

REFERENCE CASE STUDY

Full-scale 800xA system and more

For the largest greenfield project investment in the Hungarian Food & Beverage industry



— Mr. Mihály Varga, Minister of Industrial Development of the Hungarian Government makes his speech at the Brick-laying ceremony

The grain processing factory, as a Europe-wide major greenfield investment project established by a Hungarian company, is the most important development in the Hungarian food sector, creating directly 550 and indirectly more than 700-800 workplaces. The factory will process 530 thousand tons/an of Hungarian GMO-free corn and 70% of the products (high fructose containing syrups, glucoses, alcohols, feed products) will be sold on the export market. Consequently, this investment is a major contributor to the growth of the Hungarian food export, therefore the Government of Hungary declared the priority case of this project from a national economy point of view.

Other strategic goals were defined as follows:

- Strengthen the local industry through maintaining Hungarian ownership
- Decrease operation costs through maximum energy efficiency
- Sustain minimum/zero waste and emission

To operate an energy efficient and environment friendly plant, high level of automation and electrification are key enablers, so Tisza TK looked for vendors able to deliver that. As the main automation and electrification contractor, ABB was selected to

One of the strategic goals of the Hungarian government is to extend the output of the local agriculture, and to increase the value added through processing more and more crops locally. In line with that strategy, Tisza-TK Projekt Ltd. builds a corn processing factory in the outskirts of Tiszapüspöki belonging to Jász-Nagykun-Szolnok County (Hungary).

deliver the electrification products and systems on high voltage, medium voltage level with the latest fully integrated System 800xA Version 6.0.

Under a single platform, System 800xA integrates the process control system, plant utility processes, energy monitoring and medium voltage substation automation. All field devices such as instrumentation, motor control centers, frequency converters are to be connected via Profibus. System 800xA system will be linked directly to the medium voltage substation automation IEC 61850 bus. The substation automation system can be accessed by using System 800xA operator stations in the central control room.

Through implementing the solutions, installing the systems and products above, Tisza TK will be able to

- Create a safe and healthy working environment for the operation staff
- Minimize the electrical energy bill
- Minimize waste and emission in a sustainable way

All the points above shall help to maximize competitiveness at the international food and beverage market Tisza TK targeted, and contribute to the sustainable development of the Hungarian industry.



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01 Main products of the plant: high fructose containing syrups, glucose, alcohols, feed products

02 Health and safety is a number one priority

About Tisza-TK Projekt Ltd.

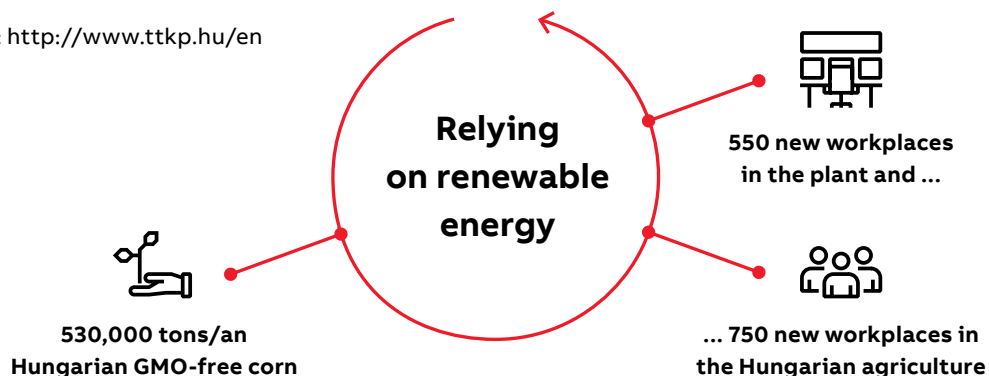
Tisza-TK Projekt Ltd. was established with the purpose of creating a Hungarian-owned grain-processing plant in the northern part of the Great Plain of Hungary. The company will produce food ingredients and feed products, mainly for export.

The plant will process non-GMO corn from Hungary. The newest technology available is applied during the construction of our greenfield project of 145 million EUR, while the necessary thermal energy is produced from biomass. Processing the crops without generating waste, the plant uses clean technology. By relying on renewable energy, our plant becomes one of the greenest to find.

Thanks to its construction, 550 workplaces will be created within the plant and additional 750 in the Hungarian agriculture.

Once in operation, the plant will process half a million ton of corn per year. Exceeding any other plant in Europe in capacity, the facility, in addition to 250 thousand tons of isosugar, will produce not only alcohol and edible oils, but GMO free feed products for animal husbandry.

More information: <http://www.ttkp.hu/en>



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ABB's supply

- System 800xA process and power control based on IEC 61850 integration
- Full Hardware and Application Software Design of control system
- Hardware assembly
- Application Software programming
- Configuration of MV Substation automation system and IEC 61850 integration
- Full Commissioning of System 800xA
- Equipment for the high voltage/medium voltage substation
- Complete installation and commissioning of the substation
- Medium voltage/low voltage dry-type transformers
- Medium voltage switchgears: UniGear ZS1 Digital (with the energy efficient sensor technology) and Unisec
- Medium voltage automation system with REF/RED 615 protection relays
- Low voltage products (switchboards, capacitor units, enclosed bus bar, etc.)
- Inverters and UPS
- Motors and drives (frequency converters) are still in the bidding phase