

# INNEON

## Success Stories

### NVP Energy in a nutshell:

NVP Energy has developed a unique technology that cleans wastewater to a very high standard whilst recovering valuable high quality biogas that is 100% available for reuse. Their innovative energy positive '**Low temperature Anaerobic Digestion (Lt-AD) technology**' works at temperatures below 20°C (Unique for AD technology). NVP Energy's business proposition has global reach and has applications for Food & Drink Industry customers (Dairy, Meat Processing, Brewing, Distilling, Malting, Bottling, Pharmaceutical) and the Municipal wastewater industry, offering average paybacks of 3 years. The capital spend on wastewater treatment in the EU and USA alone for these specific markets is in excess of € 15 billion per annum. The low strength WW market is predominantly treated with conventional aerobic/activated sludge methods. This 100 year old method has high energy, carbon usage and pumping requirements; produces sludge and is not a net biogas producer.



The NVPE technology uses a unique reactor design to create an environment in which conventional microbes can adapt their metabolism to the lower temperatures, but without the need for external heating or removal of sludge.

€ 9 million has been invested in R&D and commercial development of the technology and this has led to a number of extended trials at a range of wastewater treatment facilities at industrial facilities and municipal sewage works. The business is now at a stage where the technology has been proven at lab, pilot and commercial scale, with on-site treatment trials having taken place at several sites displaying excellent wastewater treatment performance and efficiencies. Tests have been conducted using a mobile, pilot-scale test rig across 4 Food and Drinks customers (Kerry Group, Lakeland Dairies, Arrabawn Group, Carbery Foods) and one Municipal waste water treatment site (Mutton Island WWTP, Galway). NVPE, with funding awarded in 2015 from the Department of Energy and Climate Change, has recently built its first full scale commercial plant for ABP Food Group (one of Europe's largest meat processors with 40+ production sites and revenues of > € 2.7 billion), which was installed in March 2016 at their Lurgan, Northern Ireland production facility. NVP Energy's technology has been operating successfully since May 2016. Showcase days to view this project can be arranged on request for prospective customers, investors and partners.

#### ENTREPRENEUR

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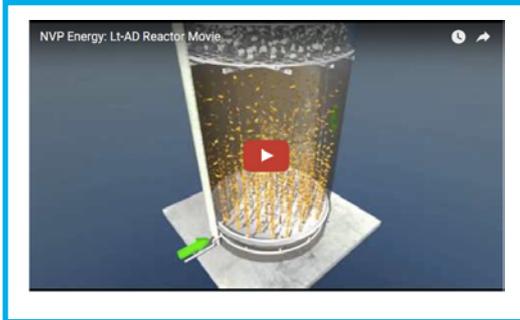


## The origin of NVP Energy

NVPE was developed on the back of 15 years of research conducted at the National University of Ireland at Galway (NUIG), where 6 PhDs, 40 peer-reviewed research articles including independent validation by Harvard College and Imperial College London was completed. The company was established in 2013 as the new cleantech company within Nucleus VP Group.

Nucleus VP Group was formed by two technology entrepreneurs, Sean McKeague and Alan Phelan, after they successfully grew their UK rail business and sold it for € 25 million in 2008.

Sean and Alan hired Michael Murray to be NVP's Managing Director in 2013 to successfully grow the business. Michael has 17 years of senior management experience in Sales, Operations & Finance and a track record of successfully growing businesses in challenging environments. Michael has built a strong team made up of well qualified and skilled people, as well as a high calibre technical advisory board.



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## The INNEON effect

Most of INNEON's support to NVPE was bespoke, including feedback on fundraising strategy, business plan, pitch pack, corporate finance engagement and live pitch events' training.

The support was very much focused at the beginning on helping NVPE to think through alternative business scenarios, and associated financing needs, and reflecting these in a coherent story, financial forecasts, a business plan, and presentation material suitable for potential investors and partners. NVPE benefited from this coaching by being able to test ideas and options in a safe, but informed environment, before presenting its proposition to potential investors and partners.

INNEON also played a role in helping NVPE to assess corporate finance advisers' proposals and training for in person pitch events (as for the Shell Springboard awards 2016).

Furthermore, INNEON tested the NVPE proposition with a number of friendly investors, but the support focused more on enabling introductions to industrial end-users and helping to select a corporate finance adviser. NVPE has recently won the SME Instrument Phase 2 which will enable the company to build a full scale commercial plant at a dairy site and is planning to raise EUR6M during the next 12 months to exponentially grow sales and scale up operations. They will do this using a direct sell model for the UK/Ireland and partnering model for Europe, USA and emerging markets.

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## Already awarded

NVPE was selected as winner at the Shell Springboard regional awards in April 2016 where the company received a £ 40,000 award, as well very positive press coverage.

NVPE received grant support from the Department of Energy and Climate Change (UK) and is a winner of the EC H2020 SME Instrument Phase 1 and 2.

**More info about the company:  
[WWW.NVPENERGY.COM](http://WWW.NVPENERGY.COM)**