

## Energy as a Key Element in the Sustainable Development of the City Region of Gauteng - EnerKey -

Second phase planning meeting, 7. March 2007, Joburg  
Work Group I “Energy Supply and Conversion Technologies”

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Who	Topics	remarks
LE	Introduction and short presentation (see attachment) on the topic Discussion follows right away	
LE	Describes the planned procedures, for supply assessment a common and thorough definition of the supply situation (demand) is necessary. Building up on various representative energy supply cases the identification and assessment of the adequate solution (fuel and supply technology) can follow.	
<b>State of City Energy Report – setting the energy baseline</b>		
LE	<ul style="list-style-type: none"> <li>- sees a priority issue in the compilation of a report “State of Cities Energy Report” for all three municipalities according to what has been done by SEA in the report for 16 Cities</li> <li>- State of Energy Report for Ekurhuleni is already available</li> <li>- current data would need to be constantly included to update the report on a regular basis</li> </ul>	
EL	- Such a reports will be issued for Joburg soon, a tender has been put out which was closed at 6. of March. First results will be available around July 07	
<b>GHG-Inventory – sharing of tasks</b>		
EL	- Joburg wants and needs a GHG inventory, current data are compiled by ICLEI rules which do not match with the national rules, which are based on IPCC	
HA LE	- IPCC rules need to be followed, the change and this task, however, are not a research question, the tools and the approach must be decided by the City authorities as is the compilation of data for setting the baseline, EnerKey can help in further developing scenarios based on various measures and the effect on GHG development and mitigation	
<b>Energy management (EM)</b>		
LE	<ul style="list-style-type: none"> <li>- EM is a task concerning energy supply and demand, tools and instruments can be developed and provided by EnerKey, especially the City of Stuttgart offers to introduce planners and City responsables in the processes of “Intracting” and their approach on how to reduce energy demand and manage the energy supply for municipal buildings, interested partners can approach various people from Stuttgart</li> <li>- The IT-tools used for EM and the energy monitoring of buildings could be transferred to the Cities</li> </ul>	<p style="text-align: center;">involve City of Stuttgart</p> <p style="text-align: center;">demand for tools needs to be specified</p>
<b>Energy supply technology options, renewable energies</b>		
	<ul style="list-style-type: none"> <li>- Important task is the assessment of the potential of renewable energies in and for the cities</li> <li>- Especially the ‘biomass’ potential needs thorough attention (e.g. Joburg is a green forest city!)</li> </ul>	

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	- The potential for solar water heater (SWH) is thought to be big, but exact quantification is missing, also the pattern (time line) of hot water use is not known, a market survey for SWH is under way, but details on technology specification need to be assessed still.	
	- Cooling and climatisation technologies using renewable energies (solar, geothermal) also have a large potential; however they are largely not quantified, technologies should be identified and characterized, geothermal (surface) technologies, also passive elements (e.g. pre-cooling and pre-heating in surface-soil-pipes) is largely unknown. - There is a large potential to use renewable climatisation and cooling technologies in SA cities, but mainly unexplored	
	- Biofuels are an important option to affect energy use in the transport sector, several projects are already underway, parts of the (Joburg) city car fleet already use bio-fuels (e.g. Metrobus, waste collectors, city car fleet). The impact of such programs e.g. on energy use or air quality is not regularly assessed.	
	- In domestic houses the use of (gelled) bio-ethanol may be an interesting option, the effects on energy, but also on socio-economic aspects are largely not known, biogels are presently also not widely available	
	- The use of fuels for domestic cooking, e.g. coal, also paraffin, needs to be improved considerably. There are serious hazards to air quality (health), energy supply and also fire. - Harold Annegarn (UJ) has submitted a proposal to SANERI to investigate various methods, especially the Basa Njengo Magogo method for coal burning - a test facility for cooking and for cooking devices will be installed and be available for further detailed investigations, scenarios on future developments and the impact on environment and energy can be done within EnerKey.	
<b>Political options</b>		
	- The options of the city to influence the use of energy supply and conversion technologies are considered to be small, maybe the potential for the cities is not fully exploited so far, measures and the possibilities for implementation on a municipal level need to be assessed	
EL	- The CDM mechanisms are not exploited very much in South Africa. However, this is a very interesting option and may help to get some projects over the barriers. The EnerKey group is asked to provide some assistance to identify possible CDM projects and assess their effects on energy economics and project development - From German side also TÜV Rheinland may assist in this topic and question	Joburg wants to act on that
<b>Timeline and further procedures</b>		
	- A range of the raised questions of the cities may be solved in a short type of work, which can be done e.g. by students in their master theses - if there is a need for such work the cities may approach the university any time to find a solution within short time	
	- The partners and participants agree on a common exchange of data bases and information in the supply side sector - The city (Joburg) will specify and announce their needs towards the EnerKey consortium, an appropriate partner to solve the question will then be identified	
	- The partners will be asked to supply an declaration of interest or letter of intent to participate in the EnerKey project	

Comments, remarks and improvements are welcome. Please contact: [le@ier.uni-stuttgart.de](mailto:le@ier.uni-stuttgart.de)

Ludger Eltrop

12. March 2007