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MEELS - A new task for a new context

Task 9 is a new project of the International Energy Agency's DSM implementing agreement. This will look at the problems and opportunities presented to local authorities by the liberalisation of energy markets and in particular how this affects their roles in energy efficiency. It is called MEELS – "Municipalities and Energy Efficiency in a Liberalised System".

Local authorities have a key role to play in promoting energy efficiency and a role that is often overlooked by concentration on the players on the supply side. Local authorities can actively involve the local population and promoting energy efficiency has a direct interest to their electorate as consumers. In many fields they have a role of regulator of the action of the local population that determines their energy consumption, for instance in building construction and spatial planning. They themselves consume a significant amount of energy (2-4% of electricity consumption) and so can directly participate in energy saving. They may also have a role on the supply side through their function as a utility – for electricity, gas and, above all, district heating. In the most structured administrations these three roles can be

combined in their regulatory function through 'urban energy planning'.

Liberalisation affects all of these functions and in particular by submitting prices to the vagaries of the market it increases uncertainty. Competition irreversibly changes the rules of the game for the players on the supply side who inevitably will withdraw from everything, including perhaps promoting energy efficiency, that is does not contribute directly or indirectly to their profitability and therefore their survival.

Local authorities by contrast are non-profit-making and depend on their popularity at the ballot box rather than their profitability for survival. They have strong interests on the demand side – as a consumer and representative of consumers. They also have strong interests in that most efficient of supply technologies – district heating combined with cogeneration.

How do these different motivations live alongside each other and how can they be used most effectively to promote the increase in energy efficiency needed to make the Kyoto Targets a reality?



Small scale cogeneration in municipal buildings requires special attention if it is to flourish

France

France is the country leading this project. The national energy and environment agency, ADEME, is currently running a significant programme to promote energy efficiency with a greatly increased funding following the change of government in 1997.

The country is still very centralised and the local authority role in energy is limited. Only 5% of electricity and gas is distributed by a municipal utility but most district heating systems are operated by municipal companies or by private companies under a concession contract. Electricity and gas are generally provided and delivered by the nationalised companies Electricité de France and Gaz de France and they manage the distribution systems in most towns under concession (even though in law it is the local authority that owns the network). The electricity supply system is dominated by nuclear (80% of production) and the current overcapacity has not encouraged the utility itself to show an active interest in energy efficiency. Nevertheless an agreement has recently been concluded between EDF and ADEME to promote a pilot action on Demand Side Management.

Local authorities also receive a significant income from local taxes on electricity.

The new law promoting the liberalisation of the electricity market has opened the market to the minimum compatible with the European Union Directive. No local authority will have the right to choose its supplier as a result of this new law, but there is provision for the preparation of strategic energy plans at regional level which will provide a significant role for municipalities in the future. Despite this, the debate on energy issues in France is now much more open in previous years with a new approach appearing among the staff of the nationalised companies.

Some local authorities have, on the other hand, been active in improving efficiency in their own building stock and promoting renewables.

Energie-Cités, the European association for local authorities promoting local sustainable energy policy, will act as consultant for the France in addition to acting as Operating Agent. It has a staff of 9 based in offices in Besançon and Brussels. The Director of Energie-Cités, Gérard Magnin, will be responsible for the French consultancy input to the project.

Spain

The production sector in Spain is dominated by large private companies with a separate grid company which they own jointly. Distribution is let by concession from the autonomous regional governments. The local authority interest in the production and distribution of electricity is limited, however a number of local authorities are responsible for the distribution of gas.

The market is currently open for clients with a consumption of 1GWh and it is likely that the market will open more rapidly than originally planned. There has been limited competition in the gas market since 1996.

Local authority interest in regulating development has not been very significant until now but a number of new local initiatives are under way to reduce the impact of energy use on climatic warming – including improving insulation standards.

The consultant for Spain is BarnaGEL – the local energy agency for the Barcelona Metropolitan Area. They are funded by the Catalonian Energy Agency, ICAEN. The Director of BarnaGEL, Josep Puig, is a former Chairman of Energie-Cites and was formerly Sustainable City Councillor for the City of Barcelona.

Setting the guidelines

The project is currently a partnership of four countries, France, The Netherlands, Spain and Sweden, which are interested in this topic. The participants from three of these countries, France, The Netherlands and Sweden, are their representatives national energy agencies which are the country representatives on the Implementing Agreement's Executive Committee. The Spanish representative, Endesa, has delegated this role to ICAEN, the regional energy agency for Catalonia.

These partners in their turn have delegated the actual implementation of the work to the coordinator Energie-Cités (called, in IEA jargon, the Operating Agent), and a consultant within each country who will carry out the necessary studies and help prepare the necessary reports. These will in turn be aided in this task by two local authorities from each country. They have agreed to consider the questions and issues raised by the project and to act as an information channel and sounding board.

The participants met in Lille on 15th-16th June 2000 to define the framework for the MEELS project. The first phases of the project will look at the roles of municipalities in the energy field in the partner countries and the impact that liberalisation has or will have on them. The participants in the project and their local authority partners presented their appraisal of these points at Lille to enable them to see how their situation relates to that in the other participants countries and thereby to put their own situation in context.



at Lille (FR)

The four partners differ considerably in the degree to which their markets are open. Sweden is a completely open energy market and local authorities and other clients have a free choice of supplier. By contrast France is opening its market to the minimum permitted by European Union directives and it is unlikely that local authorities will have much free choice of supplier in the foreseeable future. Local authority involvement in supply likewise varied between widespread municipal utilities in Sweden to the virtual absence of municipal utilities in Spain.

The presentations helped the partners determine the common framework for assessing municipal roles and the impacts of liberalisation upon them. Energie-Cités is currently appraising this framework to ensure that it is adapted to all the participant countries and once agreed, this will form the basis for proceeding on to the next phases.

The minutes and presentations at the meeting are available by e-mail from Nathalie Moroge in Besançon (nmoroge@energie-cites.org) and a shortened version will be placed on the IEA DSM group's website (dsm.iea.org) and Energie-Cités' website. www.energie-cites.org.



Utilities in the Netherlands have their origin in local authority owned energy companies, but in recent years there has been a spate of mergers and the local authority interest in energy utilities is declining.

The electricity market is currently open for consumers with a capacity over 2 MW. However the Government is promising to bring forward the date of opening of the market first of all opening to clients using over 80 amps in three phases in 2002 and then opening the whole market in 2004. At that point local authorities will have a direct interest in the conditions of sale. Experiments have been taking place regarding the introduction of competition to distribution when new network infrastructure is being installed. There is a very high use of chp in the electricity supply system but this is threatened by liberalisation and cheap electricity imports.

In Sweden the electricity market has in principle been completely liberalised since 1996. Production is dominated by two large companies – Vattenfall and Sydkraft. Local municipal utilities are responsible for the remaining 7% of electricity production and for 65% of distribution however there is a trend for municipal utilities to sell off their electricity sale business. Nearly all of the numerous district heating networks are municipally run. So there is a strong direct municipal involvement in energy matters.

Effective liberalisation to household level was in practice dependent on the abandonment of the requirement for hourly metering for small consumers which took place in 1999. There was a rapid response and companies developed different options with flexible and fixed tariffs. Small consumers are tending to have high fixed tariffs and this is taking away the incentive to save energy. At the same time the Swedish Government is committed to a programme for increasing energy efficiency as

The Netherlands

The interest of local authorities in planning and regulating new development has led to continual improvement in the energy efficiency of their building stock. A number are supporting demonstration projects for sustainable development. Nevertheless there is an impact of liberalisation – for instance the local distributor in Utrecht has indicated that it will stop financing a project to improve energy efficiency in SMEs at the end of the current contract due to the pressures of liberalisation. Local and National government rely greatly on voluntary agreements with different industrial sectors to deliver energy efficiency improvements and local government is seen as having a key role in this.

The consultant for the Netherlands is Ambit Consultants, a small energy efficiency consultancy based in Arnhem Their representative, Jan Zieck, has worked extensively with the City of Utrecht.

Sweden

part of its programme to eliminate nuclear power (currently responsible for approx. 50% of production). However the falling price of energy in recent years has reduced financial support from the government for this programme.

Local authority interest in energy efficiency is strong with active programmes in many local authorities. The difference in price between suppliers is small and local utilities often see energy efficiency as an aid to sales. About 30% of local authorities have prepared local energy plans and many local authorities have established energy efficiency programmes for the household sector with the help of government grants.

The consultant for Sweden is Bangens Teknik Consult, a small technical consultancy based near Stockholm. Their representative, Lotta Bangens, specialises in energy efficiency advice and studies in the local authority sector.

Potential new partners

While four countries have definitely decided to participate in the project, four further countries are keen to be involved and are considering options for financing their participation.

Five **Austrian** municipalities led by the City of Graz are keen to participate in conjunction with their association of municipal utilities. The Association has indicated willingness to contribute but sufficient funds have not yet been confirmed for all their requirements. Liberalisation is a live issue for Austrian municipalities as Boris Papousek of Graz explained. The Austrian system is modelled on the German system – with strong regionally owned energy companies and municipal distribution companies. The impact of liberalisation on German municipalities and their action in the field of energy efficiency (see cover article in DSM Spotlight – July 2000) gives us great cause for concern about what will happen when the Austrian market opens fully in October 2001. Austrian municipalities are very environmentally aware and want to look at their options for maintaining action in the new context.

The Energy Agencies of Leicester and Greater London in the **UK** have both expressed great interest in the UK participating in this project. The current partners feel that this would be a real asset to the project since the UK was a pathfinder in electricity and gas liberalisation and has come up against and responded to many of the problems that other partners will face in the near future. Initially it seemed that it would be difficult to find funding but more encouraging noises are now being heard and it is still hoped that they will find the funds.

Santa Monica in the **USA** is a pathfinding municipality in energy matters and has been running a programme on energy management paid for from the funding for public interest action in the liberalised state of California. Susan Munves of Santa Monica is optimistic of finding funding for participation via Public Technologies inc. This is a company set up by 7 American cities which promotes sustainable technology in the local authority sector.

There is still a possibility that funding will be found for **Australia** to participate – perhaps via their Greenhouse Office. We'll keep you posted.

...Contacts Points...

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Some Websites of interest

www.ademe.fr, www.novem.nl;
www.stem.se, www.energie-cites.org,
dsm.iea.org, www.ambit.nl

Future Programme

Following the meeting in Lille, the partners are preparing information on Municipal roles in the energy field and the impact of liberalisation on them. A framework for this analysis has already been prepared. This framework will be used by the consultants, with help from the partner local authorities, to prepare an analysis of the situation in the different participant countries. The information they gather will be analysed and combined by the Operating Agent to prepare reports 1 and 2 of the project.

These reports will be presented to a workshop in January or February 2001.

*This newsletter was prepared by Energie-Cités for Task 9 of the International Energy Agency's DSM implementing agreement. The following contributed to this issue: Josep Puig, Xavier Henriot, Arno Harting, Anders Johansson, Boris Papousek.
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An example of innovative and effective marketing strategies (Utrecht-NL)

Utrecht (pop. 233 000), has used an innovative and direct marketing approach to reduce the waste of energy in housing and council buildings. The municipality and the energy supplier, REMU, work together in a partnership called FACE promoting cheap and easy access to improved efficiency and renewable energy.

Utrecht was one of the first to use marketing tools to reduce emissions of carbon dioxide; using direct mail and offering individual advice, grants and discounts in the **THERMIE PLUS® campaign** which ran from 1995 to 1999. The consumer only ever dealt with one person. All 21 000 owner-occupiers in the city were approached by direct mail and face to face

contact. The target groups were offered energy efficiency investments installed via the energy supplier with huge discounts and cheap credit. One thousand took up the offer, each saving 15-20% of their consumption. Some remarkable results were achieved. Utrecht has saved 500,000 m³ of gas a year by



Local authorities only play a minor role in energy policy in France at present because the establishment of concession arrangements for electricity and gas distribution (in 1906) and their application to nationalised structures (in 1946) produced a situation of near monopoly. However the liberalisation of electricity and gas markets has produced a need to regulate these public service networks. This should define the conditions for maintaining a continuous service, for security of supply, for the equal treatment of users across all the local authority area, for minimising the environmental impact of the distribution equipment (noise, visual amenity), for the provision of services to the poorest sections of the community and for coordination between networks as part of the spatial planning strategy. This is evidently a fundamental role that local authorities are the most appropriate administrative level to fulfil.

the THERMIE-PLUS® campaign.

A new "ecological" neighbourhood of 30,000 houses called Leidsche Rijn is being constructed by Utrecht. An information centre in a **zero energy house** and with exhibitions and information on sustainable life styles will open there in 2001. Again the key is direct marketing concentrating on specific target groups and decisions. Those purchasing houses still under construction will get information about environmentally friendly household appliances, people with completed houses will be informed about sustainable furniture and gardening. Attacking early and targeting needs are means to make more people choose renewable energy and energy saving appliances for their household.

The municipality has already reduced its electricity use in **municipal property** by 6.7% and gas and heating by 7.7% since 1995. This campaign started in 1996 and is continuing. The campaign has a three-step approach. Firstly changing the behaviour of the employees by energy saving tips. Next concentrating on energy control to preserve the benefits of energy minded behaviour and finally taking measurements on buildings and installations. The self-financing campaign should save 15% on electricity use and 20 % on heating its buildings.

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The Assises Nationales de l'Energie (Dunkerque-FR)

The first demonstration of this nature organised at local authority level in France was the Assises Nationales de l'Energie de Dunkerque. This is an annual meeting of all those involved in determining future energy policies : public decision makers, producers, distributors, users or clients etc. At this moment in time local authorities in France are attempting to reinvolve themselves in energy issues and these national meetings form a special moment for local authorities to examine what precisely their role will be and what resources that they will have available to take action in this field. During their thinking about the future, they can fully benefit from the light shed by the experience of local authorities in neighbouring countries. The second meeting will take place on 29-30th November 2000 on the theme "Energy, Housing, tomorrow : what are the responsibilities of local authorities?".

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Zero energy apartments (Barcelona-ES)

Barcelona has chosen nine building blocks at Poblenou where it is preparing plans for a pilot project for self-sufficient development with the objective of reducing the import of fossil energy to a minimum.

The results in the 302 dwellings that will be constructed will be analysed as a model to evaluate the effects of the city's energy plan. Particular emphasis will be given to energy saving by careful bioclimatic design. This will maximise solar gain in winter and encourage effective ventilation and cooling in summer. In practice in Barcelona the energy demand for cooling in summer is twice that for heating in winter. This effect will be

achieved by creating large openings to maximise solar gains, careful design of the balconies to reduce insolation and therefore overheating in summer and the avoidance of windows in the West facade to prevent overheating on summer afternoons.

The use of renewable energy will minimise the importation of electricity and heating fuels. Photovoltaic panels will provide electricity and heat pumps in the underlying aquifers will provide space heating and domestic hot water.

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Umea's energy savings in the local community (Umea-SE)



Umea Energy in northern Sweden has worked successfully in providing energy services and energy awareness programmes for many years. This municipally owned company originally simply provided a free energy advice service as a public service but has today expanded this to provide a range of services, some still free of charge (provided in collaboration with part owned VENET) whilst others are commercial services. The awareness amongst the citizens of Umea has steadily increased and with such a severe climate up in northern Sweden there is money to be saved by taking the right measures in terms of energy saving.

"One might think that the incentive has been limited with such low electricity prices in recent years, but people are still very much interested in energy saving services and energy awareness programmes", says Anders Johansson, Marketing Manager at Umea Energy. "The services have multiple objectives: to raise awareness, reduce energy consumption and lower costs for consumers. Environmental awareness is high in Umea and the environmental benefits, combined with the cost savings, are important incentives for people to save energy", he comments.

The municipality of Umea, like other Swedish municipalities, is funded by a government grant to provide energy advice and has commissioned Umea Energy (and VENET) to provide this service. The services provided include energy seminars, an energy letter on the web, an educational house, the Big Energy Round, energy mapping, electric safety checks, a one day home electricity education course, a Safe Heating House, a fuse replacement service and an earth fault security relay to facility management. Both the company and the municipality are most concerned that this vital government support should continue.

"Umea Energy has very good relations with local authorities and local companies. We hold different events together with our local partners so that our municipal advice programme is part of a larger context. We see good possibilities for developing this even further in the years to come especially with the strong growth of the Internet," concludes Johansson.

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