

ESCO – ENERGY SERVICE CONTRACT



Assessment
Supply
Fuel
Maintenance



Solutions for you



Introduction

PROVIDING YOUR BUSINESS WITH SOLUTIONS

We recognise that operating your business is what you do best. Our expertise is in assisting you to make guaranteed significant savings on one of your major operational costs, that is, your heating bill. By entering into an ESCO with Donegal Woodland Owners Society Ltd (DWOSL) we will manage all aspects of the design and installation of the new boiler, fuel supply and maintenance. In addition, we will provide an audit of your energy consumption thereby enabling you to monitor and manage your energy usage and take whatever steps available to reduce it.

DWOSL offers a full range of boiler systems from 40kW upwards to meet the majority of industry energy needs. However, should your requirement be a smaller energy output, we can accommodate this also, however, on a different contractual basis to that of an ESCO. By conducting a feasibility study and understanding your business' energy demand now and into the future, we will design a facility tailored to your requirements. An ESCO requires no capital commitment on the client's part; DWOSL will supply and maintain the boiler facility for the duration of the contract. Thereafter, the client has the option, should they wish, to purchase.

Furthermore, we will be enabling you to reduce your carbon emissions.

What is the DWOSL?

OFFERING WHAT WE DO BEST

The DWOSL was established in 2008. We comprise a co-operative of professional forester land-owners spread throughout the county with the common aim of maximising the potential of this fundamentally vital industry. Now more than ever, society and governments are recognising the benefits to be had from this sustainable energy source. Legislation has been implemented to ensure that society switches to renewable forms of energy and that designated European targets are met.

Without exception, the move to renewable energy makes only good sense. Timber in particular, a resource which we have in abundant supply and for which Ireland can boast among the best growing conditions in Northern Europe, has experienced tremendous improvements in energy efficiency levels in later years.

BACKGROUND : ENERGY PRICES

At the **Sustainable Energy Authority of Ireland (SEAI) national conference on Sustainable Energy and Jobs**, held in Dublin on 1st November 2012, the focus was, 'Sustainable energy is important for protecting and supporting jobs in Ireland.'

Addressing the conference, Minister for Communications, Energy and Natural Resources, Pat Rabbitte, T.D., said: "We are committed to Ireland meeting its 20% renewable and energy efficiency targets by 2020.

Commenting Dr Brian Motherway, Chief Executive of SEAI said: "*Sustainable energy is relevant to all types of jobs, whether it's about reducing costs or looking at new technologies. Businesses are now realising that they need to think about energy and prepare for the future by cutting energy use and enhancing competitiveness.*"

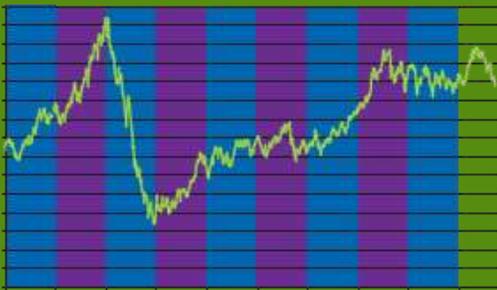
Dr Motherway continued, "*In the last five years Irish companies have cut their energy bill by over €150 million. That equates to significant bottom line savings and many jobs being protected in the process.*"

OIL PRICE MOVEMENTS

The most significant factor affecting energy prices in Ireland is change in global oil prices which have shown dramatic fluctuations in recent years. This has particular effect in Ireland due to our high dependence on oil.

Figure 1 tracks the nominal crude oil prices¹ over the period 2007 – 2012. As shown in Figure 1, crude oil prices doubled between July 2007 and July 2008. During the second half of 2011 the average price of crude oil was \$111/barrel. This compares with an average price in 2008 of \$97/barrel and €80/barrel in 2010.

Figure 1 Crude Oil Price Trend 2007 – to May 22nd 2012



Source: EIA

¹ These prices are daily spot prices of Brent crude oil, which is sourced from the North Sea, and are used as a benchmark to price European, African and Middle Eastern oil that is exported to the West

The development of boiler facilities capable of energy generation at significantly increased temperature levels and the subsequent capture and storage of that energy translates into efficiencies and the consequent energy bill saving that businesses can no longer ignore.

DWOSL members have forestry in their blood. The tradition of this industry in Ireland can be found in many historical entries. Our people are here for the long-term – the trees dictate that it is this way! We are committed to the sustainably renewable form of forestry, managing our plantations to ensure their continuation for many hundred years to come. With the initiation of DWOSL, the individual private forester has been able to be part of a co-operative, by pooling resources we have a significant resource to offer the marketplace; 160 members with approximately 6,000 Hectares of forestry under management.

Our ESCO management team, consisting of boiler facility experts with over twenty years' experience in the design and installation of our exclusive boiler system are well equipped to advise on the best system for your business. We have completed a number of ESCO-supply contracts for commercial premises and these are available for inspection.

What is an ESCO?

An Energy Supply Contract (ESCO) is a long-term agreement (typically 10-20 years), whereby DWOSL and the client enter into a contract for the supply of heating at a pre-agreed index-linked price for the duration of the contract term. DWOSL designs and supplies the boiler system, the manpower and the timber for the boiler operation and all associated maintenance. In return, the client enjoys a maintenance free, clean energy resource and enjoys substantial cost savings by paying the pre-determined price for only the energy consumed for the duration of the term.

There is no capital outlay for the client, this being borne by DWOSL who will install a key-turn facility which we will monitor and maintain for the contract term, thus relieving you the client of any responsibility or financial burden.

Supply Only and Installation

For client flexibility, we also offer the option to purchase the boiler system outright, where it is more convenient for you to arrange the finance yourself. We will install the facility, and thereafter offer the option of a fuel supply and/or maintenance contract, whichever provides the best solution for you.

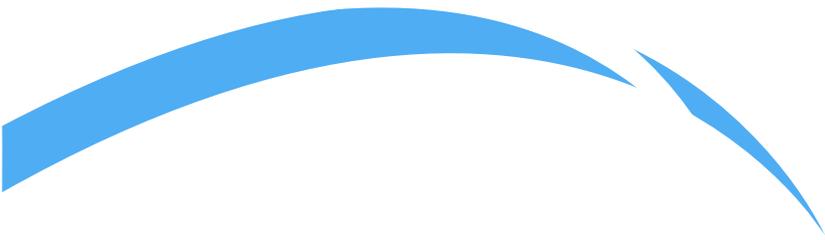


DIAGRAM BELOW SHOWS THE WORKINGS OF THE WOOD GASIFICATION BOILER



IMAGE BELOW IS OF THE WOOD GAS COMBUSTION CHAMBER – IN HERE TEMPERATURES CAN REACH UP TO 1200 DEGREES



The 'Lopper' System

WHEN ONLY THE BEST WILL DO

DWOSL's unique offering to the marketplace is the 'Porsche' of engineered boiler facilities, fabricated by the finest engineers in Germany. Based in Bavaria, this company's reputation is founded on generations of highly-skilled engineers, employing hand-fabrication methods coupled with the selection of only highest quality European-certified steel plate to ensure that the resulting boiler is beyond improvement. The boilermakers are craftsmen who take a pride in their work and their Company's reputation and where excellence is the sole standard applied. The lifespan of these boilers is testament to the quality control and standards adopted in their manufacture.

The unique operation of the boiler is contained in the wood gasification process which it manifests in the combustion chamber by enabling the timber to burn at temperatures up to 600 degrees, whereby a reaction is brought about and the timber breaks down into its various components. When these components oxidize in the flame, heat and wood gas start to be released and transferred into the second combustion chamber where the gas will burn off, producing approximately a further 40% increase in temperature up to 1200 degrees, resulting in the process known as wood gasification.

Lopper's unique ceramic honeycomb grate design permits the boiler to operate under the enormous heat impact that occurs during the burnout phase without the risk of any damage. Dividing the large grate assembly into small sections lessens the heat tension. The ceramic insert stones are provided with air inlet openings.

Until a few years ago, all wood-fired boilers had to be operated with natural draft. However, there were always situations in which wood heating led to problems. Lopper's solution was to furnish their modern wood gasification boilers with a modulating induced draft blower. A unique combination of turbulators and blower wheels are designed for each facility according to the specific operating conditions of the system. The multi-stage induced extractor fan optimises the chimney performance and guarantees a regulated combustion process with highest efficiency at constant, low exhaust gas temperature.

Also worthy of mention is the buffer tank utilised in this system. It performs a two-part role; storage of the excess surplus heat generated, and, the combining of the variable water temperatures. The buffer tank performs the task of enabling the production of heat to be independent from its consumption; a battery of sorts.

THE FINANCIAL CASE – A WORKED EXAMPLE

Nursing Home Example

Assumptions:

- Annual KW usage 550,000kW (equates to approx. 150 litres/day, or one third of a tonne of timber)

Average Oil Price - €0.95 /litre

Annual Fuel Bill - €52,250

DWOSL will meet the financing and capital cost of the following: -

- The Lopper 350kW heating installation and the cost of the Heating Station
- The fuel required to provide the energy requirement of the Nursing Home
- The operational cost of the Heating Station (labour and maintenance)
- Travelling and transportation costs incurred in the above.
- This translates into a 10% saving on the existing heating bill.

Based on the energy usage in this example, DWOSL will be required to supply approximately 1m³ of solid timber daily, equivalent to the following amount of stacked timber.



What we offer

As part of our service to you we will audit your current energy consumption. We will prepare a cost/benefit analysis tailored to your particular business, taking account of your energy requirement and your business' own particular needs.

We will recommend a turn-key boiler installation and an ESCO contract tailor-made to your business and those of your particular industry sector, taking into account any legislative requirements etc.

We will provide a fuel supply contract to ensure the optimum operational efficiency of your facility while seeking to provide you with the maximum cost saving benefits possible.

DWOSL will guarantee a professional, expertly managed system which will meet all your heating needs, thus freeing you from the responsibility of continuously monitoring the market for competitive pricing. We will assume all responsibility for the operation and maintenance of the energy facility thus freeing you to concentrate on your business, confident that we are professionally managing your heating requirement.

Our Undertaking

We will conduct a feasibility study and design and supply an installation that will meet your energy requirement now, and in the near future.

- We will supply the manpower and fuel which will ensure the smooth and efficient operation of the heating facility.
- We will maintain and continuously audit your business' energy requirement to ensure optimal utilisation.
- DWOSL guarantee a cost saving to your business based on a fixed percentage discount to the monthly published SEAI oil price for the duration of the contract, based on your energy consumption. [This is dependent on a pre-agreed minimum consumption level].



ESCO – Energy Service Contract

The Donegal Woodland Owners Society Limited
P.O. Box 10
Donegal Town
Co. Donegal

T: 00 353 (0)86 0410809

W: www.donegalwoodlandowners.com

E: admin.dwodsl@gmail.com