

China Sustainable Energy City Final Report

Project Overview

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Project Title: China Energy City

Keywords: municipal energy policy; quality control; performance benchmarking;
incentive mechanism; know-how transfer

Project Description:

The project will result in a feasibility study for China Energy City. The proposed project will assess whether the adoption of a quantitative quality management (QM) system for public sector energy policy (starting from the Energiestadt / eea[®] model in Europe) can be an effective instrument to operationalize the "scientific approach to development" in Chinese energy policymaking at the city level. The project will be conducted in two phases: (i) partnership development and (ii) feasibility study. A decision to release funding for Phase 2 will be dependent on Phase 1 outcomes.

Duration: 1 October 2008 through 31 March 2009



Visit in Yinchuan (From L to R: R. Horbaty (ENCO AG), W. Meyer (SDC), A. Arquit Niederberger (Policy Solutions), Cui Buo (Party Secretary of Yinchuan), Zhou Dadi (Director General Emeritus of NDRC/ERI)

Objective

The objective of Phase I of the China Energy City project was to present and discuss the Energy City concept with key stakeholders, in particular government officials, and to establish contacts with interested/competent partners.



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Activities – Mission 1



Summary of Consultations

A series of face-to-face meetings, phone calls and informal interactions with about 30 individuals took place prior to (including during a trip to Beijing in late October 2008) and during the mission, based on a 2-page overview document available in English and Mandarin (Annex I). The consultations are cataloged and summarized in Annex II.

In addition, the China Energy City project was presented on 11 November 2008 at the high-level JUCCE China Energy Forum – Partnering on Solutions in a panel on eco-cities (see Annex III for presentation slides). The event agenda can be viewed at <http://www.jucce.com/forum/>. The panel discussion uncovered great interest from the private and public sector to consider how to pool resources for a systematic approach to urban energy issues.

Insights for Further Development of China Energy City

Institutional Arrangements and Potential Partners

Central Government support is needed to implement China Energy City. Key ministries are NDRC, MoHURD and AQSIQ/CNIS. During the mission, meetings took place with NDRC and CNIS. Both ministries confirmed their support for China Energy City, for the following reasons:

- CNIS: They regard China Energy City as a tool to guide and assist organizations with adopting their new national energy management system standard – and they are interested in benchmarking methodologies
- NDRC: Cities need assistance / tools to implement the ambitious targets for energy conservation, renewable energy and greenhouse emissions reductions set by the central government

Our WWF counterpart confirmed that we had identified the right players on the Chinese side, which gives us some confidence moving forward.

Cities are beginning to undertake climate and low-carbon strategy work, but there is no collective database of all of these activities and not much evidence of a sustained process to develop local capacity. China Energy City was discussed in relation to a number of specific cities, including:

- Tianjin: Eco-city project supported by Singapore (new city development on a brownfield site). However, the timeframe for this and other new city activities is probably not workable for our purposes (new city area to be built within 3 years). McKinsey estimates that about 400 new Chinese cities will be added to the existing 670 cities by 2025.
- Low-Carbon City Initiative is a 5-year program of WWF China that will initially assist two and eventually more cities in developing and implementing low-carbon development models, focusing on energy efficiency improvement in industry, buildings and transport, as well as renewable energy development. The initial partner cities are:
 - Baoding, Hebei Province: China Electricity Valley/Low-Carbon City Project



- Shanghai: Emphasis on green buildings
- Urumqi, Xinjiang Province: The city has embarked on a 10-year Integrated Energy Master Plan process, with the aim of reducing the city's greenhouse gas emissions by the year 2013 by at least one million tons CO₂ equivalent. The company preparing the IEMP is eager to introduce the city to the China Sustainable Energy City approach and arranged for a face-to-face meeting with the city's chief engineer.
- CCICED (China Council for Cooperation on Environment and Development) is just launching a new "low-C society" project, which would provide a good data basis to develop appropriate indicators for China Energy City.
 - Yinchuan, Ningxia Autonomous Region: Zhou Dadi suggested partnering with Yinchuan.
 - Suzhou, Jiangsu Province: The other low-C city project under CCICED would focus on an industrial zone.
- Tezhou, Shandong Province: The President of Himing, one of the largest manufacturers of solar panels in the world, was informed about China Sustainable Energy City. He expressed great interest and proposed to talk to the respective city officials next day.

In terms of an institutional "home" for China Sustainable Energy City, one suggestion was the Mayoral Training Center of MoHURD. However, this Center would have an inherent focus on the building sector. Broader energy policy dimensions only come together at NDRC. Another idea suggested by me at the JUCCE Forum is to create a new "urban energy productivity hub", perhaps launched by the NGO Joint US-China Cooperation on Clean Energy. WWF could also be an interesting partner. More brainstorming and consolidation of ideas is needed. Many expressed interest in collaboration, including McKinsey, private enterprises and NGOs.

Regarding local support to assist Policy Solutions/ENCO AG in implementing Phase II of the project, initial discussions with Beijing HOPA International Consulting Co., Ltd. were held and will be further pursued in December in Zurich. Having such a local representation for the project will be crucial for success, as we cannot always be in China. Many Chinese counterparts asked if we had a representative office in China.

Concept and Approach

Feedback on the 2-page China Energy City paper prepared prior to the mission (in both English and Mandarin, Annex I) included the following important points for us to consider going forward:

- The basic concept of developing a procedure to benchmark cities on energy policy implementation and to provide tools and incentives for continuous improvement has wide appeal.
- The link to the new China EMS (energy management system) standard to be concluded by end 2008 is an important selling point for energy city as a supporting framework to assist cities with adopting it.
- Cities are very important in China's energy and climate policy efforts – and they need assistance with turning central government dictates into real actions at the local level. There are many emerging efforts in China to work with cities – the value added of Energy City is the introduction of a system for continuous



improvement, a support infrastructure and a “scientific approach” to benchmarking and recognition.

- Data availability is a real problem – Energy City can help.
- The list of measures used in Europe, on the one hand, is too extensive, yet on the other hand, has a major gap to be appropriate for China, namely industrial sector operations. Most Chinese cities’ energy demand is dominated by state-owned enterprises. To be suitable for widespread application in China, we will need to discuss with cities and ERI which indicators are most appropriate – and take an incremental approach. A good partner on the industrial dimension would be US DOE, since they have great experience in energy management systems, industrial audits, etc. It was also pointed out that China has already quite a lot of energy know-how in the industrial sector, but very little within local governments. So the value-added of a comprehensive approach to municipal energy management was clearly recognized.
- It will be challenging to get municipal government departments to coordinate. There is little experience with truly integrated planning – except with a growing number of eco-city experiments and the prospect of needing to build 400 new cities by 2025
- It is better to take a hands-on, learning-by-doing approach than a theoretical approach. We should identify the pilot city (or cities) early on and begin working with them on indicators/methods/tools – instead of conducting a purely research-based feasibility study.
- This is a big effort that will require many partners (both public and private) over a sustained period of time. Having the EU as a partner was suggested several times – and the US and Denmark have experience with industrial EMS. Having a group of countries on board will help demonstrate that our intent is to make use of best practices from around the world including China.
- We have the clear green light from the Chinese side to proceed with work under Phase II of the REPIC grant – but we need to revise the work plan in cooperation with NDRC/ERI as a matter of urgency.

Co-Funding

The REPIC contract requires co-funding. In addition to our in-kind preparatory efforts, initial co-funding opportunities were explored during the course of the mission – and two funding proposals were prepared and submitted.

Deliverables and Next Steps

In the meeting with NDRC, Lu Wenbin clearly stated that the ministry in charge of energy policy, NDRC, wants to go ahead with this project. He instructed us to develop a concept for the cooperation project together with Yu Cong at the ERI, so that it could be used to attract the necessary funding for the implementation phase.

Yu Cong has already provided project documentation on Yinchuan, recommended that we get in touch with the lead technical consultant on the project (Mr. Li, from BP Singapore), who would be most interested in our experience, and would like as many materials on Energy City as possible for her upcoming meetings with Suzhou and Yinchuan. These meetings will be together with Zhou Dadi. She stressed that these cities really want to be low-carbon cities and are looking for advice how to proceed.



It was also suggested by NDRC and ERI that a better name for the project might be “China SUSTAINABLE Energy City”, a convention which we will adopt going forward.

According to the project Work Plan, this mission succeeded in providing the following Phase I deliverables:

| Objective | Work Plan Item Completed | Deliverables |
|---|--|--|
| Introduce Energy City concept to municipal leaders and other stakeholders | Preparation and participation in 4-day mission to present China Energy City at JUCCE Energy Forum (Beijing, November 08) | China Energy City overview document (Annex I), engl/mand PowerPoint presentation (Annex III) Mission report (this document) Contact database of interested stakeholders (Excel file created and available on request) |
| Formalize commitments with Chinese partner institutions to prepare feasibility study proposal | Brief potential partners on Energy City (November 08 mission) | Mandate from NDRC to prepare cooperation project with NDRC/ERI for implementation in 2009 |
| Define terms for full feasibility study | To be completed in cooperation with NDRC/ERI | Note: Phase II will consist of a cooperation project to work with one or two pilot cities to actually develop the benchmarking framework, so that funding proposals for program implementation can be drafted |

Given these very positive developments – and the proactive approach taken by NDRC – we believe we are now in a position to work with ERI to prepare the terms of the initial cooperation project (the Chinese do not consider this as a “feasibility study”, since they have already taken the decision to proceed with the project) and begin real work under Phase II of the project from 1 January 2009.

Activities – Mission 2

Summary of Consultations

The second mission under Phase I of the REPIC contract was conducted from 22 February through 7 March 2009.

The mission was divided into two parts: (i) a mission 24-26 February to Yinchuan City, Ningxia Autonomous Region, at the invitation of the NDRC Energy Research Institute and the local Environmental Protection Bureau of Yinchuan and (ii) extensive consultations in Beijing. The Swiss Agency for Development and Cooperation (Walter Meyer) participated in most of the mission.

Yinchuan

During Mission 1, Zhou Dadi (Vice Chairman, National Energy Advisory Committee, and Director General Emeritus, NDRC Energy Research Institute) recommended that we consider partnering with Yinchuan for the first phase of the project. CCICED (China Council for International Cooperation on Environment and Development) is just launching a new “low-C society” project, which would provide a good data basis to develop appropriate indicators for China Energy City. In the meantime, our delegation



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was invited by Zhou Dadi to participate in a high-level CCICED workshop in Yinchuan (we had a 1-hr 15-min slot to present Sustainable Energy City), and the city government (Mr. Yin, deputy Director General, Yinchuan Environmental Protection Bureau) invited us to discuss cooperation with them.

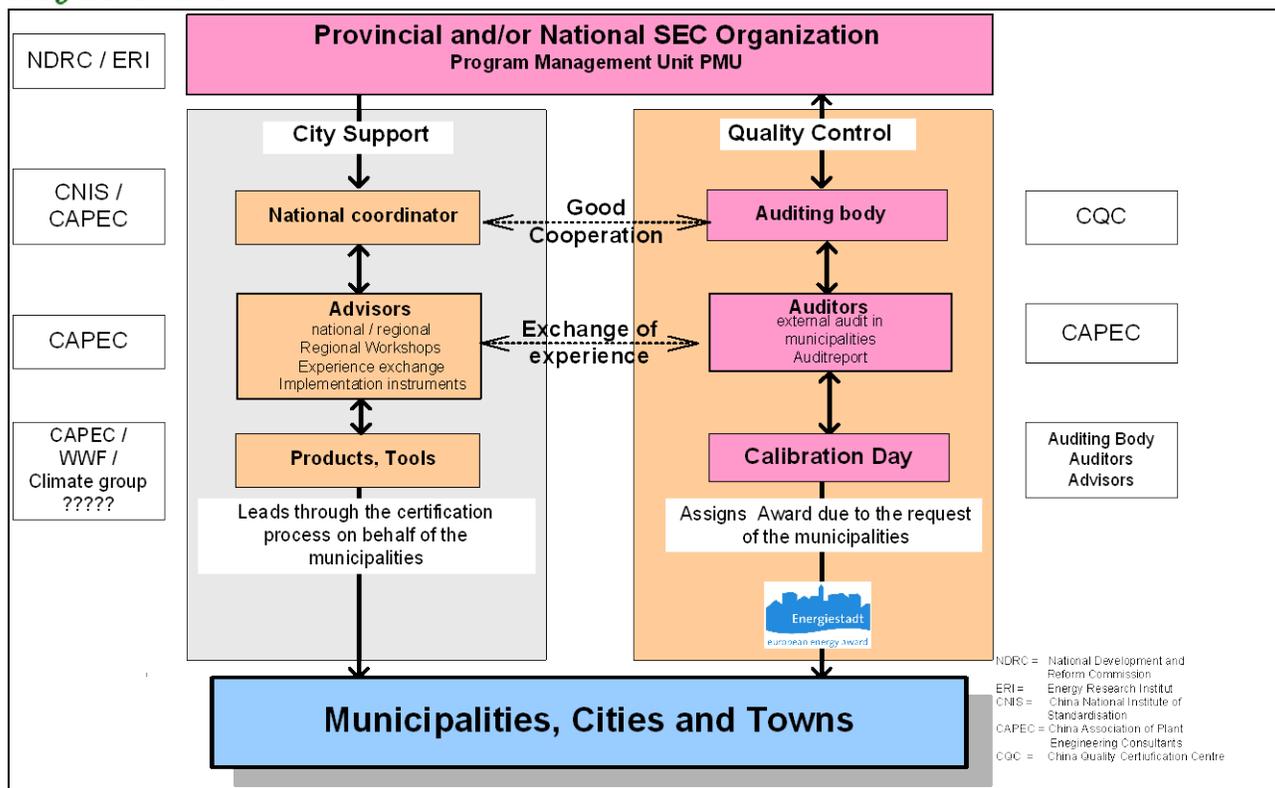
The outcomes of the meetings were:

- Personal contacts established with city leadership
- Keen interest to cooperate on SEC, beginning with exchange of views on appropriate city measures/indicators
- Confirmation that the municipalities in China have expertise and experience working with quality management and indicator systems (e.g., “model cities”) and confidence that the SEC certification approach can work in China
- Principal agreement by the Mayor of Yinchuan (Wang Rugui), to enter into a cooperation on SEC with Switzerland (SDC)
- Request to assist Yinchuan with arranging for a 10-day study tour to Switzerland (and maybe other European countries), with the Chinese side covering most of their own costs

Beijing

Following up on discussions on Mission 1, we conducted a series of consultations on (i) complementary activities to SEC and (ii) institutional arrangements to launch SEC on a firm footing (see Annex I for a summary). The main outcomes of the meetings were:

- Sustainable (Energy) City responds to a clear need to have a “scientific approach” and methodology to guide municipal energy policy in China.
- SEC brings added value to other low-carbon city/climate initiatives – and these other initiatives (e.g., WWF China and Climate Group low-C city initiatives; Urumqi integrated energy master plan) all expressed the view that there was great synergy potential and that they would like to cooperate with SEC going forward.
- It is crucial to get the institutional framework right, to find competent and motivated partners and to rapidly establish a project office in Beijing. The figure on the following page shows the current status of discussions on the possible institutional structure and partners of the SEC in China, but is not final.
- SDC is prepared to fund the preparation of a multi-year SEC program in China, in the context of its planned Sino-Swiss cooperation on climate change.



Deliverables and Next Steps

According to the project Work Plan, we have provided all of the Phase I deliverables as follows:

| Objective | Work Plan Items – Actual Outcomes | Deliverables |
|---|--|---|
| Introduce Energy City concept to municipal leaders and other stakeholders | <p>Preparation and participation in 4-day mission to present China Energy City at JUCCE Energy Forum (Beijing, November 08)</p> <p>Introduction on SEC to Yinchuan officials and discussion on cooperation with city officials (Yinchuan, February 09)</p> <p>Presentations to governmental and non-governmental stakeholders (Beijing, March 09)</p> <p>Meetings with Urumqi city officials (November 09), briefing of mayor (March 09) and follow-up in-depth briefing of mayor (April 09)</p> | <p>China Energy City overview document / PowerPoint presentations / Catalog of measures (English/Mandarin)</p> <p>Mission reports (Mission Report 1 and this document)</p> <p>Contact database of interested stakeholders (Excel file created and available on request)</p> |
| Formalize commitments with Chinese partner institutions to prepare feasibility study proposal | <p>Brief potential partners on Energy City (November 08 mission)</p> <p>Meetings with Yinchuan City officials (February 09) and agreement from Mayor in principal to participate</p> <p>Request by Yinchuan City officials and ERI to support study tour of Yinchuan officials to Switzerland in May 2009</p> | <p>SDC has been invited by NDRC to prepare an MOU between Switzerland and China on climate change cooperation, which could serve as an institutional framework for implementation of SEC (responsibility: SDC)</p> <p>Preliminary institutional organigram (see above)</p> |



| | | |
|--|---|---|
| | <p>Expression of Interest by CNIS to serve as National Coordinator and support development of institutional framework (first recommendations delivered 7.3.09)</p> <p>Commitment to continue cooperation on project in Yinchuan by NDRC/ERI in the context of their ongoing CCICED project</p> <p>Expression of Interest by CAPEC to serve as National Coordinator and support development of catalog of measures, particularly industrial plants</p> <p>Full support of Owens Corning to bring SEC to Urumqi</p> | <p>SDC preparing funding proposal that would allow for contracting and firm commitment of Chinese partners</p> |
| <p>Define terms for full feasibility study</p> | <p>SDC will provide funding to prepare a multi-year cooperation project with China, so that Phase II REPIC funding will not be required</p> <p>Pending formal internal approval, SDC intends to fund implementation of SEC as a multi-year core program under their new Sino-Swiss climate change cooperation program</p> | <p>ENCO AG / Policy Solutions provided inputs to TORs for SDC contracts to prepare the SEC program over the next 6 months</p> |

Given the positive developments outlined in this Report – and the proactive approach taken by SDC – we will not need to proceed with a formal Phase II of the REPIC project, as we have managed to achieve the main goals of the REPIC Phase II already in Phase I, namely: (i) decision to proceed with implementation of the China Sustainable Energy City program and (ii) identifying SDC as a funding source to implement the program (agreement in principle, pending internal SDC approval process).

San Francisco, 30 May 2009

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List of Annexes

- I China Energy City pre-mission overview (separate PDF file)
- II Summary of Consultations
- III China Energy City Presentation (JUCCCE China Energy Forum)
- IV China Energy City Presentation (Yinchuan Workshop)

China Energy City

A scientific approach to municipal energy policy management

National Context

China's 11th Five-Year Plan for National Economic and Social Development (FYP) reflects a bold shift in government strategy towards achieving an all around well-off society, based on a "scientific approach to development". For the first time, the Chinese Communist Party formally proclaimed that economic growth (measured in GDP terms) is not an adequate measure of economic development. In light of the growing energy challenges, Chinese has made a clear commitment to building a more resource and energy efficient economy, which is crucial to achieve the dual quantitative objectives of the 11th FYP, namely:

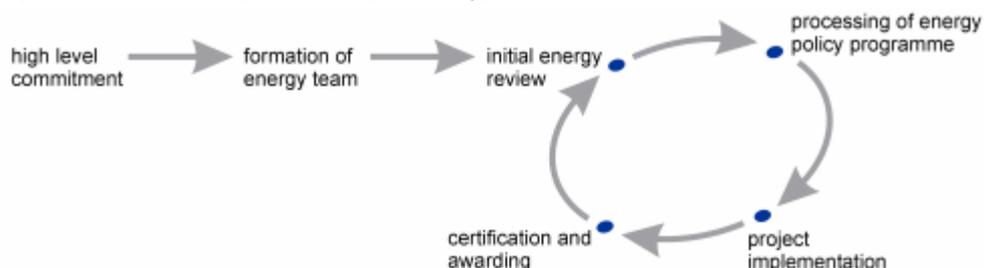
- Doubling of Gross Domestic product (GDP) per capita between 2000 and 2010
- 20% reduction in primary energy consumption per unit of GDP over the period 2006 to 2010.

Whereas China is well on track to attain the economic growth target (which would continue the trend in GDP growth achieved between 1980 and 2000), the energy intensity target is much more challenging: Although the energy intensity of the economy declined by over 50% between 1980 and 2000, while GDP quadrupled, energy consumption per unit of GDP has begun to climb again in recent years as a result of more energy intensive investment, industrial and export activities. Since the energy intensity goal was adopted in 2006, energy intensity has begun to decline again, but by less than the target value of 4% annually (-1.37% in 2006, -3.66% in 2007). China must both develop its rural economy (which will generate greater demand for energy services) and make the fast growing urban economy more competitive.

The Chinese economy and enterprises operating within it are faced with a combination of insecure and insufficient energy supplies, rising direct energy costs and serious external costs due to environmental and health impacts of fossil fuel use. Rational energy policy-making at all levels of government, based on quantitative indicators of success (in line with the scientific approach to development adopted by the Chinese Central Government), is crucial. Proper incentives to achieve this goal are urgently needed. Creating a "China Energy Award" or "China Energy City" process would provide a vehicle to track and reward progress on energy policy performance at the municipal level.

Energy City Concept

The energy city QM approach was developed in Europe, beginning with activities in Switzerland 20 years ago. The label Energiestadt / European Energy Award® is a qualified instrument for steering and controlling communal energy policy in order to review systematically all energy-related activities:



It allows municipalities to identify strengths, weaknesses and potential for improvement and, above all, implement effectively energy efficient measures. The success of a municipality's efforts is made visible by an award. The standardized assessment permits a benchmarking between the eea® communities. It allows member cities to share their experiences and expertise.

Experiences in Europe demonstrate how an active municipal energy policy can leverage similar activities within industry, trade and the population-at-large. A feasibility study to assess whether the adoption of a quantitative

quality management system for public sector energy policy can be an effective instrument to operationalize the "scientific approach to development" in Chinese energy policymaking at the city level is under preparation.

As part of the project, we participate in the ISO effort to create an energy management system standard (ISO 50001) that will not only be applicable to enterprises, but also to organizations including governments. We will use our experience with energy city – both in Europe and in China – to inform this process to ensure that this important emerging international standard can be readily applied in government settings.

Benefits for Chinese Communities

The energy and environmental provisions of China's 11th Five-Year Plan require actions by local governments. Experience with quality management systems in industry (e.g., ISO 14001), which have been very popular in China, and in the public sector in other countries (e.g., Swiss Energy Cities) have shown that the introduction of quantitative quality management systems can have many benefits to city governments:

Tool for steering and control

- Facilitating a systematic review of the energy activities to date (see full list of measures typically under the control of municipalities in the Annex)
- Identification of the most effective measures
- Planning and implementation of further activities
- Optimisation of internal administrative structures and processes in energy-related areas
- Continuous assessment of success through a comprehensive control system

Benchmarking and co-operation

- Recognition of responsible local officials for achievements in the field of energy
- Benchmarking with other cities and communities
- Replication/dissemination of successful energy activities to other local governments
- Access to the know-how and experience of leading energy cities and towns

Marketing (label, awards)

- Progressive energy policies can attract foreign investment and support development of high-tech sector
- Contribution of the city to meeting the goals of the 11th Five-Year Plan, reducing local pollution and contributing to protection of the global climate system
- Involvement of committed citizens and interest groups in energy policy planning and decision making process as foreseen in the Local Agenda 21 framework
- Improved image of Chinese cities (tourism) and China as a whole among foreign audiences

Economic and financial benefits

- Identification of energy policy measures with the greatest cost : benefit ratio
- Increased energy efficiency and associated cost savings

Results of the Process

- Consensus amongst municipal stakeholders on the status and future direction of energy policy
- Documentation of success in implementing measures, honouring responsible persons/institutions, which promotes acceptance of new and stronger measures
- Capacity building within the government on the possibilities of a comprehensive sustainable energy policy
- Energy balance and CO₂ emissions of the municipality, top down and bottom up
- Report on the energy policy of the municipality, with city profile and relevant data
- A resilient energy plan and program for the next 4 years, with targets and goals, schedule, finances, and responsibilities
- A firm commitment of all the responsibilities to the foreseen activities

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Annex II – Summary of Consultations

| Date | Name | Organization | Outcome |
|-----------|-------------------------------------|---|---|
| 6.11.2008 | Cheng Tony Wang Geng Liu Meng | CNIS, Sub-Institute of Resource & Environmental Standardization | <p>I gave a very quick intro to Energy City and gave them our 2-pager, plus the catalog of measures. Summary:</p> <ul style="list-style-type: none"> • The meeting was very friendly, and they were quite interested in the energy city system as a tool to assist organizations in concrete implementation of energy management standards – and for benchmarking NDRC is the key ministry that must support this effort – and Xie Ji is the proper contact, MoHURD can help link with mayors (but is only concerned with the building sector) <p>China will issue its own national energy management standard by the end of 2008 (based on research they did on existing national EMSs in the USA, Denmark, Ireland...), which should apply to all types of organizations. An English version of the final draft should be available very soon – and they will provide it. The response from industry has been very positive – and they are eager to test out the system. They have not yet worked out how compliance with the standard will be assessed, though (that is apparently not under the authority of CNIS, but of NDRC – and they first want to gain experience of a few large companies with their own internal technical expertise implementing it voluntarily). As a result of this discussion, we realized that we should refer to this new Chinese national standard going forward, rather than ISO 50001, since the Chinese standard already exists and the ISO 50001 will not be completed until the end of 2010.</p> <ul style="list-style-type: none"> • We agreed to exchange views at the expert level on the development of ISO 50001. • They felt the detailed measure catalog would scare people away and that we should focus first on a limited number of key quantitative indicators. Based on the evaluation of Energiestadt, it looks like a small subset of measures accounts for most of the quantitative impact, so this might make sense. Of course, I recognize that qualitative measures are also important, and we can try to include some of the most important. They also agreed with Klaus' suggestion to maybe even begin with a smaller unit than a whole city (e.g., a sectoral department within a city-level government structure, such as waste or buildings), since it is notoriously difficult to get Chinese administrations to cooperate and invest resources unless they see a benefit in doing so. I can confirm this. Although it might not sound ideal from a Swiss German perspective, it might be the only practical way forward to get started. • They were particularly interested in the benchmarking aspect, as well as knowing whether the same basic point-based approach could be applied to industry, since the majority of Chinese cities are industrial cities (as opposed to tourism or agricultural cities) and most of their energy use and greenhouse gas emissions come from the industry sector. I explained that direct benchmarking of key performance indicators would be preferable for sectors that are homogenous and therefore relatively easy to benchmark, such as cement, but that the point-based approach could perhaps be applied to benchmark the performance of more diverse sectors, such as the chemical sector. • The key to implementation of both their voluntary energy management standard and our program is to ensure sufficient qualified/accredited experts. We should discuss further with Klaus, as this is an area of his particular interest. • They provided constructive suggestions for how to move forward: take a practical, bottom-up approach, rather than trying to design a perfect system top down (in other words, find a motivated pilot city with the right characteristics and work out the point system and institutional arrangements based on their |



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| | | | <p>needs/capabilities, rather than conducting an abstract feasibility study first).</p> <ul style="list-style-type: none"> • As an aside, I discussed the JUCCE Forum panel at which I will present China Energy City with the moderator, Rob Watson, on the phone yesterday. We may try to agree to collaborate on a city planning approach (the other panelists include Owens Corning, which is just finishing a major “integrated energy management plan” for a Chinese city and could be a good partner). • They said they would brief all of the key high-level government officials and said they believed the Chinese central government must have a strong interest in the “energy city” concept and should be involved in the project. They also suggested it would be helpful to have the EU involved (money). Klaus said he would brief the EU. |
| | Ziegler Klaus Yao Xiaojing (Cathy) | EU Delegation | I indeed believe CNIS are highly interested in our proposal – they just don’t know how to tackle the issue right now. They are going to contact their superiors and their contacts at NDRC to “test the waters” – so you should keep them in the loop of all your activities. It’s also important that call them again in about 3 weeks to check where they stand. If the feedback is positive – you have with CNIS indeed the right partner to move on. If their feedback is still kind of hesitating you should push them to tell you who they believe could further our agenda. |
| 7.11.2008 | Zhou Dadi | | Suggestion to link with Ningxia Yinchang “low-C society” project just being launched under CCICED (managed by Zhou Dadi) |
| 11.11.2008 | Presentation | JUCCE | Partnership leads: McKinsey (Stefano Negri) urbanization report (urban productivity indicators); IFC (Maria May Chen) building benchmarking tool; Owens Corning (meet 20.11.08 in Shanghai) |
| 13.11.2008 | Hohenstein Helmut | HOPA | Want to collaborate. Expertise in the field of buildings, with excellent understanding of situation on the ground (feasibility) and good network in China. Can provide local support services. Also have German partner who is extremely successful in developing software applicatins for complex purposes that are user-friendly - and could be engaged for China Energy City... MoHURD now publishing “Green Arch” as one of its nine official journals Building CDM methodology - interested in collaboration |
| | Zaschke Wittko | | |
| 15.11.2008 | Huang Joe | White Box | Institutional reorganization and contacts at MoHURD; potential interest of US DOE in collaboration in Tianjin and via Mayoral Training Center; benchmarking buildings |
| 17.11.2008 | Yu Cong Tian Zhiyu Liu Jingru | NDRC/ERI Energy Efficiency Center | Lu Wenbin delegated by Xie Ji to contact me (11.11.08), proposed to meet together with Yu Cong Lu Wenbin gave the green light to go forward with the project. The first step is for us with Yu Cong to prepare a project proposal that can then be used for fundraising. I should provide the JUCCE Powerpoint to ERI and they will translate into Chinese, so that they can discuss the Energy City project with Yinchuan and Suzhou and get their feedback. They also would like the catalog of measures and other materials. At my suggestion, ERI will try to compile an overview of relevant city efforts. |
| | Lu Wenbin | NDRC Office of Inter- Ministerial Resources Conservation | |
| | Lei Hongpeng Chen Dongmei Rasmus Reinvang | WWF China, Climate Change & Energy Program | WWF China just launched a “Low-Carbon Cities Initiative” (LCCI), for which Lei Hongpeng is responsible. He used to work at the MoHURD, so is somewhat of an expert on buildings. They will work initially with Boading (renewable energy) and Shanghai (green buildings) to assist cities in low-carbon development, but plan to expand to other cities and sectors. They appreciate the desirability of the overall framework that China Energy City can provide. These cities have already done a lot (such as PV |



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| | | | <p>street lights in Baoding), but lack a systematic and continuous performance management approach. WWF also has an international project to create a city climate index that will take into account not only emissions in the city, but also the impact of import (consumption) and export activities (such as Baoding's solar PV industry). The objective is to provide incentives for cities to "do the right thing". We should immediately contact the responsible WWF person in Denmark, John Bang.</p> <p>They very much welcome collaboration and would like to receive more China Energy City materials, as well as the China national EMS standard.</p> |
| 19.11.2008 16 – 17:00 | Formeau Denis Baertges Stephan Ziegler Klaus | EU Delegation | <p>Introduction to China Sustainable Energy City</p> <p>Suggested EU-related funding opportunities, including new "SWITCH" program on sustainable consumption and production (grants to EU NGOs of EUR 1-2 million), as well as the new SWITCH Network Facility to be launched in 2009 that will promote uptake of experiences into policymaking (managing entity will be Wuppertal Institute); maybe also EEP (see section under Haugwitz)</p> <p>Introduced plans for an EU-China "Clean Energy Center", which could potentially host city support activities; suggested looking into FP7 project "CONCERTO", which is looking into EMS strategies for cities, as Chinese institutions are eligible to participate</p> <p>EU also has a draft EN16001 on EMS (not sure if they will finalize it, or wait for ISO50001 to be issued)</p> <p>May be interesting to contact Clinton Global Initiative office in Beijing</p> |
| | Haugwitz Frank | EU-China Energy & Environment Program | <p>EU-China EEP will conclude contracting by end 2008 and wrap-up operations by November 2009. There is a possibility to fund international short-term experts (also non-EU experts), and there are allocated consulting days still available (about 50 under the RE program that Haugwitz is personally responsible for). Only possible if Xie Ji agrees.</p> |
| 17 – 19:00 | Hohenstein Helmut Zaschke Wittko | HOPA | <p>Informal discussion of EEP proposal and cooperation</p> |
| | Ziegler Klaus | EU Delegation | |
| 24.2.2009 | Zhou Dadi Yu Cong | NDRC/ERI | <ul style="list-style-type: none"> • General discussion: Idea of SEC indicator framework in good and consistent with the Chinese government goal of implementing a scientific approach to development, energy conservation first and an absolute reduction in pollutants. But should not expect Central Government to adopt SEC as THE solution now. Need first to demonstrate in some cities that it is suitable for China. • Discussed cooperation with NDRC/ERI: Crucial to confirm interest of Yinchuan (and other city) officials. ERI has not yet committed to cooperation – and does not have much capacity to devote to SEC now, due to national policy support responsibilities in preparation of 12th 5-Year Plan. • Discussed potential institutional set-up for SEC (system of review of performance on energy intensity targets at provincial level, interest in disseminating best practice, China governance structure/city size, which institutions advise cities on energy policy, city-level inter-departmental cooperation) • Preparation for Yinchuan mission: Cannot expect Yinchuan to already agree to implement SEC, but workshop will be a good opportunity to present SEC benefits and make personal contact |
| 24.2.2009 | Bert Bekker Frank Haugwitz | EU-China Energy & Environment Program | <ul style="list-style-type: none"> • Short meeting to discuss EEP funding proposal (EEP cannot fund SEC, due to internal institutional issues, but this is no reflection on the project proposal – and there may be opportunities to cooperate with EU going forward) • Also discussed possible PMU arrangements – and ideas on competent Chinese experts |



PolicySolutions

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| 25.2.2009 | Wang Rugui Pan Yuelong | Mayor Vice-Mayor, Yinchuan City | <ul style="list-style-type: none"> Dinner hosted by Mayor Wang |
| 25.2.2009 | Low-C City Workshop | CCICED | <p>Invitation by the ERI to this workshop, they did organize within their own activities of CCICED (China Council for International Cooperation on Environment and Development). We did prepare a special presentation on the Energiestadt/eea®-approach and the possible outcome in China. These slides were translated by the ERI-people into Chinese (see Annex).</p> <p>Anne Arquit Niederberger gave a short introduction and Robert Horbaty explained during 1 h (incl. translation!) the possible program. Walter Meyer from the SDC explained these activities in a broader context of the future Sino-Swiss collaboration. (see pictures)</p> <p>The audience consisted of the city officials and about 100 employees. We had the impression, that our approach was not completely new to them and that they did understand it – although there was no discussion, also not after other presentations by Chinese.</p> |
| 25.2.2009 | Liu Zhiquan Other Yinchuan officials | Director General, Yinchuan City Environmental Protection Bureau List in Chinese only | <p>During the preparation of the Yinchuan mission it was agreed, that in the afternoon, after the presentation in the workshop, there will be a in depth discussion on our program with people from the municipal administration. The municipality expressed the wish, that we should make a detailed presentation on all of the 87 measures, so they can get a idea of the content of our system in Europe, on "all of the indicators" as they put it.</p> <p>The 2.5 h discussion was led by the Director General of the Yinchuan Environmental Protection Bureau (EPB), other 5 person from different departments attended. It became clear that Yinchuan has already been monitored as a "Model City" – based on 32 so called indicators.</p> <p>They are also awarded as a "Garden City" The discussion showed, that the municipalities in China are used to work with indicators and that a certification approach will quite probably work in China.</p> <p>A interesting point is, that they don't get awarded with a higher salary when they "over-fulfill" the set target, yet they get penalized if they don't reach them!</p> <p>We have to be careful how we position our system, since we don't want to be just a other City label, but actually have a comprehensive certification system implemented, which includes all energy- and climate relevant (sustainable development) measures.</p> <p>To do: obtain indicators of the "Model Cities" and "Garden Cities"</p> |
| 25.2.2009 | Cui Buo Wang | Party Secretary, Yinchuan City Vice Party Secretary, Yinchuan City | <ul style="list-style-type: none"> Dinner hosted by Party Secretary Cui Buo Wang communicated to us the agreement in principle of Cui Buo to partner on SEC – formal decision will still have to be taken through official government channels Vice-Mayor Pan Yuelong and Zhou Dadi informed of intent to organize a study tour of Yinchuan officials to learn about "energy city" in Europe (Switzerland and perhaps two other countries). Expenses on Chinese side and travel arrangements to be covered by them. Considering May 2009 timeframe. Swiss side pledged to recommend study sites/activities and support Chinese side making arrangements |
| 26.2.2009 | Christoph Lang | Swiss Embassy | <ul style="list-style-type: none"> Briefing on Yinchuan mission outcome and project next steps Coordination of Beijing meeting schedules for coming days |



PolicySolutions

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| 2.3.2009 | Li Aixian Cheng Tony Wang Geng Liu Meng | CNIS, Sub-Institute of Resource & Environmental Standardization | <ul style="list-style-type: none"> The China National Institute of Standardization is a semi official institute and deals with the implementation of different national and international Standards on all levels, like: <ul style="list-style-type: none"> - Energy Conversation Standard (Implementation and training, secretariat of ISO) - China Energy Label (verification on energy efficiency labels (Energietikette), supervision) . - Due to their national standard for "Energy Management Systems" (which is expected to be adopted by April 2009) and related expertise, CNIS (Li Aixian) serves as Vice Chair for development of the international EnMS standard ISO 50001. CNIS is highly interested in participating in our program as national coordinator. They have already provided input on institutional arrangements, and have proposed China Energy Label Center (CELC) or Certification organization (e.g. China Quality Certification Center (CQC) or others) to serve as auditing body. To do: Integrate them in our proposal for the initial phase, so they can work on the content and we can consider their suitability to serve as National Coordinator. |
| 2.3.2009 | Jiang Liang | The Climate Group | <ul style="list-style-type: none"> Climate Group low-carbon city program has adjusted its strategy to focus on technology demonstration, consistent with global priorities of the organization. They will partner with about 20 cities and 3-5 provinces – and have identified priority technologies (incl. LEDs, buildings, renewable energy, electric vehicles and eco-zones) Good synergy potential, and we could benefit from their 6-person (and growing) staff and their city/province contacts. Agree to support each other in interactions with cities and to coordinate closely going forward |
| 2.3.2009 | Yan Xianjun Zhang Ruijie | Chinese Association of Plant Engineering Consultants CAPEC | <p>Dinner hosted by CAPEC, Yan Xionzung is the general secretary and Zhang Ruijie is the director of policies and international affairs, he speaks English well.</p> <p>During this informal meeting, various points were treated like:</p> <ul style="list-style-type: none"> - Short presentation of our program - discussion of the different roles of the different stakeholders in national, regional and local policies. - possible participation of CAPEC as a partner in SEC going forward, particularly at the local advisory level <p>CAPEC invited presentation on SEC and/or CDM at their "2009 Forum on International Plant Engineering Consulting Cooperation", which will take place in Beijing in June – and will cover management of municipal infrastructure / clean energy initiatives</p> <p>It was agreed, that Robert and Walter would meet again with them on the 4th of march at the office of CAPEC to look closely at our measures and indicators.</p> |
| 3.3.2009 | Lei Hongpeng Rasmus Reinvang | WWF China, Climate Change & Energy Program | <ul style="list-style-type: none"> Interactive presentation / discussion of SEC program WWF China explained that they are considering how to best bring value added on city initiatives and believe that SEC will be complimentary to whatever they do Discussed potential synergy between WWF study tour to Scandanavia in May 2009 for Baoding City and Yinchuan visit to Switzerland in the same timeframe to study "energy city". Agreed to consider whether Baoding could join Yinchuan visit. |
| 3.3.2009 | Yu Cong Tian Zhiyu | NDRC/ERI Energy Efficiency Center | <ul style="list-style-type: none"> ERI can cooperate on SEC in the preparatory phase in the context of their work with Yinchuan on low-C city – they think SEC can be a useful indicator framework – which is funded under CCICED ERI will support arrangements for Yinchuan study tour to Switzerland (Tian Zhiyu is main contact at ERI) Unclear if ERI is suited to take on a key function in the SEC program in the implementation phase (will also depend on any agreements between NDRC and Swiss Government) |



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| 4.3.2009 | Yan Xionzung Zhang Ruiji Walter Meyer | APEC | <p>CAPEC is a association of plant engineers, they have 9'000 individual members and 400 company members. They define themselves as advisory engineers, which have mandates also from municipalities, since the concerned committees often lacks expertise and know how on the technical sides. Being a professional association, it was not quite clear to us, whether they have direct mandates by clients or they just propose their members. Never the less they have activities in the following relevant fields for our program: Electricity; Environmental protection; Distant heating; Gas supply; Garbage burning.</p> <p>In 3 hours, we discussed the catalogue of measures in detail, since the Swiss embassy did translate the English summary of it into Chinese. They could state on every measure, who in the municipalities would be responsible for the implementation of that particular measure.</p> <p>In this very fruitful discussion it became clear, that:</p> <ul style="list-style-type: none"> - the catalogue of measures has to be adapted, yet a great part of measures and indicators can be realized / evaluated in Chinese municipalities. - it is possible to put a responsible department of the administration or a committee as responsible institution to the most of the measures. - the Chinese are used to this kind of processes <p>Only "road circles" on inner city roads and the "sealing of soil" were really new to them. The promotion of nuclear power has high priority and is defined as clean and a solution to fight climate change – also on municipal level. There are plans to install about 100 plants in the near future. The power production is often owned by municipalities, the distribution in nationally controlled.</p> <p>The CAPEC is highly interested in participating in our program, either as program coordinator/Advisor or as auditors. We personally think they are best positioned to do advisory work</p> <p>After the meeting, the secretary forwarded two links with the typical structure of city administration (Guangzhou Municipality, at http://www.gz.gov.cn/vfs/web/gzeng_new/Government.html) and the structure on national level (Chinese Government's official website http://english.gov.cn/2005-08/05/content_20741.htm)</p> <p>To do: Integrate them in our proposal for the initial phase, so they can work on the content.</p> |
| 5.3.2009 | Tom McCawley | Owens Corning | <ul style="list-style-type: none"> • Owens Corning and MVV are just finalizing a 25-year Integrated Energy Master Plan on behalf of the City of Urumqi (on Mission 1, Anne Arquit Niederberger had a brief discussion with the Chief Engineer of Urumqi on SEC) • Detailed presentation / discussion of SEC • McCawley has recommended SEC as one of two initiatives for the City of Urumqi to follow up on to maintain momentum and visibility. He will meet in Beijing with the Li Hongbin (Mayor of Urumqi) in late March, and he will go over SEC, based on our presentation, with the Mayor on that occasion. He will also explore interest of Urumqi participation in May SEC study tour to Switzerland • Cooperation with Urumqi would offer opportunity to quickly implement investments to enhance performance, which could be tracked under the SEC scheme – could be good case study to market SEC to other municipalities and provincial/central government. |

Annex III – China Energy City Presentation (www.juccce.com/forum)

Slide 1

Scientific approach to managing municipal energy policy & investment

China Energy City



ISO 50001 – Energy Management Systems (not only for enterprises!)



Slide 4

Benefits of Energy City Status

- Reward city officials for meeting goals of the 11th Five-Year Plan, reducing local pollution and climate protection
- Involve citizens and interest groups in energy policy planning and decision making processes
- Improved image of Chinese cities (tourism) and China as a whole
- Progressive energy policies can attract foreign investment into high-tech sector




Slide 2

Local Government Support for Transition to Low-Carbon Economy

- Mayors carry great responsibility for achievement of China's energy & emissions goals
- China Energy City can help:
 - Support for continuous improvement
 - Network within and between communities to share best practices
 - Identification of energy policy and investment measures with the greatest cost : benefit ratio
 - Recognition and marketing of achievements (certification, label, award)



Slide 5

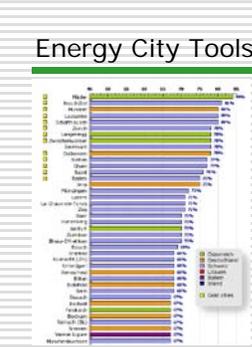
Prospects for China Energy City

- Draw on lessons learned elsewhere (*every third Swiss lives in an "energy city"*)
- Support Chinese policy priorities
- Pilot China national EMS standard / shape ISO 50001
- Partners
 - Swiss REPIC Platform
 - Policy Solutions/ENCO AG
 - Anchor institution(s) China
 - Key ministries
 - Pilot China Energy Cities




Slide 3

Energy City Tools



- Systematic database on key energy and greenhouse gas indicators at city level
- Catalog of measures
- Benchmarking across municipalities
- Expert assistance to municipal staff in planning and implementation of measures



Slide 6

Success Factors

- Mayoral commitment & leadership
- Designated qualified Energy City contact point within the government (knowledge of energy management systems)
- Inter-departmental cooperation (e.g. working group)
- Sufficient personnel and budget allocated to implement measures

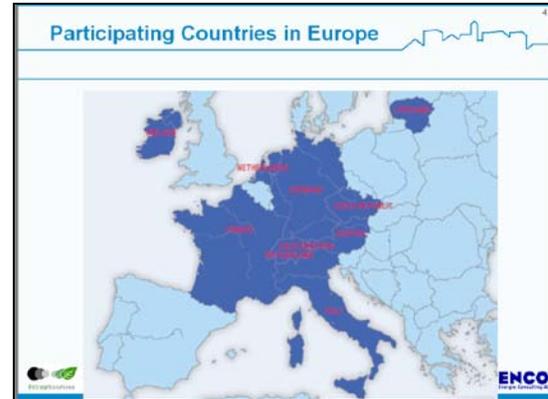


Annex IV – China Energy City Presentation – Yinchuan

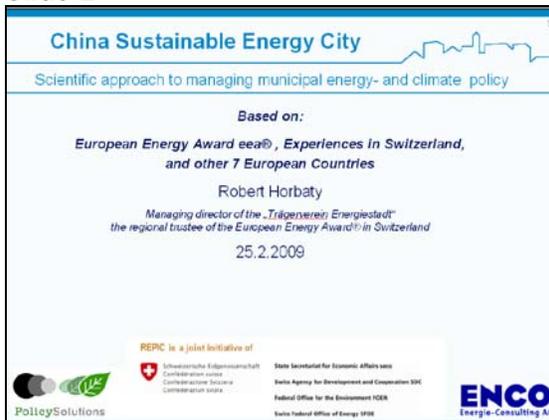
Slide 1



Slide 4



Slide 2



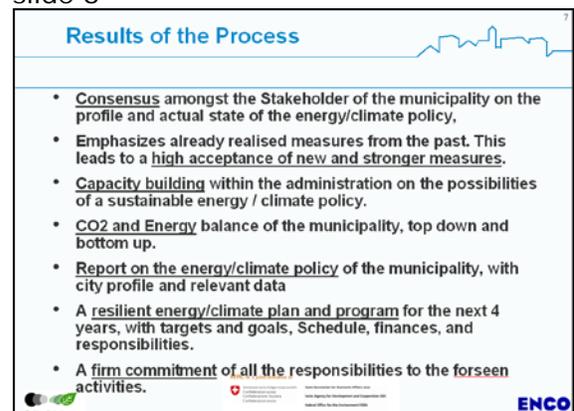
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Slide 3



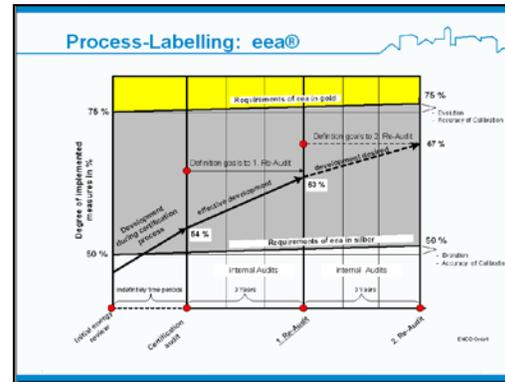
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Slide 7



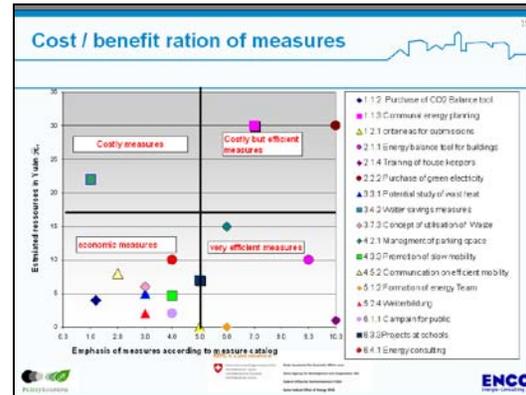
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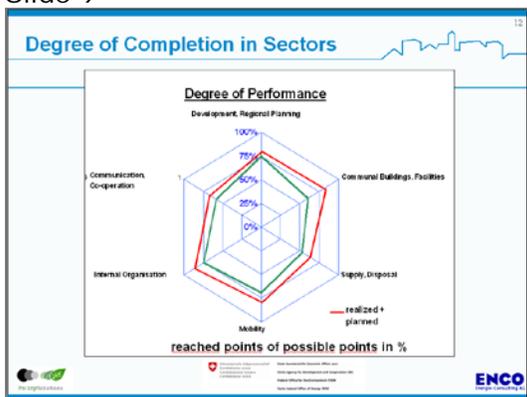
Slide 8



Slide 11



Slide 9



Slide 12

