STÄDTISCHE ENERGIEN
URBAN ENERGIES

Memorandum
„URBAN ENERGIES –
Urban Challenges"

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Rising to their responsibility for the urban and regional future, the participants of the international conference have developed this memorandum in full and open participation of national and international partners from the private sector, academic institutions, civil society and various political levels.

Although we will mainly focus on Europe, sustainable urban development remains nonetheless a global necessity

I.   Preamble

(1) The LEIPZIG CHARTER on Sustainable European Cities was adopted five years ago. It builds on the results of the Global Conference on the Urban Future URBAN 21 held in 200. The **challenges** identified at the time are still valid today: demographic change, social inequality and integration, shortage of affordable housing as well as environmental and traffic problems. Since then, climate change has become more serious and its impacts more significant, the era of cheap fossil energy is nearing its end, food production has become more vulnerable to crises, and the financial system's turmoil has not only burdened public finances but is also a threat to social peace. These developments affect cities, but increasingly also rural areas.

(2) Policy makers, the civil society and the private sector must provide answers to these challenges – international, national, regional and municipal answers. Cities of all sizes hereby have a particular responsibility and obligation. The major strategic task for the future is the **local and regional implementation of the energy transition**. Only with greater energy efficiency and the use of renewable energies can the era of cheap fossil energy be left behind. And only by doing so will an effective contribution be made to fight climate change. Cities are once again called upon. The *Energiewende* (energy transition) can only be successful if it is nor considered as an isolated task but rather if it is embedded in integrated urban development strategies. This requires extraordinary economic, social, ecological and cultural sensitivity.

(3) In many states, drastically reducing greenhouse gas emissions and energy consumption is a stated objective. In Europe, the housing stock should be almost climate-neutral by 2050. In Germany, withdrawing from nuclear energy and enacting the energy transition has created a new framework and imposed new constraints. In addition to increasing energy efficiency, an extensive conversion to renewable energy sources is essential. The **use of regenerative energy resources** will not only change urban utilities infrastructures but also affect buildings as well as city- and landscapes. With its enormous dimension, the form of this change brings new tasks in the renovation and new construction of buildings and neighbourhoods as well as in urban, transport and landscape development.

(4) **European cities** provide good conditions to address these challenges. Cityscapes, public spaces, streets, green spaces and buildings offer a sense of local identity and homebuilding in times of accelerated globalisation. Their respective singularity must be considerer. Thanks to their architectural and social qualities, cities can make a significant contribution to the implementation of the energy transition.

(5) The **social energies** for a sustainable urban development are concentrated in cities. Urban energies come first and foremost from creative people, their skills and commitment to accompany sustainable urban renewal, but also from education and science institutions. Cities are "energetic catalysts" of key social, economic, ecological, technological and cultural innovations. They concentrate initiative and willingness to participate as well as committed and competent citizens. Regarding foreigners and minorities, the vast majority of citizens is tolerant and shows solidarity with social issues.

(6) This memorandum coins requirements for political inspiration, innovation, creativity and civic engagement to ensure an environmentally responsible, socially balanced and economically robust – in short, a sustainable urban development.

II. Key tasks for sustainable urban development

(7) **Four major tasks are on the agenda: firstly, the cautious ecological renewal of buildings and neighbourhoods, secondly, the technological regeneration of urban infrastructures, thirdly, developing a new mobility and fourthly, social integration. These four major tasks have been discussed at length but are usually separated from one another, moreover in various professional and political circles. They must be brought together. The energy transition and the fight against climate change requires not only renewing cities and regions, changes in urban infrastructures, new mobility and social integration but also new economic and financial bases and respect for cultural identity. And only when the city and its surrounding hinterland are brought considerably closer can the necessary conversion be successful.**

(8) Increased energy efficiency starts at the level of the single house. Buildings are gradually moving away from being energy consumers (Plus-Energy-House). Renovation and energetic retrofitting of housing buildings are however more important than good new building. Energetic rehabilitation is one point, although as an increasingly significant component of extensive renovation it also includes good design and a socially fair distribution of costs. The key to a successful energy transition is the overall efficiency at neighbourhood and metropolitan level. In addition to energy efficiency and using renewable energies, an innovative mix of sustainable, low-CO_2 energy production, consumption, storage capacity and input is also essential. The **renewal and construction of buildings and neighbourhoods** requires clear agreements, integrated as well as actor-focused concepts in order to achieve overall urban efficiency and draw any additional forms of financing.

(9) Our cities can remain fit for the future with a need-driven adaptation of existing, and by developing new, **urban utilities infrastructure systems**. This requires considerable investment, especially in developing local renewable energy production systems. A considerable effort is needed to find suitable locations as well as a good design for these renewable energy systems. The use of modern technology allows for a multidisciplinary optimization and linking of energy and mobility systems. Intelligent systems and networks can improve urban life.

(10) Another key task is a **new mobility culture** based on innovative technology and a new balance between pedestrian, bicycle traffic, public transport and an altered automobile traffic. The aim is to achieve a city-compatible, multi- and intermodal transport, to develop new transport offers such as bike- and car-sharing systems. Mobility management and mobility cards improve local mobility. The rising shift of values in many cities, especially among the young adult population, supports this development. The use of vehicles with alternative forms of propulsion is an important contribution to eco-mobility if the energy comes from renewable sources and noise emissions are reduced. The freight and commercial transport must be organized so as to be compatible with the city. Inter-

net individualisation of demand for goods and services requires an innovative reorganisation of the courier, express and parcel delivery services with decentralized freight distribution centres and hubs as well as small, electric or hybrid delivery vehicles for urban areas. The aim is to relieve cities of noise and pollution and improve main streets, public spaces and squares.

(11) **Social integration** is the fourth major challenge of future urban policies. Growing polarisation between rich and poor as well as between cultures has led to a deeper socio-spatial division of cities. In order to preserve and improve the city's ability to integrate, the weak must be protected, intercultural interaction promoted, barriers broken down and opportunities promoted. This calls in particular upon civic engagement. Social equity, justice and inclusion in the context of the energy transition are also key goals. In addition to affordable and efficient housing as well as social facilities, it is also necessary to promote crucial behavioural changes in all social groups to reduce energy consumption. The energy transition cost will have to be economically distributed and socially fair. With their particular focus on human development in deprived neighbourhoods, the objectives of the LEIPZIG CHARTER become even more relevant in the case of the necessary integrated approaches to energy-efficient neighbourhood development.

(12) Cities, with their various educational and training opportunities, offer an outstanding potential for social integration. They thus contribute to the competitiveness of our entire economic system in a globalised world. **Young people** in particular can contribute with their ideas and commitment to making cities better places to live in. Their participation in all areas of urban development is to be promoted. It is essential to support not only early-childhood development and better education in schools and universities, but also to provide an atmosphere that offers young people and families attractive working and living conditions in cities, a culture of openness and tolerance as well as social and cultural diversity. A specific challenge is to integrate young people from disadvantaged backgrounds – also because social change requires any creative force. It has proven useful for schools and day care centres to open up to their neighbourhoods and become local social centres for families.

(13) **Demographic change**, in particular in terms of ageing as well as fragmentation of lifestyles and widening disparities, requires modifying, converting, extending or dismantling buildings and neighbourhoods. This is a smart way to combine it with the cautious ecological transformation of cities. Especially in societies facing population decline, we will only be able to deal with future challenges if senior citizens remain active longer – both professionally and with voluntary work. Social housing policies are also responsible for new housing constructions taking into account age- and family-specific needs as well as modernisation of existing age-friendly buildings. Mixed urban structures, easy access, affordable rents and age-friendly housing are essential conditions for senior citizens to stay as long as possible in their familiar surroundings. It is also important for their families that they can live in the city. Demographic and environmental goals are best combined in compact building and urban structures. Security is a basic need for citizens of all ages whose importance to the quality of life increases with age. Beyond objective security, the subjective feeling of security is also of great value – an individual who does not feel safe is impaired in his or her quality of life and limited in his or her participation in society. Public spaces must therefore be accessible to all age groups without fear. It should be noted that the neglect of public spaces triggers fear and insecurity.

(14) **Urban and historic centres** create identity in the city and region. They must be strengthened as an image of urban history as well as centres for culture, education, religion, retail, administration and housing. The careful handling of architectural heritage is also required for the ecological renewal. In this case, deprived inner city neighbourhoods in particular deserve special support.

(15) **Large-scale housing estates** on the urban fringe, insofar as they are needed for housing, should be improved in social, architectural, ecological and functional terms. The definitely also have some advantages which can be exploited: building density that favours energy efficiency as well as being often easily accessible by public transport. In the suburbs and surrounding urban areas, there is a need for action to stabilize and possibly dismantle simple and no longer adjusted to the demand **areas of single-family detached housing areas** lacking adequate social infrastructure and facilities as well as an extensive access to public transport.

(16) The long-term redevelopment of cities requires a new balance of **density, openness and diversity**. Cities need open space for recreation, cold air storage and urban agriculture, attractive, pedestrian-friendly streets and spaces, green and open spaces perceived as safe and well-designed. They also need to be densely built as well as socially, functionally and architecturally diverse. A good relationship between density and openness will help create a healthy city. The compact urban development with well-balanced open spaces paving the way to a "walkable city and region" is the goal of ecological renewal. Development within cities is still the main task.

(17) Resource efficiency, climate protection and dealing with consequences of climate change can only be achieved by engaging the city with its **surrounding hinterland and rural areas**. This implies above all an intensive and inclusive development coordination with the metropolitan areas's different municipal authorities. A balance between town and countryside – a new regional balance – is thus sought after. A keystone is the establishment of regional transportation systems that reduce transport costs for people and goods. Cities and their surrounding hinterland should cooperate more in order to strengthen regional economic activity, improve cities' food supply from the countryside, set up regional energy and water authorities, open up the region to local recreation and strengthen metropolitan public transport.

(18) An overall shrinking population facilitates a considerable **reduction** of additional **land-use**. However, there are other large savings potentials, especially in areas of trade and transport. The reuse of vacant buildings and derelict land for economic purposes must prevail over building on greenfield sites. Wastelands and derelict buildings can also be used for climate regulation (generating cold air, reducing temperatures, ventilation, water retention) and renewable energy production (solar and wind energy, geothermal energy, energy from organic matter). There are also large energy recovery potentials in industrial areas.

(19) A pre-condition to good building, adequate urban infrastructure and new forms of mobility are innovative construction and operating principles, known as **smart infrastructures**. Water supply and drainage, power and heat supply, transport and mobility should be gradually decentralised, but should also be at the same time restructured into networked systems. These allow for a multiple use of resources (energy, water, buildings, land) and include their users. Surplus energy from buildings can be a source of energy for other uses – electric vehicles for example. Decentralised organisation of the infrastructure and local and regional responsibility are inextricable.

(20) Structural economic change is mainly taking place in the city. Knowledge-based economies and the creative industry – knowledge, education, research and development, culture – have an inclination for urban locations. They contribute to the economic "urban renaissance". Urban environments are important for innovation and knowledge sharing, and attract young people. This makes the buzzword of **creative participation** tangible: experts are needed to promote, support, readjust and secure the economic, energetic but also social transformations in an innovative way. Competition for talent will influence the future of any city.

(21) **Culturally**, the challenges of the energy transition are considerable. The architectural heritage and character of towns and neighbourhoods need to be acknowledged. This means that identity-forging ensembles and buildings need to be restored in such a way that their appearance is preserved. This principle should also be applied to everyday architecture: no energy efficiency improvement without quality design. New buildings can comply with future resource and energy standards. The aim should be to increase the beauty of, as well as the identification to and responsibility for, the city alongside its necessary reconstruction. Sustainable construction, improved urban infrastructures, new mobility and changing behaviours improving energy efficiency and conservation are essential for long-term, sustainable urban development. They must however be consistent with the preservation and further development of cities' cultural qualities and characteristics. *Baukultur* (building culture) is an important location factor.

III. An alliance for a sustainable city: urban energies

(22) **A competent and responsible policy and administration at all levels can pave the way to sustainable buildings, sustainable neighbourhoods and the sustainable city. Addressing the major challenges requires broad social alliances and transparent processes. Stakeholders from the economy, academia, trade unions, associations, foundations, culture, education, media, religion, sports as well as promoters and planners have always been important partners in urban development. Today more than ever, civic participation and private initiatives are also needed to implement urban development projects successfully.**

(23) **Stakeholders** in the city and the region follow their own logic and rules. It is important to activate and focus their strengths to innovation, community engagement and entrepreneurial initiative for a future-oriented urban development.

(24) The **economy** shows entrepreneurial initiative, and has user-friendly and marketable products for a future-oriented and climate-conscious building and urban development. Research and development, especially education and training, are the foundations supporting this success. Businesses are increasingly recognizing the potential of urban development and playing a part in concrete projects.

(25) The **cultural and creative economy**, with its innovative power, takes part in the design of our cities. Its social relevance allows it to embrace the current social challenges in its actions and developments.

(26) **Science** compiles knowledge in fundamental research and applicable implementation strategies for sustainable building and urban development. It should make greater use in teaching and research of the principles and demands laid by the memorandum as a foundation for inter-disciplinary (further) education and training of the current and the next generations. Future-oriented building and urban research should be promoted.

(27) **Citizens** are increasingly involved in their neighbourhoods and cities and, as experts of their own living environment, thus help provide the necessary measures to establish a broad social basis. Appropriate forms of participation, co-decision, involvement and co-design should be further developed for this purpose.

(28) **Promoters and owners** (investors and project developers) have to be evaluated according to the principles of sustainable building and of the sustainable city. Supporting economic frameworks conditions and setting clear efficiency targets can foster willingness to change.

(29) **Media** are important public discussion forums and have a special responsibility in communicating the major challenges and the necessary efforts for sustainable urban de-

velopment. Mew media can provide effective platforms through open dialogue forums, online simulation games and other formats.

(30) **Architects, engineers and planners** must use their knowledge in closer cooperation in a creative, timely and responsible manner. Holistic approaches to planning are essential as well as early involvement of experts from other disciplines and citizens.

(31) It is important to establish **international, national, regional and local alliances** between policy, administration, economy, sciences and citizens. Such alliances do not occur by themselves, but rather in the pursuit of joint programmes, plans, and key projects for the sustainable city – for example, under the National Urban Development Policy (of Germany). They create new forms of negotiations of strategic goals and projects. Political and administrative institutions are thereby in charge of bringing all stakeholders together in terms of procedure and content as well as triggering essential coalitions. These alliances must be stable, reliable and transparent.

(32) Local self-government is a key factor to the sustainable development of cities, communities and the nation as a whole. In the light of the rapid changes related to globalization processes, the principle of subsidiarity rather than a centralized structure is proving to be a particularly successful model. The **public sector** plays a **key role** in designing the sustainable city. Committed local councils have held a central role in urban development. In addition, it will also require a reliable and technically competent administration holding long-term and transparent programmes. Its aptitude for organisation is therefore essential. Better organisational and operational structures are required, as well as a sufficient number of stuff. Only by merging the topics of ecological urban renewal, urban infrastructure, new mobility and social integration will sustainable building and urban development be possible.

(33) Several good – but often selective and sectoral – proposals for a sustainable city are already available. The direction is clear regarding practical means, however, a public debate must be held in every city. The primary objective is the sustainable city, overcoming energy and climate issues. Programmes and projects that meet this objective must be negotiated and implemented on site. They have to take into account environmental, economic, cultural and social aspects. They therefore require an **integrated urban and regional development** in regard of sectoral, temporal, spatial and process-related purposes to which European Ministers have committed themselves in the LEIPZIG CHARTER and the TERRITORIAL AGENDA. Concepts as well as projects must be built upon paths for action and long-term considerations.

(34) **Urban development plans** of a new generation carry a special importance, including integrated social and economic issues and especially energy and climate duties and responsibilities. A major task of urban development plans will be to develop efficiency potentials in a creative way and foster urban energy production. This implies enabling the existing infrastructure to produce energy, generate energy across urban areas and develop new means of storage. Efforts must also be made to make a closer connection between climate and energy concepts of urban development and urban development planning and urban regeneration. After amendment, the Federal Building Code (of Germany) would for example provide good options.

(35) Pilot projects are needed to implement urban development plans. They experiment new approaches and show how sustainable development can be arranged. Their findings must be quickly and extensively implemented. In parallel, **quality assuring methods and procedures** need to be conducted, for example through planning workshops, competitions and discursive processes. Such methods also make the establishment of local, project-based alliances easier.

(36) **Funding opportunities** of programmes in the future must be constantly adjusted to and coordinated with the current challenges of the energy transition, climate protection and management of the climate consequence. Goal orientation, technological openness and integrated neighbourhood approaches to energy supply and building renovation must remain the main criteria when designing programmes. The private banking sector is also invited to be more involved in the financing of the energy transition as a societal responsibility. Competitions are effective means to decide of funding for the best ideas in ecological urban development and cooperation in the neighbourhood, the city and region. A sustainable financing must be based on life cycle assessments. Local authorities face major challenges in the financial and infrastructure management as well as in the real estate policy.

(37) The need for energy policy transformation and environmental development of cities and regions must be actively promoted and advertised. The opportunities for wide citizens **participation** and co-decision with citizens are essential to a successful outcome. It is important to raise public awareness regarding its responsibility, using few resources and an intelligent use of urban space. New potentials and local knowledge for a sustainable city can subsequently be activated. Clear agreements and rules help create explicit responsibilities and regulate in decision-making powers in participation.

(38) Public investments in urban infrastructure are essential to promote a sustainable building and urban development. European Structural Funds should be increased with regards to the support of the urban dimension. After decades of successful **urban development promotion programme**, Germany has developed a powerful instrument which, despite changing conditions, also need to actively support the path towards sustainable cities. The federal level, Länder and local authorities have achieved this in close cooperation. In the future, the federal level should take more responsibility for model-based urban development projects relevant at national level.

IV.   Call for collective action

(39) **We call upon those responsible in cities, regions, states and international organisations as well as associations, businesses and initiatives to undertake their own programmes and projects to foster a sustainable urban development taking into account the cultural, social, economic and environmental dimensions of cities.**

(40) A first step has been made. A sense of optimism can be felt throughout all social groups. The different social groups must cooperate as **alliances** and partnerships to achieve the common objectives for sustainable cities. It is important to coordinate these alliances at all levels of action – as in Germany with the National Urban Development Policy which is already a success. This requires a national and international experience and knowledge transfer.

(41) **Political institutions** should provide the legal framework for a sustainable urban renewal including the implementation of the energy transition and initiating broad-based alliances for a sustainable city. This requires a disposition for an extensive public dialogue: actors from all sectors are already looking for ideas and projects as well as setting priorities, and are not only willing to be involved in their implementation through transparent procedures but wish to become active creators.

(42) The **public administration** should be fair in its structures, functioning and contents in order to meet sustainable urban development requirements. This means overcoming the sectoral division of architecture, urban development, infrastructure planning, transport development and social planning as well as cooperation with other actors in the pro-

gramme and project development. Furthermore, it is absolutely necessary to set clear priorities in favour of a local energy transition.

(43) **EU Institutions and other international organisations** should focus and support integrated and sustainable urban development more than they have in the past and take into account all relevant policy areas. This requires a cross-sectoral and place-based approach.

(44) **Economic, private sector and trade unions** should deal more with the conditions and options for sustainable building and urban development. The economy must take responsibility for the implementation of the energy transition at municipal level.

(45) **Education and science** should engage more intensively in a critical and constructive dialogue on the sustainable city. Universities and research institutions as well as schools should demonstrate a special effort in their commitment and endorse a more advisory role, provide platforms for public dialogue and spread to the public the knowledge acquired. Vocational and further education and training should be intensified.

(46) **Promoters and owners** as well as **planners and experts** should make the concept of a sustainable city the core of their work. They should not underestimate the growing awareness of necessary changes and should actively advocate for change. Integrated and holistic planning approaches, life-cycle-oriented plans and construction are a top priority.

(47) **Citizens** from all social groups should commit themselves more and more to the common good – in the social as well as in the individual sense. This means not only their streets or neighbourhoods, but also the entire city and region. The aim is to support the traditional form of volunteering wherever is possible, as well as through a public recognition of its outstanding achievements. It is also important to enable new project-based and temporary forms of civic engagement.

(48) **Media** should address more issues of sustainable urban development in their reporting and responsibly report on the cultural, social, economic and environmental dimensions so as to expose the discourse on these central issues in the public realm. With regard to new partnerships and alliances, the media have a multiplier function.

(49) The **new social media** are increasingly important as a platform for the discourse on sustainable urban development and its future trends. They can start and support a variety of activities. Integrating social media will allow to dialogue with all social groups.

(50) **The sustainable city is climate-conscious and energy-efficient, adaptable and socially just, economically efficient and, last but not least, creatively unique and beautiful. The sustainable city of tomorrow is the result of our actions today. Conditions, means as well as outcomes of this action are URBAN ENERGIES.**