

# Smart Wireless Transmitters Improve Operational Efficiency of Enomondo Biomass Power Plant

## RESULTS

- 5% increase in overall operational efficiency
- 40% reduction in installation and instrumentation costs
- Improved maintenance scheduling
- Improved safety

## APPLICATION

Monitoring fuel pre-treatment, incineration process, and boiler and tank farm

## CUSTOMER

Enomondo S.r.l., a partnership between Herambiente and Caviro, operates a biomass power plant in Faenza, Italy.

## CHALLENGE

Enomondo's 13.7 MW biomass power generation plant, located at the Caviro Distillerie wine and denatured alcohol plant, uses 140,000 metric tons per year of by-products from the alcohol production process to produce power for 29,000 neighboring households. To increase the plant's efficiency and capacity, Enomondo installed a new boiler -- creating the need for new instrumentation to monitor temperature and pressure. In addition, Enomondo wanted to add additional measurement points to the existing fuel pre-treatment and incineration process, which involves numerous variables that are not easily controlled. The aim was to increase visibility into the process to help optimize control.



*“The modularity of Smart Wireless, the ease and reduced cost of implementation compared to wired devices, and its reliability has encouraged us to expand its use into other applications.”*

**Alessandro Catani**

*Plant and Energy Manager Enomondo S.r.l.*

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## SOLUTION

To meet this requirement Enomondo installed twenty-two Smart Wireless transmitters from Emerson Process Management, including Rosemount 3051S pressure and 648 temperature transmitters. These devices transmit measurements to the existing Emerson DeltaV™ digital automation system, enabling operators to gain greater visibility into the process and use the resulting insights to increase efficiency.

As a result, Enomondo has been able to increase operational efficiency, maximize output, and reduce installation, maintenance and operating costs. Installation was very easy and required no external engineering capability. With no need for cabling or cable ducts, infrastructure costs were approximately 30% lower than for a wired alternative. System engineering was also simplified, with layout and wiring costs halved and installation and instrumentation control costs reduced by 40%.

Using the existing DeltaV system and AMS Suite predictive maintenance software to receive, store and analyze device data, Enomondo has been able to use the wireless system to meet its predictive maintenance requirements. The additional continuous data made available by the wireless network enables personnel to identify performance degradation trends that indicate potential problems, then use this information for better maintenance scheduling that helps optimize operator efficiency.

Twenty-six Rosemount inventory tank gauges with Smart Wireless THUM Adapters have also been installed at the Caviro Distillerie production facility to continuously monitor levels and increase safety by preventing overfills within the alcohol storage tank farm.

## RESOURCES

### Emerson Process Management Power and Water/Wastewater Industries

<http://www2.emersonprocess.com/en-US/divisions/power-water/Pages/powerwater.aspx>

### Smart Wireless THUM™ Adapter

<http://www2.emersonprocess.com/en-US/brands/rosemount/Wireless/THUM-Adapter/Pages/index.aspx>

### Rosemount 3051S® Transmitter Series

<http://www2.emersonprocess.com/en-US/brands/rosemount/Pressure/Pressure-Transmitters/MultiVariable-Transmitters/3051S-MultiVariable/Pages/index.aspx>

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**Emerson Process Management  
Rosemount Inc.**  
8200 Market Boulevard  
Chanhassen, MN 55317 USA  
T (U.S.) 1-800-999-9307  
T (International) (952) 906-8888  
F (952) 906-8889  
[www.rosemount.com](http://www.rosemount.com)

**Emerson Process Management**  
Blegistrasse 23  
P.O. Box 1046  
CH 6341 Baar  
Switzerland  
Tel +41 (0) 41 768 6111  
Fax +41 (0) 41 768 6300

**Emerson FZE**  
P.O. Box 17033  
Jebel Ali Free Zone  
Dubai UAE  
Tel +971 4 811 8100  
Fax +971 4 886 5465

**Emerson Process Management Asia Pacific  
Private Limited**  
1 Pandan Crescent  
Singapore 128461  
T (65) 6777 8211  
F (65) 6777 0947  
[Enquiries@AP.EmersonProcess.com](mailto:Enquiries@AP.EmersonProcess.com)

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*“By installing Emerson's Rosemount wireless temperature transmitters it was possible to obtain the data we needed to identify potential problems and correct them.”*

**Alessandro Catani**

*Plant and Energy Manager  
Enomondo S.r.l.*