



Stadt Zürich

# ENERGY MASTER PLAN OF THE CITY OF ZURICH



#### Cover photo:

Lake Zurich serves as a source of energy for three lake-water networks which heat and cool various buildings located in Zurich around the lake basin. This necessitates a pipeline that takes water out of the lake and returns it with the same unimpaired quality once the heating or cooling process has been completed.

Photo: ewz

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### Scope of application

The Energy Master Plan applies to the City Administration and associated organisations. These include, for example, charitable foundations and housing cooperatives such as receive considerable assistance from the City Administration or corporations in which the City of Zurich holds a majority of shares. The objectives of the Energy Master Plan must be taken into account in all energy-relevant decisions and activities.

### Departments and organisations that maintain Energy Action Plans

AfS	Urban Development Office
AHB	Structural Engineering Department
BfWbf	Residential Development Office
E360	Energie 360° AG
EB	Energy Commissioner
ewz	Power Utility
ERZ	Zurich Waste Disposal and Recycling Authority
GSZ	Office of Parks and Open Spaces of the City of Zurich
IMMO	Real Estate Management of the City of Zurich
LVZ	Real Estate Administration
OIZ	IT Skill Centre of the City of Zurich
PWG	Foundation for the Preservation of Affordable Residential and Commercial Premises
SAW	Zurich Housing Foundation for the Elderly
SWkF	Swiss Housing Foundation for Families with Many Children
UGZ	Department of Health and the Environment
VBZ	Public Transport Authorities
WVZ	Zurich Waterworks

# Introduction

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## Energy Master Plan – a controlling instrument of the City’s energy policy

Energy policy is an issue that affects many different sectors, with numerous interfaces to the energy-related strategies, resolutions and instruments of the City of Zurich. Besides providing an overview of goals and main areas of action, the Energy Master Plan also defines the framework for the implementation of the City’s energy policy. As a cross-departmental controlling instrument, it bridges the gap between the long-term objective of the 2000-Watt Society and the annual operational Action Plans of

the departments and organisations closely associated with the City. The City Council has developed the Energy Master Plan to exploit the full scope of its municipal powers towards a proactive, coordinated energy policy and play a substantial part in implementing the 2000-Watt Society. The Energy Master Plan will also help ensure that the City of Zurich continues to meet the requirements of the “European Energy Award Gold” and to set an example in energy policy. As a component of municipal energy planning, the Energy Master Plan is approved by the cantonal administration and is binding for public authorities.





# The Energy Policy of the City of Zurich

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## Long-term objectives

In 2008 a large majority of voters came out in favour of enshrining sustainability and the objectives of the 2000-Watt Society in the Municipal Code of the City of Zurich. This led to the 2012 drafting of the Energy Master Plan, which set out long-term (until 2050) objectives that are also significantly more ambitious than before, going substantially beyond the provisions of CO<sub>2</sub> legislation and the objectives of the Swiss-wide 2000-Watt programme.

## Sustainable development

Since the process of profound change required to achieve a 2000-Watt Society has to embrace all dimensions of sustainability, the transformation towards a 2000-Watt Society is bound to provoke conflicts of objectives.

The implementation of the energy policy and the 2000-Watt Society necessitates a long-term perspective that takes into account macroeconomic prosperity, justice between the generations, environmental protection and social acceptance. Despite conflicting goals, decisions still have to be made in day-to-day business. Here it is important to be transparent about decisions and not to systematically make decisions at the expense of one and the same dimension of sustainability (environment, economy, society).

## Clear framework conditions and priorities

The success of the energy policy hinges on political decision-making bodies designing appropriate framework conditions and setting clear priorities, as this enables the participants responsible for its implementation to make full use of the options open to them. The City of Zurich supports social change by adapting legal framework conditions and municipal funding programmes, and also providing communication and consultancy with regard to consumption habits and user behaviour.

### 2000-Watt Society

The 2000-Watt goal of the City of Zurich refers to the continuous rate of power consumption and means that each resident has an average two kilowatt hours (kWh) per hour at their disposal to cover their entire energy requirements – such as accommodation, food and mobility. The Energy Master Plan defines quantitative targets for the main parameters of the 2000-Watt Society: primary energy and greenhouse gas emissions.

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## More information

- Appendix: Municipal Code Art. 2ter (GB 2008)
- City of Zurich – 2000-Watt Society

# Objectives and priorities

## OBJECTIVES

Zurich's municipal energy policy defines certain objectives. Based on energy and climate protection laws of the federal government and the Canton of Zurich, they reflect the targets of the 2000-Watt Society as set out in the Municipal Code. These objectives are as follows:

- To secure an adequate, cost-effective, eco-friendly energy supply that conserves resources
- To substantially reduce emissions of CO<sub>2</sub> and other greenhouse gases
- To substantially reduce primary energy consumption

## PRIORITIES

The implementation of the municipal energy policy is governed by three principles in the following order of priority:

### 1. Sufficiency

Reducing the demand for energy-relevant goods and services

### 2. Efficient energy use

Reducing the consumption of energy by increasing the energy efficiency of buildings, processes and devices, and in the area of mobility.

### 3. Energy source selection in line with objectives

Prioritising the use of energy sources with low greenhouse gas emission coefficients and primary energy factors, i.e. energy from waste, waste heat and renewable resources.

## QUANTITATIVE TARGETS

Quantitative targets for the reduction of primary energy consumption and the associated emissions of greenhouse gases have been defined for the 2000-Watt Society. In terms of methodology they comply with the accounting model of the 2000-Watt Society for cities and municipalities. The definition is derived from the political mandate set out in the Municipal Code, namely to reduce energy consumption per resident to 2000 watts continuous consumption and CO<sub>2</sub> emissions to one tonne per year.

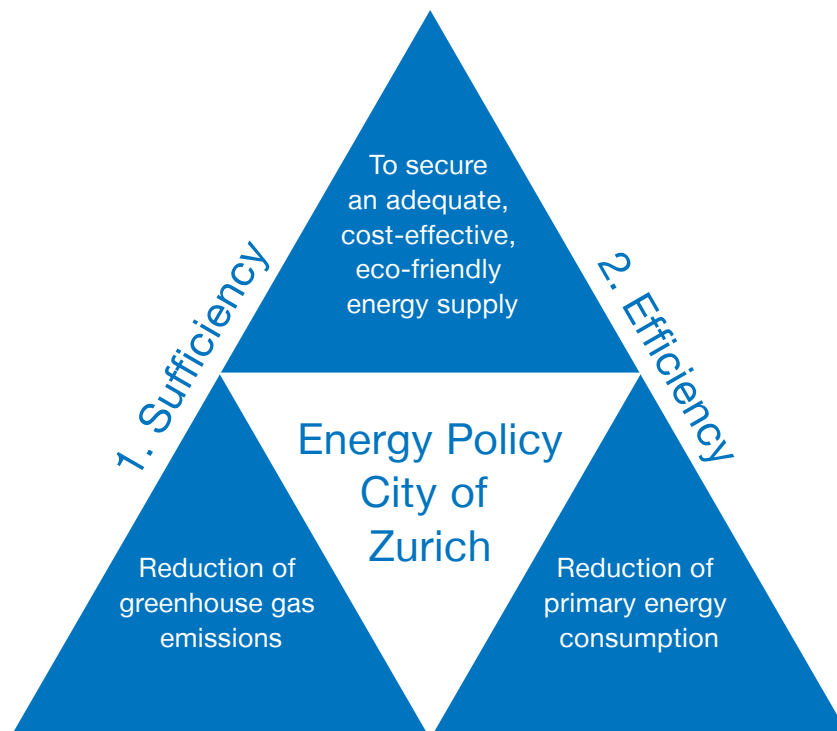
### Primary energy and greenhouse gas balance

The primary energy balance is calculated based on the total energy consumed within the urban area (plus air traffic). The 2000-Watt Society accounting model is used. The grey energy and the grey greenhouse gas emissions of the energy sources are taken fully into account; those hidden in goods and services only partially.

### Intermediate targets

Intermediate targets for 2020 and 2035 have been defined to provide a degree of control over the fulfilling of goals, in that they make it possible to evaluate the success of current measures.



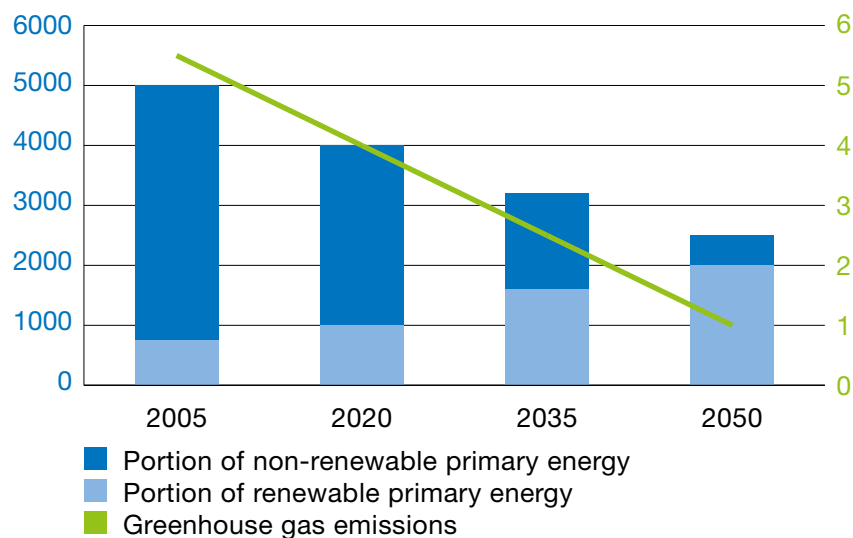


### 3. Energy source selection in line with objectives

## Objectives city area

Primary energy in watts per person

Greenhouse gas emissions in t/person



Specific targets to be attained per resident apply for the city area.

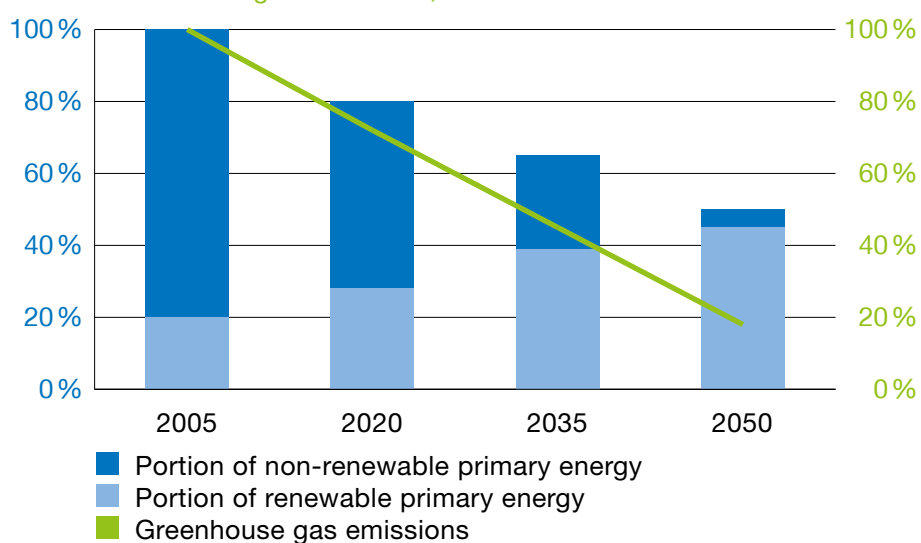
	2005	Currently	2020	2035	2050
Greenhouse gas emissions	5.5 t/person (100 %)	4.7 t/person (85 %)	4 t/person (72 %)	2.5 t/person (45 %)	1 t/person (18 %)
Primary energy	5000 W/pers. (100 %)	4200 W/pers. (84 %)	4000 W/pers. (80 %)	3200 W/pers. (65 %)	2500 W/pers. (50 %)
Portion of renewable primary energy	750 W/pers. (15 %)	790 W/pers. (19 %)	1000 W/pers. (25 %)	1600 W/pers. (50 %)	2000 W/pers. (80 %)

The target value of the portion of renewable primary energy is derived from the target range for the reduction of greenhouse gases. The current values are the mean values of the last five years (2010–2014). The data history from 2005 up to the present can be found under 2000-Watt indicators.

## Objectives City Administration

Primary energy, relative

Greenhouse gas emissions, relative



The targets to be attained by the City Administration are relative to the base year 2005.

	2005	2020	2035	2050
Greenhouse gas emissions	100 %	72 %	45 %	18 %
Primary energy	100 %	80 %	65 %	50 %
Portion of renewable primary energy	20 %	35 %	60 %	90 %

The target value of the portion of renewable primary energy is derived from the target range for the reduction of greenhouse gases.

# Strategic assessment

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## The City of Zurich's role on the way to becoming a 2000-Watt Society

On the way to the goal of the 2000-Watt Society, the City of Zurich performs the following tasks:

- Implementing comprehensive measures that are within the municipality's remit; the coordination of energy, transport and development planning is key here.
- Creating and promoting energy and mobility options compatible with the 2000-Watt goals.
- Encouraging the population to make decisions in the areas of energy, mobility and general consumption that are compatible with the 2000-Watt goals.

## Important strategic foundations – city area

Important strategic foundations for the implementation of the 2000-Watt Society:

- Energy Master Plan
- Regional structure plan, municipal structure plan (in preparation)
- Spatial development strategy
- 2050 Energy Supply Concept
- Municipal energy planning
- ewz Power of Tomorrow 2012–2050
- Urban Traffic 2025
- Environment Master Plan

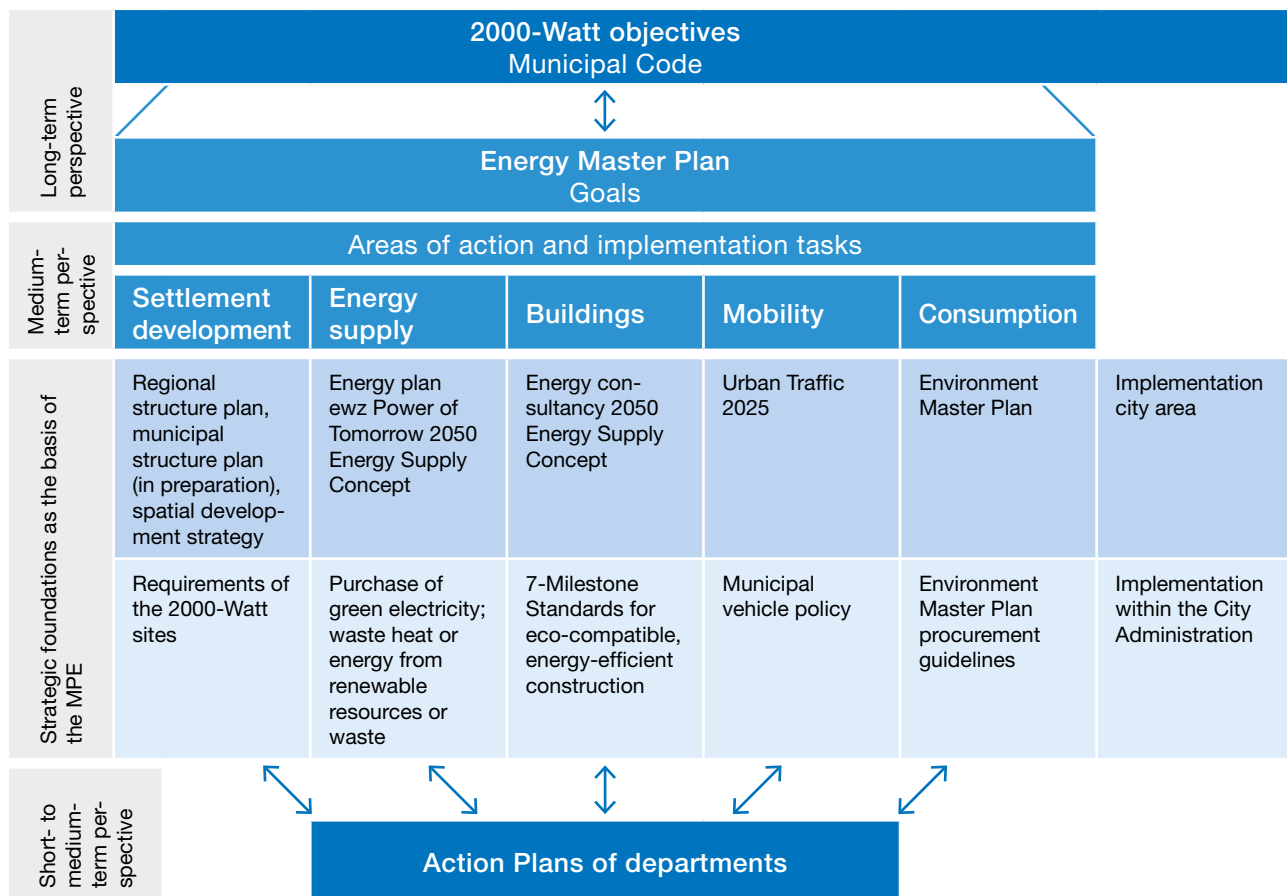
## Important strategic foundations – City Administration

The following strategic foundations define specific targets for the implementation of the 2000-Watt Society by the City Administration:

- 7 Milestone Standards for eco-compatible, energy-efficient construction
- Purchase of green electricity
- Municipal vehicle policy
- Procurement guidelines

## Energy Master Plan (MPE)

### Interfaces to strategic foundations



The Energy Master Plan defines the objectives of the City's Energy Policy and quantifies the 2000-Watt targets of the Municipal Code for the city area and the City Administration. It outlines the associated quality targets and implementation tasks in five areas of action. In this it builds on existing strategic foundations and serves as a structure for the Energy Action Plans of the departments and associated organisations. Thus the Energy Master Plan ensures a strategic connection between long-term 2000-Watt objectives of the Municipal Code and the annual Energy Action Plans.

Settlement  
development  
Energy supply  
Buildings  
Mobility  
Consumption



# Areas of action

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For the Energy Master Plan, quality targets and implementation tasks were defined in five areas:

- Settlement development
- Energy supply
- Buildings
- Mobility
- Consumption

The City of Zurich has set itself ambitious intermediate goals on the way to becoming a 2000-Watt Society, which it also implements within the City Administration as an example to be followed. The specific activities are outlined in the various areas of action.

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## More information

- Appendix: Examples of implementation tasks



## SETTLEMENT DEVELOPMENT

The City of Zurich pursues settlement development in line with the goals of the 2000-Watt Society, meaning that settlement planning and energy planning are coordinated with each other. Planning measures and building regulations encourage energy efficiency and the use of energy sources in keeping with the objectives.

### City area

- S1 Coordination of development and energy planning
- S2 Energy aspects in planning process\*
- S3 Energy aspects in the building regulations
- S4 Promotion of innovative concepts for the implementation of the 2000-Watt Society



## ENERGY SUPPLY

The long-term objective is for the supply of power, heating and cooling to be largely based on renewable, eco-friendly energy sources that also conserve resources – including energy from waste – whilst ensuring security of supply and competitiveness of products, and taking energy efficiency into account.

### City area

- E1 Municipal energy planning
- E2 Energy supplier strategy
- E3 Service portfolio and pricing policy
- E4 Production facilities and supply grids
- E5 Public lighting
- E6 Promotion of innovative concepts for the implementation of the 2000-Watt Society

### City Administration

- E7 City Administration energy consumption

\* denote implementation tasks of the Energy Master Plan that support the objectives of the area of action pertaining to consumption.

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## Energy Policy framework

- Regional structure plan (GRB 2000/894)
- Municipal structure plan  
(STRB No. 403/2015, in preparation)
- Building and zoning code  
(GRB, AS 700.100, in partial revision)
- Spatial development strategy  
(STRB No. 549/2010)
- City Council Housing Programme
- Guidelines for residential development  
activities 2011 (GRB, AS 842.191)
- 2050 Energy Supply Concept
- Municipal energy planning  
(new STRB expected in 2017)

- ewz Power of Tomorrow 2012-2050
- 2050 Energy Supply Concept
- Strategy report on district heating  
systems 2010–2050
- Performance mandate for the ewz  
(GRB 2002/329)
- Solar power exchange  
(STRB No. 267/2002)
- Regional structure plan (GRB 2000/894)
- Municipal structure plan  
(STRB No. 403/2015, in preparation)
- Heat supply concept  
(STRB No. 143/1992)
- City of Zurich green book  
(STRB No. 792/2006)
- Wood energy position  
(STRB No. 1166/2012)
- Quality of electricity used by the City  
Administration (STRB No. 417/2013)

## Abbreviations

GRB	Council Decision
STRB No.	City Council Resolution Number



## BUILDINGS

The City actively contributes to the buildings in the entire city area being built, operated and renewed in a 2000-Watt compliant way. This also takes into account in particular greenhouse gas emissions and primary energy consumed in construction, as well as the mobility necessitated by the use of the building. Innovations are specifically promoted through applied research.

### City area

- G1 Regulations on specific space requirements\*
- G2 Planning and execution
- G3 Promotion of 2000-Watt compatible technologies and solutions
- G4 Information and advice\*

### City Administration

- G5 Sufficiency – an integral part of the requirements\*
- G6 Real estate and portfolio strategies
- G7 Renewal, construction and operation of building and facilities\*
- G8 Benchmarking of energy consumption for municipal buildings and facilities
- G9 Requirements and use of machines and equipment\*
- G10 Large consumers – buildings and infrastructure
- G11 Employee information and training\*

\* denote implementation tasks of the Energy Master Plan that support the objectives of the area of action pertaining to consumption.

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## Energy Policy framework

- City Council Housing Programme
- Guidelines for residential development activities 2011 (GRB, AS 842.191)
- Municipal Code Art. 2quater (GB 2011)
- Rational use of electricity (GB 1989)
- Efficiency bonus (GRB, AS 732.319)
- Conditions of electricity supply (GRB, AS 732.330)
- Credit line for energy-saving measures in municipally owned real estate (GRB 2006/558)
- Credit line for additional energy-saving measures in municipally owned residential real estate (GRB 2006/565)
- City of Zurich energy research (GRB 2010/114)
- Energy coaching (GRB 2012/222)
- Eco-compass (GRB 2012/207)
- ewz energy consultancy policy
- 7 Milestone Standards for eco-compatible, energy-efficient construction (STRB No. 722/2014)
- “Zürich baut – gut und günstig!” programme for affordable, quality construction (STRB No. 1097/2005)
- Authorisation process for the departmental space-requirement strategies and city-wide sub-portfolios (STRB No. 969/2015)
- Operating concept and space standards for office workplaces (STRB No. 884/2015)
- Accounting model 2000-Watt Society (2014)
- AHB sustainable construction specifications
- AHB building technology guidelines
- Economic efficiency of energy measures (STRB No. 46/1998 to be replaced)
- Target agreements with large consumers (STRB No. 1372/2005)
- “Ecological requirements in procurement process” policy (STRB No. 976/2014)
- Room temperature guideline (STRB No. 1194/2006)
- Energy communication concept (STRB No. 1296/2006)
- IT strategy (including ZOOM output concept, STRB No. 624/2011)
- Environmental management system (STRB No. 1592/1997)

## Abbreviations

GRB	Council Decision
STRB No.	City Council Resolution Number



## MOBILITY

The City of Zurich creates the necessary framework conditions to allow the population to meet their mobility needs in keeping with the objectives of the 2000-Watt Society. To minimise the negative effects of motorised transport, the City promotes environmentally friendly modes of transport and seeks to facilitate shorter routes.

### City area

- M1 Implementation of Urban Traffic 2025\*
- M2 Predominantly car-free living, working and shopping
- M3 Promotion of 2000-Watt compatible technologies and solutions
- M4 Air traffic

### City Administration

- M5 Municipal vehicle policy\*
- M6 Procurement of buses and trams
- M7 Work-related travel
- M8 Commutes



## CONSUMPTION

The City of Zurich supports developments that allow the population, commercial sector and administration alike to reduce the consumption of grey energy, minimise greenhouse gas emissions and conserve resources, at the same time as satisfying their needs by practising sufficiency, i.e. moderation in the use of products, services, and resources. All projects and procurement processes are obliged to implement energy- and climate-related demands and systematically scrutinise their requirements in terms of quantities, space and equipment.

The objectives relating to consumption are implemented primarily in the context of the Environment Master Plan. Nevertheless the Energy Master Plan plays an active supporting role here, performing a number of important tasks.

\* denote implementation tasks of the Energy Master Plan that support the objectives of the area of action pertaining to consumption.



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## Energy Policy framework

- Municipal Code Art. 2quinquies (GB 2011)
- Spatial development strategy (STRB No. 549/2010)
- Regional structure plan (GRB 2000/894)
- Municipal traffic plan (GB 2004)
- Municipal structure plan (STRB No. 403/2015, in preparation)
- Urban Traffic 2025 (STRB No. 283/2014)
- Public transport network development strategy VBZ “züri-linie 2030” (STRB No. 536/2013)
- Bicycle Master Plan (STRB No. 1411/2012)
- Charter for Sustainable Urban Mobility (STRB No. 74/2010)
- City of Zurich energy research (GRB 114/2010)
- Parking space ordinance (AS 741.500, GB 2010)
- Urban spaces strategy 2010 (STRB No. 503/2006)
- “Ecological requirements in procurement process” policy (STRB No. 0315/2014)
- Municipal vehicle policy (STRB No. 1681/2012)
- Personnel law (AS 177.100) and implementation rules (AS, 177.101, Art. 100 ff)
- CO<sub>2</sub> offsetting for air travel (STRB 1392/2007)
- Administrative parking space guidelines (STRB No. 37/1997)
- Mobility framework agreement (STRB No. 1121/2013)
- Climate protection, offer to employees (Motion 2007/235)
- Energy communication concept (STRB No. 1296/2006)

## Abbreviations

GRB	Council Decision
STRB No.	City Council Resolution Number

# Implementation

## RESPONSIBILITY

### City Council

Zurich City Council plays two important roles in implementing the Energy Master Plan:

- It campaigns on a federal and cantonal level for conditions that support the City's energy policy goals and give it the necessary freedom to implement them.
- It sets priorities in case of conflicting goals between energy policy and other policies and strategies of the City of Zurich.

### 2000-Watt implementation structure

The City Council's environment delegation bears ultimate responsibility for the issue of the 2000-Watt Society. In 2012 the City Council created a city-wide organisational structure to implement the 2000-Watt Society.

### MPE steering group

Responsibility for implementing the Energy Master Plan lies with a steering group. Headed by the energy commissioner, it is made up of representatives of various sectors: the Energy and Sustainability division of the UGZ; the Traffic Strategy department of the TAZ; the Technical Centre for Sustainable Construction of the AHB; and the Technical Centre for Corporate Development and Sustainability of the ewz. The responsibility of the steering group comprises:

- Guiding the implementation process
- Updating and reviewing Action Plans on a yearly basis

- Performing higher-level compliance monitoring
- Defining the principles of reporting
- Updating the Energy Master Plan every four years
- Ensuring coordination with the catalogue of measures of spatial energy planning

### Departments

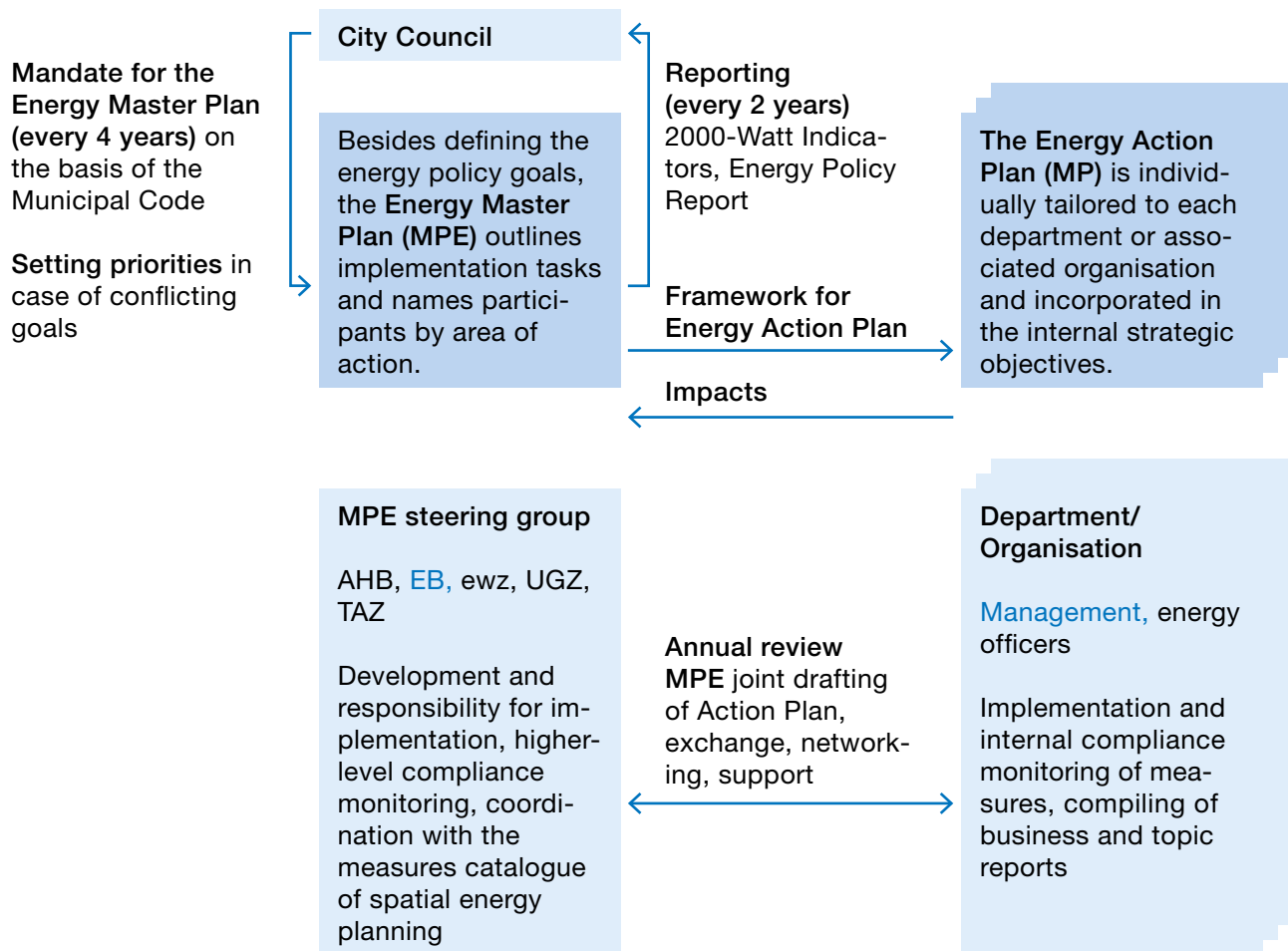
The task of implementation is carried out primarily at the level of the departments and associated organisations that perform energy-relevant tasks, but there is also a need for intense cooperation and coordination between all the City Administration functions involved – a kind of “corporate group mindset”.

This applies especially to the following issues:

- Active communication of energy policy objectives and implementation tools, both internally and externally, in a manner suited to the target group.
- In energy-policy-relevant strategic projects by City departments and Energie 360° AG, the energy commissioner is involved at an early stage.

## INSTRUMENTS AND PROCESS

### The implementation of the Energy Master Plan



■ Participants and their main tasks (process lead denoted blue). Currently 17 departments or associated organisations are involved in the implementation process.

■ Key instruments in connection with the implementation of the Energy Master Plan

### Abbreviations

AHB	Structural Engineering Department
EB	Energy Commissioner
ewz	Power utility company
UGZ	Dept. of Health and Environment
TAZ	Civil Engineering Office

## Action Plans and annual reviews

The Action Plans of the individual departments and participating organisations constitute the main tool for implementing the Energy Master Plan and comprise various energy measures that have been defined to fulfil the implementation tasks. The departments/organisations and the steering group work together closely to define the contents of the Action Plans and monitor their implementation. The measures are updated based on reviews that are usually held annually, which also serve to harmonise the different departments' internal strategies and objectives. The effectiveness of measures is compared to the objectives and tasks of the Energy Master Plan, and adjustments and corrections are applied as necessary. Action Plans are signed off annually by the heads of departments (or the participating organisations) and the energy commissioner.

## Energy meeting

The steering group and energy officers from the various departments conduct an annual "Energy Meeting" to share information on energy policy and promote technical exchange between departments. In order to better harness synergies within the City Administration, the annual Energy Meeting (MPE) is held at the same time as the annual Environment Meeting (MPU), with alternating lead responsibility.

## Data collection, analysis and interpretation

These functions are performed at several levels:

- The implementation of individual measures is verified by the departments and associated organisations themselves – generally in the context of their internal management processes (environmental management system etc.), and all progress is documented in the Action Plan.
- For certain issues, however, this is done by functional supervisors at the overall city level, such as the implementation of the 7 Milestone Standards for eco-compatible, energy-efficient construction, Urban Traffic 2025, the municipal vehicle policy and procurement.
- Data collection, analysis and interpretation is conducted separately for large municipal consumers to whom a cantonal target agreement applies, with the support of the cantonal administration.
- At a more senior level, compliance with quantitative targets is monitored by the steering group on the basis of the primary energy balance and greenhouse gas emissions.

## Monitoring, 2000-Watt indicators

The Energy Master Plan is reviewed periodically, with a statistical report on the total and primary energy consumption and greenhouse gas emissions being compiled and published by the Department of Health and the Environment every two years.

## Reporting

Reports on energy-policy-related activities and their effectiveness are prepared at departmental level to begin with, some in the form of business reports, and others as periodical reports on energy-relevant strategies such as the 7 Milestone Standards for eco-compatible, energy-efficient construction and Urban Traffic 2025. Information from the departments is summarised in the energy commissioner's Energy Policy Report and brought to the attention of the City Council and interested members of the public in a suitable form.

## Reviewing and updating

The Energy Master Plan is reviewed, updated and approved by the City Council every four years. At the same time it is harmonised with other energy-relevant policies of the City Council, including the Environment Master Plan, Urban Traffic 2025, vehicle strategy, procurement principles and housing policy. Reviews are conducted in collaboration with relevant departments.

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## More information

- Energy Policy Report
- 2000-Watt Indicators

## PROCESS CONTROL

The following implementation tasks are necessary with regard to process control:

- P1 Review and Update of Energy Master Plan
- P2 Review and Update of Energy Action Plans
- P3 Compilation and publication of 2000-Watt Indicators
- P4 Compilation and publication of Energy Report
- P5 Alignment and review of energy-relevant strategies and policies
- P6 Establish common fundamentals and uniform tools based on 2000-Watt criteria (primary energy and greenhouse gas emissions)
- P7 Analysis and publication of climate and energy related data
- P8 Coordination with energy planning
- P9 Participation at European Energy Award Process

## COOPERATIONS

To reach the 2000-Watt goals, cooperation with the Canton of Zurich and the Swiss Federation is essential. Networking with other municipalities and an active collaboration in national and international bodies and organisations are of crucial importance in this context, and this is expressed in the City of Zurich's memberships of the Energy Award trustee organisation, the association of cities, the Climate Alliance and other international climate protection programmes.

### International memberships

The City of Zurich is a member of the European Climate Alliance (STRB No. 287/1993), of the Carbon Disclosure Project (STRB No. 265/2013), of the European Covenant of Mayors (STRB No. 1200/2008) and the global initiative Compact of Mayors (STRB No. 834/2015).

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[More information](#)

► [European Energy Award](#)



# Appendix

## EXCERPT FROM THE CITY OF ZURICH'S MUNICIPAL CODE

Art. 2 (inserted via community decision of 30 November 2008, in effect as of 1 January 2010)

- 1 The community shall actively support the protection and preservation of the natural foundations of life and the sparing use of natural resources. It shall undertake to implement sustainable development.
- 2 In particular, within the scope of its responsibility for reaching the goals of the 2000-watt society, it shall support the following:
  - a) A reduction of energy consumption to a continuous rating of 2000 watts per resident.
  - b) A reduction of CO<sub>2</sub> emissions to one tonne per resident per annum.
  - c) The promotion of energy efficiency and renewable energy sources.
- 3 It shall forgo new investments in nuclear power plants and new options on nuclear power plants.

Transitional provision:

Art. 122

For reduction of CO<sub>2</sub> emissions to one tonne per resident per annum, the municipality sets the year 2050 as its target.

## EXAMPLES OF IMPLEMENTATION TASKS

### City area



#### SETTLEMENT DEVELOPMENT

##### S1 Coordination of development and energy planning

Development planning and energy planning are coordinated with each other to harness the local potential in waste heat and renewable energies as exhaustively as possible. The coordination of the two planning issues serves as a basis for the structural and utilisation plans.

#### ENERGY SUPPLY

##### E6 Promotion of innovative concepts for the implementation of the 2000-Watt Society

The City of Zurich promotes the development and distribution of innovative concepts and tools to support the implementation of the 2000-Watt Society in the field of energy supply (e.g. intelligent grids with control and storage options). These efforts are coordinated.

#### BUILDINGS

##### G1 Regulations on specific space requirements

For its own apartments or those of third parties on urban land, the City of Zurich ensures minimal space requirements and good occupancy rates: in accordance with regulations on building contracts and for subsidised apartments as well as with occupancy regulations.

#### MOBILITY

##### M2 Predominantly car-free living, working and shopping

The City makes it possible to do most of one's living, working and shopping without having to use a car. In addition, for special-use planning and in regulations on building contracts, car parking facilities are limited to a minimum in accordance with the parking space ordinance.

## City Administration



### ENERGY SUPPLY

#### E7 The City Administration's energy consumption

The ecological quality of the energy consumed by departments is subject to the directives of the City Council. Departments are free to purchase higher-quality energy sources and also to implement power generation facilities to cover their own needs.

### BUILDINGS

#### G5 Sufficiency – an integral part of the requirements

The City Administration makes modest demands of the City's own buildings and building-related equipment and services, so as to further reduce energy consumption. A high occupancy rate optimises floor space use per functional unit.

### MOBILITY

#### M7 Work-related travel

The requirements for work-related travel follow the principles of sufficiency, efficiency and consistency. Work-related travel is conducted primarily by public transport, by bicycle and on foot. Where airline travel is unavoidable, the CO<sub>2</sub> emissions are offset. Reports are submitted on journeys made by air.

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