



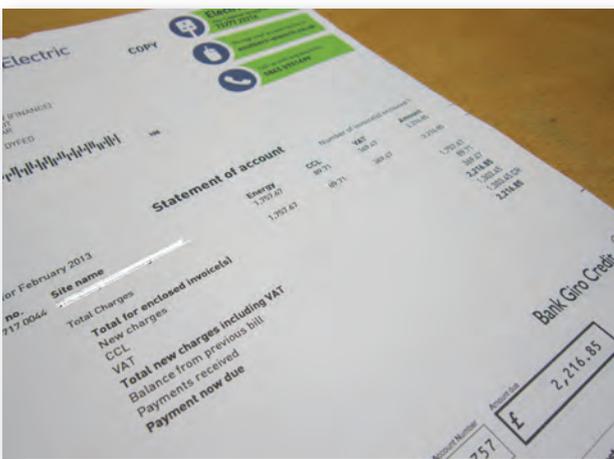
# Tariffs and time control

## The basics

One key element in keeping electricity costs as low as possible is to make sure that you are on the cheapest and most appropriate tariff. These days you can buy electricity on contract from a range of competing suppliers. For most small businesses electricity prices are a mixture of fixed costs and unit charges which may vary throughout the day. Therefore knowing when the prices are cheapest and making best use of equipment during those periods is essential.

## In practice

To get the best electricity deal, you need to shop around and be prepared to switch supplier. Electricity is usually sold on contract for fixed periods - one year, two years etc. When moving from one supplier to the other, you have to be careful to terminate old contracts as well as signing up for your new one, otherwise the supplier can retain you on an uneconomical tariff. For further guidance on getting the best electricity deals visit the energy efficiency page of the Dairy Development Centre website: <http://www.ddc-wales.co.uk/energy/>



## CASE STUDY



During an energy review on a farm in, Wrexham, it was identified that the farm electricity tariff rates were probably 30% over the best price available at the time. Significant savings could therefore be made by simply changing tariffs – which the farmer did very soon afterwards.

The farmer said: “We had an energy review done on the farm and it was shown that we were over paying for our electricity. One call to the supplier enabled me to save over £6000 on our energy costs – which is fantastic.”

Also during the review it was shown that a further £2,000 could be saved by ensuring that all water heating and ice building was done during the cheap night rate period.

Implementing the recommendations made during the energy review would result in further savings of over £4000 or 21% of the annual electricity charges at the time.



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Some farmers prefer to use electricity contract brokers whose role is to find the best deals on their behalf. The broker should also be responsible for taking care of contract renewal when the time comes.

The profile of energy use for dairy farms fits in well with cheap night rate tariffs for a number of reasons. Normal E7 periods are from 12.30am to 7.30am (GMT), although this does change in British Summer Time (BST) with the hour. Morning milking therefore often falls into the night rate period which can stretch to as late as 8:30am in the summer. Loads such as water heating and ice-building are configurable and can be switched to consume most or all use into this period.

Timer devices are used to control the switching on and off of equipment. Sometimes these work in tandem with other devices to produce complete control. For instance, it's common to combine a timer device with an ice-level device to control the switch-on of an ice-bank tank. As long as the ice level is sufficient for immediate cooling, the timer will delay the switch-on of the ice builder until the cheap rate. If however the ice level falls to a low level, switch-on is immediately allowed, over-riding the timer.

## Potential savings

An appropriate tariff and good timer control provides some of the biggest savings and shortest payback on investment for a dairy farmer. Tariff changes cost nothing and savings in some cases will exceed 25%, especially for those who haven't moved previously.

Timer controls on water heating and milk cooling are also cheap to implement. Fitted costs from as little as £100 rising to £1,000 for more complex control on ice-bank milk tanks will have a pay back of anything from a few weeks to possibly two years respectively.

For water heating it's often worth adding extra water storage capacity to enable water heating to be operated on night rate tariffs. For instance, where 200 litres of water is heated twice daily, the addition of a second tank operated entirely on a cheaper night rate tariff can reduce annual heating costs by over £300, giving a three to four year payback.



*Ice builder*



*Time switch*



*Hot water heater*

**For more information on tariffs and time control please contact:**

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