

Energy Projects at Nottingham City Council



Katie Greenhalgh - Energy Projects Manager



**Nottingham
City Council**

Energy Services

Gordon Thomson – Director of Commercial, Infrastructure and Energy

Wayne Bexton – Head of Energy Services

Katie
Greenhalgh
Energy
Projects

Andy Whitley
Utilities
Management

Edward
Gurney
Solar PV

Sara Ahmed
EE Monitor

David Nicoll
Customer
Services

Michael
Gallagher
Regional
Energy
Projects

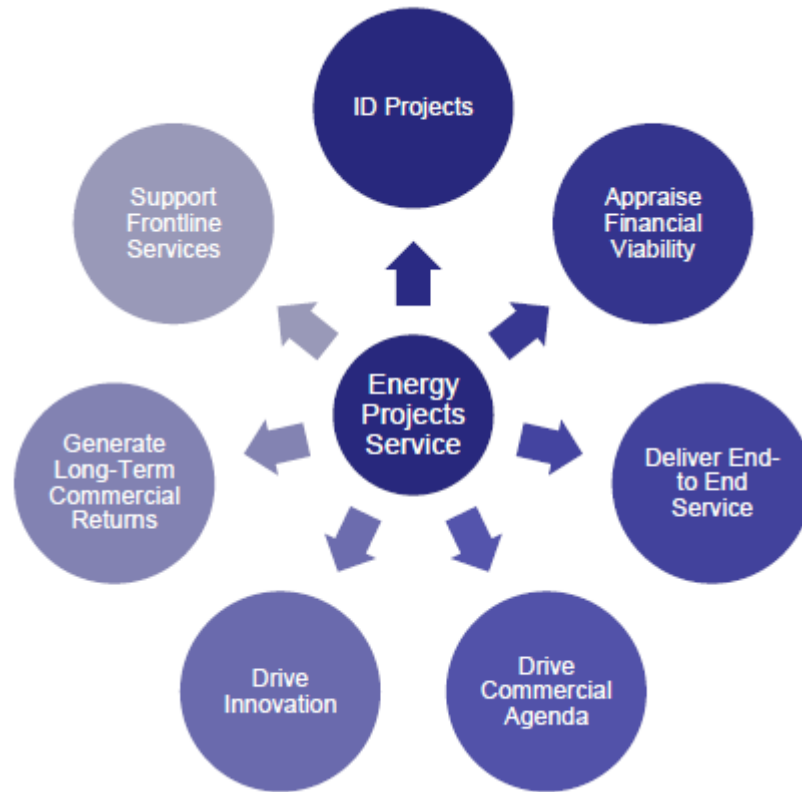


Energy Projects Team

- 17 in the team
- 5 vacant posts – growing team to meet demand
- Covering 4 areas



Aims and Objectives



Leading the way to a sustainable, low carbon future through support, collaboration and project delivery



Energy Projects Team

POLICY AND PERFORMANCE	PROJECTS	DISTRICT HEATING	ENERGY EFFICIENCY AND COMPLIANCE
<ul style="list-style-type: none">• Provide the policy and reporting framework for NCC to improve environmental performance and deliver energy projects nationally• Keep up to date with wider policy developments and how these impact upon us, as well as promoting our successes and building our reputation• Secure funding to support delivery, as well as other resources (e.g. strategic partnerships)	<ul style="list-style-type: none">• Deliver projects which reduce our utility consumption• Demonstrate innovative technologies and working models	<ul style="list-style-type: none">• Ensure that our district heat network runs as efficiently as possible• Grow the network through new connections and securing funding for extensions and innovative pilots	<ul style="list-style-type: none">• Deliver a range of compliance services both internally and externally• Generate a sustainable and profitable income stream, leading on NCC's commercialism agenda



Policy

Target:

26% reduction by 2020 against 2005 levels

Achieved:

33% reduction in 2016



edie.NET

HOME NEWS FEATURES TOPICS JARGON BUSTER SUPPLIERS EVENTS *NEW!*

Nottingham smashes climate targets four years early

8 August 2016, source [edie newsroom](#)

Nottingham has surpassed its climate change targets four years early, according to Government data which shows a 33% reduction in the city's carbon emissions since 2005.



Nottingham
City Council

Policy



Nottingham City Council's **FUEL POVERTY STRATEGY** 2018 – 2025



A COLLABORATIVE APPROACH
TO A COMPLEX PROBLEM

Projects

- Salix – energy efficiency recycling fund
- Water Efficiency Loan Scheme
- Water Self Supply Model
- CleanMobilEnergy – V2G demonstrator
- DREeM – development of Energiesprong to commercial application
- SUDs - Business Centre retrofit
- Innovation Gateway – technology sourcing
- Green Sky – horizon scanning
- Demand Side Response
- Stationary Fuel Cells

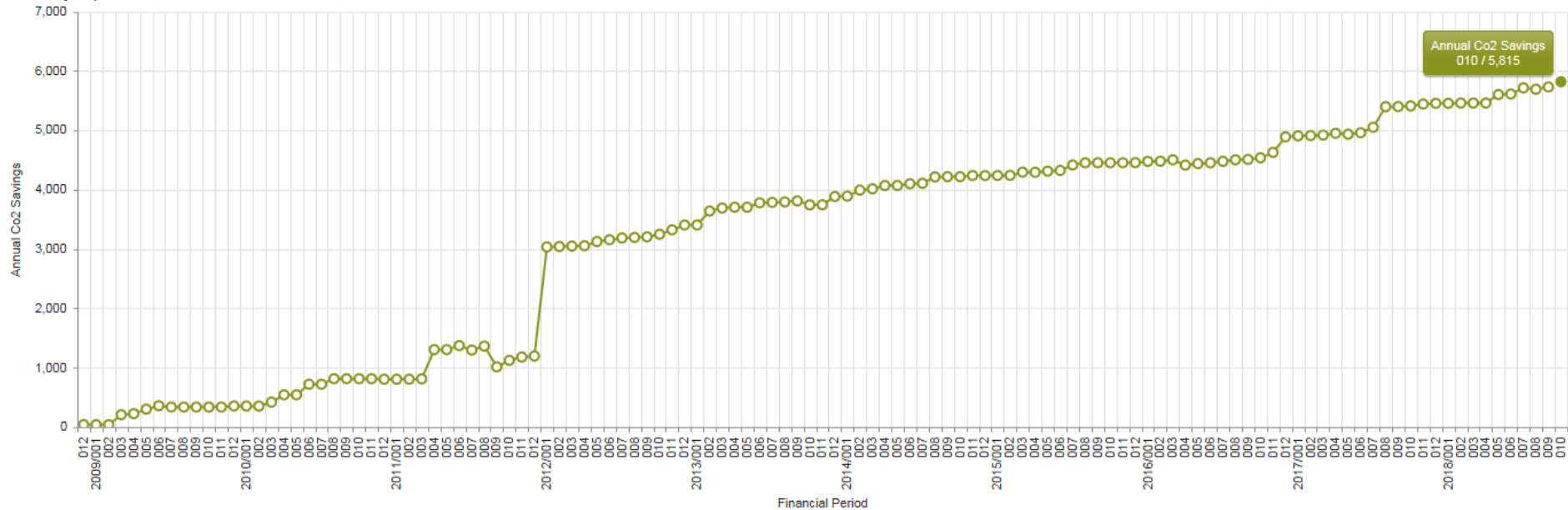


Salix

- Energy efficiency fund started in 2009
- 231 projects commissioned to date
- £3.2M invested
- Lifetime savings of 71,000 tonnes CO₂e and £11M!

H) Annual CO₂ Savings Graph

CNC0703 - Nottingham City Council



Salix

- LED lighting
- Boiler replacement
- Loxley House private wire conversion
- Data Centre upgrades
- Controls and BMS
- Building fabric
- Solar PV



Wollaton Hall

- Project cost £45k
- Annual savings £11k
- Payback 4.1 years
- Whole building lighting replacement – internal and external
- External lights in use for Splendour Festival 2018
- Major challenges – heritage, controls, access

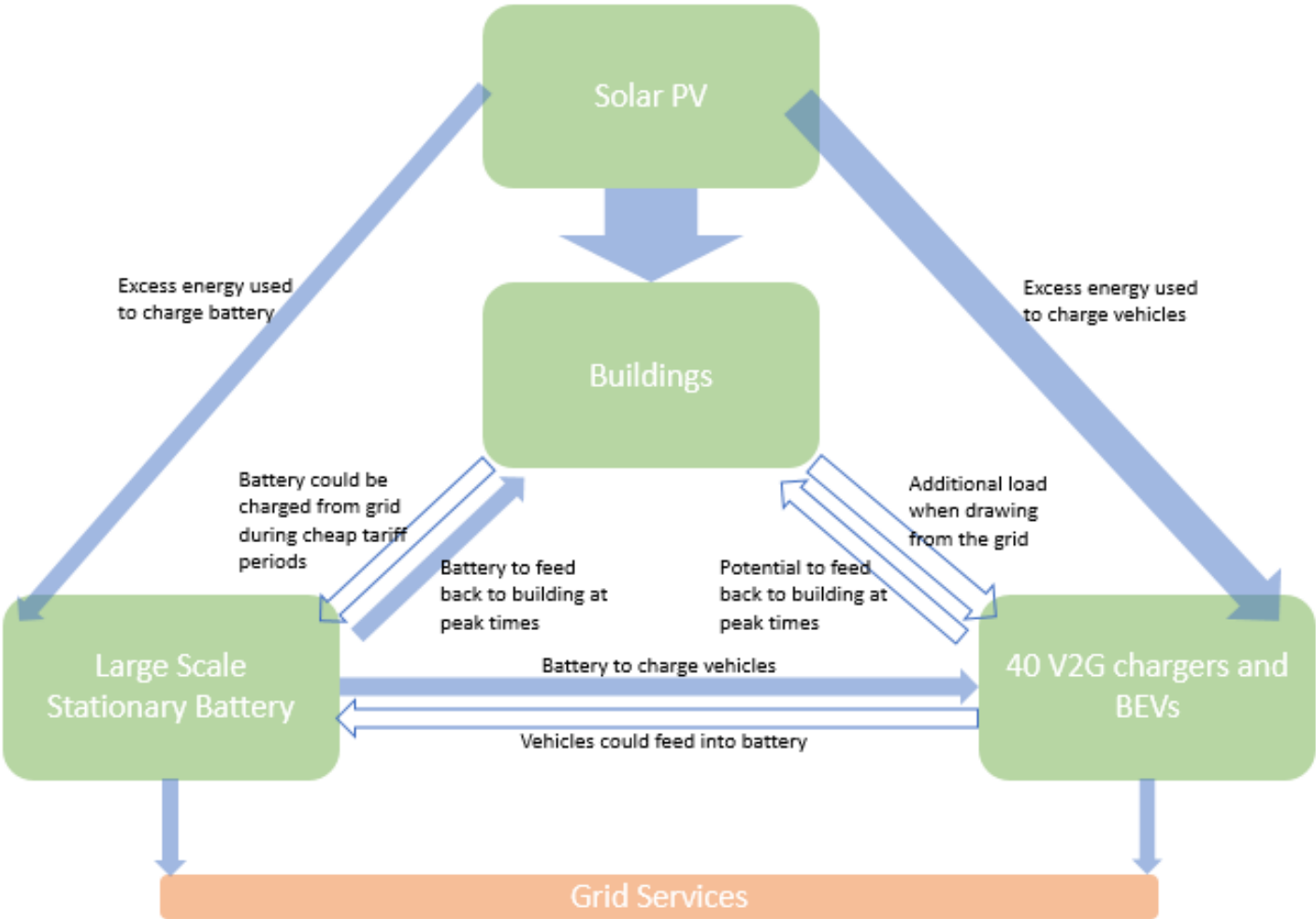


Theatre Royal

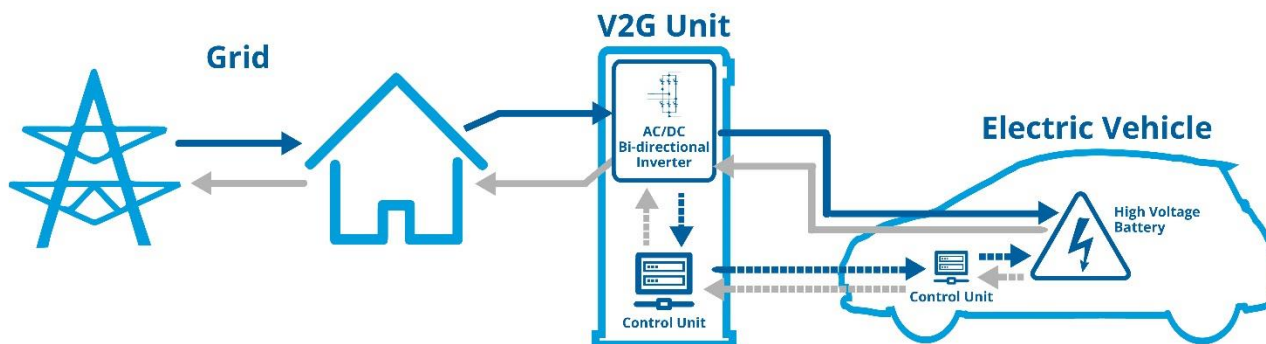
- Annual savings: £6,800
- Lifetime savings: £88,000
- 724 LED's installed
- Specification included warm colours and dimming functionality



CleanMobilEnergy & EV-elocity



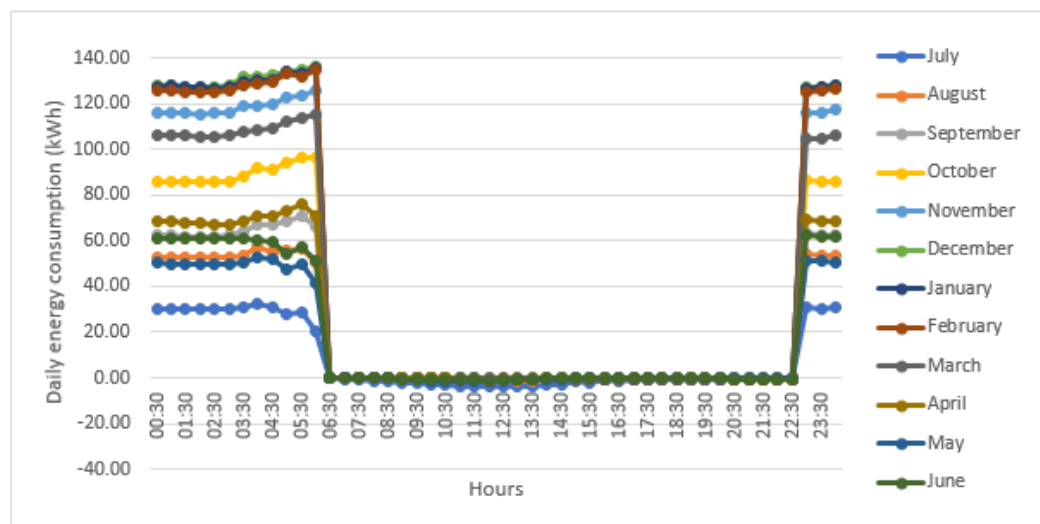
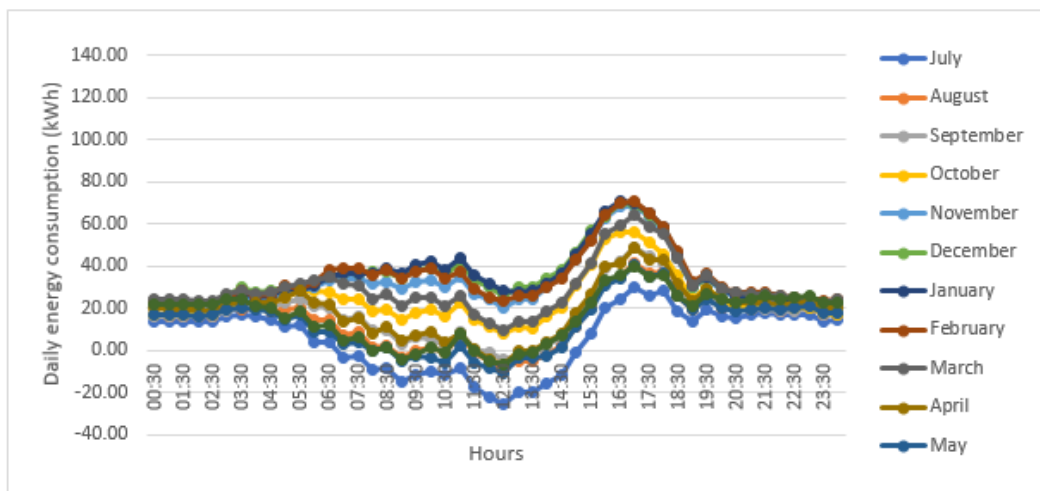
Vehicle2Grid Demonstrator



EV-elocity

Interreg 
EUROPEAN UNION
North-West Europe
CleanMobilEnergy
European Regional Development Fund

Vehicle2Grid Demonstrator



Objectives

1. Maximise use of renewable energy generation, no export to grid
 - Supply building with RE
 - Charge vehicles with RE
 - Store any excess RE in stationary battery
2. Reduce energy bills
 - Avoid DUoS, TNUoS, Capacity Mechanism charges (4-7pm)
 - If RE not available, make use of “cheap” night tariff
3. Generate revenue
 - Use an aggregator to access Capacity Mechanism/STOR/FFR/Demand turn up contracts



District Heating

- 40 year old heat network providing heat to 5000 homes and 150 commercial properties as well as private wire electricity
- Improve efficiency: Drone survey
- Extend: D2Grids



Compliance & Consultancy

- EPCs – domestic and commercial
- DECs
- ACEA
- Energy Assessments
- Energy Advice and Training
- ESOS
- SECR
- ISO14001/ISO50001
- N2EG – funded SME support and grant programme





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