

Meeting the mark for biomass OEM

Application Note

Honeywell's integrated control and safety solution helped one of Europe's biggest biomass plant meet the highest environmental performance targets while ensuring the lowest lifecycle costs.

Background

Renewable energy products are central to the European Union's ambitious target for carbon and sulphur emissions. Its climate framework for 2030 aims to cut emissions by 40% from 1990 levels.

Projects such as this biomass plant constructed in Europe are key to meeting this target. Among the largest forest biomass plants in the region, it will consume about 280,000 tons of biomass a year, helping with forest management while producing electricity to supply tens of thousands of homes.

The plant goes beyond current performance standards. Meeting the latest EU recommendations, it is to be among the most environmentally friendly plants in Europe.

The OEM catering to this project is well known for its solutions and services for clean energy production. It partnered with Honeywell to provide an integrated control and safety (ICSS) solution that would meet the automation needs of this low emissions, high efficiency green energy plant.

Challenge

Honeywell's customer required a fully integrated solution for the biomass plant at an economic price. Connectivity was required at all levels of process operations. The OEM solution would be central to achieving the high technical standards and environmental performance demanded by the end customer for the plant.

Solution

The bio-mass plant used Honeywell's proven [ControlEdge™ PLC](#) for control of boiler auxiliaries such as blower management and the [ControlEdge HC900](#) SIL2 safety system (ICSS) for the burner protection system. The HC900 is certified by TUV as per IEC 61508 for SIL2 level safety and for NFPA 85:2015. The latter standard contributes to operating safety and prevents explosions and implosions in boilers with greater than 12.5 MMBTUH, as well as pulverized fuel systems, and heat recovery steam generators.



The European Union Climate Vision is for the EU to be climate-neutral by 2050 – “an economy with net-zero greenhouse gas emissions”. The objective is at the heart of the European Green Deal.

A key advantage of the ControlEdge systems was its seamlessly integration with an [Experion® PKS](#) DCS already onsite. Together, the integrated solution – PLC, DCS and safety system – provides end-to-end automation at the plant.

Benefits

Choosing Honeywell as an automation partner brought the OEM a range of benefits across the project lifecycle, helping ensure it achieved its aims:

- Tight integration between the ControlEdge PLC and Experion DCS to promote faster system setup, testing, and troubleshooting
- Seamless integration with the existing Experion DCS for easier maintenance
- Standardization with our Universal IO modules, accelerating implementation and reducing inventory and spares requirements at site



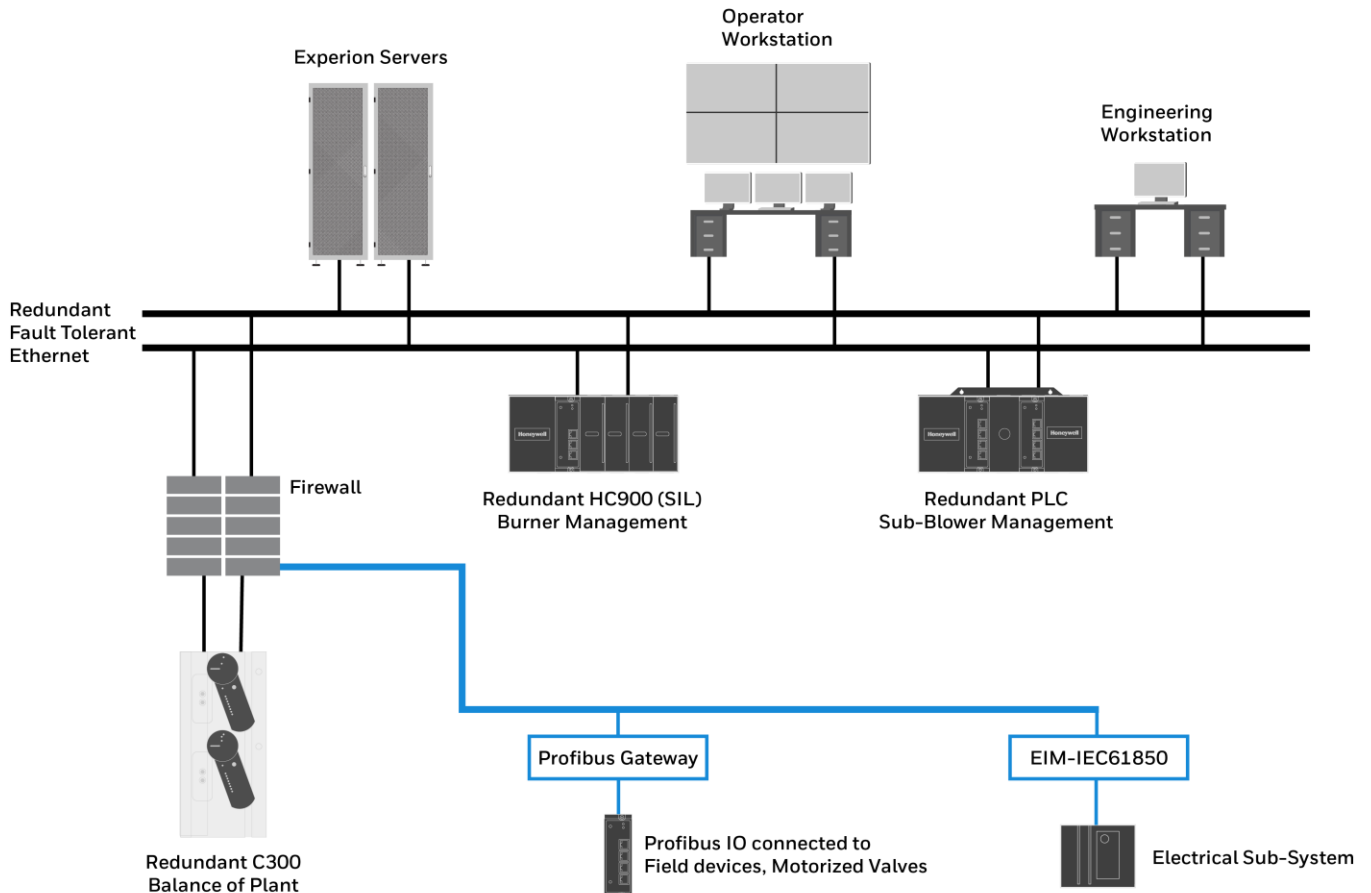
ControlEdge PLC reduces configuration, integration, and support costs while decreasing risk with embedded cyber security. Combined with Experion® PKS, it minimizes downtime through unified support, and lowers the total cost of ownership through extended system lifecycle.

With a single automation vendor, the customer was able to reduce costs over the lifecycle, and also enhance operations and control. A common HMI, hardware and protocols reduce engineering, setup and training efforts.

Equipped with the latest control and safety technology, the plant is well placed to contribute to meeting the 2030 targets and those beyond.

ControlEdge HC900 safety system can be used in applications requiring SIL2, such as emergency shutdown (ESD), critical controls, burner management systems (BMS), fire and gas, and other critical applications.

SYSTEM ARCHITECTURE



For More Information

To learn more about Honeywell's OEM Program, please visit www.honeywellprocess.com/OEM. To learn more about Honeywell's solutions contact your Honeywell Account Manager, Distributor or System Integrator.

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