

STAFF TRAINEE PROGRAMME BETWEEN BURGAS – MUNICH

Munich, 12 – 13 MAY 2011

Day 1: 12 May 2011

Participant's introduction:

Circle of Learning - Burgas Municipality participants:

Ms. Yoana Angelova – chief expert “EU Integration”

Mrs. Chanka Koralska – director of department “Building”

Mr. Dimitar Sotirov – senior inspector “Ecology and environmental protection”

Circle of Excellence - City of Munich participants

Dr. Gerhard Urbainczyk

Mr. Matthias Sinn

Mrs. Astrid Keidel

Ms. Ann-Christin Krüger

10:00 – 12:30 “The Sustainable Energy Action Plan of Munich”

Presentation by Mrs. Astrid Keidel

Background of the Sustainable Energy Action Plan (SEAP)

Different studies that are the base of the SEAP were presented. Background of it are documents such as “Local strategies for reducing carbon emissions by 50%, using the example of Munich”, “Climate protection and climate change”, “Munich-paths towards a carbon free future”, etc.

Based on a City council decision, the City of Munich adopted the targets defined by Climate Alliance such as – reduction of CO₂ emissions by 10 % every 5 years and 50 % reduction of CO₂ emissions compared to the reference year 1990 to be achieved by 2030

First package of measures is for the period 2010 - 2012 as SEAP is revised every two years.

SEAP: Organisational structure

SEAP organisational structure in Munich is divided into 3 levels of organization:

- **Steering committee** chaired by Deputy Mayor of the City of Munich and its members heads of all departments with task to take decisions to the entire process of SEAP development,
- **Project committee** lead by department of health and environment with task coordination, initiating and managing the entire process of SEAP development
- **8 working groups** – main task of the working groups is to work out measures and standards to specific topic
 - Housing construction – energy efficient construction in existing and new buildings
 - Urban development, urban land-use planning, landscape planning
 - Mobility and traffic
 - Energy-efficiency in the industry
 - Energy generation and distribution

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- Energy management in city-owned properties and in infrastructure
- Procurement, company vehicles and business trip
- Awareness rising

Contents of Climate protection Programme 2010

Within half a year, working groups elaborated 200 measures for climate protection, 55 of which were chosen for Climate protection programme 2010.

The key aspects of climate protection programme 2010

- Budget increase to 14 million Euro for subsidy programme of energy conservation
- Increase of energy efficiency of municipal non-residential buildings (supplementary 12 Million euro)
- Promoting of cycling
- Economization of electricity for street lightning and signal lights
- Promotion of programmes from change of user behaviour, energy efficiency of the municipal fleet and energy efficiency of office equipment.

Next steps

- Developing of city-wide reporting system;
- Evaluation of the climate protection measures;
- Development of new measures for Climate protection programme 2012;

Questions and answers

Question: Whose ownership are electricity and heat supply companies – private or public?

Answer: Both are owned by the City of Munich (Munich utilities SWM)

Question: How does subsidy of private investments happen? How do you distribute the subsidy?

Answer: Owners of building present business plan that comply with requirements given by the City of Munich in order to prove the investment needed then the size of subsidy is accounted. Once construction works are done they are proved by papers. Also loans with low interest rate can be provided by banks.

Questions: Do you change/update measures in SEAP every 2 years

Answer: Some of the measures remain the same, some of them are updated.

12: 45 Lunch

14:30 – 16:30 Site visit Information Centre (Bauzentrum) – Sustainable building

General information about the role and services offered by Bauzentrum:

Information centre includes permanent exhibition (regularly updated with new technologies) as well as temporary exhibitions

More than 35 consultants (experts in various fields from insulation to construction damages etc.) offer their advice concerning energy efficiency measures > brochure incl. their contact details available in the BauZ. Interested people can schedule an appointment in one of the BauZ meeting rooms (free service is offered for 30 min)

“Premium consortium” – for ex: windows check, insulation check, advice on existing law.

Various events such as seminars, workshops dedicated to professionals/general public, 3-days seminars, evening events (“after work”), forums on more dedicated issues, Solar Days are organized at the Bauzentrum.

Various supporting documents:
Publications every 2 months, technical magazines, brochures on existing/possible financial facilities (incl. general guidelines and checklist) > how to keep the costs down? How to ensure a good quality?

Promotion via Newsletters (3000 persons have already registered), fairs, advertising.

PV panels on the roof of the fair buildings with capacity 2 mw/h owned by the city of Munich were shown.

With the consultation provided by Bauzentrum citizens are aware what kind of measures they should apply, what materials should use, possible funding they can have as well as they are offered number of companies that can do the services.



18:00 Dinner

Day 2 – 13 May 2011

10:30 – 12:30 Climate protection activities of the City of Munich

Presentation by Dr. Gerhard Urbainczyk

General information about City of Munich

Targets for Climate protection at National level

- 2 degrees target - the increase of the global average temperature has to be limited at a maximum of 2 °C .
- 40% target of the German government - Pledge of the federal government of Germany to reduce its GHG-emissions by 2020 by 40 % (base year 1990), if the member states of the EU commit to reduce their emissions by 30 %.

Climate protection targets – Munich targets

- Self-imposed obligation of CO₂-reduction: minus 50 % CO₂-emissions by 2030 at the latest (baseline 1990) and accordingly minus 10 % every 5 years
- All households in Munich supplied with renewable electricity by 2015 and
- All households and commercial customers supplied with renewable electricity by 2025
- Nearly carbon free by 2058

Munich's fields of action and instruments used for climate protection

According to the case study of Oeko Institut 2004 fields of action with CO₂ reduction potential are as follow:

- | | |
|--|---------|
| • Renewal of building stocks, homes and businesses: | 818.000 |
| • Utilization of biomass and biogas in power plants: | 340.000 |

• Change of user behaviour in homes:	338.000
• Change of user behaviour in GHD:	209.000
• Change of fuels in heating systems:	150.000
• Energy-efficient housing construction:	134.000
• Lighting in administration buildings, commerce, schools:	112.000
• Energy conservation in industry:	86.000
• White goods equipment in private homes:	61.000
• Communication and media technology in private homes:	61.000

Total: 2.309.000

Renewable energy used by the city of Munich

- 11 Hydroelectric power stations Total annual production ca. 350 million kWh operated by Munich Utilities Company (SWM)
- 1.391 pv-facilities with 17,322 kWp, including Messe Riem project (incl. car park) 2.729 kWp + pv-plants in the region operated by SWM
- Wind power station with el. Power 1.5 MW supply of ca. 1,000 Munich households + windparks (under construction, onshore/offshore)
- Energetic use of biomass covers 0.68 % of the total electricity demand and 0.39 % of the total heat demand
- Geothermal energy covers the base load of the heat supply of the „Messestadt Riem“ (7000 inh.) over 80 % of the heat demand are covered
- 4.572 facilities with ca. 54.359 m² collector surface; Promoted 4.900 facilities with ca. 48.000 m² collector surface, incl. Ackermannbogen: 3.000 m² collector surface

Promotion of environmental and energy issues

Perspective Munich – Guideline Eco-Balance

Module „Climate protection and climate change“ within the framework “Guideline Eco-Balance”

- Providing background information (even beyond energy sector)
- Cross-departmental coordination of facts and figures
- Defining fields of action
- Reference to lead projects
- PR phase in 2010

Illustrated Report on Energy Management for municipal buildings by Construction Dept.

- Energy and water balances
- Activities of energy management
- Structural and technical measures
- Financial and capital investment programmes
- Resulting CO₂-reduction (10% every 5 years reached)

The alliance „Munich for Climate Protection“

- Founded on 18 July 2007 under the supervision of City Mayor Hep Monatzeder

- Leaders from politics and public administration, large Munich enterprises, from Science, institutions and organisations work together to enter in a constructive and open dialogue on climate protection problems and to develop joint solution strategies.
- Final conference “project phase” and kick-off “implementation phase” on 25 March 2010

Objectives:

- To develop a maximum of local reduction potentials in an economic and efficient manner, in particular carbon dioxide emissions
- To reduce CO₂-emissions by 50 % minimum by 2030 in comparison to 1990.
- Creating a networking platform for actors who seek to lower CO₂-emissions

Projects:

- „Klimasparbuch München“ Climate savings book
- Münchner Klimaherbst „climate autumn“-events
- Campaign car fasting
- Training course for teachers: „climate change and sustainable development - the contribution of raw materials“
- Munich agreement in modernization
- Munich quality standard
- Manual for builder-owners
- Workshop „energy saving in lighting“
- Biogas supply of a fuel cell of Telekom Germany
- Intensified PR for Carsharing
- etc.

Environmental Management System (for small and medium-sized companies)

City of Munich jointly with small and medium-sized companies has established association Eco profit Munich. Companies involved in it set their own targets, outline measures to limit the use of natural resources. The table below shows the achieved savings:

Einsparungen im Berichtsjahr 2007/2008 Savings in reporting year 2007/2008	21 Betriebe 21 companies
Strom/electricity (kWh)	15.933.705
Wärme/Kälte heat/cooling energy (kWh)	13.801.350
Treibstoff/fuel (l)	170.750
CO₂-Emissionen/CO₂-emissions (t)	14.370.424
Restmüll/residual waste (kg)	169.800
Rohstoffe/raw materials (kg)	50.700
Sonstige Abfälle//other waste (kg)	2.100
Wasser/Abwasser water/sewage (l)	62.518.400
Kosteneinsparung/savings (€)	3.223.781
Investitionen/investment (€)	18.344.428

Munich's best practice examples

- Solar district heating at Ackermannbogen
 - an innovative concept of heatingsupply of a development area with 319 apartments (heat and hot water) implemented under the aspect of sustainability
 - a concept with an extraordinary energy balance (up to 50 % share of solar coverage and 50 % district heating to be achieved)
 - Producing ecological energy without harmful emissions
 - Costs: ca. 4,5 Mill. € (1,2 Mill. € federal grants)
- Hydrothermal geothermal energy München-Riem
- Energy Concept for Freiham development project
- Hydro power at the Praterwehr weir

Question: You said that by the year 2015 you plan all households to be supplied by renewable energy and households and commercial customers supplied by RE by 2025, is this possible. Do you have potential to cover the demand? Isn't it too ambitious?

Answer: The territory and location of Munich does not have the potential to cover consumption demand so the City of Munich is planning to import or invest in countries with high RES potential.

