to-one basis. After this they carried out ten small focus group seminars. This stage was called the Asset Management Interactive Assessment. It was also designed to assess Enbridge Gas Distribution’s performance against the British Standards’ PAS 55 requirements. The purpose behind this research was to identify areas which may need attention and to assess which areas of the business matched best practice. The consultants also ran a software analysis of some of Enbridge Gas Distribution’s critical assets

using the APT suite or Asset Performance Tools. These provide a cost/risk/performance analysis for critical assets and help in the planning of optimum maintenance, spares or replacement strategies.

## What TWPL discovered

Enbridge Gas Distribution had already taken on board the principles of asset management and was applying them throughout the company. The next stage was for the different departments to combine their skills and to develop a high level strategic picture which would optimise the short- and long-term programmes of asset management and integrate them into the structure of the organisation as a whole. That meant co-ordination and alignment of all the asset management procedures under one roof.

## The Roadmap

**TWPL and Enbridge Gas Distribution together** have drawn up a roadmap allowing for adoption of a fully integrated asset management strategy over three to five years. This roadmap takes account of all investment, operations and maintenance of critical physical assets and the organisation development, education and management attitudes/culture change needed to integrate them more tightly.

The roadmap for Enbridge Gas Distribution comprises three stages starting with preparation tasks and generic enablers, followed by asset management strategy developments, and concluding with effective and self-sustaining processes for asset management delivery actions (both capital projects and daily operations and maintenance/renewals).

## The way forward

The roadmap starts with the proviso that it is essential to have general acceptance of the corporate goals and core principles, and a commitment from management and staff to carry them out. This commitment has been secured.

Next comes the need to make staff aware of what is possible, and their role in the overall picture; this is being achieved by a series of steps to introduce the concepts to staff, followed by a road show to demonstrate how they will benefit the company. The groundwork continues to be laid with the appointment of a facilitating team, choosing appropriate key performance indicators (KPIs), one-to-one coaching and mentoring for senior management and a development programme for background asset management skills and competencies.

## Asset Management Strategy development

Once the ground is ready, the main work of developing a new, optimised asset management strategy for the network will begin. This is a thorough process which begins with setting an overall policy and network strategy. Then follows an asset health review (now underway) - how equipment is performing, what risks and deterioration are present, with what significance for the future, and what are the optimal inspection and maintenance intervals and expected life cycles. This enables an asset criticality analysis – allowing customisation of investment and maintenance efforts to areas of greatest importance. Such health and criticality information enables the next two stages to take place: the capital investment planning process and maintenance strategy review and optimisation.

## Coordinated implementation

Asset Management is an inclusive method of bringing about optimised production and efficiency. It will be less effective if the recommendations are treated as a series of project solutions and not as an integrated whole. Enbridge Gas Distribution has already established sufficient understanding of asset management to ensure that an holistic view is maintained. The company has appointed a director of asset management to reinforce this message, lead the organisation along the

roadmap and make sure that staff commitment is sustained.

## Acceptance

Soundings from staff and management have enabled TWPL to crystallise the attitudes within the company. The findings are summarised in the following overall statement of commitment, built by consensus among all relevant department heads:

*Enbridge Gas Distribution aims to be recognised by its customers, regulators, shareholders, employees and peer organisations as excellent in asset management, providing a cost-, risk- and performance-optimised, and sustainable, gas distribution system.*

*It will achieve this through the establishment of an asset management culture and by successfully implementing and applying appropriate asset management processes and methods (such as risk-based decision techniques, continuous improvement, whole life costing and planning, appropriate competencies and multi-disciplined teamworking).*

*Regardless of the regulatory regime, asset management will allow us to better justify to the regulator a more robust and defensible process for all of our expenditures, which will result in bottom line improvements in financial performance and risk management.*

## Into the future ...

Enbridge Gas Distribution is moving into a new era – the new regulatory regime is bringing new challenges, and the need to be able to demonstrate the optimisation of cost risk and performance. The newly-formed asset management team is leading the way forward delivering new processes and embedding them into the business, working with colleagues from many departments. The asset management initiative is seen as key to achieving the evolution necessary to stay ahead as a world-class utility, and deliver to the new targets.

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