INNOVATION CENTER FOR ENERGY AND TRANSPORTATION
能源与交通创新中心

ANNUAL REPORT

2014

Table of Contents

LETTER FROM THE EXECUTIVE DIRECTOR

Dear Friends and Supporters,

China and its policy-makers continue to face poignant problems of increasing oil dependency, worsening air quality and growing GHG emissions. Following the "Air Pollution Prevention and Control Action Plan" in 2013, the year 2014 marked a series of aggressive national campaigns to dramatically strengthen vehicle fuel consumption standards and promote new energy vehicles. As *i*CET celebrates its ninth year, we are constantly reminded of the timeliness of our effort in strengthening international collaboration and decision-making in the areas of climate change and air quality in China, and are determined to work together to capitalize on the recent momentum of local support to fight these global environmental, economic and social crises.

This past year, *i*CET has provided Chinese business, government, and industry decision-makers with innovative solutions to improving China's air quality and curbing global GHG emissions. Some of our highlights include:

- In *i*CET's updated annual China Green Car ranking, we collaborated with the China Vehicle Emissions Control Center (under MEP) to create a real-data based "smog index" that captures the health and environmental impact of vehicles' tail-pipe emissions - gaining much traction from local policy-makers, auto manufacturers and global advocates such as the UNEP;
- In *i*CET's Annual Corporate Fuel Consumption Report, we continued to track fuel economy performance of various auto manufacturers, and highlighted challenges and opportunities faced by automakers in achieving national fuel economy standards. We encouraged policy makers to create market-based methods for accelerating clean and new energy vehicles commercialization, and started working with local cities for promoting a China-tailored zero emissions vehicle credits program;
- Our China Climate Registry, the first non-profit carbon management platform in China, has contributed to the development of regional carbon registration systems and attracted many new users;
- Our US-China Clean Tech Center (UCCTC) has fostered bilateral collaboration and alliances to accelerate the adoption of new clean technologies in China. Through sector-specific exchanges, dialogues and workshops, the UCCTC addresses the myriad of business, legal, and political issues impacting US-China clean technology transfer and creates export opportunities for U.S. companies in China's leading clean tech markets.

Despite the progress we have achieved, there is still much work to be done to solidify China's sustainable urbanization and economic growth. Your strong continued support in our work in 2015 will have a profound and lasting impact of helping China increase its sustainable production and consumption capacity, strengthen the credibility and transparency of its regulatory policies, help local businesses and governments with cutting-edge technologies, and pave the way for sustainable progress all across the developing world.

It is your support to *i*CET that has contributed to a cleaner world. And yet, we operate in two starkly different realities: as some of our staff experiences terrible air quality from our Beijing office and others in our LA office are reminded of the impactful results of regulatory and technological innovations on cleaner air, our role as an independent think-tank serving local decision-makers at all levels has never been more crucial and rewarding. Thank you!

Sincerely yours,

Dr. Feng An

President and Executive Director

MISSION AND CORE STRENGTHS

iCET....Innovating for a Cleaner World

The Innovation Center for Energy and Transportation (*i*CET), a leading think tank in the areas of clean transportation, carbon management, and clean technology development, is an independent non-profit organization registered in Beijing and California. *i*CET's mission is to strengthen international collaboration and provide decision makers at all levels with the urgently needed innovative solutions to solve the energy, environment, and climate crises that the world faces today.

iCET's Core Strengths

Independent * Practical * Innovative

Over the years, *i*CET has carved out a unique reputation as a leader in China's climate and sustainable development policies. We recognize the urgency of the sustainability problem, focusing on solutions for China. We are committed to the values and principles of innovation, sound scientific research, independence, practicality and integrity. *i*CET's work falls primarily in the following four categories:

Identifying and Introducing International Best Practices

*i*CET identifies international best practices on sustainable development and climate change, assesses their suitability for use in China, and transfers innovative best practices into China.

Providing Expert Advice and Capacity Building

*i*CET provides expert advice on low carbon and sustainable development, conducts in-depth analysis and policy studies on improving energy efficiency and reducing emissions, and delivers capacity building programs on GHG and sustainability management. *i*CET 's passionate and highly-trained staff often publish and speak in both technical and policy areas.

Planning and Coordination

*i*CET organizes international conferences and workshops, and facilitates 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

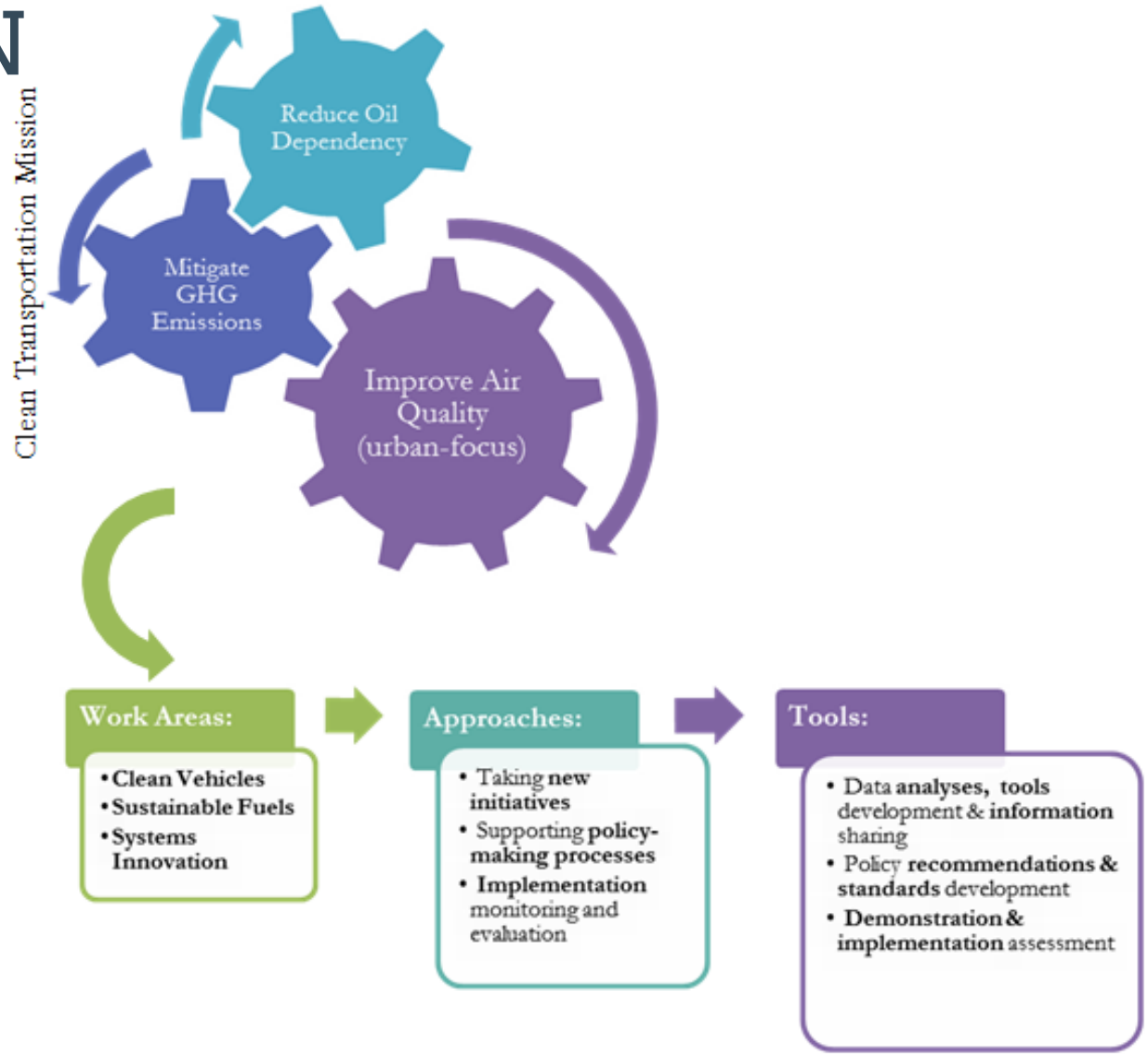
*i*CET uses public media to educate the public (for example through our Green Car Rating program and various policy briefings), promote environmental consciousness, and create demand for green consumer products in China.

CLEAN TRANSPORTATION

Program Mission: The Clean Transportation Program (CTP) mission is to dramatically reduce oil dependence, mitigate GHG emissions, and improve urban air quality through clean on-road transportation in China.

*i*CET develops innovative approaches and tools for advancing clean transportation, engages multi-stakeholders to achieve our shared vision, and combines international best practices with sound scientific analyses suited to local conditions. Our three-fold missions and subsequent key work areas, approaches and tolls are as follows:

The transportation team operates from Beijing since its formation in 2004 and is collaborating with local stakeholders from the government, industry and third sectors across the country and beyond, advancing short and long terms cleaner transport solutions integration. *i*CET has increased its collaboration with local implementers and policy-designers during 2014, and plans to continue doing so to increase the impacts of its work and its scalability potential.



Clean Transportation Program 2014 Work Summary

	Projects' Type and Titles	Areas			Approaches			Level	
		Clean Vehicles	Sustainable fuels	Systems Innovation	Data/ Tools	Policy /Standards	Implem' Plan	National	Local
Taking new initiatives [20% of *i*CET's capacity]									
1	Evaluating California's Zero-Emission Vehicle (ZEV) Credits and Trading Mechanism and its Potential Suitability for China: study report , local stakeholders engagement workshops			√		√			√
2	Developing City Transportation Emission Database and Calculator to Support Urban Transportation Planning: Potential collaborator engagement			√	√				√
Supporting policy-making processes [30% of *i*CET's capacity]									
3	Fuel economy standards: One-off analysis report during Phase IV draft revisions	√				√		√	
4	EU sustainable Biofuel Development Mechanism and its Implications for China: study report, ongoing support of standards design, global network exposure to China's biofuel progress*		√			√		√	
Monitoring and evaluation of policy implementation [50% of *i*CET's capacity]									
5	Green Car China System: 2014 annual analysis, workshop, media channels distribution, education pilot, report and booklet *	√			√	√		√	
6	China Annual Corporate Average Fuel Consumption (CAFC): 2014 analysis, workshop, media channels distribution, report and articles*	√				√	√	√	

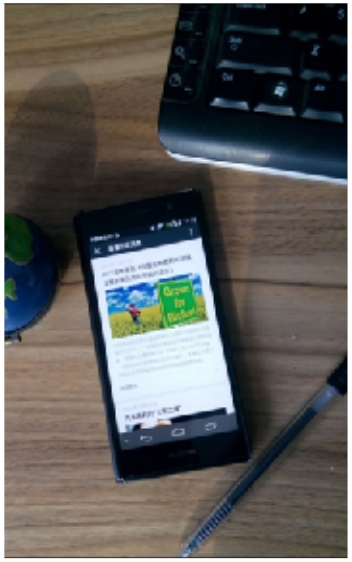
On-going projects from previous years.
Note: the above numbering is not representative of *i*CET's priorities.

Clean Transportation Key Communication Channels

Our work is promoted through broad social network including our 62,127 members Weibo blog and WeChat account.

Greencarchina.org enables free and easy access to China's Green Car annual ranking, GHG and air pollution, car CO2 life-cycle emissions comparisons, and more information in support of sustainable vehicle purchase choices. *i*CET LinkedIn is the Clean Transport Team's core international knowledge distribution channel.

*i*CET expanded its communication methods to include China Green Car education, with bold images to attract public attention and express our missions in a simple and memorable way. We also publish articles and conduct radio interviews to influence mobility communications.



Clean Vehicles

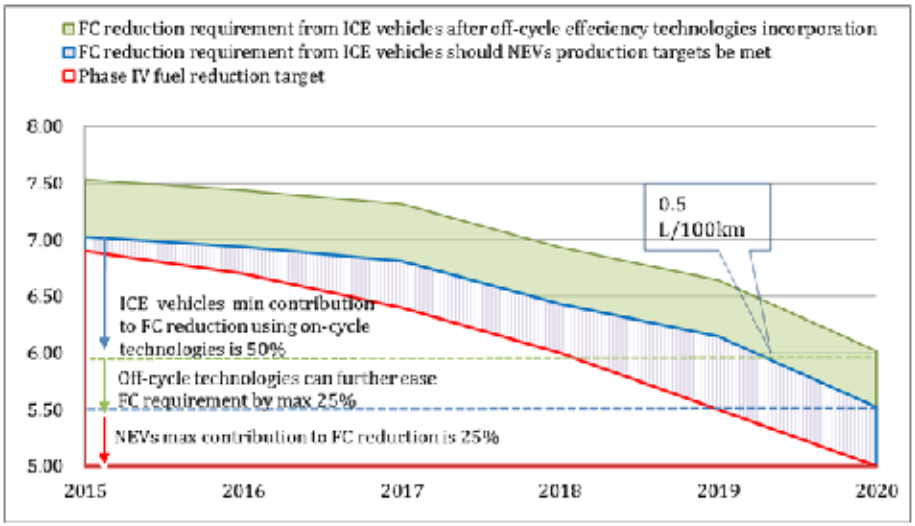
China's main transportation growth is from the private on-road transport sector, which grew by 16% last year, adding over 13 million new cars to China's roads despite urban license plate restrictions and high fees. Since urban transport accounts for as much as 30% of city PM2.5, and in light of increased interests in improving urban air quality, *i*CET has focused its work on the following fronts:

Government - we continued our private vehicle standards effectiveness monitoring analyses to advise decision makers on fuel consumption standards and its implementation development; this year we've added an analysis on the impact of new energy vehicles (NEVs) on corporate vehicle fuel consumption calling for a market-based mechanism and called for revisions to the standard management draft which were all implemented in the final version (published on October 14).

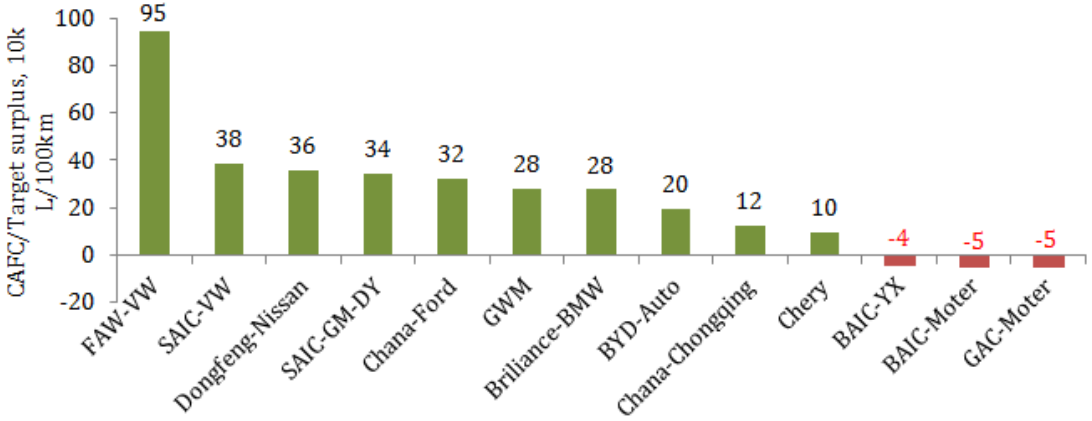
Consumers - this year we re-branded our Environmentally Friendly Vehicle (EFV) system as China Green Car (CGC). As with every year, we made sure all vehicle models are in the system and are available for consumers to compare (life-cycle energy use and emissions). This year we expanded our outreach beyond national users by gaining the support of the UNEP and introducing CGC ranking via our new global social media (blogs, LinkedIn). We have deepened our engagement with consumers going beyond media platforms into the education system: we piloted our first CGC class for kids, building on the scientific claim that children are best positioned to influence sustainable consumption.

Automakers – in this year's annual corporate average fuel consumption (CAFC) analysis, we highlighted best and least performing auto manufacturers, witnessed proactive engagement from corporations during the report review round, and enjoyed high corporate participation rate in the following multi-stakeholder workshop discussion. In this year's vehicle China Green Car ranking release and panel discussion, auto-manufacturers attended and raised issues related to government management and industry capacities. All of these efforts are aimed to spur the commercial introduction of cleaner cars in the coming years.

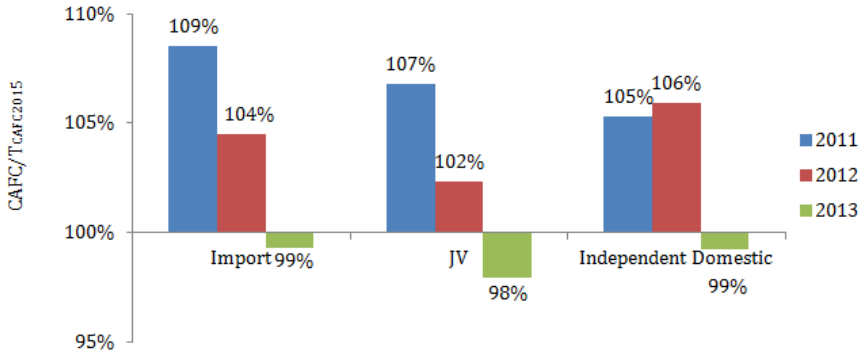
China Fuel Consumption Reduction Pathways: NEVs and off-cycle technologies can contribute to the reduction requirement by 50% at best estimates; Policy-makers' quantifications and clarifications of these energy-saving and new-energy vehicle technologies credits are crucial for ensuring effective market responses.



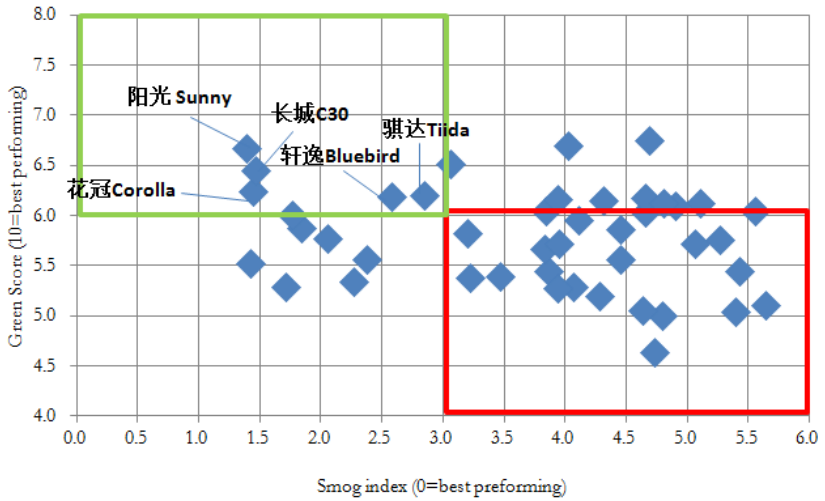
2013 CAFC 10 Top performing manufacturers and 3 worst manufacturers are highlighted below; This year has seen impressive improvements, however clear management, credible reporting, and verification methods need to kick-in for ensuring the standards effectiveness.



Corporate actual annual fuel consumption in relation to Phase III target annual requirement (CAFC/ TCAFC2015) has shown improvements across all three major types of manufacturers; We would expect more of importing brands and suggest to strengthen the capacities of independent domestic manufacturers.



Green Score and Smog Index of China's Top 50 sales; Only 5 of the 50 top selling vehicles of 2013 are performing well on both the green score (life-cycle health and environment impacts) and smog index (comparative tailpipe emissions resulted health impacts).



2014 Best green score by car segment; We recognize you have your own preferences for car type; therefore we bring to you a better-performing model by segment. Please consider the following top-performing vehicles for reducing your health and environment impact towards improving our air quality, our children's future and China's socio-economic stability.

Note: GR=Green Score; SI=Smog Index

Sustainable Fuels

As vehicle fuels (both gasoline and diesel) are responsible for 60% of oil consumption and CO2 emissions, as well as 70% of China's annual oil demand increase, *i*CET has dedicated much of its work to curb conventional fuel demand by:

- **Continuously shaping the "Low Carbon Fuel" institutional framework** in China since 2007; this year we've participated in numerous government-led low-carbon fuels workshops including all biofuel standard including the annual 2014 summary, 2015 work plan introduction, and the review of six draft NB/T standards.
- **Introducing international best practices and concepts** to China's sustainable fuels stakeholders; this year we've introduced the EU-Renewable Energy Directive and Fuel Quality Directive experiences and practices, as well as advancing the development of sustainable low-carbon alternative fuel production and certification.
- **Sharing China's experiences and knowledge** with the global sustainable fuels community; this year we have been invited to present China's biofuel and bioenergy development at international conferences abroad. There is increasing interest in learning more about the challenges faced by Chinese stakeholders and strategies guiding regulatory efforts in China.

*i*CET's Global and National Network for Promoting Sustainable Fuels and Enhancing Collaboration:

*i*CET team contributed to China's 4th Bio-liquid Fuel Committee Meeting held on October 23-24th, 2014 in Shandong.

*i*CET Clean Transportation Project Manager, Liping Kang, communicated with experts on the EBTP meeting on October 4th, 2014 in Brussels..

*i*CET presented on China International Biomass Conference and Expo on US -bioenergy markets on 17th September, 2014 in Beijing.

*i*CET presented on Ethanol Demostration Summit for Guang Dong Province on May 29, ,2014 in Guangzhou.

Systems Innovation

As the targets and direction of air quality improvements have been announced at the national level, such as the Air Pollution Prevention and Control Action Plan (Sep 2013) and New Guideline for Advancing the Commercialization of New Energy Vehicles (July 2014), local level implementation design and management is underway. *i*CET has advocated for the following best-practices in collaboration with city-level stakeholders:

- **Advocating for local market-based regulation in promotion of NEV commercialization:** under the encouragement of several of our Chinese city partners such as Shenzhen DRC and Beijing government affiliated stakeholders, we composed an evaluation of the California ZEV-Credits program. The evaluation was comprised of quantitative analyses, stakeholders' interviews and China-tailored design recommendations and was presented at multiple workshops in cities including Shenzhen, Chongqing and Beijing. Next year we hope to continue our efforts in new cities and advance the in-depth design of a China-tailored program.
- **Promoting multi-stakeholder collaboration for the establishment of an online available China city transportation emissions calculator:** we introduced our concept to multiple partners and engaged with a Ministry of Transportation research institute as well as other NGOs for joining our unique strengths towards the development of an integrated low-emission city planning transport support toolkit. Next year we hope to achieve initial deliverables that would advance the development of the tools and engage more local players.

Systems innovation promotion – zero-emissions vehicles credits trading concept introduction to various stakeholders in China:

*i*CET's founder and president, Dr. An Feng, among the distinguished keynote speakers.

*i*CET's Clean Transportation Program Director, Maya Ben Dror, presented *i*CET's ZEV-Credits evaluation and suggestions for a China-tailored program.

Dr. An Feng spoke at the "Electric Vehicle Technologies and Practical Promotion" workshop organized by the Shenzhen Low-Carbon Development Foundation and BYD on June 10th, 2014 in Shenzhen.

Dr. An presented *i*CET's ZEV credits program work to EV industry and government stakeholders at the IET conference on October 18th, 2014 in Chongqing

Clean Transportation Research Publications in 2014

Report: 2014 Green Car China Annual Report (June 2014)

China's MEP joined forces with *i*CET on marketing and improving this year's China Green Car (previously named EFV) report. Vehicle emissions of about 90% of China's model year 2013 vehicles are based on Type Approval tests rather than on China's emissions standard targets. Furthermore, a ranking of China's Top 50 sales' vehicles was added to this year's typical nine vehicle segments (Small, Compact, Medium, Large, Luxury, SUV, SPV, Sports cars, Hybrid), and separate smog index scores were added to the traditional EFV report's green rating values to indicate vehicles' air-quality impacts.

Report: 2014 China Annual Corporate Average Fuel Consumption (CAFC) Report (August 2014)

This year's report is *i*CET's fourth annual report, which tracks China's fuel economy implementation status, trends and recommendations. This year's report is unique as it examines the first-ever corporate reported average fuel consumption recently made publicly available by MIIT, studies new energy vehicles potential contribution to auto manufacturers in meeting their limits and standards; identifies trends and implementation issues by corporate type (importing, independent domestic manufacturers etc.), and provides policy recommendations towards the new standard design and implementation.

Report: EU Sustainable Biofuel Development Mechanism and its Implications for China (November 2014)

This study is aimed at introducing Chinese stakeholders to the EU-Renewable Energy Directive and Fuel Quality Directive experiences and practices, in addition to advancing the development of sustainable low-carbon alternative fuel production and certification. Based on the current data, the study shows that China could learn from a dual management model that combines mandatory implementation of a biofuel additive index and sustainable implementation standard within its legal framework, which would meet the country's "quality" and "quantity" requirements. The study also proposed a fundamental plan to increase scalability and sustainable development for biofuel information monitoring platforms.

Report: Performance of the Chinese New Vehicle Fleet Compared to Global Fuel Economy and Fuel Consumption Standards (February 2014)

This study attempts to provide policy-makers with the tools to consider the adoption of footprint-based standards (recently adopted in the US), and evaluate the relative stringency of national standards against the EU and Japan's standards. First, this paper introduces selected global standards (namely US, EU, Japan, and China), outlines their historic development and evaluates their implementation success, and then the methodology and results are outlined.

Policy Brief: *i*CET plays a role in shaping China's fuel consumption management (November 2014)

On October 14, the awaited "Announcement on the strengthening of management methods of passenger vehicles corporate average fuel consumption" was jointly issued by the Ministry of Industry and Information Technology (MIIT), the National Development and Reform Commission (NDRC), the Ministry of Commerce (Mofcom), the Customs Administration, and AQSIQ. The announced management methods include revisions to the initial draft published earlier in May, in line with *i*CET's major comments. This policy brief highlights policy revisions and their importance.

Policy Brief: New Energy Vehicles Receiving National Re-Affirmation: Will Innovative Market Creation Approaches be the Next Big Thing? (September 2014)

The State Council issued a new guideline for advancing the commercialization of New Energy Vehicles (NEV), laying out an extensive list of objectives to achieve by 2020. These objectives include vehicle sales as well as infrastructure and recycling targets, providing back-wind to industries that complement clean-vehicle production and sales. The announcement also calls for innovative approaches to help motivate production and consumption and re-affirms government support of NEV development and commercialization in the world's largest auto market. This policy brief evaluates China's NEV development and its challenges.

Policy Brief: New Energy Vehicles - Calculation Methods for Electric Vehicle Subsidies 2016-2020 (December 2014)

China's two Phase IV standard (entering into force in 2016) drafts "Fuel consumption limits for passenger cars" (GB 19578-2014) and "Fuel consumption evaluation methods and indicators for passenger cars" (GB27999-2014), were approved by the National Standards Committee on December 22nd 2014 and announced officially on January 21st in Beijing. This briefing will provide our English readers with some of the event highlights.

Policy Brief: New Energy Vehicles Commercialization Plan: Regional Pressures, Small Vehicles Performance and a National Transferability Example (November 2014)

Following the State Council's new guideline for advancing the commercialization of New Energy Vehicles (NEV), MIIT and six other ministries have jointly published the list of passenger NEV models eligible for purchase tax exemption, representing 84% of NEVs produced. Not surprisingly, October saw a sharp increase of 24 times the production volume compared to the same month in the previous year. Adding color to the predictions of NEV development in China, local cities and provinces published NEV development status and targets for 2015. This briefing covers policy updates and shares interesting insights.

Policy Brief: Is China's fuel economy gearing toward enforcement? (May 2014)

On May 5th, the Ministry of Industry and Information Technology (MIIT), which governs fuel economy implementation for passenger cars, published the list of auto manufacturers' average corporate fuel consumption scores for the year 2013. The list introduces average fuel consumption data provided directly by the submitting companies (totaling 104), as well as a list of 7 manufacturers that failed to submit their corporate average fuel consumption data as required. The announcement is aimed at increasing transparency towards this year's 106% average requirement from the 2015 target of 6.9L/100km.

Report: Evaluating California's Zero-Emission Vehicle (ZEV) Credits and Trading Mechanism and its Potential Suitability for China (November 2014)

The report introduces the innovative California ZEV-Credits program and evaluates its effectiveness through a case study of the world's leading electric automaker Tesla Motors, expert interviews, quantitative impact assessments, and extensive meta-analysis. The report has demonstrated the capacity building the ZEV credits program provides for small manufacturers in a fast evolving and highly dominated market place. As identified by national and local key stakeholders, a similar scheme tailored for China may advance local technology solutions and vehicle standard implementation, and be linked to broader emissions trading platforms.

Clean Transportation Workshops in 2014

Sino-US Clean Transportation Policy and Technology Summit (December 10, 2014 / Beijing)

*i*CET co-organized the "Sino-US Clean Transportation Policy and Technology Summit" jointly with the Beijing Energy Conservation and Environmental Protection Center (BEEC) and Natural Resources Defense Council (NRDC), on December 10 in Beijing. The event was supported by the Beijing Municipal Commission of Transport, Beijing Municipal Commission of Development and Reform, Beijing Municipal Science and Technology Commission, Beijing Municipal Environmental Protection Bureau, and the Embassy of the United States. *i*CET presented its recent ZEV-credits work and has called for multi-stakeholder collaboration to accelerate the commercialization of NEVs in China, suggesting a collaborative effort for advancing the design of a China-suited program. Among non-government participants were representatives from Beijing New Energy Automobile (BAIC), SinoEV, Tesla, BMW, GM and Ford.

China Low-Emissions Vehicle and Fuel Economy Stakeholders Engagement Workshop (August 15, 2014 / Beijing)

*i*CET organized the first China Low-Emissions Vehicle and Fuel Economy Stakeholders Engagement Workshop this year, with the support of the Energy Foundation, the U.K. Government Strategic Prosperity Fund, the United Nations Industrial Development Organization (UNIDO), and the United Nations Environment Programme (UNEP). Over 50 representatives attended, including representatives from China's Ministry of Industry and Information Technology (MIIT), the National Development and Reform Commission (NDRC), the China Association of Automobile Manufacturers (CAAM), international organizations, and other automobile companies attended to discuss low-carbon automobile issues. *i*CET's CAFC Annual Report was released and discussed, and the leading UK LowCVP has shared its multi-stakeholder collaboration methods and outcomes.

2014 China Green Car Press Release and Experts Panel Discussion (June 13, 2014 / Beijing)

In this workshop, *i*CET released its long-awaited 2014 China Green Car annual report. This year's report was endorsed by the United Nations Environment Program and released during their 'Sustainable Consumption Week" in China, falling in line with the UNEP sustainability theme. The press release attracted over 60 participants from government institutions, media, and the automobile sector. China's Vehicle Emissions Control Center (VECC), under the Ministry of Environmental Protection, joined forces with *i*CET on marketing and improving this year's China Green Car (previously EFV) report. A ranking of China's Top 50-selling vehicles was also added to this year's typical analysis of the nine vehicle segments (Small, Compact, Medium, Large, Luxury, SUV, SPV, Sports cars, Hybrid), and separate smog index scores were added to the traditional EFV report's green rating values to indicate vehicle air-quality impact.

CARBON MANAGEMENT SOLUTIONS

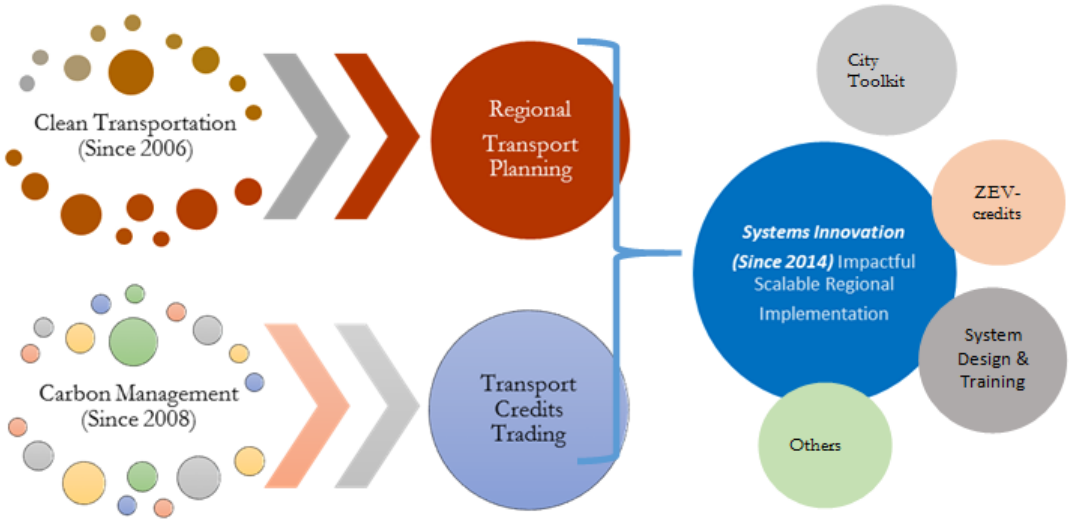
Program Mission: The Carbon Management Program's mission is to increase awareness in greenhouse gas emission data management, and provide expert carbon management services for governments, communities, business, as well as NPOs/NGOs in China.

Climate change is one of the world's greatest challenges and there is an urgent need for innovative solutions. The climate crisis not only requires the world to rapidly reform its existing business model but also foster new social responsibility from ordinary citizens. With rapid economic growth, China is making constant efforts to address energy and environmental crises. However, in order to promote climate change legislation and the establishment of a national carbon market, building robust greenhouse gas management mechanisms are necessary. *i*CET's CMS program works to meet that urgent need for capacity-building in China.

***i*CET Carbon Management Program work areas and approaches:**

Through supporting local policy-makers, the Carbon Management Program is transferring its know-how and devotes much of its capacity to advancing *i*CET's new Systems Innovation project area jointly with the Clean Transportation Program. The Systems Innovation focused work will pave the way for the creation of cutting-edge local policies and implementation schemes. *i*CET's new efforts on the local level aim to utilize its carbon management training skills and private vehicle analytical tools for promoting innovative concepts and creating effective implementation recommendations. For example, creating a comprehensive market-based mechanism to encourage and fund NEVs commercialization.

*i*CET 2015 New Systems Innovation Strategic Project Development:



China Energy and Climate Registry

www.ChinaClimateRegistry.org

From the perspective of businesses and institutions, accurate accounting and monitoring of their emissions and energy use is the first and most fundamental step in emissions reduction and also carbon trading.

In early 2008, *i*CET initiated the China Energy and Climate Registry (CECR) project, aiming to help entities operating in China manage their energy consumption and greenhouse gas emissions. The CECR project has gained financial support from the Rockefeller Brothers Fund, Hewlett Foundation, the Energy Foundation and the Blue Moon Fund, and technical support from The Climate Registry (TCR). As the first voluntary online carbon registry in China, the China Climate Registry was officially launched in November 2013 with a brand new user interface, and it is open to all entities operating in China. All formally registered users gain free access to log-in information, demo video, and an operational guidebook on carbon accounting—the GHG General Reporting Protocol.

Key Accomplishments in 2014

Expanding CECR's membership base

As one of our strategic partners, China Youth Climate Action Network (CYCAN) is doing energy conservation projects among Chinese University campuses. *i*CET is responsible for providing technical support for their university campuses. So far, 24 university campuses have completed their inventories, among which, 10 campuses have become users of CECR. Also, *i*CET engaged in direct outreach to potential members by working with partners. Besides university campus users, CECR so far has more than 20 users from various entities, such us consulting companies, manufacturing companies, academic institutes, NGOs, and so forth.

Improving CECR functionality

With the launching of China's own emission trading systems in seven pilot cities and provinces, *i*CET has officially updated fuel calorific values, oxidation rates, and emission factors based on data issued by them, making the full CECR software a user friendly tool to calculate, report and register energy consumptions and produce GHG emission inventories for registered users.

Strengthening CECR Public Profile

In March and April 2014, as the strategic partner of *i*CET, CYCAN held their University Campus Energy Conservation Training Sessions respectively in Shanghai and Beijing. As the technical expert, *i*CET's program officer, Ms. Xueyu Li was invited to give lectures on how to do carbon accounting at campus level by using CECR software at both training sessions. Around 200 representatives from different universities participated in these training sessions.

As one of funding partners of Global Carbon Registration Alliance (GCRA) launched at the Rio+20 in Brazil in June 2012, *i*CET co-hosted a GCRA's event with The Climate Registry (TCR) (USA), and GVces (Brazil) at COP20 in Lima in December 2014. The goal is to meet senior government and industry representatives from around the world and to have a discussion on GHG reporting challenges and opportunities. GCRA's mission is to improve the human and institutional capacity to address climate change through the use of its credible, transparent standards for carbon measurement and management.

Workshop and Conference

On February 7, 2014, *i*CET, together with the Climate Action Reserve (CAR) and The Climate Registry (TCR), hosted Su Wei, Director General from the NDRC, Department of Climate Change and his NDRC delegation in a day-long event to further advance California-NDRC formal collaboration on climate change.

In March 2014, the Navigating the American Carbon World (NACW) Conference was successfully held in San Francisco. NACW is the longest running and most anticipated conference for discussing climate policy and carbon markets. It has a well-established history of providing the most comprehensive and recent information on the year's most pressing topics. As a guest speaker, *i*CET's president Dr. Feng An was invited to attend the panel with the theme "International policy formulation and program development" at the conference. He discussed the recent development of greenhouse gas trading systems around the world with participants, especially the seven pilot carbon trading platforms in China.

Carbon Related Research

Since 2012, *i*CET has investigated existing carbon trading systems in North America, especially California's cap-and-trade system, and summarized useful experiences that could be applied appropriately in China's market.

Key Accomplishments in 2014:

In early 2014, *i*CET made an infograph to compare emissions compliance requirements among various pilot cities and provinces.

*i*CET also published an Analysis Report on the Relationship between Fuel Suppliers and California's Carbon Cap-and-Trade. The report briefly introduces rights and obligations for fuel suppliers who are mandatorily included in California's carbon Cap-and-Trade scheme, and the roles they play. *i*CET carbon team hopes the California experience can bring new inspirations for the pilot emission trading systems in China.

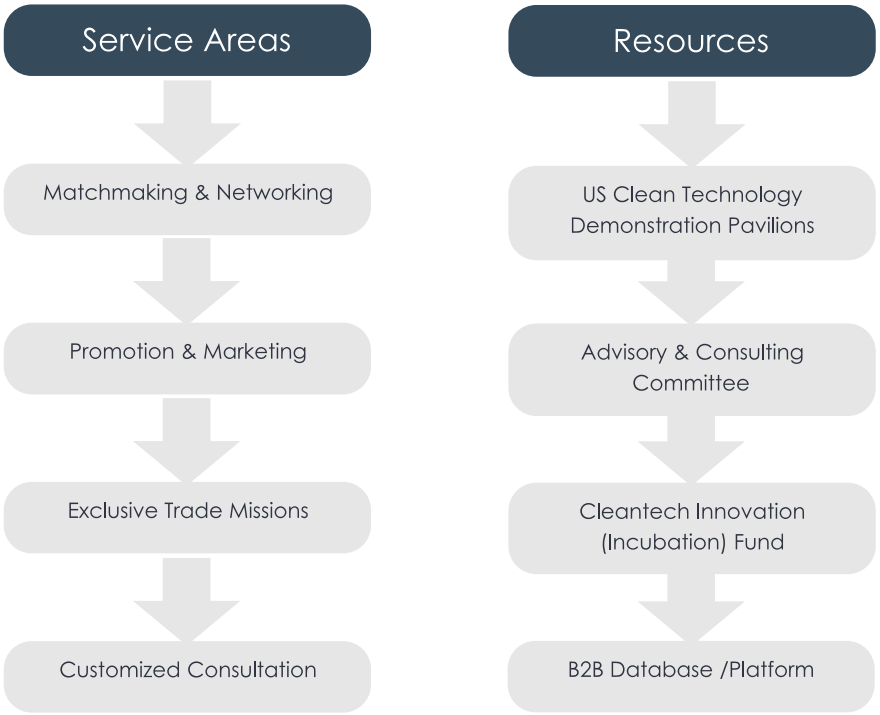
Considering, in 2015, the Carbon Management Program is going to devote much of its capacity to advance *i*CET's new Systems Innovation project area jointly with the Clean Transportation Program. *i*CET will commence research on the design of credible transport emissions calculator and user trainings for understanding city transport emissions baselines, setting feasible targets and designing efficient pathways.

INTERNATIONAL CLEANTECH COLLABORATION

The US-China Cleantech Center (UCCTC) is dedicated to providing US clean technology firms with a cost-effective and strategic launching pad where they can showcase and sell their products and services in China's leading clean tech markets.

UCCTC, the flagship program of *i*CET's international clean technology collaboration program, is now in its second year. UCCTC has continued to cement new agreements with Chinese and U.S. entities that provide U.S. firms with an immediate and lasting presence on China, targeted networking and matchmaking, and opportunities to participate in trade missions and other U.S. government sponsored events.

Clean Technology Collaboration Program service areas and resources:



UCCTC's key 2014 achievements:

High-level events for associations and US states on US-China clean technology collaboration:

UCCTC co-organized the 2014 China-US Energy Efficiency Business Development Mission to Beijing, Tianjin, Qingdao, and Changzhou in December of 2014. The Mission was jointly supported by the China-US Energy Efficiency Alliance, ChinaSF, the California-China Office of Trade and Investment, and the US Commercial Service in Beijing. During the mission, our esteemed US delegates (consisting of several leading energy efficiency companies as well as the honorable Chair of the California Energy Commission and a small delegation of California Assembly members from the Bay Area) met with Chinese central and local government officials and private companies to discuss the rapidly expanding business opportunities in China's energy efficiency market sector. This dialogue also provided an opportunity to further US-China and California-China cooperation in low carbon development. UCCTC recruited and set up over 50 total one-on-one targeted matchmaking meetings for the US delegation. 100% of the U.S. company participants were satisfied with the trade mission's quality and potential to support their export success and several companies are hopeful to find new Chinese business partners following the trade mission.

In June 2014, UCCTC served as the Promotion Partner for a high-level Roundtable titled "California-China Cooperation on Climate Change", headlined by the Chair of the California Energy Commission and Secretary of the California Environmental Protection Agency.

UCCTC has also been active in the pursuit of forging strategic alliances with Chinese development and technology areas with the goal of promoting clean technology transfer between the US and China.

In May of 2014, UCCTC organized and led a site visit to Wujin National Hi-tech Industry Zone in Changzhou for the CEO of The Water Council in Wisconsin and the Dean of the University of Wisconsin-Milwaukee's School of Freshwater Sciences. The purpose of the visit was to collaborate on establishing a joint US-China Clean Water Technology Park to address the severe water issues in Wujin through the engagement of Wisconsin's businesses and universities. This event is a prime example of UCCTC following up on its promise last year to continuously assist Wisconsin in expanding their collaboration opportunities in China.

In June of 2014, UCCTC signed a high-profile cooperation agreement with the China-US Clean Energy Cooperation Area in Dongying, Shandong Province, a strategic gateway for China's clean energy market, to develop and support the China-US Clean Technology Transfer Center. China–US Clean Energy Cooperation Area (CECA) is a leading platform for Chinese and U.S. enterprises' cooperation on clean tech. With UCCTCs guidance, this partnership will open the door for domestic and foreign enterprises to exhibit its technology and products, encouraging close cooperation and business ties between leading Chinese and U.S. small and medium-sized clean energy enterprises.

In October 2014, UCCTC signed a cooperation agreement with the city of Zhuhai to help promote the city's trade and investment with the United States. UCCTC was tasked with managing the hiring of a Chief Representative of North America Business Development for City of Zhuhai, PR China.

In-depth assistance to several individual clean technology companies:

UCCTC continues to serves as a non-exclusive representative in China for several UCCTC VIP Members (small businesses) who want to find buyers and partners for their clean technology.

Host and Serve as Knowledge Expert for International Clean Technology Collaboration:

UCCTC delivered on several high-level dialogues and workshops – both in China and in the US – on topics that address the myriad of business, legal, and political issues impacting US-China clean technology collaboration.

UCCTC co-sponsored an energy efficiency webinar series with the U.S. Department of Commerce and China-US Energy Efficiency Alliance highlighting opportunities for Energy Efficiency companies in China and assessing recent developments in China's energy efficiency market. Over 50 companies in the energy efficiency sector, including equipment, software and service providers, attended this event.

UCCTC presented at the "China Cleantech Trade Mission Showcase" at the Los Angeles Mayor's Office in March 2014 and was a speaker at the Asia-Pacific Business Outlook Conference in April 2014. The events were a clear endorsement of UCCTC's and the City of Los Angeles willingness to work together to help U.S. clean technology companies to succeed in the Chinese market and also help China achieve environmental sustainability.

UCCTC is also consistently invited to speak at events in China, such as Aquatech China 2014 in Shanghai, presenting its experiences in promoting and strategizing China market entry for US companies from the water sector to leading CEOs.

STAFF MEMBERS

Feng An, PhD
President
Executive Director

Maya Ben Dror, MS
Program Director
Clean Transportation

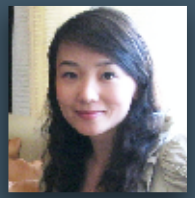
Liping Kang, MS
Program Manager
Clean Transportation

Daniel Ding, BS
Research Analyst
Clean Transportation

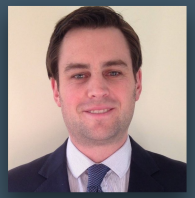
Lucia Green-Weiskel, PhD
Consultant
Carbon Management Solutions

Fang Fang, MS
Vice President
Carbon Management Solutions

Yuxue Li, MS
Program Officer
Carbon Management Solutions



Rainning Bao, MS
Program Manager
Cleantech Development

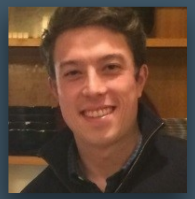


Jeffery Horowitz, MA
Program Manager
Cleantech Development

Yumin Yeh, MPP
Program Manager
Cleantech Development

Elizabeth Turner, MBA
Consultant
Cleantech Development

Li Chen, BS
IT and Project Assistant



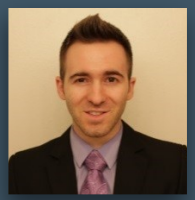
Alex Martin, BA
Project Assistant

Yang Bai, MA
Project Assistant

Xiaoqian Ruan, MS
Project Assistant

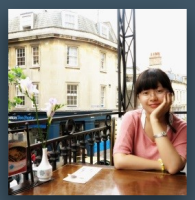
Jiang Qian, MS
Intern
Clean Transportation

Brittany Coley, BA
Intern
Clean Transportation



Mike Seitz, BA
Intern
Cleantech Development

Dongping Wang, PhD
Intern
Clean Transportation



Xingte Wang, BA
Intern
Clean Transportation

BOARD OF DIRECTORS AND ADVISORS

Dr. Binglin Gu

Academican member of Chinese Academy of Sciences

The 17th President of Tsinghua University

David Sandlow

Former Assistant Secretary of U.S. Energy Department

Fellow at the Center on Global Energy Policy at Columbia University

Hal Harvey

CEO of Energy Innovation: Policy and Technology LLC.

Founder and Former CEO of ClimateWorks Foundation

James D. Boyd

Former Vice Chair of California Energy Commission and CEO of the California Air Resources Board

Daniel Sperling

Professor of Civil Engineering and Environmental Science and Policy

Founding Director of the Institute of Transportation Studies at the University of California, Davis

Linda S. Adams

Senior Advisor of the Clean Technology Initiative Information Company

Founding Chair of U.S. Climate Action Reserve

Former Secretary of California Environmental Protection Agency

Dr.John M. DeCicco

Professor of Practice of School of Natural Resources and Environment

Research Professor of University of Michigan Energy Institute

Dr. Kebin HE

Distinguished Professor of Dept. of Environmental Engineering

Dean of Graduate School of Tsinghua University

Dr. Ning LI

Distinguished professor and Dean of School of Energy Research, Xiamen University

Associate Director for International Cooperation of the Berkeley Nuclear Research Center, University of California

Katherine Blumberg

Director of Climate and Health Programs and the Mexico Country Lead of the International Council on Clean Transportation

Barbara Finamore

Asia Director at the Natural Resources DefenseCouncil

Senior Attorney

Dr. Fuqiang Yang

Senior Adviser on Climate, Energy and Environment for the NRDC

Former Vice president of Energy Foundation and Chief Representative of Energy Foundation Beijing Office

Dr. Fei Feng

Director General at the Development Research Center, State Council of thePeople's Republic of China

Elizabeth C. Economy

Director of Asia Studies of the Council on Foreign Relations

Expert on China-U.S. relations

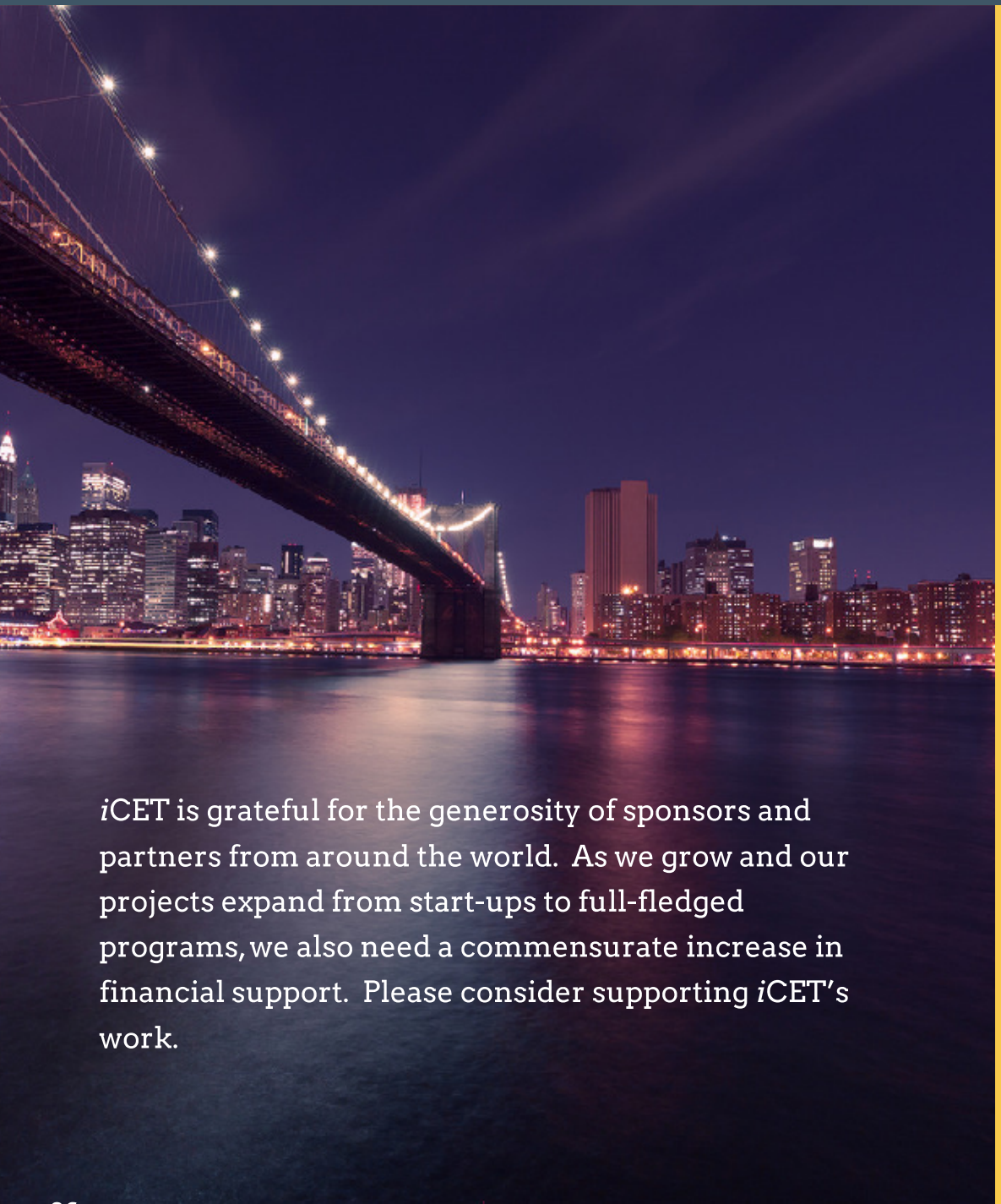
Michael Swords

Vice President Partnerships of the Los Angeles Clean Technology Center

Joseph Ryan

Vice President for Climate and Strategic Initiatives

PARTNERS AND SPONSORS



*i*CET is grateful for the generosity of sponsors and partners from around the world. As we grow and our projects expand from start-ups to full-fledged programs, we also need a commensurate increase in financial support. Please consider supporting *i*CET's work.

Major Sponsors

Hewlett Foundation

Energy Foundation, China

Rockefeller Brothers Fund

United Kingdom Strategic Program Fund

Blue Moon Fund

United Nations Department of Economic and Social Affairs

World Bank

Heinrich Boll Foundation

U.S. Department of Commerce

U.S. Department of Energy

Ministry of Environmental Protection of China

Partners

Department of Climate Change, Chinese National Development and Reform Commission (NDRC)

National Energy Administration, NDRC

National Center for Climate Change Strategy and International Cooperation, NDRC

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, Ministry of Environmental Protection of China (VECC-MEP)

China Automotive Technology and Research Center (CATARC)

China Automotive Engineering Research Institute (CAERI)

Xiamen University

United Nations Environment Program (UNEP)

California Environmental Protection Agency and California Air Resources Board (CARB)

International Council for Clean Transportation (ICCT)

CALSTART

The Climate Registry (TCR)

Green House Gas Management Institute (GHGMI)

Business for Social Responsibility (BSR)

E4Tech

China Youth Climate Action Network (CYCAN)

Shenzhen Low-Carbon Development Foundation

US OFFICE:
601 WEST 5TH ST, SUITE 650
LOS ANGELES, CA 90071
OFFICE: (+1) 213.247.5703

CHINA OFFICE:
BEIJING FORTUNE PLAZA TOWER A, SUITE 7H,
NO.7 DONGSANHUAN MIDDLE RD., CHAOYANG DISTRICT,
BEIJING, 100020, P.R. CHINA
OFFICE: (+86) 10.6585.7324

WWW.ICET.ORG.CN