Opinion of Energie-Cités

In response to the Green Paper on Adaptation (COM/2007/0354 final)

Energie-Cités welcomes the Green Paper on Adaptation and starting of a European debate on the issue involving the local stakeholders. Indeed, cities have been long considered as barely places that *need to adapt to the impacts* of climate change. Although climate change is a global issue, urban areas – responsible for nearly 80% of global CO2 emissions – have also a crucial role to limit CO2 emissions and thus *prevent further climate change* (mitigation).

Responsible for urban and mobility planning, construction, energy production and consumption, cities are challenged from several angles: municipalities have to prepare for a low-carbon future while not harming, but improving quality of life of their citizens and also alleviating negative impacts of climate change.

Integrated measures, such as *increasing vegetation in cities* (green roofs and walls) have multiple benefits: due to a better insulation it needs less energy for heating and cooling and thus less CO2 emissions (mitigation) while it also helps to avoid further CO2 emissions and heat pollution by electrical air-conditioning and finally, green roofs help to improve air quality via oxygen emission and CO2 absorption of plants.

In order to apply such integrated measures, cities have to be *aware of potential impacts on climate change* in their areas as well as *costs and benefits of integrated adaptation and mitigation measures*.

1. Urban areas vulnerable to impacts of climate change

Urban areas are exposed to impacts of global climate change in several ways: extreme weather conditions, gales and hailstorms, flooding, heat waves and drought can cause expensive damage in local properties and infrastructure, but also infer human and social costs (injuries, illnesses and death) and finally disrupt ecological balance.

These *impacts incur multiplied in built-in areas,* which urges cities for early action. For instance, in summer heat-waves buildings not only absorb heat during the day and keep it for the night but also external heat emitted by electrical air-conditioning systems used in buildings and cars contribute to the creation of heat island in cities.

2. Integrated mitigation and adaptation: low cost measures with high return in cities

As highlighted in the Green Paper, the cost of inaction would be higher, than the cost of early action. This tells us that *mitigating* further climate change by reducing CO2 emissions of cities pays off. Mitigation should be our primary focus, accompanied by necessary measures to *adapt* to unavoidable effects of climate change.

There is a broad consensus[1] on *energy (and resources) efficiency* being the most cost-effective measure to act on climate change. Improving the *insulation of new and existing buildings* – combined with vegetation of cities and roofs – do not only benefit of reduced heating demand and CO2 emission in winter (mitigation), but also reduces the need for air-conditioning in summer (adaptation), and thus eliminate the risk of black-out on the electricity systems. Complementing insulation and vegetation of buildings with *ground heat exchanger* and a *ventilation system with heat recovery*, as well as a *solar absorption cooling system* can further improve internal and external air quality, while reducing buildings vulnerability to extreme weather conditions and improve energy security of cities. Such integrated measures have also the benefit of improving local competitiveness (creating local jobs and services) and quality of life.

Smart urban and mobility planning can limit further the need for adaptation. Planning new neighborhoods and amending existing ones should happen in a way that favors accessibility against mobility. Combining residential areas with commercial, social and work places can limit everyday commuting, while well integrated green parks and recreation facilities can avoid the need for 'weekend-commuting' and render life of citizens more pleasant.

[1] Among others stated in following reports: A cost curve for greenhouse gas reduction, McKinsey Quarterly 2007 Number1. The Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report estimates that by 2020 CO2 emissions from building energy use can be reduced by 29% at no net cost.

3. Local authorities act on climate change

Local authorities, in their capacities as urban and mobility planners, service providers, energy consumers and producers in their territories, they are the closest to local businesses and their citizens to lead by example and motivate them also to act on climate change.

European cities have done great work that should be acknowledged. Pioneering members of Energie-Cités have placed energy and climate change in the core of their political agenda. Front-running cities have set ambitious targets on CO2, some even aiming at becoming fossil free by the mid of the century.

Indeed, our cities have to change paradigm and reinvent a more sustainable energy future, in order to meet the challenges of climate change and energy security, while improving quality of life.

Technical solutions and pioneering practices exist, however these are often isolated and their replication potential largely determined by the national legislative and fiscal frameworks.

4. EU support for boosting local action

The European Union has adopted revolutionary commitments in March 2007 to *reduce CO2 emissions by 20% by 2020* via increasing the share of renewable energy and improving energy efficiency. To deliver on these targets, a strong involvement of the local level will be necessary. The EU has crucial role in creating the necessary urgency and encouraging as well as enabling national and local decision makers to take action by:

- Promoting the *integration of mitigation and adaptation policies and measures*, as well as looking at climate change as a cross-cutting issue to be integrated in sectoral policies
- Setting more *ambitious building standards* (for instance, min U-values in insulation) and reviewing the Energy Performance of Building Directive, extending its scope for smaller buildings
- Requiring Member States to set up integrated *national climate action plans*, involving and enabling the local and regional authorities
- Allocating / earmarking *EU funds for integrated action* on climate change, and avoid supporting any measures having an effect of green house gas emissions, thus undermining mitigation (i.e. adaptation measures should have a positive or at least neutral mitigation effect)
- Raise national and local *awareness and knowledge* on climate change and its impacts by stimulating the exchange of tested practices and involving local stakeholders, as key players in adapting to climate change (for instance local funds for energy-efficiency and carbon reduction)

5. Energie-Cités helps 500 European cities to prepare for their energy and climate future

- To set up their comprehensive local climate action plans: *Local Climate Plans* - developed in France in cooperation with ADEME: http://www.energie-cites.eu/IMG/pdf/guide_plan_climat_fr.pdf
- Raising awareness on public buildings' energy consumption and CO2 emissions, suggesting measures for improvement via the *Display Campaign*: www.display-campaign.org
- Setting benchmarks of pioneer cities and invite others to *IMAGINE their energy future* within a multidisciplinary approach: www.imagineyourenergyfuture.eu
- *Reinforcing capacities of local authorities* and stimulate transfer of knowledge and experience via seminars, conferences and study tours, as well as a database containing 500 local practices: www.energie-cites.eu

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Energie-Cités represents 500 European local authorities and promotes local sustainable energy policies.
www.energie-cites.eu