

Low-Carbon Development Planning Toolkit:

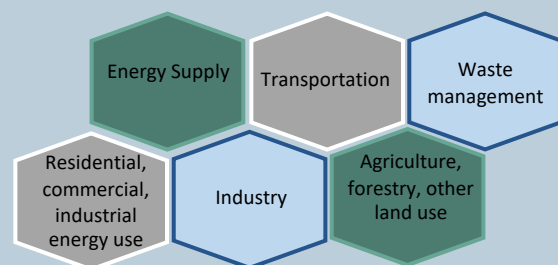
Science-based Policies for Low-Carbon Growth



The low-carbon development (LCD) planning toolkit is designed to help policy-makers make and realize their multi-faceted development goals in a step-wise and science-based fashion.

For nearly 10 years, Global Environmental Institute (GEI) has been leading a team of domestic and foreign experts to develop and pilot the toolkit as well as lead trainings on its implementation throughout China.

THE LCD PLANNING TOOLKIT COVERS 6 KEY SECTORS:



10 STEPS OF THE LCD TOOLKIT:

1. Organization and Goals
2. Baseline Development
3. Policy Options Identification
4. Policy Screening & Prioritization
5. Initial Policy Design Specifications
6. Direct (Micro) Impacts Assessment
7. Policy Options Integration and Overlap
8. Indirect (Macro) Impacts Assessment
9. Final Recommendations & Report Transmittal
10. Monitoring, Reporting, Evaluation, Updating

Inside the LCD Toolkit

The LCD toolkit includes a variety of tools, which have been developed to support the LCD planning process.

Together they conduct:

- Baseline analysis
- Policy Catalogs
- Multi-Criteria Assessment (MCA) Policy Screening
- Policy Document Design
- Sector-level micro-economic impact analysis
- Economy-wide impact analysis
- Macro-impact analysis.

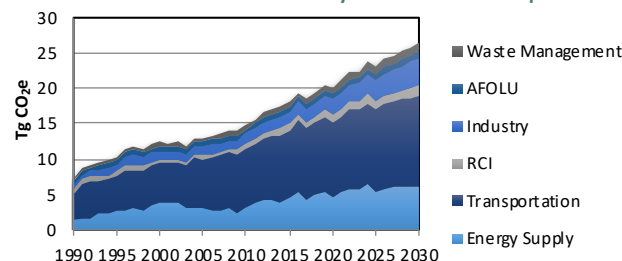
GEI Brings the LCD Tool to China

GEI recognized that the LCD Toolkit could contribute to Chinese policy making in three main ways:

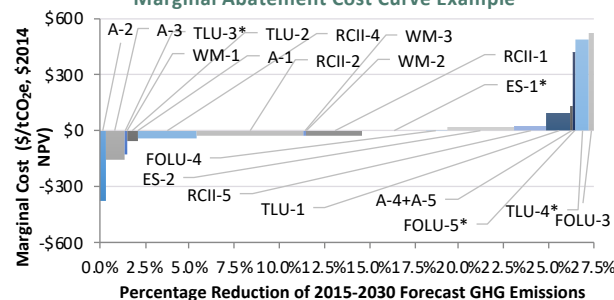
1. Quantification of GHG emission reduction
2. Calculation of policy cost-effectiveness and
3. Analysis of economic impact assessment

Since 2009, we have been working with foreign and domestic partners to adapt the toolkit to China and to train decision makers using it during policy planning.

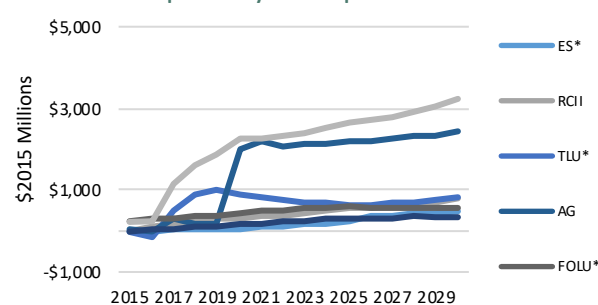
GHG Baseline - Inventory and Forecast Example



Marginal Abatement Cost Curve Example



Indirect Impact Analysis Example - Income Increase



LCD Toolkit Development Partners

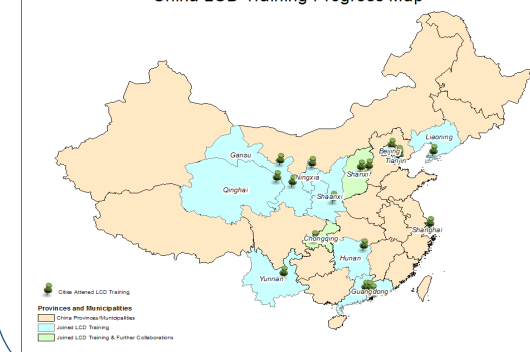


Pilot Projects

- Chongqing Municipality (2010-2014)
- Guangdong Province (2014-2016)
- Shanxi Province (2015-2017)

Capacity Building, Textbook Publication & Training with Tianjin Academy of Governance

China LCD Training Progress Map



Using the LCD Toolkit For 5-Year Economic Development Plans: Chongqing City, 2010 - 2014

Chongqing's economy grew 14% in 2012, reaching \$40billion USD in the first quarter¹. Sustaining this economic growth while also achieving lofty low-carbon goals required a practical and quantitative approach.

The LCD toolkit was used to help Chongqing evaluate it's 12th 5-Year Economic Development Plan.

OUR WORK:

We used the LCD Toolkit to analyze:

- China's energy transition policies' impact on Chongqing
- The macroeconomic impacts of various development scenarios for Chongqing
- Carbon emissions accounting
- The functional departments for policy change

Reducing Carbon Intensive Industries: Shanxi Province, 2015 - 2017

From 2015-2017, GEI, the Research Center for Eco-Environmental Sciences in Shanxi and CCS applied the LCD toolkit in the cities of Yangquan and Shuozhou, Shanxi. We completed a GHG emission and forecast, screened of low carbon policy inventory, analyzed the policies' cost effectiveness and submitted recommendations for future low-carbon policies.

OUR WORK:

We used the LCD Toolkit to analyze:

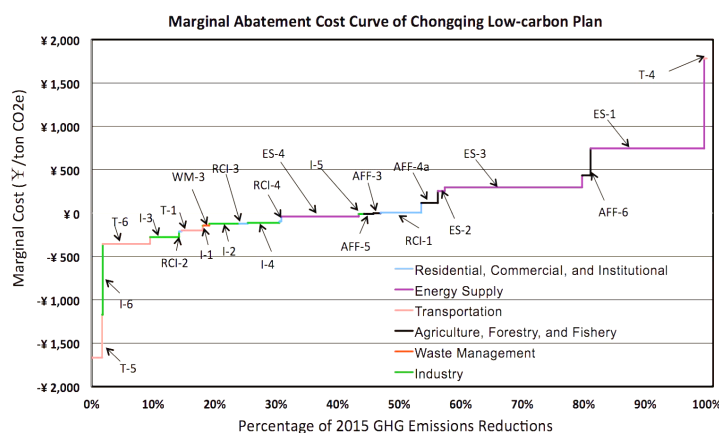
- 6 different sectors' (energy, industrial, construction, agricultural, transportation and waste management) carbon emissions and impact on air quality
- 6 different policies' cost-effectiveness to ability reduce carbon emissions and improve air quality



Global Environmental Institute
北京市朝阳区永续全球环境研究所

Global Environmental Institute (GEI) is a leading Chinese, non-governmental, non-profit organization based in Beijing since 2004. We conduct research and pilot projects in order to make policy recommendations that simultaneously realize economic growth and environmental conservation.

To learn more, please visit www.geichina.org,
Follow us on social media (WeChat: GEI-NGO)
Or contact us, gei@geichina.org, +86-10-8532-5910

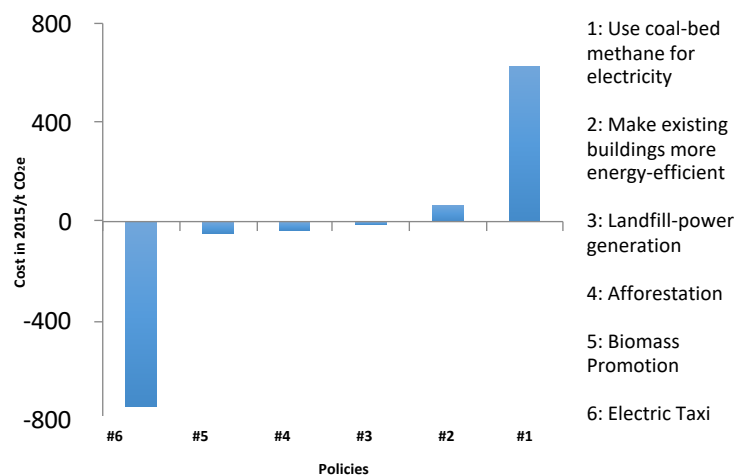


"Analysis of Chongqing Low-carbon Policy in 12th Five-year Plan and Policy Recommendations"

RESULT:

- Chongqing DRC awarded our team a "Certification of Result Application";
- The findings from the LCD toolkit and our analysis was included in Chongqing's 13th 5-Year Plan.

1: China Daily, Chongqing registers 14.4% GDP growth in Q1 (2012 -4-21)



Cost-effectiveness analysis of the 6 Recommended Policies

RESULT:

- We recommended a package of all 6 policies to the government; increasing coal-bed methane for electricity, energy-efficiency renovation and landfill-power generation were the three most cost-effective.

PARTNERS



中国科学院科技战略咨询研究院
Institutes of Science and Development, Chinese Academy of Sciences



THE CENTER FOR
CLIMATE STRATEGIES



山西省生态环境研究中心
Research Center for Eco-Environmental Sciences in Shanxi