

# M2G HOSPITAL CASE STUDY

GEM-Utilities Ltd

Feb 2017

## M2G delivers savings for CNU St. Brendan's Loughrea

Following an estates meeting with GEM and subsequent site surveys, HSE West installed #2 M2G advanced boiler controls at CNU St. Brendan's Loughrea. The M2G controls will ensure that the boilers are not nuisance cycling. Boiler nuisance cycling is an industry-wide problem which often goes overlooked and can lead to untapped energy savings and premature aging of boiler plant.

### Project Details

#2 M2G controls complete with digital sensing probes and interface units were installed on the #2 Remeha Eco 320 boilers at Loughrea Community Nursing Unit (CNU). The boilers are fully modulating condensing units with a combined output of c. 640 kWh. The project was completed in #1 day without any interruption to hospital heating or hot water demand. Monthly gas consumption data was used to analyse the savings and was plotted against HDD for a base temperature of 18°C. Savings were calculated at 8% to IPMVP.

The project was fully funded by EEOS. Annualized savings of 89,035 kW based on 2015 baseline were calculated translating to Co2 savings of 16,916 Kg/Co2.

Simple payback (SPB) under normal pricing regimes of 20 months. More detail available on request at [info@gem.ie](mailto:info@gem.ie).

### Boiler Nuisance Activity

Low water content boilers are prone to nuisance cycling under low load conditions

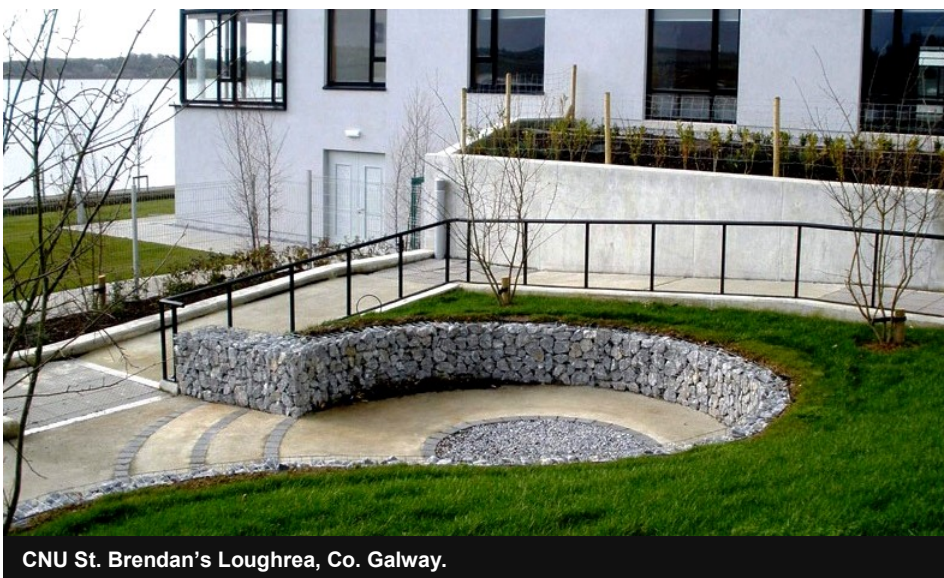
Modulating/Condensing boilers cycle on-off at minimum turn down ratios

Almost all boilers have over capacity for the job in hand.

Over capacity leads to nuisance cycling during low load conditions.

Nuisance cycling engages additional purge losses and can cause premature aging of boiler plant.

M2G completely eliminates boiler nuisance activity.

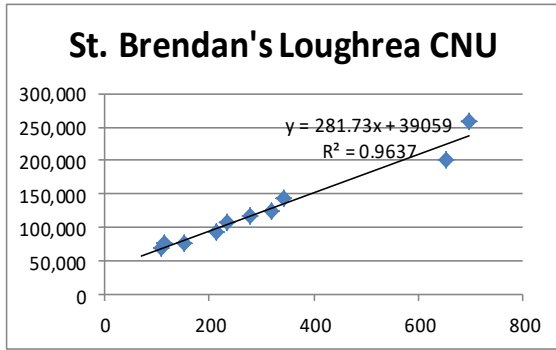


CNU St. Brendan's Loughrea, Co. Galway.

### Highlights

- 8% savings IPMVP
- EEOS full support
- Simple Retrofit
- No loss of comfort
- Same day completion
- 6 month payback
- No Changes to BMS

# Savings analysis to IPMVP



A regression analysis showed savings of 8% using local HDD data for a base temperature of 18C. An M1G was not installed on the DHW boiler which would likely have led to additional savings est. 5% giving a total of 13%.

## BMS Compatibility

M2G is fully compatible and integrates seamlessly with all BMS systems (e.g. Trend, Cylon, Siemens, and TAC). M2G takes direct operating instruction from the BMS enable /disable function and is interfaced with boiler inter-lock provided by most boiler manufacturers.

## Applications

M2G is suitable for Low-Medium temperature hot water boilers **up to 125 °C** including Atmospheric, Forced Draught, Single-Stage, 2-Stage, Modulating Boilers, Modulating Burners, Condensing Boilers and Oil Fired Pressure Jet Burners. M2G is suitable for Natural Gas, Oil and LPG fired heating systems.

No steam application.



## Contact Us

Visit us at [www.gem.ie](http://www.gem.ie)

Contact us at [info@gem.ie](mailto:info@gem.ie)

For more information about M2G or for an appointment contact

Jeanette

M: 087 8372063

About GEM...

**GEM** is the leading supplier of boiler load control technology in the ROI and has 15 years experience in delivering projects for public and private sector organizations.



Gem Utilities  
 Gem Utilities

**GEM-Utilities ... delivering untapped energy savings !**

GEM-Utilities Ltd  
 GEM Business Suite  
 7 Cherry Ave  
 Ennis Road  
 Limerick

