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# Efficiency Focus: The Management of Energy and Water

## **Torfaen County Borough Council**

<b>Summary and Recommendations</b>	<b>3</b>
Next steps	4
<b>Detailed report</b>	
The Council is developing a strategic focus for energy and water management but this needs to be matched by leadership, management, resources and awareness of policy aims	5
More assurance is needed that value for money is being obtained, that payments are accurate and that energy procurement is not unnecessarily delayed	7
As awareness of the benefits of good energy and water management is raised, the capacity to provide qualified technical advice also needs to increase	8
Systems and baseline information for energy and water management need to be improved in order to inform decisions about efficiency savings and improvement actions	10
The need for energy and water management to be a part of asset management is recognised, but asset management planning must develop further and more corporate influence exercised over properties	11
Good practice	13
<b>Appendices</b>	
Action Plan	14

### Status of this report

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## Summary

- 1 Local government in Wales spends over £40 million on energy and a further £8.5 million on water each year.<sup>1</sup> The challenge for councils is to manage this appropriately to ensure value for money whilst exercising prudent use of these natural resources.
- 2 There is potential for significant efficiency savings to be made in energy and water<sup>2</sup> and recent and anticipated future rises in energy and water costs will impact considerably on the annual spend in these two areas and consequently upon potential savings.
- 3 In their overall expenditure, councils are also expected to achieve efficiency gains in the context of the strategic document, *Making the Connections: Delivering Better Services for Wales* (October 2004) by the Welsh Assembly Government (the Assembly Government). In addition, reductions in carbon emission levels are required for the Assembly Government's policy agreement for energy with each council. Consequently, councils have a responsibility both to conserve energy and water and to control the financial impact of increased prices.
- 4 We investigated whether the arrangements governing the management of energy and water in Torfaen County Borough Council (the Council) could achieve efficiencies in energy and water consumption and costs. The study was confined to the Council's non-domestic building stock.
- 5 We concluded that the Council has made only limited progress in energy efficiency and water management, although these issues are now being more strongly supported and a more structured approach is being taken.
- 6 We found that the Council is developing a strategic focus for energy and water management but this needs to be matched by leadership, management, resources and awareness of policy aims. More assurance is needed that value for money is being obtained, that payments are accurate and that energy procurement is not unnecessarily delayed. As awareness of the benefits of good energy and water management is raised, the capacity to provide qualified technical advice also needs to increase. Systems and baseline information for energy and water management need to be improved in order to inform decisions about efficiency savings and improvement actions.
- 7 The need for energy and water management to be a part of the corporate management of assets is recognised, but asset management planning must develop further and more corporate influence must be exercised over properties.

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<sup>1</sup> Source: Data supplied by local authorities. Figure is restricted to non-housing stock and excludes street lighting.

<sup>2</sup> Energy Saving Wales, October 2004, Welsh Assembly Government

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## Recommendations

R1	Further develop a strategic focus for energy and water management and match this with clearer leadership and management, consideration of the necessary resources and an awareness of policy aims for all key staff.
R2	Set up robust procurement arrangements for all of the energy and water purchased by the Council. These should include: <ul style="list-style-type: none"><li>• a means by which procurement advice can be acted upon with minimal delay;</li><li>• measures to compare the cost of energy and water; and</li><li>• a review of the quality of contracts and their associated management costs.</li></ul>
R3	Ensure that optimum benefit is gained from the qualified technical advice available to the Council by: <ul style="list-style-type: none"><li>• making sufficient capacity available to ensure a strategic approach to implementing the energy policy;</li><li>• prioritising energy and water management projects so that the greatest efficiencies are secured first and in accordance with the Asset Management Plan (AMP); and</li><li>• strengthen the capacity available to undertake energy efficiency surveys and support property managers.</li></ul>
R4	Improve the performance information and systems for energy and water management so that decisions about efficiency savings and improvement actions are better informed. In particular, the system needs to: <ul style="list-style-type: none"><li>• record and analyse routine energy and water consumption data at all Council managed properties; and</li><li>• be compatible and integrate with the Council's property management and electronic billing systems.</li></ul>
R5	Ensure energy and water management is an integral part of corporate property management. This needs to allow for strategic decisions on: <ul style="list-style-type: none"><li>• the suitability and sufficiency of property;</li><li>• running costs; and</li><li>• maintenance costs of all buildings.</li></ul>

## Next steps

- 8 The Council should consider and respond to the issues in this report by completing the Action Plan in Appendix 1. The Council is asked to assign responsibility and a timescale to the Action Plan and return it to the Wales Audit Office within three weeks of receipt of the draft report.

## **The Council is developing a strategic focus for energy and water management but this needs to be matched by leadership, management, resources and awareness of policy aims**

### **A renewed commitment and strategic focus is developing**

- 9** There is recognition within the Council both from senior managers and members that there has been a loss of focus on energy issues since 2001. There is now a renewed commitment to energy and water management and this is demonstrated by the inclusion of energy efficiency within the five themes in the emerging Corporate Plan for 2005-2008. The Improvement Plan 2005/2006 also identifies the need to continue the implementation of the energy policy, produced in May 2004, as a part of the vision for a 'better and more sustainable environment' but so far the implementation of this policy has been slow.
- 10** There is now a member portfolio for resources, which includes energy and water management. With increasing energy costs and the requirement to secure efficiency savings throughout the Council, the acknowledged driver for energy efficiency is financial. However, there is also recognition of the sustainability aspects of reducing consumption and in using energy from renewable sources.
- 11** The Council has a policy agreement with the Assembly Government to reduce carbon emissions by 6 per cent before April 2007. Implementation of the energy policy, including meeting targets for carbon reduction, relies upon the implementation strategy which was launched in January 2005. The implementation strategy gives a clear indication of the outcomes necessary to deliver the objectives of the energy policy, but currently the objectives and outcomes of the policy are not captured in an action plan. There are plans for a project group to develop an action plan, but this will not be ready for a further nine to twelve months.

### **Leadership needs to be clearer and the level of awareness raised**

- 12** The Energy Manager emphasised that more efficient energy and water management practices would eventually become largely self-funding. We agree with this objective but as the Council is some way from this position, it should consider an initial injection of resources to get the policy embedded across the Council.

- 13 There is currently a low level of awareness of energy and water management issues amongst staff and members, although some leaflets have been produced and several lunchtime seminars held. Some training sessions have also been organised for property managers and caretakers, with the aim of reinforcing the ownership of energy management within the service. Feedback from these events shows that energy issues are not considered by staff to be an important issue for the Council. There is also low awareness of the funding opportunities that are available to services and no prioritisation system or criteria are established by which funding bids can be assessed.
- 14 As a result of this low awareness, basic energy management issues such as reading meters and providing and using performance data, are not widely undertaken. Some officers consider that the aims of the energy policy are an 'aspiration' and this implies that their achievement is not of primary concern to services.
- 15 An interface with the Council's Sustainable Development Group was established in December 2005 and this is evidence of the attempt to integrate the energy policy with other policies and strategies in the Council. If the energy policy is not to be overlooked, it will need to be supported by both corporate directors and members. Therefore, the energy policy implementation strategy needs to clearly state who is the project manager and sponsoring corporate director. This will ensure that the necessary changes are made to raise awareness and engender ownership of energy and water management issues across the Council.

### **Resources necessary to implement the energy policy are not sufficient**

- 16 The recent appointment of an energy manager underlines the Council's renewed commitment to energy and water management. The Council recognises that the Energy Manager is faced with a considerable workload and the expectation is that this person will provide the technical expertise and momentum to identify and drive improvements in energy efficiency and water management throughout the Council. In addition to these responsibilities, the Energy Manager also has a commitment to provide access and advice on energy efficiency matters to all areas of the community including the public, businesses and community groups. A high level of expertise, enthusiasm and awareness is shown by the Energy Manager, but with over 40 per cent of time currently spent on domestic property energy work, there may not be sufficient capacity to take forward the energy policy.
- 17 The Council expects some of these resource pressures will be reduced by the appointment of an assistant who is to undertake much of the clerical and data management.

- 18 This remains a significant resource issue and with the implementation of the energy policy, the demand for technical appraisals of buildings and the identification of efficiencies and improvement works are expected to increase considerably. We therefore consider that the Energy Manager should adopt a strategic role in the implementation of the energy policy. This is to ensure the necessary technical input is made into the strategic planning and enabling of tasks, rather than being a part of the routine delivery of technical solutions.

## **More assurance is needed that value for money is being obtained, that payments are accurate and that energy procurement is not unnecessarily delayed**

- 19 Energy and water procurement for the majority of the Council's properties is currently undertaken through the Central Supplies Organisation (CSO). This is a direct services organisation set up as a local authority partnership and hosted by the Council, which purchases energy and water through the Welsh Purchasing Consortium. This CSO is to be disbanded in early 2006 and the Council intends to jointly procure energy and water in partnership with Newport and Monmouthshire councils. Officers were still uncertain of the future arrangements at the time of our work, and felt that the outcome may also be influenced by a review of energy purchasing being carried out by the Welsh Purchasing Consortium.
- 20 The current position for the Council is therefore uncertain, although gas and electricity contracts were set up in October 2004, and after a price review in October 2005, extensions were agreed for two years until 2007. The option to extend these contracts exists, and no major decisions are therefore required in the near future. This gives the Council an opportunity to review how it intends to procure energy in the future and to influence the future procurement position in Wales.
- 21 About 10 per cent of properties procure energy directly from the utility provider and at the standard tariff. In these cases, the Council may not be securing value as this method of procurement is likely to be more expensive than as part of a major contract.
- 22 An assessment of whether the Council's energy contracts obtain value for money is difficult given the rising energy market that is distorted by speculative buying, making trend analysis confusing. With price rises affecting the market as a whole, any variation is likely to be due to the time of the purchase or quality aspects of the service procured. There is no evidence that a formal approach to benchmarking energy costs is occurring.
- 23 An Internal Audit review of the CSO was undertaken in 2004 due to concerns that the Council was being overcharged for energy. The review also considered the benefits of procuring energy through the CSO. We were advised that the review found that there was little evidence to demonstrate that value for money was being obtained for the contract management and administration work undertaken by the CSO.

- 24 The Council should ensure that when the new arrangements are in place for contract procurement and management, value for money is obtained both in terms of the unit cost of the energy purchased but also in managing the contracts.
- 25 There is also a need to procure energy quickly when energy market conditions are favourable. This may not always be possible when procuring through a consortium and the consequence of delaying the confirmation of contract acceptance can have a significant impact on the final price. As an example of this, the South Wales Procurement Consortium was offered a contract price for electricity provision over a two-year period for the needs of all 12 councils. This price was £14,378,000. Delays caused by some of the councils being unable to secure the necessary authority to take advantage of this offer meant that the consortium finally purchased three months later, by which time the price had risen to £21,700,000. This is an increase of almost 51 per cent.
- 26 This indicates that purchasing through this consortium reflects the individual arrangements of each member council, some of which are risk-averse and have protracted schemes of delegation that cannot react with sufficient speed to make the most of procurement opportunities, even when professional advisors recommend purchasing.

## **As awareness of the benefits of good energy and water management is raised, the capacity to provide qualified technical advice also needs to increase**

- 27 Detailed energy efficiency surveys are the key to identifying where improvements can be made to the fabric and management of properties. This is complex work that requires a high level of technical expertise. These skills are scarce within the Council with a high degree of reliance placed on the Energy Manager to provide this service.
- 28 The Energy Manager recognises the need to prioritise survey works, in particular for properties such as leisure centres and schools, which are likely to consume the greatest amount of energy. However, the need for technical advice also extends to supporting services after energy surveys have been undertaken and includes assisting managers to make a business case for funding and in ensuring that energy and water management is integrated into the overall management of property assets.
- 29 Even with the current low level of awareness of energy and water management issues, the demand for technical advice outstrips the available resources. External consultants could provide this service but with the lack of a specific 'invest to save' fund in the Council, their use means a direct and immediate impact on service budgets. Managers are becoming more aware of the long-term benefits of improved energy and water management but are reluctant to pursue this option because the payback period for schemes is often several years.

- 30** There has been only limited use made of the expertise offered by the Carbon Trust (the Trust), although the Trust undertook an assessment of initial energy saving opportunities at County Hall in August 2005. This identifies seven priority actions to reduce energy consumption in County Hall, and expresses the cost of these works against both the energy and carbon dioxide savings. Payback calculations show how long each of the improvement works take to make savings that are sufficient to recover their initial cost. The two highest priorities are for better data collection and analysis and to improve staff awareness and training. Both can be easily introduced and at no cost and have an immediate payback which the Trust estimates will save £7,000 per year.
- 31** This is the type of advice that is transferable and should be taken up by property managers and applied across the Council's property portfolio. The Trust has not undertaken any other surveys for the Council and the findings of the County Hall survey were not shared for the wider benefit of the Council's property stock.
- 32** Whereas energy consultants will charge about £3,500 to survey a large property and produce a report highlighting improvement works, the Trust will undertake similar surveys at no cost or for a greatly reduced fee. This is an opportunity that should be taken before the Council considers the need to employ consultants.
- 33** Survey work needs to be planned under the guidance of the Energy Manager to ensure that the properties that are likely to be the highest energy users are targeted first. This will also help to place the Energy Manager in an enabling role and to allow a more strategic approach to be taken towards the delivery of the energy policy. As data collection and management systems are set up and the quality of energy and water consumption and cost data improves, the Energy Manager also needs to become much better informed about the condition of corporate properties and where both physical improvement works and improved property management are required. In this way, the Council's asset management information and decisions about property condition can be a part of energy and water management.
- 34** Funding resources also need to be clarified. In particular, the Council should decide whether, in the absence of a specific ring-fenced budget for energy savings, an 'invest to save' fund should be set up. This would allow services to make applications for funding, for example, employing consultants to undertake energy efficiency surveys when the Trust is not able to provide a free survey, making improvements and recouping costs through the payback period and through investing in improvements where whole-life costing shows a positive return from savings.
- 35** Managers advised us that, in the absence of a specific fund, the Council is supportive of service budgets being used in this way, although members of the Staff Focus Group we held did not know this was permissible. The Energy Manager has recognised the need for clearer access to funds and a framework agreement for an energy investment fund is proposed as part of the Draft Implementation Strategy for the energy policy.

- 36 The current budget arrangement whereby any savings made are lost from services and passed into a corporate fund provides little incentive for services to undertake energy efficiency and water management improvement works. By allowing services to retain at least a part of such savings, there would be an incentive to carry out such works. It is also important that the Torfaen Management Team leads strongly in the implementation of the energy policy and that, once the means by which improvements can be identified and funds are established by the Council, performance management steers service managers towards making the required changes to properties.

## **Systems and baseline information for energy and water management need to be improved in order to inform decisions about efficiency savings and improvement actions**

- 37 The absence of a corporate approach to energy and water management is evident from the lack of effective performance monitoring and management systems. The Council does not currently use a software package for the capture of this information. 'Team' software was used until 2001, but has been discontinued. As a result of this, all of the back data held in this system, including consumption trends and billing details on many of the Council's 400 properties, was lost. In retrospect, the Council acknowledged that this was a mistake as it is left with little to compare performance or to identify where improvements and efficiencies can be made.
- 38 Establishing a data management system is now a recognised priority and the Energy Project Group reports on the requirements for a new system to the Torfaen Management Team in February 2006. The Energy Manager is proposing a system based on remote input by building managers through a webpage. This software would also accept central billing from utility companies via the 'Onebill' electronic system and would ease the current administrative burden of processing and inputting about 400 separate paper-based energy bills. The efficiencies offered by centralised billing would be further improved by including the remaining 10 per cent of Council properties that are currently billed individually and are not part of an energy contract.
- 39 The Energy Manager is aware of the need to secure quick results to demonstrate the benefits of better energy and water management to members and senior managers. Initial work using the Trust's Carbon Management Toolkit is encouraging and although only using high level data and applied to some of the properties most likely to consume high amounts of energy, it has already identified where significant financial savings can be made. The toolkit compares buildings of similar type and usage, qualifies data against the floor area and analyses the expected consumption against the bills received. This provides a quick comparison where unexpected high consumption can be easily identified. The toolkit has been used with the available data from the Council's leisure centres and schools and is a good way of making progress before monitoring software allows more comprehensive data analysis to be undertaken.

- 40 A notable example of success in the use of the toolkit is in Blaenavon Leisure Centre where a gas supply meter pressure correction factor had been wrongly set. The meter has now been corrected and will result in the reduction of £20,000 in the current annual gas bill for this property. The Energy Manager has also secured a rebate of about £28,000 from the gas utility supplier Elf, for overcharging based on incorrect consumption data from this meter over the past two years and is seeking to reclaim overpayments for the last six years. This shows what can be achieved when better performance information is available and there is the technical expertise to use this data and make informed comparisons.
- 41 Currently, in the absence of an electronic system, services are requested to undertake readings manually and to enter energy and water consumption data onto a form, and return this to the Energy Manager. This system has only been in place a short time.
- 42 It was too early to judge the response to this request but we found that some services considered that it was not their responsibility to undertake meter readings. The result is that services are still not checking many of the meters in the properties that they manage nor are they scrutinising utility bills before payment. This indicates that many services still do not realise the benefits, and as a consequence, do not sufficiently own energy and water management issues for the properties they maintain. This highlights the considerable cultural shift that is required if the energy policy is to be a success.

## **The need for energy and water management to be a part of asset management is recognised, but asset management planning must develop further and more corporate influence exercised over properties**

- 43 The need to deliver the energy policy within the AMP is recognised by the Council, but although this is mentioned in the Draft Implementation Strategy for the energy policy, no detail is given. The Council is not well advanced in the preparation of an AMP and it is anticipated that the plan is about 18 months from completion. It is therefore very difficult for energy and water management issues to move forward as a part of the overall consideration of property assets. This is why improvement to properties is presently confined to leisure centres and certain schools, where efficiency gains can be easily identified through the use of basic data analysis such as the Carbon Trust Toolkit.

- 44** This is currently a limiting factor for the energy policy as the asset management process is not significantly influencing decisions about the property stock. In general, the Council has yet to gather together the information about the property it manages. In particular, little is known about the suitability and sufficiency of properties, either for the current or future service needs, or their state of repair, although a recent estimation is that £46 million is required to maintain the upkeep and repair of existing properties. This means that service managers are unsure which properties are to be retained and the future requirements of properties. Against this backdrop of uncertainty, any significant expenditure on energy and water management improvements must be considered a risk. Even for properties that are almost certain to be retained, services are not provided with any guidance on the relative priority of energy efficiency works against repair or maintenance works.
- 45** There is little corporate influence over the repair and running of properties, with only a couple of the civic buildings managed centrally and property management budgets devolved to services. Clearer definition here would help to resolve the tension between devolved property management and the fulfilment of corporate property objectives.
- 46** There are several examples of recent property issues that point to the challenge ahead if energy and water management is to become a routine consideration:
- A reluctance to dispose of property means that limited funds need to be widely spread with less likelihood that energy efficiency works can be undertaken.
  - The time it had taken the Council to accept the benefits of investing in swimming pool covers at leisure centres was cited as evidence of the reluctance to invest in energy efficiency works where the payback is not certain and very quick.
  - Although the Council can demonstrate through some good examples where leading-edge energy efficiency systems have been used, progress is only with small projects and led by enthusiasts. An example of this type of project is the Power Station, where geothermal heating and passive ventilation have been employed and the Spring Vale Eco building, in which straw bales are used for construction, and 'grey water' is recycled.
  - Maintenance of Council property assets is reactive and no planned programme exists. The number of building surveyors employed to monitor the upkeep of corporate properties has reduced significantly in recent years.
- 47** Energy and water management should be a part of the overall management of corporate assets, rather than standalone. The Council has a considerable way to go to re-establish sufficient corporate influence over its property portfolio and a cultural shift is now required for services to embrace the full consequences of corporate asset management. Energy and water management issues must be a part of this change but must also take their proper place in the prioritisation of improvements of Council assets.

## Good practice

- 48** As part of our work, we look for areas of good practice relating to energy management. We plan to draw together appropriate examples at the end of this programme of work into a summary of good practice.

## Appendix 1

## Action Plan

Recommendation	Priority 1 = Low 2 = Med 3 = High	Responsibility	Agreed	Comments	Date
R1 Further develop a strategic focus for energy and water management and match this with clearer leadership and management, consideration of the necessary resources and an awareness of policy aims for all key staff.	3	Corporate Director Resources, Head of Asset Management, Energy Manager.	Yes	Policy is currently under review in order to ensure that priorities are in accordance with corporate objectives. Energy working group is to be re-established with appropriate membership from all service areas. The policy proposals will be agreed by the Green Team and Cabinet.	May 2006
R2 Set up robust procurement arrangements for all of the energy and water purchased by the Council. These should include: <ul style="list-style-type: none"> <li>a means by which procurement advice can be acted upon with minimal delay;</li> <li>measures to compare the cost of energy and water; and</li> <li>a review of the quality of contracts and their associated management costs.</li> </ul>	3	Corporate Director Resources, Energy Manager	Yes	The process has now been agreed. The Office of Government Commerce will be used for procurement. Report to Cabinet is being prepared by outgoing head of CSO and is due June 2006.  Ability to make decisions quickly is incorporated within the recommendations.	May/June 2006

Recommendation	Priority 1 = Low 2 = Med 3 = High	Responsibility	Agreed	Comments	Date
<p>R3 Ensure that optimum benefit is gained from the qualified technical advice available to the Council by:</p> <ul style="list-style-type: none"> <li>• making sufficient capacity available to ensure a strategic approach to implementing the energy policy;</li> <li>• prioritising energy and water management projects so that the greatest efficiencies are secured first and in accordance with the Asset Management Plan (AMP); and</li> <li>• strengthening the capacity available to undertake energy efficiency surveys and support property managers.</li> </ul>	3	Corporate Director Resources, Head of Asset Management	Yes	<p>An energy manager and energy assistant have now been appointed. The collation of baseline data for our premises is regarded as the highest priority.</p> <p>Energy and water management projects will be identified and prioritised once sufficient data has been obtained to identify key opportunities for improvements.</p> <p>We may consider the use of external resources such as the Carbon Trust to carry out some survey work, as the Energy Manager has limited time to devote to surveys.</p>	
<p>R4 Improve the performance information and systems for energy and water management so that decisions about efficiency savings and improvement actions are better informed. In particular, the system needs to:</p> <ul style="list-style-type: none"> <li>• record and analyse routine energy and water consumption data at all Council managed properties; and</li> <li>• be compatible and integrate with the Council's property management and electronic billing systems.</li> </ul>	3	Energy Manager	Yes	<p>TEAM system has been procured and data collection has commenced. Energy Assistant has been appointed to assist with this work.</p> <p>Routine energy and consumption data is being recorded and will be input to the system.</p>	

Recommendation	Priority 1 = Low 2 = Med 3 = High	Responsibility	Agreed	Comments	Date
R5 Ensure energy and water management is an integral part of corporate property management. This needs to allow for strategic decisions on: <ul style="list-style-type: none"><li>the suitability and sufficiency of property;</li><li>running costs; and</li><li>maintenance costs of all buildings.</li></ul>	3	Head of Asset Management, Energy Manager.	Yes	Energy data will inform the asset management process through the IPF system. This data will be used in the analysis of our premises in the ways described.	



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