

# Community Energy: Getting Connected in Aberdeen

**Michael King**

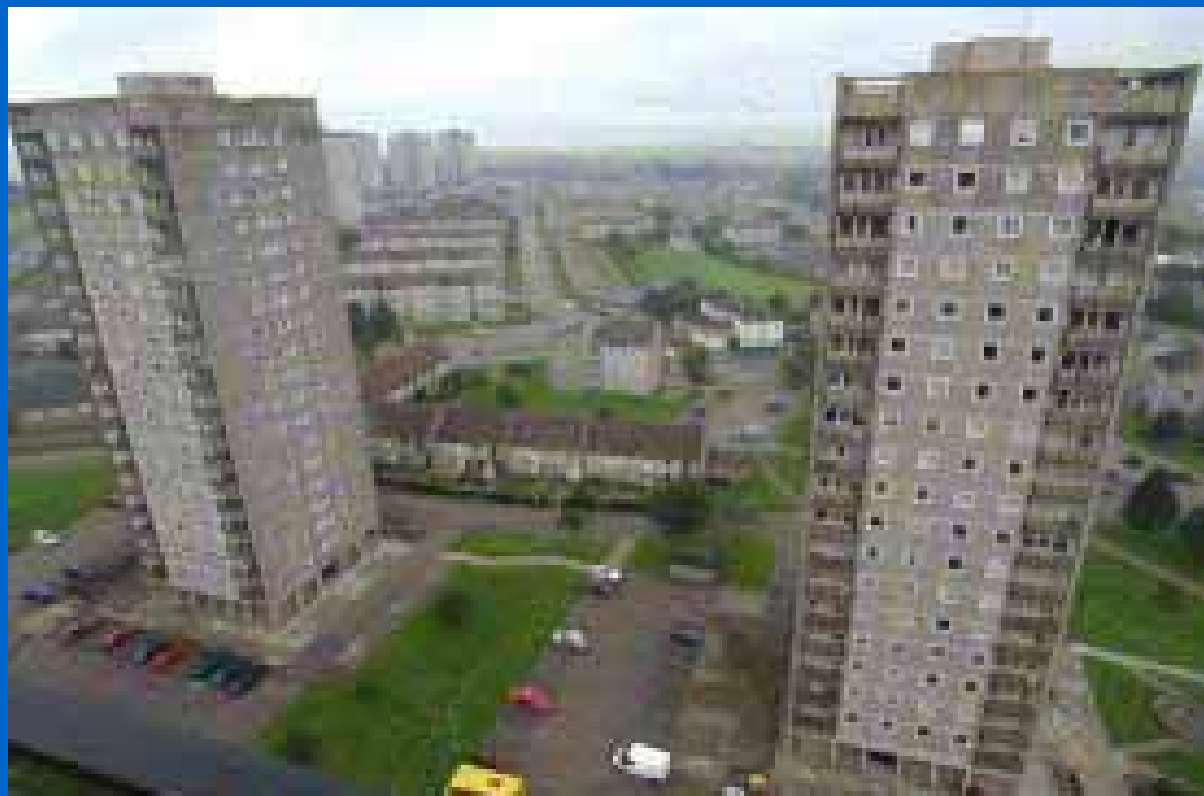
**Chairman**

**Aberdeen Heat & Power Co**

# Aberdeen Heat & Power Co

- Council Housing Stock 27,000
- Capital Programme
- Average NHER
  - 4.2 in 1997
  - 5.7 in 2001
- Feb 1999 adopts Affordable Warmth Strategy
- Policy to target the least thermally efficient homes
- MULTI STOREY FLATS

# Aberdeen Heat & Power Co



# Aberdeen Heat & Power Co

- 59 multi storey blocks
- 4,500 flats
- NHERs of below 4.0
- Improvements have to meet objectives of:
  - Affordable Warmth
  - Safety
  - Sustainability
  - CO<sub>2</sub> reduction
- Within financial constraints - be affordable to the Council

# Aberdeen Heat & Power Co

- Commissioned study of all 59 multi storey blocks
  - Structural survey
  - Ground conditions survey
  - Energy issues - affordable warmth, reduced CO<sub>2</sub> emissions, affordable to Council, speedy delivery
- Full report in summer 2002
- Will provide a strategy for future investment in these blocks

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- Interim report:
  - Focused on one cluster of 4 multi storey blocks - Stockethill cluster
    - 19 storeys
    - total of 288 flats
    - electric storage heating
    - precast panel, cavity construction
  - Considered range of options
  - Recommended CHP

# Report findings

<u>Option</u>	<u>Over-cladding</u>	<u>Cost/Flat</u>	<u>Heat cost/Flat</u>
Elect Htg	£4.3M	£20,000	£14.27
Central Blr	£5.4M	£23,000	£5.65
CHP Plant	£5.6M	£24,000	£3.18

<u>Option</u>	<u>No Over-cladding</u>	<u>Cost/Flat</u>	<u>Heat cost/Flat</u>
Elect Htg	£0.4M	£1,691	£15.73
Central Blr	£1.0M	£4,464	£5.83
CHP Plant	£1.2M	£5,000	£3.65

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- Existing:
  - NHER 3.36
  - CO<sub>2</sub> emissions 1597 tonnes per year
- With CHP:
  - NHER 6.00
  - CO<sub>2</sub> emissions 936 tonnes per year
- Running costs reduced to £3.20 per week = Affordable Warmth

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- Council had the technical answer but how to do within financial constraints?
- EST Energy Services Programme
  - Appointed specialist CHP consultant
  - Independent, not-for-profit company
  - Company to raise capital
  - Contract between Council and company
  - Business Plan and cash-flow forecast
  - Enables the Council to spread capital payments over a number of years
- *Without external funding Council could only afford one development every 10 to 12 years!*

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- Total project cost - £1.6 million
- Community Energy Programme
  - £730,000 grant for capital costs
    - CHP plant
    - Distribution system
    - Internals
- Bank financing of up to £1 million based on income from Council of £215,000 per annum
- Applied for Energy Efficiency Commitment (EEC) monies to offset costs of heating systems within leaseholder flats.
- Surplus generated by independent company will provide capital to start work on next cluster

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- Sales arrangements
- Consultation on resident preferences
- Flat rate charge for heat
- Tenants – heat with rent
- Owner-occupiers – direct debit established
- Electricity sales – via consolidator
  - original intention to sell to Council
  - to residents
  - to housing association

# Benefits for Council

- Capital investment in blocks
- Accelerated refurbishment
- Cost spread over several years
- Affordable warmth for tenants
- Council still owns heating systems within flats
- CO<sub>2</sub> reductions
- Assists meeting HECA targets

# Boiler House at Stockethill



# Inside the boiler house



# Inside the boiler house



# Hydraulic board in a flat



# Controls in a flat



# Timer in flat



# Inside a flat



# What next?

- **Awarded Community Energy grant of £1.3 million for new network and CHP serving 500 homes in six tower blocks at Seaton beach front**
- **Awarded Community Energy grant of £613,052 for new network and CHP serving 200 homes, a school, sports centre and swimming pool at Hazelhead**
- **Developing a new proposal linking a number of public buildings including theatre, central library, universities and smaller blocks of flats in city centre**

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## ■ What was learnt?

- Approach strategically
- Best-value approach - whole life cycle costs
- Need external specialist assistance
- Needs internal champion to drive the process
- Arm's length company enables accelerated refurbishment of stock

# Contact

- Michael King

- ◆ [mj.king@blueyonder.co.uk](mailto:mj.king@blueyonder.co.uk)

- ◆ 07966 238566

- Janice Lyon

- ◆ [JLYON@housing.aberdeen.net.uk](mailto:JLYON@housing.aberdeen.net.uk)

- ◆ 01224 523512

- Community Energy Programme

- ◆ [www.est.co.uk/communityenergy](http://www.est.co.uk/communityenergy)

- ◆ 0870 8506085

# Case Study

- Community Heating - Aberdeen City Council Case Study

- available on:

[www.est.org.uk/bestpractice](http://www.est.org.uk/bestpractice)

0845 120 7789