

DAS ENERGIEREFERAT

Frankfurt am Main

**Passive houses – saving of electricity
help against energy poverty
and against climate change**

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Brussels, 12th sept 2011 CECHODAS**

Climate and energy targets of Frankfurt am Main

**Reduction of CO₂-emissions by 50%
until 2030 – 10% each 5 years**

**Member of Climate Alliance, Energie
Cités, EUROCITIES – signed Covenant
of Mayors 2008**

**Energy and Climate Plan with 50
detailed measures 2009**

NEW project 2012

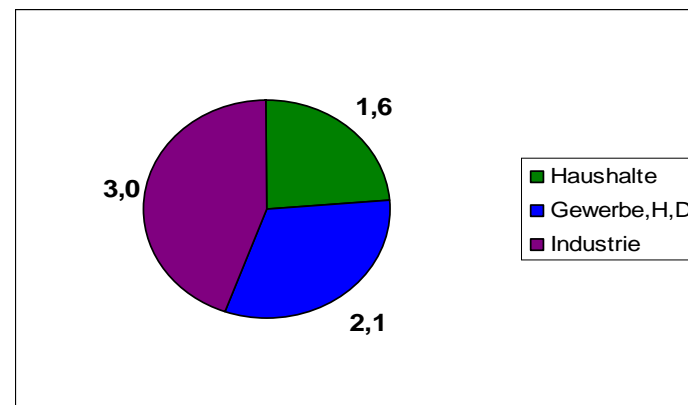
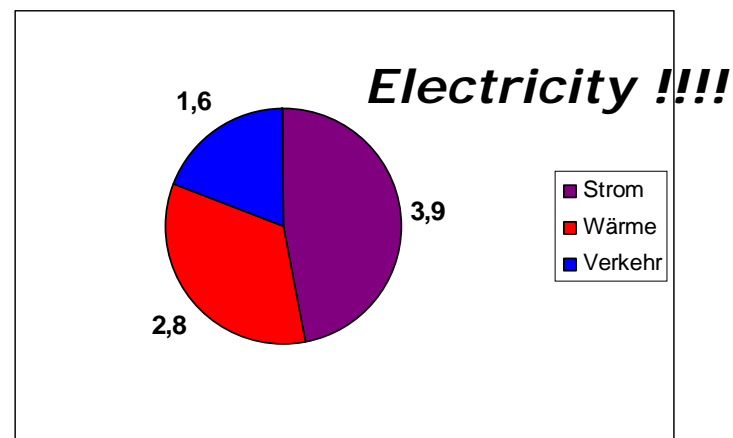
**Set up new plan: 100% supply from
renewable energies in 2050 – will work
only with energy efficiency**



Frankfurt am Main – City of Energy Efficiency

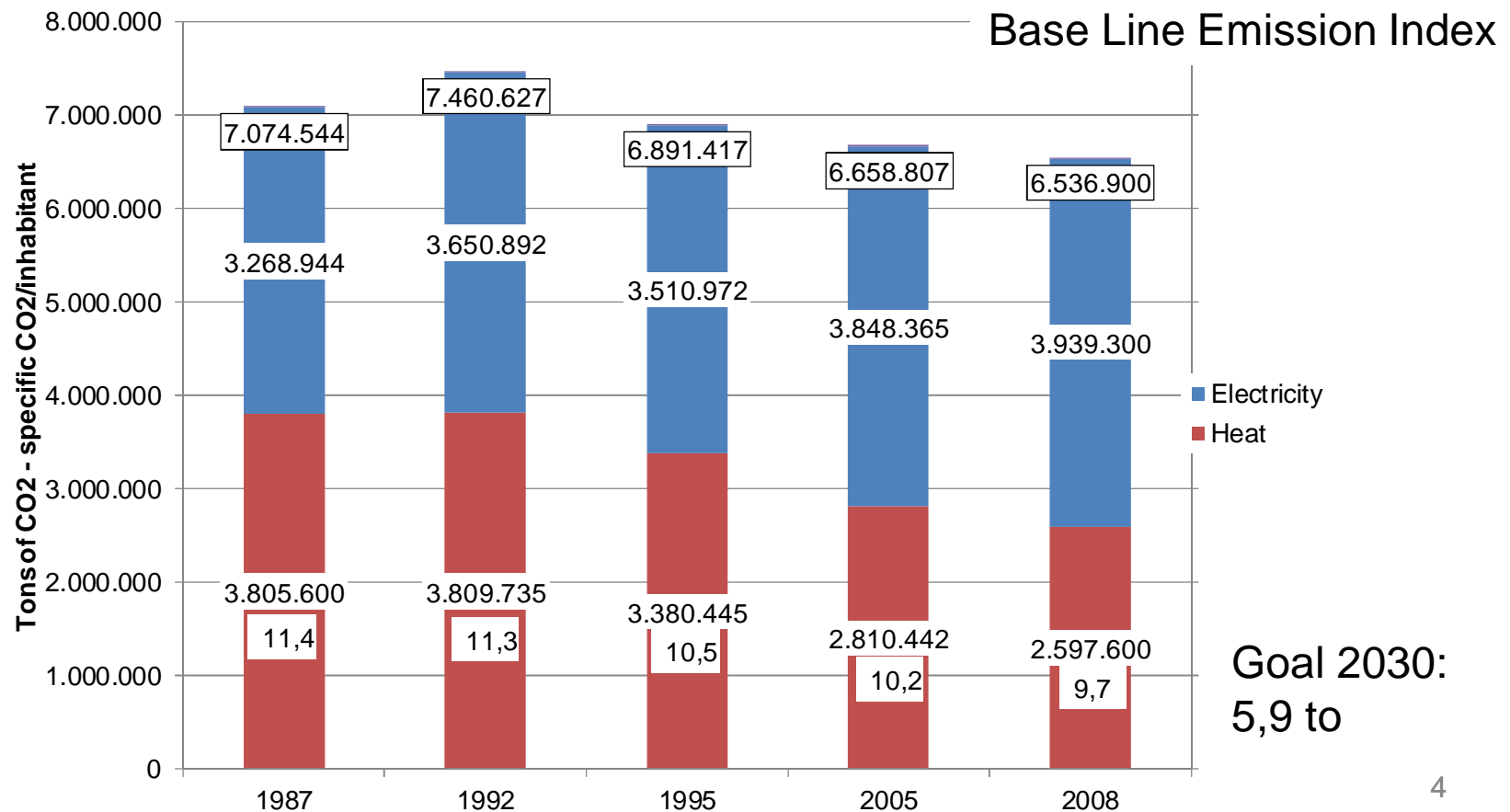
CO₂-balance 2005: 8,3 Mio. t per year

	Strom	Wärme	Verkehr
Haushalte	0,6	1,0	-
Gewerbe, Handel, Dienstleistungen	1,4	0,7	-
Industrie	1,9	1,1	-
Alle Bereiche			1,6
Gesamtsumme	3,9	2,8	1,6



Frankfurt am Main – City of Energy Efficiency

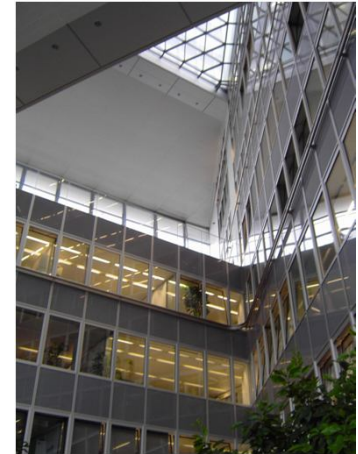
Decrease of Energy related CO₂-emissions since 1987 minus 8 % / **minus 15% per inhabitant**



Frankfurt am Main – City of Energy Efficiency

Guideline – Frankfurt am Main the City of Energy Efficiency

- > Frankfurt – city of most energy efficient office buildings
- > Frankfurt – city of passive houses
- > Frankfurt – city of saving electricity
- > Frankfurt – city of cogeneration
- > Frankfurt – city of energy from biowaste



Frankfurt am Main – City of Energy Efficiency

Frankfurt – City of passive houses

Basic decisions of City Council
for municipal buildings
and of „ABG Frankfurt“ – we only
Construct new PH and refurbish
to PH standard.

**2011: 1500 PH dwellings,
150.000 m2 incl. 2 schools,
5 kindergardens etc.**

NEXT: PH for social homes

WHY ?

- Always fresh good air
- No heating bill any more
- Independency from energy prices



Frankfurt am Main – City of Energy Efficiency

Municipal electricity saving programme Frankfurt – Funding of the saved kilowatthour electricity



Funding for

- ✓households
- ✓Small medium enterprises
- ✓Associations, churches

Funding households:

- ✓Each saved kWh : 10 Cent
- ✓Comparison of bills

Förderung SME etc.:

- ✓10 cent /saved kWh
- ✓max. 30 % of investment
- ✓Before: consultancy

Frankfurt am Main – City of Energy Efficiency

Electricity saving = communication



2010

Change programme for old refrigerators:
Bonus for buying a new with Label A++

1000 Frankfurter old fridges have been Taken back to metal recycling .

Christmas action:
give incandescent bulb, get a saving lamp!



2011

Stand-by campaign
cooperation with
Frankfurts retail
market companies

Special plug with
switch for special
price

Frankfurt am Main – City of Energy Efficiency

- **CARITAS Electricity saving service**
- 1. long-term unemployed people are qualified as so-called service advisers for energy and water saving techniques
- 2. These service advisers visit low-income households, check and document the current consumption of electricity and water and determine saving potential
- Started in December 2005
- Developed as cooperation between Energy Department, Department of Social Services, unemployment office + **Caritas Association Frankfurt**
- Started with 12 long-term unemployed people



Sie brauchen mehr
Geld??



Sparen Sie
Energie!!



- Kostenlose Energiesparberatung
- Kostenloses Starterpaket (mit Energie- und Wassersparartikeln) im Wert von bis zu 70,- EUR
- Einsparung: bis 100,- EUR im Jahr

Frankfurt am Main – City of Energy Efficiency

- **CARITAS Electricity saving check in low income homes**
- **Appointment with household is made by phone, basic data is noted**
- **1st visit:**
 - check of equipment
 - check of bills (if available)
- **Calculations, recommendation, report**
- **2nd visit:**
 - installation of easy to plug in energy saving devices like saving bulbs, low water flow aerators, switchable power strips
 - advice on change in behaviour to further save energy and water
 - if necessary, reference to other service offers (e. g. consumer advice centres)



Frankfurt am Main – City of Energy Efficiency

- **Saving package costs: up to 70 €**
- **Financed by support partners (City of Frankfurt, power supplier Mainova AG, Federal Ministry)**
- **Sample of saving bulbs, water tap aerators (< 5 l/min), water-saving shower heads, etc., with a focus on electricity and water**
 - **because savings of electricity and water can be made quick and easy**
 - **because heating costs are paid by local community and therefore it is more difficult to motivate the households**



Frankfurt am Main – City of Energy Efficiency

The Cariteam-Energiesparservice meets four objectives:

Employment policies: long-term unemployed persons are qualified as energy and water saving advisers

Social policies: low-income households learn to reduce their energy costs which in turn relieves their tight budgets

Educational policies: a special group of people in the society is being reached and further educated which would probably not have happened otherwise

Environmental policies: And, last but not least, the environment benefits from the reduction in CO₂ emissions.

Household saves long term 1100 €, city saves 200 €

1500 checks in Frankfurt, 50.000 checks in Germany



Frankfurt am Main – City of Energy Efficiency

Energy efficient (social) homes

refurbishment of residential buildings
towards low energy house (70
kWh/m²) and passive house (15
kWh/m²)

model projects –
buildings with nice facade

change heating to district heat with
cogeneration



Energy refurbishment of residential (social) housing helps against climate change, raising energy prices, fuel poverty, bad indoor climate, unemployment

Frankfurt am Main – City of Energy Efficiency

Social housing - before and afterwards from 250 to 15 – 80 kWh/qm



**Ready to
demolish
1910 ?**



***Heritage
protected***



1950



**Passive
house**

Thank you – let´s cooperate !

Dr. Werner Neumann

www.energiereferat.stadt-frankfurt.de

www.energiemanagement.stadt-frankfurt.de

www.greenbuilding-award.de

www.stromspar-check.de

www.frankfurt-spart-strom.de

www.energiepunkt-frankfurt.de

www.oekoprofit-frankfurt.de

