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Municipality of Nuremberg

Environmental management of the  
Municipality of Nuremberg

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# Environmental management of the Municipality of Nuremberg

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The Municipality of Nuremberg in Germany has undertaken a range of environmental initiatives since the late 1990s. The city's efforts are practical examples of the ways city governments can minimize their environmental impact and be enabling agents for environmentally responsible practice in their spheres of influence.

Nuremberg is located 160km north of Munich and is the largest city in Franconia. In 2014, the City of Nuremberg was home to just over 513,000 people, whilst the European Metropolitan Area of Nuremberg had a population of 3.5 million.

In 1997, Nuremberg City Council became involved in the United Nations' Agenda 21 process. In 2001, the city signed a sustainability pact with regional companies and, since 2003, has presented annual awards for sustainable management and projects.

Nuremberg City Council committed to the Ten Principles of the Global Compact in 2003. The city has since committed itself to sustainability. Nuremberg achieved fourth place when it participated in the European competition for Green Capital Cities 2012/13. In October 2014, the city was nominated for the German Sustainability Award 2014.

## Agency for Climate Protection and Sustainable Development

In 2010, the City of Nuremberg launched an initiative to create a regional agency for 'Climate Protection and Sustainable Development' in the Nuremberg Metropolitan Region (NMR), which comprises 34 cities and districts. The members of the Council of the Metropolitan Region agreed to this. The following measures have been implemented so far:

- Alliance for Climate Protection of the NMR with an agreement on common climate policy goals – an 80 per cent CO<sub>2</sub> reduction by 2050.
- Improved coordination of institutions and projects within the region – establishment of four working groups for renewable energies, co-generation, energy efficient refurbishment of buildings, and energy efficiency in economic enterprises.

- Exchange of expert opinion on best practices and sharing of successful solutions and experiences.
- Improved communication of climate protection competence, both internally and externally i.e. 1<sup>st</sup> international conference on climate protection in Nuremberg in 2012, the second conference is planned for the summer of 2015.

## Sustainability reporting

In recent years, the Department for Environment and Health has been working on a sustainability report for the city. The first comprehensive report on the sustainable development of the City of Nuremberg was published in 2009. The City Council decided to review this report regularly and the second report was published in 2012. The reports are based on indicators characterizing the state of environment and development trends, sustainability of the local economy and businesses and socio-economic features of civil society. These indicators will serve as orientation marks for future development projects and political decisions and assist with analyzing their effects on sustainability and adjusting (if necessary) development concepts.

The Department for the Environment has launched an information campaign on the new European regulation for public procurement, which permits the application of environmental criteria in the procurement process. Internal municipal regulations will be adjusted step-by-step to the new rules, e.g. by (1) integration of low engine emission standards for vehicles; (2) emission-free/reduced products in the building sector; (3) eco-friendly IT equipment and appliances; (4) eco friendly technical materials used in wastewater treatment, etc.

### Environmental certificates for municipal facilities

A number of municipal offices and agencies have been certified according to international Environmental and Quality standards and norms, notably:

- ASN, the municipal agency for waste management with 437 employees (first certified according to ISO in 1997)
- the municipal agency for waste water management, ISO 14000 and ISO 9000 in 2003
- SUN, the newly formed agency for waste water management and environmental analysis (415 employees), certified for all sectors of work according to ISO 9000, ISO 14000 and (the laboratory unit) ISO 17025
- Nürnberg Stift, the agency for municipal homes for elderly people has implemented a (not certified) QM-system
- SÖR, the recently formed municipal road and public space service (865 employees) first certified according to ISO in 2009.

Between 1998 and 2000, the City of Nuremberg directed and coordinated a certification project that was implemented by four Bavarian cities. The Eco Audit in Municipal Administration implemented EMAS certification in the Nuremberg State Theatre, the Nuremberg Environmental Department, two elementary schools, the B4 vocational school for professions in the retail trade and credit business, wholesale and foreign trade, the B14 vocational school for office professions and a company running Franconian Stadium.

### Environmentally friendly purchasing management

Purchasing for the municipal administration is organized according to the principle of decentralized administration of resources. All municipal offices, agencies, services or other units have to follow the 'Guidelines for Environmentally-Friendly Purchasing' – a voluntary municipal environmental compatibility check, which was implemented by the City Council in 1990 that is binding for purchasing offices. Some examples of products under the purchasing policy are:

**Recycled paper:** Since January 2009, only recycled paper has been purchased (mandatory procedure). This includes paper towels and toilet paper. The below table shows reductions by using recycled paper (100 per cent since 2009).

	Recycled paper	Fresh fibre paper	Savings
Wood (in kg)	-	67,269.8	67,269.8
Water (in L)	460,290.6	1,172,057.0	711,766.4
Total energy consumption (in kWh)	94,186.7	240,767.9	146,581.2
CO <sub>2</sub> emission (in kg)	19,893.5	23,800.4	3,906.9

**Energy saving light bulbs:** For over 10 years, the City of Nuremberg has been changing lighting from conventional bulbs to energy saving light bulbs. Today 100 per cent energy friendly lighting appliances are used.

	2005	2006	2007	2008
Energy saving bulbs (8,000-16,000 hrs)	770	755	1200	470
Electric bulbs (max. 2000 hrs)	3,750	5,225	3,050	2,300
Overall consumption (in %)	4,520	5,980	4,250	2,770
	17	12.6	28	17

**Office furniture:** Office furniture in municipal offices have to be certified according to *Blauer Engel* (Blue Angel) standards.

**Vehicles:** Environmental protection and emissions reduction are priorities when purchasing municipal vehicles (mandatory procedure). This is monitored by external auditors. The system was implemented in 1997. Since 2005, all cars purchased have been in exhaust class Euro 5, an exhaust emission standard. The latest acquisitions of trucks for various purposes have been made according to standard Euro 5/EEV, a standard that goes beyond Euro 5.

### Organic products in schools

In July 2003, Nuremberg City Council unanimously decided to aim at supplying 10 per cent of all products consumed in school cafeterias and other municipal canteens and service points from organic farms or certified organic processors by 2008. In October 2008, more ambitious targets of up to 50 per cent of organic food in schools and day care centres were set.

**Organic Lunch Box Drives 2005–09:** Since 2005, the Organic Lunch Box Drive has been implemented in Nuremberg and other municipalities in the Metropolitan Region. In the first year, about 5,000 boxes were handed out to first-formers free of charge. In the fifth drive in September 2009, all first-formers were handed their new Organic Lunch Box with tasty snacks for school breaks. Ten thousand organic lunch boxes were distributed to 413 classes. Nuremberg was the second city to introduce this initiative after Berlin.

### Energy management in municipal buildings

The characteristic value for energy used for heating all municipal buildings has continuously decreased in past years. While in 2006 (adjusted to weather conditions) the value was still at around 165 kWh/m<sup>2</sup> per year, in 2008 it was reduced to about 146 kWh/m<sup>2</sup> per year. A similarly positive trend can be observed for significant city buildings, such as schools, municipal office buildings, municipal baths, cultural institutions and large childcare centres. Thus the average heating energy use characteristic of this group of buildings was a value of approximately 133 kWh/m<sup>2</sup> per year in 2006, reduced in 2008 to only approximately 124k Wh/m<sup>2</sup> per year.

The goal is finding the best solution for construction projects fulfilling all functional, need-based, economic and design quality criteria, as well as saving resources and energy and preserving existing buildings. The City of Nuremberg stipulated stricter 'Energetic Standards and Planning Requirements' in order to achieve its high climate protection goals. Thus, all new buildings must be constructed to passive house standard. When existing properties are refurbished, the standard required by the City of Nuremberg is about 20 per cent higher than that stipulated by the current (federal) Energy Saving Regulation.

The City of Nuremberg owns property comprising about 1.2 million square metres of heated space, mainly school buildings. Some examples for energy saving refurbishment of existing properties include:

- The conversion of a restaurant building to a nursery school/childcare centre/advice centre, *Schlachthof* (former abattoir), from 2002 – 04. The heating energy needed was reduced by 75 per cent (energy used in 2008: 78 kWh/m<sup>2</sup>) and the primary energy use was reduced by 80 per cent.
- The complete refurbishment of a childcare centre in Adam-Klein-Straße 37a in 2005. The building housing the childcare centre was completely refurbished with heat insulation technology. The amount of heating energy used was reduced by about 50 per cent (compared to the value before refurbishment) to 120 kWh/m<sup>2</sup> per year.

- The Internal Thermal Insulation Project (since 2001). Implemented in the buildings of the *Bildungszentrum* (adult education centre) and in *Gemeinschaftshaus Langwasser* (Langwasser Community Centre), this project was successfully completed between 2000 and 2003. All structural-physical prognoses concerning damage-free processes and energy saving were confirmed.
- New (municipal) buildings *Südpunkt* (2004 to 2008). One of the largest projects of past years, the construction of the *Südstadtforum Qualifizierung und Kultur – südpunkt* (Southern City Forum Qualification and Culture, with about 4,700 square metres of usable floor space), was the first project to adhere to the requirements for the construction of new buildings to passive house standard. Due to the forum's high profile and its wide information network, this project had a signal effect for further sustainable development in the city's southern districts. In 2009, the forum's first operative year, the heating energy used for the entire complex was 38 kWh/m<sup>2</sup>. This value is far below the required value of the current energy saving regulation.

More information (in German) can be found at:  
<http://klimaschutz.metropolregionnuernberg.de/>

*The City of Nuremberg has been a signatory to the United Nations Global Compact since 2003.*



Minimizing energy consumption by investing in renewable forms of energy. Image: City of Nuremberg.