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## Towards low energy cities with a high quality of life for all

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***In Europe, one of the most pleasing answers to the current energy and climate crisis comes from the local level. Hundreds of mayors have signed a covenant by which they commit themselves to exceeding the Energy & Climate package objectives adopted by the European Parliament. Energy Cities, a local authority association, welcomes their willingness to take the matter in hand and urges them to stand up for a “low energy city with a high quality of life for all”.***

Mid-December 2008: The European Union adopted its Energy & Climate Package. February 2009: 350 mayors committed to reaching and exceeding these objectives by signing the Covenant of Mayors. April 2010: 1,600 European cities – including 24 capital cities – had signed the covenant. But what is really at stake for these mayors, beyond their commitment?

Enough of words and figures, the time has come to implement ambitious, not to say radical policies. The alarm raised by the International Energy Agency (IEA) in November 2009 is eloquent: “Current policies put us on an alarming fossil energy path”. Such policies, however, should be aimed at making all societies -at all levels and taking their diversity into account- less vulnerable to climate change and the depletion of energy resources, especially in cities, which concentrate 80% of the European population.

### Setting the tone

Local authorities conceive the urban system which largely determines energy use in their territory through the following components: urban planning, land use policy, building energy performance, accessibility of services and shops, mobility planning and the sharing of public space amongst all users, etc.

A low energy urban system is not, therefore, a collection of stationary (buildings) and moving (vehicles) objects in a territory. It is a complex set of relations linking said objects, like whether or not it is feasible to safely cycle to work or to the shops; the capacity to mobilise local biomass for space heating purposes; the connection between waste and energy policies, etc.

Such a level of complexity makes things even more difficult, but it also involves huge, not to say unlimited, potential in terms of innovation. Laws can help regulate this, but not alone; it has to be worked into the intricacy of urban development.

In addition to being the urban system architect, the role of a local authority is also to conduct the musicians performing in its territory. These musicians are numerous and their instruments varied: town planners, architects, plumbers, transport officers, housing managers, energy specialists and users. They are not always ready to play the same score. As with any system, a score is not a collection of notes, but an original arrangement that produces a specific piece of music.

Local authorities must set the tone, be exemplary, point out the path to take, catalyse, engage local stakeholders and rely on the most dynamic ones to build policies that will change the course set. This change in governance represents a considerable change in comparison to current urban development practices. But it is the only way forward. However, realistic observations show that local authorities are torn between opposing forces.

## **Coming to terms with this contradiction**

Many local authorities are aware of their responsibilities towards global issues and are taking measures to improve building performances, develop cycle paths, install PV panels, use biogas from wastewater plants, etc. But all too often this has more to do with a collection of ad hoc measures than with a well co-ordinated policy. They know, however, or have a strong feeling that they will have to do more and revamp their policies to adapt to the new energy and climate paradigm that is currently emerging.

But they are also aware that in addition to requiring human and financial resources, these changes will also affect organisational practices, habits and lifestyles. Although using a car emitting low levels of carbon dioxide (CO<sub>2</sub>) does not involve major behavioural changes, cycling to work instead of going by car is a totally different story.

Such a contradiction may have a crippling effect, all that is not in vital need of change today being likely to be postponed to a later date. The risk is that local authorities will develop a paradoxical attitude: they know that they have to change course in the long term but are reluctant to take the necessary short and medium-term measures to do it. This is the main danger for cities, and others!

Two complementary paths can help them come to terms with this contradiction:

- make people actually *want* the necessary changes, by showing them how a “low energy city” can lead to high quality of life;
- do not remain isolated, join a regional, national or European movement of local authorities with similar objectives, exchange ideas with and learn from counterparts and be proud of being part of a transformation and co-operation process.

## **Tangible objectives**

Cities are committed to “overall” figure-based objectives. But it is not easy to translate these macro-economic objectives into practical targets and operational measures. “Factor 4 by 2050”? Declaring oneself in favour is quite easy when the deadline seems so far away. But what will a “Factor 4” city look like in 2050? And what about a “3x20 city” in 2020?

What does it mean in terms of lifestyle, quality of life, social justice and economic activities? We are clearly at a loss for concepts and practices that will help us imagine the potential futures of such a city and, of course, the transitional routes leading to it.

Energy Cities intends to bridge this gap by bringing together the global and local levels in a discourse that local decision-makers and citizens can easily understand and make their own. This is why Energy Cities proposes using the simple denomination of “low energy city with a high quality of life for all”.

Like any denomination seeking to translate complex ideas into simple terms, the above denomination is restrictive. It does not refer to renewable energy, for instance. But it draws an analogy with the now well-known low energy buildings. This wording is certainly preferable to “passive city” – a not really enticing term, despite the analogy with “passive houses”-, is more illustrative than the too evasive “Factor 4 city” and sounds better than “post-carbon” or “low carbon city”, a vocabulary still reserved for specialists.

Low energy cities deal with energy as an issue in itself and not as a by-product of climate change. It has to be said that energy is a stronger inducer of microeconomic actions than climate change, especially in the absence of significant fiscal incentives, Sweden and its carbon tax being the exception that proves the rule.

By exposing the inconsistencies of our development model, the recurrent oil crises - or the anticipation of future oil crises – are giving a new boost to public and private strategies. It is, therefore, the fear of our physical, economic and social energy vulnerability that motivates action, as the fact that energy poverty has become a highly topical issue testifies.

In a nutshell, local energy cities with a high quality of life for all:

- Need a territory that is reconciled with its energy supply, that assesses its impact on natural resources and that measures the emissions and waste generated by its energy use so as to be able to reduce them by implementing figure-based targets;
- Need local authorities to cross-reference all their sectoral policies with long, medium and short-term energy and climate objectives, which implies that all these objectives will be negotiated at an early stage in policy-making or when mounting a project;
- Mean looking for solutions that are the closest to the citizens and to the problems to be solved by mobilising local potentials in a systematic and integrated way, starting with energy efficiency and energy savings within the urban system, then using locally available renewable energy resources and then turning to complementary exogenous supplies – in application of the idea of “energy subsidiarity”;
- Reintroduce common sense in the way we consider energy; human beings and economic activities do not need energy as such, they need services that use the least possible amount of energy, preferably from readily available local sources.

Such an approach has much to do with the quality of life on a daily basis, economic prosperity and social justice.

### **Intelligent routes**

Introducing a momentum for change is only possible if the goal pursued is perceived as progress. This is quite a difficult issue, as progress is too often assimilated to the quantitative accumulation of physical goods consuming energy and raw materials, regardless of their environmental impact. This desire is still a strong decision-making driver at the beginning of the 21<sup>st</sup> century, even more so amongst those who have been kept away from it.

There is no denying that such progress has led to significant improvements in quality of life, or that there are limits to it. But beyond this deep-set trend, new development logics are emerging, which are based on the above mentioned low energy city principles and give priority to a high quality of life for all. These are generally well received by the general public.

In a recent study on the quality of life in cities in which Energy Cities collaborated, the European Environment Agency (EEA) noted: “The urban environment influences human physical, social and mental well-being, therefore, a healthy, supportive environment is indispensable to quality of life in cities”.

“People need to breathe clean air, have access to clean drinking water and adequate housing conditions, and enjoy quiet and peaceful places. Accessible, good-quality, well-maintained green spaces and playgrounds, modern transport systems and safe, walkable neighbourhoods that encourage physical activity and social interactions are key constituents of urban quality of life” (EEA, 2009).

All these expectations are consistent with a low energy city. The fact that 50% of all journeys made in Odense (Denmark) or in Groningen (The Netherlands) are made by bike and that cycling is staging a comeback in cities such as Paris or Lyon where it had been completely abandoned in the past is a sign that it is possible to reconcile low energy mobility, the sharing of public space, physical activity and health.

The fact that heat from old coal mines in Heerlen (The Netherlands) is used to heat part of the city, thus giving a new lease of life to a local activity, demonstrates that resources can be found within easy reach, they just need to be put to use. Geneva did the same by using the water from its lake to provide air-conditioning for buildings belonging to international institutions (LaRevueDurable, 2007).

When the mayor of Brno-Nowy Liskovec (Croatia) decided to retrofit multi-family buildings to standards below 50 kWh/m<sup>2</sup>/year, she demonstrated that it was possible to improve comfort and reduce the energy bill for households, whilst proposing a solution to all Eastern European countries and beyond.

In Besançon (France), labelling municipal drinking water “La Bisontine” aimed to demonstrate the absurdity of buying mineral water, with its attendant costs in transportation, energy use, emissions and waste.

The fact that 84% of Växjö’s (Sweden) heat requirements are covered by biomass shows that it is possible to achieve ambitious energy and climate objectives whilst stimulating the local economy, the money spent on energy being injected locally.

In new car-free neighbourhoods, as for example in Freiburg (Germany), all the services we need on a daily basis can be accessed on foot or by bike and children can play to their hearts’ content in revegetated streets; they have a tram service and feature a number of “passive” standard buildings where heating costs are limited to 10 euros per month, and even “positive energy” buildings. These neighbourhoods give an idea of what a city operating on these principles would be like. (LaRevueDurable, 2008).

When Rennes invited its population to its Open Forum on “post-carbon Rennes” to imagine collective, “impacting and realistic” initiatives aimed at “drastically reducing” the city’s CO<sub>2</sub> emissions, it was experimenting with new forms of governance.

There are many other examples of this type. Thinking of a low energy city with a high quality of life for all is not just, therefore, an intellectual composition but rather a democratic, participative and open exercise which demonstrates that the routes to intelligent energy are already put into practice.

### **An initiative without precedent**

Acting locally is all well and good. But realising we are part of a massive movement is an irreplaceable source of encouragement. This is precisely what the Covenant of Mayors is aiming at in Europe. Such a voluntary commitment of local decision-makers to supporting – and sharing – a European policy is probably a first in the history of the European Union.

Movements on this scale are usually set up to protest against EU policies, not to approve them. With the Covenant of Mayors, it is quite the opposite. Mayors are unilaterally committing themselves to exceeding the EU objectives set for 2020 by reducing CO<sub>2</sub> emissions in their territories by 20%, reducing their energy use by 20% and increasing the share of renewable energy to 20% by 2020.

This does not just involve municipal infrastructures: citizens, businesses, the housing sector, transport and all economic and human activities are also concerned. A challenge for sure!

Mayors are committed to measuring the energy used in their territories, its uses and origins, etc., as well as the corresponding CO<sub>2</sub> emissions, so as to establish a baseline that can be used for defining objectives and evaluating results. Then, the signatories prepare an Action Plan in liaison with local players and citizens. These plans must be finalised within one year of signing the Covenant. Two years later, a first progress report is to be presented on the measures carried out so far.

The European Commission’s Directorate General for Energy and Transport is at the origin of this initiative, which was expected, and even demanded, by cities and local authority networks, including Energy Cities. Initially composed of a small number of large cities, the Covenant of Mayors now appeals to all cities committed to moving forward.

It is indeed up to the European society as a whole to come to grips with the European objectives and face up to the energy and climate constraints, now and in the future, by making the necessary trajectory adjustments. The time of pilot-actions must now be followed by massive changes.

We all know that old frameworks are still too often obstacles to change. Beyond strictly local aspects, this commitment of cities also provides Member States and the European Union with a unique opportunity to learn from these initiatives to achieve the objectives they have set themselves in terms of legislation, taxation, financing etc., whilst encouraging the transition towards low energy cities with a high quality of life for all.

This multi-level governance experiment also provides valuable support to European negotiators in the post-Kyoto period.

***IMAGINE all the cities in Europe...***

*Although an increasing number of cities are committing themselves to achieving the European objectives, notably through the Covenant of Mayors, they are also coming up against two major obstacles: the difficulty for any society to imagine, measure and accept the extent of the changes that are needed and the necessary means to implement them.*

*Helping overcome such obstacles is the objective of the Imagine think-tank which is the continuation and prolongation of an initiative called "Imagine the energy future of our cities" within the time horizon of one generation or more, launched in 2006 by the Energy Cities network as a platform for foresight, collaboration and exchanges leading to action and change.*

*Imagine unites a number of partners from the public, private and community sectors, all committed to working together on developing a new vision of the relationship between energy and territories. Through innovative work methods, Imagine aims to facilitate the transition towards the "low energy city with a high quality of life for all" and to contribute to enriching the reflections and strategies of social, institutional and economic players at all levels.*

<http://www.energy-cities.eu/IMAGINE.89>

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**For further information**

[www.energy-cities.eu](http://www.energy-cities.eu)

[www.eumayors.eu](http://www.eumayors.eu)

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