



Commonwealth Games Village – District Heating

David Hay
Glasgow City Council



Overview

- Affordable Warmth
- Greener Legacy
- Commonwealth Games Athletes' Village
- Delivery of District Heating
- Looking to the Future
- Challenges Faced
- Lessons Learnt



Affordable Warmth

IBM's Smarter Cities Challenge

Glasgow

Report





Policy Drivers

■ Strategic Plan 2012 – 2017

- We will provide new and sustainable District Heating systems in Glasgow

■ Affordable Warmth Action Plan 2011 – 2016

- Improving Glasgow's Housing Stock
- Maximising the benefits of Green Deal for the Residents of Glasgow

Greener Legacy



- To create a Greener Glasgow, that will use Glasgow 2014 to become one of the most sustainable cities in Europe
- Sustainable Design and Combined Heat and Power (CHP) at the Athletes' Village



Commonwealth Games Athletes' Village – Client Brief

- Exemplar sustainable new mixed tenure residential quarter
- Accommodation for 6,500 athletes and officials
- Low-carbon standards
- Decentralised energy strategy
- The highest standards of urban excellence and design

Athletes' Village - Before



Athletes' Village – During



Athletes' Village



Delivery of District Heating

- City Legacy – Development Partner
- Vital Energi – Design, build & operate
- Change of Approach
 - ESCO





System Capacity

- 13.3MW heat capacity
 - 2 No. 850kW CHP engines
 - 3 No. 3MW gas boilers
 - 2.6MW thermal store
- Heat to Emirates Arena, 120 bed care home + 700 houses
- Maximising capacity during Games Mode



Looking to the Future

- Building sized for 4th boiler + 2nd thermal store
- Phase 2 housing
- Electrically heated social housing
- Network masterplan
- ESCO



Challenges Faced

- Emerging industry
- Multiple agreements and risk allocation
- Price fixing – no option to switch
- Sizing of scheme and diversity
- Deficit funding for initial operating period



Lessons Learnt

- Public or private controlled asset
- Early CHP switch-on
- Sinking fund
- Do not over promise
- Map out full journey