

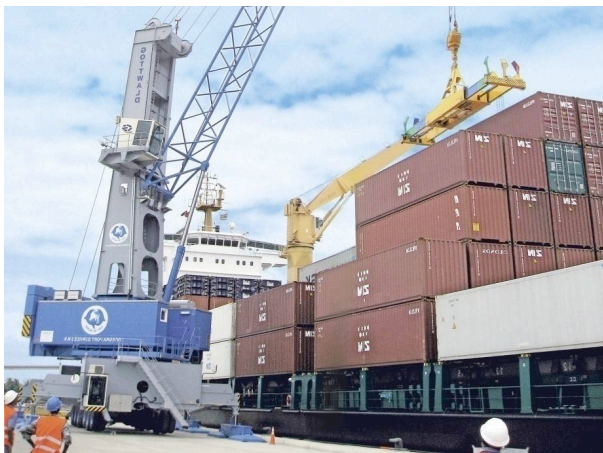
Energy as a proposition

Industrial site with lower energy bills has preference

The European Union focuses on a major change in the energy market. How to reach a cleaner, more energy efficient Europe that is less dependent on fossil fuels? What are the obstacles in the route to the 20/20/20 objectives? How can we overcome these? How do we get the high-end energy in the industrial sector involved? With the support of the EU program INTERREG, this is researched. The Municipality of Zaanstad cooperates with an international group of universities, the industry and other governments. The result so far is promising. By consciously organize and automate business processes and optimal use of renewable energy sources a significant cost saving is possible. A Scottish company's already has a business case for their new hybrid fleet.

From ambition to action

Many companies have an appealing ambition on sustainability, climate goals or energy reduction. These are often driven by a corporate profile, pressure from the market or even the government as a client. The fulfillment of this objective, particularly in the energy-intensive industrial environment, turns out to be a major challenge.



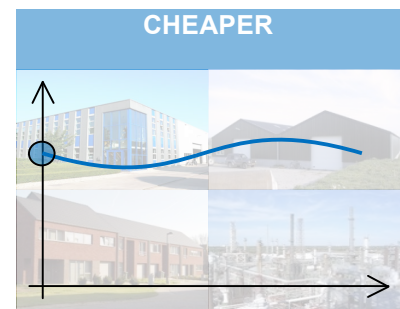
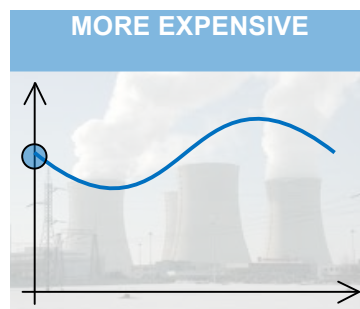
Flexibility is the key to cost reduction

The energy market is complicated. Still, the average user takes the availability of energy for granted. But look at the costs! Large end-users. Contracting large amounts can lead to good prices (see figures). But deviating from the contract, leads to penalties and the on-the-spot market price. Which varies greatly and is often significantly higher than the contract price. This

could be an incentive to reduce energy consumption by shutting down parts of the production process. But: production prevails; customers rely on delivery. The flexibility of the business is suddenly a tool to maintain margins.

Own energy

When local (renewable) energy sources are added, the tools for balancing consumption and production increase dramatically. By doing this, the locally produced energy is a commodity making companies less dependent on the energy market. Renewable energy becomes a potential source of cost reduction or even revenues.



Business case ... or not?

An international consortium of North Sea ports has examined a number of business cases. For example, the instant use of wind energy by introducing demand side flexibility with smart grid software offers a saving of 20%. With about 10k on software investments it reached an annual reduction of €120.000 on energy costs. That sounds like a sound business case, or not

Flexibility in existing situations

However, the concept is not often used. The competitive port/logistic environment runs with small margins. External changes are seen as risky disturbances of sophisticated logistics processes. The financial benefits are not yet big enough. Another point is the flexibility available. This is not always to be found at a single company's plant. The use of flexibility asks for cooperation with adjacent units. That sounds a little less attractive, especially if the neighbours are competitors with a similar "energy profile". The sector considers energy-optimizing as a minor thing.

Energy as a USP in sites to be developed

In existing situations integration is not easy. For new development sites it's a great opportunity to get started with this concept. Besides development criteria such as availability of "connections", "staff", the availability of energy flexibility can be a unique selling point. Consider the use of waste heat from data centres, or the ability to charge an electric car fleet. Energy-flexible and energy - cooperating companies will be more competitive in the near future



If you consider developing a competitive region the tagline is: "Act smart from the start". And energy is certainly to be considered.

Striking examples:

Scotland 2011. A regional company switches to hybrid ferries. The batteries of the ferries are charged overnight, while 'shaving' the nocturnal peak production of the wind farm off the coast. The new fleet is paid by balancing the net and saving on fossil fuel.

Belgium, Pentecost 2012. Sunny weather and high winds lead to a peak in energy production, while the Belgians enjoy the long weekend. This energy is consumed by the French, only after supplement payment by the Belgians. If in Belgium someone already worked with the e-harbours idea

Zaanstad, 2013. In cooperation with TU Eindhoven, the municipality is develops a comprehensive energy model for the industrial zone Hoogtij. Companies are enabled to reduce their energy bills by working together. A smart phasing strategy is an important product in the sustainable development of the port area.

