

Municipalities: Good Practices and Action Plans; Lobbying and Networking Among Municipalities

*International Conference on
Energy Efficiency, 2011 İstanbul*



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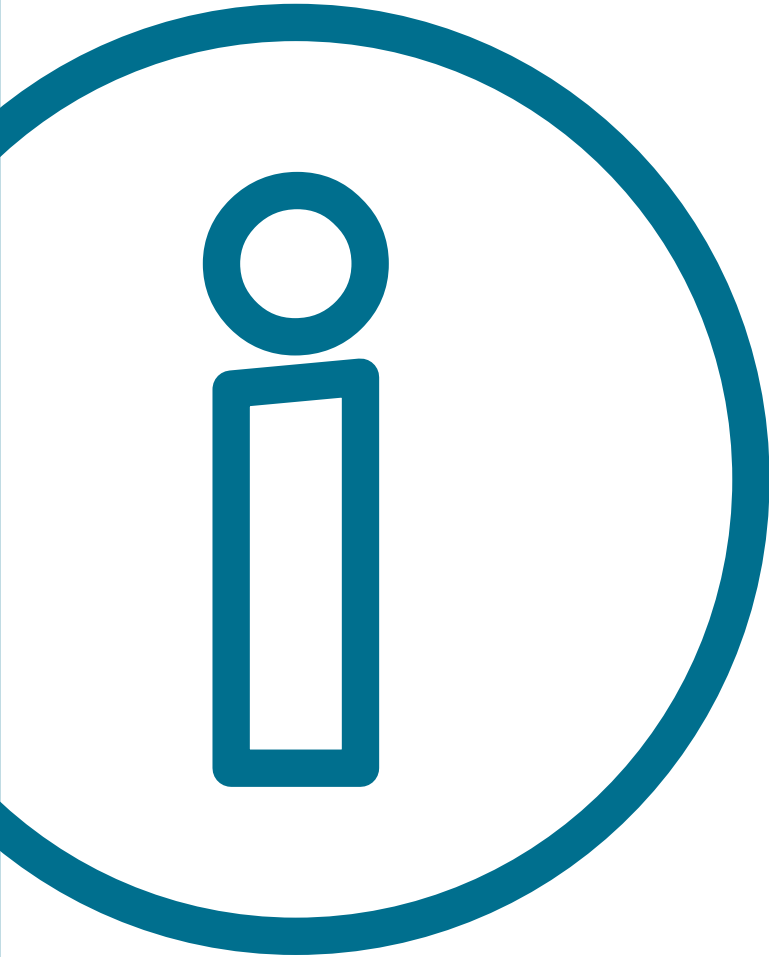


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This brochure was published as part of the EU funded project
“Strengthening Energy Efficiency Capacities and Networks of CSOs and
Municipalities-Bosnia and Herzegovina, Czech Republic, Serbia and Turkey”.
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Energy Efficiency which took place on Sept 30-Oct 1, 2011 in Istanbul and
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Energy Efficiency, 2011 İstanbul*



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Municipalities: Good Practices and Action Plans; Lobbying and Networking Among Municipalities

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Ecology

Heinrich Böll Stiftung Derneği Türkiye Temsilciliği

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Istanbul, January 2012

ISBN ??????

Inönü Caddesi, Hacı Hanım Sk. No: 10/12
34439 Gümüşsuyu – İstanbul

T 90 212 249 15 54 **F** 90 212 245 04 30

W www.tr.boell.org

Book Design and Page Layout: Myra

Printed by: ???????? II. Matbaacılar Sitesi, B Blok, Kat: 6,
No: 9 İstanbul

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Energy Efficiency: Civil Society Organizations and Municipalities

Reports on the international conference
held on September 30 - October 1, 2011 in Istanbul

Energy efficiency plays an increasingly important role for intelligent and future oriented energy policies. For the formulation of sustainable and comprehensive energy action plans, cooperation is needed between stakeholders at all levels: local, national and international.

Heinrich Böll Stiftung Turkey Representation, Center for Ecology and Energy (Bosnia and Herzegovina - BiH), Center for Monitoring and Evaluation (Serbia), Center for Progressive Technologies (Czech Republic) together with the European Union Policies Institute organized a two-days conference on September 30 – October 1, 2011 in Istanbul. The conference was open to the participation of local governments, NGOs and private sector representatives working on the issue of energy efficiency.

Launched in early 2010 and financed by the European Commission, the project "*Strengthening Energy Efficiency Capacities and Networks of Civil Society Organizations and*

Municipalities: Bosnia Herzegovina, Czech Republic, Serbia and Turkey" was closed with this international conference which aimed at increasing collaboration among different stakeholders with the potential to influence energy efficiency policies.

The conference brought together an impressive group of speakers from prominent international organizations, finance institutions and municipalities including the Covenant of Mayors (COMO), German Development Bank (KfW), Local Governments for Sustainability (ICLEI), United Nations Development Program (UNDP) and Istanbul Metropolitan Municipality. The aforementioned project started off with two surveys conducted in Serbia and Turkey analyzing the energy efficiency policies from a legal and administrative perspective. The project was followed with capacity building programs which targeted representatives from local administrations, civil society organizations, energy consultants and other relevant actors in BiH, Serbia and Turkey with the support from the Czech partner of the



project, Center for Progressive Technologies (for more information on the project, please visit www.e-efficiency.org).

The conference aimed at being a platform where local decision-makers, representatives from civil society organizations and private sector had the opportunity to exchange ideas and experience in the field of energy efficiency with international organizations, finance institutions and municipalities. A wide range of topics were covered in the conference including the following:

- Energy efficiency policies in the European Union
- Finances and energy efficiency
- The role of municipalities: action plans, local strategies and methods
- Cooperation between civil society organizations and municipalities: success stories
- Lobbying and networking among municipalities at the regional, national and international level

The three-volume conference publications contain the presentations made by speakers as well as the discussions that took place during and after the roundtables focusing on the specific topics of *Finances and Energy Efficiency; Municipalities: Good Practices and Action Plans, Lobbying and Networking Among Municipalities; and Civil Society Organizations and Municipalities: Success Stories*.

We hope that the publications help establish and strengthen the relationship between different stakeholders and that it will contribute to the formulation of a comprehensive and intelligent energy policy in Bosnia and Herzegovina, Serbia and Turkey.

We are truly grateful to all the speakers who took part in the conference for their full support and co-operation and also to the conference attendees for their enthusiastic participation.

Dr. Ulrike Dufner and Zeyneb Gültekin
Heinrich Böll Stiftung Turkey Representation





Novy Liskovec Municipality, Czech Republic

Jana Drapalova



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Brno-Nový Lískovec Project for revitalisation of the housing area



The Czech Republic



The Czech Republic has a population of 10 million and is a member of the EU since 2004.

Brno is the country's second largest city with a population of 400 000, and is the metropolitan city of Southern Moravian Region.

Brno's economy is based on textile and machine industries, yet it has recently become a university city and is rapidly progressing in the areas of science and arts.



The statutory city of Brno is divided into 29 administrative divisions – city districts. The residents vote every four years for the Brno City Council and the local councils of the city districts. The City Council is headed by the lord Mayor, and the city districts are headed by the district mayors. The powers of the Lord Mayor and the District mayors are regulated by the Status of the Brno City.



Brno – Nový Lískovec



Brno – Nový Lískovec is a district with a population of 11 000, located in the west of Brno. The houses in the district are mostly detached, yet a building complex of 1000 apartments was built in 1980-1983, and later on 2500 more panel apartments were added in 1990-1995.



City owns the apartments



1000 apartments are owned by the City (entrusted to the City District), and the other apartments by a co-op or individual owners. The City District also "has" owns two official buildings, two primary schools, three preschools and a municipality building. The development strategy of the settlements located within the district boundaries are under the jurisdiction of the City District.



Housing fund in the Czech Rep.



The housing fund in the Czech Republic – share of panel buildings constructed between 1950 and 1990

	Total # of dwellings	# of apartments in panel buildings
Czech Rep.	3 900 000	1 165 000
Brno	165 000	65 000
Novy Liskovec	3 900	3 500 (90%)

Construction problems in panel buildings: low-quality windows, bad thermal-technical specs on outside walls, minimum or minimal maintenance (elevator, electricity installation)

State policy – no system until 2000 – biggest problem for owners – economic constraints, resulting in only partial maintenance done and only in the event of a failure.

State policy



In 2000, the state approved a repair program for panel buildings; the program was called "Panel".

- The programme supports complete modernization of panel buildings, including exterior thermal sheathing
- The program is for all home owners,
- The owner gets state-guaranteed bank loan to be used for repair and maintenance, and the state pays a portion of the interest.
- Requirement is to have the house completely modernized
- Loan payment term of 15 years, with state grants maximum 4% of the interest.

Brno City's housing strategy

- In 2002, Brno City decided to privatize a part of the housing fund and use the revenue to repair the buildings remaining in the City's housing fund. City Districts can also receive grants from this fund.
- In addition, the fund lends to home owners in the city, from the Revolving Capital Fund.

Novy Liskovec – innovative and inclusive approach



In 1999, a call was issued to the elected council members with the initiative of the apartment tenants demanding that the apartments be repaired. An unofficial working group was formed from citizens, elected council members and NGOs. In 2000, the working group submitted a revitalization strategy for the apartments, together with a financial model, to the council members.

In 2000, the council adopted the working group's proposal, and assigned an official committee to supervise the new and ongoing works.

Objective:

- Raise housing quality
- Reduce negligence in City property
- Ensure energy saving (as paid by tenant – reduce housing costs)

Make use of all accessible financial means



Comprehensive approach



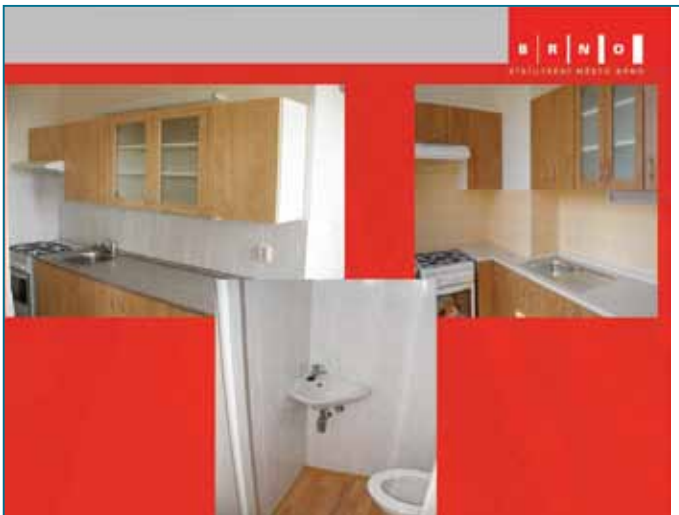
Comparison of general standards in the Czech Republic and the extraordinarily comprehensive modernization

Technical measures: external sheathing, including roof and basement (insulation thickness 16-18 cm), replacement of windows and internal installations, electricity installation, ventilation installation, new apartment body, new open or closed balconies, replacement of elevators, modernization of heating and hot water systems.

Innovative approach - eliminating thermal bridges and giving importance to the quality of work done.

Organized measures:

- Introduction of energy management
- Education programme for tenants
- Modernization took place while tenants continued to live in the apartments – challenging in terms of coordination.





Results of the first phase: 286 apartments in 10 buildings between 2001 and 2006

Overall cost: 6.5 million EUR (1 flat 17.000 EUR)

Financial model:

District's own resources (from rents)	2.5 million EUR
Grant from Brno City (from privatization)	1.5 million EUR
Lending from Brno City (revolving capital fund)	0.5 million EUR
Commercial loan (15 year-repayment)	2.5 million EUR

Money collected from rents ensures payment of future debts and transfer of sufficient funds to the District's housing fund. Thanks to heating savings, housing costs to tenants is minimal despite increase in rent.



Second phase of the revitalization project completed in 2007-2011.



Modernization of public buildings.



In the Novy Liskovec district, the preschool and schools have the same faults with the apartment buildings as they were also constructed with panels.

The energy cost is a direct burden on the municipality. Since rents collected from the apartment buildings flow to the housing fund, this cannot be used as a course of income. Since a large portion of the school modernization cost is not related to energy saving, it is not possible to use the EPC (energy performance contracting) model.

2007 – 2013 EU grant scheme - a chance for schools

Grants for operation program living environment – savings in public buildings

Kaminky Primary Education School – cost between 2009 and 2010 is 1.4 million EUR

16 cm insulation was used in sheathing, triple-glazed windows were installed, and recuperation was done in the school's kitchen and cafeteria, with shutters installed outside the windows. Savings in heating was 50 000 EUR/year, amounting to 65%.

Kaminky Primary School



Kaminky Primary School





Ctvrte preschool

Ctvrte preschool – benefited from internal EPC.

Municipality (City District) obtained no-interest loan using the new financing model for revitalization of the preschool building. According to City rules money collected from apartments can only be used for modernization of houses, and for improvement of the housing fund. Novy Liskovec municipality borrowed from this fund with the permission of Brno City, and is currently repaying with the money from energy saving.



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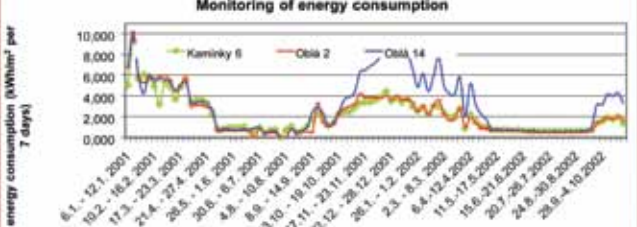


Energy management



Energy spending is constantly monitored and results are published on the District's web pages. Aim is to motivate other apartment owners to renovate their buildings. The arrangement also controls functionality and shows any device failures. Websites also ensure communication with customers and motivate them to make savings.

Monitoring of energy consumption



period 7. days

Energy management





Public spaces





Public spaces are not only housing complexes and buildings, but also include social relations and the community life. The housing complex of Nový Lískovec has the same problems witnessed in other similar complexes. Anonymity, vandalism, problem youth, quality of public spaces, lack of parking spaces... In 2002, a programme for revitalization of public spaces was launched with the support of citizens. We managed to get grants from EC funds for accessible sports fields, construction of a new park and revitalization of the recreational forest. We are consulting with citizens on the projects before entering the preliminary phase.

Citizen participation at local level:

- Thematic civilian committees – work as advisory organs to the District Council
- Social organizations – cooperate with district municipalities in identifying problem areas. (For example, the motherhood centre, which is a civil society organization, prepared the "map of obstacles" for mothers with push-chairs).

Public spaces









Monitoring Gas Consumption for Thermal Rehabilitation of Residential Buildings

*Bilal Duman
(Sivas Municipality)*



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Monitoring Gas Consumption for Thermal Rehabilitation of Residential Buildings

- Prepared under “Promoting Civil Dialogue” between the EU and Turkey.
- Paris Apur, TBB (Union of Turkish Municipalities), EİE and Ministry of Environment and Forest provided assistance during project preparation phase, and supported the Sivas Municipality during project implementation.

Monitoring Gas Consumption for Thermal Rehabilitation of Residential Buildings

- Project Partners
 - Sivas Municipality
 - İstanbul Metropolitan Municipality
 - MAIRIE DE PARIS
 - ADEME, French agency for environment
 - EİE
 - TBB
 - İGDAŞ
 - SIDAŞ

Project budget

- Total applicable budget of the project is 235,000 EUR, with other project partners contributing to project budget via co-funding.

Project definition and target group

- **General Objectives:** To increase cooperation at technical level between French and Turkish Municipalities for capacity-building on energy efficiency and environment; to reduce heating costs, energy consumption and CO₂ emissions in residential buildings.
- **Specific Objectives:** To develop new methodologies in the Istanbul Metropolitan Municipality and Sivas Municipality for monitoring gas consumption within the framework of a common Geographical Information System so as to plan, implement and evaluate thermal rehabilitation projects for residential buildings
- **Target groups**
- Technical cadres and planners in the Istanbul Metropolitan Municipality and Sivas Municipality, sector operators, owners of un-insulated buildings and apartments built before 2000, with a total of 6000 home owners in 2 cities.

Targeted outcomes

- Building public awareness on the necessity of thermal insulation before using natural gas, by developing a practical systematic device that shown on GIS and maps the potential savings in gas consumption as well as the relevant thermal quality of the buildings and their thermal rehabilitation options, so as to raise awareness among home-owners, households and banks, and enable them to take joint decisions
- Also, helping natural gas-users with regard to thermal insulation by informing them that the economic cost of thermal insulation will pay off in a couple of years and by assisting them in obtaining affordable loans from banks as home-owners.
- Good collaborative connections were established between some TR & FR municipalities regarding innovative and successful practices on energy efficiency and environmental awareness. In addition, the personnel of Istanbul Metropolitan Municipality and Sivas Municipality received the necessary training on energy management on GIS.

Trainings and Study Visits

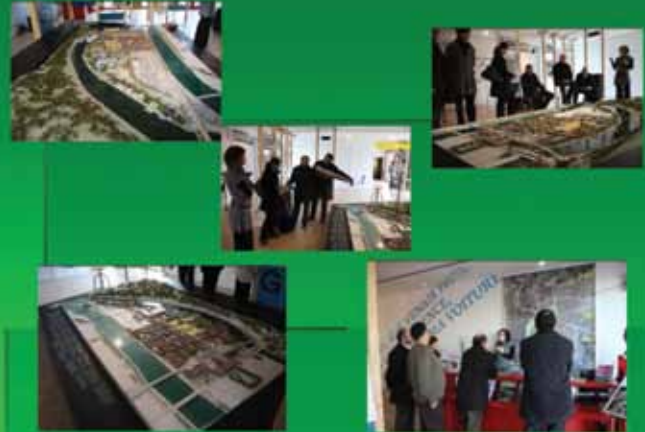
Lyon Water treatment Facilities – Technical Visit

- The sustainable projects of the city of Lyon were also seen in this first technical visit to France. In this scope, the system in the water production plant located on a protected area and operated by Veolia, the company supplying water to Lyon (including water production, distribution and treatment), was examined.



Lyon Concerto Urban Transformation Site – Technical Visit

- An urban transformation site is being created on the Peninsula of Lyon by replacing the Industrial Area with residential buildings and social facilities. Within the scope of this project, the energy-related “Concerto” fund was obtained from the European Union. Thanks to this fund, the scope of the urban transformation went beyond a simple zone planning, leading to concepts such as renewable energy and energy efficiency being incorporated into the new transformation site. Thanks to the Concerto fund, energy efficiency is considered in all residential buildings and social outfittings, which has reduced the energy demand for an average residential building via central heating and solar energy. With the Concerto fund, these changes are announced with models displayed in an exhibition hall.
- In the technical visit, participants examined project details and received information on the project.



APUR, Meeting on Energy Efficiency

- APUR, the French Planning Agency, is an organization attached to the Paris Municipality. In 2007, APUR conducted a study on the amount of energy consumed in buildings in Paris, including the type of energy used and the emissions they cause. The project received the first award in the “Environmental Convention” in France.
- The technical teams visiting Paris received detailed information on said project. They also received information on the structural characteristics of Paris as well as the relevant laws and regulations.



Studies by the Urban Planning and Geographical Information System Directorates of the Paris Municipality

- During the technical visit to Paris in October 2008, participants received information on the activities, visions and missions of the urban Planning and Geographical Information System Directorates of the Paris Municipality.
- The Urban Planning Directorate of the Paris Municipality informed the participants on the social, economic and urban structure of Paris. The team also received information on the Paris Municipality's sustainable city perspective and vision.
- The team also held a meeting with the Geographical Systems Directorate of the Paris Municipality. It was seen that the Paris Municipality gives great importance to GIS. In addition, the team also found the opportunity to see how the Paris Municipality's information system helps in city management. The works in Paris are synchronized with the information system, which is also used in planning the activity programmes and budgets.
- The meetings highlighted how important these two directorates are for the city of Paris. These directorates have strategic importance for the development of Paris.



APUR's Data Bank

- In the first technical visit to Paris, the participants received information on the offices and contents of APUR, or the Planning Agency of Paris. In this scope, the databank of APUR was also examined. In addition, experts gathering at APUR gave information on the relation between urban structure and energy consumption in Paris and other major metropolises around the world.



Eco-quarter by SEMAPA

- SEMAPA is a company owned by the Paris Municipality. SEMAPA's duty is to realize urban transformation. In this scope, the "Gare Rungis" quarter will be subjected to urban transformation in an attempt to transform it into an eco-quarter. "Gare Rungis" is the area characterized with an old train station. SEMAPA is responsible for making the plan, project and infrastructure for the eco-quarter. The rules and philosophy of the living area that will be created in the quarter are also being shaped by SEMAPA based on a "sustainable" logic. The construction of the eco-quarter started in 2008.



GIS Training at APUR

- The project "Monitoring Gas Consumption for Thermo-Rehabilitation of Buildings" requires determining the quantity of natural gas used by buildings for heating per square meter, and measuring the resulting emissions, all using the GIS. In this scope, APUR provided technical support for generation, preparation and processing of the relevant data.



- Future: The thermal insulation system that has become increasingly popular in the last 5 years in Turkey has also started to spread rapidly in our province. As a result of the mistakes made during this process, performance losses and some damages were seen in some buildings where thermal insulation systems were applied. The main source of these problems is the lack of a sufficient pool of firms experienced in these applications. Practitioners lacking experience and information win contracts by influencing project owners with unfair price competition and cause problematic applications, which has forced us to seek a solution to this problem; hence, we have launched a long-term study in order to solve the problem of bad practices, ensure that our citizens are fully informed about thermal insulation, and train the companies and practitioners who provide thermal insulation services.

- Our studies have led us to achieve a first in Turkey. As a result of our meetings, a protocol was signed between IZODER, the Provincial Directorate of National Education and our Municipality. Within the scope of the protocol, practitioners/ foremen carrying out thermal insulation applications were trained and successful trainees were awarded certificates to ensure that certified practitioners are preferred by contractors.



- Alongside these trainings and in collaboration with professional organizations, architects were trained on project design, civil engineers and building contractors on material selection, and mechanical engineers on calculation programs in accordance with TS 825.
- The consumer side was also considered, and after conducting a survey on what could be done, the necessary infrastructure works were completed. Afterwards, as a first step in raising public awareness in Sivas, CDs, magazines and brochures on energy efficiency were distributed and awareness-raising activities were carried out in primary education schools for students who are the bright generations of a bright future.





- Then, a panel on insulation was organized as a follow-up to the previous actions. The panel was publicly announced through billboards and posters. Panelists included Prof. Ertan Buyruk from Cumhuriyet University, Faculty of Engineering with a presentation on practical determination of heat losses; Erdal Çalikoğlu, Deputy Director General of EIE with a presentation on energy efficiency policies and practices; Bilal DUMAN, Director of Development and Urbanism at Sivas Municipality with a presentation on insulation practices in Sivas; and Timur Diz, İZODER Technical Affairs and Training Coordinator with a presentation on Insulation. The panel garnered huge interest with its panelists who are experts in their areas.



- Thus, the citizens of Sivas were informed about the necessity for thermal insulation and efficient use of energy, and the necessary measures were taken, with only strict supervisory practices left for the future. Now, we have launched a new action as a follow-up of our project. Under this new action, all dwellings in Sivas are visited and owners are asked what type of fuel they use and whether the building is insulated etc. All these data will be used in developing a schematic map of energy utilization in Sivas.
- During all these, our team interacted directly with the citizens, treated everyone equally with an inclusive and participatory approach, and acted impartially and in line with applicable legislations. We are continuing to work so as to ensure that the physical, social and cultural environment in which people maintain their social relations and interact with others throughout their lives is protected, the ecological balance is not disturbed or destroyed, and any existing deteriorations are rectified, and so as to improve and enhance the environment, achieve the environmental, economic and social targets that guarantee that current and future generations live in a healthy environment, minimize the irregularities and help the decision-makers.

Local Action Plans in Tepebaşı Municipality

Haluk Sevinçli
(Eskişehir Tepebaşı
Municipality)



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LOCAL ACTION PLANS STRATEGY AND METHODS



ESKİŞEHİR
TEPEBAŞI BELEDİYESİ

Haluk SEVİNÇLİ – Mechanical Engineer / Energy Manager

30.09.2011



ENERGY EFFICIENCY PRACTICES IN BUILDINGS

In Turkey, around 35% of the total energy consumption originates from buildings. In addition, an important responsibility falls on the shoulders of local governments, as Turkey is 73% dependent on external sources for energy, and since our energy deficit is increasing day by day.

The Thermal Insulation Standard TS 825, which is tried to be implemented in Turkey since 2000, is unfortunately not fully implemented across the country. As such, while there are projects approved as Class-C with a few centimetres of insulated coating, there are also projects with no insulation that manage to get approval by merely submitting an invoice for insulation materials.



ENERGY EFFICIENCY PRACTICES IN BUILDINGS

To what extent TS 825 is being implemented?

The insulation applications used in our country generally vary in standardization and practice in each province or local government region; building-specific characteristics such as the structure, utilization purpose and architectural characteristics of buildings or the specifications of the construction materials used are usually overlooked.

In short, thermal insulation projects have failed to go beyond being an extension of mechanical installation projects. However, it is obvious that insulation projects specific for each individual building can be prepared when TS 825 rules are applied.



ENERGY EFFICIENCY PRACTICES IN BUILDINGS

TS 825 practices of the Tepebaşı Municipality

We have launched activities to inform the public so that they can have their non-insulated buildings insulated in accordance with the BEP (Energy Performance in Buildings) Regulation and get their energy performance certificate, aka energy ID card, for a suitable performance level. These activities have also been included in the 2012-2014 strategic plan of the Tepebaşı Municipality.

Regarding newly licensed buildings, in order to ensure that new buildings are in full conformity with the TS 825 standard, we have managed to create a very harmonious working platform recently in Eskişehir primarily with building auditing companies and also with Chambers of Architects & Engineers and contractor companies.



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ENERGY EFFICIENCY PRACTICES IN BUILDINGS

TS 825 practices of the Tepebaşı Municipality

We started by identifying the shortcomings in the package programmes that are widely used in preparing TS 825 thermal insulation projects. The insulation thickness sought in package programs make it very easy to prepare Class-C projects. This is entirely in the hands of the project owner or project author preparing the project.

Then, we prepared an excel module covering all conditions specified in TS 825, and we started to check all projects one by one according to this module. These checks are still continuing.



TS 825 CONTROL TECHNIQUE



TS 825 CONTROL TECHNIQUE



TS 825 CONTROL TECHNIQUE



TS 825 CONTROL TECHNIQUE

GÜNEŞ ENERJİSİ KAZANÇLARI												
	Ocak	Şubat	Mart	Nisan	Mayıs	Haziran	Temmuz	Ağustos	Eylül	Ekim	Kasım	Aralık
İ Güney =	72	84	87	90	92	95	93	93	89	82	67	54
İ Kuzey =	26	37	52	66	79	83	81	73	57	40	27	22
İ katlılığı =	43	47	35	24	13	12	12	20	32	42	41	32
PENCİRE Güney	30,84	35,68	35,84	35,84	35,84	35,84	35,84	35,84	35,84	35,84	35,84	35,84
PENCİRE Kuzey	106,67	106,67	106,67	106,67	106,67	106,67	106,67	106,67	106,67	106,67	106,67	106,67
PENCİRE diğ. katlı	28,78	28,78	28,78	28,78	28,78	28,78	28,78	28,78	28,78	28,78	28,78	28,78
SÜNEY	300,01	420,94	420,67	451,53	481,59	478,38	488,54	488,54	432,92	335,75	328,72	328,72
SÜZÜY	1.328,75	1.890,76	2.457,89	3.172,57	4.037,54	4.243,78	4.239,55	3.730,75	2.963,62	2.084,22	1.278,89	1.124,52
DOĞU-BAT	955,19	798,35	1.262,23	1.261,57	1.172,43	1.883,03	1.607,89	1.481,29	1.117,61	813,92	595,60	528,42
OLMASI-GEREKEN	1.200,75	1.701,57	4.135,78	5.503,53	6.875,35	6.400,84	6.211,40	4.476,41	3.269,04	2.281,20	1.935,46	1.935,46
PROJEDE HESAPLANAN	1.901,95	2.161,31	2.214,20	2.796,33	3.540,53	3.311,90	3.027,12	2.829,48	2.779,36	2.676,13	2.562,32	2.396,53

TS 825 CONTROL TECHNIQUE

TS 825 CONTROL TECHNIQUE

TS 825 CONTROL TECHNIQUE



IMPLEMENTATION DETAILS

External insulation of 6-7-8 cm on outer facades (nominal 20 kg/m³ EPS)
5 cm insulation in mezzanine floors (obligatory during molding)
10-16 cm insulation for the roof
3 cm thermal and sound insulation on partition walls between flats
3 cm thermal and sound insulation for stair wells
5 cm insulation between attached buildings
Double-glazed synergy heat control glass (LOW-E)
Minimum 5 cm insulation for floors in contact with earth
Mobile system heating installations (30% efficiency with thermostatic valves)

The optimum insulation thickness calculated for Eskisehir in accordance with lifetime cost analyses is 8.3 cm. *TESKON 2011 Conference*



EXTRA SAVING EXPECTED FROM THE APPLICATION

As a result of the implementation of the TS 825 in full scope since 2010, the natural gas saving ensured in energy consumption of buildings licenced within the last one year was approximately 800,000 m³ higher compared to previous year.

Assuming that the economic lifetime of the insulations is 10 years, if this system is implemented for 10 years, the people of our district will be able to save 44,000,000 m³ more natural gas simply through full implementation of the regulation in new buildings.

Compared to buildings that have no insulation, this figure translates into 110,000,000 m³ saving in natural gas.



PROJECT FOR INCREASING THE ENERGY EFFICIENCY OF THE MUNICIPAL MAIN SERVICE BUILDING



PROJECT FOR INCREASING THE ENERGY EFFICIENCY OF THE MUNICIPAL MAIN SERVICE



As an innovative solution in this scope, it is planned to convert the existing 200-ton water tank into a thermal storage reservoir to achieve significant savings from the cooling burden in summer months.





PROJECT FOR INCREASING THE ENERGY EFFICIENCY OF THE MUNICIPAL MAIN SERVICE BUILDING

In addition to the installation of a building automation system that will ensure integrated management of all heating, cooling, ventilation, natural ventilation and thermal storage systems, the project we have launched incorporates various efficiency-boosting actions such as use of inverters in pumps and air handling units, air quality and air flow control with VAV panels, installation of heat recovery units in air handling central units and heating boilers, and improvement of pipe insulations.

In addition, with the free consumer certificate, all buildings owned by the municipality will be able to supply electrical energy from the private sector, which will lead to around 17% cheaper electricity.



PROJECT FOR INCREASING THE ENERGY EFFICIENCY OF THE MUNICIPAL MAIN SERVICE BUILDING

Following the process of betterment and improvement, our target will be to reach even better results by implementing the TS EN 16001 energy management system.



EXAMPLES FROM OUR ENVIRONMENT-FRIENDLY PROJECTS



WATERSPORTS COMPLEX – GREEN BUILDING





ECO-VILLAGE PROJECT

The EKO-KÖY (Eco-village) project for which the project design phase has been completed by the Tepebaşı Municipality and which will be built on a 60-decare area will be completed very soon and offered to the service of the people of Tepebaşı.



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ENVIRONMENTAL RESPONSIBILITY WORKS

Eskişehir Tepebaşı Municipality held a meeting on "Efficient Use of Resources and Energy Efficiency" within the scope of the Healthy Cities Council.

The meeting included presentations on "Efficient Use of Resources", "Efficient Use of Resources in Agriculture" and "Energy Efficiency in Residential Buildings". Academicians from universities and representatives of chambers also participated in the meeting where projects were proposed for raising awareness on efficient use of resources and hence increasing energy saving despite limited resources. Province-based working groups were also formed at the meeting.

EXAMPLES FROM THE 2012-2014 STRATEGIC PLAN

BÖLGEDE ENERJİ VE KAYNAK TÜKETİMİ HEDEFLERİ

HEDEF 1.18: Tepebaşı bölgesinde etkin enerji kullanımı ve enerji verimliliği çalışmaları yapmak.

STRATEJİLER

- Etkin duyarular ile bilgilendirme çalışmalarının yapılması
- Toplumsal farkındalık yaratılması
- İlgili Sivil Toplum Kuruluşları ile iş birliği yapılması
- Yönetmelikler ve Uygulama usulleri hakkında bilgi verilebilecek ön kadronun oluşturulması
- Merkezi ısıtma sisteminde giderlerin paylaşılması yönetmeliğinin duyurulması ve uygulanması
- Binalarda ısı yalıtım konusunda danışmanlık vermek
- Sürdürülebilir politikalar üretmek
- Üniversiteler ile iş birliği yapmak
- İlgili Meslek Odaları ile iş birliği yapmak

EXAMPLES FROM THE 2012-2014 STRATEGIC PLAN

HEDEF 1.10: Bölgenizde etkin ve verimli atık yönetimi uygulamaları yapmak ve 2014 yılı sonuna kadar 51 mahalleye bu çalışmalar yaymak

STRATEJİLER

- Ambalaj atıklarının, bitkisel atık yağların, atık pillerin kaynağında ayrı toplanması için mahallelerin uygulamaya alınması
- Ambalaj atıklarının, bitkisel atık yağların, atık pillerin kaynağında ayrı toplanması için konutlarda eğitim ve bilgilendirme çalışmalarının yapılması
- Sokak toplayıcılarının sisteme dahil edilmesi için eğitim çalışmalarının yapılması
- Sosyo-ekonomik ve fiziksel analizlere göre planlama yapılması
- Çevre koruma bilincinin geliştirilmesi amacıyla çocuklara; okullarda, Sukurusu Atölyesinde, eğitim aracında ve eğitim parkında eğitim çalışmalarının yapılması
- Çevre koruma politikalarının sürdürülebilirliğinin sağlanması
- İlgili sivil toplum kuruluşları, mahalle muhtarları ve kurum/kuruluşlarla koordineli çalışmak



ECO-MARKET



Our municipality opened the first Ecological Market of Eskişehir on 4 July 2010, after working in collaboration with producers producing certified organic products in Eskişehir.



ECO-SCHOOLS



At the ceremony sponsored by the Tepebaşı Municipality and traditionally organized every year by the Turkish Environmental Education Foundation (TURÇEV), 11 schools from Eskişehir got their Eco-School Green Flags. Across Turkey, 105 schools were awarded the Green Flag.



COLLECTING RECYCLABLE WASTES



Tepebaşı Municipality's Environmental Protection and Control Directorate continues to increase studies and activities oriented to "equip the public with conscious consumption habits" for the purpose of reducing waste. Tepebaşı Municipality's initial recyclable waste collection quantity was 5 tones in July 2007, which has increased to 562.1 tons per month by June 2011. The target for 2014 is to collect wastes from 116,000 dwellings.

For separate collection at source and recycling of packaging wastes, the collection phase is carried out by companies licensed for collection by the Ministry of Environment and Forests. Our Municipality does not pay these companies for collecting wastes.



USED VEGETABLE OIL RECYCLING PROJECT



Within the scope of the Used Vegetable Oil Recycling Project launched across Eskişehir under the leadership of our Municipality in August 2010, 100 enterprises in the district of Tepebaşı were included into the system for separate collection of used vegetable oils. At the end of the pilot phase, 33 tons of waste vegetable oil was collected. Starting from our pilot regions, used vegetable oil is currently being collected from 6,000 dwellings. The target is to spread the implementation to 51 quarters until 2014.

Also, believing in the importance of renewable energy, our Municipality's contracted and licensed recycling plant Ezici Biyodizel company has started bioelectricity generation as of 2011.





2010 RECYCLING BALANCE

In the trainings, students are informed that we have saved electrical energy enough to light a 100-watt lamp for 55,000 years, with the metal wastes collected in 2010; that we have saved 113,000 tons of petrol with the glass wastes collected; that we have saved 1,600,000 litres of petrol with the plastic wastes collected; and that we have saved 44,000 trees, 10,500,000 kW of electrical energy and 60,000 m³ of water with the paper/cardboard wastes collected in 2010.



Thank you for your attention and patience ...



Energy Policy and Projects of Istanbul Metropolitan Municipality

*Muhammet Garip
(İstanbul Metropolitan
Municipality-İMM)*



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ENERGY POLICY AND PROJECTS FOR ISTANBUL METROPOLITAN MUNICIPALITY

ISTANBUL,
OCTOBER 2011



Energy-Related Activities of IMM Companies and Departments

- 0.91 billion kWh / year electricity consumption
- 45.5 million m3 / year natural gas consumption

- Enerji A.Ş.
- İSTAÇ A.Ş.
- İGDAŞ

- All IMM
Departments

1



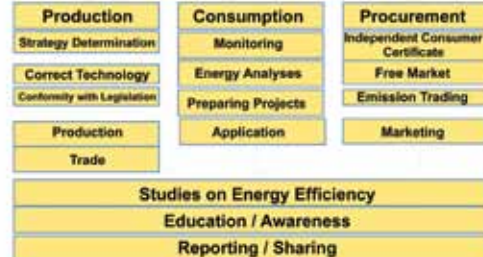
IMM's Total Annual Energy Consumption

IMM Departments	60,997,054	İsbak A.Ş.	728,763
İSKİ	706,993,537	İsfalt A.Ş.	8,433,142
İETT	12,979,083	İspark A.Ş.	39,427
Ağaç A.Ş.	411,283	İstaç A.Ş.	6,517,831
Belbim A.Ş.	236,727	İstanbul Enerji A.Ş.	3,792
Beltur	2,551,506	İstanbul İmar A.Ş.	7,550
Birleş	82,799	İston A.Ş.	3,197,422
Halk Ekmek A.Ş.	8,430,492	Kültür A.Ş.	3,178,963
Hamidiye A.Ş.	872,067	Sağlık A.Ş.	103,062
İDO A.Ş.	3,038,034	Spor A.Ş.	3,202,024
İDTM	8,132,509	Ulaşım A.Ş.	72,836,660
İGDAŞ	7,732,491		
Total Consumption: 910,706,230 kWh			

2



ENERGY MANAGEMENT PROGRAM

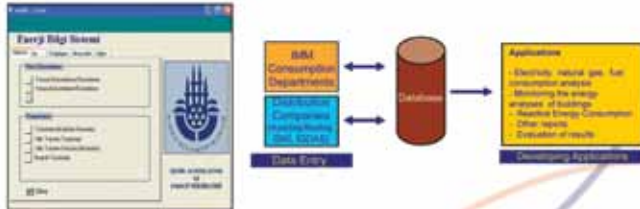


3



Energy Activities of IMM Energy Management System (EMS):

- An Energy Management System (EMS) has been established to address the needs arising as a result of IMM's energy policy.
- Data from the Energy Management System are utilized in various applications.
- The analysis and design processes of the system have been completed, and we are currently working on the final step to produce the required software.



4



Energy Efficiency Analyses in IMM Buildings



IMM buildings, which are located in Sarayhane and Merter, were analyzed in terms of their energy efficiency; analysis results showed that energy efficiency projects can achieve 25% energy saving.

5



Energy Efficiency Analyses in IMM Buildings



6



Energy Efficiency for Fatih Sports Facility

Istanbul Sport Event Inc.

Istanbul

Services planned:	CEMS	LSMS	PIEMS	RMS	P50SS	SESS	V50SS
	E,J,W	E	E	E,J,W	E,J,W	E,J,W	
Fatih Sports Facility							
				Type of building: Sports centre and offices Area (m²): 22,000 (closed 14,000 / open 8,000) Number of users: 120 staff members Number of visitors: 16.00-1650 /day			
Savings planned: 30% overall				30% peak demand			
Energy consumption 2010:							
Electricity	1.887 MWh						
Gas	2.07 793 m ³						
Cost	TL 423,9.96 / 320.972						

7





Green Building Applications for Kayışdağı Almshouse Campus



Kayışdağı Almshouse Campus has:

- Total area of 141,000 m2
- 91,000 m2 outdoor
- 46,000 m2 indoor
- 21 buildings

- 729 elderly people in need of nursing
- 664 workers

8



Energy-Efficient Lighting

Energy-efficient lighting has saved 16 million kWh of electrical energy in a year. The City Lighting Energy Directorate plans to expand this program to all the streets of Istanbul. Thanks to this saving, CO₂ emissions were reduced by 8,690 tons in 2007. This energy efficiency measure is a part of a citywide action plan to protect the environment and reduce emissions.



9



The Lighting Automation System

Energy efficiency has also been ensured through automation in city lighting systems.

- The entire network has been recorded on GIS medium.
- The entire lighting system has been recorded, together with details regarding their materials.
- Remote fault control, communication via GPRS modem
- Permanent solutions for continual faults.



10



Other EU-funded Project

Name of the Project	Partners	Targets	Duration
Smart Spaces: (Saving Energy in Europe's Public Buildings by using ICT)	IMM – Spor A.S German, Belgium, UK, Italy, France, Spain, Netherlands, Serbia	Increasing energy efficiency in public buildings	36 months
SMILE: Sustainable Management of Istanbul Local E-Waste	IMM, ÇEVKU (Turkey), ERS (Greece)	Collecting, classifying and recycling electronic waste	18 months
OUTSMART: Internet in Future (Public & Private Sector)	IMM, Berlin, Nice, Milano, Luxemburg, Santander and Helsinki, ORANGE, Alcatel, Ericson, Focus	Developing new software for solid waste management, electricity, n. gas, water management	10 years (3 terms)
Energy Efficiency for Fatih Sports Facility	IMM – Spor A.S	Developing energy efficiency projects and using renewable for Fatih Sports Facility	1 year

11



Waste Management and Energy



Istanbul Metropolitan Municipality gives high importance to reducing emissions through implementation of its own waste management program.

1. Electricity Generation from landfill gas, which is collected from solid waste landfills.
 - a) Hasdel Power Plant (4MW)
2002-2008 : Total Emission Reduction of 400,000 tons of CO₂-e
 - b) Odayeri RDF (320 t/day) and Compost Plant (1000 t/day)
Emission Reduction = 1,200,000 tons of CO₂-e /year
 - c) Kömürçüda/Asian side (7 MW)
 - d) Odayeri/Auropean side (11 MW)
2. Reducing the number of cars in the Istanbul traffic with waste transfer stations
Emission Reduction = 5000 tons CO₂-e /year.
3. Separation of wastes at source
Emission Reduction = 84,000 tons CO₂-e/year

12



Energy Efficiency Studies for ISKI



Energy Efficiency Studies in the General Department Buildings of ISKI

- Reactive Power Compensation
- Frequency and speed control in water pumps



13



Renewable Energy Practices in IMM

Solar Collectors for Hot Water have been installed in 5 different buildings in 2011.

- > 7.8671 m² reduction in natural gas consumption...
- > 203.000 kg less CO₂ emission...
- > TL 80.000 money saving
... per year



14



Making New Buildings More Energy Efficient

- 50% energy saving through sensors in lighting systems.
- 5-10% energy saving with thermostatic valves on heating radiators. KIPTAS (Istanbul Public Housing Corporation) has been taking energy efficiency measures in dwellings.
- Some of the energy efficiency measures practiced in KIPTAS dwellings save 30% electricity through use of inverters in elevators.
- 30-40% energy saving through central heating and calorimeter use.
- 10-15% water and energy saving by using thermostatic valves in showers and sinks.



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Making Water-Saving Cartridges Widespread

Water-saving cartridges were installed in 40 different buildings used for IMM's services in 2010, resulting in 25% water saving without compromising from comfort.



> 45.000 m³ / year water saving



16



Transportation and Energy



MARMARAY PROJESİ

An annual reduction of 115.000 in greenhouse gas emissions will be ensured with the Marmaray project for its first 25 years period of operation.



An annual reduction of 400.000 tons will be achieved in CO₂ emissions with the Metrobus project.

17



Transportation and Energy



Yerleşimimiz için çevreye duyarlı yönetim

Yıl	LED Trafik Sinyali Sayısı	LED Trafik Sinyali Enerji Tasarrufu (kWh)	LED Trafik Sinyali Enerji Tasarrufu (TL)
2010	15.768.297	1.824.882	11.942.414
2011	3.770.712	234.826	1.535.778

Yüksek Enerji Tasarrufu %74

Introducing LED Technology to Istanbul's Traffic Lights

Energy saving equal to \$ 1.535.778,69 / year.

Istanbul Metropolitan Municipality is one of the world's first municipalities to use the LED technology in traffic signals.

Existing traffic lights have been replaced with LED ones since 2000, and now the rate of using LED components is nearly 100% across Istanbul.

18



Hydrogen Energy Technology in IMM

BELBİM A.S., a company of IMM, has been working on an environment-friendly project which will provide a new mode of passenger transfer on the Golden Horn with the use of Hydrogen Fuel Cells.



19



Infrastructure Works for Charging of Electrical Vehicles

Istanbul Metropolitan Municipality is continuing to expand its infrastructure works to build charging points for electrical vehicles, the demand for which is expected to rise.



20



Infrastructure Works for Charging of Electrical Vehicles



Charging Stations for Roads and Public Areas



Charging Stations for Indoor Public Areas



Special Charging Stations for Buildings



21



Education and Awareness Activities

A seminar on "Energy Efficiency in Schools", attracting huge interest, was organized with participants from the Ministry of National Education, representatives from non-governmental organizations, and school administrators. The main objective of the seminar was to raise awareness on Energy Efficiency.



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Thank you for your kind attention...



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A Local Commitment Towards Europe's Energy and Climate Objectives

*Kristina Dely
(Covenant of
Mayors-COMO)*





Covenant of Mayors

2020
10th Anniversary

A local commitment towards Europe's energy and climate objectives

Kristina Dely, Energy Cities, Head of the Covenant of Mayors Office 




We face similar challenges...




Solutions for a more sustainable future...?




Solutions for a more sustainable future.



European legislation

The EU Climate & Energy Package (December 2008)

Objectives: 3 x 20 by 2020



> 2800 Mayors committed in the Covenant of Mayors



4 Signatories



3 steps towards - 20% CO₂ by 2020

1st year

3rd year & beyond

STEP 1: Signature of the Covenant of Mayors

- Creation of adequate administrative structures
- Baseline Emission Inventory & SEAP development with stakeholders and citizens

STEP 2: Submission of your SEAP

- Implementation of your SEAP
- Monitoring and reporting

STEP 3: Regular submission of implementation reports (every 2 years)

- 20% CO₂ by 2020

>700 Sustainable Energy Action Plans



www.eumayors.eu





European funding mobilised

- IPA
- ELENA (European Local ENergy Assistance facility)
- The four J's (Jeremie, Jaspers, Jessica, Jasmine)
- Eco-innovation under CIP (Competitiveness and Innovation Programme)
- Marguerite
- IFI facilities (mainly Member States)
- Municipal finance facility
- Municipal infrastructure facility
- Energy efficiency finance facility
- SME finance facility...



Ivanic Grad (HR) and Lviv (UA) display their energy performance



Freiburg reinvents liveable districts and new lifestyles



Brno retrofits with high energy standards





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More information

Website: www.eumayors.eu

Contacts:
 For cities : info@eumayors.eu
 For regions and provinces: support@eumayors.eu

Thank you for your attention!
kristina.dely@eumayors.eu

www.energy-cities.eu




Covenant of Mayors: A Success Story

*Kristina Dely
(Covenant of
Mayors-COMO)*



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Covenant of Mayors: A success story

2900
SIGNATORY CITIES

>700 SEAPs

143
Regions, provinces and networks supporting

€1.6bn
Investments committed

Covenant of Mayors: A success story

Increasing EU Support

- ERDF: new 4% regulation
- IEE programme
- ELENA facility extended (KfW and CEB)
- EEEF launched

Convincing Figures

- 130 million citizens
- 46 countries
- 26 capitals
- 132 million tonnes of CO₂ potential reduction

Global Interest

- Covenant for Eastern Part countries
- US Mayors
- Covenant in the Balkans and the Mediterranean

Covenant of Mayors: A challenging story

CONSOLIDATION OF THE COVENANT

- Get SEAPs financed and delivered – align existing local procedures with Covenant requirements
- Get local investments realised – EEEF, PPP, carbon financing
- Intensified 'multi-level governance support

NATIONAL AND EUROPEAN CONTEXT

- Public debt crisis > both national and local level concerned
- Ensure Europe's continuous support for local sustainable energy
- Link to a 'Resource Efficient Europe'

INTERNATIONAL CONTEXT

- Post Kyoto regime...?
- Harmonized methodological framework – work undergoing with UN, Worldbank
- COMO East, South and beyond

- Voice of LA and their association counts !
- > Next ceremony: 29 November 2011
- Networking and peer-reviews, twinning
- NGOs and civil society control
- Appropriate tools at hand
- Communication, communication, communication...

ENGAGE

CITIZENS, STAKEHOLDERS, PUBLIC SERVANTS AND MORE...

...AND ACHIEVE YOUR CITY'S ENERGY & CLIMATE OBJECTIVES!

www.citiesengage.eu

UNIQUE POSTERS TO MOBILISE

A user friendly tool to create tailor-made posters with personal concrete energy-related engagements

www.citiesengage.eu

The Display Campaign: Building Management tool

Building	Address	Category	Year	Energy	CO ₂ e	Water	Other	Actions
Acik Fiyat Lisesi School, Istanbul	Genel D. okul sok. 2007	C	B	D				
Acik Fiyat Lisesi School, Istanbul	Genel D. okul sok. 2009	C	B	D				
Acik Fiyat Lisesi School, Istanbul	Genel D. okul sok. 2009	C	D	D				
Acik Fiyat Lisesi School, Istanbul	Genel D. okul sok. 2009	C	C	D				
Atatürk KOCOK Mesireti School, Lutfiye	Genel D. okul sok. 2007	C	D	D				
Atatürk KOCOK Mesireti School, Lutfiye	Genel D. okul sok. 2008	C	D	D				

www.display-campaign.org

Communication tool

GHG emissions (CO₂ equivalents in kg/m²/year)

Water consumption in l/m²/year

Distribution of energy sources in %

Display® Classification

Primary energy consumption in kWh/m²/year

How to progress towards class A

Local authority logo and contact details

www.display-campaign.org





What is the Energy Efficiency Role for Municipalities & Civil Society Organisations?

*Ian Shearer
(ICLEI)*



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What is the energy efficiency role for Municipalities & Civil Society Organisations?



LaresPark Hotel, Istanbul - 1 October 2011
Ian Shearer – Project Officer - ICLEI Europe

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www.iclei-europe.org

What I want to cover



- What do you want your municipality to do?
- What are municipalities doing?
- One-off projects or a structured management process?
- Introducing "ICLEI – Local Governments for Sustainability"
Helping translate sustainability into practice
- A final plea - register your actions and commitments
 - Tell the world

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Is this your vision of a sustainable community?



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Or is this your vision of what is needed to fix it!



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So what is the role of a municipality?



- Is the role to collect the waste & recyclables or
- Is it to provide energy services to the community?
- Or is it to try and tell residents that they need to do it themselves?



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Municipalities are Facilitating Community Actions



- Alternative fuels and modal shifts
- Improved public transport
- Implementing cycle lanes & facilities
- Encourage walking school buses
- Biogas for buses and work fleets



QuickTime™ and a TIFF (LZW) decompressor are needed to see this picture.



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Municipalities are Facilitating Civil Society Actions



- Facilitating grassroots community action
- Energy Days
- Climate day of action
- Energy town meetings
- Transition town groups
- Helping develop a change of culture!



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Municipalities provide efficient public transport



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Municipalities support improvements for residents



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Municipalities support new electric vehicle trials



Amsterdam electric cars & public charging



Torino electric buses



Rotterdam electric vans

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Municipality actions are everywhere!



BUT the lessons are clear

- Climate change mitigation actions by municipalities are most successful when they are part of a standard cyclical governance & management process.
- Monitoring progress is essential to ensure ongoing support from municipality management and governance.
- Reporting progress is essential and targets should be adjusted after each cycle of planning, and implementation. We can always do better!
- Working with your community and civil society is

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Introducing ICLEI (I)



Working with communities on urban sustainability

ICLEI supports cities and local governments to become sustainable.

We consider a Sustainable Community to be one that:

- strives to reduce its per capita use of natural resources to levels that will not endanger local nor global ecosystems, while at the same time
- ensures that political, economic and social systems provide a high quality of life for everyone.



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Introducing ICLEI (II)

Global to local, local to global



ICLEI – Local Governments for Sustainability (ICLEI):

- International network that advances local sustainability – established in 1990 in New York.
- Members: 1,200+ cities, towns, counties and their associations from 70 countries – representing 569,885,000 people.
- ICLEI works through Campaigns, Initiatives and Projects.
- Conducts global climate advocacy.
- Focus: quality, standards, practical support, working closely with local governments in their communities.
- Our motto: **“Local action moves the world”**.



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ICLEI active around the globe



- 1200+ members; cities and local governments world-wide
- 15 offices plus satellite offices
- 150+ staff

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In Europe



- Cover EU27, rest of Europe, Newly Independent States (NIS) and Middle East
- 200 members from 35 countries
- Representing 70 million inhabitants
- 15 capital cities
- 14 cities > 1 mio
- 85 cities >100,000
- Many regions, provinces and counties



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Building leadership in sustainability (I)



We connect

- 1 200 pioneers and champions around the globe
- Local governments, R&D, research, local to global
- You to key initiatives

ICLEI Europe is proud to be a Supporter of



We inform

- Offering web-based guidance
 - Sharing good practices
 - Providing workshops
 - Developing practical tools
- ICLEI Europe created a Toolbox of Methodologies on climate and energy



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Building leadership in sustainability (II)



We involve

- Exploring new ways of working and cooperation
- Participating in projects and joining research relevant to Local Governments
- Piloting innovative actions



We guide

- Offering support and training on many different topics – from target setting to monitoring
- Greenhouse gas inventory tools and guidance
- Integrated approaches



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Building leadership in sustainability (III)



We advocate

- Local Government delegations advocate for global recognition of local
- Opinions on EU policies and frameworks



We meet

- Organising conferences, events, seminars - on sustainability in Europe and worldwide



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Join our network on projects & campaigns



- CCP Campaign
- Energy for Mayors
- City Climate Catalogue
- Local Government Climate Roadmap
- Covenant capaCITY
- Procura+
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ICLEI Europe is proud to be a Supporter of the

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HEINRICH BÖLL STIFTUNG DERNEĞİ TÜRKİYE TEMSİLCİLİĞİ



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Speakers



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Speakers

Jana Drapalova

Since 1991, Jana Drapalova worked in Czech Association of Nature conservation (NGO) as manager of regional projects. In 1994, she was elected as a member of City Council of Brno Parliament as an independent candidate on the list of the Green Party. She is a Member of the Advisory Committee for city development and environmental issues and member of Committee for Assessment of Municipal Investment. She was involved in the process of strategic planning of the cities and regions and also implementation of principles on sustainable development at municipal level.

In 1998, she was elected as member of Brno City Parliament as independent candidate on Green Party list. Chairman of the Advisory Committee for Environmental issues and Chairman of Executive Committee for Co-ordination of long term strategic planning. In 2002, she was elected as Mayor of City District– Brno-Novy Lískovec. In 2006 and 2010, she got re-elected as Mayor of City District Brno-Novy Lískovec, elected as a Member of the City of Brno Council.

Between 2002-2004, Drapalova was involved in the Interact Networking Project in the of 6th Framework Programme EU (Efficient interactive management of the development projects in the cities). Within the Covenant of Mayors (COMO), she was the leader of the process of the City of Brno joining the network.

Bilal Duman

He was born 1981 in Şarkışla, Sivas. After finishing primary and secondary education in Sivas, he graduated from the Selçuk University, Faculty of Engineering & Architecture, Department of Urban and Regional Planning in 2004 as Urban Planner.

In 2005, he started working as Urban Planner at the Development Directorate of the Sivas Municipality. In 2006-2007, he was appointed as urban planner to the Building Inspection Department of the Directorate General of Construction at the Ministry of Public Works and Settlement. He performed inspections in various provinces on the basis of building inspection applications.

In 2007, he participated in the "Training Programme for Mitigating Damage in Disasters", carried out in collaboration by the Ministry of Interior and the Japan International Cooperation Agency (JICA).

In 2008-2009, he worked as planning and infrastructure expert in the Project titled "Thermo-rehabilitation in residential buildings of ISTANBUL and SIVAS" carried out in collaboration by the Greater Istanbul, Sivas and Paris Municipalities.

In 2007, he was appointed to the Sivas Municipality. In 2009, he was appointed as Director of Development and Urbanism. Bilal Duman speaks English and is married and has one child.

Haluk Sevinçli

Born in Eskişehir, Haluk Sevinçli graduated from Istanbul Technical University, Faculty of Mechanical Engineering,



Department of Mechanical Engineering in 1993. He is currently working as mechanical engineer at the Eskişehir Tepebaşı Municipality, Directorate of Development and Urbanism. He is also the building energy manager of the Tepebaşı Municipality. He holds a mechanical installation expertise certificate and has designed many mechanical installation projects and worked as project manager and implementer in the automation, mechanical design and IT sectors. He currently manages projects oriented to increase energy efficiency in the municipal main service building and other municipal buildings. Member of the Chamber of Mechanical Engineers (MMO) and ITU Alumni Association, he has two published books.

Muhammet Garip

Muhammet Garip was born in Adana in 1972. He received his BS from the Electrical Engineering Department of the Yıldız Technical University in Istanbul in 1994, his MS in 1997, and his PhD in 2002. His interests include urban lighting, renewable energy, energy saving, and electrical driver systems.

Having successively worked for the Yıldız Technical University, the İstanbul Ulaşım A.Ş. (İstanbul Transport, Inc.), and the İstanbul Enerji San. ve Tic. A.Ş. (İstanbul Energy Manufacturing and Trade, Inc.), Garip is currently the Urban Lighting and Energy Director for the Metropolitan Municipality of İstanbul and an assistant professor with the Mechatronic Engineering Department of the Yıldız Technical University.

Dr. Garip has published many articles in numerous national and international publications.

Kristina Dely

Kristina Dely has been heading the Covenant of Mayors Office (COMO) since its establishment in January 2009. The office – composed of 5 major European associations of local-authorities – co-ordinates the Covenant of Mayors (www.eumayors.eu), the mainstream initiative by the European Commission, whereby close to 3000 local authorities have committed to reduce their CO2 emissions by at least 20% by 2020.

Formerly, Kristina was in charge of European Affairs of Energy Cities (www.energy-cities.eu), a European association representing 1000 local authorities from 30 countries. Kristina holds a Masters degree in economy and environmental management from Budapest University of Economics and the Ecole de Management de Lyon.

The Covenant of Mayors (www.eumayors.eu) is the mainstream European initiative addressing cities and climate change. Launched by the European Commission DG Energy in 2008, today close to 3000 local authorities from Europe have signed up to the movement and committed to go beyond the objectives of EU energy policy in terms of CO2 emissions reductions.

Municipalities signing up to the Covenant of Mayors commit to submit their Sustainable Energy Action Plans within one year of their signature, justifying their commitments via more efficient use and cleaner production of energy.

Ian Shearer

(FIPENZ) ICLEI Europe, Climate & Air Team, Technical Project Officer

Ian Shearer is an experienced energy engineer who, for the last 2 years, has been responsible for technical assistance to



local governments throughout Europe in the ICLEI Europe Cities for Climate Protection (CCP) Campaign. He provides technical support to cities and towns in the Covenant of Mayors' campaign, and provides training and capacity building for cities involved in ICLEI Europe projects such as Sustainable NOW, LAKs, Energy-for-Mayors, and Covenant CapaCITY. He specialises in the development of GHG inventories and action plans for municipalities, including through the development of protocols, tools and methodologies and technical support for development and implementation of energy efficiency and renewable energy projects.

Ian worked with local governments, and community groups in New Zealand for the previous 10 years, as an energy efficiency and renewable energy consultant, and as a technical programme officer for New Zealand local governments working in ICLEI Oceania's Cities for Climate Protection Campaign. His earlier experience was as an electrical engineer on design and construction supervision of large utility systems (boilers, turbines, water treatment, compressors, fire alarms) for electricity utilities (thermal & geothermal power stations) and for industry. He helped develop, and has managed, several renewable energy industry organisations including the New Zealand Wind Energy Association, and the New Zealand Photovoltaics Association.

Ian is a Fellow of the Institution of Professional Engineers in New Zealand, awarded for services to the sustainable energy engineering industry in New Zealand. In Europe, he is a member of ECEEE. He has also been a board member for a number of energy efficiency and renewable energy industry associations, and for many years was chairman of the technical engineering skills accreditation body, EARB, in New Zealand. He is a Life Member of the New Zealand Wind Energy Association and also The Sustainable Energy Forum.

Arif Künar

Arif Künar graduated from Middle East Technical University (METU) as an electrical engineer. He is a founding partner and general manager of EDSM Energy. Künar is also an advisor of energy and environment for MATPUM (METU Faculty of Architecture Research and Implementation Center for Built Environment and Design) and he has carried out many energy study for industrial and commercial buildings.

Arif Künar is in the editorial board of many publications such as Elektrik Mühendisliği (Electrical Engineering), 3E, Yeni Enerji (New Energy), Yeşil Bina (Green Building) and BEST Bina Teknolojileri (BEST Building Technologies) journal. He has two books, three brochures and more than hundred published articles related to topics of nuclear energy, energy efficiency, renewable energy and environment. He has participated in workshops in China, USA, Germany, Spain, Belgium, Greece and Cyprus related to renewable energy, nuclear energy, energy efficiency and green buildings.

Künar is actively involved in anti-nuclear movement since the 1986 Chernobyl accident. Chamber of Electrical Engineers, METU Alumni, Turkish Green Building Association are among the many NGOs he is actively involved.





This publication has been produced with the assistance of the European Union