ANNUAL REPORT 2023

iCET

CONTENTS

Letter from the Executive Director

Dear Friends,

Over the past year, the world has faced multiple challenges, including escalating geopolitical tensions, sluggish economic growth, and continuous increases in greenhouse gas emissions. Despite commitments to carbon neutrality from over 150 countries, time is running short for the Earth, and human society must unite and accelerate the implementation of various climate solutions. Since its inception, *i*CET has been unwavering in its commitment to expanding influence, broadening horizons, and seeking innovative approaches. We persist in driving innovation and practice in zero-carbon transformation and climate-friendly policies, aiming to reduce global dependence on fossil fuels and greenhouse gas emissions.

*i*CET has been founded for eighteen years, and despite various challenges, we have witnessed China and the world make continuous progress in renewable energy utilization, widespread adoption of electric vehicles, promotion of high-efficiency technologies, and transition to clean energy.

In the past year, *i*CET has continued to promote several innovative zero-carbon transportation and clean energy transition projects: the China Clean Transportation Partnership has been further developed; research on zero-emission transportation transformation in the Guangdong-Hong Kong-Macao Greater Bay Area has been comprehensively launched; cooperation with international institutions to conduct research on China's decarbonization market and promote global climate solutions collaboration; continuous research on the electrification roadmap of commercial vehicles, promotion of carbon neutrality in non-road transportation, sustainable aviation fuel policy research, and sharing of research results on global urban carbon footprints. We also participated in the UN Climate Summit COP28 held in the UAE and organized and participated in seven events to release our research findings and cooperation projects. These achievements reflect our commitment to development and change and demonstrate our core values of independence, practicality, and innovation.

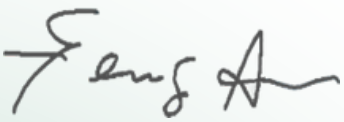
Looking ahead, we need to redouble our efforts to help the world and China accelerate their pace towards zero-carbon development and transformation. *i*CET will continue to promote clean transportation and energy transition projects, accelerate the transition to electrification and zero emissions through standards, policies, technology, and consumer participation. We will also promote carbon footprint and carbon management projects, utilizing measurable, reportable, and verifiable mechanisms and green financial instruments to achieve carbon peak and carbon neutrality goals. We will comprehensively promote sustainable aviation fuel projects in China, implement the best application scenarios for the electrification of commercial vehicles, and promote practical cooperation between China and the United States on climate solutions.

There is still much work to be done in the future, and we will continue to rely on your support to fulfill *i*CET's mission – to create a cleaner world. Despite facing formidable challenges, we firmly believe that solutions can be found and actions can be taken. We will continue to exert more efforts for a clean environment and to address climate change.

Once again, thank you for your attention and support!

Best regards,

Dr. Feng An



Founder and Executive Director

About *i*CET

Our Vision: Creating a Cleaner World

The Innovation Center for Energy and Transportation (*i*CET) is an independent, non-profit professional organization registered in California and Beijing. It is a leading think tank in the fields of clean transportation, energy transition, and climate change. *i*CET's core mission is to provide governments, enterprises, and the public with innovative solutions to create a clean and low-carbon ecosystem.

*i*CET's Core Advantages: Independence * Practicality * Innovation

For nearly two decades, *i*CET has established a good reputation as a third-party independent think tank. We are deeply aware of the severity of climate change and have therefore been dedicated to seeking pragmatic, feasible solutions. We adhere to the principle of innovation, commit to scientific research, and guarantee the objectivity and practicality of our results. We focus on promoting technological and policy change, pragmatically driven in actively establishing cooperative partnerships, and advocating green lifestyles and sustainable development models, to cherish our one and only Earth.

About *i*CET

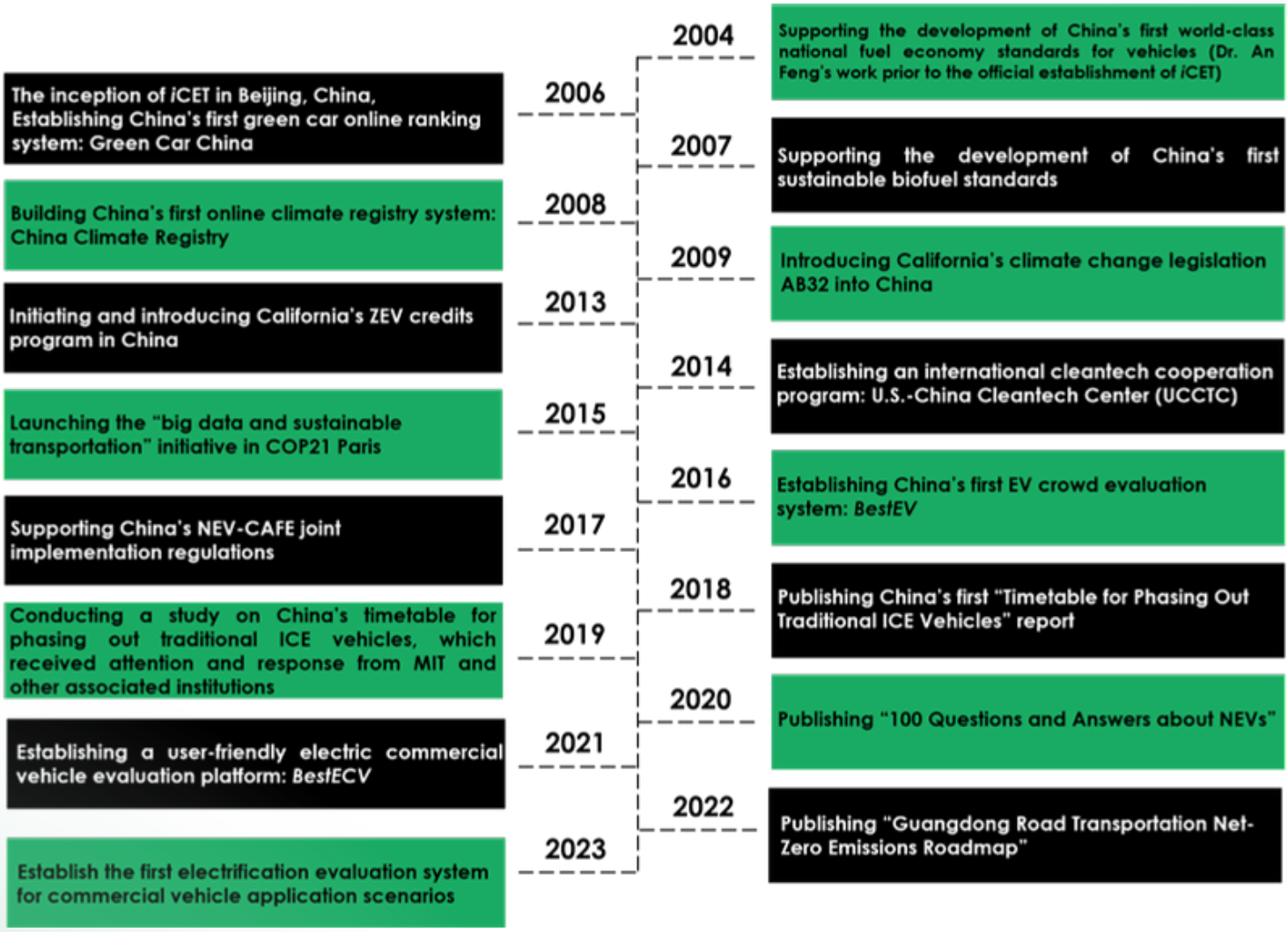
*i*CET's Core Projects

Currently, *i*CET's work centers around three core projects: the Clean Transportation Transformation Project (CTTP), which accelerate the transition of transportation system to zero-emissions and electrification through standardization, policy, technology, and consumer engagement; the regional Carbon Footprint Management Project (CFMP), which promotes the MRV (measurable, reportable, verifiable) mechanism and management system and effectively tracks the implementation of regional dual-carbon goals (carbon peak and carbon neutrality) through the assessment and prediction of regional and urban agglomeration's greenhouse gas emissions and carbon footprints; and the Clean Tech Innovation and Cooperation Program (CTICP), which builds a multilateral cooperation platform for promoting climate-friendly technology between China and North America, Europe, Israel, and other regions.

*i*CET's Innovative Approach

*i*CET adopts innovative approaches to fulfill its mission: improved policy design through data-driven analysis, multi-stakeholder engagement towards the formation of a shared vision, and solid, scientific analysis of localized sustainability impact assessments. We are dedicated to conducting cutting-edge research, hosting expert panel discussions, designing assessment tools, developing consumer infotainment applications, and creating new inroads for public outreach.

Achievements



Core Programs in 2023

01

Guangdong-Hong Kong-Macao Greater Bay Area Zero-Emission Transportation Roadmap Study

02

Best Electric Commercial Vehicle *(BestECV)*

03

China Clean Transportation Partnership (CCTP)

04

Climate Change Mitigation and International Cooperation Initiative

Guangdong-Hong Kong-Macao Greater Bay Area Zero-Emission Transportation Roadmap Study

Since 2020, the Innovation Center for Energy and Transportation (*i*CET) has collaborated with several top think tanks, universities, and research institutions to conduct ongoing research on the net zero carbon emissions roadmap for transportation in Guangdong Province and the Greater Bay Area, China. Focusing on Guangdong Province and the Guangdong-Hong Kong-Macao Greater Bay Area, the project aims to accelerate the carbon neutrality process in the transportation sector of the Greater Bay Area. The research focuses on relevant studies and policy recommendations within Guangdong Province, aiming to promote coordinated cooperation among Guangdong, Hong Kong, and Macao.

2020/2021: Comprehensive Electrification Policy Recommendations for Road Traffic in Guangdong Province's 14th Five-Year Plan √

2021/2023: Research on the Transportation Net Zero Carbon Emission Roadmap for Guangdong and the Greater Bay Area☆

First Stage: Focus on Road Traffic in Guangdong	Second Stage: Covering the Entire Transportation Sector, Focusing on the Greater Bay Area☆

Guangdong-Hong Kong-Macao Greater Bay Area Zero-Emission Transportation Roadmap Study

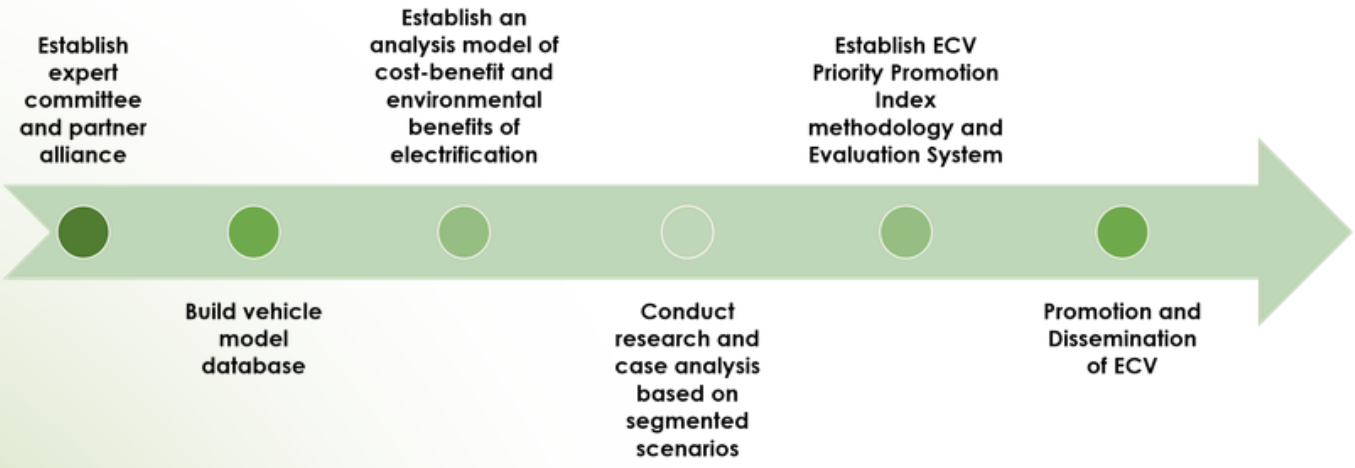
Building upon the groundwork laid in the first phase of the project, we are expanding our research scope to include the regions of Hong Kong and Macau. Our research will now encompass all modes of transportation, including road, rail, waterway, and aviation. The ultimate goal of the project is to develop a comprehensive "Net Zero Carbon Emissions Roadmap for Transportation in the Greater Bay Area." By setting more ambitious targets, conducting pilot demonstration projects, and devising actionable roadmaps and action plans, we aim to lead China in achieving its carbon peak and net zero emission goals.

The Trend of Comprehensive Transportation Carbon Emissions in the Guangdong-Hong Kong-Macao Greater Bay Area

Best Electric Commercial Vehicle (*BestECV*)

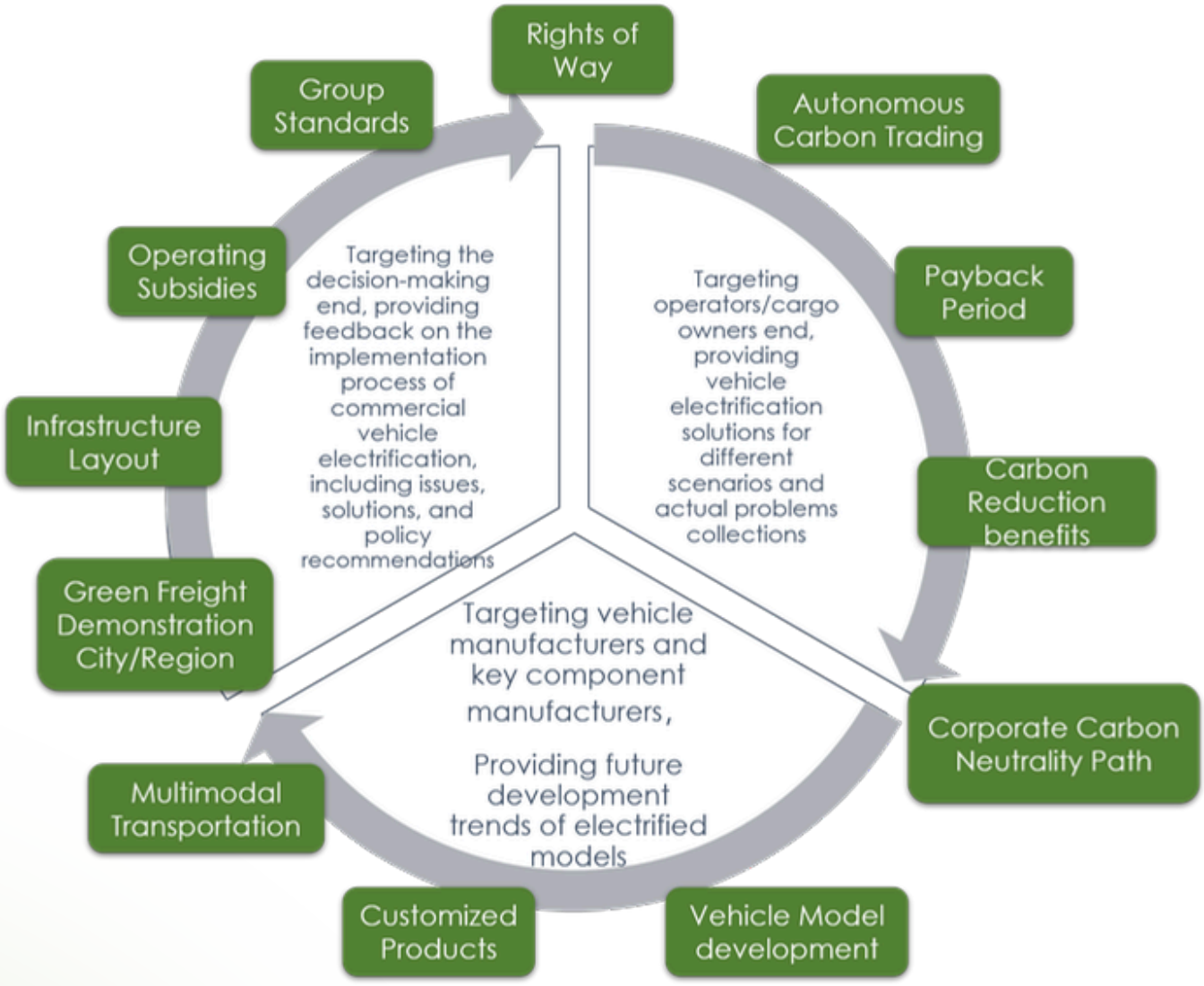
Commercial vehicles are significant sources of greenhouse gas emissions and atmospheric pollutants such as nitrogen oxides, and there is a pressing need for their electrification. As electric vehicle (EV) technology in the commercial vehicle sector advances and receives increasing attention from both policies and industries, China's new energy commercial vehicle market has been steadily growing. According to data from the Joint Information Committee on the New Energy Commercial Vehicle Market, in 2023, China's sales of new energy commercial vehicles reached 447,000 units, representing a year-on-year growth of 32.3%, with the penetration rate of new energy vehicles surpassing 11% for the first time.

In order to further drive the implementation of commercial vehicle electrification, *i*CET has launched the *BestECV* project, aiming to comprehensively and systematically assess the development prospects and pathways of electric commercial vehicles (ECVs). This assessment covers various dimensions such as vehicle types, consumer markets, application scenarios, customer usage, and management aspects. Additionally, the project will establish a user-friendly online assessment system for ECVs, with the goal of assisting in advancing the comprehensive electrification of commercial vehicles in priority areas.



Best Electric Commercial Vehicle (*BestECV*)

The goals and impact of the project



China Clean Transportation Partnership (CCTP)

01 Annual Forum

Under the theme of "Advancing Zero-Emission Transportation," we host an annual forum inviting experts from the fields of transportation, energy, and environment to share insights and engage in discussions. We also release the "Research on the Zero-Emission Transformation and Development of Commercial Vehicles in China."

02 Theme Salons

We delve into the trends of clean transportation development and discuss controversial hot topics. We aim to provide objective policy advice and constructive viewpoints, fostering multidimensional exchanges and cooperation across various sectors.

03 Dialogue Events

Through live broadcasts, we facilitate dialogue between hosts and guests to interpret domestic and international transportation policies, explore technological innovations, share international/local practices, and discuss current pilot topics. We encourage the raising of questions, collision of viewpoints, and promotion of interaction and knowledge sharing. Our objective is to disseminate trends in policy, technology, and industry to a broader audience, thereby advancing the practice and development of clean transportation.

04 Expert Opinion Publication

In conjunction with the theme salon and recent hot topics, we invite seasoned industry experts to share cutting-edge viewpoints and track the current development status of hot topics, while offering policy recommendations to address existing issues.

China Clean Transportation Partnership (CCTP)

Over the past year, the CCTP has organized five salon events, bringing together over a hundred institutions, experts, scholars, and industry practitioners to delve into more than 30 relevant topics. Discussions have covered a wide array of subjects, including carbon reduction in the automotive supply chain, the transition from aviation to high-speed rail, the cost and carbon accounting of new energy heavy trucks, the development of urban low and zero-emission zones, and the construction of integrated energy service stations. Additionally, the CCTP has innovatively introduced the "Lounge" segment, reforming the traditional salon discussion format to foster broader interactivity and openness.

In 2023, the CCTP successfully held two Lounge events with themes focusing on "Greening Beijing: How MaaS Supports Urban Green Travel" and "From Grease to Flight: The Future Path of Sustainable Aviation Fuel." These two events attracted nearly 800 participants and generated over 10,000 interactions during the live broadcasts. Furthermore, in the same year, the CCTP brought together the wisdom and expertise of five top universities, think tanks, research institutions, and enterprises in the industry to initiate the drafting of the 2023 Comprehensive Research Report. This report comprehensively analyzes the issues and future development trends facing the zero-emission transformation of commercial vehicles from multiple dimensions, including the evolution of policy standards, technological pathways, economic cost accounting, and infrastructure development. It provides robust intellectual support for relevant departments and industry policy formulation.

China Clean Transportation Partnership (CCTP)

CCTP's influence in 2023

1. Over 50 institutions and 170 experts participated in CCTP activities
2. In-depth discussions on over 30 relevant topics in clean transportation
3. Over 88,000 reads for articles on the WeChat official account
4. 28 videos released on the WeChat video account, with over 24,000 views
5. Collaboration with 21 mainstream media outlets, with online conference viewership reaching 789,000.

Climate Change Mitigation and International Cooperation Initiative

Over the past year, we participated in COP28, the United Nations Climate Summit held in Dubai, UAE, and organized a series of themed events on climate cooperation, energy transition, clean technology, and decarbonization efforts, totaling 7 sessions. These events covered numerous hot topics, including the role of digitization in accelerating decarbonization and achieving China's and global climate goals, opportunities for climate cooperation in the Greater Bay Area, Sino-US climate cooperation opportunities in energy efficiency, sharing China's experience in electric mobility, and promoting international cooperation.

Meanwhile, *i*CET assisted the Energy Foundation in hosting two energy transition think tank roundtable meetings in Los Angeles, namely the "High-level Dialogue on Clean Energy Transition" and the "Climate Charity Foundation Roundtable Meeting." These events aimed to share China's valuable experience in clean energy transition with the international community and promote cooperation and exchange on a global scale.

"High-level Dialogue on Clean Energy Transition"
(October 15, 2023, Los Angeles)

"Climate Charity Foundation Roundtable Conference"
(November 10, 2023, Los Angeles)

Climate Change Mitigation and International Cooperation Initiative

In 2023, *i*CET continued to focus on international cooperation in clean technology, organizing international clean technology cooperation conferences in cities such as Shenzhen, Guangzhou, Shanghai, Nanjing, Suzhou, and Changzhou, with the participation of 16 international clean technology companies. These companies represented various sectors in the field of clean energy and sustainable development, including carbon neutrality and capture, clean energy, environmental protection technology, green smart buildings, and clean fuels.

The climate issue is urgent and significant, requiring collective human efforts to address it. By continuing to focus on international cooperation in clean technology, we can positively impact the development of the global low-carbon market and decarbonization goals.

OVERVIEW OF WORK IN 2023

01

Guangdong-Hong Kong-Macao Greater Bay Area Zero-Emission Transportation Roadmap Study

Actively promoting multi-party exchanges and continuously promoting the net zero transformation of regional transportation

Key Achievements

*i*CET has been continuously conducting research on zero-carbon transformation in transportation in Guangdong Province and the Guangdong-Hong Kong-Macao Greater Bay Area since 2020. In 2023, *i*CET collaborated with the Hong Kong Think Tank, Policy Research Institute, and experts in various fields to conduct research on the "Net Zero Carbon Emissions Roadmap for Transportation in the Guangdong-Hong Kong-Macao Greater Bay Area." The resulting reports, such as "A Roadmap to achieve net-zero emissions for transportation sector in Hong Kong," provided in-depth analysis of the key issues for achieving transportation zero-carbon transformation by 2050 in the Greater Bay Area. Specific policy recommendations were made to achieve net zero carbon emissions in various sectors. The policy recommendations for Hong Kong have been submitted to the SAR Government and have become important references for government policy reports.

OVERVIEW OF WORK IN 2023

Key Achievements

To strengthen interaction and communication among the Guangdong-Hong Kong-Macao Greater Bay Area and jointly promote zero-carbon transformation in transportation, *i*CET, in collaboration with the Hong Kong Think Tank, conducted a four-day special research activity in Hong Kong in July 2023. The findings were compiled into the "Hong Kong Transportation Zero-Carbon Transformation Research Report." The research covered buses, railways, ports, and cargo owner companies. Meetings were held with the Environmental Protection Department (EPD) of the Hong Kong Environmental Protection Bureau and the Chief Executive's Policy Group to convey the voices of enterprises and share mainland China's experience in transportation transformation with government departments.

OVERVIEW OF WORK IN 2023

Key Achievements

Best Electric Commercial Vehicle *(BestECV)*

Establishing the first evaluation system for electric commercial vehicle (ECV) application scenarios, gradually advancing the electrification transformation of commercial vehicles in various scenarios.

To continuously promote the electrification transformation in the commercial vehicle sector, *i*CET initiated the BestECV project in 2020. In the initial phase, the *BestECV* website was successfully launched, featuring an online assessment tool for analyzing and comparing the emission intensity and cost-effectiveness of different electric commercial vehicles. In 2023, the project team collaborated with senior experts from universities, research institutions, industry associations, and NGOs to establish the first evaluation system for electrification based on commercial vehicle application scenarios. Using a quantitative and qualitative indicator system, the project comprehensively evaluated the electrification priority of commercial vehicle application scenarios.

OVERVIEW OF WORK IN 2023

Key Achievements

In 2023, the *BestECV* project conducted its first evaluation of the electrification priority of 15 truck application scenarios and released the "Assessment Report on Electrification of Commercial Vehicle Application Scenarios." The study identified several high-priority electrification scenarios, such as closed-loop short-haul, construction site waste transportation, short-distance sanitation, and urban logistics. Secondary electrification scenarios included road sweeping, medium-to-long-distance operations, and logistics, while long-haul logistics ranked lower in priority. These findings provide important references for government decision-making, industry investment, and fleet transformation.

During the project, the team conducted in-depth research in cities such as Beijing, Shenzhen, and Chengdu, investigating over a dozen sites in scenarios including sanitation, logistics, ports, and construction, and released the "Research Report on Electrification of Commercial Vehicle Application Scenarios." This report aimed to understand the operational characteristics of electric commercial vehicles in different scenarios and the issues and challenges of electrification applications, providing valuable insights for government decision-making and industry research.

OVERVIEW OF WORK IN 2023

Key Achievements

03

China Clean Transportation Partnership (CCTP)

Continuously focusing on policy and technological innovation to drive the transformation of transportation towards zero emissions.

Over the past year, the China Clean Transportation Partnership (CCTP) has organized five salon events and innovatively launched two lounge live dialogues, addressing key industry issues and hot topics. These events saw participation from over a hundred institutions, experts, scholars, and industry practitioners, engaging in in-depth discussions on over 30 relevant topics. Topics covered in this year's salons and lounge sessions included carbon reduction in the automotive supply chain, consumer willingness and decarbonization potential of aviation to high-speed rail transition, cost-effectiveness of new energy heavy trucks, urban low/zero emission zones, integrated energy service stations, Mobility as a Service (MaaS), and sustainable aviation fuels.

Additionally, in 2023, CCTP successfully hosted two important forums. On April 15th, the "Zero-Emission Transportation Development Forum" held in Beijing attracted 130 experts and practitioners from various sectors, with an online audience of 400,000. On November 28th, the "Towards Zero-Emission Transportation Forum 2023" focused on decarbonization of medium and heavy-duty trucks and zero-emission off-road transportation, drawing 80 on-site guests and nearly 790,000 online viewers.

OVERVIEW OF WORK IN 2023

Key Achievements

In April 2023, CCTP released the "China Transportation Zero Emission Transformation Blue Book," a comprehensive research report consisting of 8 chapters and 50 Q&A sections. It systematically reviewed domestic and international transportation emission trends and current status, pinpointing the shortcomings in China's zero-emission transportation transformation and conducting in-depth research on key areas. In November 2023, CCTP officially released the "Research on Zero Emission Transformation of China's Commercial Vehicles," focusing on the challenges and future trends of zero-emission transformation in commercial vehicles and providing specific policy recommendations. Both reports serve as essential references for government policy formulation and enterprise emission reduction strategic planning.

In 2023, with the joint support of the Steering Committee, Executive Committee, active participation of partnership members, institutions concerned with clean transportation development, and the efforts of the Secretariat, CCTP played an active role in advancing China's transportation towards zero emissions.

OVERVIEW OF WORK IN 2023

04

Climate Change Mitigation and International Cooperation Initiative

Promoting international cooperation in clean energy technology to drive the development of the global low-carbon market.

Key Achievements

Over the past year, we participated in COP28, the United Nations Climate Summit held in Dubai, UAE, and organized a series of themed events on climate cooperation, energy transition, clean technology, and decarbonization efforts, totaling 7 sessions. These events covered numerous hot topics, including the role of digitization in accelerating decarbonization and achieving China's and global climate goals, opportunities for climate cooperation in the Greater Bay Area, Sino-US climate cooperation opportunities in energy efficiency, sharing China's experience in electric mobility, and promoting international cooperation.

Meanwhile, *i*CET assisted the Energy Foundation in hosting two energy transition think tank roundtable meetings in Los Angeles, namely the "High-level Dialogue on Clean Energy Transition" and the "Climate Charity Foundation Roundtable Meeting." These events aimed to share China's valuable experience in clean energy transition with the international community and promote cooperation and exchange on a global scale.

OVERVIEW OF WORK IN 2023

In 2023, *i*CET continued to focus on international cooperation in clean technology, organizing international clean technology cooperation conferences in cities such as Shenzhen, Guangzhou, Shanghai, Nanjing, Suzhou, and Changzhou, with the participation of 16 international clean technology companies. These companies represented various sectors in the field of clean energy and sustainable development, including carbon neutrality and capture, clean energy, environmental protection technology, green smart buildings, and clean fuels.

Key Achievements

The climate issue is urgent and significant, requiring collective human efforts to address it. By continuing to focus on international cooperation in clean energy technology, we can positively impact the development of the global low-carbon market and decarbonization goals.

OVERVIEW OF WORK IN 2023

MAIN RESEARCH REPORTS

Guangdong-Hong Kong-Macao Greater Bay Area Zero-Emission Transportation Roadmap Study

01

"Research Report on the Roadmap to Achieve Net Zero Carbon Emissions in Transportation Across the Guangdong-Hong Kong-Macao Greater Bay Area"

02

"A roadmap to achieve net-zero emissions for transportation sector in Hong Kong "

03

"Research Report on Zero-Carbon Transformation of Transportation in Hong Kong"

OVERVIEW OF WORK IN 2023

MAIN RESEARCH REPORTS

Guangdong-Hong Kong-Macao Greater Bay Area Zero-Emission Transportation Roadmap Study

01 "Research Report on the Roadmap to Achieve Net Zero Carbon Emissions in Transportation Across the Guangdong-Hong Kong-Macao Greater Bay Area"

Since 2020, the Energy and Transportation Innovation Center has been conducting research on transportation's zero-carbon transformation in the Greater Bay Area. The aim is to accelerate the net-zero carbon emissions of transportation in the Greater Bay Area by setting more ambitious goals. Covering 11 cities in the Greater Bay Area, the "Research Report on the Roadmap to Achieve Net Zero Carbon Emissions in Transportation Across the Guangdong-Hong Kong-Macao Greater Bay Area" focuses on all modes of transportation, including public, rail, water, and air transport. Based on data analysis and the practical situation in Guangdong, Hong Kong, and Macao, the report puts forward pathways and policy recommendations for achieving net zero carbon emissions in transportation in the Greater Bay Area.

02 *"A roadmap to achieve net-zero emissions for transportation sector in Hong Kong "*

The report is a subset of the 'Research on Net Zero Carbon Emissions in Transportation in Guangdong Province and the Guangdong-Hong Kong-Macao Greater Bay Area.' Hong Kong, as one of the core cities in the Greater Bay Area, has set ambitious goals to achieve carbon neutrality by 2050. In the transportation sector, Hong Kong has mandated the cessation of private vehicle registration using fossil fuels by 2035. However, progress in the transition to zero emissions in operational transport sectors such as buses, trucks, and ferries has been slow due to high costs and technological constraints. Through field visits, research, and model analysis, Civic Exchange has proposed a roadmap for achieving net-zero carbon emissions in Hong Kong's transportation sector by 2050. Additionally, tailored policy recommendations have been submitted to government departments such as the Hong Kong Financial Secretary to accelerate Hong Kong's journey towards carbon neutrality.

03 "Research Report on Zero-Carbon Transformation of Transportation in Hong Kong"

The Innovation Center for Energy and Transportation, in collaboration with the Civic Exchange in Hong Kong, conducted comprehensive field research activities in Hong Kong. This included visits to government agencies such as the Environmental Protection Department and the Chief Executive's Policy Office. The research also involved transportation entities such as bus companies, MTR Corporation, ports, and integrated transportation enterprises. The aim was to fully understand the current status, opportunities, and challenges of zero-carbon transformation in Hong Kong's transportation sector, providing recommendations to achieve Hong Kong's carbon neutrality goal by 2050.

OVERVIEW OF WORK IN 2023

MAIN RESEARCH REPORTS

Best Electric Commercial Vehicle *(BestECV)*

01

"Research Report on Electrification of Commercial Vehicle Applications"

With the increasingly mature development of new energy vehicle technology and the favorable policies regarding operations and road rights, the electrification of commercial vehicles has accelerated in the past two years. However, at present, the electrification transformation process of commercial vehicles still lags significantly behind that of passenger cars. Moreover, the application scenarios for commercial vehicles are complex, resulting in imbalanced development of electrification across different scenarios. In order to promote the electrification of commercial vehicles more effectively, the Energy and Transportation Innovation Center initiated the *BestECV* project. The *i*CET project team conducted research at over ten different types of sites in cities such as Beijing, Shenzhen, and Chengdu, including sanitation, logistics, ports, and urban construction. The "Research Report on Electrification of Commercial Vehicle Applications" provides an in-depth exploration of the operational characteristics and challenges of electrification applications in various scenarios.

02

"Report on the Evaluation of Commercial Vehicle Electrification in Various Applications"

This report is one of the outcomes of the *BestECV* project. It primarily outlines the evaluation system for the electrification of commercial vehicle applications established through the Delphi method, along with the assessment results of the electrification priority for 15 truck application scenarios. These findings can serve as valuable references for various stakeholders in the commercial vehicle sector.

OVERVIEW OF WORK IN 2023

MAIN RESEARCH REPORTS

China Clean Transportation Partnership (CCTP)

01

"The Blue Book on Zero-Emission Transformation in Chinese Transportation"

"The Blue Book on Zero-Emission Transformation in Chinese Transportation" is a comprehensive research report on the transformation of China's transportation sector towards zero emissions. It was jointly authored by experts and researchers from member units of the China Clean Transportation Partnership. The book is divided into 8 chapters, systematically reviewing both domestic and international trends and current status of transportation emissions. It identifies and analyzes the shortcomings in China's zero-emission transformation process in transportation and focuses on key sub-sectors. This is beneficial for transportation regulatory authorities, research institutions, upstream and downstream enterprises, as well as the general public to understand the latest developments in zero-emission transformation in transportation. It provides necessary insights and references for regulatory authorities to formulate relevant policies and regulations, and for enterprises to develop emission reduction strategies.

02

"Research on the Zero-Emission Transformation of Commercial Vehicles in China"

As one of the series of publications released by CCTP in the first half of the year, the publication of "Research on the Zero-Emission Transformation of Commercial Vehicles in China" holds significant importance for relevant government departments, research institutions, upstream and downstream enterprises, industry organizations, and the general public. The report is divided into five chapters and presented in a Q&A format comprising 30 questions, analyzing the issues and future trends faced by the zero-emission transformation of commercial vehicles from multiple dimensions such as policy standards evolution, technological pathways, economic cost calculations, and infrastructure development. Furthermore, it offers targeted policy suggestions for the development of zero-emission commercial vehicles, aiming to advance the carbon emission reduction process in the commercial vehicle sector.

Main Events

Guangdong-Hong Kong-Macao Greater Bay Area Zero-Emission Transportation Roadmap Study

"Greater Bay Area Transportation Net Zero Carbon Emissions Roadmap" Phase II Kick-off Meeting

On February 8th, the kick-off meeting for the Phase II of the Greater Bay Area Transportation Net Zero Carbon Emissions Roadmap Research Project was held, combining both online and offline participation. Over 20 experts from universities, enterprises, industry organizations, and research institutions were invited to attend. The project team provided a detailed report on the progress and framework of the preliminary research, and solicited opinions and suggestions from the expert members on relevant issues.

"Roadmap to Net Zero Emissions for Hong Kong Road Transportation" Seminar

On the afternoon of July 5th, a successful seminar titled "Roadmap to Net Zero Emissions for Hong Kong Road Transportation" was jointly organized by the Energy and Transportation Innovation Center and the Think Tank Policy Research Institute, with support from the City University of Hong Kong. The event was held in Hong Kong and saw the participation of over a dozen stakeholders from various sectors of the Hong Kong road transportation industry, including representatives from major bus companies such as Kowloon Motor Bus and Citybus, automobile companies like Volvo Bus Hong Kong and Wisdom Motors, cargo owners represented by Swire Coca-Cola, and infrastructure construction and consulting firms including Hilti and Trans-Consult.

"Mid-term Meeting of Phase II for the Greater Bay Area Transportation Net Zero Carbon Emissions Roadmap"

On the morning of July 6th, the Energy and Transportation Innovation Center (*i*CET) in collaboration with the Civic Exchange successfully hosted the mid-term meeting for the Phase II of the "Greater Bay Area Transportation Net Zero Carbon Emissions Roadmap" project in Hong Kong. The meeting was conducted in a hybrid format, combining both online and offline participation, and saw the attendance of over 20 experts from universities, research institutions, and enterprises.

Main Events

Guangdong-Hong Kong-Macao Greater Bay Area Zero-Emission Transportation Roadmap Study

"Closing Ceremony of Phase II for the Greater Bay Area Transportation Net Zero Carbon Emissions Roadmap"

On the afternoon of October 19th, the Energy and Transportation Innovation Center (*i*CET), in collaboration with the Civic Exchange, successfully hosted the closing ceremony for the Phase II of the "Greater Bay Area Transportation Net Zero Carbon Emissions Roadmap" project in Beijing. The event was attended by over a dozen expert representatives from universities, research institutions, and enterprises.

"Seminar on Net Zero Emissions in Transportation in the Greater Bay Area"

On November 16th, the Energy and Transportation Innovation Center hosted a seminar on "Net Zero Emissions in Transportation in the Greater Bay Area" in Shenzhen. Representatives from various institutions including the Civic Exchange (Hong Kong), the One Country Two Systems Research Center (Hong Kong), the Office of the Chief Executive of Hong Kong, the Chinese University of Hong Kong, Swire Coca-Cola Hong Kong, Arup Engineering Consultants (Hong Kong), the Guangdong Institute of Environmental Science, the Guangdong Provincial Transportation Planning Research Center, the Shenzhen Urban Transportation Planning and Design Research Center, the Shenzhen Collaborative Innovation Center, and Tsinghua University attended the seminar. The participants engaged in in-depth discussions on the design and construction elements of the "Zero Emission Freight Corridor" in the Greater Bay Area.

Main Events

Best Electric Commercial Vehicle *(BestECV)*

"Mid-term Meeting of *BestECV* Optimal Electric Commercial Vehicle Project Phase Two"

On June 27th, more than 20 experts from universities, businesses, industry organizations, and research institutions participated in the mid-term meeting of the *BestECV* Phase Two project, both online and offline. *i*CET summarized the current research progress and findings of the Phase Two project to the participating experts and earnestly listened to their opinions and suggestions on the project's achievements. Together with the experts, an analysis and outlook on the next steps of the project's research direction were discussed.

"*BestECV* Optimal Electric Commercial Vehicle Project Phase Two Research Conclusion Discussion"

On September 28th, more than 10 experts from universities, businesses, industry organizations, and research institutions participated in the research conclusion discussion of the *BestECV* Phase Two project, both online and offline. *i*CET presented a summary report on the research findings and survey results of the Phase Two project to the attending experts. They attentively listened to the opinions and suggestions of the experts on the final outcomes of the project and, together with the experts, analyzed and looked forward to the next phase of research direction for the project.

Main Events

China Clean Transportation Partnership (CCTP)——Annual Forum

The 2023 "Towards Zero-Emission Mobility Forum 2023"

The 2023 "Towards Zero-Emission Mobility Forum 2023" was successfully held in Beijing on November 28, 2023. 14 experts from the fields of transportation, energy, and the environment attended this conference. About 80 people from universities, research institutions, international think tanks, enterprises, and media participated in the offline event, and the total number of online views reached 7.89 million.

Forum on Zero-Emission Transformation and Development of Transportation

the "Forum on Zero-Emission Transformation and Development of Transportation and the Annual Conference of the China Clean Transportation Partnership for 2022-2023" was successfully held on April 15, 2023, in Beijing. 30 experts from the fields of energy, climate, environment and transportation were invited to attend and give speeches at the forum. Nearly 130 experts, scholars and industry practitioners from universities, research institutes, international organizations, think tanks, enterprises and media participated in the forum offline, and the online live broadcast was viewed by 400,000+ people.

Main Events

China Clean Transportation Partnership (CCTP)——Workshop

In 2023, CCTP alongside its partner organizations, effectively organized 5 themed salons, each focusing on distinct topics. These discussions covered a range of subjects, including decarbonising supply chains in the automotive industry, exploring the emission reduction potential and consumer inclination in transitioning from short-haul aviation to high-speed rail for passenger transportation, enhancing accounting methods to aid companies in choosing new energy-heavy trucks, examining the construction path and practices of low/zero-emission zones in urban transportation, and addressing issues related to the establishment of integrated comprehensive energy service stations.

Main Events

China Clean Transportation Partnership (CCTP)——Dialogue

In 2023, CCTP introduced the "Dialogue" program, revolutionizing the conventional format of themed salons by enhancing interactivity and openness. These approximately one-hour sessions featured speakers sharing insights and innovative ideas on specific aspects of clean transportation. The inclusion of real-time Q&A sessions provided a dynamic platform for in-depth discussions, engaging both speakers and participants.

CCTP successfully conducted two Dialogue sessions, focusing on the themes "Greening Beijing's Development - Exploring MaaS's Role in Urban Green Mobility" and "Even Waste Oil Can Make Aircraft Fly - The Future Path of Sustainable Aviation Fuel." These Dialogues attracted nearly 800 participants and generated over 10,000 interactions during the live broadcasts.

Main Events

COP 28 Events

As an official observer organization of the United Nations Climate Change Conference since COP 15 in Copenhagen in 2009, *i*CET has organized numerous thematic events. At COP 28 in Dubai, we collaborated with partners to organize a series of activities on climate cooperation, energy transition, clean technology, and decarbonization efforts. A total of 7 thematic events were held, including discussions on the role of digitization in accelerating decarbonization and achieving climate goals in China and globally, opportunities for climate cooperation in the Greater Bay Area, opportunities for Sino-US climate cooperation in energy efficiency, sharing of China's experience in electric mobility, and promotion of international cooperation. In addition to organizing a series of thematic media release events with partners, *i*CET also supported and participated in numerous activities organized by other institutions.

*i*CET Team

Dr. An Feng
Founder and Executive Director

Wenwen Wang
Program Director
Clean Transportation

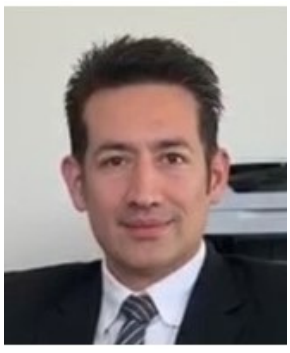
Lanzhi Qin
Senior Analyst
Clean Transportation

Heng Wang
Senior Program Officer
Clean Transportation

Jing Luo
Program Officer
Clean Transportation

Mengyuan Zhang
Analyst
Clean Transportation

Rainning Bao
Program Director
Cleantech Development



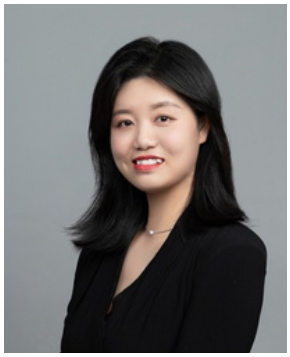
Alex Morales
Consultant
Cleantech Development

Tingying Tao
Analyst
Cleantech Development

*i*CET Team

Dr. Lucia Green Weiskel
Program Director
Climate Policy and Practice

Ran Zhang
Communication Officer



Li Chen
Administration Officer

Liu Shi
Project Assistant

Doreen Du
Admin & Financial Assistant

*i*CET Key Partners and Sponsors

Sponsors

Hewlett Foundation

Energy Foundation China

Rockefeller Brothers Fund

ClimateWorks Foundation

United Nations International Children's Emergency Fund

Natural Resources Defense Council

UK Strategic Prosperity Fund

China Environmental Protection Foundation

SEE Foundation

Ministry of Ecology and Environment of China

UN Commission on Sustainable Development

World Bank

Asian Development Bank

*i*CET Key Partners and Sponsors

Project Partners and Supporters

United Nations Environment Program

UNDP Climate Change Program

International Council for Clean Transportation

Pew Center on Global Climate Change

California Energy Commission

The Climate Registry

California Air Resources Board

University of California, Davis

University of California, Riverside

International Trade Administration of the U.S. Department of Commerce

International Energy Agency

OECD International Transport Forum

World Economic Forum

UK E4tech Ltd.

Industrial Economics Research Division at the Development Research Centre of the State Council

Resources and Environment Branch, China National Institute of Standardization

Ministry of Ecology and Environment, Foreign Economic Cooperation Office

Vehicle Emission Control Center, CRAES

Energy Research Institute, NDRC

China Automotive Technology and Research Center

China EV100

Global Environment Institute

China Beijing Environment Exchange

Tsinghua University

Xiamen University

Innovation Center for Energy and Transportation

www.icet.org.cn