

Case Study 15

Metropolitan Police Energy Efficiency Programme

UK



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Energy behavioral changes



Changing Behaviour



Work package 2

Development of the conceptual model: Analysis of success factors, underlying models and methods in target group interaction

Case Study 15:

Metropolitan Police Energy Efficiency Programme

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Content

Summary of the case.....	5
Step 1: Context of Metropolitan Police Energy Efficiency Programme	6
Step 2: Focuses of Metropolitan Police Energy Efficiency Programme	8
Step 3: Design of the Programme.....	10
Step 4: Process of programme	12
Step 5: Outcome of the project.....	14
References	16

Summary of the case

The Metropolitan Police Service (MPS) Energy Efficiency Programme is an initiative that aims to improve energy efficiency in relation to already existing MPS buildings and practices. The programme has roots that can be traced to 1991, although its current initiatives in respect of its involvement in London's Building Energy Efficiency Programme (BEEP) programme from 2008 are the primary focus here. The wider context for this is that the MPS is committed to reducing its CO₂ emissions by 10 per cent by 2010 and 30 per cent by 2025.

Although the focus is on the MPS the priorities of the MPS need to be understood within the context of its relationship to the Mayor of London and also in respect of the Mayor's relationships to the leaders of other large cities. The setting of the MPS's strategic priorities are thus 'nested' and need to be understood in terms of the ways in which these relationships enable, constrain and condition the MPS's priorities. This is illustrated here through the example of the MPS's £5.7 million involvement in its energy efficiency programme.

In doing this the case highlights that the relationships between strategic objectives and operational outcomes requires a better understanding of processes and learning in terms of both the development of operational objectives and attempts to embed them through projects and activities.

Step 1: Context of Metropolitan Police Energy Efficiency Programme

National context in general

The United Kingdom - commonly known as the UK or Britain - is a sovereign island country. It has the fifth largest economy in the world and a population of over 60 million people. Its population has been growing at a fast rate and it is predicted that it will continue to increase due to immigration, birth rate and long life expectancy. However, anticipated demographic trends in Britain are likely to cause significant challenges and tensions in the near future where the growing population will, without purposive action to the contrary, result in the inevitable increase in resource consumption and pollution that UK affluence generates (Vidal, 2007).

Over recent years, the government has increased its focus on energy use and environmental protection issues. In line with this, the government has produced a range of policies to stimulate the development of sustainable energy technologies (Mitchell and Woodman, 2004). The government has promoted the 2006 UK Climate Change Programme as the key strategy for its work on tackling climate change; it sets out the policies and measures which the UK is using to cut its emissions of greenhouse gases (DEFRA, undated). Overall, the UK government has agreed with other Member States to an EU-wide target of 20 per cent renewable energy by 2020 - including a binding 10 per cent target for the transport sector. The European Commission has proposed that the UK share of this target would be to achieve 15 per cent of the UK's energy from renewables by 2020 which is equivalent to almost a ten-fold increase in renewable energy consumption from current levels. (BERR, undated) Furthermore, the UK has proposed setting binding targets for reducing carbon dioxide emissions through the Climate Change Bill 2007. These include:

- A 60 per cent cut in carbon dioxide emissions from 1990 levels by 2050
- A 26-32 per cent cut by 2020.
- Five-year carbon budgets will be established from 2008 to 2023, this will set binding limits on carbon dioxide emissions ensuring every year's emissions count.

The UK plan to cut down on carbon dioxide is strongly related to its production (and consumption) of energy. The government has set out the UK's Energy Efficiency Action Plan 2007, which aims to bring together current and planned policies and measures to improve energy efficiency and meet the energy saving targets. As part of its goal to reduce emissions, the government aims to generate at least 10 per cent of electricity from renewable sources by 2020.

Local and specific context

The public sector is responsible for 8 per cent of UK carbon emissions, where electricity consumption and heating of buildings accounted for approximately 4.4MtC of emissions in 2005 - about 25% of the public sector's total footprint (DEFRA, 2007). Therefore, the government has attempted to reduce its own carbon footprint, to assure the public of its role in addressing climate change, as government leadership in this area is critical to the success of measures targeting action by consumers and business.

In London, the Mayoral group itself produces around 226,000 tonnes of CO₂ per year, that counts towards to 0.5 per cent of London's total emissions (Mayor of London, 2007). Although the figure is not considered high, the Mayor recognised the importance for the public authority to demonstrate its commitment and practise to tackling climate change issues (Mayor of London, 2007). The Mayoral group consists of the Greater London Authority (GLA) and four Functional Bodies:

- London Development Agency
- London Fire and Emergency Planning Authority

- Metropolitan Police Authority (and the Metropolitan Police Service)
- Transport for London

The (recently replaced) Mayor of London, Ken Livingstone, promoted his vision to develop London as an exemplary sustainable world city (Mayor of London, 2004). In order to achieve this vision, the authority published an Energy Strategy which aims to reduce London's contribution to global climate change, tackle the problem of fuel poverty and promote London's economic development through renewable and energy efficient technologies (Mayor of London, undated). According to the strategy report (2004), the Mayor applies and delivers strategies or policies through his services and activities, which includes the Functional Bodies such as the Metropolitan Police Service (MPS).

Moreover, The Mayor of London has partnered with the Climate Change Initiative (CCI) of the Clinton Foundation to establish a global Energy Efficiency Building programme. The scheme aims to bring together a framework of the world's largest energy service companies (ESCOs), five of the world's largest banks and forty of the world's largest cities to reduce energy consumption in existing buildings. The overall objectives within which the Clinton programme sits in London are to:

- Reduce CO₂ emissions in London
- Reduce CO₂ emissions from GLA group buildings by 20% by 2010.
- Aim to reduce CO₂ emission by 60% by 2025 as the longer-term goal.
- Create an exemplar model for wider public and private sectors to follow.
- Develop a commercial model and framework for London's organisations across both public and private sector to enable energy efficient in London's buildings.
- Re-emphasise the commitment, leadership and partnership across public and private sectors.
- Develop and promote the best practice of procurement framework across London.
- Assist the development of the CCI building Programme and reinforce London's commitment to reduce the effects of climate change through a reduction of CO₂ emissions.

(Metropolitan Police Authority, 2007)

Step 2: Focuses of Metropolitan Police Energy Efficiency Programme

General issues, initiator and problem definition

As part of the GLA group, the MPS is required to contribute to the Mayor's plan for sustainable development. The service began its environmental programme in 1991 (prior to the inauguration of the office of Mayor), largely as a focus on monitoring and reporting its environmental impacts. In 2001, the MPS developed a five-year environmental strategy to demonstrate its commitment to deal with the climate change challenges over the next five years (Metropolitan Police Service, 2005).

As the largest UK police service, the MPS covers an area of 620 square miles and a population of 7.2 million. Furthermore, the organisation manages over 50,000 staff, 600 operational buildings (including headquarter offices and police stations) and 6000 vehicles. The MPS has reviewed its operations and has begun to recognise that its activities have significant impacts on the environment. It has identified the following general environmental issues in relation to the MPS:

- The consumption of resources from the construction and operation of the estate.
- Operation of the vehicle fleet and employee travel.
- The consumption of a variety of raw materials through office based and policing activities, such as paper, furniture, electronic equipment and so on.
- The generation and disposal of a variety of wastes.
- Indirect impacts associated with financial investments and procurement of goods and services.

(Metropolitan Police Authority, 2007)

Through the Mayor's commitment to climate change and environmental policies, the MPS has engaged with other GLA Functional Bodies to assist with the delivery of the Mayor's Climate Change Action Plan targets (Metropolitan Police Authority, 2007). Under the MPS Environmental Strategy, a more specific energy efficiency programme had also been developed, which involves energy improvements to ten MPS buildings as part of the Clinton initiative. The Building Energy Efficiency Programme (BEEP) was set up in line with the MPS's Environmental Strategy and the Climate Change Action Plan (CCAP) programme, which the MPS is required to address to meet the CO₂ reduction target set by the Mayor.

Goals, objectives, targeted behaviours and target groups

Based on the Mayor's Energy Strategy, there are several main points that apply to and should be addressed by the MPS. These include:

- Lead by example and to manage all buildings in accordance with the Mayor's Energy Hierarchy, which seeks to meet essential energy needs through the following principles:
 - Applying energy efficiently
 - Applying renewable energy
 - Seeking optimal efficiency of energy supply
- Promote best practice in vehicle fleets owned or regulated by the Greater London Authority or Functional Bodies and will seek to influence fuel used by fleets owned by firms with which it has other contractual arrangements.
- Work to ensure that the GLA and Functional Bodies fully integrate the objectives of the Energy Strategy into their activities and demonstrate best practice.

(Metropolitan Police Authority, 2002)

The Mayor has requested that the MPS reduces its CO₂ emissions by 30 per cent by 2025. Furthermore, the progress against the Environmental Strategy is monitored and supported by the

Metropolitan Police Authority (MPA). The MPA's statutory role is to ensure that the MPS is efficient and effective, which includes the delivery of the five year MPS Environmental Strategy and producing a joint Environmental Report annually (Metropolitan Police Authority, 2007).

The MSP has committed to the Mayor's target and has set out measures and initiatives to reduce its own emissions. Under the five year MPS Environmental Strategy, the MPS has developed 24 general strategic objectives which, with reference to energy efficiency, include:

- Increase the efficiency of the MPS's most inefficient buildings through the implementation of energy minimisation initiatives.
- Investigate and trial the use of innovative energy efficient technologies and promote their benefits and develop recommendations for wider implementation.

(Metropolitan Police Authority, 2007)

Step 3: Design of the Programme

What knowledge and ideas informed the design of the programme?

The MPS Environmental Strategy was developed in consultation with the MPA and other key stakeholders including the GLA. Furthermore, the plan has incorporated the priorities of the GLA. The key concept for the strategy development was to support the MPS vision, which is 'to make London the safest major city in the world, through the operation of a sustainable police service where environmental issues are embedded in the decision making process' (Metropolitan Police Service, 2005).

There is no doubt that the Mayor has dominated the GLA Functional Bodies' environmental activities. As the MPS (2005) stated that the GLA provides the overall strategic direction for London through the production of the Mayor's Sustainable Development Framework and supporting Environmental Strategies. His concept was based on the conditions of:

- Maintenance of high, stable levels of economic growth and employment.
- Prudent use of natural resources.
- Social progress which recognises the needs of all people.
- Effective protection of the environment.

(Metropolitan Police Service, 2005)

The MPS has sought to make environmental improvement through the development of policies and strategies. Moreover, the organisation has adopted an Environmental Management System (EMS), which supports environmental management and impacts reduction. According to the MPS (2005) the international standard for environmental management -ISO 14001 provides a framework for developing and implementing an EMS within an organisation and represents best practice, such as ensuring compliance with legal requirements, manage areas of high environmental risk, auditing and progress review and so on. The MPS claimed that the ISO approach would improve the organisation's environmental performance.

Furthermore, the MPS has developed a Corporate Governance Framework, which reports progress in an 'Annual Statement of Internal Control' that covers various issues, such as change management, citizen focus and people management and so on. The organisation also attends the GLA Sustainable Development Policy Group, which develops the core themes of the Sustainable Development scheme that guides the MPS's environmental activities (Metropolitan Police Authority, 2007).

Research conducted on target group

The core principles of the MPS activities are under the government's plan for 'Sustainable Development'. It is set out to focus on a mix of social, environmental and economic progress and further development to meets the needs without compromising the capacity for future expansion (Metropolitan Police Authority, 2007). A comprehensive review of all MPS operations and activities which are associated with environmental impacts was carried out using a 'systematic and comprehensive' approach. The details of the review have been vaguely described and there has been no formal published information, and therefore the details cannot be verified at this stage.

Participation, commitment, monitoring and evaluation

In short, the MPS's environmental impacts are managed through the MPS Environmental Strategy and supporting Environmental Management Programme (EMP). In addition, an Environment Team has also been set up to support the Environmental Strategies developed by the Mayor of London. Its main role is to co-ordinate the delivery of the Environmental Strategy, develop and implement the Environment Management System (EMS), monitor MPS environmental impacts and communicate environmental messages to staff across the MPA and MPS (Metropolitan Police Authority, 2005). Moreover, the MPA has allocated £5.7 million to im-

plement energy efficiency activities. It is hoped that the activities could save 25 per cent of the buildings' carbon emissions and 2,500 tonnes of CO₂ per annum once the scheme is implemented on all of the MPS's ten initial chosen office sites (Metropolitan Police Authority, 2007).

The team claimed that it has been monitoring and evaluating the Environmental Strategy, which have been performed through various methods and channels. For instance:

- Internal publication of an MPA/MPS Environment Report.
- Presentation and workshop discussions to review the proposed measures.
- Regular visits to MPS functions in order to gain better understanding of the operation of programmes and ensure that proposals are realistic and appropriate.

Furthermore, the annual environmental management programme has also been developed in consultation with objectives and targets to ensure that the proposed schemes are consistent with the environmental strategies of the individual departments and to encourage mainstreaming of environmental issues. According to the Metropolitan Police Authority (2007) the review of the performance against targets and environmental key performance indicators are assessed quarterly by the MPS Environmental Strategy Steering Group and reported annually in the MPA/MPS joint Environment Report, and through the Mayor's Sustainable Development Budget Return.

Links to other programmes and policy

Based on the available resources and information, it has become apparent that the MPS Environmental Strategy and Energy Programme are part of a much wider scheme of action at both a national and regional level. It is clear that the Mayor of London is the key architect in initiating MPS's environmental strategies and related activities.

Step 4: Process of programme

Interaction between the different participants

The interactions between key stakeholders were discussed in the previous section. We develop this further here through detailing the key stakeholders in the programme, their expectations and the nature of their involvement in the programme (see Table 1).

Table 1 Stakeholders' Expectations and Involvement

Stakeholders	Expectations	Involvement
Metropolitan Police Service	<p>As a Functional Body of GLA to assist with the delivery of the Climate Change Action Plan and Energy Strategy targets.</p> <p>Aspirations to potentially save 25 per cent of the building carbon emissions on project sites and save public money.</p>	<p>5 year MPS Environmental Strategy aims to:</p> <ul style="list-style-type: none"> ➤ Increase efficiency of MPS's most inefficient buildings. ➤ Investigate and trial use of energy efficient technologies. <p>BEEP Programme - London's energy efficiency programme under CCI - involves energy improvements to ten MPS buildings including:</p> <ul style="list-style-type: none"> ➤ surveying and auditing the buildings to assess potential carbon savings, ➤ before planning and implementing a range of improvement measures, including ➤ insulation ➤ energy efficient building management technology, ➤ low carbon heating and cooling equipment..
Mayor of London	<p>Reduction of energy consumption and carbon emissions from London's organisations and public and private buildings.</p> <p>Aspirations for efficient, renewable and locally produced energy.</p>	<p>Development of CCAP and energy strategy</p> <p>Mayor has requested the MPS to reduce its CO₂ emissions by 30% by 2025.</p> <p>Promotion of best practice in buildings owned or regulated by the GLA or Functional Bodies such as MPS</p>
Clinton Climate Initiative	<p>Network of large cities around the world have pledged to accelerate their efforts to reduce GHG emissions, through working with C40 cities (including London) to develop and implement large scale energy efficiency projects.</p>	<p>Development of CCI's Energy Efficiency Building Retrofit Program with the world's largest cities (including London), energy service companies and financial institutions to retrofit public and private buildings to reduce energy use.</p>
Metropolitan Police Authority	<p>To ensure that the MPS is efficient and effective</p>	<p>Progress against the MPS Environmental Strategy is monitored and supported by the MPA</p>

What should be noted is that the interactions between participants cut across different scales - involving relationships between the authorities of large cities but also between the Mayor of London and the MPS. This encompasses a variety of different expectations and motivations for involvement that come together in a particular way in the MPS Energy Efficiency programme.

Issues

With an organisation the size of the MPS, with the number of employees and the breadth of estate it covers it is important to develop understanding of the expectations of those whose everyday practices may be affected by attempts to 'implement' energy efficiency programmes at the level of individual police stations and offices. It is beyond the scope of this report to do this and it remains unclear what the differing expectations of the MPS's 50,000 employees are and how the process of mediating between the strategic aspirations of the MPS in respect of energy efficiency and the achievement of small scale projects takes place.

Step 5: Outcome of the project

Table 2: Objectives and Outcomes

Objectives	Outcomes
<p>Assist with the delivery of the Climate Change Action Plan targets</p> <p>MPS reduce its CO₂ emissions by 10% by 2010 and 30% by 2025.</p>	<p>These are medium and long-term targets and, as such, their achievement is unclear.</p>
<p>Increase the efficiency of the MPS's most inefficient buildings.</p> <p>Investigate and trial the use of innovative energy efficient technologies.</p>	<p>This is work in progress. Under BEEP, from 2008, and the MPS Environmental Strategy, a more specific energy efficiency programme has developed, which involves energy improvements to ten MPS buildings.</p>
<p>The overall objectives for the Clinton C40 programme in London include:</p> <ul style="list-style-type: none"> • Reduce CO₂ emissions from GLA buildings by 20% by 2010. • Assist the development of the CCI building Programme. 	<p>In a wider context the programme aims to contribute to reducing CO₂ emissions from MPS buildings and also to contribute to London's involvement in the CCI initiative.</p>

Effectiveness

The effectiveness of the Metropolitan Police Service Energy Efficiency Programme can be addressed in terms of two sets of issues: (1) the relationship between objectives and outcomes and (2) the effectiveness of processes.

First, many of the objectives of the programme are embodied in targets and aspirations that are strategic into the long-term (2025) or at least into the medium-term (2010). This makes these difficult to 'measure' in terms of outcomes. What can be said is that activities are taking place that are supportive of these aspirations - the extent to which they are effective in this respect is unclear given that the MPS's involvement in BEEP only started in 2008. The MPA has allocated £5.7 million to implement the energy efficiency programme in the hope that it could save 25 per cent of the building carbon emissions and 2,5000 tonnes of CO₂ per annum once the scheme is implemented on all MPS's ten office sites (Metropolitan Police Authority, 2007). This will be and is being monitored in terms of measures such as the review of performance against targets and environmental key performance indicators assessed quarterly by the MPS Environmental Strategy Steering Group and reported annually in the MPA/MPS joint Environment Report, and through the Mayor's Sustainable Development Budget Return.

This leads to a second point, in terms of process effectiveness. There has been a great deal of effort in seeking to align different motivations and objectives for energy efficiency across different interest groups (MPS, CCI, Mayor of London). At one level holding these interests together to start the programme can be seen as success. That is to say, an account of effectiveness must also take into account the process through which DSM programmes and projects come to be shaped in the way that they are.

Conclusions

The Metropolitan Police Energy Efficiency Programme is embedded within a nested set of priorities (CCI, Mayor and MPS). It also sits within a context of the various different priorities of each of these different stakeholders, which shape the priorities of the MPS. In particular, as one of the Functional Bodies of the GLA the role of the Mayor has been crucial in shaping the strategic parameters within which the MPS can act in terms of energy efficiency. It is in terms of this development of strategic priorities that there has been significant activity through the development of plans and subsequently of a programme of energy efficiency activities in MPS existing buildings.

As this programme commenced in 2008, two issues primarily require further work. First, it is unclear what has and will happen when attempts are made to embed these activities in different buildings. To what extent will the practices and behaviour of MPS employees change? Second, although there are processes in place to monitor the strategic targets and plans of the MPS the processes for monitoring and learning from attempts to embed energy efficiency activities in the context of MPS buildings is less well defined.

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