

ENVIRONMENTAL INITIATIVES THROUGHOUT THE PRODUCT LIFE CYCLE

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MANUFACTURING



SALES & SUPPLY



Daikin's efforts to reduce its environmental impact start as early as the manufacturing stage, comprising of:

RESEARCH & DEVELOPMENT

PROCUREMENT

ASSEMBLY

While expanding its sales and supply activities, Daikin is working hard to raise awareness among its affiliates and their customers to help protect and conserve the environment:

SALES ACTIVITIES

LOGISTICS



USE



END OF LIFE

Environmental efforts don't stop once Daikin Europe N.V. has sold its products. Throughout its entire product range, Daikin Europe N.V. shows the same pioneering concern for reducing the global warming impact caused by energy use and potential refrigerant emissions:

RESIDENTIAL

COMMERCIAL

INDUSTRIAL

Proving its concern for the environment, Daikin Europe N.V. is among the first manufacturers in the HVAC-R industry to set up voluntary take-back schemes across Europe:

RECYCLING SCHEMES

MANUFACTURING

DAIKIN'S EFFORTS TO REDUCE ITS ENVIRONMENTAL IMPACT START AS EARLY AS THE MANUFACTURING STAGE, COMPRISING OF:

- RESEARCH & DEVELOPMENT
- PROCUREMENT
- ASSEMBLY

→ RESEARCH & DEVELOPMENT

Daikin's environmental efforts start at the R&D stage. These include the optimal selection of components with regard to energy efficiency, specific use of materials, their longevity and recyclability. Testing whether the design specifications correspond to the actual performance of the finished products is also essential. Thorough quality checks are carried out in laboratory conditions as well as in real life conditions. A good example of this is the Daikin Energy Saving House. This typical residential house close to the Ostend plant was fully equipped with the latest Daikin heating systems and ready to be tested in March 2008.



→ Opening ceremony of the Daikin Energy Saving House.



➔ Bart Aspeslagh, Co-Manager Design department

DAIKIN ENERGY SAVING HOUSE: TEST LAB FOR DAIKIN PRODUCTS

Bart Aspeslagh, Co-Manager of Daikin Europe N.V.'s Design Department, helped launch Daikin's Energy Saving House.

*“When Daikin started the development of new heat pump concepts for residential use, we wanted to install and test these systems in real-life conditions. The Daikin Energy Saving House enables us to analyse their energy efficiency by simulating use patterns: although the building is unoccupied, occupation is simulated. We regularly let the shower run, and we heat or cool the rooms according to predefined settings ... The configuration we are testing on an ongoing basis includes our low temperature heat pump system Altherma™ in combination with a rooftop solar panel system. Our Altherma™ set-up heats the house via underfloor heating loops and low temperature radiators. It also cools the house and provides domestic hot water using the solar panel system. The results we obtained so far are absolutely mind boggling: the Altherma™ system we installed at the test house **releases 60% less CO₂** compared to the former gas-fired boiler system! And the solar panels on the roof **yield 40% of the energy** necessary for domestic hot water, despite our cloudy Belgian climate.” (see page 27)*



➔ The Daikin Energy Saving House real-life environment offers perfect test conditions for Daikin's advanced heat pump technology.



➔ Solar collectors are combined with the heat pump system to provide domestic hot water for the Daikin Energy Saving House

MANUFACTURING →

→ PROCUREMENT

A complete supply chain is involved in Daikin's operations, both upstream and downstream of the actual manufacturing. All actors in this supply chain share the same burden of responsibility: to contribute to a more sustainable society. Daikin cannot do it alone; its suppliers must also contribute.

To this end, Daikin has issued Green Procurement Guidelines for its suppliers. These guidelines include:

- > **Striving for ISO 14001 certification**
- > **Legal compliance**
(E.g. Suppliers must not have a record of violations in the past 2 years.)
- > **Chemical substance management**
Restrictions on the use of certain chemical substances (Daikin prohibits the use of 15 substances such as cadmium, lead, asbestos, etc).
Cooperation in the investigation of chemical substances (e.g. REACH⁷)
- > **Packaging guidelines, Eco-consideration design, ...**

⁷ REACH (The Registration, Evaluation & Authorisation of Chemicals) requires Daikin to request suppliers to submit information on their products regarding certain chemical substances.



► Daikin's commitment to manufacture greener products extends to its suppliers via the issuance of Green Procurement Guidelines.



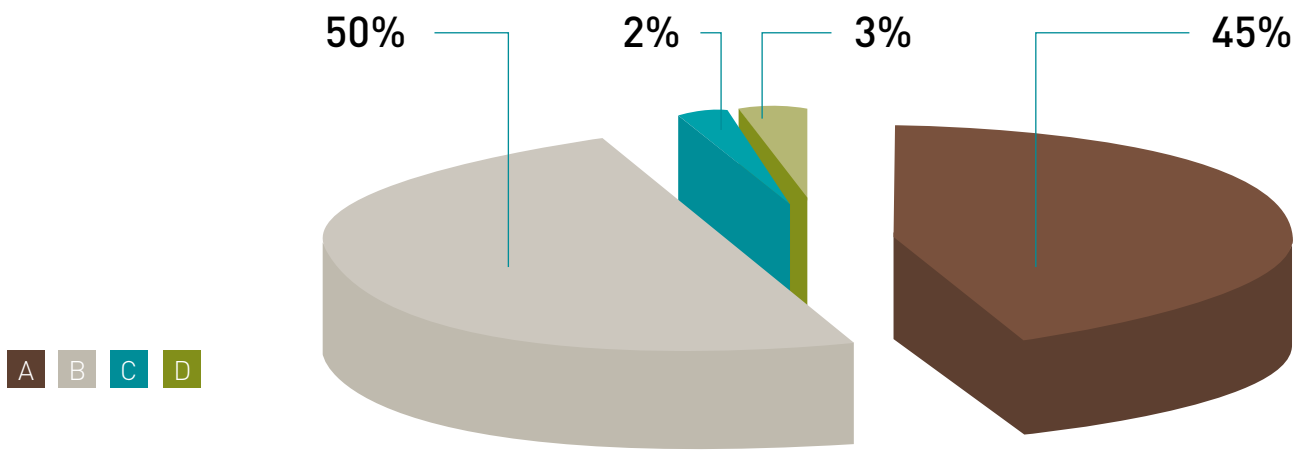
ONGOING GREEN PROCUREMENT EFFORTS AT FACTORIES:

EXAMPLE OF DAIKIN INDUSTRIES CZECH REPUBLIC

Daikin Industries Czech Republic (DICZ) started production activities in 2004 and mainly manufactures products for the residential market. In order to evaluate its suppliers, Daikin Industries Czech Republic requires them to complete a 'Green Procurement Survey Sheet'. This allows Daikin to evaluate and classify its suppliers into four categories:

- A** CURRENT STATUS GOOD BUT UNDER CONTINUOUS REVIEW
- B** COLLABORATION WILL CONTINUE, BUT IMPROVEMENTS ARE NEEDED
- C** NO NEW PROJECTS AWARDED
- D** FURTHER COLLABORATION NOT POSSIBLE

GREEN PROCUREMENT EVALUATION 2007 IN DICZ:



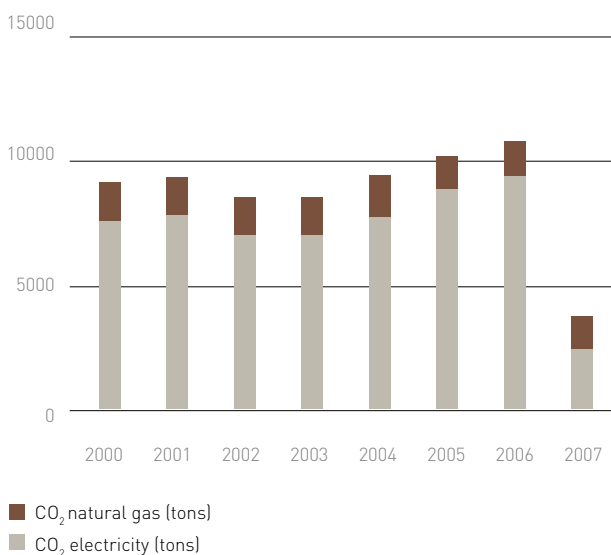
The results for FY2007 clearly indicate that the majority of DICZ suppliers take the environmental requirements very seriously, even if there is still room for improvement.

MANUFACTURING

→ ASSEMBLY

Each year, Daikin Europe N.V. increases its efforts to minimise its environmental impact in manufacturing and beyond. Daikin Europe N.V.'s efforts aim to further reduce energy and water consumption in production and office areas, contain the refrigerants used and reduce the waste generated from production by effective treatment, reuse and recycling. Excerpts of this successful policy are illustrated below with figures from the Daikin Europe N.V. Ostend plant.

REDUCED CO₂ EMISSIONS



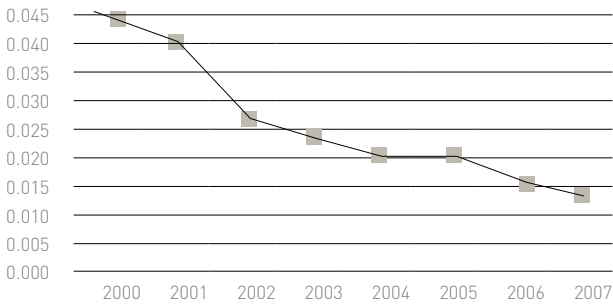
Once again Daikin succeeded in drastically reducing its CO₂ emission levels per produced unit during FY 2007



By opting for 100% renewable energy – from hydraulic power plants in the French Alps – Daikin Europe N.V. took a further step in reducing its CO₂ emission levels and lessening its impact on the environment.

REDUCED WATER CONSUMPTION

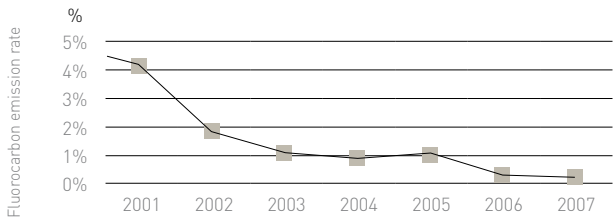
Water consumption from production (m³/unit)



➤ Thanks to a series of rationalisation measures Daikin Europe N.V. succeeded in further decreasing its water consumption per produced unit in FY 2007.

REDUCED FLUOCARBON EMISSIONS

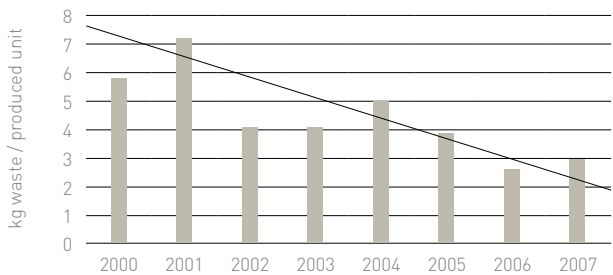
Fluocarbon emission rate (% released/handled volume)



➤ Daikin Europe N.V.'s refrigerant emission ratio has almost reached the 0.2% target set for FY 2010.

REDUCED WASTE

Waste delivered out of site per unit production



➤ Despite yearly fluctuations, the waste/unit ratio shows a downward trend.

