SUGAR PRODUCERS STRATEGIES TO DEAL WITH HIGH ENERGY COSTS AND RISK MITIGATION FOR POSSIBLE SHORTAGES

Marie-Christine Ribera, Director General, CEFS

Sugar Market Observatory, 8 November

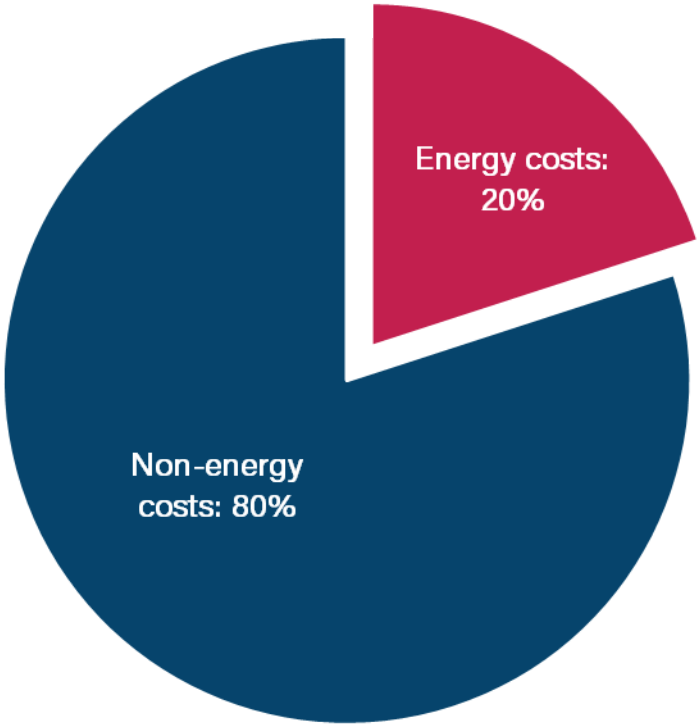
Summary

- Sugar is an energy-intensive industry
- High gas prices have led to mitigation measures, including fuel switching, earlier campaigns, and ad hoc solutions
- Longer-term solutions are already underway
- But full decarbonisation of the industry will require the use of beet pulp for energy

Sugar is an energy-intensive industry

Sugar is on the EU ETS carbon leakage list and list of energy-intensive sectors under CEEAG

Energy = c. 20% of factory costs in normal years… *but much more today*!

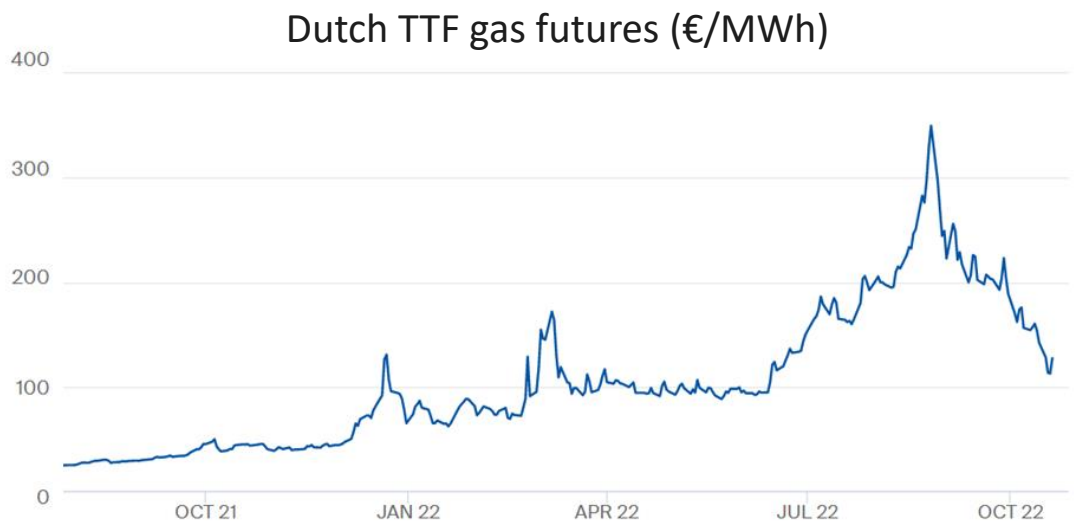


Source: CEFS manufacturing costs survey MY 2020/21. February 2022

High gas prices and concerns about availability have caused many sugar factories to switch back to oil and coal for 2022/23

Gas prices remain high.

The recent fall is likely to be temporary (warm weather for September/October)



Source: ICE

Fuel switching I: a temporary back-up solution

- Cosun Beet Company Anklam: natural gas replaced by bioethanol for 50% of energy needs
- Nordzucker: 80% of German capacity converted back to oil
- Sudzucker: postponing coal exit in two factories
- Agrana: switch to oil in Austria, Slovakia
- Fuel switching less possible in France, where natural gas has been used for longer than elsewhere
- Finland, Lithuania, Denmark: fewer issues with gas supply

Fuel switching II

- Permits required to move back from gas to alternative energy sources
- Straightforward in some countries (Germany, Spain), but time-limited
- Regional competence in Belgium
- Difficulties in Netherlands

The sugar production campaign has started earlier this year to avoid the peak demand month of January

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Markets

European Sugar Plants Start Early to Beat Worst of Energy Crisis

- Some companies are processing beets earlier than usual
- Aim is to finish campaign before energy supplies get too tight

By Samuel Gebre
September 7, 2022 at 3:15 PM GMT+2

SUCRE

Cristal Union avance sa campagne betteravière d'une semaine

ACTUALITÉS • 14/09/2022

Dans un contexte de crise énergétique, Cristal Union avance la date d'ouverture des ses usines avec pour objectif d'économiser de 10% de sa consommation de gaz. Le rendement moyen betteravier est prévu

Zuckerrübenernte 2022 +++ aktualisiert 25.08.2022 +++

Wegen Gasknappheit: Landwirte sollen Rüben früher liefern

oto Die Rübenkampagne startet dieses Jahr deutlich früher. Gasknappheit ist ein Grund. ferprämien dürften deutlich ansteigen.

Ad hoc solutions are necessary

Zucker Industrie
Sugar Industry
News Statistics Directory

Nordic Sugar to ship Swedish beet to Denmark

Due to the risk of a possible energy shortage for the factory in Örtofta (Sweden), Nordzucker subsidiary Nordic Sugar plans to move 300,000 t of beet from the Swedish port of Trelleborg to the Danish factory in Nakskov. Örtofta is largely run on natural gas, which means “we have to start moving beet right from the start of the campaign to avoid a possible scenario where we cannot process all the beet in the factory in Sweden,” reads a Nordic Sugar statement. Meanwhile at Örtofta two of the boilers are being converted from natural gas to light fuel oil. Furthermore, the sugar factory started making use of the fossil fuel-free steam of the local Kraftringen power plant for the first time.

The first seagoing vessel will be loaded in Trelleborg on September 19 and unloaded in Nakskov on September 20. From the start, one vessel (5200 t) will depart every other day and a little later another boat (3700 t) will supplement. Overall, Nordic Sugar expects this to last for about three months. The move means that the campaign in Sweden will be about 20 days shorter, while the Danish campaign will be extended by about 14 days.

Competition law derogation in Germany

Possibility for sugar manufacturers to make production capacities available to each other in the event of gas supply cut-offs and ensuing production stoppages at the factories affected

Bundeskartellamt

State of play

- Food industry identified as "societally-critical" in COM "Save gas for a safe winter" Communication
  - This should guide MS gas rationing plans
- Temporary Crisis Framework revision:
  - Negative EBITDA criterion should be relaxed
  - Sugar should be included in annex of particularly-affected sectors (eligible for more aid)

Longer term solutions are underway

Örtofta steam pipeline

- €8m investment connecting Kraftringen cogeneration plant to Sweden's only sugar factory, at Örtofta (Nordzucker).
- The steam from the 1.1 km pipeline will provide 25% of factory's energy needs

Cosun Solar Park

- 67,000 solar panels
- Producing as much electricity as 8,200 households consume annually
- 14 million kg annual CO2 savings

Iscal Sugar wind turbine

- €10 million wind turbine
- Capacity: 3.8 MW
- Completion scheduled for 2023
- Will complement existing biogas production, which already = 15% of energy needs

Solar drying of beet pulp in Spain: back to basics

- Pulp dried using energy from sun rather than in a pulp drier, saving 6.5GJ of gas per tonne of pulp
- 220,000t of CO2 saved 2014-2021
- Emissions reduced by 25% at 3 of 4 factories (220kt of CO2 saved 2014-21)
- Not appropriate in all parts of EU!

Renewable electricity is only part of the solution

We need a dispatchable, readily-available heat source

Biomass: the most viable solution

- Biogas or solid biomass.
- Biomass residues are readily available if needed for energetic self-use.
- Use of beet pulp is essential.
- Regulatory uncertainty: Renewable Energy Directive and Energy Taxation Directive.

Biogas at Kaposvár, Hungary (Agrana)

- Processing capacity: 7,000 t beet/day
- No local animal feed market.
- Biogas from beet residues provides 83% of primary energy needs.
- Biggest biogas plant in Hungary!

The EU sugar industry can decarbonise…

but we need to retain the flexibility to use beet residues (especially beet pulp) for energetic purposes

RED revision must:

- take into account the position of the colegislators that the emissions from the extraction and cultivation of wastes and residues, e.g. beet pulp for the production of biogenic energies for heating, continue to be counted as zero;
- leave the greenhouse gas emission reduction thresholds under Art. 29(10) unchanged, so as not to undermine the transition away from fossil fuels; and
- clarify that for the purposes of the RED the cascading principle applies to forest biomass only, and not to agricultural residues.

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