The indirect cost of coal

What is the most economical fuel for your coal-fired power plant?

New fuel types

The deregulation of the electricity market is forcing power plants to increase their purchase of cheaper types of coal. There are plenty of options: the market offers various types of coal from every corner of the world. Power plants are also increasingly mixing coal with biomass, chiefly due to the financial incentives offered by the government. But the total bill is determined by more than the GJ cost of fuel alone. There is a host of indirect costs linked to 'cheap' coal that can strain any budget.

So the best deal is not always the cheapest

For one thing, the transport cost per kWh produced rises as the net heating value falls. Actual plant performance is also impacted. Flue gas cleaning or not, more or less flue gas flow? It all depends on the fuel type. The effect on the maintenance budget is significant. Some fuels wear down the coal mills faster, causing more corrosion, more slag deposits in the boiler, and accelerated catalyser poisoning. Choosing the most cost-effective fuel must take all of these factors into account.

Clear insight fast

Comparing the total cost of various fuel types is a complicated task. To make things easier, you can call in the Laborelec combustion experts. They have developed a standard method that makes the necessary calculations with quickly and accurately. Moreover, the Quick Check Fuels software has been developed for this kind of needs.

Fast-track fuel evaluation

- Are you switching to a new coal type?
- Do you want to burn a lesser known mixture of fuel?
- Are you going to mix coal and biomass?

Ask the Laborelec combustion engineers to study all the implications of your decision. They analyse the impact of your choice on your installations and write a detailed report containing the following:

- The general characteristics of the fuel (cost, ash quality, net heating value, trace elements, etc.)
- The fuel's impact on the costs of power production (transport cost per kWh, grinding, impact of water content on ventilation in the furnace, necessary flue gas cleaning, cost or profit generated by the ashes, etc.)
- The fuel's impact on the costs of maintenance (wear on the coal mills, corrosion, slag deposit, furnace contamination, catalyser poisoning, etc.)
- The total cost of the fuel €/kWh, specifically for your plant
- Any critical risks of the fuel for your plant
- Conclusions and practical recommendations.

LABORELEC

The technical Competence Center
in energy processes and energy use.
From innovation to operational assistance.

We share our expertise with you to minimise the total fuel bill of your plant.

Some plants request advice every time they purchase fuel. That avoids making flawed decisions. In this type of ongoing collaboration, we organize an annual workshop where the results are being presented.

■ *Quick Check Fuels*: decision supporting software

The *Quick Check Fuels* software is based on an interactive graphic representation of the plant's entire fuel cycle: from the supply of fuel, via the furnace to the flue gases.

Once the fuel characteristics have been entered in the programme, it will display either a green, amber or red light for each strategic link in the chain, based on the fuel's impact. This visual 'traffic light' representation ensures a graphic overview of the fuel's impact on plant operations. Simply click on one of the lights to get more details.

Quick Check Fuels also calculates the total cost of the fuel in €/kWh. The programme is designed for fuel procurers, plant operators and fuel experts.

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Five reasons for you to choose Laborelec:

- you have one-stop shopping for your energy needs;
- you get access to more than 40 years of experience;
- you get rapid service with reliable solutions;
- you increase the profitability of your installations;
- you benefit from independent and confidential advice.

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