City typology as the basis for policy

Towards a tailor-made approach to the benchmarking and monitoring of the energy and climate policy of cities

ADVISORY

AUDIT ▪ TAX ▪ ADVISORY

© 2010 KPMG Advisory N.V.

Contents

	Preface	4
	Summary	6
01	Background	10
02	An inventory of initiatives and tools concerned with the energy and climate policy of cities	12
03	Harmonising the collection of data	20
04	So many cities, so many challenges	22
05	Energy and climate programmes are change programmes	30
06	Conclusions	33
07	Recommendations	34

© 2010 KPMG Advisory N.V.

Preface

The whole world is facing a major challenge of how to limit the effects of climate change. These days, there is little doubt that climate change is an important issue. Therefore, the main question now is how to address it.

Bernd Hendriksen

Director, Sustainability Advisory practice, KPMG in the Netherlands

Addressing climate change is a shared responsibility requiring the joint support of citizens, businesses and governments. Cities occupy a key position in this respect. They house large populations and many businesses, generating a great deal of mobility, and are therefore major emitters of greenhouse gasses. This also implies that cities have unique opportunities to develop an energy and climate policy that can significantly reduce these emissions. To achieve this, cities can mobilise the parties involved, create awareness and enforce specific changes through legislation and regulations. The range of issues to be addressed is virtually endless, from waste collection and industrial policy to car use in the inner cities and grant schemes for green energy.

© 2010 KPMG Advisory N.V.

Moreover, this also presents cities with opportunities: a city that successfully tackles this issue can raise its profile accordingly. In the near future, this will become an increasingly important way for cities to distinguish themselves.

Understandably, cities are already using the opportunities available to place the issue of climate change on a solid footing. Domestically as well internationally, numerous initiatives and tools have been implemented to measure the efforts, to benchmark and to share knowledge. In this publication, KPMG Sustainability analyses and compares the impact of various tools and initiatives. One of our conclusions is that the landscape is cluttered, showing little uniformity or cohesion. We also conclude that initiatives are often not properly aligned to the specific characteristics of a given city and therefore do not invite a tailor-made approach. We have therefore made a number of suggestions for improvement. These are also based on the awareness that cities, particularly in the coming years, will require tailor-made policies that are designed to achieve optimal and sustainable results in a cost-effective manner.

Furthermore, requirements will become stricter. The Covenant of Mayors (a European Commission initiative for commitment by signatory towns and cities to go beyond the objectives of EU energy policy in terms of reduction in CO_2 emissions) for example, is drafting stricter requirements with respect to reporting, and the European Commission will also keep a close eye on the energy and climate policies of cities.

Many people both directly and indirectly contributed to this publication. I would like to thank them for their work, and I am confident that this publication will provide policymakers and decision-makers in cities with points of departure enabling them to optimise their climate efforts. We are happy to exchange ideas with them on how to design a tailor-made approach that results in a truly sustainable improvement.

© 2010 KPMG Advisory N.V.

Summary

Cities are responsible for about eighty percent of the global energy consumption and half of the total greenhouse gas emissions (European Commission, 2008[1]). Cities are therefore one of the key locations in the fight against global warming.

During the past decades, numerous initiatives and tools have been developed to achieve climate gains by determining the energy and climate profiles of cities, by carefully monitoring their energy and climate policy, by comparing cities and by reporting on their progress. All of these initiatives are well-meaning. A few of these initiatives and tools have also produced impressive results.

Nonetheless, the market is still immature, and its performance is therefore not optimal. There has been a rampant proliferation of perspectives, definitions, benchmarks, indicators and measuring methods. But a proper overview of these initiatives is lacking.

The effect of this is twofold:

- The effectiveness of energy and climate policy is low. There is no unequivocal insight into the effectiveness of cities' energy and climate policy. Different methods for footprinting, benchmarking and monitoring may produce contradictory results and this creates the risk that the parties involved – cities as well as critical observers – start to pick and choose from the available data and rankings to reinforce their arguments. The discussion is then too focused on their position in the rankings and not enough on the effectiveness of their energy and climate policy. That is why cities are looking for better tools that will help them to truly make a difference with their energy and climate policy.
- Administrative costs are high. The data requirements of the different initiatives and tools are placing an increasingly heavy administrative burden on cities, which are complaining about the overload of internal as well as external information requests. Moreover, in this field the information systems of cities are often still immature, and meeting the numerous information requests is therefore labour intensive. Differences in definitions also play a role, making it difficult for civil servants to promptly and reliably generate the requested information. A non-exhaustive inventory of nearly 60 initiatives and tools produced by KPMG Sustainability showed the wide range in diverging objectives, perspectives and indicators. The resulting administrative burden, including time spent and costs incurred, is a serious issue for many cities.

© 2010 KPMG Advisory N.V.

In this publication, we provide an overview of the different initiatives and tools. We look for the differences and the similarities and analyse to what extent the initiatives are useful for cities. This study can thus serve as a first step towards achieving the desired European-wide objective of uniformity in concepts and definitions. This may produce a better insight into the effectiveness of energy and climate policy and also a lower administrative burden.

In addition, this publication distinguishes different types of cities. This is done because in our view effective energy and climate policy requires a tailor-made approach. The different rankings and benchmarks say little about the energy and climate performance of a given city when its characteristic starting points, prerequisites and environmental factors are not taken into account. Every city has its own challenges, and a measure that was very effective in one city may produce next to no effect in another. Thus the energy and climate policy of a port city with a large manufacturing sector will logically focus strongly on investment in this sector, as this is where the difference can be made. When this city's performance is compared to that of a city dominated by financial services, this creates a skewed comparison. Rankings and benchmarks say little about the efforts actually made by the two cities. Furthermore, these types of comparative benchmarks do not provide cities with any input on how to improve their policy. At best, a high ranking is useful as a PR instrument.

In the coming years, cities will be expected to make a major contribution towards addressing the problem of climate change. At the same time, many cities have limited budgetary leeway for this, also due to the financial crisis. Now more than ever it is important for policymakers to make well-considered choices that actually produce effects and cost as little as possible. However, many policymakers and administrators have little idea where to start and are inundated with well-intentioned reports, rankings and proposals.

By basing their considerations on the typology of their city, they can compile the optimal package of energy and climate measures. This publication provides them with suggestions for a new way of thinking about this issue. We hope that these suggestions will initiate a discussion among cities and their administrators about achieving an effective energy and climate policy.

1. European Commission (2008) Covenant of Mayors Brochure.

© 2010 KPMG Advisory N.V.

© 2010 KPMG Advisory N.V.

Viewpoint

The sustainable energy revolution and cities

Sara Pasquier and **Nigel Jollands**, Energy Efficiency and Environment Division, International Energy Agency (IEA)

Cities (including towns) currently use over two-thirds of the world's energy, an estimated 7 900 Mtoe in 2006, even though they only account for approximately 50% of the world's population. By 2030, cities are expected to account for more than 60% of the world's population and use more than 12 400 Mtoe in energy.

These trends present an opportunity. Cities, as home to increasing population, energy use and CO_2 emissions, are an important player in energy management and climate change mitigation. Fortunately, city authorities (CAs), through their direct energy use, regulatory powers, capital works programmes and property management, are uniquely prepared to take leadership in these areas.

First, CAs are significant energy users in their own right. CAs are owners and managers of energy-related capital infrastructure, including buildings, recreation and sanitation facilities, water provision, transport fleets and energy distribution networks. Estimates of the proportion of city energy consumed by local government range from between 1% to 5% (for example, in New Zealand and France) to 16% (in Austria) of total city energy use.

Second, CAs have a profound indirect influence over a city's overall energy use through their regulatory functions. Urban planning, transport infrastructure, etc. are all areas where cities can influence energy use. Many city governments can also levy rates and charges and provide incentives and disincentives for energy use through pricing policies.

Lastly, CAs have considerable experience in engaging with issues of sustainable development and attempting to translate global and national targets into local practice. For example, CAs are generally responsible for implementing national energy efficiency requirements in building codes. This experience means that many CAs are well placed to assist with sustainable energy and climate change mitigation strategies.

CAs' ability to improve energy efficiency, mitigate climate change and take innovative decisions to enhance the deployment and use of renewable energy resources is also a function of the energy production and energy savings potential in its jurisdiction. Geographic setting, biophysical resources, infrastructure, industry make-up and social environment influence the energy production and energy-saving potential available in each urban area. CAs' capacity to tap energy savings and renewable sources also varies according to the availability of a skilled workforce, public/private partnerships and networks with other cities. Despite differences in capacity and energy production and energy savings potential, cities around the world are actively engaged in policy creation and implementation to improve energy efficiency, increase the share of renewable energy and decrease CO_2.

As a result, cities are uniquely placed to play a pivotal role in the sustainable energy revolution.

© 2010 KPMG Advisory N.V.

01

Background

For cities, the issue of climate is not optional

Global warming has been at the top of the agenda for years now and both governments and businesses are looking for ways to reduce humanity's impact on the climate. Cities play an important role in this. They are not only responsible for eighty percent of European energy use and half of the annual emission of greenhouse gases, but they also have excellent opportunities to bring about positive change (European Commission, 2008[2]). Cities can enforce this change by influencing the behaviour of citizens and businesses (by means of legislation and regulations, for example), by implementing a procurement policy focused on sustainability and by making their own activities more sustainable. Cities are therefore putting a great deal of effort into developing energy and climate policy and associated projects and programmes. It is important that such action is taken collectively. Only if cities conclude agreements with each other and move in the same direction can they truly make a difference.

For energy and climate policy to be effective, a number of prerequisites should be met:

- Cities must have insight into their climate footprint and must know who the main emitters of greenhouse gases and/or energy users are. Having this (quantified) insight creates real opportunities for defining the right policy.
- Cities must have clearly defined objectives and action plans for their energy and climate policy.
- Cities must regularly monitor and evaluate whether actions are producing the desired effect, so that timely adjustments can be made.
- Cities must regularly make themselves accountable to external parties (report) regarding their adopted energy and climate policy and the results it is producing. The rules governing this are becoming ever stricter.

In this effort, it is important for cities to exchange experiences with each other, so that they can gain new insights and adopt each other's best practices. Benchmarks can play an important role in this. When they are used properly, benchmarks are valuable not so much because they measure and rank cities, but because they spread knowledge about policies and measures and show what the frontrunners have achieved.

2. European Commission (2008) Covenant of Mayors Brochure.

© 2010 KPMG Advisory N.V.

Viewpoint

Bridging the gap

Birgit Georgi, Project Manager Urban Issues, European Environment Agency

Cities become increasingly aware of their role in the global fight against climate change and have started various initiatives. However, despite the European dimension of cities' action, no exact data of, e.g., urban greenhouse gas emissions can be reported. The variety of approaches, methods and tools does not allow for comparability of such data.

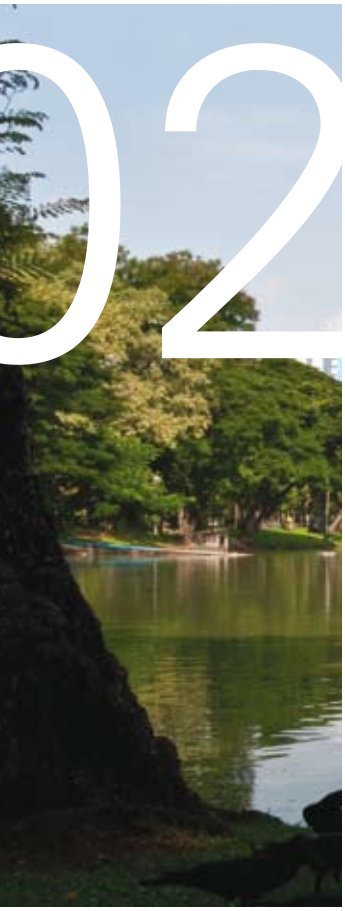
Bridging this gap is a difficult task as cities, due to the subsidiarity principle and the variety of contexts and purposes, will often insist to decide on their own approach. In this situation, a comparison study is an important first step in order to get an overview over the different approaches. This would provide the basis to analyze the problems of comparability in detail and identify potential ways forward.

Given the large number of approaches and the independent decision-making of cities, general and broadly accepted indicators could lead towards a solution. Current initiatives with a broad acceptance like the Covenant of Mayors or major European city-networks can be a good ground for such an initiative and should definitely be taken into account. When it comes to tools and data, it could also be a way to develop translation tools to make different data comparable.

There is the need to embed the whole issue into a broader approach of sustainable urban development. Climate change is strongly linked to many other environmental areas such as air quality, water or health and the study should at least link to these issues.

By considering these linkages and increasing the scope - this study can be very helpful within this process of supporting cities playing a more active their role in reducing Europe's energy footprint.

© 2010 KPMG Advisory N.V.



02 An inventory of initiatives and tools concerned with the energy and climate policy of cities

A potpourri of initiatives and tools

Our research shows that cities are faced with a large number of initiatives and tools for determining their climate profile and monitoring and/or benchmarking their climate performance in order to report on it. It is difficult to gain an insight amidst the potpourri of hundreds of tools, initiatives, standards and guidelines at local, regional, national and European level. Although some of these initiatives are comparable, there are major differences in terms of perspectives, objectives and scope, as well as adopted definitions, indicators and measuring methods. Gaël Léopold, Manager Corporate Relations WWF International: "Lots of institutions and organizations have tried to compare urban projects using different methodologies (e.g. European Green Capital Index, European Energy Award, etc). The problem is that the projects taken into account are very different from one another and the existing benchmarking tools are often either biased or not accurate/strict enough to make concrete conclusions. It is therefore difficult for policy makers to identify which strategies have provided the best results in order to assist policy decision making."

KPMG made an inventory of 57 initiatives and tools, most of which had a European-wide focus. Our selection was aimed at obtaining a cross-section and we therefore focused on producing an overview of the most well-known/important initiatives and tools. These can be clustered as follows (see table to the right).

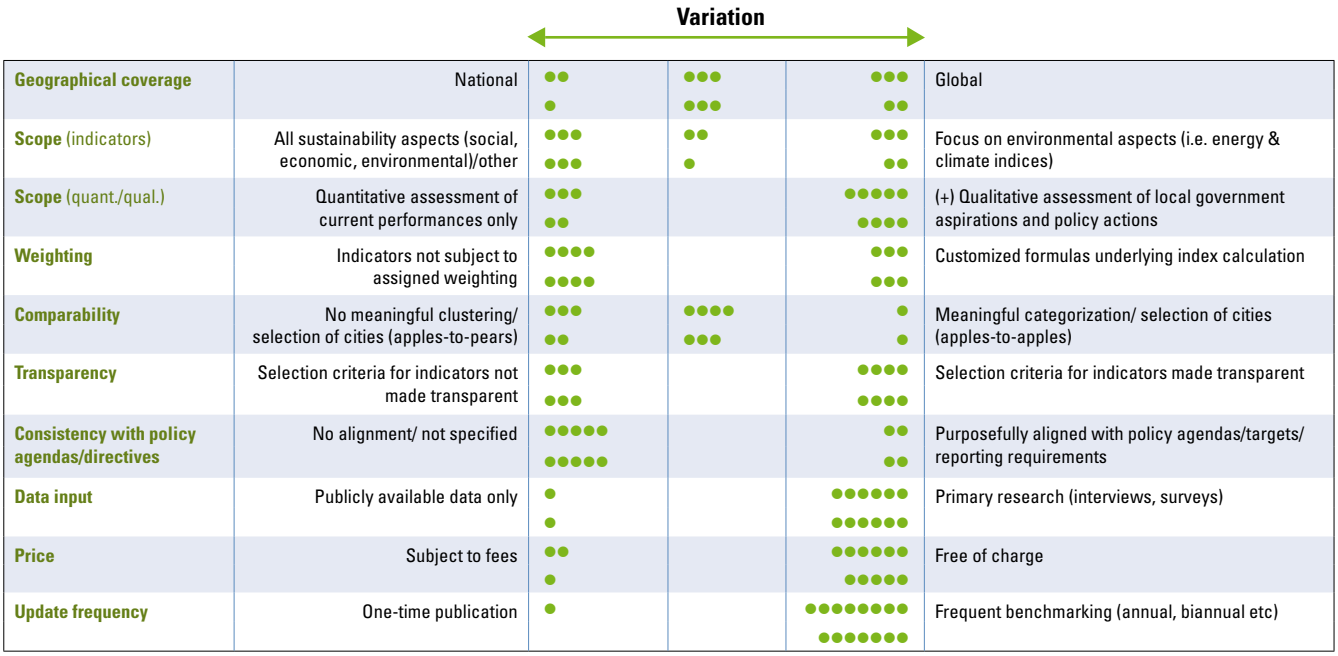
This clustering provides some insight into the types of tools available on the market and seeks to bring some order to the 'chaos'. Nonetheless, this analysis also makes it crystal clear that there has been rampant proliferation. Below, we specify the main differences and similarities for the various benchmarks and local greenhouse gas (GHG) inventory tools. Benchmarks mainly provide insight into the differences between cities. Local GHG inventory tools provide a framework for monitoring the footprint of activities. Monitoring precedes benchmarking: "Put your own house in order before you have a look at your neighbour's".

© 2010 KPMG Advisory N.V.

Monitoring			
Local GHG inventory tools			**Sustainability inventory tools**
• Zerofootprint – Carbon Manager • C-FAR • PCP - GHG Inventory Quantification Support Sheet • LAKs Greenhouse Gas Inventory Toolkit • Smart SPP toolkit	• HEAT (Harmonized Emissions Analysis Tool) • Eco2Region • Clean Air & Climate Protection 2009 • CO_2-Grobbilanz • Greenhouse Gas Regional Inventory Protocol (GRIP) • Bilan carbone	• CO_2 Calculator • Klimaat Monitor • CO_2 Emission Evaluation (GB) • Multiplying Sustainable Energy Communities (MUSEC) • Rapid Assessment • CRIS	• STAR Community Index • Urban Ecosystems Europe • Local Evaluation 21 • STATUS • TISSUE • Cities21
Benchmarking			
Benchmarks			
• European Green Cities Index • European Green Capital Award • European Cities Monitor • European Energy Award	• Urban Ecosystems Europe • RES-League • Mercer Quality of Living Index • EIU Liveability Survey	• The Anholt-GFK Roper City Brands Index (CBI) • Globe Sustainable City Award • Climate Cities Benchmark	• SustainLane US Cities Ranking • Smarter Cities • Sustainable Cities Index
Disseminating			
Best practices dissemination tools			
• Carbonn • C40 Cities Best Practices	• City Instruments – Catalogue • Green Cities	• Benchmarks of Excellence (Covenant of Mayors)	• The Climate City Catalogue • Managenergy
Reporting			
Reporting guidance tools			
• CLEAR (City and Local Environmental Accounting and Reporting) • Greenhouse Gas Protocol (WRI, WBCSD)	• The International Local Government GHG Protocol (ICLEI) • GRI Sector Supplement for Public Agencies	• UNFCCC Methodologies for the use of project-based mechanisms • IPCC Guidelines for National Greenhouse Gas Inventories	• International Standards Organization (ISO) 14064 and 14065 • Sustainability Energy Action Plan (Covenant of Mayors) • Aalborg Charter
Input/design			
Databases	**Indicator analyses**		
• Urban Audit	• Global City Indicators	• European Common Indicators	• CRISP

© 2010 KPMG Advisory N.V.

Differences in approaches of benchmarks



Differences and similarities with respect to objectives:

Obviously, all initiatives have the general aim of making a positive contribution to the energy and climate policy of cities. The manner in which they try to achieve this differs. Various local GHG inventory tools help cities to calculate their total footprint (citizens, businesses and government). Other tools only provide insight into the footprint of local government as a separate entity; this is virtually identical to *corporate footprinting*. Furthermore, various tools provide additional services, such as helping to quantify climate objectives. Benchmarks also refer to various different objectives. These often include the following: creating a competitive climate, supporting policy, offering an appealing means of communication.

Differences and similarities with respect to scope:

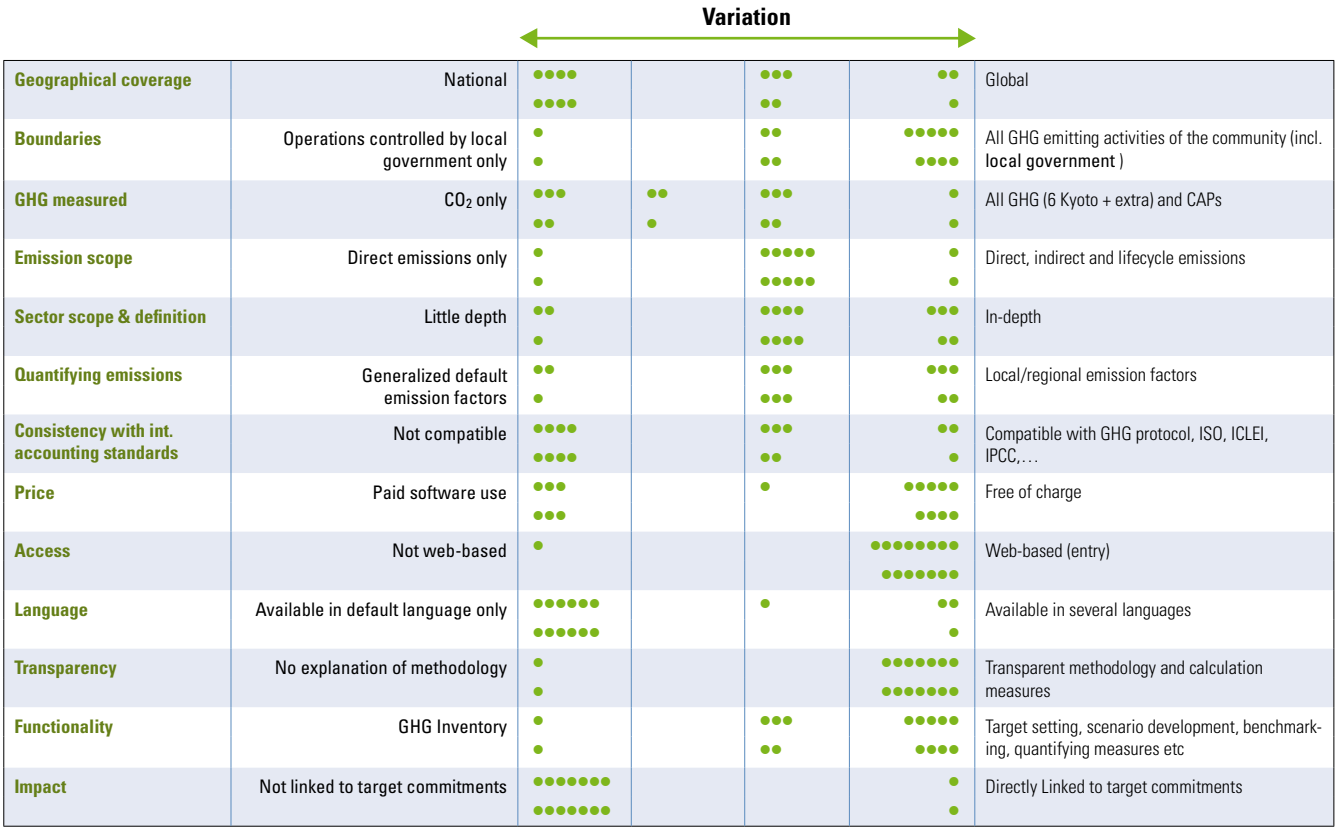
Each initiative refers to its own 'ideal mix' of indicators for measuring local sustainability performance. There is next to no agreement on what this mix should consist of. In general, a distinction can be made between initiatives that refer to sustainability in the widest sense of the word – *people, planet, profit* -, and initiatives that are purely focused on measuring energy use and CO_2 emissions. Even after this distinction has been drawn, the picture is still vague. To illustrate, the 14 benchmarks analysed here together comprise 100 indicators for specifying the environmental performance of cities. Of these 100 indicators, only 30 are applied in more than one benchmark. Seventy indicators are 'unique'.

In some cases, these are indicators that capture adopted policy; in other cases they measure performance or current practice. This clearly leaves little room for comparison, and as a result of these differences cities that score well in one benchmark may score poorly in another. It is suggested that generally accepted guidelines on how to define certain environmental terms and how to measure and report performance could add to the comparability and the better use of benchmarks.

The table to the right shows which indicators are used comparatively often.

© 2010 KPMG Advisory N.V.

Differences in approaches of local GHG inventory tools



Indicator	Theme	Percentage of projects where indicator is mentioned
Modal split	Transport	40%
Amount of municipal waste produced/collected	Waste	40%
Proportion of solid waste processed by recycling (or composed)	Waste	40%
Climate and Energy saving policies/action plans/ targets	Environmental management of the local government	40%
Size of pedestrian and bicycle (non-car) network	Transport	33%
Water consumption	Water	33%
Size/proportion of area used for green space	Land use	33%
Proportion of sustainability consumption	Consumption	33%
CO_2 emissions	CO_2	25%
Share/number of sustainable/green-classified buildings	Building	25%
Percentage of total wastewater that has received treatment (primary, secondary, tertiary, compliance with standards)	Waste	25%
Air pollution	Air quality	25%
Annual average concentrations of NO2	Air quality	25%

© 2010 KPMG Advisory N.V.

Viewpoint

Inconsistencies and proliferation

Maria Berrini, Chairperson, Research Institute Ambiente Italia

It is absolutely clear that cities need to monitor their sustainability performances in a way that is scientifically based, yet simple to understand and communicate (by means of indicators). Furthermore, cities need to analyse their results and compare them with other cities (by appropriate benchmarking). It is evident that EU institutions and national governments regularly need to obtain relevant information about how cities perform.

The efforts done in the past twenty years in the field of local sustainability and energy & climate monitoring, benchmarking and reporting have been really wide-ranging and somewhat disparate. The Aalborg Commitments and The Covenants of Mayors initiatives offer a general framework to reinforce these efforts. In the last ten years, together with other partners and EU funds, we have tried to contribute to all this, developing concepts and tools (as in TISSUE and STATUS projects, DG Research) and on-field applications (as in the European Common Indicators Initiative launched by DG Environment).

From 2006 to 2007 we developed the Urban Ecosystem Europe (UEE), a set of 20 sustainability indicators applied to about 40 medium and big European cities. UEE has been developed, with the endorsement and cooperation of most European city networks, to capture all issues that mirror local sustainability (as done by the Aalborg Commitments). Thanks to an ongoing FP7 research project, Urban Ecosystem Europe and local Evaluation 21, also a benchmarking tool but focused on the quality of public participation process, will be launched for a new round. Furthermore, the aim of the INFORMED CITIES Project (Ambiente Italia, ICLEI, ABO University and Northumbria University) is to collect data from at least 100 hundred cities and report them with careful attention to benchmarking matters (clustering cities with reference to geographical distribution, dimension, and social/economical factors).

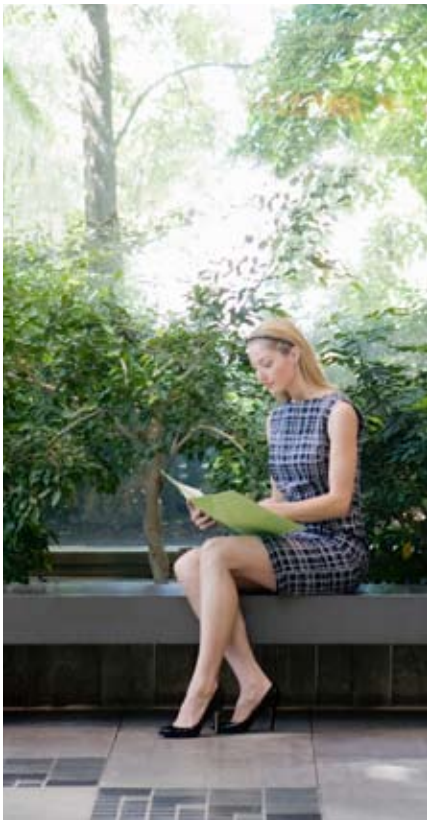
Energy & Climate issues are already included in the two tools, but it would be absolutely relevant to focus further, looking for standardisation, for solutions to overcome obstacles and inconsistencies, and for ways to better benchmark cities under this aspect, in the light of other tools and experiences.

© 2010 KPMG Advisory N.V.

Differences and similarities with respect to target market:
The composition of the rankings is often also somewhat arbitrary. In many cases, a number of European capitals are selected, without substantiating this selection. In other cases, the selection that has been made seems completely random. One of the factors contributing to this is that in many cases these initiatives depend on the willingness of cities to participate. Even if we disregard the arbitrariness of the selection of cities, it is clearly observable that there are almost no initiatives that take note of city characteristics. Yet such an approach would in our view be very valuable, as it would enable meaningful comparison. Furthermore, as much as "large" (capital) cities typically draw most attention in rankings, benchmarks ideally do not discriminate between city sizes.

Differences and similarities with respect to reliability:
There is considerable divergence in the depth of information requests and the manner in which these are verified, and this probably also applies to reliability. Various initiatives use questionnaires and rely on data supplied by cities themselves. Other initiatives derive their information from (public) databases. In the first case, verification is essential; the accuracy and consistency of interpretations and information requests must be checked. In the second case, risks are posed by unavoidable estimates and extrapolations on the basis of macro data.

Differences and similarities with respect to the transparency about their preparation:
A city's ranking in a benchmark is determined by two factors: its score for the various indicators and the way in which these scores are processed into a total score. This final step can be performed in various ways: by means



of a simple addition or by using a method in which some indicators are weighted more than others. This allows for different truths. To be able to correctly interpret rankings, it is important that benchmarks are transparent about the type of work that has been performed 'behind the scenes'. Various benchmarks simply present rankings as facts, without providing any insight into the underlying methodology used to prepare the ranking.

Differences and similarities with respect to frequency:
The aim of benchmarks is to bring about a learning curve effect, cross-fertilisation and the sharing of successful approaches. One of the prerequisites for this is that the benchmarking is not a one-off but a recurring exercise, so that developments over time can be identified and cities are offered the opportunity to improve on poor performances. However, for a number of benchmarks this is not the case.

Differences and similarities with respect to consistency with the political agenda:
Cities are faced with European-wide legal requirements and political ambitions regarding their energy and climate policy. It would be logical for the indicators and definitions applied in initiatives to be aligned to this. Cities would then be able to monitor the extent to which their efforts are in line with adopted (policy) agreements. However, the reality is that few initiatives are aligned to this, which means that they are quite separate from the political policy agenda.

Differences and similarities with respect to consistency with the reporting schedules:
This aspect is affected by similar factors as the previous one. Many cities participate in international organisations and programmes in the field of environment, energy and climate. In many cases, cities report their data in accordance with the designated formats and systems (e.g. Covenant of Mayors' Sustainable Energy Action Plan). Ideally, initiatives should be aligned to these formats and systems to prevent the duplication of work. Consistency not only makes it easier to supply information, but also increases the willingness of cities to participate in initiatives. However, in reality there is often no consistency and it takes cities a great deal of time to meet all the information requests.

Differences and similarities with respect to level of detail:
Benchmarks and GHG inventory tools ideally account for a sound balance between comprehensiveness of indicators used and extensiveness of data requests. The number of indicators should be adequate to capture sustainability properly, yet not too extensive to reduce the administrative burden on cities.

© 2010 KPMG Advisory N.V.

	European Green Cities Index	European Green Capital Award	European Cities Monitor	European Energy Award	RES-League (solar ranking)	Mercer Quality of Living Index	EIU Liveability Index	Globe Sustainable City Award	Anholt GFK-Roper City Brands Index
1	**Copenhagen**	Hamburg	**London**	**Zurich**	Friedrich Wilhelm-Lubkekoog	**Vienna**	**Vancouver**	Curitiba	**Paris**
2	**Stockholm**	**Stockholm**	**Paris**	Mäder	Kroonprinzen-koog	**Zurich**	**Vienna**	**Malmö**	**Sydney**
3	**Oslo**	**Munster**	**Frankfurt**	Lausanne	Schalkham	**Geneva**	Melbourne	Murcia	**London**
4	**Vienna**	**Amsterdam**	**Barcelona**	Schafthausen	Fresstedt	**Vancouver**	Toronto	Songpa	Rome
5	**Amsterdam**	Freiburg	**Brussels**	Wiemsheim	Rettenbach am Auerberg	Auckland	Perth	Stargard Szczecinski	New York
6	**Zurich**	**Oslo**	**Madrid**	Langenegg	Niederberg-kirchen	Düsseldorf	Calgary	**Sydney**	**Barcelona**
7	**Helsinki**	Brisol	**Munich**	**Munster**	Kaiser-Wil-helm-Koog	**Munich**	**Helsinki**		San Francisco
8	**Berlin**	**Copenhagen**	**Amsterdam**	Neuchatel	Gollhofen	**Frankfurt**	**Geneva**		Los Angeles
9	**Brussels**	**Malmö**	**Berlin**	Jena	Freichten a.d. Alz	Bern	**Sydney**		**Vienna**
10	**Paris**	Vitoria-Gasteiz	Milan	Virgen	Heckhuscheid	**Sydney**	**Zurich**		**Madrid**

Note: Cities indicated in bold are mentioned in multiple benchmarks.

Following methodological differences, the level of detail across tools is rather scattered.

Differences and similarities with respect to rankings:

One of the consequences of the diversity of methodologies is that cities score differently in different rankings. Not only does this create a surprising picture, there is also the risk that the parties involved – cities as well as critical observers – start to pick and choose from the available data and rankings to reinforce their arguments. Rankings mainly have a PR value.

Measuring is knowing. But perversely, measuring too much can also result in not knowing anything at all. This also applies to the great diversity of initiatives and tools, which results in high degree of incomparability. While we do not doubt that benchmarks and monitoring tools are valuable, we would like to suggest a number of ways in which tools could serve cities better:

- Improve the comparability of tools. Inconsistencies between tools undermine their value (confusion, administrative burden, etc.). Some form of harmonisation will be inevitable to stop proliferation (see chapter 3).
- Improve the comparability of cities. Cities are actually looking for ways to learn from each other when drafting and implementing energy and climate policy.

  But they can only learn from comparable cities. Benchmarking therefore requires a tailor-made approach, based on comparing cities with a similar profile (instead of comparing apples and pears!) (see chapter 4).

- Performance needs to be contextualised. Contextual differences across cities make it somewhat arbitrary to compare cities according to their actual energy and climate performance at a fixed date. Rather than measuring cities' current performance, benchmarks should therefore also take into account the policy that has been implemented: i.e. monitoring the progress made compared to the status quo.

© 2010 KPMG Advisory N.V.

Viewpoint

Methodologies for monitoring progress

Ulrike Janssen, Executive Director, Climate Alliance

With the commitment of more than 1.500 cities, municipalities and regions of the Climate Alliance, more and more local authorities are assuming the responsibility to contribute actively to the achievement of the European energy and climate targets. Furthermore, they see energy efficiency and the use of locally available renewable energy resources as fundamental means to stabilize their local economies, create jobs, reduce energy poverty and decrease dependence from ending fossil fuels.

Assigning concrete figures to the impact of local action is fundamental, both in terms of monitoring of progress at city level to improve their own policy, but also to convey the actual and the potential contribution of local authorities to national or European climate targets in the fight for improved framework conditions.

With Climate Alliance's members committing to a concrete CO_2 emissions reduction target (10% every 5 years), developing methodologies for monitoring progress is a central pillar of our work. Over the past 15 years, the Climate Alliance Group of Local Experts has developed guidelines and recommendations for CO_2 inventories and has jointly developed the methodology for the ECORegion tool.
The variety of existing approaches – all of them reproducible due to different contexts, tasks and purposes – ask for two next steps: to offer descriptions of the existing monitoring methodologies in order to support local authorities in selecting the most appropriate for their individual background and requirements; and to look for ways to transcribe the results of the different methodologies with the aim of reaching common messages when communicating results and achievements.

Quality, sustainable built environment in Europe

Adrian Joyce, Director, Architects´ Council of Europe

The Architects' Council of Europe (ACE) has long recognized that it is in cities and regions that the true advances in relation to the creation of a more sustainable future will occur. For this reason the ACE has long regretted that there is not a "department" of the European Commission that is dedicated to the question of Urban Issues. It is aware that this is because of the existence of the subsidiarity principle, but it is a matter of some regret.

The Commission has an Inter-Service Group that works on Urban Development and it has produced a very useful overview of how urban issues have been dealt with at EU level. It is an encouraging development because it shows that the Commission is beginning to think about urban development in a more integrated way and it clearly demonstrates that there is much the EU can do on this topic.

There are many cities that are taking important and valid steps towards truly and ambitiously addressing the challenges posed by energy and climate change issues, but these initiatives and good work are isolated cases. The fact that they are generally being formulated, implemented and monitored at a purely local level condemns the work to be lost from making its contribution to the common good.

What is needed is a coherent, valid and well-structured way of ensuring that the best policies, implementation strategies and monitoring mechanisms are widely known so that other cities and regions can adopt and/or adapt them to their local conditions. ACE is ready to further contribute to the development of a valid benchmarking approach as one contribution in an array of new tools that are necessary to assist in the creation of a quality, sustainable built environment in Europe.

© 2010 KPMG Advisory N.V.

03 Harmonising the collection of data

Cities are looking for more efficiency

The preceding inventory and analysis have shown that the approach adopted until now is very fragmented, with widely varying definitions, approaches and demarcations. This situation, which is also typical for the current state of the climate issue, is an almost classic one. Take, for example, the rise of private equity at the end of the last century: it only gained a boost after private equity parties established their own network, began standardising concepts and started speaking with one voice to regulators on the capital market. In the coming decades, cities will also need such a harmonisation to give the issue of sustainability a boost.

While there are various reasons why steps need to be taken towards harmonisation, the need to improve efficiency is a particularly urgent one. At present, civil servants in cities are inundated with requests for information by numerous initiatives, and it takes them a great deal of time to meet all these requests. Obviously, the diversity of concepts outlined above does not make matters any easier. Moreover, the information systems to address this issue are still in their infancy.

In recent years, the European Union has exerted pressure to arrive at a harmonised set of indicators for sustainability and more specifically for energy and climate, including in the context of the Covenant of Mayors and the Urban Audit. The underlying idea is that such harmonisation encourages comparability and boosts the impact and effectiveness of cities' energy and climate policy. It also has the additional benefit of reducing the administrative burden of cities and improving the reliability and integrity of data. It should be noted that cities can already anticipate this development by improving the design of their information systems with respect to this issue, so that they can more easily address the various information requests.

© 2010 KPMG Advisory N.V.

Viewpoint

Harmonisation in inventories

Gino Van Begin (European Director and Deputy Secretary General, ICLEI) and **Maryke van Staden** (Coordinator Climate and Air, ICLEI)

GHG inventory tools and benchmarks certainly are beneficial in cities' fight against climate change. They support the political commitments for community-wide GHG reductions and help cities save money. It is apparent that cities and towns actively involved in using such tools are Europe's frontrunners, and also leading internationally.

Inventories are a basic necessity. Among other things, inventories are baselines that reveal whether or not money on measures is spent well; that the measures provide for genuine CO_2 reductions and that savings can be made in the short term and long run. As much as GHG inventory tools provide for valuable insight, Maryke van Staden stresses that there are many tools which differ in terms of scoping, boundaries, definitions, data etc. These differences rightfully address differences across communities, or differences in purpose. There is no 'one-size-fits-all' inventory tool. However, these differences also cause difficulties in comparing data in a useful way – a deficit that has to be addressed in the near future.

Inventories are a precondition to benchmarking. Cities need to have their own house in order first. Comparing comes second. Still, Europe has a long tradition of benchmarking. We love fishing out pioneers. Van Begin stresses different reasons for cities to engage in benchmark initiatives: money, marketing, mutual learning, and, last but not least, improving quality of life for citizens. Firstly, a favourable ranking increases the chance of successfully applying for funding on the national and European level. Benchmarking typically is a means for cities to politically and strategically advance themselves. Secondly, favourable rankings help cities position themselves against peers. We live in a competitive world, and this is no different for cities. Thirdly, benchmarking allows for best practice dissemination. It tells cities what elements they should include to become more sustainable. Addressing these issues will certainly lead to improved conditions in communities – and thus also to a better quality of life for inhabitants.

However, the variations resulting from different tools also create confusion. The majority of cities need guidance on what standards and tools to use. ICLEI recommends that all cities base their selection of a GHG tool on the now widely accepted International Local Government GHG Emissions Analysis Protocol (IEAP). IEAP aims at introducing widespread harmonisation in inventories. "Harmonisation is a commonly used word. However, using a harmonised standard should not imply that all cities and regions are alike. Furthermore, it does not mean that all tools should be the same. "Harmonisation of the standard recognises today's different tools, yet ensures that outputs of future tools are more comparable by setting standards for data accounting and reporting.

ICLEI - Local Governments for Sustainability is an international association of local governments as well as national and regional local government organisations that have made a commitment to sustainable development. ICLEI currently has over 1100 members worldwide.

© 2010 KPMG Advisory N.V.

04 So many cities, so many challenges

The typology of cities determines the optimal mix of energy and climate policies

The benchmarking of the sustainability performance of cities can help to identify front runners and leading practices. If these are shared, cities can benefit from the knowledge and experience of colleagues in other cities and that obviously benefits their sustainability policy. Benchmarking thus contributes to an increase in the effectiveness of the policy.

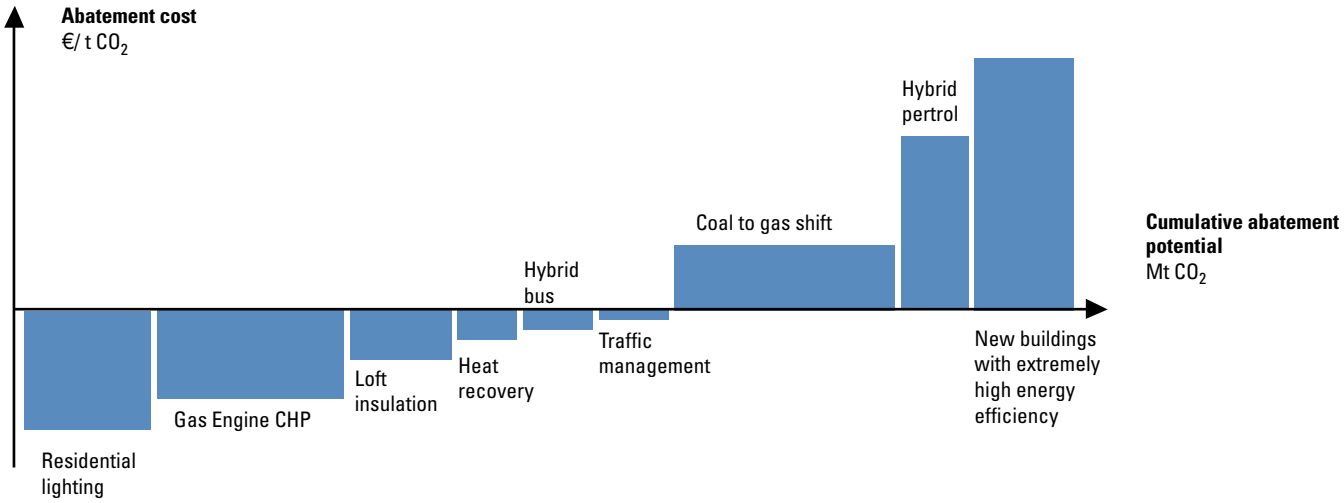
With the current overload of benchmarks, however, this barely gets off the ground. Besides the previously described diversity of definitions and approaches, this is also caused by the diversity of the cities themselves. A rich city with a great deal of history and a high-quality service economy is, for example, faced with very different challenges than a port city with a large manufacturing sector and a relatively low average income per capita.

These differences are so great that the significance of a ranking must at least be put into serious perspective. In fact, the ranking is based largely on coincidence since the energy and climate policy of cities is often the consequence of the natural and historical conditions of a city. One example of this is a city that has had metro network for years and has now optimised it to meet the growing mobility. A city with an existing district heating system is also an example. The optimisation of existing – naturally and/or historically determined – elements can then be grouped under the climate efforts, so that an extra contribution to addressing the climate problem can be made fairly 'painlessly'.

The current energy and climate policy of many cities mainly capitalises on these natural possibilities. In a sense, this is like picking low-hanging fruit. The expectation is that in the coming years cities will (have to) develop greater ambitions with respect to their contribution to addressing energy and climate issues. They will then have to resort to measures that are rather less 'natural' and in many cases also more expensive. They will therefore look for the most effective package of measures for energy conservation, energy efficiency and renewable energy. At present, benchmarks unfortunately provide little useful information for improving policy, especially since no account is taken of the various typologies of cities.

Be that as it may, in the coming years cities will try to find an optimal climate policy. A policy that is very cost-effective – since the budgetary

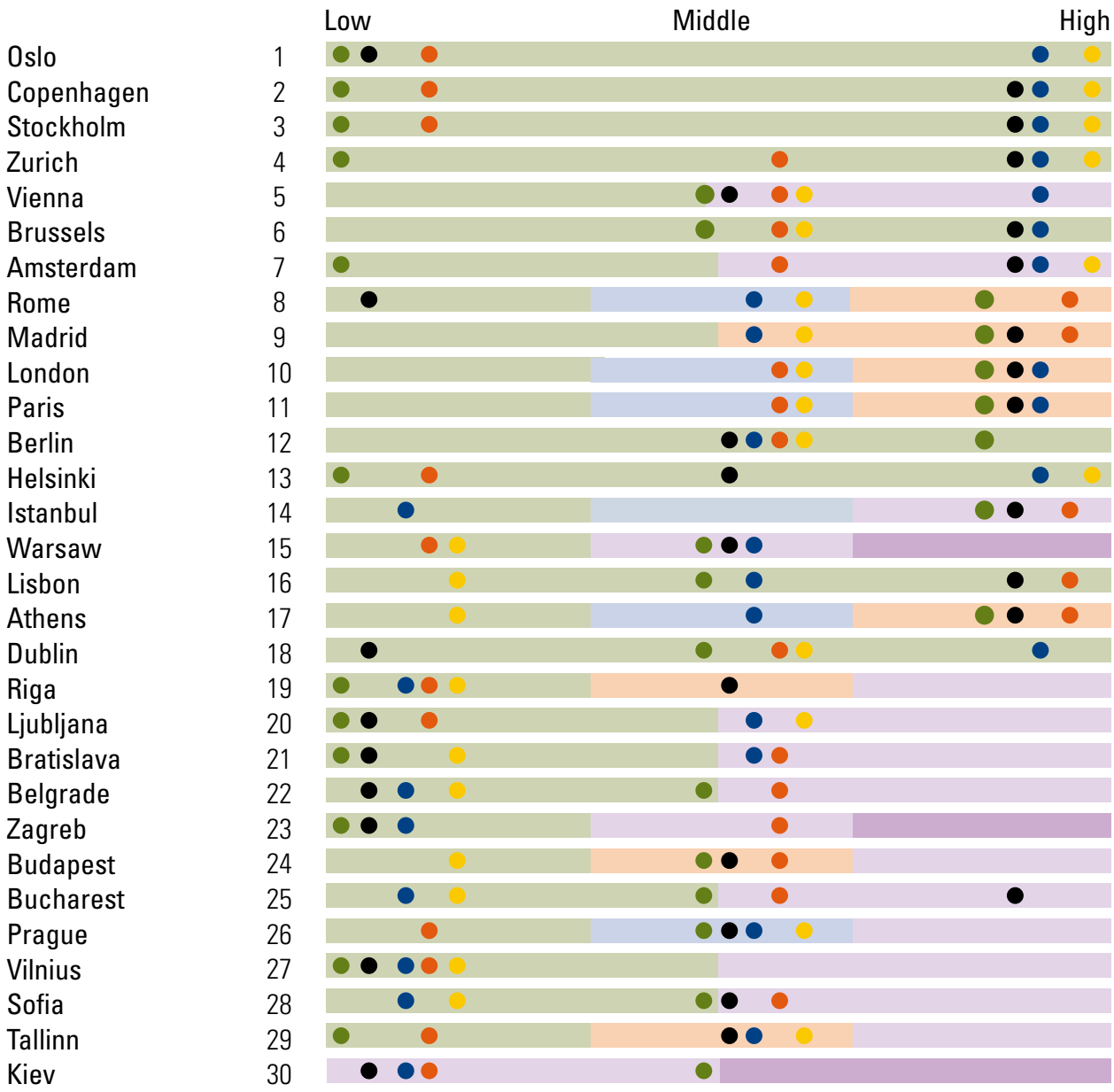
© 2010 KPMG Advisory N.V.



pressures are in many cases enormous – and that also demonstrably benefits the climate. In general terms, a proper balance is needed between costs and benefits; CO_2 abatement cost curves are very useful in this respect (the CO_2 abatement cost curve above refers to a snapshot of potential measures cities' may take). The measures on the left of the figure with negative values on the y-axis are those that produce financial savings and also contribute to reducing CO_2 emissions. The other spectrum includes measures that cost money and usually have greater effects on reducing emissions.

The graph therefore provides insight into the most effective measures for reducing CO_2.

© 2010 KPMG Advisory N.V.



- Size: "small", population < 1 million; "middle-sized", population between 1 million and 3 million; and "large", population > 3 million.
- Income: "low income", with GDP per head of less than €21,000; "middle income" of €21,000 to €31,000; and "high income" of more than €31,000;
- Temperature: "cold", average temperate of 4-8 Co; "temperate", average temperature of 9-12 Co; "hot", average temperature of more than 13 Co;
- People: following EU's index for voluntary participation in organizations (based on the average number of voluntary organizations, such as religious groups, trade unions and sports, professional or charitable bodies that citizens belong to). "Low" index <0.5; "middle" index 0.5 - 1; "high" index >1. (Source: European Foundation for the Improvement of Living and Working Condition (2006) First European Quality of Life Survey: Participation in civil society. Dublin.)
- History: not plotted as it can not be captured in the grid structure. Impact of history should be addressed for each city individualy.
- Population density: "low", less than 2.000 residents per km^2; "middle", 2.000 – 4.000 residents per km^2; "high", more than 4.000 residents per km^2.
- Sector composition: "services" financial, R&D, real estate, health care, public administration, wholesale and retail trade, post & telecoms (ICT); "tourism" restaurants, hotels; "transport" road transport, land transport (pipelines), air transport, water transport (port activities); "light industry" pharmaceuticals, timber production, food & beverages, textiles, electrical and optical equipment, consumer electronics, pulp, paper, printing; "heavy industry" oil & gas, steel manufacturing, mining, chemicals and plastics, utilities, industrial machinery, automotive.

Ranking based on European Green Cities Index (Siemens AG, 2009), compilation of CO_2 and energy performances.

© 2010 KPMG Advisory N.V.

The specific character of a city obviously plays a role in this. In a city with many old houses, an ambitious insulation programme will be of more use than in a modern city with a more average climate. Furthermore, the possibilities for exerting an influence differ considerably. A city which is almost entirely driven by business and financial services can impose strict conditions for the construction of new offices (energy consumption/compelling particular modes of transport), while a city with a few large manufacturers has other possibilities for intervention, for example by means of a system of environmental permits.

At present, there is hardly any insight into how cities score in technical climate terms in relation to their specific typology, although this is an essential insight for the definition of an effective climate policy. The key question is: What is the best thing for a city to do in view of its natural conditions? Answering this question requires a tailor-made approach. We have developed a typology grid on the basis of which cities can engage in an internal discussion about where their optimum lies. To this end, we have listed at the left a number of characteristics of European cities.

This table provides a concise insight into a number of elements that are crucial for energy and climate policy. These relate to the city's economic typology (the dominant economic sectors that are represented by the bars), the size of the city, the average income of its population, the average temperature, the environmental awareness of its residents, and its history. This table has no scientific basis but is an excellent way to focus one's thoughts when defining a climate policy. Relating this table to the rankings on the European Green Cities Index[3] at the end of 2009 also provides sufficient food for thought. It is striking, for example, that the cities ranked first, second and third (Oslo, Copenhagen and Stockholm) have an almost identical profile. This could point to the fact that – as previously argued – the climate performance of a city largely depends on its 'natural' conditions and (far) less on conscious policy.

3. European Commission (2008) Covenant of Mayors Brochure.

© 2010 KPMG Advisory N.V.

City viewpoints

Learn from peers

Bruno Villavecchia, Director, Energy and Environment Department of Mobility, Environment and Landscape Agency of the Municipality of Milan

Just like many other European cities, Milan has set ambitious targets: 20% reduction of CO_2 emissions by 2020 (relative to the 2005 emission level). The goal was officially confirmed in 2009 with the signatory of the Covenant of Mayors and the development of the Sustainable Energy and Climate Action Plan (SEAP). Milan's SEAP foresees a set of measures covering different sectors: transport, residential and tertiary sectors, energy production, waste and agriculture and municipal buildings. Measures have been developed and selected by taking into account specific characteristics and environmental factors of the city.

The development of the Plan started before the publication of the SEAP Guidelines. "We are currently comparing our initial Plan with the Guidelines, making sure our format is coherent with SEAP's. The SEAP anyway is a work in progress, and is subject to regular updates, deepening elaborations and modifications."

"In order to monitor progress adequately we continuously update indicators best disclosing sustainability. Data collection is a demanding and time consuming job. Yet, data are essential for analysis, planning, designing and monitoring activities."

Milan takes part in various initiatives, primarily the Covenant of Mayors. "There's a lot to learn from our peer cities:"

- what measures are most effective;
- what measures are the easiest to implement and most accepted by citizens;
- how to implement measures (this is really important).

Milan also is a best practice example itself in many aspects. "Milan was one of the first cities (with London and some other cities) that introduced a (pollution) charge for vehicles entering into the city centre. Furthermore, in the residential and tertiary sectors tax reductions were introduced for new constructions and refurbishment activities when buildings (new and refurbished) have better performances than current regulations. Moreover, incentives for energy efficiency and renewables will be introduced in the building code, which is currently being updated. The newest District Heating Plan foresees a wide extension of the district heating network within the city. The goal is connecting 730.000 inhabitants equivalent by 2015 (currently about 225.000 inhabs. eq. are connected)."

© 2010 KPMG Advisory N.V.

"It seems as if a new competition lands on my desk every week"

Wiert-Jan de Raaf, programme director, Rotterdam Climate Initiative

Wiert-Jan de Raaf is programme director of the Rotterdam Climate Initiative and in this role is responsible for driving climate initiatives in Rotterdam, in cooperation with the municipality and market players. His organisation has 'a mere' fifty employees who are, however, working together to realise a huge future investment of 13 billion euros in order to achieve Rotterdam's ambitious CO_2 targets.

De Raaf sees in practice that countless organisations are developing initiatives for benchmarks, rankings and competitions, etc. However well intentioned, the RCI is increasingly being forced to critically examine an unstructured maze of possibilities: "It seems that a new initiative lands on my desk every week. Anyone can start a competition and we are reticent about participating in these initiatives, also because it takes considerable time and energy to get hold of the necessary data. Every new initiative is weighed up by means of a standard set of questions and on this basis we decide whether or not to participate. In quite a number of cases, we decide not to get involved."

Nevertheless, benchmarks and rankings are important to put Rotterdam on the map as a city that is concerned with climate. The port city has deliberately chosen to participate in the European Green Cities Index, a Siemens initiative. "We currently rank 13th and our ambition is to get into the top 5. If you are high up on such a list, it has a stimulating effect. It inspires pride, which helps you to go further."

One would expect the benchmarks to provide valuable information to De Raaf. After all, by comparing its performance with that of other cities, Rotterdam can identify points for improvement. Does he experience it in that way? "Not really. The differences between the cities are too great to really identify learning points. It is actually often a matter of comparing apples and pears since each city has its own character. We mainly learn from one another at conferences, by talking a lot to each other."

© 2010 KPMG Advisory N.V.

City context

Indra van Sande, Engineer Environmental Department, City of Ghent

Ghent is a forerunner in Flanders in terms of climate and energy. Ghent was the first Flemish city with a CO_2 baseline and a climate plan. Its participation in the European Green Capital Award is a matter of time. In addition, the city wants to focus on developing energy maps and identifying cost-effective measures with maximum returns.

Van Sande explains: "Ghent is involved in various monitoring and benchmarking initiatives. The city has recently committed itself to the EU Covenant of Mayors and participates in the City Monitor, a Flemish initiative." The most recent development is that we are preparing ourselves to participate in the European Green Capital Award; this participation is welcomed by the city council. Van Sande gives the main reasons for participating: "Initiatives like the European Green Capital Award encourage cities to translate climate and energy-related targets into an actual phased plan. Such a plan is stimulating and has a fixed period. This prompts action and is an important means of communicating to stakeholders." Participation is not self-evident, however. "Participation in the European Green Capital Award requires a lot of preparation. The process of data collection is lengthy and places a considerable burden on the city's capacity."

"Benchmarking has advantages and disadvantages" continues Van Sande. Benchmarks are above all a "carrot". It prompts cities to bump up their climate and energy performance. Nevertheless, Van Sande believes that the learning effect is debatable. "In benchmarks, usually the performance of different cities is compared. This implies that cities are comparable. In reality, however, cities and their context and typology are very diverse. Moreover, few cities report in a consistent manner. Definitions (e.g. whether or not ports, airports and motorways are included) are often incomparable." There are also differences in the rates of change in the various countries. In Belgium, for example, interest groups and industry associations exert a real influence on the decision-making process, in both a positive and negative (e.g. delaying the process) sense. There is also relatively little private money available and measures mainly have to be funded by government bodies. Changes with respect to climate and energy are thus extremely slow in comparison with other countries. "Benchmarks do not provide this insight and are therefore misleading." Nevertheless, Van Sande also sees the added value of benchmarking: "Benchmarks show frontrunners. Frontrunners have had to follow a particular course to get to where they are now. This course contains clues for other cities: they can identify missteps and successes in policy".

In addition to these initiatives, Ghent is also developing tools designed for the city itself. Thus, the city will soon start computing abatement cost curves. These curves should produce a more realistic picture of the potential for reducing CO_2 and the related costs/benefits and of what to do in a particular period of time, at what costs. Inspired by Hannover, where participation by and collaboration with local businesses is very strong, Ghent expressly activates the business community. "The ideal abatement cost curve is primarily theoretical. It must be put into practice. Establishing partnerships with the business community will initially help us to formulate the theoretical curve and will also help us to realise measures in the longer term."

© 2010 KPMG Advisory N.V.

Below we will briefly discuss the various dimensions we distinguish.

Dominant economic sectors

It is evident that different business sectors show differences in the size of their emissions. The risks of climate change and the opportunities to actively address it also differ greatly, as was already evident from the previous KPMG Sustainability study ('Climate Changes Your Business'). For cities, this is a given that in the short term often only allows slight improvements, for example by enforcing (behavioural) change through legislation and regulations. Examples of this are the use of energy labels for offices/hotels or changes to the licensing policy. What is actually more important is to have a real debate about the future of the city. Based on the climate policy it may be necessary and/or desirable to initiate a transformation of the city's economic character. The energy and climate policy cannot therefore be divorced from the overall strategy of a city.

Size

It is often said that the bigger the city, the worse its climate profile. This relationship is certainly not unequivocal, however. Siemens' Green Cities Index study shows that this correlation is strong for Eastern European cities, but is not discernible for the rest of the population. The population density is more relevant for this purpose and this is often connected to the size of the city: a large city often has a relatively high population density. It is the density that makes particular energy and climate measures effective (or not). For example, encouraging the use of solar energy (many roofs) will often be promising. In addition, a high density makes it economically possible to invest sooner in, for example, charging points for electric vehicles.

Average income

The higher the average income, the better a city scores with respect to energy and climate performance. For administrators, it is therefore important to realise that a policy focused on increasing the average income of citizens also creates new opportunities for improving the energy and climate performance. This strategic relationship should definitely be kept in mind. Cities with increasing prosperity have the opportunity to make charges to free resources for more expensive forms of climate measures, such as the underground storage of CO_2. Charging is less feasible for cities with a population with a relatively low average income. Moreover, this category of citizens often only invests to a limited extent in (capital intensive) methods to reduce energy use, which save money in the long run but require an initial investment. 'Poor' cities could specifically focus measures on this issue.

Temperature

While the temperature of a city may be an obvious factor, it is also a factor that still has great potential. In cold cities, energy consumption is high due to the need for heating. Noteworthy in this context is that many Northern cities score high on the various rankings. In hot cities, energy consumption is high due to the need for cooling in the summer, but also as a result of poor insulation in cooler seasons. Effective interventions available to cities include encouraging insulation or implementing programmes that focus on solar energy. In some cities – particularly where climate awareness is low – such opportunities are used to a very limited extent. In short: hot cities need a different policy than cold cities.

Climate awareness of citizens

The most important component of a city's energy and climate programme will often be a change of behaviour. Nevertheless, this aspect is often neglected in developed initiatives, which often focus on the 'hard' side of energy and climate improvements, such as new technology. Possibly the toughest part of addressing the energy and climate issue is removing the cognitive dissonance: 'I know that my big car is bad, but I do it anyway' or the almost classical 'not in my backyard'. However difficult this aspect is, cities that succeed in truly changing the attitude of the population can take great steps. The opportunities for exerting such an influence vary from public campaigns to interventions by means of legislation and regulations.

History

This is an aspect that a city by definition can do nothing about - the past simply cannot be changed – and has a major effect on energy and climate performance. Warsaw, for example, is lucky to have a heating network installed in the nineteen-fifties that is now highly desirable from an energy and climate perspective. And various old cities have a metro network that was built at the end of the nineteenth century. However, while being an old city has its advantages, it also has disadvantages. Often old cities have many poorly insulated houses. These aspects clearly have an impact on the energy and climate policy.

© 2010 KPMG Advisory N.V.

05 Energy and climate programmes are change programmes

Benchmarks and other instruments are important tools for shaping the energy and climate policy of cities. The previous chapters have shown that there is currently a proliferation of approaches and that there are very few good points of departure that a city's policymakers can derive from these instruments. The cross-fertilisation of knowledge and best practices with other cities must currently be realised in other ways: conferences, personal contacts, etc. Apart from this observation, there is also another point. An energy and climate programme is not one-dimensional and linear, but is instead characterised by a certain amount of chaos and unpredictability. Therefore, an approach is required that takes this into account. This chapter makes a number of observations about this.

Energy and climate policy: it should take root

An energy and climate programme is by definition characterised, at the international, national and regional level, by a degree of unpredictability. There is always a subsequent challenge after, for example, the realisation of the Kyoto targets or the aspirations of the Copenhagen summit. Moreover, the relationships between policy measures and their effects are not always unambiguous and depend on other factors, such as changes in the economic cycle.

The formulation of an energy and climate policy mainly involves taking a direction and mobilising businesses and citizens rather than specific actions and decisions by a limited number of parties. Of course, countless legislative measures can be taken to realise energy and climate targets and there are also many options, in terms of technology, to achieve immediate results. But a real solution for the climate problem requires unorthodox interventions and unambiguous messages that take root and thus lead to change for everyone.

There are a number of factors that impede the successful implementation of such a programme:

No unequivocal centre of power within government

In the business community, management can formulate a clear strategy and develop specific actions throughout the company. Within government this is more complex, for as start because of the (changeable) political environment in which decisions have to be made.

© 2010 KPMG Advisory N.V.

Then there is the involvement of various stakeholders (departments, other governments, private parties, etc.) with varied interests, powers, competences and responsibilities. A minister or councillor who is responsible for the issue of energy and climate is not unequivocally in charge of all the associated actions, but has to make compromises with other administrators who have other priorities. Power of conviction and leadership are therefore essential to actually make progress on these issues. The deployment of well-known figures (so-called programme ambassadors) may also help.

Limited options for forcing the issue

A minister, councillor or provincial executive who aims to initiate innovative climate projects during his term runs risks if he relies on power play via the line organisation. Deploying heavy artillery and proceeding expediently to get these projects off to a quick start is often counterproductive in such change processes.

Chaotic development

These types of policy processes proceed in a chaotic rather than an orderly manner and even the relationships between cause and effect (action and result) are often not linear. Because of this, decision-making inevitably has a chaotic character. As the end result and the process to achieve this are not known in advance, there is uncertainty from the start. The support among stakeholders for possible solutions and actions is also unknown and subject to change. Furthermore, there is continuous powerful political intervention that may lead to changes in the scope and/or ambition.

© 2010 KPMG Advisory N.V.

Viewpoint

Smart business decisions

Tom Carnac, Head of Public Sector, Carbon Disclosure Project

Since 2003, the Carbon Disclosure Project (CDP) has provided a common disclosure platform for the world's corporations to report climate change related information. But last year for the first time we asked a number of cities in the United States to disclose alongside corporations. Results from this pilot programme — conducted in partnership with ICLEI-USA — showed that cities and corporations have much in common, and that measurement and disclosure of climate change information is a crucial first step in both the private and public sectors.

When CDP first began requesting information from companies, many were hesitant to disclose. Last year, however, more than 400 of the world's 500 largest companies disclosed data on crucial items like greenhouse gas emissions, climate risks, and governance. This increasing interest in disclosure and benchmarking is driven, in part, by the strategic value of collecting data and assessing the risks and opportunities posed by climate change. Many companies report to CDP that the process of filling out our information request has helped them to better understand their businesses. In the words of Andy Green, CEO of Logica, "We have used CDP as the main tool to drive carbon reporting right across our organisation. It has been really fantastic for us. We've discovered cost savings, and we have probably saved 10 million pounds in various ways."

The cities in our pilot reported that their work to measure emissions produced similar results. Chicago, for example, described how it used its efforts to create a climate change action plan as a platform to engage the local business community in sustainable practices. And New York City reported that its work to reduce greenhouse gas emissions "will save the city hundreds of millions of dollars in energy costs in the coming decade." Measurement and disclosure are smart business decisions—for both corporations and cities. The pilot programme also showed that many cities may be ahead of their corporate counterparts when it comes to awareness of the physical risks of climate change. Understanding these physical risks is critical for cities to remain attractive to business and investment in a warmer world.

Overall, CDP's experience with cities demonstrates that local governments, just like corporations, can gain strategic insight into their operations and reduce their financial exposure to climate change through assessment and disclosure of climate risk. With the right strategies and then the right tools, cities can lead the transition to a low-carbon economy.

© 2010 KPMG Advisory N.V.

06 Conclusions

The main conclusions from this study are:

Proliferation of energy and climate benchmarking and monitoring initiatives

During the past decades, numerous initiatives and tools have been developed to achieve climate gains by determining the energy and climate profiles of cities, by carefully monitoring their energy and climate policy, by comparing cities and by reporting on their progress. All of these initiatives are well-meaning. However, there has been a rampant proliferation of perspectives, definitions, benchmarks, indicators and measuring methods.

Tools and benchmarks may not always contribute to an effective energy and climate policy for cities

The current rankings appear to be mainly used as a marketing tool and hardly at all for the sharing of knowledge and understanding. There is no unequivocal insight into the effectiveness of cities' energy and climate policy. Different methods for footprinting, benchmarking en monitoring may produce contradictory results and this creates the risk that the parties involved – cities as well as critical observers – start to pick and choose from the available data and rankings to reinforce their arguments. The discussion is then focused too much on the ranking itself and not enough on the effectiveness of the energy and climate policy. That is why cities are looking for better tools that will help them to actually make a difference with their energy and climate policy.

Proliferation of tools and benchmarks can also lead to high administrative costs

The data requirements of the different initiatives and tools are placing an increasingly heavy administrative burden on cities, many of which are complaining about the overload of internal as well as external information requests. Moreover, in this field the information systems of cities are often still immature, and meeting the numerous information requests can therefore be labour-intensive. Differences in definitions also play a part, making it difficult for civil servants to promptly and reliably generate the requested information.

The typology of a city is a decisive factor for climate policy, but is not always included in tools and benchmarks

At present, there is hardly any insight into how cities score in technical climate terms in relation to their specific typology, although this is an essential insight for the definition of an effective climate policy.

© 2010 KPMG Advisory N.V.

06 Recommendations

The main recommendations are:

Envision ways to make energy and climate data comparable across cities and exchangeable between tools
Refine existing methods for consistent measurement, benchmarking and reporting of energy and climate data. Harmonisation enables peer review, creates a basis for the dissemination of best practices and optimises the use of tools by aligning information requests. Ideally, the methods that are developed take into account dominant reporting schemes (e.g. Covenant of Mayors) and/or GHG inventory protocols (e.g. International Local Government GHG Emissions Analysis Protocol (IEAP)).

Envision ways to leverage the burden of energy and climate data search
Europe needs an open source and interactive database tailored towards cities, containing energy and climate performance data as well as data on the potential for cost/CO_2-reduction of defined actions, technologies, policies and practices. Comprehensive, reliable and up-to-date databases help reduce the administrative burden of data search and provide city practitioners with a tool to navigate through the vast amount of available information.

Envision ways to include city typologies into the decision-making process regarding energy and climate actions
There is no one-size-fits-all solution that effectively addresses climate change. Across cities, the impact of certain actions and the related cost differ. Therefore, a tailored approach is needed. Cost abatement curves addressing a city's typology help city practitioners to develop appropriate energy and climate action plans and create a basis for successful implementation.

Envision ways to further capitalise on examples of best practices
There are a vast number of successful ideas to cut emissions and enhance energy efficiency in cities. Currently however, best practices are not always shared and therefore not exploited to their full extent. There is a clear need for a shared platform for cities that does not only stimulate the exchange of knowledge, but one that also facilitates dissemination of best practices and the interactive co-creation of projects.

© 2010 KPMG Advisory N.V.

Authors

Lead author

Bernd Hendriksen
Director KPMG Sustainability

Authors

Eric Copius Peereboom
Jonathan Ballantine
Nart Wielaard
Sander Jansen

Interviews

Sara Pasquier and Nigel Jollands
Energy Efficiency and Environment Division, International Energy Agency (IEA)

Birgit Georgi
Project Manager Urban Issues, European Environment Agency (EEA)

Maria Berrini
Chairperson, Research Institute Ambiente Italia

Ulrike Janssen
Executive Director, Climate Alliance

Adrian Joyce
Director, Architects´ Council of Europe

Gino Van Begin
(European Director and Deputy Secretary General, ICLEI)

Maryke van Staden
(Coordinator Climate and Air, ICLEI)

Bruno Villavecchia
Director, Energy and Environment Department of Mobility, Environment and Landscape Agency of the Municipality of Milan

Wiert-Jan de Raaf
Programme Director, Rotterdam Climate Initiative

Indra van Sande
Engineer Environmental Department, City of Ghent

Tom Carnac
Head of Public Sector, Carbon Disclosure Project

Review of the report

Wim Bartels
Global Head, KPMG Global Sustainability Services

Barend van Bergen
Associate Partner, KPMG Sustainability

© 2010 KPMG Advisory N.V.

kpmg.nl

Contact

For more information on this report please contact:

Bernd Hendriksen
Director KPMG Sustainability
hendriksen.bernd@kpmg.nl

Laan van Langerhuize 1
1186 DS Amstelveen
The Netherlands
Tel +31 020 6564505

www.kpmg.nl/sustainability

Austria
Peter Ertl, Partner
pertl@kpmg.at
Tel + 43 1 31332 224

Czech Republic
Eva Rackova, Partner
evarackova@kpmg.cz
Tel +420 222 123 121

Denmark
Charlotte Enkeboelle Nielsen, Partner
cenielsen@kpmg.dk
Tel +45 3818 3000

Finland
Jan Montell, Partner
jan.montell@kpmg.fi
Tel +358 20 760 3831

France
Philippe Arnaud, Partner
parnaud@kpmg.fr
Tel + 33 6 1 55 68 90 05

Italy
PierMario Barzaghi, Partner
pbarzaghi@kpmg.it
Tel +39 02 676433713

Portugal
Cristina Vaz Tomé, Senior Manager
ctome@kpmg.com
Tel + 351 210 110 042

Romania
Geta Diaconu, Director
gdiaconu@kpmg.com
Tel + 40 741 800 776

Spain
José Luis Blasco, Partner
jblasco@kpmg.es
Tel +34 914 56 35 27

United Kingdom
Jonathan Gorrie, Director
jonathan.gorrie@kpmg.co.uk
Tel +44 121 2323645

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

The views and opinions expressed herein are those of the interviewees and do not necessarily represent the views and opinions of KPMG Advisory N.V. or KPMG International.

© 2010 KPMG Advisory N.V., registered with the trade register in the Netherlands under number 33263682, is a subsidiary of KPMG Europe LLP and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved. Printed in the Netherlands.
KPMG and the KPMG logo are registered trademarks of KPMG International Cooperative ("KPMG International"), a Swiss entity. 74_0510