

## Co-generation in the PFP Industry: an environmentally efficient technology adapted to the sector's energy needs and self-sufficiency challenges.

- ✓ Why co-generation?
- ✓ How is co-generation used in practice in the PFP sector?
- ✓ Looking into the future:

### Why co-generation?

- Combined production of Heat and Power (CHP) or 'cogeneration' is widely used in the EU PFP industry to process a very large volume of agricultural raw materials every year (for PFP members this represents about 220 million tonnes per year).
- **Significant volumes of agricultural raw materials require significant amounts of electricity and heat** in order to process those materials into a myriad of added-value components used by multiple production chains in different industries (from food to non-food applications).
- Co-generation has progressively conquered production sites in PFP industries as the most economically and environmentally efficient mean to produce sufficient heat and electricity. With its **lower emissions of CO<sub>2</sub>** compared to the separate production of heat and consumption of electricity from the public grid and its **lower consumption of natural resources**, co-generation is identified as a **Best Available Technique (BAT)** in the Food and Drink and Milk BREF (<http://eippcb.jrc.es/reference/fdm.html>)
- Co-generation provides also **energy self-sufficiency** to those PFP sectors, notably the beet sugar and potato sectors, whose factories need to be in close proximity with rural areas because of the perishable nature of the raw material. Rural areas are indeed, in most cases, not equipped to supply PFP sectors' industrial energy-intensive needs. Therefore, **co-generation sustains the presence of industrial activities in rural areas** thus, supporting the European rural economy.

### How is co-generation used in practice in the PFP sector?

- Cogeneration units basically maximise usage of the energy content of fuels by producing simultaneously heat used directly in the process and electricity that is used for production in the factory. Thus transportation losses in the grid are avoided.
- As electricity cannot be easily stored, our factories using CHP handle electricity in the following way: the electricity produced on site is directly used in the factory process to the greatest extent possible and, on occasions, surplus electricity will be available for delivery to the grid or to nearby users whereas, on other occasions, the factory will need to take some electricity from the grid if required for the process.

- This two-way system generally aims to balance itself and it is seen as the most efficient way of handling electricity production so as to ensure that electricity is used at the right moment and when really needed. Electricity exports to the grid or to local users therefore do not compete with electricity companies but simply add efficiency to the whole process.
- Moreover, electricity produced from CHP can claim a net energy production efficiency that is significantly higher as that of electricity produced from classical power plants.

### Looking into the future:

- PFP sectors will continue to challenge themselves into **finding better and more efficient ways to produce while using less resources**:
  - By trying to further **improve production processes** while acknowledging that a lot has already been done in this field and future improvements will need to be evaluated carefully so as to be sustainable.
  - By **maximising the use of renewable energy sources** while acknowledging that none of them may be suitable to supply in full PFP factories' peak energy needs (in particular in PFP sectors making an intensive and/or seasonal use of energy)
- Nevertheless, environmental regulations in the EU, notably in the field of climate change (e.g. **ETS**) risk **discouraging the use of CHP in the primary food processing industry**. The beneficial role of CHP has, in our opinion, not been sufficiently recognised by the EU ETS system that will apply after 2013 for two main reasons (assessment based on the final EC proposal made on 15 December 2010):
  - It fails to recognise and support the efficiency of co-generation use in manufacturing processes because **it does not allow temporary free allocation for the electricity produced**. Whereas we could understand such a decision for co-generation in the energy-producing sector (which is in competition with electricity companies) it makes certainly less sense when applied to manufacturing sectors like PFP.
  - It fails to recognise and support the role that co-generation plays in ensuring self-sufficiency and sustainability of production of processed agricultural goods in rural areas because **it does not take into account that some fuels are simply not available in some of those rural areas** due to the limitations in energy infrastructure.
- For sectors like PFP, exposed to **international competition, a level-playing field is increasingly important** to avoid that less environmentally efficient imported goods progressively replace EU-made compliant products just by the fact that they don't have to support the same standards of environmental protection. It is a matter of fairness but, more importantly, a level-playing field is necessary to avoid that the impact of EU environmental policies is not diluted by the simple effect of replacement by 'less-virtuous' imports. The EU should encourage **regulatory convergence of our trading partners** so that they apply equivalent environmental standards and, until that convergence takes place, it should **balance the unfair competitive advantage of some imports by protecting EU production** to the extent necessary to achieve such a balance.



The Primary Food Processors of the EU (PFP) is composed by:

- European Starch Industry Association (AAF)**
- European Committee of sugar manufacturers (CEFS)**
- European Flour milling association (The European flour millers)**
- European Vegetable Protein Federation (EUVEPRO)**
- European Oil and Proteinmeal Industry (FEDIOL)**

PFP members process approximately 220 Mio tons of raw materials (cereals, sugar beet, apeseeds, soybeans, sunflower seeds, crude vegetable oil, starch potatoes...) employing over 120 000 people in the European Union.