Workshop "Energy Efficient Communities – technological strategies and their implementation"

Salzburg
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Future perspective "On the way to energy optimized communities" – Statements and Discussion

Participants:
Hans Günther Schwarz (bmvit), Peter Cunz (IEA), Ina Homeier-Mendes (City of Vienna), Herbert Pairitsch (Infineon), Robert Horbaty (EncoAG), Engelbert Spiß (Neue Heimat Tirol)

Moderation:
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Summary

The previous presentations of the Workshop highlighted the main results and key findings of "Annex51 Energy efficient Communities" as well as ongoing research projects with relation to communities. In general the conclusion can be summarized as:

- Community approach will be relevant in future due to economic aspects, achievable co-benefits etc.
- Key issues for energy efficient communities are identified, but there are further challenges for broad implementation
- How to strengthen driving forces, create win-win-situations etc.
- How to steer processes with a lot of stakeholders in an efficient and effective way? How can a strong/clear leadership be initiated?
- Which policy instruments are available, which have to be further developed?
- Which indicators are useful for planning and evaluation?

Details can be found in the presentations of speakers.

The discussion was focusing on future perspectives. In their initial statements participants highlighted their perspectives on energy optimized communities.
Hans Günther Schwarz told about several initiatives such as the Smart Cities initiative of the European Commission or the Urban Europe program within the Joint Programming Initiative. This leads to a demand for an advanced information flow between the programs but also between research and programs.
Regarding international targets on climate protection Peter Cunz presented some remarkable facts which show the relevance of communities. Residential and commercial buildings account for 1/3 of global final energy use. Due to rising population the energy demand of the building sector will be more than doubled by 2050. Today 50% of the world's population lives in urban environments, in 2030 it will be 60%. They consume 2/3 of total primary energy, of which 60% in buildings. To reach the goal of max. 2º Celsius an additional investment of US$ 5 trillion is needed until 2020. 2/3 of the required additional investment is seen in the building sector. For successful implementation the encouragement and

empowerment of local authorities to develop and implement intelligent policies is seen as an urgent need.
Ina Homeier Mendes emphasized that urban planning has a holistic approach. When talking about energy mobility issues always have to be included. Urban planning has not only to fulfil classic tasks of planning such as zoning but also has to deal with participation and awareness rising issues. In particular the transition of the existing building stock will be the great challenge. As urban planning will have an essential role in future development of energy efficient communities tools for practical application are highly required.
Herbert Pairitsch recommended learning from the smart grids initiative. A lot of fears on new technologies arose there, for the smart cities initiative he sees a chance to do it better to achieve a high commitment of population – which will be necessary. He emphasized that energy costs will anyhow be higher in future, thus investments in buildings have to be taken now – due to the long investment cycles. It is necessary to take the appropriate measures now – which require sufficient knowledge about the meaning of "appropriate".
Robert Horbaty sees a certain commitment on energy / climate protection targets. But downsizing the targets to concrete actions in the near future (backcasting) is very challenging. This fact needs supporting tools such as the European Energy Award (eea) but also a new focus of research. At level of the communities different technologies such as decentralized energy production, energy storage, building technologies, mobility and several players with different interest have to be organized in an efficient way.
Engelbert Spiß presented efforts of the housing association “Neue Heimat Tirol” to reduce energy demand of buildings by constructing several projects in passive-house-standard. In future bringing together aspects like location of buildings, energy and mobility will be a great challenge.

Further discussion included the issue of participation of people. Experiences show that participation and support of population, of tenants is not easy to achieve. Yet there are no proved methodologies for effective involvement. But there is a still a common agreement that there must be a focus on population: "smart cities" need "smart population". Instead of a required strong leadership for communities´ projects a shared leadership could take place.

Since technology is mostly available the role of urban planning was stressed in the discussion. A new understanding of the role of urban planning as well as the use of policy instruments with a higher degree of commitment was required.

In particular the example of district heating systems was discussed. Increased renovation of buildings requires new business models for the operation of district heating systems. In addition more binding instruments to facilitate expansion of grids were discussed.

C**onclusion, future perspectives**

A focus on communities means a much higher complexity which has to be managed. Programs for cities and research should focus on that challenge.

A holistic approach as well as different experiences in all the countries require new networks. Information transfer and knowledge-sharing will be crucial in future. The issue is not only to learn from flagship projects; also learning from local behaviour is necessary to change things.

Implementation in cities does not only need research and pilot projects. In particular the transformation of the existing building stock needs new business models, financial schemes and use of new policy instruments.

Communities approach means high relevance of cost effectiveness. Thus technological solutions which can be implemented on the actual price level are highly recommended. Furthermore there is a big challenge to make technologies cheaper.

A strong link between urban planning and energy planning is recommended. It is not only doing things step by step. Urban planning with a holistic approach has to include energy planning on a high level of importance and quality.

Energy optimized communities will be of high relevance due to their cost effective contribution to energy / climate change targets, but the benefits are not sufficiently obvious for all involved stakeholder. High complexity given by range of technologies and amount of stakeholders has to be solved by adequate organisation and process steering. Thus modified tasks of urban planning have to be developed.