

Financing Energy Infrastructure Projects

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Agenda

- Customer Example - Financing Energy Infrastructure Projects/ESCO
- ESCO funding (some sources) - small to large scale projects

Stewarts Care Background on the Project...

- Stewarts Care in Palmerstown have been providing care for people with intellectual disability for over 140 years.
- Currently Stewart's provide care for 700 service users, 200 are residents on campus, 100 are residents in community houses, and the remaining 400 attend day services in Stewart's facilities.
- Despite Natural Gas the site, majority of the heating systems were operating on heating oil more expensive than natural gas by **60% typically**.

Options Available

1. Business as usual, continue repairing existing plant and equipment and continue paying the high utility bills by using heating oil.

Annual utility bills pre baseline year €995k + maintenance costs/parts averaging €50k P/A.

2. Replace boilers to new more efficient oil boilers with small savings and fit a new oil distribution network. Replacement oil boilers valves, pump sets and oil network €250k- €300k

3. Engage expert in energy services to carry out a site analysis and advise on the most energy efficient solution and evaluate the payback term for the capital, based on projected savings in energy costs.

Due to lack of funds available to Stewarts and the fact that option 1 would eventually lead to option 2 which provided no payback (Status Quo)

Option **3** was chosen as best long term solution by outsourcing the risk to Veolia

Stewarts & Veolia

Commenced **Phase 1** of the projects in November 2009.

We built a new Energy Centre consisting of

- 2 x steam boilers for our laundry,
- 1 x CHP and a separate LPHW boiler for heating.
- zone heating controls
- Energy efficient lighting upgrades across the site.
- 2nd CHP at our sports and leisure centre.
- Phase 1 completed in **April 2010**.

• **Phase 2** commenced in September 2011

- Insulation to walls and attics of 23 buildings
- Solar panels for domestic hot water on 23 buildings
- Zone heating controls in 27 buildings,
- Changed our main utility source from oil to gas
- Fitted condensing gas boilers in 27 buildings.
- Phase 2 project was completed in **January 2012**.

• Stewarts were fortunate to qualify

- SEAI CHP grant funding and the SEAI SEEEP grant program in 2009
- SEAI BEW Grant in 2011

Reduced capex and shortened pay back term.



Stewarts Palmerstown Campus

Leisure Centre
140 kWe CHP

Phase 1

Phase 2

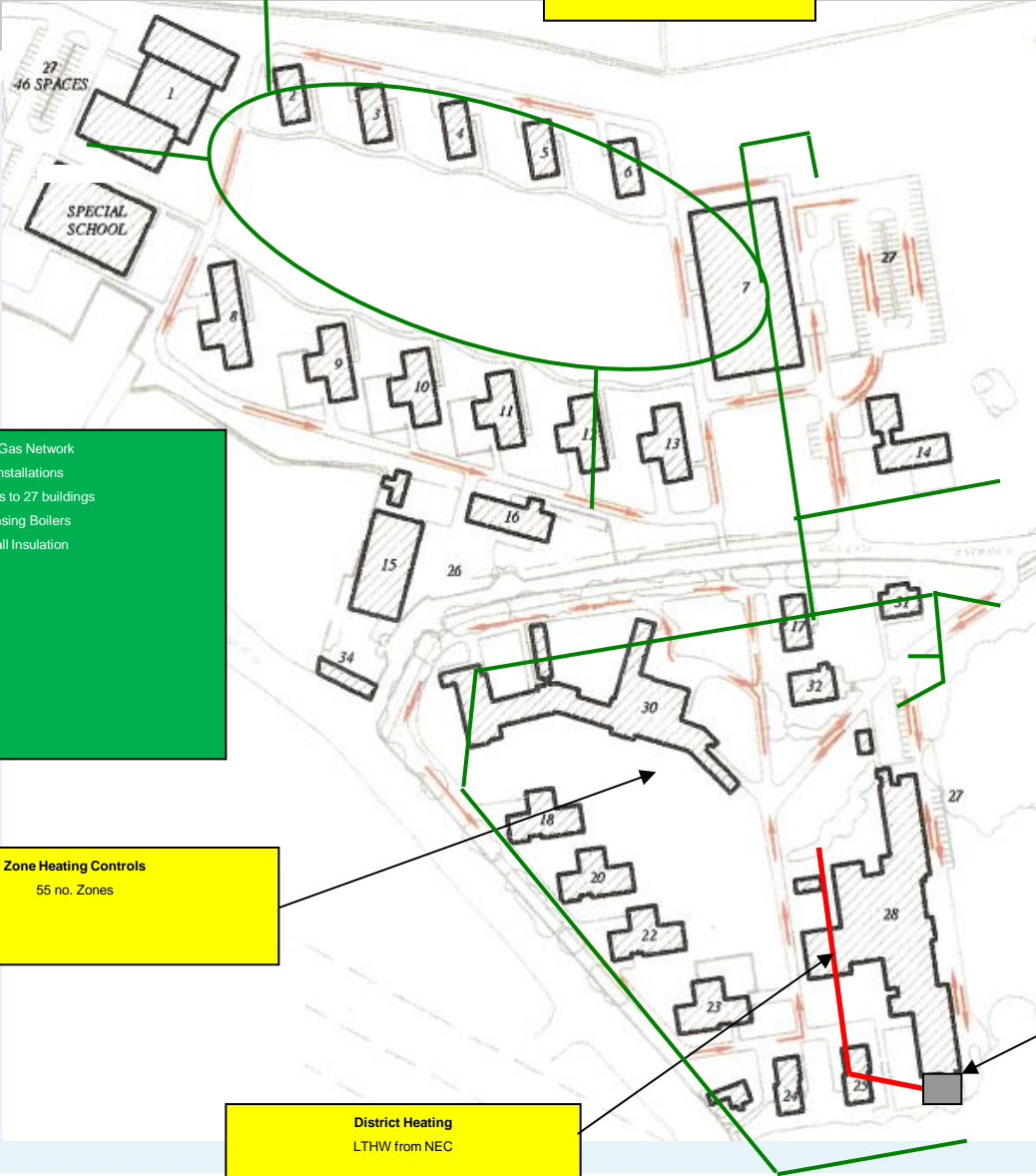
Site-Wide Projects
Energy Efficient Lighting
Monitoring & Targeting System

Site-wide Natural Gas Network
23 Solar DHW Installations
Zone Heating Controls to 27 buildings
New Gas Condensing Boilers
Attic & Cavity Wall Insulation

Zone Heating Controls
55 no. Zones

District Heating
LTHW from NEC

New Energy Centre
140 kWe CHP
2 no. 960kg/h Steam Boilers
700kW LTHW Boiler



Scope of the Stewarts & Veolia Energy Performance Contract...

	Phase 1	Phase 2
<i>Contract Duration</i>	15 Years Apr-10 to Mar-25	13 Years Feb-12 to Mar-25
<i>Operation & Maintenance Services</i>	Energy Centre Leisure Centre CHP	All Boiler Houses
<i>Replacement Guarantee Service</i>	New Plant	New Plant
<i>Project Cost (nett of grants)</i>	€1.16 million	€0.95 million
<i>Project Financing By</i>	Veolia	Stewarts care
<i>Energy Services</i>	Monitoring & Targeting Energy Reporting & Review Meetings Annual Electricity & Natural Gas Procurement	
<i>Shared Savings Scheme</i>	10% Share of kWh-based Cost Savings vs. Base Line	

ESCO funding (some sources) - small to large projects

Mid Sized ESCO projects	Special Purpose Vehicle - ESCO's
BANKING - Short & long term loans	EQUITY
 <p>VEOLIA</p> <p>Bank of Ireland</p> <p>AIB</p> <p>Ulster Bank</p> <p>SBCI</p> <p>SDCL</p> <p>LINKED FINANCE</p>	 <p>VEOLIA</p> <p>Development Capital</p> <p>DAVY BDO</p> <p>KERNEL CAPITAL</p> <p>DAVY</p> <p>BVP BUSINESS VENTURE PARTNERS</p> <p>Investec</p>

Healthcare Delivered Projects

Scheme	Year	CHP rating (Mwe)	Capex (£M)	Funding Source	Form of Contract
Royal Liverpool Hospital	2001	5.4	£5.6	Veolia	Performance / CEM
Hartlepool Hospital	2003	1.4	£1.9	Veolia	Performance / CEM
Lincoln Hospital	2004	1.4	£1.4	Veolia	Performance / CEM
Christie's Hospital	2005	1.4	£2.1	Veolia	Performance / CEM
Broadgreen Hospital	2006	2.2	£3.1	Veolia	Performance / CEM
Ormskirk Hospital	2006	1.0	£5.3	Veolia	Performance / CEM
Freeman Hospital	2007	1.4	£4.9	Veolia	Performance / CEM
Kingston Hospital	2007	1.4	£2.9	Veolia/Grant	Performance / CEM
Kings College Hospital	2010	4.2	£10.5	Trust/E&SF	Performance / CEM
Leeds Hospital (most recent works)	2012	26	£6.2	Veolia	Performance / CEM
Lister Hospital	2012	1.4	£2.2	Veolia	Performance / CEM
Southport Hospital	2012	1.0	£1.7	Veolia	Performance / CEM
New Cross Hospital	2013	2.0	£2.4	Trust	Performance / CEM
Royal Berkshire Hospital	2013	2.0	£2.2	Veolia	Performance / CEM
Southampton General Hospital	2013	2.0	£5.3	Veolia	Performance / CEM
Southampton General Hospital (phase 11)	2013	2.0	£2.6	Trust/Veolia	Performance / CEM
Croydon Hospital	2014	1.4	£1.1	Trust	Performance / CEM
Good Hope Hospital (under Construction)	2014	1.1	£1.7	Trust	Performance / CEM
Royal United Bath (under construction)	2014	2.0	£2.2	Trust	Performance / CEM
		74.9	91.3		

Veolia – Long term / low rate finance

- **Future of Funding**
 - Move away from traditional high street banks
- **Large range of funders**
 - Veolia have relationship with most financial institutions around the world.
 - Can arrange funding with many partners
- **Finance advisory section**
 - Access to long term funding (20 to 25 years) Low rates.
- **Invest**
 - Veolia invest equity in ESCO projects
 - Backed by guaranteed savings
- **Summary**
 - Veolia understand importance of cost of finance to ESCO models.
 - Veolia work with client in partnership/ tailored finance solutions
 - Flexible
 - Veolia in house Tax and Legal departments, smooth process.

SEAI Sustainable Energy Award Winner 2012



***SEAI Sustainable Energy Award Winner 2012
Outstanding Leadership in Energy Management***

Thank You!

