

The Innovation
Center for
Energy and
Transportation

2010

Annual Report



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MISSION AND WORK APPROACH

The Innovation Center for Energy and Transportation (*iCET*), a leading policy think-tank in the area of low-carbon development and climate change, is an independent non-profit, professional organization registered in Beijing, China and California, USA. *iCET*'s core mission is to reduce dependence on fossil energy and mitigate climate change through the advancement of low-carbon transportation, clean energy, and carbon registry practices and policies in China.

iCET is solutions-oriented and pursues its goals by actively developing projects with different stakeholders, both inside China and around the world. *iCET*'s work falls primarily into the following four categories:

Identifying and Introducing International Best Practices: Identifying international best practices on low carbon development and climate change policies; assessing their suitability for China; introducing and transferring innovative best practice into China.

Providing Expert Advice: Collaborating with Chinese and international experts to provide advice and suggestions to national and local governments and business communities on low-carbon development and innovations; conducting in-depth analysis and policy studies on improving energy efficiency and reducing carbon emissions.

Planning and Coordination: Organizing international conferences and workshops; facilitating the exchange of ideas, cooperation, and coordination among various stakeholders, including central and local government bodies, the private sector, NGOs, academics and consumers.

Media Outreach: Using public media to educate governments and the public; promoting environmental consciousness and a demand for green consumer products in China.



LETTER FROM THE EXECUTIVE DIRECTOR



Dear Collaborators, Supporters and Friends,

Goodbye, Year of the Tiger. Hello, Year of the Rabbit! In line with the Chinese zodiac and the qualities of the rabbit, we look forward to 2011 as year in which we will continue to become more focused, effective and results-oriented in the race against the climate crisis to find new and meaningful innovative solutions for China's energy and environmental challenges.

In the last year, our two largest project areas, low carbon transportation and building carbon registration system in China, have both made dramatic moves into the spotlight on the world stage. The issue of **Low Carbon Transportation** and its impact on climate change has taken on tremendous momentum in China, and, along with it, our work has gained importance and attention. Most notably, *iCET* submitted policy recommendations to the State Council, the National Energy Administration and the State Administration of Standardization on developing low-carbon transportation fuel standards and policies, worked with the World Bank and United Nations Commission on Sustainable Development on electric vehicle infrastructure analysis, and published the first-ever China Green Car Guide and Corporate Average Fuel Consumption Trend Report.

Our **Energy and Climate Registry**, and the broader policy context surrounding the process of measuring, reporting and verifying greenhouse gas emissions has been catapulted to center stage. In the summer of 2010, the Chinese government announced the launch of **Low Carbon Pilot Zones** in five provinces and eight cities across China. GHG accounting will be a central focus of the pilot zones. We hope our ECR project will serve as an instructive and informative guide for GHG accounting standards and protocols in China.

We facilitated a number of high-level meetings between US and China. *iCET* became the first Chinese NGO to sign the **R20** initiative. We hosted the Chinese NDRC delegation to the 2010 **Governors' Global Climate Summit** in Sacramento in November. Following our successful events in Copenhagen at the COP15, we were invited back to the United Nations climate conference, the **COP16**, which was held last year in Cancun, Mexico, to host a side event and several press conferences on our recent achievements. Finally, our work was recognized by **Bill Clinton** at the Annual Meeting of the **Clinton Global Initiative** held in New York in September 2010, for our commitments to reduce greenhouse gases from the atmosphere through both our Low Carbon Transportation Program and the Energy and Climate Registry.

Please enjoy the following report. We hope you will take pride, as we do, in the successes we have been able to achieve. It is important to remember that these successes belong to all of us who contributed. Without the support of our collaborators, partners and supporters, none of this would be possible. So, please allow us to **Thank You** from the bottom of our hearts. Please join me and lift a glass to speed, innovation and success in the year of the Rabbit.

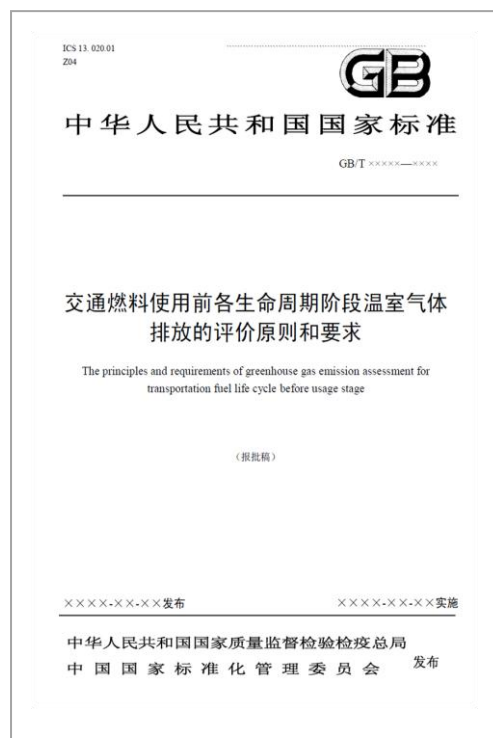
Sincerely yours,
Dr. Feng An



President and Executive Director
Innovation Center for Energy and Transportation

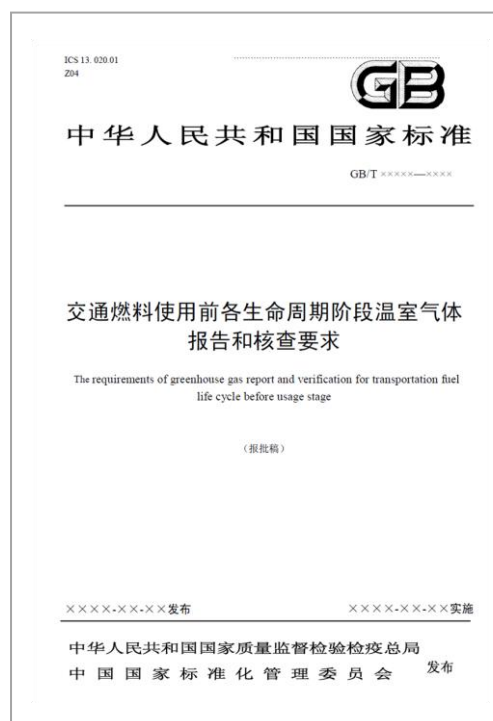


HIGHLIGHT ACHIEVEMENTS



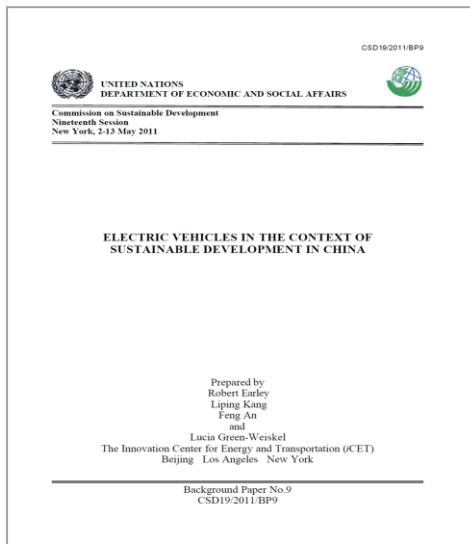
National Standard (Draft): The Principles and Requirements of Greenhouse Gas Emission Assessment for Transportation Fuel Life Cycle Before Usage Stage (Submitted for approval from the Standardization Administration of China) (December, 2010)

This is the first recommended standard in the “Low Carbon Fuel Standards Series” promoted by iCET, which standardizes the evaluation of GHG emission from each stage of a fuel’s lifecycle before it is used. The standard is to be used by feedstock producers, fuel conversion enterprises, fuel marketers and other stakeholders, and covers biomass-based fuels, coal-based fuels, petroleum-based fuels, etc. The standard is to be used by feedstock producers, fuel conversion enterprises, fuel marketers and other stakeholders, and covers biomass-based fuels, coal-based fuels, petroleum-based fuels, etc. This standard was jointly drafted by iCET and a National Environmental Standardization Technical Committee made up of experts from the China National Institute of Standardization (CNIS), Tsinghua University, the Research Center for Eco-Environmental Sciences of the China Academy of Sciences, the Safety and Environment Technology Research Center of the China National Petroleum Company, the China Coal Science Research Institute, and COFCO Co. Ltd., and is now in the national standards approval process at the Standardization Administration of China.



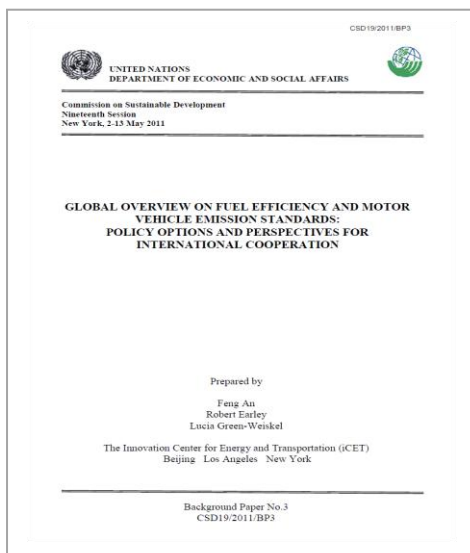
National Standard (Draft): The Requirements of Greenhouse Gas Reports and Verification for Transportation Fuel Life Cycle Before Usage Stage (Submitted for approval from the Standardization Administration of China) (December, 2010)

This is the second recommended standard in the “Low Carbon Fuel Standards Series” promoted by iCET, which standardizes reports and verification methods on the calculation of lifecycle GHG emissions from the production of transportation fuels before they are used. The standard is to be used by feedstock producers, fuel conversion enterprises, fuel marketers and other stakeholders, and covers biomass-based fuels, coal-based fuels, petroleum-based fuels, etc. This standard was jointly drafted by iCET and a National Environmental Standardization Technical Committee made up of experts from the China National Institute of Standardization (CNIS), Tsinghua University, the Research Center for Eco-Environmental Sciences of the China Academy of Sciences, the Safety and Environment Technology Research Center of the China National Petroleum Company, the China Coal Science Research Institute, and COFCO Co. Ltd., and is now in the national standards approval process at the Standardization Administration of China.



Report Title: Electric Vehicles in the Context of Sustainable Development in China (for UNCSD) (March, 2011)

This report provides a comprehensive and systematic analytical overview of China's automotive electric-drive technology development and electric mobility promotion policies and programmes, and recent trends and projections in technology development and electricity use in private and public motor vehicles are analysed. This paper serves as background information for the 19th Session of the United Nations Commission on Sustainable Development in New York, 2-13 May 2011.



Report Title: A Global Overview on Fuel Efficiency and Motor Vehicle Emission Standards: Policy Options and Perspectives for International Cooperation (for UNCSD) (March, 2011)

The report provides updated profiles for the United States (both federal and California approach), the European Union, China, Japan, the Republic of Korea, Canada, India and Latin American developing countries and outlines challenges and potential solutions for methodologies for comparing standards between different countries and regions. It serves as background information for the 19th Session of the United Nations Commission on Sustainable Development in New York, 2-13 May 2011.



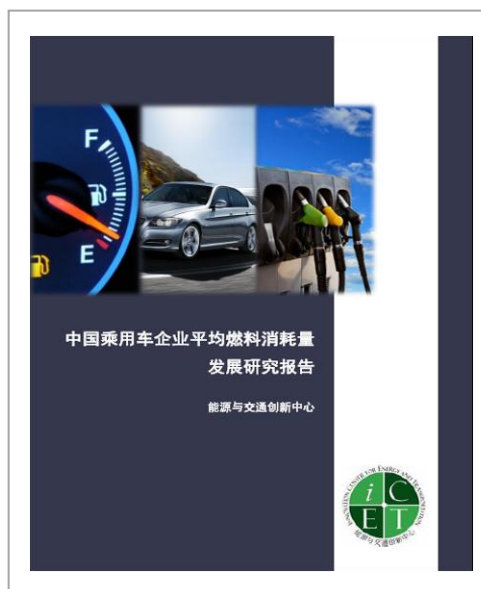
Report Title: Development of Low Carbon Vehicle Fuel Policy in China Recommendation Report (December, 2010)

This report offers a background on China's automotive fuel and international low carbon policy development experience, then sets out important recommendations for the development of low carbon vehicle fuel in China. The report also presents scenario analyses on GHG emission implications of the use of alternative fuels in China, offers a method for China to select low carbon fuels, proposes a low carbon vehicle fuel development pathway and targets, and finally makes seven policy action recommendations for the Chinese government. The report stresses the importance of using demonstration projects, government policy support, commercial application of technology and other means to achieve a 10% reduction in the carbon intensity of China's fuel system by 2030 compared to 2005. Based on this report, iCET and the Development Research Center of the State Council of China have submitted a policy briefing, which has been presented to senior leadership and policy researchers.



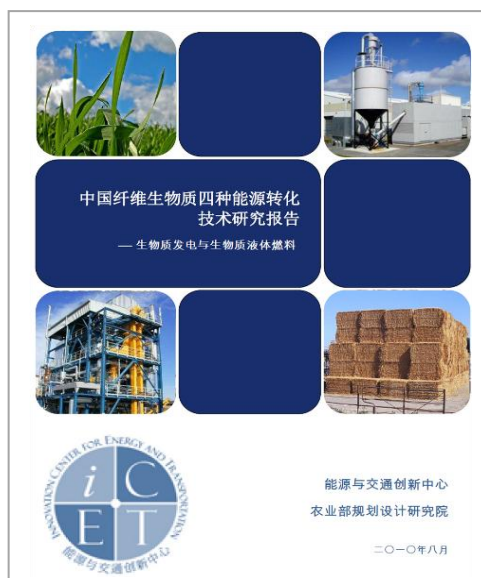
Report Title: 2010 China Environmentally Friendly Vehicle Annual Analysis Report (April, 2011)

This report is based on the Environmentally Friendly Vehicle methodology jointly developed by iCET and the Vehicle Emission Control Center of the Ministry of Environmental Protection in 2006-2007 for evaluating the impact of individual models of vehicles on the environment based on openly available data. Taking a lifecycle perspective, the methodology looks at the production and use of vehicles, taking exhaust emission standards, fuel type, fuel economy and curb weight as basic parameters for evaluation. iCET's database now contains more than 5400 models of vehicles made under 80 brands in the Chinese market. A Green Rating is available for all vehicles, and the report has also generated top-ten rankings in each of the categories of micro cars, small cars, compact cars, midsize, medium and large cars, luxury cars, SUVs, MPVs, sports cars and New Energy Vehicles. The results seek to guide consumers, car companies and government to together promote the use of environmentally friendly vehicles.



Report Title: 2010 China Passenger Vehicle Corporate Average Fuel Consumption Development Research Report (April, 2011)

The Ministry of Industry and Information Technology (MIIT) and China Automotive Technology and Research Center (CATARC), along with major auto manufacturers have issued a draft of *Passenger Vehicle Fuel Consumption Evaluation Method and Requirements*, which for the first time will require the calculation of Corporate Average Fuel Consumption, and is planned to come into force in 2012. This report utilizes a CAFC methodology and data from authoritative sources such as the MIIT and China Association of Auto Manufacturers to analyse the 2006-2010 CAFC trends of 11 major automotive groups, 31 major auto companies and major independent brands and joint venture brands.



Report Title: Research Report on China's Four Types of Fiber Biomass Energy Conversion Technologies (August, 2010)

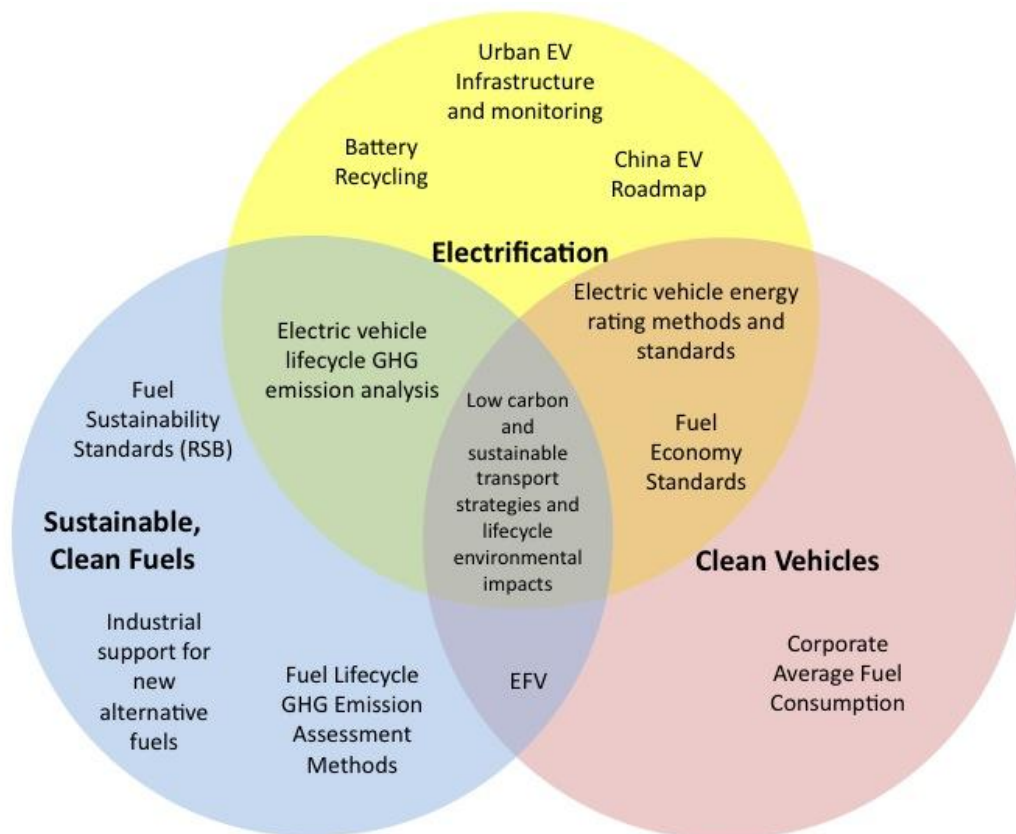
The Report defines the status quo of China's biomass resources and the utilization; outlines the technology for biomass power generation and bio-liquid fuel and the status quo of industry development. It conducts cases appraisals on biomass power generation and bio-liquid fuel technologies from the perspectives of energy, economy and environment effects; also analyzes China's existing policies and impediments concerning fiber biomass energy. Finally, the report puts forwards several policy suggestions involving China's fiber biomass energy, providing a basis for further promoting the sound and orderly development of China's fiber biomass energy and the formulation of relevant policies.

PROJECT HIGHLIGHTS

Our current projects focus on three areas: Low Carbon Transportation, Energy and Climate Registry, and US-China Collaboration on Clean Energy. Brief descriptions of current key projects are given below:

Low Carbon Transportation Program

iCET has continued its trailblazing work in pushing for cleaner, more sustainable and lower carbon transportation in China. By focusing on vehicle and fuel standards, new energy infrastructure and vehicle technologies and the companies that make these available to consumers, iCET presents a comprehensive approach to policy for improving the environmental performance of transportation. In 2010, iCET made major progress in its **Low Carbon Fuel Policy and Standards** work, bringing the first phase of the project to completion; iCET has formed new partnerships and undertaken new research that will help consumers and policy makers alike understand which **vehicle models and vehicle manufacturers** are most efficient, and we have started to bring the low carbon message to China's massive **transport electrification program**.



iCET's Low Carbon Transportation Program includes three major areas which when considered together, focus on an overall promotion of low carbon and sustainable transport strategies through lifecycle analysis of environmental impacts.

Low Carbon Fuel Policy and Standards

In September 2007, iCET undertook a major initiative to bring about the measurement and regulation of lifecycle GHG emissions from transportation energies: the China Low Carbon Fuel Policy and Standards project (LCFPS). This work was launched with major support of the UK Foreign and Commonwealth Strategic Programme Fund, and was continued through 2010 with the generous continued support of the Energy Foundation China Sustainable Energy Program and the Hewlett Foundation.

2010 marked a major milestone in the LCFPS project. In 2010, iCET successfully completed consultations with key researchers across China on the development of low carbon fuel support policies, completed draft standards, and made key recommendations to the Chinese government on how to proceed with the regulation of lifecycle emissions from the transport sector.

Standards Development

2010 also marked the end of research and development on methodology standards for the calculation and reporting of lifecycle GHG emissions from transportation fuels in China. The standards, developed by the China National Institute of Standardization with the advice of iCET and the UK consultancy E4tech, and entitled *The Principles and Requirements of Greenhouse Gas Emission Assessment for Transportation Fuel Life Cycle Before Usage Stage*; and, *The Requirements of Greenhouse Gas Report and Verification For Transportation Fuel Lifecycle Before Usage Stage* have been revised by three technical drafting committees appointed by the Standardization Administration of China, and have passed a final review of 20 key standardization experts, allowing the draft standards to be officially submitted to the Standardization Administration of China for consideration at the central policy level.

Policy Recommendations

In March, 2010, iCET held a major domestic workshop on the concept of low carbon fuel regulation and policy initiatives for enacting this type of regulation in China. The workshop, attended by influential academics and industry, was also attended by the Director of International Cooperation of the Chinese National Development and Reform Commission (NDRC) Climate Change Division, Jiang Zhaoli, who offered solid support for the continuation of research and development on this important policy initiative.

The recommendations from this workshop became a major policy document drafted by iCET and the Development Research Center of the State Council of China (DRC), one of the most influential think tanks and research organizations of the Chinese government. The report is currently being promoted to high levels of government.

Major recommendations included:

1. Promote the diversification of various vehicle fuels, and furthering coordinating technological development with low lifecycle greenhouse gas emission kept in mind;
2. Support the sustainable development of environmentally sustainable biofuels, and meeting or exceeding established consumption targets;
3. Circumvent the rapid development of high carbon, coal-based liquid fuels; develop advanced, “lower carbon” coal-to-liquid fuels that can be developed commercially in times of national crisis, but do not promote them under normal conditions;
4. Establish an office in government responsible for low carbon sustainable development of automotive fuels within the nation’s functional departments, or clearly define a group that is regularly responsible for this task between the offices of related departments.
5. Establish a unified and national “Key State Laboratory for Automotive Fuel Lifecycle Research”;
6. Develop a “two-step” low carbon vehicle fuel policy mechanism;
 - Step One:** Establish an information system for reporting and verifying information about the carbon emissions and environmental sustainability China’s vehicle fuels;
 - Step Two:** Based on the information collected from several years of information reporting, establish a default value for China’s GHG emissions.
7. Establish a reasonable mandatory target for the use of low carbon automotive fuel in China that will achieve a lower target average fuel carbon intensity. The expanded version of the report is available at the iCET website in English and Chinese.

Fuel Consumption Analysis

Vehicles that use less fuel are better for the environment. Indeed, it is widely recognized that fuel economy standards have been, by far, the most effective measure to reduce transportation energy use and GHG emissions. *iCET*'s approach to clean vehicles has been to take advantage of data that is available to report on the fuel consumption performance of individual vehicles and auto manufacturers. For data years 2006-2009, *iCET* has matched the fuel economy ratings of every model of vehicle available in China to the sales figures of each of those models to calculate the average fuel consumption values of the major automotive manufacturers in China in order to let the public, shareholders and governments around the world understand which manufacturers make the most efficient vehicles. The figure below denotes the estimated average fuel consumption of major car companies in 2009.

In addition to undertaking CAFC analysis, *iCET* has written a global fuel economy review report on behalf of the United Nations Commission on Sustainable Development. The report outlined the

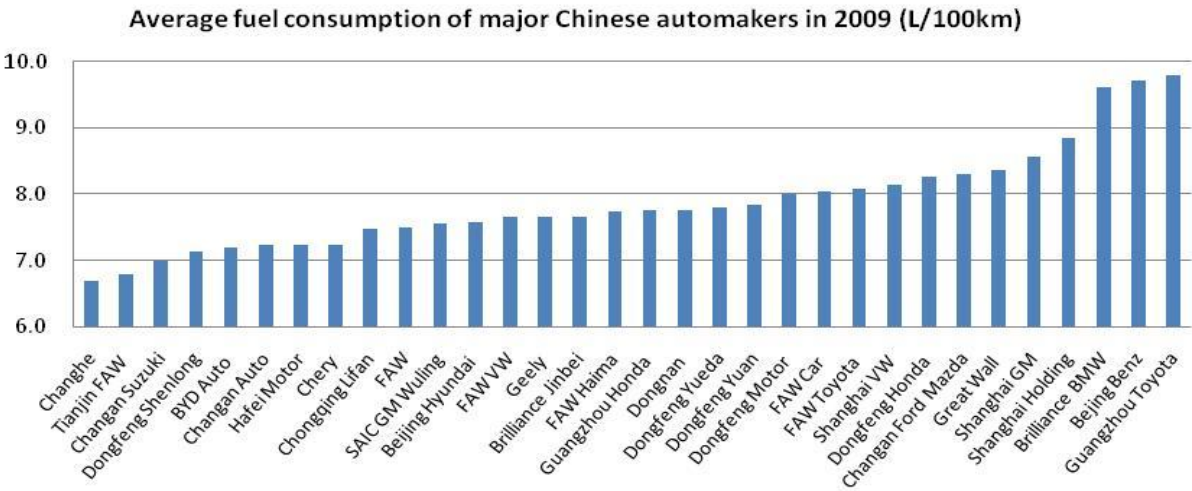
WEB LINK

***iCET* Report on Fuel Efficiency and Vehicle Emission Standards for the United Nations:**

www.un.org/esa/dsd/resources/res_pdfs/csd-19/Background-paper3-transport.pdf

fuel economy policies of nine major auto producing countries, and

recommended that with the optimistic future of electric and plug-in hybrid vehicles, that lifecycle GHG emissions become an integral part of fuel economy standards, and that methodologies for integrating grid-enabled vehicles into energy consumption standards be a priority.



Environmentally Friendly Vehicle Program

In order to identify the environmental performance of vehicles on a broader scale than just fuel consumption, iCET and the Vehicle Emission Control Center of the Ministry of Environmental Protection developed a "Green Rating" methodology for rating vehicles based on their lifecycle environmental impact.

In 2010, iCET redesigned its online rating system which allows users to search for the Green Rating of their vehicle. The database contains over 5,000 models of vehicles, and allows users to compare two different vehicles at the same time. The website also allows users to estimate GHG emissions from their vehicles over a user-specified distance.

*iCET's Green Car Rating
System Website
www.GreenCarChina.com*



In 2010, iCET also solidified a partnership with GPS-data giant, Autonavi, to develop software for smart phones to give smart phone users access to the Environmentally Friendly Vehicle rating system. The application, entitled "Minimap" has an existing user base of over 10 million users. When the EFV portion of the software is complete, iCET will be able to promote the EFV through a convenient mobile phone application.

In addition to the online rating system and software tools, iCET released the first-ever China Green Car Guide, which identified the top ten environmentally performing vehicles in ten vehicle classes. The handbook was launched in English in December 2010 at the UNFCCC Cancun COP 16 meeting.



*iCET's Green Car Mobile
Phone Application*

Electrification of Transportation

Electrification of transportation is becoming a major trend in Chinese cities. Yet little attention is being paid to ensuring that the low carbon benefits of electrification are realized. *iCET* has become a key contributor to the policy discussion on low carbon electrification in China.

After acting as record keeper of the US-China Electric Vehicles Forum in December, 2009, *iCET* was quickly recognized, and requested by the World Bank to act as contributor to a report on how the World Bank can assist in the development of electric vehicle systems in China. *iCET* assisted in the organization of a delegation from the United States to attend meetings with key officials and companies in Beijing and Shenzhen to collect information for the report, and contributed to the final report, ensuring that “low carbon” remained a key theme. Following up on this report will be a key task for *iCET* in 2011, and working with a demonstration city to maintain a low carbon electric vehicle program will be a priority. Finally, *iCET* has been given a key role as a member of both the US and China sides of the US-China Clean

Energy Research Center. *iCET* will serve to ensure that “Low Carbon” remains a theme of the work this center does, and offer a channel for communication between the US and China.

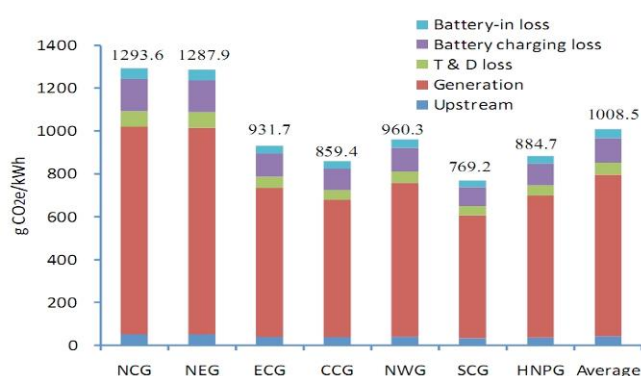
WEB LINK

iCET's Report on Electric Vehicles for the United Nations:

www.un.org/esa/dsd/resources/res_pdfs/csd-19/Background-Paper-9-China.pdf

Further to this work, *iCET* has completed a report for the United Nations Commission on Sustainable Development on the development of electric vehicles in China, where it

conducted a region-by-region analysis of the electric grids in China to conclude that the development of electric vehicles in some regions will not likely produce the GHG emission reductions originally hoped by electric vehicle proponents. Only the Southern and Central China Grid regions are likely to produce significant environmental benefits with the introduction of electric vehicles, and the grid must develop new renewable energy sources and smart grid charging methods in order to keep pace with the development of electric vehicles. The chart below highlights the lifecycle GHG emissions associated with the use of electric vehicles in 7 regional grids across China. The report has been published on the UN website.



NCG North China Grid

NEG North East Grid

ECG East China Grid

CCG Central China Grid

NWG North West Grid

SCG South China Grid

HNPG Hainan Power Grid

iCET's full lifecycle analysis of average Greenhouse Gas emissions from electricity produced by each of the regional grids in China and used by a Nissan Leaf electric vehicle. The next step of work will focus on the GHG emissions resulting from charging at different times of day, as different times of day demand different power sources to be used.

The Energy and Climate Registry

In recent years, China has committed itself to some of the most ambitious policies in the world for reducing energy consumption and carbon emissions. Ten days before the UN Climate Change Conference, the COP15, opened in Copenhagen in December of 2009, Chinese president Hu Jintao announced that China would reduce the carbon intensity of economic production by 40%-45% by 2020 from 2005 levels.

In the subsequent months, through policy announcements and the passage into law of the 12th Five Year Plan in March 2011, it has become increasingly clear how China plans to reach this goal. The 12th Five Year Plan outlines several energy-saving targets, including expanding the contribution from renewable energy to 11.4% of China's total energy consumption by 2015. China has invested in renewable

energy, public transportation, electric vehicles and set efficiency standards for vehicles, fuels, appliances and buildings. Additionally, in the summer of 2010, China's National Development and Reform Commission launched pilot low-carbon development zones in eight cities (Tianjin, Chongqing, Shenzhen, Xiamen, Hangzhou, Nanchang, Guiyang and Baoding) and five provinces (Guangdong, Liaoning,

Hubei, Shaanxi and Yunnan) that focus on low-carbon transportation and building GHG inventories among other low-carbon development initiatives.

However, while these policies are bold and admirable, and set China apart as a leader in climate change mitigation, implementation remains a concern.

Satisfactory implementation of these policies can only be gauged using reliable and transparent data gathering methods. Data accuracy, methodologies that reflect best practices and are in line with international standards and measures to insure consistency must be central features of the implementation strategy. Building capacity to empower independent, non-governmental actors to monitor progress is essential to the ultimate goal of satisfactory implementation of China's climate and energy policies.

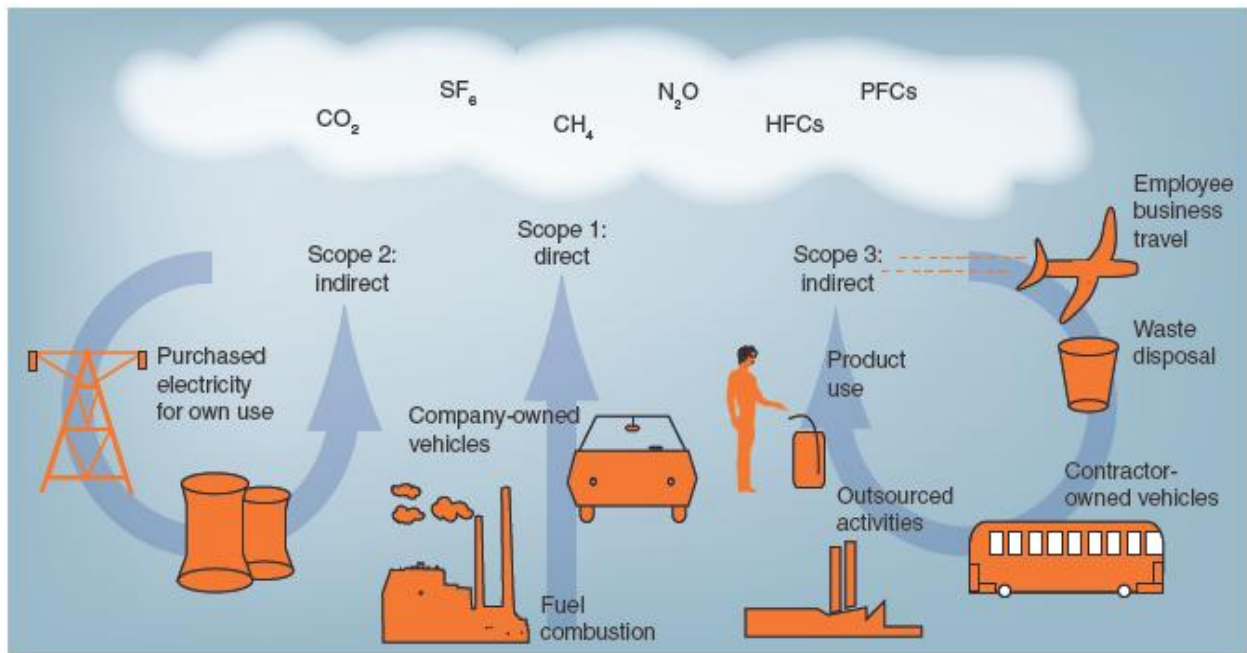
To build capacity for measuring, reporting and verification iCET worked with partners to develop the Energy and Climate Registry – the first platform for measuring, reporting and verification of GHG emission that is tailor made for China.



中国能效与碳注册
ENERGY AND CLIMATE REGISTRY

To build capacity for measuring, reporting and verification, iCET worked with partners to develop the Energy and Climate Registry – the first platform for measuring, reporting and verification of GHG emission that is tailor made for China.

How to Measure Emissions: Any corporation can generate a GHG inventory using the ECR. Each entity's emissions can be divided into three Scopes:

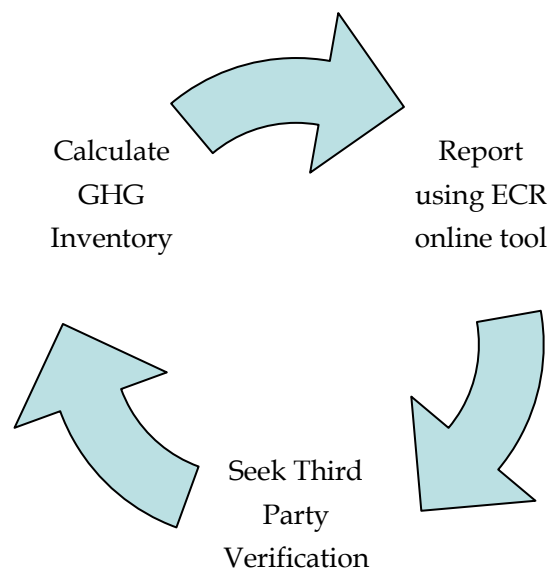


The ECR helps companies measure their corporate footprint from Scope 1 and Scope 2 emission sources. (Source: WRI.)



iCET with Robyn Camp from The Climate Registry and James Boyd, California's Energy Commissioner in Beijing.

THE REPORTING PROCESS



Three components make up the ECR reporting platform

The **ECR Reporting Protocol**, which is a “users’ guide” and includes all information needed to report emissions. The reporting protocol is an extensive user guide, which provides all the information necessary to report an organization’s greenhouse gas emissions and energy intensity data. The Protocol provides background on the ECR and introduces the goals of the project as well as the benefits of joining ECR and the membership levels and detailed instructions for how to determine what should be in the inventory report, how to quantify emissions and how to generate a public report.

The **ECR Reporting Software** includes all calculation procedures and provides a user friendly interface to enter your energy consumption data. iCET worked with The Climate Registry and software company, Misys, to develop a Chinese-language reporting and calculation software tool that is adopted from the CRIS application used by The Climate Registry. Members receive usernames and passwords upon joining the ECR.

The **ECR Verification Program** links entities to accredited third party verification bodies which provide the reporter with confirmation that the GHG inventory report is accurate and thorough. To generate carbon credits for trading, verification is mandatory.

The ECR GHG reporting software is available in English and Chinese.

The screenshot displays the 'Entity Details' page for 'Campeo' in the CRIS system. The form includes fields for Program (TCR), Verification Body (Zoswitch Verification Services), Entity Name (Campeo), Description (Provider of camping equipment including tents, coolers and sleeping materials using only the highest quality, lightweight), Entity Type (Commercial & Industrial), and Entity Active From Date (March 23, 2010). It also has sections for Physical Address, Mailing Address, and Public Relations Address, each with options for Private or Public status. A 'Related Items' sidebar on the right lists links for Facilities, Contacts, Emissions Data, Additional Information, Documents, Submissions, and Address History.

The ECR Reporting Protocol 1.1



Written by The Climate Registry
Adapted by The Innovation Center for Energy and Transportation



May 2010

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The ECR Reporting Protocol is available in hard copy for members and as a PDF downloadable from our website.
www.ChinaClimateRegistry.org

ECR Membership Options

We have an exceptionally broad and flexible membership program with the idea that many membership levels will reduce barriers to joining while at the same time provide the same robust membership options that are offered by The Climate Registry. Companies can choose to report one or all six greenhouse gases, for one or all facilities, province- or nation-wide and in measurement of absolute emissions in tons or energy intensity per unit of economic output.

1. Supporting Member

A Supporting Member does NOT report its emissions. As a baseline member, Supporting Members join as a simple statement of support and affiliation with the Energy and Climate Registry.

2. Founding Member

Members who join the ECR before December 2011 are Founding Members. Founding Members have an opportunity to participate in the ECR development process by providing feedback on

the ECR Protocol and calculation software in addition to reporting emissions as a Basic, Crystal or Diamond reporter.

WEB LINK

The Energy and Climate Registry

www.ChinaClimateRegistry.org

3. Reporting Member

Members that report their GHG emissions and/or energy intensity data to the registry are called Reporting Members.

Reporting Members can join the ECR either at the Basic, Crystal or Diamond level. See the chart below for a list of requirements for each membership level. Basic level reflects a basic commitment, and Diamond is the highest commitment level.

4. Pledging Member (Transitional Reporter)

Members that are Pledging Members only publically report their emission reduction target pledge. They do not publish GHG emission reports each year. Pledging Members report their GHG emissions and commit to a GHG Reduction Target. Members are encouraged to develop their own GHG Reduction Target based on the size of their operations and their capacity to reduce energy consumption.



iCET members have presented progress reports on the ECR at several meetings hosted by The Climate Registry. Here, TCR members listen to Lucia Green-Weiskel

ECR Training

In the last year iCET has hosted a number of training sessions that provide an introduction to the ECR and demonstrate how to report emissions as well as why it is beneficial to do so. We hosted the following training sessions:

In the US: From Nov. 29th to Dec.3rd, 2010, iCET's ECR team came to Los Angeles and attended a one-week training on GHG registry at The Climate Registry (TCR). The training covered protocol development, reporting software, member service, marketing, member training as well as other related aspects. The success of TCR's operation in North America is valuable experience that iCET could transfer to China and contribute to the local development of GHG registry.

In China: In October 2010, iCET and Guangzhou Academy of Energy Testing and Inspection (GAETI) co-hosted a training session on energy and GHG management in Guangzhou. Representatives from 16 companies, as well as NGOs and academies participated.



On October 19th, 2010, iCET hosted a workshop on energy and GHG management in Guangzhou.

Online Seminar: A webinar on "Building the supply chain---a registry in China" was held in November of 2010, co-presented by The Climate Registry and iCET. Sixty potential members participated in the hour long presentation. iCET and The Climate Registry will host more similar webinars in 2011.

ECR Publications: iCET published a peer-reviewed report entitled "**Using the Energy and Climate Registry for Carbon Management in China**" (*Carbon Management* (2010) 1(1), 57-63) and a Chinese-language paper entitled "**Carbon Accounting: the basis for carbon markets,**" in *Carbon Market* co-authored by the Beijing Environmental Exchange.



From November 29th to December 3rd, 2010, iCET's ECR team came to Los Angeles and attended a one-week training on GHG registry at The Climate Registry.

US – China Collaboration on Clean Energy

iCET attends US-China Clean Energy Forum in Washington DC

On January 18-19 of 2011, iCET team members Dr. Feng An, Dr. Yufu Cheng and Lucia Green-Weiskel traveled to Washington DC to attend the US-China Strategic Forum on Clean Energy Cooperation hosted by the Brookings Institution, the China Institute for Innovation and Development Strategy and the Department of Energy. iCET also attended signing ceremonies for the US-China Clean Energy Research Center (CERC) jointly launched by the Department of Energy, China's National Energy Administration and Ministry of Science and Technology. The CERC will facilitate joint research and development on clean energy. Priority topics include building efficiency, clean coal, carbon capture and storage, and clean vehicles. iCET will play a role in the clean vehicles area under the CERC framework.

During the Washington visit, iCET met many leaders from US and Chinese state-owned energy corporations, as well as leading energy scholars and experts from US and China. Dr. Feng An also traveled to Michigan to attend the inaugural workshop of US-China CERC-Clean Vehicle.



iCET Joined the Michigan and Tsinghua team for US-China Clean Vehicle Research

September 2, 2010, Washington, D.C. - U.S. Energy Secretary Steven Chu announced that two consortia - one led by the University of Michigan and one led by the West Virginia University - will receive a total of \$25 million over the next five years under the U.S.-China Clean Energy Research Center (CERC). The funding will be matched by the grantees to provide at least \$50 million in total U.S. funding and will facilitate joint research and development of clean energy technologies by the United States and China. The University of Michigan's award will advance technologies for clean vehicles and lead a consortium that mainly includes Ohio State University, Massachusetts Institute of Technology, Sandia National Laboratories, Joint BioEnergy Institute,

Oak Ridge National Laboratories, General Motors, Ford, Toyota, Chrysler, Cummins, A123, American Electric Power, etc. The consortium will focus on vehicle electrification. The China-side will be led by Tsinghua University. iCET

proudly joined both the Michigan and Tsinghua teams and as a team member, will engage in clean vehicle policy-related research and analysis .

China-US Challenges and Opportunity

World's biggest industrial country: USA
World's largest developing country, China

Together:

- 25% of the world's population
- 33% of the world's economic output
- 33% of the world's energy consumption
- 45% of global CO₂ from fossil fuel use

Promoting LED Standards and Policy Development in China

Lighting, as one of society's major sources of energy consumption and GHG emissions worldwide, is attracting attention for its energy-saving potential. Recent developments for the high light efficacy of white Light Emitting Diode (LED) have made the possibilities for energy saving widely accepted and valued around the world. However, challenges remain for LED technology and market development.

LED markets are developing rapidly. Because LED technology depends on measuring data to improve its performance, effective testing, standards and labeling system is vital to guarantee and improve the quality of LED lighting industry in China. The standardization and labeling process must be transparent and to be developed efficiently and quickly enough to guide the development of the LED products. Education for both consumers and manufacturer is important to ensure high quality products are identified and rewarded. Vetted LED or SSL (Solid-State Lighting) products with excellent design and high energy efficiency parameters should be rewarded by

offering rebates and including them in LED eligibility lists available for both the public and private sectors. It is important to harmonize the testing procedures and international standards on LED products. In this way, LED market development will be incentivized by technology development, smart system design, customer recognition and acceptance and reliable distribution channels.

Solid State Light and LED technology (especially white LEDs) is available to use but it is still a new technology. A majority of the products in the market do not perform as claimed nor are they as cost-effective as conventional lighting. However, LED products overall can surpass a lot of traditional light sources in efficacy and quality if designed properly.

iCET continues to work with the Beijing Lighting Research Institute (BLRI), China Solid State Light Alliance and key international partners to promote LED standards and policy development in China on the items listed below:

iCET provided consultation with major stakeholder and China- and US-based organizations, such as China SSL Lighting Alliance, Beijing University Shenzhen Graduate School, Tianjin Polytechnic University, University of California-Davis's Lighting Technology Center; and some leading corporations such as Cree, Philips, Southern California Edison's Customer Technology Application Center (CTAC) and China-based manufacturers; standardization and policy development groups such as the Beijing Lighting Research Institute, China National Institute of Standardization(CNIS), National Institute of Standards & Technology (NIST), Energy Star program (USEPA and USDOE).

iCET finished the **white paper** in both languages and draft strategic roadmap and policy suggestion for the development of China SSL industries. This will help governments and manufactures set effective strategies to support and develop a strong LED industry in China.

iCET organized/co-organized and participated in **conferences and workshops** in Shenzhen, Shanghai, Hong Kong, San Diego and Las Vegas and coordinated with major LED event organizers in China and US to organize **high-level discussion panels** at international conferences on LED industries current status and future development strategies.

US-China Sub-National Collaboration

*i*CET became the first and only Chinese NGO to join the R20 regional initiative. The R20, launched by out-going California governor Arnold Schwarzenegger is an alliance of regional governments that have joined together to fight climate change through private investment in green energy. Provincial and state governments from Asia, Africa, Europe and the Americas have signed onto the agreement. *i*CET will work with Chinese central and local governments to promote R20 partnership in China.



*i*CET's President and Executive Director Dr. Feng An signed the R20 agreement with Schwarzenegger.



Dr. Feng An was with the Chairman of IPCC Dr. Rajendra K. Pachauri, the Chancellor of UC Davis Linda P.B. Katehi and Executive Director of the Climate Registry Denise Sheehan at the R20 ceremony.

CONFERENCES AND EVENTS HIGHLIGHTS

iCET attended the 16th Conference of Parties (COP16) in Cancun

iCET was granted observer status by the UNFCCC and successfully hosted three events in UN Climate Change Conference in Cancun, Mexico in December 2010.

iCET hosted two press conferences. The first was the official launch of the China Green Car Rating System. The second was held with The Climate Registry, Misys and China Beijing Environment Exchange – an update on the Energy and Climate Registry. Besides, iCET held a side event focusing on “Building Carbon Inventories in China,” and was joined on stage by Secretary of California EPA, Linda Adams and Ms. Huang Wenhong, Director of the Division of International Cooperation at the

Department of Climate Change of China’s National Development and Reform Commission. The panel event covered top-down and bottom-up approaches to low carbon development in China including clean technology, sub-national cooperation, especially through the R20, and finally platforms for measuring, reporting and verifying emissions reductions. Mr. Christophe Nuttall from UNDP, who has been asked by Schwarzenegger to serve as Executive Director of R20 joined Margret Kim, director of California’s China Program to discuss last month’s launch of the R20 and iCET’s role as the only Chinese organization to sign the R20 charter.



iCET members take the stage at the Green Car Rating press conference in Cancun.



iCET booth in Cancun COP 16



iCET with Robyn Camp from TCR and Robert Barthelmes of software company Misys after the ECR press conference in Cancun at the COP16.

iCET held China Low Carbon Fuel Policy Recommendation Workshop

On March 29, 2010, iCET held “China Low Carbon Fuel Policy Recommendation Workshop” at the Presidential Hotel in Beijing. The workshop invited around 40 relevant stakeholders from governments, research institutes, academic organizations, multinational and domestic enterprises, as well

as project sponsors, which included National Development and Reform Commission, Ministry of Environmental Protection, State Forestry

Administration, Development Research Center of the State Council, Energy Research Institute, China National Institute of Standardization, China Automotive Technology & Research Center, Tsinghua University, Chinese Academy of Sciences, CNPC, Sinopec, CNOOC, General Motors, UK Strategic Program Fund, and Energy Foundation.

The workshop started with reporting project progress and achievements. Project partners - iCET, Development Research Center of the State Council and China National Institute of Standardization presented the project situation to audiences. Participants then discussed in groups on low carbon fuel policy development and how those policies would impact the fuel industry. The closing speech was given by Zhaoli, Jiang, the Director of International Cooperation of Climate Change Dept under NDRC. He appealed that it was significant that governments, research institutes, enterprises

and NGOs made joint efforts to promote low carbon policies in order to mitigate the transportation climate change.

iCET organized China NDRC delegation to attend Governors’ Global Climate Summit

From November 15-16, iCET organized a delegation from Climate Department, of National Development and Reform Commission

(NDRC) to attend the Governor’s Global Climate Summit 2010 in Los Angeles. Leaders from nations around the world, US governments, research institutes, enterprises, NGOs made presentations at the

summit. Mr. Guangsheng GAO, Director general of Department of Climate Change, NDRC, Ms. Wenhua HUANG, Director of International Collaboration and President Dr. Feng An and Vice President Dr. Yufu Cheng from iCET gave speeches and attended panel discussions. NDRC and iCET delegation also met California governor Arnold Schwarzenegger, and representatives from California Environment Protection Agency, California Energy Commission, UNDP, Canada governments and US State Department, etc, to discuss the collaboration between China and international partners on low carbon development, as well as future cooperation on R20. After the meeting, from November 16th - 19th, NDRC and iCET delegation also visited some US based world well-known organizations, including Stanford University, Applied Materials, HP, APPLE, Climate Work Foundation, and UC Davis, UCLA, Southern California Edison, Etc.



iCET honored at Clinton Global Initiative Annual Meeting for excellence in transportation work in China

On September 21 - 23, The Innovation Center for Energy and Transportation (*iCET*) was recognized during the energy and environment keynote session of the Clinton Global Initiative's 2010 Annual Meeting in New York. Dr. Feng An, President and Executive Director, represented *iCET* on stage in front of hundreds of NGO leaders, heads of state, and corporate executives, for an announcement about *iCET*'s commitment to develop low-carbon transportation policies in China with an emphasis

on electric vehicle development and low-carbon fuel standards. *iCET* joined the Clinton Global Initiative (CGI) in April of 2010 as an invited member. As such, *iCET* is expected to develop and follow-through on a "commitment," using CGI's vast network of NGOs, businesses, and governments to implement its plan of action. *iCET* made two commitments at the CGI meeting. The first was to introduce best practices in low-carbon transportation policy to China by developing and promoting carbon emission calculation methodologies; training government officials in what low carbon transportation means; working with corporations to evaluate their products' greenhouse gas (GHG) intensities (and helping to find ways to decrease those intensities); introducing policies such as more aggressive fuel economy standards and low carbon fuel standards in China; and generating and promoting information about "green" vehicles

for the Chinese government and consumers. The second commitment was to build capacity in China for GHG measuring, reporting and verification (MRV) by establishing the Energy and Climate Registry (ECR), and by recruiting multinational and domestic companies to join and "test drive" the ECR. The ECR will set clear, internationally-based standards for corporate based inventory reporting in China. It will provide a full protocol and software to register

in Chinese and will encourage companies to set reduction targets. *iCET* is working with local NGOs and government partners in China to implement these commitments in China.



iCET held a side event at Tianjin UN Climate Change Conference

On October 5, 2010, as UN Climate Change Conference entered the second day in Tianjin, China, *iCET* held a side event focusing on the role of the transportation sector in achieving China's energy intensity reduction target. It was highlighted how China's vehicle fleet is growing at a rapid pace (2500 additional cars per day in Beijing alone), surpassing the US in becoming the largest car market in the world. The potential impacts of biofuels, electric vehicles and other low carbon vehicle/fuel technologies were explored. The Green Car Online Rating System, a system developed by *iCET*, was presented as an efficient way to label the environmental impacts of different cars. A roadmap for promoting electric vehicles in China was also presented.

***i*CET as a Strategic Partner to Beijing Earth Temple Forum 2010**

On June 5, “Earth Temple Forum 2010” was convened by the Beijing Municipal Finance Bureau, Beijing Dongcheng District People's Government, Energy Research Institute of NDRC, and China Beijing Environment Exchange. The theme, “Green Finance and Sustainable Development was about how to save energy and reduce emissions by making use of market mechanisms and finance. President and Executive director Dr. Feng An delivered a speech at the panel entitled “China VER Market: Carbon Intensity and Enterprises Voluntary Emission Reduction”, discussing the role of China’s carbon market in facilitating a controllable carbon emission intensity index, how China’s carbon market might be different than other countries’, and how China’s carbon market should relate to the international one.

***i*CET supported the 2010 International Low Carbon Development Forum**

The 2010 International Low Carbon Development Forum (Shenzhen) was convened by the Shenzhen Municipal Government and Peking University in Shenzhen. The major goal of this event was to provide a platform for dialogue, strategizing, and collaboration among governments, academics, and industries that are key players in the current low-carbon development

movement. *i*CET supported the event, actively organized four panel discussions, and served as moderators and speakers: Low Carbon Transportation - Fuels and Infrastructure, Low-Carbon LED Lighting – Lighting Standards and Policy, Capacity Building on Quantifying GHG Emission: China Climate Action Partnership, and Land Use Credit for Low-Carbon Development.



***i*CET offered training on Low Carbon Transportation for Chinese NGOs**

September 29, 2010, *i*CET was invited to attend the Chinese NGOs’ Climate Change Workshop. The workshop was jointly organized by Institute for Environment and Development (IED), Oxfam, The Chinese Civil Climate Change Action Network (CCAN), and China's Civil Society on Climate Change Group. The purpose of the workshop is to strengthen the knowledge base and capacity of NGOs to work on climate change science, and discover the work direction and action plan to adapt and mitigate climate change. *i*CET’s Low Carbon Transportation Research Analyst Mr. Dong Ma gave speech entitled “Low Carbon Transportation and Green Life”, sharing experiences of mitigating climate change in transportation sector with Chinese NGOs.

***i*CET signed MOU with China Beijing Environment Exchange**

In July 2010, *i*CET signed an MOU with China Beijing Environment Exchange (CBEEX) in Beijing. This strategic cooperation agreement

will lead to the promotion of clean, low carbon, energy efficiency policy research and trading both inside and outside of China. It will also enhance the communication and dialogue between *i*CET and CBEEX. *i*CET would

like to be the think-tank to promote the low carbon development, while CBEEX would serve as a carbon trade platform for *i*CET low carbon projects.

*i*CET Monthly News Briefing

In 2010, *i*CET prepared and distributed the 7th Volume of the monthly Newsletter, which is sent out monthly to thousands of international professionals and subscribers. Since *i*CET was established, the monthly Newsletter has continued to keep its readers up to date on the most recent energy, auto/transportation, climate change and low carbon development information in China. The newsletter is distributed by e-mail and also published online.



*i*CET's Communication Director, Lucia Green-Weiskel blogs regularly on China's energy and climate for the Huffington Post.

*i*CET in the News

In the past year, *i*CET has appeared many times in the international and Chinese media. In addition to our reports for the United Nations and peer-reviewed publications, *i*CET is frequently quoted in *The New York Times*, *Washington Post*, *China Daily*, *Xinhua* news agency, the *People's Daily*, the *South China Morning Post* and has contributed articles to Sohu.com, ChinaDialogue.net, *The Nation*, *Green Leap Forward*, *E! Magazine*, *Grist* and *Alternet*. *i*CET's Communication Director, Lucia Green-Weiskel blogs regularly on China's energy and climate for the Huffington Post.

S T A F F M E M B E R S



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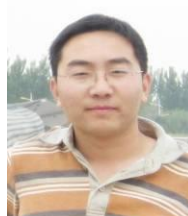
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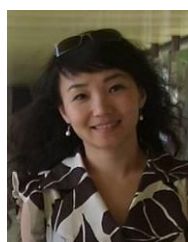
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2010 FINANCIAL HIGHLIGHTS

Balance Sheet (in USD)

Assets (\$)	1-Jan-10	31-Dec-10
Cash	305,685.12	273,180.57
Other Current Asset	135,204.09	150,062.45
Fixed Assets	4,479.81	3,261.96
Total	445,369.02	426,504.98

Liabilities & Net Assets (\$)	1-Jan-10	31-Dec-10
Liabilities		
Total Current Liabilities	45,181.83	5,102.40
Long-term Liabilities	0.00	0.00
Total Liabilities	45,181.83	5,102.40

Net Assets		
Non-restrictive Assets	400,187.19	421,402.57
Restrictive Assets	0.00	0.00
Total Net Assets	400,187.19	421,402.57

Total Liabilities & Net Assets	445,369.02	426,504.98
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Ministry of Environmental Protection (China)
UN Sustainable Development Commission
World Bank

Project Partners and Supporters

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California Environmental Protection Agency and Air Resources Board (USA)
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International Council for Clean Transportation (USA)
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The Climate Registry (USA)
Southern California Edison (USA)
Environmental Defense Fund (USA)
Ecolinx Foundation (USA)
New York University (USA)
University of California Riverside (USA)
The Stern Review on the Economics of Climate Change (UK)
E4tech Ltd. (UK)
Development Research Center, State Council (China)
National Institute of Standardization, Standardization Administration (China)
Vehicle Emission Control Center, Ministry of Environmental Protection (China)
Department of Climate Change, NDRC, Energy Research Institute (China)
Automotive Technology and Research Center (China)
Global Environment Institute (China)
Tsinghua University (China)