

Managing the Change

Demo Zone Toolkit



EC2

Europe-China Clean Energy Centre
中欧清洁能源中心



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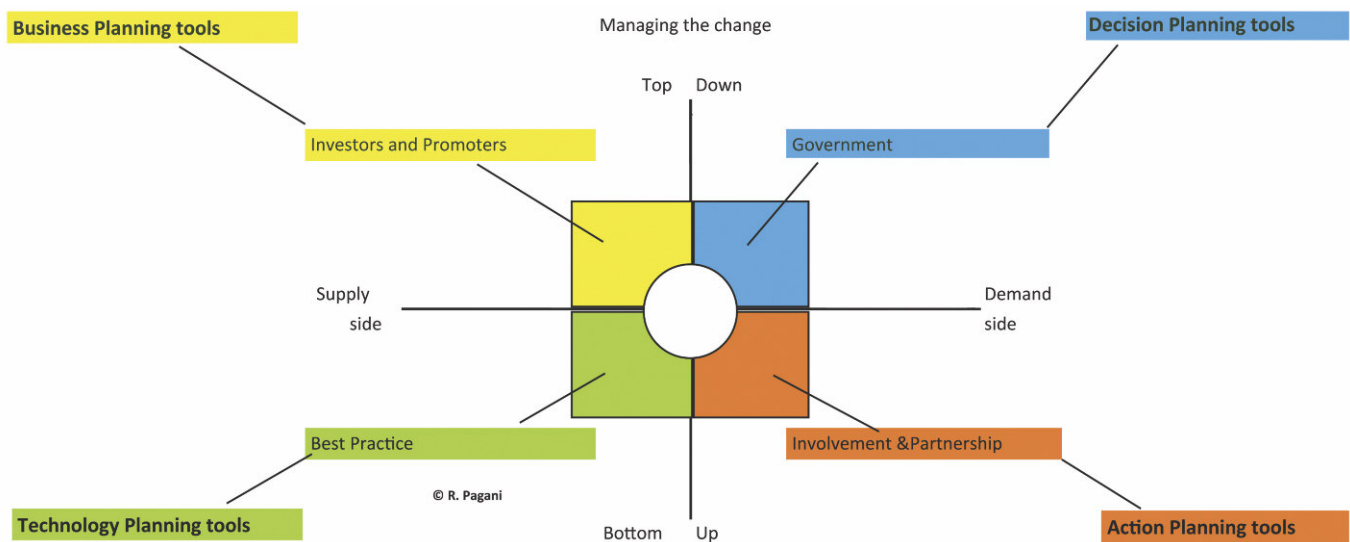
The *Demo Zone Toolkit*

A *Demo Zone Toolkit* has been developed, i.e. a methodological set for public decision makers to govern urban projects, which have been tested in Europe with adaptations for the Chinese context. The key to this process is tackling the complexity of the urban demonstration setting using the right mix of innovative methods, which are accepted by local stakeholders.

The *Demo Zone Toolkit* has been tested in EU demonstration projects with adaptations for the Chinese context.

The *Demo Zone Toolkit* aims at providing the public decision makers with a methodology to comply with sustainable urban projects. It incorporates a number of methodologies for the guidance of complex and integrated projects that have been proven to be successful in Europe.

The structure of the Toolkit is based on an interpretation diagram for describing urban policies and sustainable decision-making (see figure below).



It can be summarised into four fundamental approaches:

- **Top-down approach** - Related mainly to the activity of governments and/or institutions when introducing new regulations, as well as when reducing regulatory and procedural impediments
- **Bottom-up approach** - Organising the needs of a community and preparing the policies that comply with these needs

- **Demand-side approach** - Concerning the end-uses of citizens and their needs: mobility, housing, quality of life, economic opportunities, healthy environment, and so on
- **Supply-side approach** - Refers to the capability of the market to organise the production of goods, services, and technologies, which respond to consumers' need.

These four approaches create different urban policy consequences.

One approach is neither more nor less important than the other, but all can be equally significant and effective as part of coordinated and integrated implementation, when pursuing objectives of a better urban quality.

In practice, the urban policies are not exclusively “top down”, or “bottom up”, or only “supply-side” or “demand-side”. Usually policies are a combination of the four approaches and can be placed in a Cartesian diagram, which refers to the supply – demand on the X axis and the top-down – bottom-up on the Y axis (see figure). This conceptual framework gives the innovative organisation of the project. The “urban strategies” diagram is:

“Top-down / Demand-side” This is the city and institution area when planning or deciding, in the interests of the general public - the domain of “Government”

“Bottom-up / Demand side” area is considered the domain of “Involvement” and partnership, where stakeholders or citizens get involved and participate in decision making processes

“Bottom-up – Supply side” area is the domain of “Development” of best practices, which supplies integrated responses and methodologies to urban problems with the involvement of professionals and educationalists

“Top down – Supply side” area is the domain of “Investment” in urban technologies and marketing of them. This involves the supply of technical solutions and industrial products to the sustainable city concept.

Based on such a decisional mapping, urban demonstration projects should never focus on just one approach, with only one although relevant player, but shall involve the participation of multiple stakeholders to address economic, environmental and social issues in urban decision making and longer lasting and thus more sustainable solutions to the urban problems.

Demonstration Projects are processes that take place and tend to persist in the urban context. They consist of a mix of technical and non-technical interventions, pervasive enough to involve all aspects of the decision process. The *Demo Zone Toolkit* helps in find-

ing the most appropriate methodology for tackling any specific problem, in a certain step of the process.

Many tools are normally used in Europe in demonstration and pilot projects to facilitate decision-making and design processes. Based on the previous conceptual framework, only a limited number of tools have entered the toolkit, after a careful selection among the most recurrent, giving to them a categorization and structure.

The list of tools follows the previous organization into four sectors:

- **GOVERNMENT:** Decision Planning Tools
- **INVOLVEMENT:** Action Planning Tools
- **DEVELOPMENT:** Technology Planning Tools
- **INVESTMENT:** Business Planning Tools

Before introducing the tools we have to explain the “matrix” on which the toolkit is shaped. The matrix consists of the tools categorisation, on vertical, and the demonstration phases in horizontal. Each of the previous tool categories includes 3 fundamental and well-grounded tools that will be later commented.

The demo phases include the three main steps of any demonstration project, as recognised in EU project framework: Research, Demonstration, Dissemination, as well as the sub-steps of each of the previous macro-phases.

Based on this categorisation of tools across various steps of demonstration processes, a matrix of preferential applications has been compiled, to guide users to better understand the comprehensiveness of the Toolkit.

We need to remark that there are not strict rules of adoption of any specific tool in any specific phase. In a single EU Integrated Demonstration Project not all of these tools are used at once. We can draw profiles of different celebrated demonstration projects, by tracing the tools that were used, at different steps, for improving decision-making and provide innovative solutions. Only few of these tools were probably fully implemented in a single project, just to avoid redundancy. However, the list of the potential applications is highlighted by red-buttons on the matrix.

DEMO_ZONE_TOOLKIT



		Research		Demonstration				Dissemination		
		Strategy	Analysis	Project Identification	Partnership Identification	Project Formulation	Project Implement.	Monitoring Assessment	Training	
Decision Planning Tools	Stakeholder Mapping									
	Identification Session									
	Logframe Matrix									
Action Planning Tools	Sharing Event									
	Vision Workshop									
	Planning for Real									
Technology Planning Tools	Energy Action Plan									
	Low Carbon Assessment									
	Multi-criteria Analysis									
Business Planning Tools	Project Finance									
	Performance Financing									
	Green P. Procurement									

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This toolbox incorporates methods for governing urban projects tested in EU Demonstration Projects with adaptations to the Chinese context. Methods are made available to city managers to provide practical support and a structured framework for better planning. They help in cross-fertilisation among city decision makers, experts, professionals and developers.

A_Government: Decision Planning Tools



The aim of Decision Planning Tools is to “govern” sustainable urban transformations from conception to implementation and management of transformations.

The Decision Planning Tools included in the Demo Zone Toolkit are based on the *Logical Framework Approach* (LFA), a planning methodology for public programmes and projects widely used by several national and international organisations around the world.

This approach was first adopted in the context of external development programmes by USAID in the early 1970s, based on private sector “management by objectives” principles. The European Commission adopted the LFA in the early 1990s as part of the *Project Cycle Management* of European development cooperation. Similar approaches based on the logical framework method are followed by development agencies such as the World Bank, the Asian Development Bank, GiZ, DANIDA, etc.. in their partner countries, including China.

The LFA is particularly useful to design any kind of public interventions whatever its degree of complexity (from small projects to large programmes), its nature (tangible or intangible) and scope

(sector-related, regional, local). The use of this method enables the identification of a series of means-ends links (the objectives hierarchy) derived from a systematic cause-effect analysis. It provides an overview of the project goals - framing them within the relevant policy objectives - the means to achieve them and the necessary resources. It includes the assumptions on which the project is based enabling the adoption of risk management strategies, and provides the information to measure the results for monitoring and evaluation purposes. Aspects related to the sustainability of the project are incorporated in the design since the beginning so as to make the flow of benefits deriving from the public intervention last over time after the investment phase.

The LFA assumes a good knowledge of the context in which the project is designed and implemented and requires practitioners to focus on the real needs of the beneficiaries. Stakeholders’ consultation and problem analysis based on their perceptions is one of the key aspects of this approach. The method has a strong potential to help all those involved in a project to exchange their view and reach a consensus about what is valuable and feasible. However this can happen only if real consultation and negotiation are accepted.



Decision Planning Toolbox

A1_Stakeholder Mapping Tool

The *Stakeholder Mapping* is a method to analyse the stakeholders of a project and visualize the relationships among them. It provides a picture of the individuals, groups of people, institutions, companies, having a link with the project (either as beneficiaries, implementers, facilitators or adversaries) and helps establishing the framework within which the stakeholders' participation may take place at project planning and implementation stage.

The mapping of the stakeholders is based on the premise that different groups and institutions have different interests, motivations and capacities in relation to the relevant context. These need to be identified and understood in project design, in order to maximize the social, economic and institutional benefits, and to minimize negative impacts.



► [Learn more about this tool!](#)

A2_Identification Session Tool

The Identification Session is a participatory group event in which stakeholders' representatives analyse a reference context (a city, a neighbourhood, a demonstration area), identify issues and reach a consensus on the course of action to be followed. It is a tool to identify public projects and programmes based on a thorough problem analysis.

A project is a vehicle to innovate, an effort to transform a negative situation into a positive one. To make this transformation possible, it is crucial to have a clear picture of the starting point and to know the problems to address through the intervention. The exercise consists in depicting the initial negative situation (problem analysis), to transform it into a positive situation (objectives analysis), and to identify the lines of action to be pursued.

A proper consultation of stakeholders during the Session, complemented with a stakeholder analysis, helps to set priorities, checking how realistic the achievement of some objectives might be and identifying additional means that might be needed to achieve desired ends.



► [Learn more about this tool!](#)

A3_Logframe Matrix Tool

Logframe Matrix is the summary of the essential elements of a complex project (hierarchy of objectives; indicators; sources of verification; external factors/risks). It allows information to be analysed and organized in a structured manner to guide decision makers understanding the project rationale, its objectives and the means by which they will be achieved. It is used for project design as well as for management and evaluation. It provides the basis on which activities, resource requirements and costs are determined, and can be split among different partners. The completion of the matrix should follow a process of analysis of the stakeholders and of the problems (as outlined above).



► [Learn more about this tool!](#)

Reality check in China

The Decision Planning tools based on the *Logical Framework Approach* have a varied track record of application in China in the framework of development cooperation projects (by the European Commission, the World Bank, the Asian Development Bank, etc.). The problem analysis approach is already used in some urban regeneration projects in China and similar tools as the *Logframe Matrix* are internally used by Chinese municipalities.

The lessons learned from a reality check in China highlights that a systematic use of stakeholders' analysis can help expanding the project planning scope, by showing the importance of other relevant entities that could be included in programme. The stakeholder analysis enables a more effective communication with key actors and the prioritization of their needs. Moreover, it is key to identify the right interlocutor in each stakeholder group. On the other hand, engaging stakeholders very late in the process could result in poor engagement or it could constitute a barrier to the project.

It has also been observed that the analysis of the stakeholders is very difficult in those settings where there is not a participative culture, there is too little or no clear information or conflict is present within an interest groups or organization. The poor facilitation in the stakeholders' consultation process is recognized as being a major drawback. Very often the most effective way to obtain information from stakeholders is through informal channels.

There is a better chance of success in solving critical issues if there is a public participation in identifying such issues (as it is done by Beijing municipality when compiling the "annual list of critical issues"). Starting project design from problem analysis rather than from objective setting, as it usually happens, is more effective, as it enables finding the real roots, the target audience, and the achievable objectives and feasible solutions. The identification session method is appropriate when there are technical issues, which could be solved with technical solution; its application is more difficult when other types of issue have to be solved. The most crucial aspect is setting appropriate indicators. There is a strong need to improve the quality of the indicators, so as to improve the measurability of results and objectives.

B_Involvement: Action Planning Tools



This toolbox provides training to city planners and urban managers, from the very beginning, by means of workshops and participatory methods that belong to the Action Planning Tools. Action Planning Tools help local administration to understand and to experience new processes of governance, recognizing their potentiality and sustainability in economic, environmental, social and cultural terms.

The key and common elements of Action Planning Tools are intense community-based or stakeholder-based workshops, car-

ried out over a period of one to five days, depending on the specific goals of the workshop: sharing, visioning, designing. The workshop output is basically a development plan, which includes a list of strategies, options, and prioritized opportunities for dealing with the problems, and a work programme describing who, when and what is to be done. Methods are based on equal relation between the professional technical inputs and the community.



Action Planning Toolbox

B1_Sharing Event Tool

The aim of a *Sharing Event* is to exchange experiences and knowledge belonging to different contexts (e.g. China and the EU) that can influence or upgrade existing practices or originate new ones. The event is centered on a topic or an issue, which is presented from different perspectives (the Chinese and the European). A discussion is then conducted around a number of elements characterizing the issue (*key words*). For each key word two questions are raised: “*What does not work?*” (weaknesses, risks, unsuccessful aspects, barriers) and “*What works?*” (strengths, factors of success, good practices).

This method has proved to be very effective in terms active participation and comprehensiveness of the conclusions. The participants are systematically invited to reflect on their experience and to express themselves writing down on cards, which are then clustered topic wise to facilitate the exchange. Focusing firstly on what does not work enables a discussion on how to avoid mistakes that others have already made.

B2_Vision Workshop Tool

The Vision Workshop is an instrument for increasing the participation in the choices associated with scientific and technological development. It allows stakeholders to exchange information and to discuss the central themes and processes that govern technological development and the impact of technology on society. Directing the discussion in such a way as to stimulate the capacity for planning and identifying solutions to existing problems. The Vision or Scenario Workshop aims at encouraging public debate, to create a balanced relationship between society, technology and environment and to ensure sustainable development according to the wishes and needs of local communities.

B3_Planning for Real Tool

It allows people to produce plans of actions at structured sessions at which all those affected work creatively together. Planning for Real helps in developing design ideas on urban regeneration bringing people on site and helps their creativity to shape the urban transformation. Method for community involvement in planning and development which uses simple models as a focus for people to put forward and prioritize ideas on how their area can be improved.

Planning for Real, also known as Community Planning, is a highly visible hands-on tool which people of all abilities and backgrounds find easy and enjoyable to engage in.

Reality check in China

Having submitted the Action Planning toolkit to the quality check of Chinese experts and governmental stakeholders, it appears that there are no specific obstacles in applying the EU experience into the Chinese context. The “Sharing event” method, for example, is extensively applied in China, though it is called “investigation”. When policy investigation are made, in some Chinese regions on the 12th Five Year Plan on Energy Conservation and Emission Reduction, before making any in-depth analysis, meetings with key stakeholders and government officials are organized to collect their previous experiences. Local meetings for promoting awareness were experienced to be indeed useful (classrooms and micro-blogs were more useful than roundtables).

The vision workshop is an interesting approach, especially for local participants. In the already experienced events, participants found it was interesting that they were encouraged to express their views and suggestions for future developments. Still, there is a need for adaptation: after asking them a feedback, they replied (besides being satisfied) that there was a distance between what had been discussed and what could be implemented in their daily work. Furthermore, when they were asked to vote for priorities, there was a clear reluctance to show their preferences and anonymous vote might be more appropriate in China. For Chinese experts there should be more of these opportunities for identifying local authorities demand and bottlenecks.

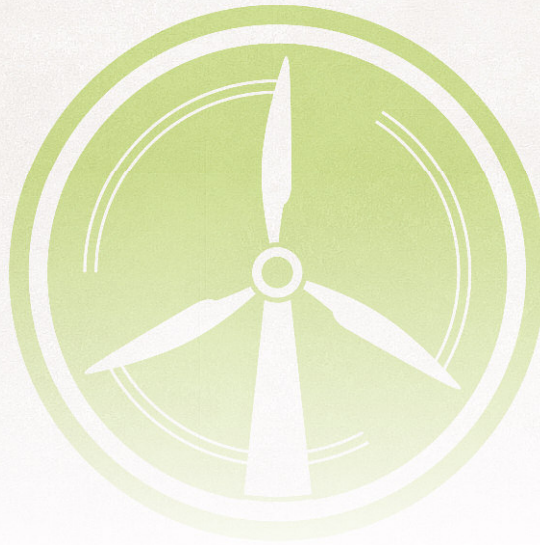
The action driven methods, such as “Planning for Real”, are recognised as very useful in China, where the top down approach is prevalent. Working with local communities is felt as important, but at a later stage of project development in the form of a “consultation”. In initial steps, a working framework needs to be developed.

Community planning methods should take into consideration the degree of development of cities in which this action is planned. It is recognised that in more international cities such as Shanghai or Beijing community involvement is easier than in more traditional cities or in small towns.



► [Learn more about this tool!](#)

C_Development: Technology Planning Tools



There are many various kinds of Technology Planning Tools, in all sectors of technological decisions: building, industrial, transportation, energy, materials, equipment, etc.

Each sector and technological field has its own set of tools, from planning to design and implementation. We have to categorize and select those tools among many that are widely applied in energy demonstration projects, and contributing to the environmental quality of urban areas,

The Toolbox helps to improve the planning and design phase of urban regeneration processes, starting from the energy balance on the city/district scale, the ecology assessment at the district/building level, and ending with a multi-purpose tools for selection of best technological solutions, such as the “multi-criteria analysis” tool.

Tools can qualify and quantify the effectiveness of energy solutions; assess the environmental quality of selected eco-technologies; demonstrate the cost effectiveness, practical application of integrated, innovative technologies in urban regeneration.



Technology Planning Toolbox

C1_Energy Balance Tool

The Energy Balance Tool aims at answering to the need for energy planning at the urban level, in order to support the evaluation and monitoring of the effects of cities' development from the energy point of view. The specific objective of the tool is the organization of an information system on energy able to give a picture of the relationship between the energy flows entering in the urban system and the final demand of the different sectors (building, transportation and industry), and the related amount of pollutant emissions, evaluated in a simplified way

C2_Low Carbon Assessment Tool

The Low Carbon Assessment Tool represents the indicators of environmental sustainability of an urban area, in order to check the potential improvements of ecological projects. The "Site Footprint" is based on an innovative assessment method, easy to predict and largely replicable. Based on estimating the level of performance for 8 different indicators: energy, mobility, air, water, waste, soil, materials and biodiversity. These indicators are categorised into three different levels: current practice, good practice, exemplar practice.

C3_Multi-criteria Analysis Tool

Multi-criteria analysis is undertaken to make a comparative assessment between alternative projects or heterogeneous solutions. This tool can be of high importance in taking decisions, when the choices are driven by a multiple factors (technological as well as economic, environmental and social). It helps tackling in the decision-making process complex problems including qualitative and quantitative aspects.

Reality check in China

The Chinese Government, National Energy Administration, has been involved in the development of the *Toolkit* and committed to help Local Municipalities for more effective technological decision-making. In the Chinese experience, pre-feasibility and feasibility studies are fundamental steps for actions and these tools are preliminary decision-planning tools, to be adopted by Chinese procedures to better formulate pre-feasibilities. They need to find appropriate funding to be incorporated into municipal planning schemes.

"Energy Action Plans" methodologies are standardised in Europe and could be also in China, with common templates and comparable results. These methods are devoted to cities, although are used by energy and technology planners to satisfy cities' requirements.

The "Low carbon Assessment Tool", a tool used at the district level, can be adopted to assess design choices in a preliminary design step. The degree of acceptance by municipalities is felt to be high, since with these tools city decision makers can proof whether their planning is ecologically friendly and compatible or not, by harmonizing the eight aspects of the low carbon assessment, discussing and deciding for improvements. It can facilitate different visions of the city's decision makers to focus on their ambitions and it is a powerful tool for planning (water, transport, etc).

"Multi-criteria Analysis" is a widely known tool and well experienced in China when comparing planning proposals. However, local authorities in China could better exploit this tool and planners should extensively apply it to show their project potentiality. This tool can be considered a focal point for a technological decision making process.



[Learn more about this tool!](#)

D_Investment: Business Planning Tools



This toolbox provides the description of three main business models based on the *Public Private Partnership* (PPP) concept.

While recognizing the limitation of overreliance on public grants and public investments alone for promoting development in less developed regions, such as Western China, how to diversify financing sources as well as how to create an efficient PPP based approach for its green transformation remain key challenges for many regional and local decision-makers. Against this backdrop, the overall objectives of developing the green and low-carbon business planning tools are to:

- Help local decision-makers and technical staff to set up and understand the strategic goals of their green and low-carbon business development plan in a regional/local context (see Figure);
- Help local decision-makers and technical staff to obtain hands-on tools and skills for creating PPP-based financing mechanisms for their regional/local sustainable energy- and environment infrastructure development;

- Identifying capacity building needs related to PPP and green and low-carbon business development;
- Identify international cooperation opportunities to unleash both leapfrogging green growth potentials in less developed regions in China as well as to achieve win-win collaboration between the EU and China.

The low-carbon and green business model toolkit is developed by choosing three PPP-based tools, for leveraging financial resources for low-carbon and green investments, as well as for increasing the efficiency of investments:

- **Project Financing** – structural solutions for project risk sharing
- **Performance Financing** – Regulation driven green market creation
- **Green Public Procurement** – Demand-side management / Market-creating mechanism

D1_Project Finance

Faced by the liquidity constraint of the financial sector on the one hand and the large number of projects (energy, social and environmental infrastructure) on the other hand, project financing is becoming an increasingly important part of structural solutions for credit enhancement and risk mitigation.

Simply put, project finance involves non-recourse debt and equity from one or more sponsoring firms. Debt is borrowed for a specific project and the amount of debt made available will be linked to the revenue that the project will generate over a period of time as this is the means to pay back the debt. This amount is then adjusted to reflect inherent risks involved in the project.

D2_Performance-Based Financing

Performance-based financing is heavily relying on governments' green policies and regulations to generate demand for products and services associated with improvement in energy- and environmental performance, for instance, in building energy savings. Energy Service Company (ESCO) is a new business concept and a typical example of performance-based financing vehicle for promoting end-user/demand-side energy management.

D3_Green Public Procurement (GPP)

Green Public Procurement (GPP) involves environmental standards in the public procurement process, so the procurement process can be a powerful "market-creation" tool to stimulate uses of environment-friendly and resource-efficient products and services. The key principles for GPP include:

- Best value for money – against lowest price (alone)
- Fair and open competition
- Transparency and predictability
- Support for life-cycle based cost and environmental impact assessments

Reality check in China

Exporting existing models is very difficult because the supply side (technology and salutation suppliers) and the demand side (project developer and the local authorities) do not necessarily meet, or they meet spontaneously. In particular, the previous experience of Europe-China bilateral projects show substantial complications:

Within project consortia it is usually a challenge to find the right balance, since the supply side of "sustainable urban development solutions" is often fragmented and it is difficult to achieve the degree of coordination and integration, which is necessary for the delivery of "durable and high-standard" performance;

To deliver sustainable urban solutions, it is not only about technological solutions, but also requires the support and commitment from the financial institutions and the local government. However, so far, both green finance and green public procurement are still in a premature stage of development on the ground;

To make international co-operation work in the sustainable urban development context, openness and transparency are necessary framework conditions for attracting foreign investments and foreign technologies. How to improve the market conditions for green business development as well as how to set up necessary financial infrastructure for green investments will need to be the key elements when implementing the business planning tools as well as for future capacity building for green regional development in China.

Concerning Project Finance, public grant and private capital need to be brought on the same platform. A EU-China structure could serve this scope and a "small stage" with relevant partners – each playing its role – might be ideal. China is currently experiencing a boom in urbanisation and reducing energy consumption is the new goal for cities, but it is very difficult and time consuming to elaborate and approve new policies: that is why China needs to focus on business and industry. Hence a Green Investment Bank can be an option. Business engagement is crucial not only for bilateral cooperation projects, but also for an effective implementing of various public policies related to green and low carbon development. The incentive mechanisms should be further investigated, namely how to encourage enterprises to be active in enhanced actions for energy conservation and emission reduction enhancement.

Concerning the Performance Financing Tool, this has been tested already in China; however, during the 11th Five Year Plan, ESCOs faced a lot of challenges due to either a low engagement of the business sector and insufficient policy incentives. In addition, there is need of a legislative framework in place. Therefore, ESCOs are interesting, but still challenging (e.g. related to energy prices, energy saving, energy incentives). To realise the great energy-saving potentials, barriers to ESCO development, such as misaligned incentives between developers, building and end-users as well regulatory and enforcement weakness in the Chinese market will need to be taken seriously and removed. Regarding Green Public Procurement, it can indeed be a useful tool for creating demand for green goods and services, i.e. both of cost effectiveness and high environmental performance. In Europe, the public procurement market is significant (e.g. estimated to reach approximately 2 trillion euros annually, equivalent to around 17% of the EU's gross domestic product) and rich experience in green public procurement has been accumulated among many EU member states. In China, the public procurement is also gaining increasing importance; however lack experience, particularly in the field of green public procurement. Therefore, green public procurement should/can be an important focal point for the EU-China cooperation in the framework of *Clean Energy and Circular Economy Demo-Zone*.



► [Learn more about this tool!](#)