

LUCI CHARTER

on Urban Lighting

Promoting a culture
of sustainability in lighting



LIGHTING URBAN COMMUNITY INTERNATIONAL

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Introduction

By establishing a "LUCI Charter on Urban Lighting", we, the member cities of the LUCI network, would like to hereby affirm our shared conviction that lighting can play a determining role in supporting the sustainable urban development of our cities.

We strongly believe that urban lighting, with its capacity to organize and stimulate urban activities, to enhance cities and their urban spaces and to increase the quality of life of its inhabitants, can indeed contribute positively to building sustainable cities.

A responsible public lighting strategy can assist in meeting the following objectives:

- *Supporting the urban, social and economic development of our cities*
- *Reducing energy consumption*
- *Taking into account the social and environmental impacts linked to the production, exploitation and maintenance of lighting installations.*

By this charter, we therefore wish to define the issues related to the implementation of sustainable lighting, and the way such lighting can contribute to sustainable development policies in cities worldwide.



1 | Sustainable Cities

INTEGRATING URBAN LIGHTING IN URBAN DEVELOPMENT POLICIES

We are convinced that high quality and carefully designed urban lighting can influence the process of urban development and regeneration in a decisive and positive way.

We believe that a fully integrated public lighting strategy supported by a master plan constitutes one of the keys to a balanced urban development.

Thus, we the member cities of LUCI, hereby declare our commitment to:

1.1 Ensuring an equal and free access to urban lighting

Lighting is one of the basic needs for living in urban areas. Cities must guarantee an equal and free access to urban lighting for all citizens, regardless of their social status and physical conditions. This means that lighting strategies should concentrate on the entire city, including city centres, suburban areas and the periphery of cities. Lighting should contribute to reducing social and economic inequalities and support integration policies.

1.2 Creating a safe and comfortable environment

Lighting has played a historical role in making our cities safer, more secure and more comfortable to live in. Urban lighting strategies must maintain this as one of their primary and most essential objectives. They must contribute to creating a secure and comfortable environment. This involves consideration being given to the role light plays in creating a feeling of safety when necessary, with a reasonable amount of light.

1.3 Using light to build the urban and cultural identities of our cities

Lighting, whether temporary or permanent, is a powerful tool for city marketing and city enhancement. It can help create distinctive nightscapes and can define and enhance significant urban areas, buildings or monuments.

However, lighting to enhance and promote our cities must be handled with care and some aspects deserve specific attention:

REINFORCING CULTURAL AND SOCIAL IDENTITY

Urban lighting should be encouraged in its capacity to build and/or reinforce the link between people and their urban environment. Lighting events and festivals in particular should give expression to urban creativity, culture and art, and serve the social unity of our cities.

PRESERVING AND PROTECTING HERITAGE SITES AND ANCIENT CITY CENTRES

Lighting of historic buildings or structures and lighting in historic areas should respect and enhance their architectural characteristics and quality. Careful consideration should be given to the positioning and daytime appearance of luminaires and other electrical equipment to ensure that they do not damage the physical fabric of buildings or detract from their appearance.

1.4 Supporting an environmentally friendly mobility

Lighting must play an important role to ensure safety for automobile traffic, but it should also strongly support green mobility as well. Bicycle lanes, local public transportation and pedestrian routes must be lit to an appropriate level to offer an adequate and safe alternative to transportation by car, and thus contribute to minimising the negative effects of motorised traffic on climate and the environment.

1.5 Strengthening local economic development

Lighting strategies must support local economic and commercial development. By its ability to enhance and improve the image of a city and its quarters, well designed lighting can constitute an attraction for residents and tourists, as well as for commercial and economic activity. In an indirect way urban lighting investments are economically efficient and can be decisive in stimulating economic development.

2 | Sustainable Light

CONSIDERING THE ENVIRONMENTAL AND ECOLOGICAL IMPACTS OF LIGHT

Cities and countries worldwide are taking action to limit their CO₂ emissions and we fully support these initiatives.

We believe that cities can contribute to these objectives by planning and realising their urban lighting strategies in an efficient and resource-friendly way.

Thus, we the member cities of LUCI, hereby declare our commitment to taking into consideration the following issues in our lighting policies:

2.1 Optimising energy consumption

Urban lighting is a major consumer of electric power in our cities and therefore contributes significantly to their carbon dioxide emissions.

The climate change challenge can be dealt with only through utilising new intelligent approaches and technologies, which minimise power consumption while improving the light quality in our cities.

Two levels of CO₂ emissions must be taken into consideration:

I ENERGY SOURCES

To reduce the environmental impact of urban lighting to a minimum, cities must promote and use renewable energy sources (solar energy, wind energy, energy derived from plants (biomass) or from water) wherever possible rather than energy derived from fossil fuels. Cities should also promote research in this field.

I OPERATING ENERGY

Urban lighting must contribute to energy efficiency objectives through the implementation of innovative strategies and concepts developed in urban lighting design as well as through up-to-date technologies applied to lighting equipment and management systems.

2.2 Minimizing the environmental impact of all operating and production aspects

Cities must take into consideration the entire life cycle of materials: this includes all the resources that are needed for the production of lamps, luminaires and columns, as well as the cost of their transportation.

At the end of the lighting's life cycle, all products used must be disposed of without risk for man and the environment. Recycling must be set as a priority in all cities.

2.3 Maintenance and quality control

Maintenance is one of the most important responsibilities of cities and is vital for energy efficiency. The financial, human and material cost and impact of maintenance must be identified at the beginning of any project and a maintenance plan prepared. Lighting designs should ensure that installations are easily accessible for maintenance and easy to maintain. Cities should also take responsibility to control the quality of their lighting and its photometrical characteristics.

2.4 Reducing light pollution

Light pollution obscures the stars in the night sky for city dwellers, interferes with astronomical observatories, and, like any other form of pollution, disrupts ecosystems and has adverse health effects.

Two main aspects related to light pollution should be taken into consideration by cities:

I HUMAN HEALTH AND BIODIVERSITY

Urban lighting strategies must take into account the potential nuisances of intrusive or disruptive lighting. Beyond the feeling of discomfort, disturbing the natural light-dark cycle can create a malfunction of the circadian rhythm of humans, animals and plants and thus have a negative impact on their health and the environment. Cities must aim at creating comfortable light environments and protect darker areas.

I PRESERVING THE DARK SKY

Due to light pollution the stars in the night sky have become invisible in many metropolitan areas. As a result of poor lighting design and improper products, waste light is emitted towards the sky instead of illuminating the areas to be lit. The use of luminaires with improved photometrics that limit waste light, careful lighting design and sensitive handling of urban lighting can reduce light pollution and help make starlight visible again.

Following these commitments,

**we, the member cities of LUCI,
hereby engage ourselves in:**

► **Applying the existing local, national and international resolutions and charters** on sustainable development and sustainable technologies.

► **Developing an integrated approach to the design and implementation of lighting** in urban planning and development policies.

This involves:

- **Using lighting master plans** as a strategic planning instrument.
- **Organizing active civic participation** on significant lighting projects.

► **Disseminating a new culture of sustainable lighting** in our cities, by:

- **Supporting open innovation** by encouraging and promoting activities in all domains related to sustainability.
- **Promoting good practice solutions** and demonstrating the positive results of advanced lighting concepts and technologies for innovative lighting.
- **Contributing actively to the expertise within the LUCI network** by exchanging experiences and building benchmarks of good practice.

► **Verifying the results of our efforts** and giving a progress report every 3 years