

Portsmouth City Council

Energy and Engineering Services

Portsmouth City Council

PCC is a unitary authority which offers a full range of LA services but also includes in-house property professionals.

Maintains an estate of 15,500 domestic and 800 commercial properties.

Through in-house utility management and energy efficiency driven engineering projects:

- Investment of £10.2m over 3 years
- Annual Savings £1.3m
- Annual Income £500k

Approved budget of £4.5million on energy efficiency projects in 2016/17

Energy Management

- Purchase energy through buying group
- Validate all energy bills
- Install energy management software and smart meters
- Reduce usage through analysing data
- Identify high usage buildings
- Deliver feasibility studies
- Gain the funding
- Hand over to engineers to design and project manage

Mechanical and Electrical Engineering

Engineering Design

- Provide an in-house engineering design service for all aspects of mechanical and electrical building services:
 - Site survey and assessment of existing installations
 - Detailed design drawings for proposed installations
 - Detailed design specification for proposed equipment and systems

Project Management

- Provide project management and contract administration services for mechanical and electrical installation projects.
 - Project / contract setup
 - CDM
 - Contract administration
 - Cost control
 - Site supervision and quality management

LED Lighting

All new lighting projects designed with LED lighting as standard. This includes replacing all lighting in 248 housing blocks which saves £32,000 per year in electricity.

Civic Offices example:

- In-house feasibility study and lighting design to replace all lighting with LED
- Additional daylight harvesting control to dim lights relative to natural daylight levels
- Microwave and PIR sensors to turn off lights in periods of no occupancy
- Saving:
 - £54,000/a in electricity
 - £26,000/a in maintenance
 - £3,500/a in CRC allowance and MD allowance
 - Payback of 6 years



3D model of LED lighting at Civic Offices



Lighting design by Council engineers for Civic Offices showing proposed lux levels from LED lighting

Solar PV Projects

Solar PV

- Around 3.5MW installed on commercial-sized rooftop sites with a further 4MW planned for before end 2017/18
- Majority of recent expenditure through PPA model
- Installations done through framework contractors and project managed in-house allows install prices as low as £700/kW
- PPA installs for schools, community associations, leisure centres and other authorities
- Has created a sustainable income stream for PCC worth around £600k in income and savings



Mountbatten Leisure Centre

- Whole building approach
 - Feasibility study
 - Design
 - Project management
- 200kWe Combined Heat and Power
- 30kWp solar PV
- Building Energy Management System upgrade
- LED lighting

- Capital investment of £550k
- Payback 4 years

Thanks for listening
utilities@portsmouthcc.gov.uk
Tel: 023 9283 6033