

Case study: Independent verification for an ESCO



Technology supplier:

Danfoss

Danish firm with 24,000 staff in 22 countries and a 75 year history in energy efficiency.

Client:

Imperial Tobacco

No of employees:

Over 38,000

2010 revenue:

£28.2bn

Independent M&V auditors:

EEVS Insight Ltd.

Specialist UK provider of independent performance analysis and verification services for resource efficiency projects

About Danfoss



The Danfoss Group is one of the largest industrial companies in Denmark, developing and manufacturing mechanical and electrical components

for various applications. Danfoss Solutions is an Energy Services Company (ESCO), identifying opportunities for energy saving measures for its clients, the performance of which are guaranteed. Danfoss Solutions can also provide financing so that lack of initial capital is not an obstacle to starting energy efficiency projects.

Project outline

After a tender process, Imperial Tobacco (ITG) selected Danfoss to enter into an energy saving partnership. Danfoss began with an energy audit of 11 recently acquired sites. An average of 20% savings were identified with an internal rate of return (IRR) of around 25%. ITG selected two sites – one in Poland and one in Spain, as pilot projects under ESCO agreements with Danfoss.

ESCO agreements will be extended to further sites if there is a compelling case. These sites were selected because they had the greatest identified energy saving.

The M&V analysis

ITG and Danfoss selected M&V specialists EEVS Insight Ltd (London, UK) to review the measurement and verification (M&V) procedures for the contract and the baseline energy calculations, to ensure adherence with the International Performance Measurement and Verification Protocol (IPMVP). This helped to build confidence in the agreement on both sides of the ESCO contract.

Measures

M&T, VSDs and new controls on water pumps and HVAC, boiler heat recovery, improve lighting, floating head pressure control on chillers, improved compressed air generation, and several other measures.



The ESCO in numbers

- CAPEX: **€2.8 m**
- Energy savings: **20%**
- Paybacks: **3.1 years**