

M.E.E.L.S

Municipalities
and Energy
Efficiency in a
Liberalised
System



News Letter

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MEELS visits California

An expert team from MEELS visited California in November 2002 in order to learn from their experience of liberalisation. Representatives from France, Spain and the Netherlands visited Sacramento, the Bay area, Los Angeles and San Diego.

Liberalisation of the energy markets has proved a truly controversial issue and the poor management of the liberalisation legislation was one of the main issues in the recent recall election. When the visit was made, liberalisation had recently been withdrawn and most captive consumers had been returned to their host utility (some 60-80 000 customers - e.g. buying green energy, remained with their provider). However the experience of three years of liberalisation had left its mark.

There had been a lack of investment in production plant in California while the demand for electricity had expanded rapidly. A certain degree of playing the market, putting plant out of commission for repair for instance, took place by the electricity producers creating a shortage and the free market price sky-rocketed, often at off peak times of the year. Since legislation put a cap on the price for retail customers, this could not be passed on by the distribution companies until the stranded costs were recovered and they verged on the edge of bankruptcy and resorted to power cuts to contain demand. Once stranded costs were paid off, the price could rise (as it did for San Diego Gas and Electric) and then the retail price peaked.

Municipal utilities were kept out of the liberalised system at the start. Prior to liberalisation the accepted wisdom was that they would be forced to open their markets. However, those like Los Angeles that had generating capacity were able to pay off all their debts by generating excess current and selling it. There was no incentive to enter such a market.

There was clearly a legislative failure, compounded by the geographical position of California with too little interconnection to enable other suppliers to fill the void when the local generators, including the ill famed Enron, withdrew capacity.

As a result of this experience, energy was a very live topic in the state. The legislation had imposed a 3% "public good" charge which was recycled to programmes promoting energy efficiency, renewables etc. This fund is largely controlled by the electricity companies and it has proved difficult for local authorities to tap into this, despite being those on the ground in communities and therefore well placed to administer funds. In 2002 the fund was administered by the California Public Utilities Commission and a part was reserved for local authorities, it reverted to utility control in 2003 but a further tranche is passing by the CPUC in 2004. From July 2003 legislation requires the CPUC to provide protocols allowing other agencies than the utilities (including local authorities) to run "public good" programmes. While in California the team saw a series of interesting examples of work on energy efficiency.

Sacramento

In Sacramento the team visited the office of the Governor and the California Energy Commission. The Commission is responsible for planning energy policy and in particular for licensing new plant over 50MW. The key problem for them is to create enough stability to promote investment in new capacity to meet burgeoning demand.

Commissioners Robert Pernel and Art Rosenfeld drew attention to the funds provided by the public goods charge and managed by the Commission. These support energy research and demonstration and renewable technology. There are also programmes for peak load reduction, demand side bidding, public education, real time metering and low cost loans for public buildings. Their programmes directed to local authorities take up 20% of available funds..

The Key Role of Air Conditioning

Peak demand in California is in summer and many programmes are designed to keep buildings cool as efficiently as possible. A wide ranging statewide programme grant aiding the installation of "cool roofs" (coloured white) ran from 2001 to 2003. The use of such roofs produces significant savings and could save \$35M per year in energy costs in Los Angeles for example. A visit was made to state of the art buildings at Sacramento and Santa Monica using natural ventilation for air conditioning. In the US, heating and cooling is primarily by vented air systems unlike the water based systems common in Europe, and this facilitates the use of natural ventilation. The American accreditation system for environmentally friendly buildings, LEAD, is of interest with a very limited number of classes (Certified, Silver, Gold and Platinum).

Municipal Utility Districts (MUDs)

Municipalities can take back control of their own network and establish their own utilities. The constraints on this are enormous since the utility demands a high price for «its» network. Nevertheless during the energy crisis the municipal utilities maintained reasonable prices and avoided power cuts. The near bankruptcy of the distributors and the energy crisis has persuaded some municipalities to consider establishing their own MUD. Davis has been asking to merge with the district in adjoining Sacramento and San Francisco is interested in establishing its own district. The municipality has to put such a proposal, involving significant financial commitment, to their voters. Municipal utilities are still monopoly providers and have promoted, and continue to promote, significant energy efficiency and renewables programmes.

Energy Planning

With the energy crisis, energy planning by local authorities has become more popular. However municipalities have limited powers in which to act. Citizen participation is very strong in the US and Pleasanton, a well heeled Bay Area satellite, has heavily involved its citizens in preparing an energy plan designed to reduce demand and promote local sustainable sources of energy via distributed generation. A more detailed and comprehensive Sustainable Cities programme was adopted in Santa Monica in 1994 which has been produced by the Environment Department. The objective is to reduce the piecemeal approach to planning and set quantifiable targets - for instance all new buildings should meet at least LEAD's Silver classification. However this is wide ranging, not simply a response to liberalisation. It promotes many transport related issues, mixed use development, energy efficient construction green purchasing etc. In a multi purpose local authority it is difficult to limit policy making to one sector.

Santa Monica has not got its own municipal utility, and like San Francisco has not always found it plain sailing getting funding from the utilities for energy efficiency improvements. They used the opportunity of liberalisation to buy renewable electricity and that contract remains valid - indeed it now costs less than the standard conventional power supply.

However they cannot afford to take back their own network, but are considering other action in their own stock of buildings. They have retrofitted HVAC and lighting and are thinking of establishing a stand alone utility district with district heating and cooling, distributed generation and a parallel distribution network for the municipal headquarters complex. The problems in doing this are significant. Utilities are fighting to prevent people generating themselves, and are limiting new access to the grid to high voltage transmission lines. To counter this they will need to limit production to base load to avoid export to the grid.

The team look at a cool roof and solar wall on a state of the art building in Sacramento. New Californian construction regulations will require developers to install cool roofs on non-residential buildings from October 2005.



The task of delivering policy and grants (or "rebates" to the Americans) is often conferred to semi independent organizations. San Francisco, Berkeley and Oakland for instance have run a scheme funded by the public good charge and directed at the small business sector which was delivered by a local authority sponsored non-profit association (www.ci.berkeley.ca.us/energy/encesc.htm). This has managed to directly contact 6 000 small businesses in 18 months, a major challenge, and has carrying out improvements in over 4 000 of them. This scheme has been such a success that they are planning a follow on scheme in the coming year.

The San Diego area has established a regional energy office to guide policy and research in the region. This is really very similar to the regional agencies that are relatively common in Europe which has been given a key role in developing regional planning on energy issues. Such regional agencies are however rare in the US, and there was talk about copying this model during our visit. Pilot projects for regional energy offices have since been launched on the Redwood Coast in Northern California and in Ventura County, near Los Angeles.

The California Public Utilities Commission presented us the new Community Choice law which has been passed in California, following earlier laws in Massachusetts and Ohio. We met Paul Fenn of Local Power (www.localpower.org) who had been lobbying for this legislation for a number of years. This legislation allows municipalities, subject to approval in a local referendum, to act as purchasers for consumers within their area and deliver energy efficiency services via public good levies and revenue bonds. The concept is very interesting and has been taken up in a case study. It deserves consideration in other liberalising countries.

We were hosted by California's Local Government Commission, another non profit association of local governments which concentrates on promoting action on energy and environment issues in the State's local authorities (see www.lgc.org). They are helping set up the two new regional energy offices in cooperation with the local utilities and are now running an awareness raising programme to help California's municipalities understand their new community choice law. Their programme will require municipalities to commit themselves to 40% renewables in their portfolio by 2017 (the law requires all utilities and aggregators to achieve 20%). Many of the other programmes they have developed to reduce cooling costs would be transferable to other warm climate regions in Southern Europe and the Southern hemisphere.

Two reports published

The first two reports of the project have just been published. These cover the roles of local authorities in the participant countries and the impacts of liberalisation on them. In addition information was added on the United Kingdom since this is the European country with the most liberalised market, and it was felt that the lessons obtained from there would be useful for local authorities in other countries in the process of liberalisation.

Restructuring the Market

The first report provides a background to the situation in each country and in particular the position of municipalities in the energy system. Municipalities have had a more significant role in those countries with a harsh winter climate in North and East Europe where they have been very actively involved in the supply of energy, a role promoted by the needs of district heating. The report concludes that there is a restructuring and reconcentration of the energy sector in the countries concerned. Municipal companies have been sold off and merged - in the Netherlands the process is almost complete as the market is controlled by a handful of large companies. The remaining companies are combining into fewer larger blocks capable of acting on an international scale. In Austria the utilities have cooperated so that more than half the market is now supplied by one consortium of municipal and regional companies.

One of the main impacts therefore is the decline of small players, many of whom are municipal, or their amalgamation into large trading blocks. To play on this market one needs capital and scale. In effect municipalities are left by the wayside. Nevertheless competitive companies are unlikely to be interested in delivering energy efficiency unless they make a profit, it is imposed by regulation or it is a key to enter into other profitable fields. In private business there is a saying that there is "no such thing as a free lunch". So it is municipalities who are likely to have to pick up the pieces and carry out the unprofitable public service activities such as selling energy efficiency to small consumers that will still be needed to meet political or environmental targets. Indeed this is the big question of the next 20 years. How does one reduce the climate impact of energy consumption in a politically acceptable manner?

Latest developments

Events in both Europe and the US have emphasized the importance of energy efficiency in security of supply. A rolling blackout crippled large areas of the North East and Mid West in August and the whole of Italy was blacked out in October. Both events were being blamed on burgeoning demand coupled with a lack of investment in capacity and grid links in the run up to liberalisation. Questions are being asked. What is government's role in this? How can the situation be eased?

The significant role of awareness raising and the promotion of energy efficiency measures will be a challenge to local authorities. More and more of the responsibility for public interest energy efficiency services such as awareness raising will therefore fall to the local level, i.e. to municipalities and other local non profit structures. In the initial phase of liberalisation few countries have yet to face up to the implications of this- the attitude is that the market will solve all.

The second report looks at the roles of local authorities in the energy sphere. It appraises the action of local authorities in their different spheres of activity, as a consumer, a utility, a regulator and as an awareness raiser. In certain fields the political interest of local authorities is everywhere in the same direction. They all want to minimize expenditure in their own stock of buildings and equipment, most elected members have environmental objectives to be achieved (usually at minimum cost), all want to ingratiate themselves with the electorate by providing them with clean, green and above all cheap energy.

Some of these roles are universal. All municipalities are responsible for their own stock of buildings and equipment although the availability of resources and information on energy use in their own stock varies tremendously between countries. This is greatly dependent on the lead given by government and the ease by which

local authorities can invest in capital improvements. Others depend on the country. In some countries the granting of a concession to the utility is a potential lever (e.g. Netherlands, France) although it is rarely used to its potential effect. Here again, as in all negotiations between interest groups, there is strength to be gained by cooperation. Municipal utilities still play an important role in some countries although municipal influence on them is declining. Elsewhere, e.g the UK and Spain, they hardly exist. Local authority roles in awareness raising are rarely an obligation, but the degree to which they are applied varied tremendously. They are significant in the UK, Austria and the Netherlands where funds from central government agencies provide the oil to grease the wheel and there is a broad spectrum political culture that stresses, at least outwardly, environmental issues. The situation is less clear in France and Spain, where government support, if provided, depends on the swing of the political pendulum.

The report gives an overview of this situation in the six countries studied. It makes fascinating reading.

Copies of the reports will be available to the participant countries. Others can obtain the reports from Energie-Cités for a small charge by e-mailing info@energie-cites.org .



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