# The Innovation Center for Energy and Transportation (*i*CET) 2008 Annual Report





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## *i*CET Contact Info



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## About *i*CET

The Innovation Center for Energy and Transportation (iCET) is an independent non-profit, professional organization registered in Beijing, China and Los Angeles, USA. iCET's core mission is to mitigate climate change through the promotion of clean, low carbon and energy efficient policies and technologies in China.

### **Our History**

iCET's predecessor, the Auto Project on Energy and Climate Change (APECC), was established by Dr. Feng An in Beijing in May 2004, with the goals of promoting improved fuel efficiency for the automotive fleet, raising awareness of clean vehicle policies and technologies, and reducing greenhouse gas emissions arising from the transportation sector. APECC was hosted by the Global Environmental Institute.

On August 6, 2006, APECC completed registration to become an independent, non-profit Chinese NGO with the name, Innovation Center for Energy and Transportation (iCET). On February 21, 2008, iCET successfully registered in California, and on October 20, 2008 iCET obtained non-profit, tax-exempt status in the United States.

#### **Our Approach**

iCET is a solutions-oriented organization 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 use in China, and introducing and transferring innovative best practices into China.

#### **Providing Expert Advice**

Collaborating with Chinese and international experts to provide advice and suggestions to governments and business communities on low carbon development and innovations; and, conducting in-depth analysis and policy studies on improving energy efficiencies and reducing carbon emissions.

#### Planning and Coordination

Organizing international conferences and workshops, and 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 creating demand for green consumer products in China.



## Letter from the Executive Director

Dear Friends and Supporters,

Thank you for reading this, our  $2^{nd}$  Annual Report! 2008 was indeed a busy and productive year at *i*CET, and I'm excited to share our progress with you.

In the short two-and-half years since its inception, I am proud to say that *i*CET has made a name for itself as a provider of innovative solutions in international climate change circles. In the past year alone, *i*CET made great impacts on several fronts, including in low carbon fuel policy development, fuel economy standards, an online Green Car rating system, and in climate change capacity-building. *i*CET also organized two high-level international conferences on low carbon fuel policies, climate change and carbon accounting.

In the coming year, we will build upon our success and expand further into energy efficiency and climate change areas. *i*CET has recently started a program to promote national LED lighting standards and policy development. On the issue of climate change, *i*CET, in partnership with The Climate Registry based in California, is introducing the first-ever online energy and carbon registration system in China. The registry, called The "Energy and Climate Registry" (ECR), will be an important first step toward producing measurable, verifiable and reportable information by multinational and state owned enterprises, as well as governmental and local entities. The ECR will also help China achieve its highly lauded energy efficiency targets.

*i*CET's mission is to bring international best practices in low carbon and climate change mitigation policy to China in an effective and practical way. 2009 will be an

exciting year for *i*CET as we transform and embark on broader programs, tackling challenges in the following three key areas: Low Carbon Transportation, Climate Change and Energy Efficiency. China and the world need innovative energy and transportation solutions to solve the unprecedented global crisis presented by climate change. Working together, I strongly believe that we can make a difference!

Sincerely yours,

Fenga

Feng An Executive Director, *i*CET





## 2008 Project Highlights

Our current projects focus on three areas: Low Carbon Transportation, Energy Efficiency, and Climate Change. Brief descriptions of current key projects are given below:

#### Low Carbon Transportation Program

In 2008, *i*CET amalgamated all its transportation-related projects into a Low Carbon Transportation Program. These projects include low carbon transportation fuel policies and standards development, ground-breaking research on vehicle fuel economy in China, and the innovative Environmentally Friendly Vehicle online rating system. As the world increasingly focuses on reducing greenhouse gas emissions, transportation is receiving significant attention. *i*CET is working to bring together low carbon fuel policies and low carbon emission vehicle ideas from around the globe to offer a comprehensive set of policy suggestions to help China achieve real increases in transportation energy efficiency and reductions in greenhouse gas emissions.

#### Low Carbon Fuel Policy and Standards:

In September 2007, with major support from the UK Foreign and Commonwealth Office Strategic Programme Fund, The Energy Foundation's China Sustainable Energy Program and the Hewlett Foundation, *i*CET initiated a major project to develop low carbon fuel policy recommendations for China. Project partners include the China National Institute of Standardization (CNIS), the Development Research Center of the State Council of the PRC (DRC), the Vehicle Emission Control Center of the Ministry of Environmental Protection (VECC-MEP) and E4tech, a leading UK consulting company in low carbon transportation. 2008 saw key progress in this project. We have introduced the concept of low carbon fuel standards and policy to China, held training sessions and major conferences, organized international and domestic experts related to every aspect of fuel development in China, and begun to engage industry in evaluating the lifecycle carbon emissions of the fuels they produce.



Excellent progress has been made in terms of developing standardized methodologies for measuring the life cycle GHG emissions of transport fuels in China. Completion of the project background report has informed the project partners on the general situation of fuels and transport energy policy in China. Ongoing cooperation between CNIS and E4tech has led to the identification of five sample fuel chains to be analyzed in this project, including corn and cassava bioethanol, waste oil biodiesel, direct and indirect coal to liquid fuels, and possibly others. We work constantly with



other fuel life cycle analysis (LCA) researchers and other relevant experts in China to confirm these fuel chain analyses, and they will be used to inform the development of the standardized LCA methodology and associated technical manuals and training programs. All this work has led to the exciting result that the Standardization Administration of China (SAC) has decided to allow the Fuel Carbon LCA methodology to enter the "National Standard" development cycle, and two standards, Fuel Carbon Emissions Requirements and Audit Guidelines and Fuel Carbon Emission Lifecycle Assessment Principles and Requirements are now on the 2009-2010 work plan for the SAC. Once CNIS has completed the discussion draft, it will enter the National Standards development process.

The timeline below outlines the details of the progress *i*CET has made in the LCFS project:

iCET's Low Carbon Fuel team published a Chinese language article entitled "Building a Low Carbon Fuel Standard – Advancing Alternative Fuel Development," in the May 2008 edition of the Chinese publication, Environmental Protection. (Cheng Yufu, Kang Liping, Fang Fang and An Feng. 2008. Jianli ditan ranyou biaozhun – Tuidong tidai ranyou. Huanjing Baohu. (9) 23-24).

iCET successfully organized and hosted the Second International Workshop on Low Carbon Fuels and Climate Change in China in April 2008, as well as a panel on Low Carbon Fuel Policy Development in China & Abroad at the 4th World Biofuels Symposium, held at Tsinghua University in October 2008. The details of these highly productive workshops are included below in the Conferences and Outreach section. iCET also held a very successful study tour with CNIS and SAC to London, UK to study the world-leading Renewable Transport Fuel Obligation (RTFO) policy there.

UK - RTFO Study Trip: The RTFO policy study trip to London, UK, had the objective of learning about the inception, design, implementation and evaluation of the RTFO, so as to make informed recommendations on low carbon fuel policy in China, based on the operational experience of the UK. The trip, which took place from

February 22 - 29, 2009, focused on a series of meetings that introduced participants to the organizations and individuals responsible for the RTFO and upcoming policy development, including the Low Carbon Vehicle Partnership, E4tech (UK) Fuels Ltd., the Renewable Agency, the Department for Transport, the Department of Energy and Climate Change,



Aaron Berry, Head of Carbon and Sustainability at the UK Renewable Fuels Agency meets with representatives from iCET, the SAC and CNIS. - 6 -



British Petroleum, the British Standardisation Institution, and the World Wildlife Fund. Participants included Dr. Chen Liang from CNIS, Ms Yu Qian from the SAC, and Mr. Robert Earley, Dr. Cheng Yufu and Dr. Feng An from *i*CET.

The UK's RTFO is the only operational policy in the world that gives companies an opportunity to measure and report on the GHG intensity of their transportation fuels (in the UK's case, biofuels only), based on a standard, government-provided methodology. Policy in China that aims to reduce GHG emissions in the lifecycle of transport fuels will also require an LCA methodology as well as GHG policy and regulation; therefore, during this study trip, *i*CET, the SAC and CNIS became more fully informed about the success of the RTFO, as well as upcoming policies at the EU-level including the Renewable Energy Directive, which will require fuels all over the EU to reduce their carbon emissions while meeting important sustainability criteria. This experience will certainly help our project partners make informed recommendations on low carbon fuel policies as our project continues.



iCET Executive Director, Dr. An Feng and Low Carbon Transportation Program Manager, Robert Earley meet with Greg Archer, Director of the UK's Low Carbon Vehicle Partnership.

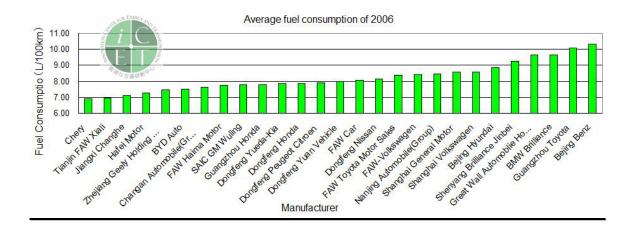
#### Agricultural Vehicle Fuel Consumption Standards:

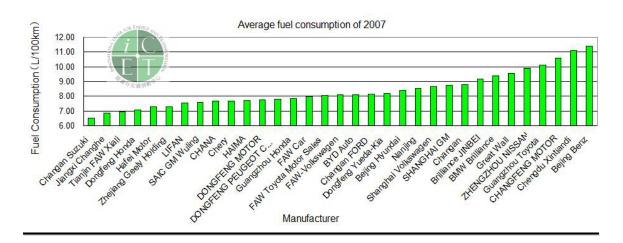
With support from the Energy Foundation, and working closely with the Development and Research Center of Agricultural Vehicles, *i*CET provided expert advice for the establishment of the Chinese rural vehicle fuel economy standard. On January 21, 2008, the "Three Wheeled Vehicle Fuel Consumption Limit and Measurement Method" and "Low-speed Vehicle Fuel Consumption Limit and Measurement Method" were officially approved by the Standardization Administration of China (SAC) and the General Administration of Quality Supervision, Inspection and Quarantine of the P.R.C. (AQSIQ). These important standards were implemented as of June 1, 2008.



#### Passenger Vehicle Fuel Economy Standards:

Since Phase II of the Chinese fuel economy standard was implemented in 2008, *i*CET has continuously monitored and collected fuel consumption data published by the NDRC and some manufactures in order to complete the "*Structure and Impacts of Fuel Economy Standards for Passenger Cars in China*" report. In this report, *i*CET calculated the major domestic car manufacturers' fleet average fuel consumption as well as the Chinese domestic automobile fleet average fuel economy (see the figure below). We have also calculated the fleet average fuel economy of imported vehicle models. Based on our calculation, while almost all domestically-made vehicle models have met the fuel economy standards, the 2007 average fuel consumption of imported vehicles in China is about 11.0 L/100-km, 36% more than the national average, and a large number of imported vehicle models fail to meet Chinese Phase II fuel economy standards.



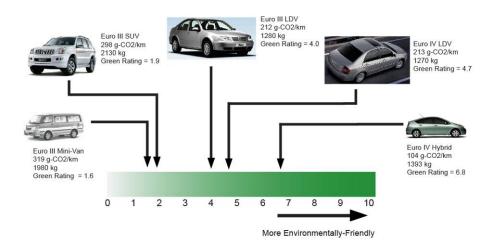


*iCET's analysis of the major domestic car manufacturers' fleet average fuel consumption in 2006 and 2007 using government-sourced data.* 



#### The Environmentally Friendly Vehicle (EFV) Rating System:

As part of our commitment to promoting environmentally-friendly vehicles in China, iCET, in collaboration with the Vehicle Emission Control Center at the Ministry of Environmental Protection (VECC-MEP), has led the effort to develop the first-ever "Green Car" rating system in China. The rating system is designed to give manufacturers, consumers, and policy makers an accurate and scientific method of differentiating vehicles based on their total environmental impact.



*iCET-VECC's Environmental Friendly Vehicle Rating System is China's first and only environmental ranking of vehicles.* 

In 2008, *i*CET developed an EFV online rating system. The website allows users to search for the Green Ratings of every passenger vehicle model available in China. It also lists the top ten ranking Green Rated vehicles as calculated by the EFV methodology. In the future, consumers may be able to calculate the life-cycle carbon dioxide emissions of their own vehicles based on their driving habits through the online system. This website, which is planned to be made available to the public in 2009, will play an important role in raising awareness of the life-cycle environmental impacts of vehicles in China.

#### iCET Annual Report 2008



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iCET created its own Environmental Friendly Vehicle online rating system.

## Energy Efficiency Program

**Energy efficiency** means using less energy to provide the same or better level of energy service. At *i*CET, we are working with partners to promote energy efficiency in the transportation (fuel economy standards) and lighting sectors (LED – Light Emitting Diode – light standards and related policies). Our progress on fuel economy standards are discussed in the Low Carbon Transportation Section, so this section focuses on our new project on LED lighting standards and related policies.

With the fast pace of economic development in China, national energy demand is growing rapidly. Power shortages have led to blackouts in the past and have disrupted both economic development as well as the lives of ordinary citizens. The majority of China's electricity is generated using dirty coal technology and it cannot keep pace with the soaring energy demand. The pressures from energy shortage and environmental degradation (including GHG emission) have put the energy efficiency at the top of the list of important national policies. President Hu Jintao stated that "Promoting the saving of energy and resources should be taken as a priority by the country and viewed as one of the basic principles the government should follow in the future."



As one major source of energy consumption, the lighting sector has a lot of room for improvement of its energy efficiency. The Chinese government plans to subsidize the sales of 150 million energy-saving lamps (mostly Compact Fluorescent Bulbs) over the next 3 years. At the same time, LED products have attracted great attention and become the next target product for the government's promotion of energy efficient lighting products. Application of LED products is expanding rapidly since recent R&D breakthroughs have made high intensity LEDs available in a wide range of colors, most notably, white.

As the LED industry grows, there is a strong need for accurate specifications of LED characteristics. Large discrepancies in product quality are being reported among LED manufacturers and users, thus seriously jeopardizing the reputation of LED technologies.

With support from The Energy Foundation, *i*CET is working with the Beijing Lighting Research Institute on the project entitled: **Promoting LED Standards and Policy Development in China: Building a First-class and Competitive Chinese LED Industry.** The targets of the project are: market research and analysis on LED lighting products and global trends; establishing an International Working Group and Technical Advisory Committee; setting strategies and economic incentives to promote LED R&D and application; and, a white paper and recommendations.



*iCET Executive Director, Dr. Feng An and Program Director, Dr. Yufu Cheng visited Dr. Enboa Wu's LED lighting laboratory of Applied Science and Technology Research Institute Company Limited (ASTRI) in Hong Kong.* 

## Climate Change Program

#### The Energy and Climate Registry (ECR):

Last Spring, the US Energy Information Agency forecast that China's rising coal demand will lead global carbon emissions with an increase of over 50 percent between 2005 and 2030. This bleak prediction stands in distressing contrast to targets set forth by climate leaders around the world to reduce global emissions by 50 percent by 2050. A significant development during the Bali round of UN climate negotiations is that the developing countries, for the very first time pledged to support mitigating GHG emissions in a "measurable, reportable, verifiable" manner, under the condition



that developing countries will receive sufficient technical, investment and know-how support from developed countries.

In response to this pledge, and with support from the Rockefeller Brothers Fund and the Hewlett Foundation, iCET has developed a concrete and practical tool to help China meet its stated goal. *i*CET is working in partnership with The Climate Registry

of the United States (TCR) and key Chinese governmental agencies to develop an online energy and carbon registration system to monitor energy use and greenhouse gas (GHG) emissions from various domestic and multinational corporations as well as local economic development areas. In 2009, iCET will develop a pilot registry based in Guangdong province with an intent of The Climate Registry eventually expanding the registry to a national scale.



The goal of this project is to produce reliable, consistent and verifiable information on energy consumption and carbon emissions on the corporation and local municipality levels. Under this system, which we are calling the **Energy and Climate Registry** (ECR), companies operating in China will be able to measure their energy use and GHG emissions. Multinational and domestic corporations will be encouraged to voluntarily sign up and report input parameters to calculate energy consumption and produce GHG emission inventories, which will be verified by certified third parties. With this information public and standardized, enterprises can begin to do the necessary work to reduce their emissions and overall energy use.

This online registration system and related methodologies will be largely adopted from the California-based Climate Registry (www.climateregistry.org). The Climate Registry grew from a small initiative in the state of California and has now expanded to become an organization that includes members from many of the US and Mexican states, tribes, and Canadian provinces across North America. The Climate Registry establishes GHG emission reporting standards that are credible, accurate and consistent to be used by all industries across their membership. The Registry is a voluntary tool to measure carbon emissions, although eventually legislation in the United States might make carbon reduction mandatory and thereby further increase the relevance of The Climate Registry's tool.

In a future best-case scenario, national carbon and energy registration systems in China and elsewhere in the world would be the first step of a consumption- and emissions-reduction mission, facilitating international trade practices that could track and eventually price products according to their carbon footprint. Energy efficiency would be monitored and significantly improved and sound policy would be drawn up to enforce compliance with these progressive goals. But none of this can be done effectively without verifiable and accurate GHG accounting methodologies and inventories.



An ECR based in Guangdong province and then on a national scale is a first and crucial step toward tackling the formidable task of reducing overall energy consumption and GHG emission in China and beginning to work effectively toward meeting a goal of halving global GHG emissions by 2050.

Specific goals of the registry include:

1. Creating a common standard for measuring and monitoring carbon emissions and energy usage, and promoting full and public disclosure of GHG emissions and energy consumption;

2. Publicizing and rewarding energy-efficient enterprises and creating a benchmark for high-performance operations;

3. Interpreting and localizing the carbon accounting methodology, establishing a Chinese expert committee to review and make suggestions on applying the methodology in the Chinese context;

4. Demonstrating and publicizing best practices of energy efficiency improvement and GHG emission reduction measures carried out by enterprises;

5. Organizing workshops to train the public and stakeholders on supply-chain energy and carbon management, green innovation and technology transfer; and,

6. Raising awareness for the need to reduce GHG emissions and energy consumption in China and the rest of the world.

## **Conferences and Outreach**

### Conferences

<u>**2**<sup>nd</sup> International Workshop on Low Carbon Fuels and Climate Change in China</u> On April 18, 2008, *i*CET hosted the **Second International Workshop on Low Carbon Fuels and Climate Change in China** in Beijing. This landmark workshop was supported by the National Development and Reform Commission (NDRC) – Office of National Climate Change Coordination Committee, Ministry of Environmental Protection Vehicle Emission Control Center (VECC-MEP), the China National Institute of Standardization (CNIS), and E4tech (UK) Ltd., and sponsored by the British Foreign and Commonwealth Office (FCO) Strategic Programme Fund (SPF), the China Sustainable Energy Program of the Energy Foundation, and the California Environmental Protection Agency (Cal-EPA).

The opening panel of the Second International Workshop on Low Carbon Fuels and Climate Change in China



The conference attendees included representatives from major relevant Chinese governmental agencies, project partners, and an international advisory committee including those who are doing research and development of the LCFS in the European Union and California, as well as relevant researchers, industries and other stakeholders.

Building from the success of the first conference held in September 2007, as well as developments and progress on the low carbon fuel standard project, the second conference took a slightly different approach with the goals of sharing the experiences of the project partners as well as international experience from both policy and business perspectives. The most important goal of the conference was to decide on action items for the project to move forward.

Key speakers included **Dr. Feng An**, Executive Director of *i*CET, who gave a welcoming speech; **Dr. Yaodong Shi**, Deputy Director of the Industrial Economics



Research Department, Development Research Center, State Council of China, who gave a presentation named "the Macro-Background of Low Carbon Fuel Policy in China"; **Ms Linda Adams**, Cal-EPA Secretary, who delivered California Governor Arnold Schwarzenegger's personal greeting to the conference; and, **Mr. Tokao Onada** from the International Energy Agency, presenting on China's energy demand and CO<sub>2</sub> emission projections.



Ms Linda Adams, Secretary of the California Environmental Protection Agency (Cal-EPA), delivered opening remarks.

## The International Roundtable on Consumption-Based Nation-State Carbon Accounting

On April 19, 2008, *i*CET organized *The International Roundtable on Consumption-Based Nation-State Carbon Accounting* at the Kerry Center Hotel in Beijing's Central Business District. The co-organizers of this workshop were the China Energy Research Society, Chinese Renewable Energy Industries Association, and the Sussex Energy Group/Tyndall Centre for Climate Change Research.

"Who owns China's carbon?," a recent study by Dr. Wang Tao and Jim Watson of University of Sussex and Tyndall Center for Climate Change Research indicates that China currently exports as much as 23% of its total CO<sub>2</sub> emissions to developed countries such as the EU and the United States. This roundtable-style conference gathered relevant officials, researchers, and industries to start a strategic and high-level dialogue on a consumption-based carbon accounting system. Such a system could provide a breakthrough in creating a fairer and more engaging carbon accounting system that would be effective in mitigating carbon emissions on a global level, especially if the emissions-based international treaties cannot live up to their billing. The goal of this workshop was to explore longer-term alternatives in designing carbon policies and international treaties that are consumption-based and transcend nation-state boundaries.



On the opening panel, **Dr. Wang Tao** from the Sussex University Energy Group and the Tyndall Centre for Climate Change, gave a presentation on "Who owns China's Carbon?" **Dr. Glen Peters**, from the Norwegian University of Science and Technology, who is dedicated to researching carbon footprints, presented, "Is International Trade Important for Global Emissions?" and focused on the economic interconnectedness of countries. Experts and officials from China and abroad joined in this topic discussion.



iCET staff and friends at The International Roundtable on Consumption-Based Nation-State Carbon Accounting

#### <u>Tsinghua University – 4<sup>th</sup> World Biofuels Symposium</u>

On October 21, 2009, *i*CET, in conjunction with the main conference organizers, Tsinghua University, COFCO, BBI, and the Minnesota Department of Agriculture, convened a panel entitled *Low Carbon Fuel Policy Development in China & Abroad* at *the 4th World Biofuels Symposium* held in Beijing. It was the third time *i*CET had the opportunity to update the Chinese low carbon fuel community on policy developments on this topic.

For more conference-related information, including presentations, please visit our website: http://www.icet.org.cn/cn/Programs/Conferences/ wwwroot/index.html

#### **Other Conference Activities**

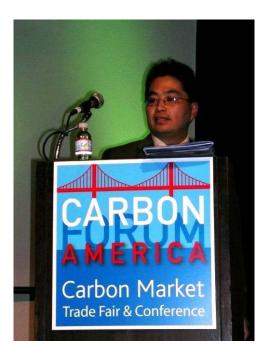
Besides the conferences organized by *i*CET, we also attended some high-level academic and professional conferences and training sessions in order to extend our knowledge and develop our relationships, or give speeches on *i*CET projects. Dr. An Feng, Dr. Cheng Yufu, and Ms. Lucia Green-Weiskel were invited to attend the California Governors' Global Climate Summit (Nov 18-19 in California), joined a panel discussion on "Climate Action on Transportation and Mobility", and spoke with Governor Arnold Schwarzenegger on global climate change.





*Ms.* Lucia Green-Weiskel and Dr. Cheng Yufu met with Governor Arnold Schwarzenegger on global climate change policies on Governors' Global Climate Summit, Nov.18<sup>th</sup> -19<sup>th</sup>, 2008. Lucia Green-Weiskel was interviewed by the radio show, This American Life about the summit.

Dr. Yufu Cheng gave a speech entitled "Low Carbon Fuels Standards, Fuel Economy and Transport CDM, Leading the Way towards GHG Emission Reduction in China" at the Carbon Forum America held Feb. 26 – 27, 2008 in San Francisco, USA; and Dr. Feng An was invited to give speeches on clean fuel, fuel economy and green cars in China, India, Europe, and United States. Lucia Green-Weiskel gave a talk on "Carbon Registries: Leading the way towards GHG emission reduction in China" at the Global Carbon Trading conference in New York, USA on Jan. 14, 2009.







#### GOVERNOR ARNOLD SCHWARZENEGGER

#### April 18, 2008

#### China Low Carbon Conference Series 2008

It is a privilege to send my greetings to everyone gathered for this year's conference.

I applaud your dedication to exploring how China can develop a low carbon fuel standard to help fight global warming. Climate change presents several challenges and our future depends on us taking action now. We must find ways to protect our environment for future generations, while continuing to grow our economy.

I am excited to work with China on this pressing issue. As we stated in last year's Memorandum of Understanding, California is committed to providing China with technical and political support to develop a low carbon fuel standard. By diversifying our transportation fuels, we can reduce our dependence on oil and begin to rollback the effects of global warming.

On behalf of all Californians, I send my best wishes for a productive conference and every future success.

Sincerely, Showenge X

Arnold Schwarzenegger

STATE CAPITOL · SACRAMENTO, CALIFORNIA 9581+ · (916) ++5-2841

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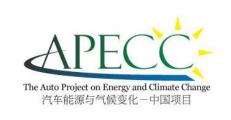


### Outreach

#### The Auto Project on Energy and Climate Change (APECC)

In 2008, *i*CET prepared and distributed the 5<sup>th</sup> Volume of the APECC Newsletter, which is sent out monthly to hundreds of international subscribers. This year, we increased our information resources to more than ten media sources and extensively expanded its readership amongst officials, industries, researchers and students. Since *i*CET was established, the APECC Newsletter has continued to keep its readers up to date on the most recent energy, environment, auto/transportation, oil/natural gas and climate change information in China. The newsletter is distributed by e-mail and also published online.

For more information about APECC project, please visit the website at: http://www.autoproject.org.cn/index.html or subscribe by sending email to info@icet.org.cn.



MONTHLY NEWS BRIEFING
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<a href="http://www.autoproject.org.cn">AUTO/ENERGY/POLLUTION</a>
<a href="http://www.autoproject.org.cn">Volume V, Issue 12, December , 2008</a>
<a href="http://www.autoproject.org.cn">Click here</a>

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China must cut energy consumption per unit of GDP by 7% annually Fuel tax reform an energy milestone Renewable energy to power city ahead Nuclear cooperation prospects unclear Energy: Coal price may rise 10% in 2009 Cold coal Fueling the need AUTOMOBILE AND TRANSPORTATION

Alternative wheels China, US team up for green vehicles China's vehicle imports rise 40% in first 10 months China to run 30,000 'clean' vehicles by 2012



#### Public Education and awareness building

In order to improve public awareness of environmental protection and global climate change issues, *i*CET has accepted interviews from large media outlets including The New York Times, the Los Angeles Times, China Central Television (CCTV), Thompson-Reuters, Xinhua News Agency, the Science and Technology Daily, CNN and the radio show, "This American Life" to present our research results and offer our expert opinions.

Dr. Feng An was interviewed by Yahoo on clean energy and green transportation. http://liveinterview.cn.yahoo.com/ 08-04-/838/27teh.html



#### *i*CET<u>Website</u>

The *i*CET website (www.icet.org.cn) has grown into a valuable source of information not only about *i*CET activities and progress, but also for news, reports, and publications related to *i*CET's work. We regularly update *i*CET work and project progress.





## *i*CET Staff

#### Dr. Feng An, Executive Director



Dr. An is a world-renowned expert in innovative and low carbon technologies, vehicle fuel economy standards, and climate change policies. Dr. An founded the Auto Project on Energy and Climate Change (APECC) in 2004 in Beijing and the Innovation Center for Energy and Transportation (*i*CET) in Beijing in 2006. In 2008, under Dr. An's guidance, *i*CET successfully registered as a non-profit 503(c)(3) organization in California, USA.

Since its inception, Dr. An has directed all of *i*CET's programs

and led its growth in three major areas: low carbon transportation, climate change and energy efficiency. He has worked in numerous national and international-level institutions and founded several California-based companies to solve energy and transportation problems in the United States and China. Dr. An received his Ph.D. from the University of Michigan in 1992, and his M.S. from Tsinghua University in Beijing in 1986, both in Applied Physics. Dr. An has authored numerous publications and been frequently invited as a speaker at major international conferences.

#### Dr. Yufu Cheng, Program Director

Dr. Cheng is active in promoting green innovative technology and related policies in both China and USA. He is currently working with colleagues at *i*CET and international partners on low carbon transportation fuels, the Energy and Carbon Registry, and LED lighting standards and policies development. Dr. Cheng brings 14 years of climate change education and working experience to



*i*CET's programs and has furthermore sought advice from global environmental leaders, including former U.S. Vice President AI Gore, California Governor Arnold Schwarzenegger and pioneer climate scientist Dr. David Keeling on strategies to combat climate change. Before joining *i*CET, Dr. Cheng conducted climate change research in China, the U.S., Mexico, and the Arctic. He served as a committee member of the Sino-Ecologists Association Overseas from 2004 to 2006 while working as an adjunct professor of Biology at California State University, Los Angeles. Dr. Cheng has been interviewed by major national and international media and is a frequent speaker at international energy and climate change conferences. Dr. Cheng received his Ph.D. from the University of California, Davis in 2003 in Environmental Sciences, Master's Degree in Ecology from the Chinese Academy of Forestry in 1998 and Bachelor Degree in Biological Sciences from Anhui Normal University in1995.



#### Fang Fang, General Manager, Beijing Office

Ms Fang Fang obtained her Master's degree in Environmental and Development Economics from the University of Oslo in Norway in 2007. She is responsible for program development, office management and budget. She has extensive experience in maintaining public relations and managing projects, having previously worked as a project officer in the International Department of the Ministry of Finance, P. R. China.





Robert Earley, Low Carbon Transportation Program Manager Mr. Earley, with a Master's degree in Environmental Studies from the University of Waterloo in Canada, specializes in the planning and evaluation of environmental policies in Canada and China, particularly in the areas of low carbon and environmentally responsible fuel policy, arctic resource development, heavy oil development as well as in climate change policy.

Lucia Green-Weiskel, **Project Officer, Climate Change Program** Ms Green-Weiskel has led the development of the climate change program at *i*CET and has served as the manager of the ECR project. She holds a BA in International Relations from Hampshire College and an M.Sc. in Asian Politics from the School of Oriental and African Studies, University of London. She speaks at numerous conferences on China and climate change and is the author of many articles about China's environment and politics.









#### Cheng (Chandler) Wang, Research Analyst

Mr. Wang holds a Master's of Engineering degree from the Chinese Academy of Sciences. He focuses on the impacts of Fuel Economy Standards and related policy research, and is responsible for ongoing development of the EFV online rating system.

#### Liping (Ellie) Kang, Research Analyst

Ms Kang holds a Master's degree in Bio-engineering from the China Agricultural University, and is involved in biofuel technologies and low carbon fuel policies. She has published several academic papers and patents in this field, and is now working on *i*CET's Low Carbon Fuel Standard and Policy project.





#### Karen He, Administrative Assistant

Ms Karen He holds a BA in English from Beijing Foreign Studies University. She is the administrative assistant *i*CET's Beijing office, and also serves as a translator to translate many of *i*CET's materials from Chinese into English.

#### Su-Anne Huang, Intern, Fall 2008.

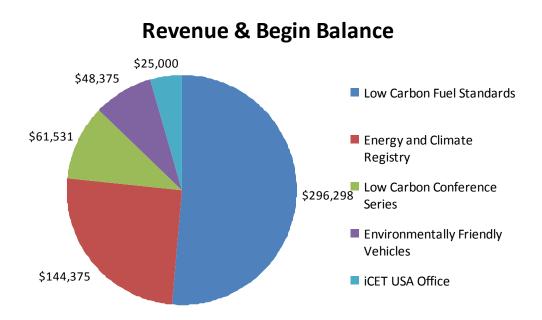
She is pursuing Environmental Studies and Psychology at New York University, and researching a thesis on how to ameliorate denial towards climate change and instigate individual and collective pro-environmental behavior change. She works on the Transportation and Recycling committee at NYU's Sustainability Task Force and on NYU's Climate Action Plan to reduce the university's greenhouse gas emissions 30% by 2017.





## *i*CET 2008 Financial Highlights

Condensed statement for the year ended December 31, 2008 (US \$)						
Program	Revenue & Begin Balance	Expense	Balance			
Low Carbon Fuel Standards						
	\$296,298.00	\$260,173.00	\$36,125.00			
Energy and Climate Registry						
	\$144,375.00	\$35,021.00	\$109,354.00			
Low Carbon Conference Series 2008						
	\$61,531.00	\$61,531.00	\$0.00			
Environmentally Friendly Vehicles						
	\$48,375.00	\$33,081.00	\$15,294.00			
<i>i</i> CET_USA Office						
	\$25,000.00	\$25,000.00	\$0.00			
Total	\$575,579	\$414,806	\$160,773			





## *i*CET Partners

## Sponsors

The Hewlett Foundation The Energy Foundation, China Sustainable Energy Program The United Kingdom Strategic Program Fund **Rockefeller Brothers Fund** The Blue Moon Fund Ministry of Environmental Protection The Stern Review on the Economics of Climate Change

## **Project Partners**

Development Research Center, (DRC), State Council of the People's Republic of China China National Institute of Standardization, Standardization Administration of China (CNIS-SAC) Vehicle Emission Control Center, State Environmental Protection Administration (VECC-SEPA) The Climate Registry (USA) E4tech (UK) Ltd. California EPA and California Air Resources Board (CARB)







THE WILLIAM AND FLORA HEWLETT FOUNDATION

## **Acknowledgements**

Department of Climate Change, National Development and Reform Commission Energy Research Institue (ERI) China Automotive Technology and Research Center (CATARC) International Council for Clean Transportation (ICCT) Global Environment Institute (GEI) Business for Social Responsibility (BSR) Foreign & United States Environmental Protection Agency (US EPA) Commonwealth Office **Environmental Defense Fund** Pew Center on Global Climate Change **Tsinghua University EcoLinx Foundation** Rockefeller University of California Riverside Brothers Fund Philanthropy for an Interdependent World Natural Resources Defense Council (NRDC) **UNDP** Climate Change Program