

MEELS

Municipalities and Energy Efficiency in a Liberalised System

Task IX of the International Energy Agency
Demand-Side Management Programme
*Promoting Energy Efficiency and Demand-Side
Management for global sustainable development
and for business opportunities*

Report 2

The Roles of Municipalities in the Energy Sector

October 2002

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2 - Introduction

This report has been prepared for the MEELS project, a Task of the International Energy Agency's Demand Side Management Implementing Agreement. The Task's objective, put simply, is to examine the impact of the liberalisation of energy markets on local authorities and identify what action they can take to counter the harmful impacts and how they can make the best of the opportunities offered.

There are five countries participating in the Task, all from the European Union. These include one country which is liberalising as slowly as possible, France, two whose liberalisation was originally slow but whose liberalisation has since speeded up significantly, Spain and the Netherlands, and two whose markets are now fully liberalised, Austria and Sweden. Information has also been gathered from the United Kingdom, a pioneer of liberalisation whose markets demonstrate the logical implications of such policies.

The project is divided into five main phases. The first phase will look at the roles of municipalities and how they are affected by the impacts of liberalisation, and these two reports are the output of this phase. In the light of this the project will investigate good practice in responding to these impacts and will then discuss policy implications for local authorities and governments and prepare a guide to best practice for local authorities to encourage a sustainable energy policy promoting energy efficiency in the context of liberalisation.

This second report looks at the roles that municipalities fulfil in each country. These include roles that all municipalities fulfil, like acting as a client, to the roles that only some do such as acting itself directly as an energy distributor. The view of a municipality is very much affected by its roles. Municipalities, like all of us, tend to defend roles that they fulfil as sources of power and influence. Attacking these roles breeds insecurity, but nevertheless local authorities are unlikely to prevent changes driven by powerful economic logic for very long. So there is great benefit in looking in advance of these impacts at how these roles are changing and how municipalities respond to these new roles. Energy efficiency was always a discretionary role of municipalities, without the same urgency as education or maintaining roads. But as climate change considerations achieve a higher profile in each country's approach to energy policy, they will have to look to energy efficiency and will desperately need partners to deliver what will always be a dispersed rather than a centralised product.

The report is presented in largely tabular format. The roles of municipalities are investigated in the framework of the five main responsibilities of local authorities, as a client, as an energy producer, as an energy distributor, as a planner and regulator and as an awareness raiser. The traditional responsibilities of local authorities are identified and recent changes noted. The tabular format gives more scope for comparison between countries, with information being presented in parallel so that each country's reaction to a particular issue can be compared with that of the other participants.

These matters are changing so rapidly that they will certainly be to some extent out of date by the time they are published. However the broad scope of the differences will not change and these reports give essential context for understanding how local authorities can and are coping with the problems facing them.

2.1 - Acknowledgements

Apart from the participant countries and consultant experts, we would like to particularly thank **Juan Escobar of ICAEN** for kindly hosting the meeting held in Barcelona in September 2002 in the ICAEN offices and **Jeremy Draper and Paula Judd of Milton Keynes Council** and **Milton Keynes Energy Agency** respectively for their warm welcome at the National Energy Centre in Milton Keynes, advice on the UK situation and unstinting help in the organisation of the meeting held there.

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Sweden

- Anders E. Johanssen of Umea.

3 - Responsibilities of Municipalities by role

3.1 - Municipality as Consumer

3.1.1 - Buildings (heating, lighting, services)

Austria	Basic Situation: What buildings do they own?	Municipalities manage Kindergartens, Primary schools, secondary schools, special schools, sports buildings, recreational buildings, administrative buildings
	Action in the period since 1980	Setting up of many district heating systems
	Recent changes and comments	Introduction of Contracting projects. In March 2001 the Minister of Agriculture, Forestry, Environment and Water Management decided to implement an Energy Saving programme in 1500 public buildings which is to be carried out via Energy Performance Contracting. Energy Accounting was also introduced in some buildings of the Community in order to find out which buildings have to be renovated. There exists an incentive for Municipalities if they take advantage of the Contracting process.
France	Basic Situation: What buildings do they own?	Municipalities manage Primary schools, Sports buildings, Cultural and recreational buildings, Administrative buildings, Local sanitary buildings (e.g. sewage treatment, water supply).
	Action in the period since 1980	From 1979 to 1985 the Government promoted a major programme for energy saving in commune buildings via the Agence Française pour la Maîtrise de l'Energie, (ADEME). Systematic diagnoses were grant-aided at 70% and actual work at 30%. From 1986 to 1999 this Government programme was dropped and since 1992 support for all action to encourage energy saving completely disappeared. This Government action allowed programmes to start in a large number of towns, the establishment of energy teams some of which are still active. In these towns present-day energy consumption is 40% less than that in 1980. Action centred on: regulation and hourly programming, insulation and changing energy generators and, remote monitoring of consumption.

		<p>Every 5 years a survey is carried out by ADEME - with other partners - on the energy use by municipalities and the results are published.</p> <p>Electricity saving projects started in the 1990s and even after 1995. The idea of saving electricity in a country with a surplus of nuclear power appearing irrelevant.</p> <p>In 1997 a "Guide pour la Maîtrise des Usages de l'électricité dans les collectivités territoriales" was published by EDF – in collaboration with the <i>Association des Ingénieurs des Villes de France (AIVF)</i> and the <i>Association des Techniciens Territoriaux de France (ATTF)</i>. This was the first publication on this subject.</p> <p>In 2000, a companion guide : "Maîtrise de la Demande d'Electricité : recommandations pour les communes" was published by the same partners and ADEME.</p>
	Recent changes and comments	A relaunch of energy saving policies took place in 1999 and the effects start to be seen today. ADEME runs leads this policy framework and supports the carrying out of audits. While the <i>Code des marchés publics</i> requires calls for tender for suppliers of oil products, it makes no requirement for gas and electricity, there being no competition. The electricity Act does not recognise communes as eligible, even if their total consumption of electricity (and tin the future of gas) exceeds the eligibility thresholds. In effect it is indicated that eligibility is determined by site and not delivery.
Spain	Basic Situation: What buildings do they own?	<p>Municipal buildings</p> <p>They include all the municipal administrative buildings, public schools, some hospitals and sports facilities, municipal museums, municipal civic centres, municipal old people's residences.</p>
	Action in the period since 1980	No action on energy
	Recent changes and comments	It is only recently that, some municipalities have started with energy audits and energy efficiency actions (mainly efficient lighting and efficient heating)
Sweden	Basic Situation: What buildings do they own?	Municipalities manage: day nurseries, kindergartens, primary schools, secondary schools, special schools, old people's homes, nursing homes, sports and recreational buildings, cultural buildings, museums, theatres, administrative buildings, civic centres.
	Action in the period since 1980	<p>In the years between 1980 and 1985, local authorities took quite an interest in energy conservation activities. They started to register and compare energy consumption in their own buildings and plants. A specific energy consumption of 150 kWh per square meter and year was considered OK, while a higher consumption was regarded as alarming. During this period, computer software for handling energy consumption statistics was developed and launched on a commercial basis.</p> <p>Then oil prices fell and electricity prices were generally low. In addition, the Government stopped the national grants to the local energy guidance service. Energy-efficiency issues were no longer given the same priority at the local policy level.</p>

		In recent years, sustainable development and environmental issues have thrown a new light on the energy sector and energy consumption.
	Recent changes and comments	At the end of 1990s several Government bills on sustainable development, on environment and on energy have once again increased the political interest in energy conservation.
The Netherlands	Basic Situation: What buildings do they own?	Municipalities manage the following: administrative buildings, social and cultural centres, libraries, theatres, recreational buildings including swimming pools, water and sewage treatment works (sometimes in consortium), transport facilities (including harbours), cleansing facilities and workshops, cemeteries etc., educational centres.
	Action in the period since 1980	Audits, technical measures for energy-savings have been carried out creating a reasonable ad-hoc situation. Since the beginning of the nineties structured plans involving energy-management, behavioural actions and the like have been put into practice
	Recent changes and comments	Growing trend to a structured situation with energy-management and central purchase.
United Kingdom	Basic Situation: What buildings do they own?	Municipalities manage: Primary and secondary schools (unitary authorities and counties), Sports buildings (Unitary authorities and districts), Cultural and Recreational buildings, Social housing, Communal social buildings (e.g. social homes) although much of this has been contracted out and Administrative buildings. Sewage treatment and water supply are the responsibility of regional private companies.
	Action in the period since 1980	Action has followed cycles depending on the fuel price and general political visibility of environmental issues. There is no real central agency for supporting action on energy issues. However new bodies have been set up to support energy efficiency and renewables generally – for instance the Energy Savings Trust to redistribute funds raised by levies on energy sales. The Government has heavily promoted local authority involvement in Local Agenda 21 and in particular this can include the appraisal of energy issues at a regional scale, including the municipality's own stock. Local authorities have been obliged to go out to tender for the supply of all energy (except the monopoly district heating), otherwise they risk surcharge by the District Auditor. Many authorities (e.g. South Wales) operate in consortium for this.
	Recent changes and comments	The Carbon Trust is being set up to redistribute the Climate Change Levy. The price of energy has shown significant swings since liberalisation – initial reductions in gas for instance have been replaced by increases of up to 30% in one year. This makes long term planning difficult and discourages investment.

3.1.2 - Public lighting

Austria	Basic Situation: What buildings do they own?	The Municipality is responsible for public lighting ¹
	Action in the period since 1980	
	Recent changes and comments	Introduction of Contracting projects; many municipalities have set up a control system for their public lighting depending on daylight conditions.
France	Basic Situation: What do they own?	Local authorities are responsible for public lighting (occasionally delegating the management)
	Action in the period since 1980	<p>After the action carried on heating, it quickly became apparent that public lighting is the second most significant source of energy spending and that it was tending to grow.</p> <p>Since the end of the 1980s the management of public lighting has become more significant and the quinquennial report by ADEME also covers public lighting.</p> <p>Apart from changing the light bulbs, action has concentrated on:</p> <ul style="list-style-type: none"> - Matching lighting to needs - Remote monitoring (rare) - Reducing light intensity for part of the night.
	Recent changes and comments	No new provisions. It is not possible to group all lighting into one consuming unit – each connection with the mains network being considered a separate site.
Spain	Basic Situation: What do they own?	Local authorities are responsible for public lighting. In some cases they subcontract the management of the public lighting systems.
	Action in the period since 1980	Some actions have been undertaken, basically the replacement of mercury lamps with sodium vapour lamps. A large proportion of municipalities have no electricity counters in public lighting.
	Recent changes and comments	There is now a tendency to progressively install counters and programming devices.
Sweden	Basic Situation: What do they own?	The ownership of public lighting varies at a local level. Local authorities as well as power companies may own and manage the mains and equipment.
	Action in the period since 1980	<p>Some changes of ownership between municipal and private companies have occurred, in both directions.</p> <p>Before the reform, the electricity consumption by public lighting stock was often calculated as a residual included in other network losses. Today the new legislation demands metering.</p>

¹ http://staedtebund.wien.at/recht/neuhof_d_neu.html

		Low energy lamps are the ones most frequently used.
	Recent changes and comments	Nothing special to note.
The Netherlands	Basic Situation: What do they own?	Mostly owned together with public utilities.
	Action in the period since 1980	Changing armatures and bulbs by energy-saving sets.
	Recent changes and comments	No reduction in lighting intensity due to safety considerations. General purchase of current due to liberalisation. As this item is mostly "simple" to summarize and to specify, this is one of the first items to be brought to the market.
United Kingdom	Basic Situation: What do they own?	Local authorities are responsible for street lighting and nearly always manage this directly.
	Action in the period since 1980	<p>Local authorities that manage street lighting directly have long invested in energy efficient stock – in particular low pressure sodium lighting is very widespread. However they do not control the electricity distribution network supplying the lights. These are generally connected directly to it with consumption being estimated rather than metered, and this limits the scope for investment in certain energy management techniques.</p> <p>The promoter of new development is usually required to construct new roads for development, including lighting, to local authority specifications which is then adopted by the local authority. Local authorities install new lighting on major roads and improvements.</p> <p>Local authority specifications are generally determined by road class and linked to nationally agreed specifications under a British Standard : BS 5489.</p> <p>Investment has centred on establishing databases which, in view of the method of billing by estimation, have proved essential to enable competitive tendering for energy supply. Some experiments in metering supplies are being proposed.</p>
	Recent changes and comments	In recent years a couple of authorities have contracted out their lighting management and investment programmes under the Private Finance Initiative. This has been designed to get round severe government controls on capital spending.

3.1.3 - Water and Sewage Pumping

Austria	Basic Situation: What do they own?	The Municipality manages the distribution of water and is responsible for sewage treatment ² .
	Action in the period since 1980	
	Recent changes and comments	
France	Basic Situation: What do they own?	Sometimes they manage the production and distribution of water and sewage treatment directly.
	Action in the period since 1980	Action has concentrated on : <ul style="list-style-type: none"> - Changing the periods of pumping to obtain a cheaper tariff (outside peak periods) - The size of pumps - Using variable speed motors.
	Recent changes and comments	Like the other services, it is not possible to group together different sites.
Spain	Basic Situation: What do they own?	Municipalities, individually or in collective structures, have responsibility for the mains water supply and for sewage treatment. In some cases they manage the facilities via public enterprises or subcontract the management to private companies.
	Action in the period since 1980	Using cheaper tariffs outside peak periods.
	Recent changes and comments	At the moment no changes due to liberalisation
Sweden	Basic Situation: What do they own?	In general, the municipalities manage the distribution of water and are responsible for sewage treatment.
	Action in the period since 1980	The municipalities still own the plants. However, there are several examples of cases in which a subcontractor tenders for the operational activities in a procurement process and then manages the operation. Some local authorities have incorporated all the municipal technical services into a single company – a “multi-utility”. One exception from municipal ownership is the city of Norrköping, which sold its “multi-utility” to the power company Sydkraft.
	Recent changes and comments	Nothing special to note.

² http://staedtebund.wien.at/recht/neuhof_d_neu.html

The Netherlands	Basic Situation: What do they own?	Water is serviced by a publicly owned company, sewage in general by the municipality.
	Action in the period since 1980	Energy-saving measures/peakshaving.
	Recent changes and comments	Currently there is discussion going on whether to liberalise the water supply companies.
United Kingdom	Basic Situation: What do they own?	Not generally a local authority responsibility, however some areas are still covered by local authority utilities. Local authority influence in their management is effectively very slight.
	Action in the period since 1980	
	Recent changes and comments	

3.1.4 – Vehicles

Austria	Basic Situation: What vehicles do they own?	Local authorities own: Public transport, Service, Maintenance and Utility vehicles (fire department, emergency,...)
	Action in the period since 1980	
	Recent changes and comments	In many municipalities there are buses that run with gas or biogas. A good example is Graz, where many buses run with „Ökodiesel“ which is made out of used edible oil. Since 1999 about 250.000 kg of used edible oil has been collected from about 1200 restaurants in Graz.
France	Basic Situation: What vehicles do they own?	Local authorities own: <ul style="list-style-type: none"> - Service and utility vehicles - Refuse collection trucks - Buses (whose management is conferred on a third party).
	Action in the period since 1980	The management of vehicle fleets has significantly improved (<i>pompes à badges</i> , service, replacement). There is currently a very significant trend to convert public transport vehicles to natural gas.
	Recent changes and comments	The Air and Rational Use of Energy Law requires that 20% of replacement vehicles bought by local authorities be fuelled by gas or electricity. It has proved possible to persuade EDF to allow the consumption of tramways to be considered as one unit even though there are several points of connection to the grid network.

Spain	Basic Situation: What vehicles do they own?	Local authorities own some service vehicles, refuse collection vehicles (sometimes these are owned by private subcontractors) and buses (owned either by municipal companies or private ones).
	Action in the period since 1980	
	Recent changes and comments	The tendency, in big cities, is to subcontract companies providing vehicle services so that they use their vehicles rather than owning them directly.
Sweden	Basic Situation: What vehicles do they own?	Local authorities own: Public transport, Service, Maintenance and Utility vehicles (fire department, emergency, etc.)
	Action in the period since 1980	During the early 1980s, some municipalities, e.g. the city of Stockholm, tried to build a new vehicle fuel market by converting their vehicles to gas. The attempt was not successful enough. The new gas filling stations were removed. In the middle of the 90s the alternative vehicle fuel market gathered momentum again. Alcohol-driven buses are common in many cities today. The national network of biogas filling stations is constantly growing. Trials with hybrid vehicles are continuing. The local authorities are helping to lead the way.
	Recent changes and comments	The trend over recent years has settled down. The alternative vehicle fuel market is steadily growing.
The Netherlands	Basic Situation: What vehicles do they own?	Local authorities only own a few transport vehicles and service cars/bicycles.
	Action in the period since 1980	Privatisation of waste-collection and public transport.
	Recent changes and comments	Incentives for the use of cycles and some pilot projects with gas or electricity powered vehicles
United Kingdom	Basic Situation: What vehicles do they own?	Local authorities also possess : <ul style="list-style-type: none"> - Service and maintenance vehicles - Refuse collection lorries - Buses for direct use (e.g. social services) - Public transport has generally been privatised but some cities still operate municipal public transport services such as new tramway services.
	Action in the period since 1980	Action in management of the vehicle fleet appears generally rather limited, and in addition the system of refunding local authority staff for staff mileage encourages use of their own car. Some authorities (e.g. Nottingham City Council) have established green transport plans for their own staff to discourage commuting in their private cars.

	Recent changes and comments	The introduction of congestion charging and workplace car parking charges will impact also on local authority staff.
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3.1.5 - Other issues

Austria	Basic Situation	
	Action in the period since 1980	Local authorities sometimes operate solid waste treatment plants, either individually or via collective structures.
	Recent changes and comments	The local authority as consumer is subject to the Law of Public Procurement. However, as far as electricity procurement is concerned, they still have a close link to their utility so that tendering procedures have not taken place very often up till now.
France	Basic Situation	Local authorities sometimes operate plant for the treatment of waste directly but this is more often delegated to a specialised company even though the equipment belongs to the local authority.
	Action in the period since 1980	
	Recent changes and comments	
Spain	Basic Situation	Local authorities sometimes operate solid waste treatment plants, either individually or via collective structures,.
	Action in the period since 1980	To bring the so-called, uncontrolled landfills, present everywhere in Spain until recently, up to an adequate standard. Some local authorities have been using incineration plant (always without cogeneration) as an alternative to landfill.
	Recent changes and comments	There is a trend to subcontract private companies to manage the solid waste treatment plants. A few local authorities have been introducing methanisation plant to treat the organic fraction of waste (Cadiz, La Coruña, Barcelona).
Sweden	Basic Situation:	As a consumer the local authority is subject to the Swedish Public Procurement Act.
	Action in the period since 1980	Before the electricity market reform 1996 the local authority naturally bought electricity from its own company. That is no longer permitted on a competitive electricity market. Compulsory tendering prevails.
	Recent changes and comments	Green public procurement has been the subject of extensive discussions. A large number of local authorities would prefer for example to purchase green electricity.

The Netherlands	Basic Situation:	Municipalities involved in motivation and example carrying out actions on environmental matters.
	Action in the period since 1980	Municipal plan in action directed to all target groups or of a selected number of groups (mostly three to four: public lighting, buildings, new-built houses, existing stock).
	Recent changes and comments	The influence of the municipality on energy matters is in general declining due to liberalisation.
United Kingdom	Basic Situation:	Counties and Unitary authorities are responsible for waste disposal and districts for waste collection.
	Action in the period since 1980	The production of electricity from landfill gas is quite widespread although virtually never by cogeneration.
	Recent changes and comments	

3.2 - The Municipality as Energy Producer

3.2.1 - Heat

Austria	Basic Situation:	Municipalities are sometimes involved in district heating.
	Action in the period since 1980	Wood chips are sometimes used for District Heating in smaller Communities.
	Recent changes and comments	The new legislation has made combined heat and power production using renewables more attractive.
France	Basic Situation:	There are 380 district heating systems in France which meet 6% of heat demand. They generally belong to local authorities and are operated by private companies. Most of them were created during the 60's and 70's when new districts were built
	Action in the period since 1980	Apart from extensions to existing district heating systems and the creation of small networks using energy from wood and/or waste, the increase in the number of installations has stopped since the middle of the 80's. Some systems have even been closed down or dismantled.
	Recent changes and comments	Since the beginning of the 90's, cogeneration installations have been implemented in some DH systems. This process will continue due to the new energy context. However, the risk of them being closed down again remains.
Spain	Basic Situation:	Only a very limited number of small municipalities have district heating networks.
	Action in the period since 1980	No action. Only the small town of Sant Pere de Torelló built one small biomass fired district heating system in 1986. In 1993 it was equipped with a cogeneration system.
	Recent changes and comments	No significant changes. Only a small number of municipalities have district heating facilities. IDAE is helping a few municipalities to install further small district heating systems, with biomass (Cuellar, Allariz) as part of the Spanish Renewable Energy Program. More recently, Molins de Rei, a municipality in the Barcelona Metropolitan Area has promoted a project (now in operation) to build a new district (695 apartments) supplied with a biomass boiler (3.5 MWth). At the end of year 2001, Barcelona announced that the city will build a small district heating network in order to recover the heat of a solid waste incinerator built in the early eighties.
Sweden	Basic Situation:	Most municipalities have district heating in densely populated areas. Municipal companies own and manage about 80% of the district heating sector.
	Action in the period since 1980	Some municipal district heating companies have been sold to become part of an energy conglomerate. Private companies offer district heating systems known as a "complete heating concept".

	Recent changes and comments	The trend since 1980 continues, but the changes are relatively small.
The Netherlands	Basic Situation:	In the past they owned (part) of the distribution companies and the bigger cities together with the provinces owned an element of the power production plant.
	Action in the period since 1980	Companies have been sold off to larger regional conglomerates, now predominantly with private capital.
	Recent changes and comments	Not generally relevant any longer. Some possibilities still remain however (e.g. for the ownership of small co-generation plant for e.g. one building only).
United Kingdom	Basic Situation:	Municipalities are actively involved in the few district heating networks that exist. They also manage local heating networks in high density housing developments. Some sites (e.g. Sheffield, South London) are linked to refuse incineration and cogeneration.
	Action in the period since 1980	A number of new developments have taken place – but at the same time a number of local heating schemes in social housing have been abandoned in favour of individual boilers. New jargon has been introduced to promote district heating and give it a new image – e.g. the sustainable energy network in Woking.
	Recent changes and comments	There are no legal provisions enabling one to oblige owners to connect to the network. It is likely that any attempt to impose such an obligation would be <i>ultra vires</i> .

3.2.2 - Electricity

Austria	Basic Situation:	"Everybody" can in principle produce electricity.
	Action in the period since 1980	Investments in CHP were forced in order to improve air quality.
	Recent changes and comments	Municipalities are now in a worse position following the EU directive liberalising energy markets as an "ecological" energy producer (e.g. if producing electricity out of renewables). Municipalities cannot compete with cheap imports from other parts of Austria as well as abroad.
France	Basic Situation:	A purchase obligation for all production by independent producers has existed since 1955 up to a power rating of 8 MW. Some municipal utilities have their own plant – especially CHP and small hydro. Dunkerque developed the first wind turbine in France and has an interest in a joint venture promoting wind energy.
	Action in the period since 1980	In 1994 this obligation was restricted to independent producers producing electricity from waste, renewable energy and CHP.

	Recent changes and comments	<p>The electricity law allows under certain conditions, and to the extent that the production is not destined for eligible clients, communes to manage and operate all new plant:</p> <ul style="list-style-type: none"> - which obtains energy from domestic waste and supplies district heating networks or CHP. - Which uses renewable energy or waste energy - Which develops CHP - ...where this plant produces energy saving and reduced air pollution. <p>A purchase obligation is proposed under certain conditions up to 12MW by site (to be defined by decrees) at a price determined at the beginning of 2002.</p> <p>Communes as concession granters can also develop any local plant for electricity production where this avoids, on good economic terms, the extension or strengthening of the network. This limitation was introduced following the construction of generators in battery by private companies to profit from the very attractive price available on 22 peak days a year</p> <p>A new Energy Law to be passed before the end of 2002 which will demonstrate the main guidelines of the pluri-annual programme of investments and also a Law giving orientations for overall energy policy.</p> <p>These options have been very little used due to the very unattractive price. All now depends on the prices to be published at the beginning of 2002.</p> <p>Why have the concession granters, as managers of the network, have not got this possibility?</p> <p>This provides a new opportunity for debate regarding the balance between centralised and distributed generation. At the same time France must express a view on the EPR reactor on the basis of a Franco-German collaboration.</p> <p>There are no targets for renewable energy α generation efficiency concerning this but overall targets will be required under the EU's Renewables Directive.</p>
Spain	Basic Situation:	<p>Traditionally some municipalities have retained the power to generate electricity. So a small group of them (around 40) own small hydro systems ranging from 6 kW to 5 MW.</p> <p>In Spain there are no existing municipal energy utilities.</p>
	Action in the period since 1980	<p>Since the middle of the eighties there has existed an obligation of purchase of electricity generated by independent producers.</p> <p>This measure pushed the independent producers to build cogeneration systems in private factories, hospitals (public and private), but not in municipal buildings.</p>

	Recent changes and comments	The Spanish Electricity Law (Ley 54/97) provides that 12% of energy has to be generated by renewable energy sources by 2010. The legislation adopted since then, has enabled some municipalities to build some renewable energy systems (mainly solar systems, thermal and PV). At present there is also one small municipality in Catalonia working to have a small wind farm (2 MW) owned by local people.
Sweden	Basic Situation:	A few Local authorities are still shareholders in power companies. Some local authorities have still interests in hydro electric power plants.
	Action in the period since 1980	The local authorities' interests in power generation have gradually been reduced since 1980.
	Recent changes and comments	No particular change of note.
The Netherlands	Basic Situation:	In the past they owned (part) of the distribution companies and the bigger cities together with the provinces owned an element of the power production plant.
	Action in the period since 1980	Companies have been sold off to larger regional conglomerates, now predominantly with private capital.
	Recent changes and comments	Not generally relevant any longer. Some possibilities still remain however (e.g. for the ownership of small co-generation plant for e.g. one building only).
United Kingdom	Basic Situation:	The local electricity utility has never been obliged to purchase surplus current but has generally done so – at a rather low price. Local authorities do not manage their own mini hydro or wind plant (except for one or two very small examples of the latter).
	Action in the period since 1980	Small scale cogeneration is relatively widespread. The introduction of liberalisation has enabled the current to be sold competitively and in the case of tenanted housing – has enabled the resale of current direct to tenants, a procedure pioneered by Waltham Forest Energy Services and Woking.
	Recent changes and comments	Opening of the networks has enabled current to be transmitted across the network. However the price is generally dissuasive to small units and short distances. Woking has already installed its own distribution wires to local authority tenants in sheltered housing and others (e.g. Leicester) are considering this solution. It would probably be <i>ultra vires</i> for a local authority to invest on any scale purely for energy generation unless there was an element of public service involved or it was ancillary to use in their own stock.

3.2.3 - Gas (Biogas)

Austria	Basic Situation:	
	Action in the period since 1980	Municipalities often manage sewage treatment, and sometimes also make Biogas out of it. Vienna has the biggest production of landfill gas with its waste deposit „Rautenweg“. There are other examples like for instance Gemeinde Grimmenstein. ³ The theoretical potential of biogas production in Austria is 63,1 PJ/a.
	Recent changes and comments	The liberalisation legislation gives an incentive for the production of electricity out of biogas. In some regions, e.g. in Styria, initiatives have been started to promote biogas.
France	Basic Situation:	Municipalities often manage sewage treatment works and sometimes also refuse tips (though this is often subcontracted).
	Action in the period since 1980	Plant designed to use biogas has been installed but not very widely. These are CHP units producing electricity and heat for the digesters The use of biogas from refuse tips remains marginal: <ul style="list-style-type: none"> - Supply into the mains gas network – a plant is ready to operate but awaits approval. - Transport of gas on a separate network – a first example opened in 1999. - Use in public transport vehicles. (in Lille) There was no installation for producing electricity from landfill gas up to 1999. A call for tender was operated in 1999.without producing much change. Calls for tender do not provide much encouragement – no local authority was successful in 1999.
	Recent changes and comments	The decree setting the purchase price for electricity from biogas is now published. This will determine the new balance of profitability between autoconsumption and sale to the network. In the opinion of operators, the price that has been decided is not sufficiently attractive to allow an effective start to this market. The new purchase price being not reasonable from the point of view of improving the share of RES in the energy supply, plant may generally not operate in summer (and maybe even in winter !). It appears more efficient to stop the motors to lengthen their life and buy in electricity at that time!
Spain	Basic Situation:	Municipalities often manage sewage treatment plant and sometimes also solid waste plant (though this is often subcontracted).
	Action in the period since 1980	Only a few sewage treatment plant were equipped with anaerobic digestion systems.
	Recent changes and comments	There is now a great deal more interest in using biogas technologies in sewage treatment plant and solid waste landfills. At present there are a dozen landfills with biogas recovery systems. Also some municipalities have decided to build methanisation plant in order to treat the organic fraction of waste (Cadiz, La Coruña, Barcelona) and produce biogas.

³ <http://www.erneuerbareenergie.at/teil6/start6.htm>

Sweden	Basic Situation:	Biogas production is modest. Very limited action has taken place in this field apart from action to promote biogas from anaerobic digestion of waste for fuelling municipal vehicles, in which Sweden is a leader. There is little action on CHP for biogas from sewage treatment and landfill.
	Action in the period since 1980	The biogas market grows at a modest rate.
	Recent changes and comments	Waste policies will have an influence on biogas development.
The Netherlands	Basic Situation:	Municipalities are supporting private initiatives to develop biogas in some cases.
	Action in the period since 1980	
	Recent changes and comments	
United Kingdom	Basic Situation:	Local authorities are not responsible for sewage treatment, but since most solid waste has been disposed of by landfill for many years, the responsibility for dealing with landfill gas is significant.
	Action in the period since 1980	There are many installations for flaring landfill gas, a significant number of which generate electricity. Some have been supported under the NFFO arrangements.
	Recent changes and comments	The recently introduced landfill tax system will discourage future disposal by landfill and so this source of energy is destined to decline in the long term.

3.2.4 - CHP

Austria	Basic Situation:	"Rautenweg" (see above), uses collected landfill gas in CHP. There are also other municipalities actively involved e.g. Kautzen ⁴ which uses wood chips for its CHP.
	Action in the period since 1980	
	Recent changes and comments	Depending on the "Ausführungsgesetze" most electricity consumers have to pay a levy to support CHP (see also costs).
France	Basic Situation:	There is no tradition of cogeneration in France due to the centralised tradition in France.
	Action in the period since 1980	Apart from a few large industrial units, cogeneration only started to be considered at the start of the 1990s. Some gas turbine plant were constructed in district heating networks (e.g. the Metz municipal utility in 1994,

⁴ <http://www.iclei.org/egpis/ggpc-021.html>

		<p>Besançon in 1995, and then, following approaches from private companies, in about 20 other French municipal installations).</p> <p>From 1997 to 1999, a special CHP tariff was agreed (contract 97-01) which promoted developments, especially in the industrial sector, but also in the municipal sector (in this latter case, the electric power installed must be compatible with the thermal power delivered to the district heating network). A capacity of 3500 MW was authorised during this period.</p> <p>There are very few small scale CHP units. These are mainly in hospitals and some swimming pools.</p>
	Recent changes and comments	The electricity law allows communes, under certain conditions and in so far as the production is not for eligible customers, to develop and operate any new CHP unit supplying district heating networks or using renewable energy, waste or waste energy. After two years without a tariff for electricity produced by CHP, new tariffs were published at the end of 2001. They seem attractive over 2Mwe (up to the limit of 12Mwe), but not for small and micro scale systems.
Spain	Basic Situation:	In Spain cogeneration systems were introduced at the beginning of the eighties, when the Energy Conservation Law was implemented.
	Action in the period since 1980	As a result of this Law, cogeneration started growing fast. Just before liberalisation, cogeneration facilities were producing 10% of the electricity generated.
	Recent changes and comments	Initially cogeneration continued to grow as a result of the Liberalisation law (5,000 MW of capacity installed and 30,000 GWh of electricity produced in the year 2000 – 13,000 GWh self-consumed and 17,000 GWh sold to the grid). But in the year 2001 as a result of the increasing of natural gas prices, a crisis developed in the cogeneration sector, and some facilities were stopped, so the electricity produced in the year 2001 was less than the previous year. During 2001 a new organisation was created: COGEN Spain, in order to lobby in favour of cogeneration.
Sweden	Basic Situation:	Many large and medium-sized cities have CHP.
	Action in the period since 1980	Some large municipalities, have sold their energy company, including the CHP plant. But CHP is still of great importance to many local authorities.
	Recent changes and comments	Local authorities are trying hard to improve the competitiveness of CHP. They are highly critical of today's energy and environmental taxation system. The heat losses from condensing power generation are free from taxation, but the useful heat from CHP is taxed. Changes in the taxation system are in preparation.
The Netherlands	Basic Situation:	<p>CHP has developed a very strong position in the Dutch market since about 1985. At present a capacity of 8000 MWe is available (which is about 40% of the total installed electrical generation capacity).</p> <p>Important market segments for CHP are industry and greenhouses horticulture. CHP also has a market share of 90% in district-heating systems, which although originally municipal have now for the most part been sold off.</p> <p>At the moment the further development of CHP is stagnating because of low electricity prices and a relatively high price for natural gas. This has been caused by the liberalisation of the market and/or new tariff structures for the supply of natural gas.</p>

	Action in the period since 1980	<p>1987: start of a programme designed to promote the application of CHP by a premium system for investment, an attractive gas price for CHP, an attractive price for feeding surplus current into the national grid and the establishment of the PWK office (Projectbureau Warmtekracht = a project office for CHP). The design and sizing of CHP installations has been based on heat demand.</p> <p>1995: A temporary moratorium on new CHP due to a threatened overcapacity of electricity production (this followed strong requests from the national electricity companies, represented by SFP/EnergieNed).</p> <p>2001: Introduction of a promotional package for CHP because of the poor competitive position in the liberalised market. This consisted of:</p> <ul style="list-style-type: none"> - a discount on the remittance of ecotax (REB=regulating energy-tax) for CHP power supplied to the national electricity grid (€0,0057/kWh) - an increase in the investment-deduction from tax to 55% (EIA: energy investment deduction). <p>Local authority investment has followed this national trend.</p>
	Recent changes and comments	<p>The package of policy-measures described above is the most recent change in the CHP-field in the Netherlands. At this moment studies are being carried out to propose a more effective policy for promoting CHP based on a CO₂ index for different energy conversion techniques (including CHP). This would favour those offering the greatest reduction in CO₂ emissions. This proposal must be compatible with any future system for negotiating CO₂ emission rights.</p>
United Kingdom	Basic Situation:	There is very limited cogeneration linked to district heating but small scale cogeneration in individual buildings has become more widespread. Industrial cogeneration has boomed in recent years however.
	Action in the period since 1980	Profitability is critically dependent on the balance in the electricity and gas prices. There are many units in swimming pools and they are becoming more frequent in local heating schemes for social housing. Hospitals, one of the prime targets, are not a local authority responsibility in the UK.
	Recent changes and comments	

3.2.5 - Renewable energy (general)

Austria	Basic Situation:	Many Municipalities produce energy from renewable sources. There are many incentives for the production of electricity from renewable sources. ⁵
	Action in the period since 1980	
	Recent changes and comments	All electricity consumers have to pay an obligation to support the production of renewable energy (see also costs). There are also many promotions for the installation of heating using renewable sources of energy. The local authorities, the owner of the local grid, are obliged to buy all the electricity generated from renewable sources.
France	Basic Situation:	There has been an obligation to purchase electricity produced by independent producers from renewable energy sources since 1994,
	Action in the period since 1980	Until very recently, no enthusiastic policy had been implemented, apart from an initiative in wood biomass. The system of Call for Tenders to produce electricity (e.g. wind energy with the Eole programme) has demonstrated its own limits : no significant installation has been built.
	Recent changes and comments	<p>The electricity law states that:</p> <ul style="list-style-type: none"> - The combat against climate change, the development of national resources and the rational use of energy are among the objectives of public service - Electricity can be supplied from the public mains or from locally provided production units - The public service funds will cover all the additional costs carried by operators in meeting purchase obligations and calls for tender. Contributions are made to this fund by all producers, importers and distributors and autoproducers with units over 4.5MW, apart from those using renewables, (some large biomass and waste plant excepted) - Multi-annual programmes of investment by the state will be carried out in a manner designed to leave room for distributed generation, CHP and new technology - New plant below 4.5 MW is exempt from authorisation. <p>When the objectives in the programme are not met, the State can launch a call for tenders.</p> <p>The existence of this fund prevents EDF from saying that it subsidises renewables. There is little incentive with these regulations, but there should be some following the new Renewables Directive which was adopted during the French Presidency.</p> <p>The declarations of government regarding RES are now much more positive – especially in order to promote projects designed to help to reach the European objectives (increasing of the RES share in energy supply from</p>

⁵ <http://www.eva.wsr.ac.at/esf/inhalt.htm#h6>

		<p>13% to 21%, incl large hydro). However the administrative establishment and the little group forming the "energy establishment" are both very influential in France and continue to consider that RES and dispersed energy in general are overall a cause of disturbance.</p> <p>Regional and local authorities are now encouraged to investigate the potential for RES and CHP within their territory under the recent Law relating to the sustainable development of territory (LOADDT – Loi d'orientation et d'Aménagement durable du territoire).</p>
Spain	Basic Situation:	The Electricity Law (Ley 59/97) fixes that at least 12% of all the primary energy in 2010 must be produced by renewable energy sources. This goal must be achieved by means of the Renewable Energy Promotion Plan.
	Action in the period since 1980	<p>IDAE was put in charge of the promotion of renewable energy.</p> <p>By the mid eighties the electricity grid has been opened to feed electricity generated by independent producers.</p>
	Recent changes and comments	<p>With the Electricity Law (Ley 54/97) the 'Special Regime' generation (renewables and cogeneration) was recognised.</p> <p>The development of this Law was implemented by the Real Decreto 2818/1998 of 23 December that regulates the generation of electricity by facilities supplied by renewable energy sources, waste and cogeneration. It fixes premium prices depending of the source. This Decree includes:</p> <ul style="list-style-type: none"> - cogeneration and surplus industrial process energy - all renewable sources (solar, wind, geothermal, waves, tides, small hydro –up to 50 MW- primary and secondary biomass) - municipal waste incineration plants - agricultural waste plants –under 25 MW. <p>Also, a new Decree has been adopted on Solar PV (Real Decreto 1663/2000 of 29 September, about the connection of PV installations to the low voltage grid).</p> <p>But despite all this new legislation, only a small group of municipalities are using it to develop small projects on renewables and cogeneration at local level.</p>
Sweden	Basic Situation:	Local authorities have a strongly supportive attitude to RES. Local politicians constitute a heavy pressure group. Acceptance of economic and administrative instruments promoting RES is high.
	Action in the period since 1980	<p>Before 1980 the district heating sector was 90 % dependent on fossil fuels. Today practically all fossil fuels have been replaced.</p> <p>In several cases wind turbine projects are supported or managed by municipal enterprises.</p>
	Recent changes and comments	The trend towards RES continues ever stronger. The introduction of a Green electricity certificate system is one recent example.

The Netherlands	Basic Situation:	
	Action in the period since 1980	
	Recent changes and comments	For RES the so-called <i>sandwich method</i> will be used: if voluntary action is not successful, then obligations will be imposed. Customers are supposed to purchase a certain percentage of sustainable energy with the help of the green labelling system in the Transitional phase. At present the Ministers of Economic Affairs and Environment disagree because the latter wants to enforce a percentage in order to realise the Dutch RES target. The Minister of Economic Affairs wants to wait because growing demand would only raise prices.
United Kingdom	Basic Situation:	Renewable energy is supported by programmes at national level. Local authorities have often developed policies at local level, for instance via surveys of local resources for renewable energy and within the spatial planning documents, but have had to compete with other interests in obtaining grant aid for renewable energy projects.
	Action in the period since 1980	Local authorities have sometimes promoted renewable energy via the EU supported local energy advice services but there has been little promotion of renewable energy via grant aid to the general public.
	Recent changes and comments	Support for renewable energy and energy efficiency since liberalisation has been channelled via utilities via their Standards of Performance programme. Local authorities have carried out projects in cooperation with the utilities but there is no consistency in the service provided. Recently grants from the Energy Saving Trust and Carbon Trust have also provided resources for committed local authorities. A number of local authorities have purchased green energy for their own stock.

3.3 - The Municipality as Energy Distributor

3.3.1 - Distribution Concessions

Austria	Basic Situation:	The distribution system is a monopoly in Austria.
	Action in the period since 1980	None.
	Recent changes and comments	This did not change due to liberalisation. Distribution is still a monopoly and tariffs are fixed by the regulator.
France	Basic Situation:	<p>Municipalities are the concession granting authorities for gas, electricity and heat This provision was not changed under the nationalisation legislation in 1946. This legislation authorises municipalities or groupings of municipalities which carry out distribution themselves to continue with this arrangement as DNN (Distributeurs Non Nationalisés). About 5% of the market is covered by DNN in 2000 and the relevant bodies are organised within the ANROC - <i>Association Nationale des Régies</i>.</p> <p>However if they do not carry out this function or if they abandon it, they are obliged to give a concession to EDF and GDF without the possibility of going back on the decision. (Note:Distribution of electricity and gas is a joint service with common staff).</p> <p>An association has been established to represent concession granting local authorities, FNCCR : <i>Fédération des collectivités concédantes et des régies</i></p>
	Action in the period since 1980	Concession contracts signed in the 1920s for 40 years expired without renewal. In the early 1990s EDF realised the implications of this situation and has renewed with the vast majority of local authorities for 20-30 years. Few have taken to task the terms they receive
	Recent changes and comments	<p>The Electricity Law has confirmed the prerogative saying that local authorities negotiate and conclude concession contracts and monitor the application of the public service obligations identified in the specification for the concession</p> <p>The limitations regarding concessions were maintained but nevertheless the DNN are only eligible themselves for that part of their consumption relating to eligible consumers.</p> <p>EDF was classified "Manager of the distribution network"</p> <p>The contracts for electricity and gas are negotiated separately for different periods which limits the scope for coordinated planning.</p> <p>The new Law implies a renegotiation of addenda to the contracts or new contracts if the modifications become numerically significant.</p>

		Will this monopoly situation stand up in front of European legislation?
Spain	Basic Situation:	There is no municipal tradition of energy distribution in Spain.
	Action in the period since 1980	In the Law that regulates the local regime (municipalities) nothing is written about energy distribution. This Law states that municipalities must enact a local tax on using municipal space (land, soil, air) for energy distribution, based on the quantity of energy distributed by the grid into the municipality. Only a very small group of municipalities are distributing electricity or gas.
	Recent changes and comments	No changes, but a discussion concerning local taxes started with the passing of the Energy Liberalisation Law. This is because because the new operators (mainly commercial energy agents) don't pay the local tax.
Sweden	Basic Situation:	Electricity distribution needs a concession. Sweden has 270 concession areas. Municipal companies manage about 100 of these areas.
	Action in the period since 1980	Many local authorities have sold their shares in their company, or even a group of energy companies as a whole, to one of the big private or national power companies. About 50 municipal companies have been sold since 1996. The local authorities have often been offered a high price for the network company – a price too high to resist.
	Recent changes and comments	The sale of municipal network companies has slowed down recent years.
The Netherlands	Basic Situation:	Municipalities are empowered to grant concessions to establish energy networks in new development. Normally this had been automatically granted to the regional energy company.
	Action in the period since 1980	Trials of a new procedure for letting concessions for new development on a competitive basis have been carried out.
	Recent changes and comments	A General Measure of Rule (AmvB) was issued in March 2001, called <i>BAEI</i> ⁶ . This applies to all The Netherlands, giving local authorities the right to choose to grant permits for the construction of new energy infrastructure following a prescribed public procedure which allows them to select between competing proposals. The goal of such a choice is to facilitate those authorities who wish to include environmental requirements in their concessions. It is therefore considered unsatisfactory that no specific energy efficiency targets are mentioned in the BAEI, or even the obligation to develop an energy policy. Besides, it is not clear why areas with less than 500 dwelling equivalents are not included and if business areas and the like are to be included as well. What the public procedure means in practice remains another uncertainty. The ownership of the distribution pipelines, specially for heat and gas has been a major political issue. Finally the ownership has been split into an economic ownership (distribution companies) and legal ownership (municipalities).

⁶ Decision Construction Energy Infrastructure

United Kingdom	Basic Situation:	Local authorities are obliged by statute to allow electricity and gas utilities to use the highway for distribution purposes. There is no concession arrangement
	Action in the period since 1980	
	Recent changes and comments	The concession system seems to have been lost at the time of nationalisation, which coincided with the introduction of planning legislation.

3.3.2 - Network access

Austria	Basic Situation:	There is free access to the networks for all energy producers, in principle, but in practice much dependent on the good will of the utilities. Heat has not been regulated.
	Action in the period since 1980	
	Recent changes and comments	The free network access for all producers was introduced by the ElWOG with a few exceptions (see “General characteristics of the liberalisation legislation in country”).
France	Basic Situation:	Municipalities had the right to access to the network to supply three separate points of consumption. This provision has never been publicised and apparently never been applied.
	Action in the period since 1980	
	Recent changes and comments	The Electricity Law provides that any local authority or local authority consortium can get access to the network to supply the facilities which it manages directly from its own generating capacity. A tariff is charged for the use of the network. This is a new provision – all depends on the price not yet published.
Spain	Basic Situation:	The electricity grid is open for all consumers using more than 1 GWh/year and for consumers supplied by the high voltage grid (independent of consumption). But municipalities appear not to be interested in becoming players in the energy market.
	Action in the period since 1980	
	Recent changes and comments	No change.

Sweden	Basic Situation:	Open for all producers and customers.
	Action in the period since 1980	Access was denied to everyone but the local monopoly before 1996.
	Recent changes and comments	No change.
The Netherlands	Basic Situation:	Until the end of the nineties this was a publicly owned resource. Heat however has not yet been regulated (difficult to privatise).
	Action in the period since 1980	Access to the electrical networks has been privatised and formally opened to third parties by law.
	Recent changes and comments	Access to the gas-distribution network will be opened in the years to come (2002: business, 2004/2005 small consumers).
United Kingdom	Basic Situation:	There is free access to the networks for all producers on the basis of a tariff.
	Action in the period since 1980	Access was introduced progressively and is now complete. In addition there is one example of a local authority (Woking) setting up its own "private wires" distribution network to run from a CHP unit to local authority tenants so avoiding access charges.
	Recent changes and comments	It is suggested that the tariffs disadvantage small and local producers, however the local network and transport network are charged separately.

3.3.3 - Demand side management

Austria	Basic Situation:	Demand side management had always been seen as a responsibility of the utilities and the local authorities have no role in distribution.
	Action in the period since 1980	Municipal utilities started some DSM-measures, mainly for load-shifting.
	Recent changes and comments	Not responsible for network issues.
France	Basic Situation:	DSM had not been the subject of any particular provisions up until 1990.
	Action in the period since 1980	Certain local authorities started looking at MDE as a means of putting off or avoiding additions to the network. However the Fonds d'amortissement des charges d'électricité (FACE) has no right to pay for work beyond the meter, i.e. at the consumer, in order to reduce his consumption, although they do pay for extensions to the network. FACE has however paid for PV installations for sites isolated from the electricity network.
	Recent changes and comments	The electricity law provides that local authorities can carry out work designed to limit the demand from electricity consumers connected to the low voltage network where this work economically avoids or puts off the extension or

		<p>strengthening of their network. This can include work on insulation or regulation of consumption or the purchase of low consumption equipment. Action can also be directed to those on low incomes.</p> <p>EDF is forbidden to offer such services to non-eligible clients, being restricted to offering advice. This provision is justified by the monopoly of distribution, but it is curious that action benefiting the concessionaire is to be carried out by municipalities.</p> <p>In practice the relevant decrees do not yet exist and apparently almost no one is interested in their preparation.</p>
Spain	Basic Situation:	DSM was introduced by the Energy Conservation Law in the year 1982.
	Action in the period since 1980	In the late eighties and early nineties the electricity companies were forced by Law to invest in DSM projects. But no municipalities used this provision.
	Recent changes and comments	The electricity companies don't invest in DSM. Neither do the municipalities.
Sweden	Basic Situation:	<p>Some 280 of Sweden's 289 local authorities offer their inhabitants and local industry advice on energy efficiency matters. The activities are partly financed from national government funds.</p> <p>Regional energy agencies are financed in part from the EU and in part by the local authority of the region concerned. The EU funding covers the first three years after which the local authorities have to provide the requisite funding. From 2003 the regional energy agencies will also be partly financed from national government funds.</p>
	Action in the period since 1980	<p>Sweden had nationally financed local energy advisers during the first years of the 1980s. The activities came to an end when the national funds were withdrawn.</p> <p>In 1998 local energy advice activity was again reintroduced. An Energy Act of central government granted local authorities partial funding during the following 5 years.</p>
	Recent changes and comments	This year a further Government Energy Act has granted partial funding during the next five years to local energy advice activities and regional energy agencies.
The Netherlands	Basic Situation:	Environmental planning of municipalities is in general designed to stimulate energy-efficiency on the consumer side. Their market has to date been very "product" orientated.
	Action in the period since 1980	
	Recent changes and comments	With competition entering the market, awareness is developing of the possibilities for energy-savings (price), peak shaving and for big consumers purchase-specifications for the source of the energy supplied.

United Kingdom	Basic Situation:	Demand side management had always been seen as a responsibility of the regional distributors until privatisation. Since that date the regulator has imposed standards of performance on the utilities. The local authority has no role in distribution.
	Action in the period since 1980	
	Recent changes and comments	While the local authority is seen to have a role in reducing energy use for environmental or social reasons (see below "Municipality as an awareness raiser") they are not responsible for network issues.

3.3.4 - Field of action of energy suppliers

Austria	Basic Situation:	Several municipalities own their own municipal utility ("Stadtwerke").
	Action in the period since 1980	Some programmes and activities to increase energy efficiency were carried out in cooperation between the municipality and the municipal utility.
	Recent changes and comments	Many municipalities have sold shares or all their interest in their energy company. Some have set up an energy agency.
France	Basic Situation:	Due to the principle of "speciality" that goes with the monopoly, EDF has to limit its activities in the area of production, transport (through RTE – <i>Réseau de Transport d'Electricité</i> – which is an internal-independent body) and distribution of electricity.
	Action in the period since 1980	Overtures were made in the 90s but resisted by other (private) companies in the energy sector since these didn't have the possibility of reciprocity.
	Recent changes and comments	The electricity law allows EDF, by means of subsidiaries, to offer local authorities services linked to the production, transport and distribution or to energy use for public lighting, the treatment of waste or district heating. EDF has taken a 30% share in Dalkia, currently an energy subsidiary of Vivendi.
Spain	Basic Situation:	The energy suppliers, now all private, have great power in Spain.
	Action in the period since 1980	At this time, energy suppliers were <i>de facto</i> determining energy policy and strategy to government. Municipalities were affected by decisions taken over their heads.
	Recent changes and comments	The ancient vertical energy monopolies have been broken down but all the new companies created are owned by the same groups. Now the links are more closed, because of the interrelation between electricity and gas companies. Municipalities normally accept the energy decisions taken by the major energy players. In only a few cases have big projects have been defeated because of local opposition (a 1,600 MW combined cycle project, proposed in southern Catalonia by Enron, and with the support both of the local authority and Catalan Government, has been

		cancelled due to strong local opposition).
Sweden	Basic Situation:	Energy suppliers act commercially. Demand side management activities may be a part of other sales promotion activities.
	Action in the period since 1980	Before the reform in 1996, the energy supplier, i.e. the local monopoly, preferred to introduce itself as an “energy service company”, that endeavoured to satisfy their customers need for lighting, power and heating.
	Recent changes and comments	Electricity is a homogenous and well-defined commodity. The qualities to be measured are agreed: frequency and voltage. (A quality that may differ between companies is distribution security. But that concerns the remaining monopoly – the network company). Therefore suppliers on the competitive market make use of a variety of sales promotion activities and customer “fringe benefits” ranging from phone subscriptions to a free book about gardening, cooking etc.
The Netherlands	Basic Situation:	Preparing for competition and image making.
	Action in the period since 1980	Product-oriented monopolies, administrative and technical activities/MAP-operations.
	Recent changes and comments	Strategy for diversifying the market (e.g. energy-supply, cleaning and household-help operations), positioning in the market (image building, a lot of publicity) and supply and promotion of green energy.
United Kingdom	Basic Situation:	Local authorities are constrained as a public body using public funds from competing in the general market place. This could be seen to limit local authority action as an electricity producer in a competitive market.
	Action in the period since 1980	Local authorities have set up service companies (ESCOs) but normally are limited to a 20% stake. Some such companies (e.g. WFES) have been privatised.
	Recent changes and comments	It had originally been proposed in England and Wales that the large electricity generating companies be limited in purchasing distribution companies and that distributors be limited in the amount of own generating capacity they could develop to 15%. This rule has recently been relaxed as National Power has bought East Midlands Electricity. Curiously at the same time the Scottish and Northern Irish industries were privatised as vertically integrated structures The revisions to the local authority Acts enable local authorities to run wholly owned companies for the "benefit of the neighbourhood".

3.4 - The Municipality as Regulator and Planner

By Municipality as Planner and regulator in the field of energy, we mean the elements that affect urban energy consumption in different consuming sectors (esp. housing and transport) and on greenhouse gas emissions.

3.4.1 - Spatial Planning

Austria	Basic Situation:	Austrian local authorities have an important role in spatial planning including land use planning and transport planning (they are only responsible for municipal streets).
	Action in the period since 1980	<p>Beginning in the mid eighties, quite a few municipalities developed their own energy plan (although this was not mandatory). Most of the energy plans focus on the planning of the heat networks and associated measures.</p> <p>In the nineties the environmental aspects became more important and energy plans began to include awareness raising programmes, subsidies etc.</p> <p>The energy plan could also contain some spatial planning regulations for citizens, e.g. priority areas for district heating and gas are defined and adopted by the municipal council in Graz and in certain areas of the City the burning of solid fuels is forbidden.</p>
	Recent changes and comments	No changes due to liberalisation.
France	Basic Situation:	<p>Means of taking these factors into account in France include:</p> <ul style="list-style-type: none"> - Land use planning, by POS (now Local Development Plans) - Mixed use or single use zoning - Urban sprawl or urban renewal - Transport planning. <p>The delivery of planning consents: <i>Certificats d'urbanisme</i> and <i>permis de construire</i></p> <p>Aswell as :</p> <ul style="list-style-type: none"> - The coordination of energy networks and the possibility of planning them so avoiding unnecessary investment (Least cost planning). One IEA project was devoted to Energy planning - In French legislation there are no special provisions relating to energy and planning <p>Nevertheless the price for connection to the networks may now been established by Las, depending of the density of population which is planned in the <i>Plan Local d'Urbanisme</i>.</p>

Action in the period since 1980	<p>A legal possibility has been opened up to more or less oblige consumers in a defined area to be connected to the district heating network (Classement des Réseaux de Chaleur). Nevertheless this possibility is used as an exception.</p> <p>A number have factors have changed in the last couple of years (see below)</p>
Recent changes and comments	<p>The 1999 reform of local authorities has brought into being two basic territorial units, the "pays" and "agglomérations" which will have a very large influence on the decision making system. (in particular as a result of a re-equilibration of the tax distribution) and so improve spatial planning.</p> <p>A Law of Solidarity and Urban Renewal (SRU – Solidarité et renouvellement urbain) is in the process of implementation which will strengthen the overall approach to housing and transport and set up local development plans (PLU) which will replace POS and also introduced the Schémas de Cohérence Territoriales (SCT) which will replace the former Schémas d'aménagement et d'urbanisme in major built up areas</p> <p>The plan for combating climate change proposes action at local level without yet defining it..</p> <p>These provisions seem to act as a counterweight at local level to the globalisation of decision-making, including in the energy field.</p> <p>Liberalisation calls for regulation. The local level appears like a indispensable place for regulation and coordination.</p> <p>Competition is a search for performance and speed. The municipality is the long term and memory.</p> <p>ADEME is currently searching for a better capacity for action at the local level, both urban and rural. It has concluded <i>Contrats de Plan</i> with the majority of regions for the next 7 years concentrating on renewables and energy efficiency. In addition, ADEME is proposing to local authorities - through a Call for proposals – pluri-annual contracts encouraging them to implement a local energy policy (ATENEE Contracts – Action Territoriale pour l'Environnement et l'Efficacité Energétique".</p> <p>A renewed interest in this field is also evident in local authorities. The C.U. Dunkerque has organised the first three annual "Assises Nationales de l'énergie" for local authorities – followed by Grenoble for the fourth annual event - in cooperation with Energie-Cités.</p>
Spain	<p>Basic Situation:</p> <p>Factors taken into account in planning include:</p> <ul style="list-style-type: none"> - Land use planning - Mixed use or single use zoning - Urban sprawl and urban regeneration - Transport planning - Building regulations and development control

		But Spanish legislation doesn't take into account energy provisions when development plans are planned or implemented.
	Action in the period since 1980	
	Recent changes and comments	In some cases it is mandatory to make environmental assessments.
Sweden	Basic Situation:	Local authorities have a monopoly role in the field of spatial planning.
	Action in the period since 1980	The Swedish Planning and Building Act (PBL) came into force in 1987. The municipal comprehensive plan (MCP) is a guiding instrument for the municipal area as a whole at local level. The detailed development plan (DDP) is a binding instrument with strong legal status. The DDP regulates buildings within a limited area and over a limited time period. The PBL has no directions that explicitly stipulate energy efficiency or demand side management. PBL just refers to the Building regulations (BBR) issued by the National Board of Housing Building and Planning (Boverket).
	Recent changes and comments	An overhaul of the PBL will start this year.
The Netherlands	Basic Situation:	Dutch local authorities have an important role in spatial planning and in granting environmental permits.
	Action in the period since 1980	Spatial planning: Energy Performance on Location (EPL). The EPL is a tool for the development of new build areas. The aim is to minimise use of fossil energy. As the EPR is sharpened, the EPL becomes more important because of measures beyond the level of the building. Spatial planning: Mobility Performance on Location (MBL). The Mobility Performance on Location (MBL) is used to optimise traffic-flow. The goal is to improve the energy efficiency by 30 %.
	Recent changes and comments	
United Kingdom	Basic Situation:	Factors taken into account in planning include: <ul style="list-style-type: none"> - Land use planning - Mixed use or single use zoning - Urban sprawl and urban regeneration - Transport planning - Building regulations and development control. <p>There are no specific provisions relating to energy in British legislation and energy is not normally a consideration in land use plans. But the issue is raised in government circulars on energy issues.</p> <p>However local authorities have been able to designate smoke control areas under the Clean Air Acts for over 40 years in order to prevent air pollution, and within such areas residents and businesses must use smokeless fuel or</p>

		sources of energy which do not emit smoke. This policy has been extremely successful in reducing smoke pollution.
	Action in the period since 1980	<p>Certain authorities have indicated a preference for developments that are very environmentally sound.</p> <p>The current trend is to promote "mixed use development" although this has different meanings according to which planner is saying it. The control of urban sprawl has been very stringent since the second world war with the introduction of "green belts" (no build zones) around major conurbations. This is still an objective of policy.</p> <p>Local authorities have always had a major role in considering new energy generation developments such as wind turbines.</p> <p>Local authorities have never been significantly involved in the planning of energy networks and have no powers in this field. They are consulted on new extensions to the main networks as part of their planning role, but have no powers to impose conditions and the avoidance of duplication would certainly have no weight in decisions which would be seen as commercial decisions of the independent operator. The only constraints would be under other legislation, for instance relating to the protection of nature and heritage.</p>
	Recent changes and comments	<p>Recent advice seeks to place 60% of all new development on "brownfield" land (i.e. land that has previously been developed). That being said the British tradition of an individual house and garden limits the extent to which densities can be raised. A greatly increased interest in using the planning system to discourage unnecessary travel by the private car is noticeable and is reflected in Government advice. It remains to be seen how successful it is.</p> <p>In February 2002, a draft green paper on the Government's energy review was published which gave special attention to energy efficiency and renewables as a means to achieve the Government's environmental targets. This will have a knock-on effect on spatial planning.</p>

3.4.2 – Construction Regulations

Austria	Basic Situation:	Construction Regulations are the responsibility of the 9 Länder. For this reason there are 9 different sets of construction regulations in Austria. Municipalities deliver construction permits, according to the Legislation.
	Action in the period since 1980	The level of performance of buildings imposed by the regulations has constantly increased over the past 20 years.
	Recent changes and comments	Subsidy schemes for residential buildings run by the Länder increasingly contain incentives for energy efficiency and ecological measures.
France	Basic Situation:	There is a national regulation regarding the energy performance of new buildings. Local authorities have no responsibility in this field, the State and its administration being responsible for enforcement.
	Action in the period since 1980	The level of performance of buildings (incl. tertiary) was increased in 1989
	Recent changes and comments	A new regulation, with a higher level of performance, came into force in 2001 but there is no real <i>in situ</i> control, at least in private housing.
Spain	Basic Situation:	Municipalities deliver construction permits, according to the Legislation.
	Action in the period since 1980	
	Recent changes and comments	The city of Barcelona has adopted a new local Ordinance that makes it mandatory to have solar heating systems in all new buildings constructed in the city after 1 st August 2000. Since then some other local authorities in Spain are following this example. Also, Spanish Energy Agency (IDEA) and other Regional Energy Agencies (like ICAEN in Catalonia) are offering municipalities written models for the so called ‘Solar Ordinances’, in order to help them to adopt such a measure.
Sweden	Basic Situation:	The National Board of Housing Building and Planning (Boverket) issues Building Regulations (BBR). The regulations and directions include energy economy and heat retention; thermal insulation standards etc. A local authority has no legal right to impose higher standards than the national building regulations at local level.
	Action in the period since 1980	The Swedish building regulations have included directions on energy efficiency since 1977. A new Planning and Building Act came into force in 1987. New editions of the Building Regulations (BBR) have been issued since.
	Recent changes and comments	Energy efficiency in buildings has received renewed and growing attention nationally and internationally as well. The EU proposal for a directive on the energy performance of buildings is a case in point. In Sweden, the matter of energy performance in buildings is also connected to the recently proposed national environmental objectives, which have recently been formulated and approved by the Swedish Parliament.
The Netherlands	Basic Situation:	Local authorities have an important role in supervising Building Standards
	Action in the period since 1980	In the Netherlands, the energy use of a building is expressed as an EPR (Energy Performance Ratio), a simple figure that reflects the average energy efficiency of a building (technical equipment included) in one single figure. EPR aims at achieving maximum energy efficiency for buildings. It applies to dwellings, buildings with a living function and utility buildings. The lower the EPR, the better the energy efficiency.

	Recent changes and comments	Lowering of the EPR-value (plans by 2004/2005). (i.e. increasing standards)
United Kingdom	Basic Situation:	The building regulations are nationally determined (Devolved in Scotland to the Scottish Parliament) and applied by local authorities at local level.
	Action in the period since 1980	Building Regulations have been getting regularly more stringent. The trend is towards considering overall energy performance
	Recent changes and comments	The Scottish Parliament, in particular, introduced higher standards for the energy performance of new buildings in September 2001 which may set a lead for other parts of the UK.

3.4.3 - Other regulations

Austria	Basic Situation:	All over Austria there are more the 50 organizations providing information <i>inter alia</i> on all aspects of efficient use of energy for households, companies and municipalities ⁷ .
	Action in the period since 1980	Agenda 21: Some 101 municipalities and communities as well as eight Austrian Provinces together with municipalities from neighbouring countries have formed a "Climate Alliance". They have committed themselves to reducing their carbon dioxide emissions by the year 2010 through concrete measures in the field of traffic, energy, procurement. ⁸ Many municipalities have prepared environmental plans and programmes in which energy plays an important role and quite a few municipalities have subsidy schemes to promote solar energy, biomass and other renewables or to give incentives for energy efficiency measures in companies (e.g. in Graz).
	Recent changes and comments	
France	Basic Situation:	
	Action in the period since 1980	
	Recent changes and comments	Recent provisions: Law on Air Pollution and the Rational Use of Energy (1997 ?) requires conurbations of more than 100 000 inhabitants to produce Urban Transport Plans (PDU) The same law obliges conurbations of over 250 000 inhabitants to produce an Atmospheric Protection Plan (PPA). The Departemental Waste Management Plans are obligatory and must propose methods of treatment.

⁷ <http://www.un.org/esa/agenda21/natlinfo/countr/austria/natur.htm#energy>

⁸ <http://www.un.org/esa/agenda21/natlinfo/countr/austria/inst.htm>

Spain	Basic Situation:	More than a hundred municipalities are working on Local Agenda 21 processes including some energy issues.
	Action in the period since 1980	
	Recent changes and comments	After the city of Barcelona signed the Aalborg Charter (November 1995) and started working on sustainable development issues (Local Agenda 21), some other municipalities have been following the same path. This includes some work on energy, mainly to develop energy audits at municipal level, analysing how energy is produced, supplied and used at local level. However they have also implemented some energy projects.
Sweden	Basic Situation:	The Act on Municipal Energy Planning came into force 1977. The local authorities have a duty to promote the efficient use of energy as well as to work for a reliable and adequate energy supply.
	Action in the period since 1980	The efficient use of energy was initially the aim of the Act on Municipal Energy Planning. Three amendments have been made: As from July 1982 there was to be a plan in every municipality for a reduction of oil consumption in its area. From 1984, the plan had to be comprehensive and encompass the whole municipality. June 1991 the Swedish Parliament decided that every energy plan had to be supplemented with an environmental impact study.
	Recent changes and comments	When the energy market was liberalised in 1996, i.e. when the local energy monopolies were abolished, the local authorities' political influence upon the supply side also changed. Today the concept of energy planning has a different content; and focuses more on analysing the market and acting as a player in a competitive market. Once again many local authorities are concentrating on the demand side and energy efficiency in the context of their environmental plans. Most local authorities have laid down local environmental objectives that are derived from the Swedish national environmental objectives.
The Netherlands	Basic Situation:	Local authorities grant environmental permits for SMEs which include energy issues.
	Action in the period since 1980	Local authorities are co-signatories of the MJA (Long-range plan for energy savings) and Benchmark Covenants (an obligation to design an energy efficiency plan) for companies.
	Recent changes and comments	Environmental Management Act: from January 2001 all new environmental licences must contain energy regulations. The environmental inspection has to done annually.
United Kingdom	Basic Situation:	Other procedures, e.g. Local Agenda 21, can be used to promote energy efficiency.
	Action in the period since 1980	Local authorities are obliged to prepare a transport plan to consider their policies for transport investment and for support for public transport services (including the private sector). The Home Energy Conservation Act 1995 (HECA) imposes on local authorities the duty of reducing greenhouse emissions in the residential sector by 30% by 2010 but provides no new resources. Many local authorities have established new energy agencies with grants from the EU's DGTREN. This has been seen in particular as a means of complying with the requirements of HECA.
	Recent changes and comments	

3.5 - The Municipality as Awareness Raiser

Austria	Basic Situation:	Awareness raising is not an obligation for local authorities. Therefore it is strongly linked to the policy goals and programmes of the municipality. Before 1980 the interest in providing information and raising the awareness of the citizen was very limited.
	Action in the period since 1980	<p>In the eighties and in the beginning of the nineties – as environmental concern was increasing – the first energy advice centres and energy agencies were set up at provincial level (Länder). These differ between Länder, but in most of them energy advice is provided by the provincial government.</p> <p>In the nineties more and more municipalities became involved, mainly as an element in implementing their energy plans or their environmental policies.</p> <p><u>Climate Alliance</u>: Started in 1992, now more than 100 municipalities and communities as well as eight Austrian Provinces are members of the "Climate Alliance". They have committed themselves to reducing their carbon dioxide emissions by 50% by the year 2010, to do information work etc.</p> <p><u>Local Agenda 21</u>: There are also many municipalities (in Styria e.g more than 20) carrying out a Local Agenda 21 process in their area. They are often supported by the Länder (e.g. a separate organisation has been set up in Styria).</p> <p>In the past few years, a lot of different programmes and activities have been carried out by municipalities. It can be stated that the most innovative and most ambitious activities take place at municipal level. This is often done in co-operation with other institutions and organisations. All over Austria there are more the 50 organisations providing information <i>inter alia</i> on all aspects of efficient use of energy for households, companies and municipalities.</p>
	Recent changes and comments	<p>With support from DG TREN, 8 local and regional energy agencies have been set up which now play an important role as awareness raisers.</p> <p>In early summer 2002 the Federal Government decided on their implementation plan for the Kyoto protocol. An important element is formed by the so-called "action programmes" for several sectors, which could develop into important support measures for awareness raising also at municipal level.</p>
France	Basic Situation:	Municipalities have been little involved in information provision and awareness raising among the inhabitants and the economic players.
	Action in the period since 1980	In the early 80s, under the influence of ADEME (ex-AFME) municipalities got involved in a programme of "pilot towns" where the objective was the thermal rehabilitation of towns or neighbourhoods via a campaign of diagnosis, working charters with craftsmen and enterprises, banking associations, etc.

		<p>Support for these actions finished in the late 80s and they finished. From 1982 to 1990, Information centres on Housing (ADIL) had energy counsellors which have virtually all disappeared today. ADEME (ex-AFME) had a resource of information and advice leaflets that have nearly all disappeared today.</p> <p>At the start of the 90s, ADEME (ex-AFME) relaunched a programme through "CitéVie" contracts in which the objective was to push local authorities to act on the all the responsibilities described in this report. This programme had enabled action to be taken towards the population but was halted in 1993.</p> <p>It was near the end of the 90s that new initiatives were taken (see below)</p> <p>Note: from 1992 to 1998, ADEME lived through a dark period due to the complete withdrawal of a national policy on energy efficiency.</p>
	Recent changes and comments	<p>Several towns or conurbations have created energy agencies under the SAVE programme (DG TREN) and most frequently with the support of ADEME. Thus the towns and conurbations of Brest, Rennes, Mulhouse, Grenoble, Montreuil-Vincennes, Clermont-Ferrand, Cergy, Lyon have such agencies.</p> <p>One series of original and very interesting projects were undertaken by these agencies directed to the general public and also to smaller local authorities in the conurbation so transferring the experience of the major urban centre. This new phenomenon is likely to get stronger as ADEME pushes for the creation of more "Info Energie points, 100 of which have been created all over the country from the beginning 2001 to March 2002. Another 100 are planned for the coming months.</p>
Spain	Basic Situation:	In general municipalities are not involved in information provision and awareness raising among the inhabitants and the economic players.
	Action in the period since 1980	None.
	Recent changes and comments	<p>During the first half of the nineties, some municipalities have been working to create local energy agencies under EC support schemes.</p> <p>But, to some extent they are not following the European Commission's goals, because in general these local energy agencies are not independent from local authorities, nor involving local energy players.</p> <p>The city of Barcelona has been doing some active work on energy awareness raising and information provision between 1995 and 1999. The last measure in this period was the creation in 1999 of a new Energy Information Centre in the city (called 'Oficina de Recursos per a la Ciutat Sostenible'), opened to the public and showing what to do at domestic level to increase energy efficiency and to use renewable energy in the city.</p>
Sweden	Basic Situation:	All Swedish local authorities carry out work on Local Agenda 21. A crucial part of that work is to actively involve citizens and develop their commitment.

		<p>Many Swedish local authorities are carrying out special environment investment programmes. Such programmes are financed from national government funds within the scope of the government's Local Investment Programme.</p> <p>Local energy advisers and the regional energy agencies disseminate information and knowledge of energy efficiency and energy conservation.</p>
	Action in the period since 1980	The government's Local Investment Programme (LIP) was launched in 1998. SEK 2.6 billion has been granted during 1998 – 2002. The purpose of the programme is to speed up the changeover process to a sustainable and environmentally sound society and to increase the number of jobs. A great deal of the programme deals with environment and energy projects.
	Recent changes and comments	<p>LIP is now closed. The recently launched Climate Investment Programme (KLIMP) will replace LIP. The new programme focuses on climate change issues. The energy sector will also be of considerable importance in this connection.</p> <p>The government's Energy Bill 2002 suggests that local authorities should establish Local Centres for Sustainable Development, where local energy efficiency guidance, consumer guidance, co-ordinators of local Agenda 21 and KLIMP programmes will work together with the environmental and health staff of the local authority.</p>
The Netherlands	Basic Situation:	<p>Energy agencies are quite widespread involving the local authority, Chamber of commerce, energy companies and (social) housing associations.</p> <p>NOVEM plays an important role as a national agency and also has an important role on a local level.</p>
	Action in the period since 1980	<p>National sustainable building package: this package is based on a nationally standardised list of sustainable materials and measures and is used in the Netherlands as a guideline or checklist on which municipal agreements with market parties are based. The package is supported by a sustainability centre and a network (register) of organisations and companies involved with sustainable building projects.</p> <p>From 1988 to 1996 Novem, the Dutch Company for Energy and Environment associated with the Ministry of Economic Affairs, carried out the Municipal Energy saving Approach (GEA). This method required the local authority to prepare a policy plan for energy saving for different target groups and also to prepare a plan of execution. Novem provided subsidies with which the municipalities could finance the preparation of the plans. By 1995 almost five hundred municipalities had prepared an energy policy plan and one hundred and eighty of them had prepared a plan for implementation. The transition to actual implementation however, appeared to be a complicated and difficult affair since local authorities have few powers to enforce compliance.</p>
	Recent changes and comments	<p>Climate Covenants: An agreement the national authority made in 2001 with the local and regional authorities concerning the policy actions to be taken to reach the Kyoto goals. This so-called <i>Climate covenant</i> was signed in late 2001. The covenant includes some financial support for those local or regional authorities that sign up to commit themselves to a prescribed "ambition" level, Active, Fore-runner or Innovative. The climate covenant has a number of themes</p>

		<p>including general policy, municipal buildings and equipment, housing, business, agriculture transport, renewable energy and international action.</p> <p>Local and regional authorities can voluntarily sign up and enlist in a programme that looks a bit like a menu card. For the three different "ambition" levels⁹ a number of actions in various themes are defined. They can sign up to the "ambition" and programme that suits them best, but all levels are intended to be challenging enough to lift the local and regional climate programme to a higher level. In return the national authority will provide technical and financial support to help them to reach the chosen goals. It is expected that the programme will start next year.</p> <p>In the Netherlands many programmes on climate change and energy efficiency in fact operate by Gentleman's Agreements and local authorities have an important role in brokering these. Local authorities are supposed to take over the role of promoter and stimulator of energy efficiency. However, they have no specific financial resources to improve the energy efficiency, whereas the energy distributors have had budgets for their actions on energy saving (MAP-tax).</p>
United Kingdom	Basic Situation:	Many local authorities are actively promoting energy awareness via local energy advice centres, energy agencies, and action under their Local Agenda 21 programme.
	Action in the period since 1980	<p>Local authorities have administered grants for loft insulation for many years and other aid can form part of the grants provided for home improvements. One handicap is that improvements to homes are charged VAT at 17.5% while new homes are exempt from VAT.</p> <p>A programme of energy advice centres funded in the late 1970s and early 80s was later abandoned once the Conservatives took power and the oil price fell. In the 90s this programme has restarted with Energy Saving Trust money.</p> <p>Consumer protection departments have looked at sales claims by energy distributors and the effectiveness of energy labelling.</p>
	Recent changes and comments	<p>Many cities have set up energy agencies with EU funding following on from the development of energy advice centres set up in the 1970s-90s.</p> <p>This seems to be a developing role of local authorities.</p>

⁹ 'Active', 'Forerunning' and 'Innovative'.

4 - Conclusions

4.1 - Changing roles

The roles of municipalities are changing. This is perhaps not evident directly to the municipalities themselves – since municipalities are regulated by legislation and the legislation concerning liberalisation hardly ever mentions municipalities. But their roles are changing nevertheless since events outside their control are having an impact on municipalities.

4.2 - Municipalities as clients

With the opening of markets, municipalities will have to go out to public tender for their energy supply. In all countries there are stringent rules governing local authority procurement and over time the local authorities will be forced to compare suppliers. This is now a major consideration in the UK. It is apparent that with energy there are real advantages in purchasing in bulk and cooperation – as always when dealing in a market situation, you are able to exert an influence in proportion to your buying power so that the small consumer individually is a receiver of the market and a large consumer or wholesaler can become a controller of the market. British local authorities have long experience of purchasing in consortium and in this the British ethos of team working is undoubtedly an asset.

Energy is ideally suited to such purchase since one is purchasing an easily comparable product – a kWh or cubic metre of gas. Quality considerations are limited primarily to the source of electricity and now at last local authorities can, and are, having an influence on this by purchasing green electricity both in the UK and the Netherlands (In Sweden this is of doubtful utility since half the public supply comes from hydroelectricity). Energy efficiency services could in principle be an add on to an energy supply offer, but there is very limited evidence that this is a key criterion in sales. It is sufficiently difficult to assess offers when the tariff structure is a dog's breakfast of fixed charges and individual rates depending on time and consumption at a particular site. Trying to write in the impact of energy efficiency is just too confusing. Purchase considerations and energy efficiency investment considerations are therefore generally considered separately. However it is noted that on the domestic level, marketing in the UK might include such issues (British Gas recently ran a campaign directed at the domestic market that emphasised their energy advice services).

4.3 - The Municipality as a Producer and Distributor

The local authority's role as a utility is also changing. Local authorities are retreating from their involvement in utility services in some of those countries which have had a strong local authority involvement in the past. Thus in the Netherlands nearly all the formerly local authority owned utilities have been sold to the private sector. In Germany many stadtwerke are selling interests in their municipal companies to private investors or setting up joint ventures, particularly for their generating interests. However to date such a trend has been limited in other countries (eg. Austria and Sweden).

There seems to be a clear distinction between the role of production and that of distribution. Distribution remains a monopoly even if it is now heavily regulated and dominated by a business mentality.

4.3.1 - Production

Generation is a purely competitive business and it is clear that many municipalities find it difficult to see any role for themselves in this side of the market except where this is necessary to supply heat (either to district heating or in small scale CHP) or as a by-product of another service that they supply (e.g. refuse disposal). It

seems likely that municipalities will retreat further and further from their generation role conferring this to the private sector (probably even where heat is involved – many district heating utilities already buy in their heat).

4.3.2 - Distribution

Distribution appears to offer real opportunities however for the municipality to have an influence on energy policy. Unfortunately British local authorities have no influence on distribution by concession or otherwise, and so their experience cannot provide guidance. However there is evidence that local authorities could influence distribution via conditions on the concession where appropriate (such action has been seen in the Netherlands and Germany). In particular in the context of the German situation where the fee for the concession is fixed by law, there is scope to obtain benefits on other issues, such as energy efficiency or carbon emissions, through competition for the concession contract (Utrecht and Heidelberg provide examples, the former for new developments, the latter during renewal of the concession contract).

It appears that in any case local authorities will in any case work more closely with distributors in the future. In the UK there is no concession system, but the distributors have regulatory obligations to deliver energy efficiency and they have found that the local authority is an essential intermediary in delivery to the small consumer since it is the only body with the respect and contacts to be able to bring in all the local interests that need to be involved. As obligations for energy savings among small consumers become more frequent (and this would appear to be the most likely scenario for the energy services directive currently being proposed by the European Commission), these will have to be delivered in cooperation with local interests, which cannot realistically exclude either the local authority or the distributor.

4.4 - The Municipality as a Regulator and Planner

Roles in this sphere vary greatly particularly in issues like construction regulations which are nationally administered in some countries, e.g. France, or regionally in others (e.g. Austria, and recently in the UK where the Scottish Parliament has proposed applying stricter regulations in Scotland than in the UK as a whole).

While there has been concern prior to regulation that the power of local authorities to regulate and plan will be reduced in a situation where they have no direct control over distribution or production, there is evidence that their roles in this sphere may actually increase. In France, for the first time, local authorities have been instructed by law to cooperate in the preparation of regional energy strategies. In the UK the local authorities strategic coordination role in many spheres, including energy and sustainable development, is being emphasised in government advice. In Poland local authorities have been given the specific responsibility of coordinating energy networks in a local energy plan. The competition for the concessions for new development Liberalisation is not of course the same as deregulation (although the latter term is confusingly frequently used to describe it). Liberalised markets need regulation to create the confidence for competition and to compensate for the third party effects.

4.5 - The Municipality as an Awareness Raiser

Awareness raising is hardly ever a local authority obligation. It may be a concomitant of other legislation (e.g. the Home Energy Conservation Act in the UK), but no local authority has a legal obligation to raise awareness. Yet local authorities are the obvious means of approaching the small consumer, and in many countries have a significant role in practice.

Prior to liberalisation the responsibility for awareness raising was often or usually seen as the responsibility of the distributor or supplier, a type of quid pro quo for monopoly. Distributors dropped this almost immediately on liberalisation except where it is an obligation imposed by the proprietor (local authority) or regulator, or where they provide a service on behalf of the local authority (the case in Umea for example).

However if governments have ever more stringent targets for CO₂ reduction, as seems likely, all the evidence points to the need for an increasing involvement of local authorities in awareness raising. This may either be imposed on the distributor (as in the UK) by the regulator or be imposed directly on the local authority (as via the new energy counters being set up in 100 French towns). Alternatively it may be encouraged by the provision of incentives via recycled energy taxes, e.g. via the Energy Saving Trust.

The key question is of course, how is this to be funded. As long as local authority budgets are tightly controlled, and there is no income from utility activities, this is likely to be limited. However if a real source of income is affected to this role, then real action is likely to take place. It is a role that local authorities seem to take up with enthusiasm when it is given to them. Watch this space.

5 - IEA Demand-Side Management Programme

The International Energy Agency (IEA) was established in 1974 as an autonomous agency within the framework of the Economic Cooperation and Development (OECD) to carry out a comprehensive programme of energy cooperation among its 25 Member countries and the Commission of the European Communities.

An important part of the Agency's programme involves collaboration in the research, development and demonstration of new energy technologies to reduce excessive reliance on imported oil, increase long-term energy security and reduce greenhouse gas emissions. The IEA's R&D activities are headed by the Committee on Energy Research and Technology (CERT) and supported by a small Secretariat staff, with its headquarters in Paris. In addition, three Working Parties are responsible for monitoring the various collaborative energy agreements, identifying new areas for cooperation and advising the CERT on policy matters.

Collaborative programmes in the various energy technology areas are conducted under Implementing Agreements, which are signed by contracting parties (government agencies or entities designated by them). There are currently 40 Implementing Agreements covering fossil fuel technologies, renewable energy technologies, efficient energy end-use technologies, nuclear fusion science and technology and energy technology information centres.

The Demand-Side Management Programme is a relatively recent collaboration. The 17 Member countries and the European Commission have been working since 1993 to clarify and promote opportunities for DSM.

Australia	France	Spain
Austria	Greece	Sweden
Belgium	Italy	United Kingdom
Canada	Japan	United States
Denmark	Korea	
European Commission	Netherlands	
Finland	Norway	

A total of 10 Tasks have been initiated, 4 of which have been completed. Each Task is managed by an Operating Agent from one of the participating countries. Overall control of the programme rests with an Executive Committee comprising one representative from each contracting party to the Implementing Agreement. In addition, a number of special ad hoc activities--conferences and workshops--have been organised. The Tasks of the IEA Demand-Side Management Programme, both current and completed, are as follows:

Tasks

Task I	International Database on Demand-Side Management
Task II	Communications Technologies for Demand-Side Management
Task III*	Cooperative Procurement of Innovative Technologies for Demand-Side Management
Task IV*	Development of Improved Methods for Integrating Demand-Side Management
Task V*	Investigation of Techniques for Implementation of Demand-Side Management Technology in the Marketplace
Task VI*	DSM and Energy Efficiency in Changing Electricity Business Environments
Task VII	International Collaboration on Market Transformation
Task VIII	Demand Side Bidding in a Competitive Electricity Market
Task IX	Municipalities and Energy Efficiency in a Liberalised System
Task X:	Performance Contracting

* completed Task

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