



FRANKFURT AM MAIN

shining example



Building in Europe Local Intelligent Energy Forums



» Frankfurt am Main (pop. 640,000) is the largest city in the region of Hessen and is an internationally known financial centre – the largest in Germany. It hosts the German Federal and European Central Banks in addition to more than 100 other banks. The city also has a large chemical industry and Frankfurt Airport is a main European hub. Since 1990 Frankfurt has been active in the field of climate and environmental protection. The city is well known for its environmental planning, in particular its green belt and sustainable development programme (see www.frankfurt.de).

Abstract

Frankfurt am Main set up the “Lokale Energie Initiative Frankfurt – LEIF” as its intelligent energy Forum in February 2006. The Forum was founded on the city’s broad experience of energy planning and communication projects, and representatives of housing companies, energy companies, associations of craftsmen (Innungen), chambers of commerce, energy advisers, environmental organisations and political parties have all taken part in the sessions. Frankfurt was one of the first subscribers to the www.sustenergy.org campaign.

The main objective is to prepare an energy action plan and to evaluate and disseminate the results of actual projects. Our guiding principle is not to develop new guidelines and papers, but to invite everyone to make proposals to the energy action plan, to put these ideas into practice and to show how these ideas may help to save the climate.

Frankfurt has a wealth of experience in forming and running energy Forums, such as the Banks and Offices Energy Forum, the Rhine-Main Facility Management (FM) Forum, and in cooperation with industry, the “Totally Integrated Power Dialogue Forum”.

We know what could and should be done – the main task is to motivate and activate people!

OUR FORUM

Basic facts

Previous experience in running Forums

- » The Environment Department in Frankfurt am Main and the "Energierreferat" (municipal energy agency) have a really long tradition in energy Forums.
- » The "Banks and Offices Energy Forum" was created in 1992-5. The target was to develop methodologies and approaches to reduce the energy demand of new high rise buildings planned by the banks. The participants formed a closed group of people responsible for planning and energy in banks and business. The Environment Department of the City initiated the Forum, but later there was a contract whereby participating banks paid for external assistance and project costs. It was clear, that the resulting savings in investment and in future running costs of the buildings would be more than 100 times greater than the costs for getting more experience via the Forum! Therefore the advantages of an energy Forum should be obvious to the participants.
- » In the years 1995-8 the City in common with many other German cities set up their Energy Round Table. The subjects tackled by the round tables were different in each of the participating cities. Frankfurt chose to consider the modernisation of the residential building stock. In total 10 meetings were held with the aid of an external facilitator in which representatives of residential housing companies, craftsmen's guilds, energy companies, energy advisors, consumers' associations and tenants' organisations participated, the Forum agreed to focus on a definite project. Thus it was decided to examine how one could modernise a particular city district. As a result some competition developed between different participating energy companies (electricity, gas, oil). It turned out

that the craftsmen's guilds were not interested in CHP (combined heat and power) which was the city's priority in order to optimise the reduction in CO₂ emissions. The interests of the housing company and the tenants were different with the opposing effects of higher rent and lower energy costs. In the end the Forum went through an organised procedure which produced a result that was considered satisfactory by all the participants: It was decided to install a small district heating network with a CHP plant, combined with insulation of buildings. The higher rent was more than compensated for by the reduced heating bills.

- » Following this successful experience, the City's Environment Department in collaboration with the Energierreferat, the City's energy agency, decided to set up the LEIF Forum, (Lokale Energie Initiative Frankfurt am Main) whose objective is to prepare an intelligent energy action plan for the City in collaboration with many partners. The Forum will run for three years from 2006 to 2008 and a broad range of partners of the City, both existing and new, have been invited to take part in the Forum. The range of participating organisations was wider than in either of the previous Forums, including for instance educational organisations, the construction sector, scientific institutions, political parties, chambers of commerce and industry, environmental organisations, architects, etc. The Forum has been called an Energy Initiative because it is intended that the partners plan and carry out practical measures and not only talk and set up guidelines and papers.



Working method

- » Frankfurt has found that it pays to employ an external moderator. There are many professionals offering such a service.
- » The actual operation of the Forum depends on the size of the Forum and the target group. Closed-shop Forums have a particular target that is only of interest for the group itself. Open Forums, on the other hand, may cater for 100-200 participants. However it should be noted that Forums are different from a Conference or just a workshop. Therefore the number of participants in a Forum should not be too small and not too big so that one has a critical mass while at the same time having enough space to enable everybody to contribute.
- » Each Forum has to have a clear objective and an organisation that acts as organiser and leader of the Forum. This is frequently the City Council (department, energy agency, etc.), but in some cases (as in the FM Forum, TIP Forum), the organisers are private companies or the industry itself or – even better – a consortium of public and private bodies.

Benefits for members

A Forum should produce benefits to the participants. But as the results of the Forum are not obvious at the beginning, most of the advantages are, at first, only expectations and later develop following the exchanges that take place in a successful networking event. If the Forum gives time and space for informal contacts, the Forum should give the participants the chance to develop interesting contacts and ideas. A successful Forum is a Forum with satisfied participants, contributing to the Forum and taking some new ideas home with them.

OUR SUSTAINABLE ENERGY ACTION PLAN



Objectives

Although Frankfurt has previously run a number of Forums, the establishment of the Frankfurt Local Energy Initiative has involved the City in a new field. Previous Forums concentrated on a particular subject, for instance how to design low energy high rise buildings or how to modernise a city district, and the participants were a limited number of invited participants. LEIF will be different. The objective of the Forum is to prepare an energy action plan covering the entire field of energy use – buildings, households, industry, heat, electricity, CHP, efficiency, renewable energy. The sole target identified by Climate Alliance in May 2006 is to both reduce demand for energy and increase the use of renewable energy by 1%/year. The city is waiting with bated breath to see what proposals the Forum will come up with. After the local elections in March 2006, the new coalition set up between the Conservative and Green parties decided to take up this target in their coalition contract providing an ideal political climate for the LEIF! This demonstrates the importance of getting good political support and informing the key political decision makers.

Another important issue is the need to restrict the size of the main group of the Forum. It will be limited to 20 persons / organisations but at the same time thematic conferences and workshops for a broader audience will be organised to give others their chance to express themselves.



Activities

There are no direct results as yet since the activities have hardly started. However one can have a good idea of the main working fields based on past experience and the former Energy and Climate Protection Plan (published in 1995). The City of Frankfurt's environmental guidelines and energy efficient building guide provide a clear idea of what is needed. But, the main challenge will be to find suitable partners with whom to cooperate and transform these ideas into reality.

We will be guided by Aristotle's analysis of the meaning of the word "energy" in our future activities, in other words "how potential can be transformed into reality".

Financial aspects

The costs for participation in the BELIEF project include 90,000 for staff and 40,000 for external costs. The City's energy utility Mainova AG (75% owned by the City) runs a "Climate Partner Programme" with an annual budget of 200,000 used to provide grants towards the installation for solar thermal panels, energy analysis, the construction of passive houses and high efficiency circulation pumps for heating systems.

Achievements

The City of Frankfurt started their climate protection activities in 1990 and was a founding member of the Climate Alliance. The main achievements are:

- » The preparation of an energy plan at the same time as the preparation of nearly every city development plan. Most city districts are now supplied with district heating from three major cogeneration plants. This achievement will be extended in the future, as there are now more than 100 small CHP plants (5 kWel – 3 MWel) with a total capacity of more than 25 MWel in addition to the major plant. The City uses and promotes the use of renewable energy via solar thermal plant, photovoltaics and wood pellet boilers.
- » The completion of an energy and CO₂ balance sheet of the city in 2006. This will give an estimate of the changes in CO₂ emissions since 1990. The new commitment of the Climate Alliance is to achieve a 10% reduction in CO₂ emissions every 5 years – the BELIEF/LEIF action plan will contribute to this goal.
- » The installation of an energy management system for municipal buildings which collects data on energy use and proposes modernisation projects in a systematic way. The CO₂ emissions from the municipal building stock have been reduced by about 25% since 1990.
- » The establishment of initiatives and Forums designed to reduce energy demand in new office buildings in cooperation with a number of banks, investors and architects. Some of the most energy efficient office buildings in the world have been constructed in Frankfurt (Commerzbank, KfW-Bank, Helvetia-Insurance). In addition, many small Forums have been set up to improve cooperation, including an annual meeting that brings together all the owners of CHP plants.
- » The modernisation of the residential building stock in many residential districts by improving the insulation of walls, windows, etc., usually combined with the installation of a new district heating network and the installation of small scale cogeneration. In some of these projects the CO₂ emissions have been reduced by 50-80%.



RECOMMENDATIONS

» The role of the moderator is very important. Frankfurt finds **it pays to employ an external moderator**. The ideal moderator is someone experienced in the environmental field but NOT expert in the subject being discussed. The Forums should **clearly address different interests and should not avoid conflicts**, but instead try to facilitate the resolution of those conflicting interests by presenting all participants with a clear target – the best solution with both economics and the environment in mind. Having someone external to act as an external moderator **helps give a clear dispassionate view** in bringing out and resolving these conflicting interests.

» The operation of the Forum can permit an **active participation of the participants**. Important “ingredients” for a successful Forum include the organisation of an interesting Forum with good presentations that give participants the possibility to present themselves, the allocation of coffee breaks for open discussions and organisation of “open time” for presentations where participants may jump from one presentation to another.



Further information

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www.ip-building.de (TIP Dialog Forum and FM Forum Rhein Main)

BELIEF website www.belief-europe.org



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