ANNUAL REPORT **2019**

icct

THE INTERNATIONAL COUNCIL
ON CLEAN TRANSPORTATION

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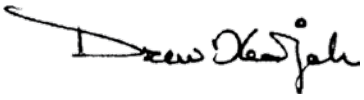
ICCT'S 2019 YEAR IN REVIEW

The year 2019 saw significant staff growth at the ICCT, which we expect to continue in 2020. That was a reflection of growing need above all. The climate crisis is urgent. Lack of leadership from some quarters where we had come to expect it means that others must step up. Cities and other subnational governments in particular have begun to do so, to an even greater extent than before. Our work is evolving to reflect the changing policy landscape. So is our organization. Much of our staff growth is in India, Latin America, and Asia, each crucial to global progress on clean transportation policies.

The following pages highlight some of the policy-relevant work that ICCT's dedicated researchers produced in 2019. Our aviation team continued to shine a light on the climate and noise impacts of supersonic aircraft, which some investors are eager to revive, while also ramping up work on alternative jet fuels and carrying out a unique, bottom-up global inventory of carbon dioxide emissions from commercial aviation. Our fuels team, in addition to collaborating on research into alternative fuels for aviation, was actively engaged on advanced biofuels in markets from India to Brazil and Europe. Researchers in our marine program put useful numbers to policy questions ranging from the costs and benefits of an emissions control area in the Pearl River Delta to the potential fuel and emissions savings from advanced wind-assist and hull-air lubrication technologies for ships.

On land, electrification is a dominant theme, with new ICCT studies ranging across global markets from China to India to the United States and Europe on topics such as estimating charging infrastructure needs and costs, identifying regulatory pathways for zero-emission vehicle mandates, funding the electric transition, and more. But a glance at the work of our passenger vehicle and heavy-duty vehicle teams makes clear that the growing emphasis on electrification does not come at the expense of research aimed at increasing the efficiency of conventional vehicles and reducing emissions to benefit air quality. From harmonizing HDV emissions standards and greening supply chains to deploying cutting-edge remote-sensing technology to measure the tailpipe emissions of vehicles operating on urban roads, ICCT's research teams continue to produce foundational work for sound, evidence-based public policy.

So 2019 was a busy year, with much accomplished, but much remaining to be done. We look forward to another year of growth and new opportunity to make change in 2020.



Drew Kodjak
Executive Director

ELECTRIC VEHICLES

The widespread adoption of electric vehicles is a vital component of the future of clean transportation. To address air quality, pollution, and climate change issues, local, national, and regional governments are implementing policies to hasten this transition. These range from strengthening emissions regulations, to setting electric vehicle sales targets, to establishing low or zero-emission zones. Along with other zero-emission options, electric transport beyond passenger vehicles is also beginning to take hold. From electric ferries to the introduction of electric heavy-duty vehicles, electric technologies are becoming an increasingly common aspect of the transportation ecosystem.

In 2019, researchers at the ICCT undertook an assessment of the costs and benefits of the transition to zero-emission passenger vehicles. They found the benefits of the ZEV transition are estimated to outweigh costs before 2030, and 2020–2050 cumulative benefits will outweigh the costs by a factor of about 5 to 11.

ELECTRIC VEHICLE GUIDEBOOK FOR INDIAN STATES

In 2019, ICCT researchers created a guidebook to help Indian policymakers craft regionally focused policy packages to effectively promote electric vehicle adoption. The guidebook outlines an electric vehicle policy development cycle that explains how state-level electric vehicle policies should be drafted, implemented, and assessed. The guide also identifies 83 individual policy actions relevant for state-level governments which address five common barriers to electric vehicle adoption: model availability, cost competitiveness, fleet deployment, usage convenience, and consumer understanding. The guidebook aims to assist state-level policymakers in establishing a strong electric vehicle strategy that is responsive to regional needs.

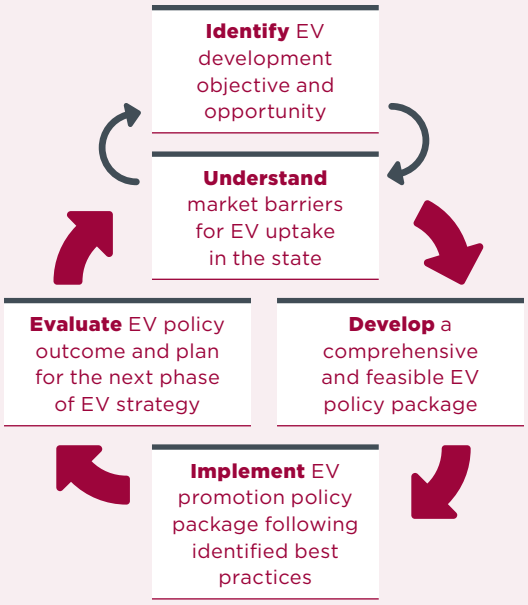


Figure: Electric vehicle policy development cycle
Source: *Electric vehicle guidebook for Indian states* https://theicct.org/publications/electric-vehicle-guidebook-indian-states

> "The more the charging providers see [charging use increase], the more assurance they have that all of their investments in charging will be attractive ones over the long term. And then, vice versa: All of that charging instills more confidence in electric vehicle drivers, and in prospective electric-vehicle consumers to buy electric vehicles." (Nic Lutsey, ICCT Program Director)

Aarian Marshall "America Needs Way, Way More Electric-Car Charging Stations," *Wired*, January 25, 2019. https://www.wired.com/story/us-charging-network-electric-vehicle-needs/

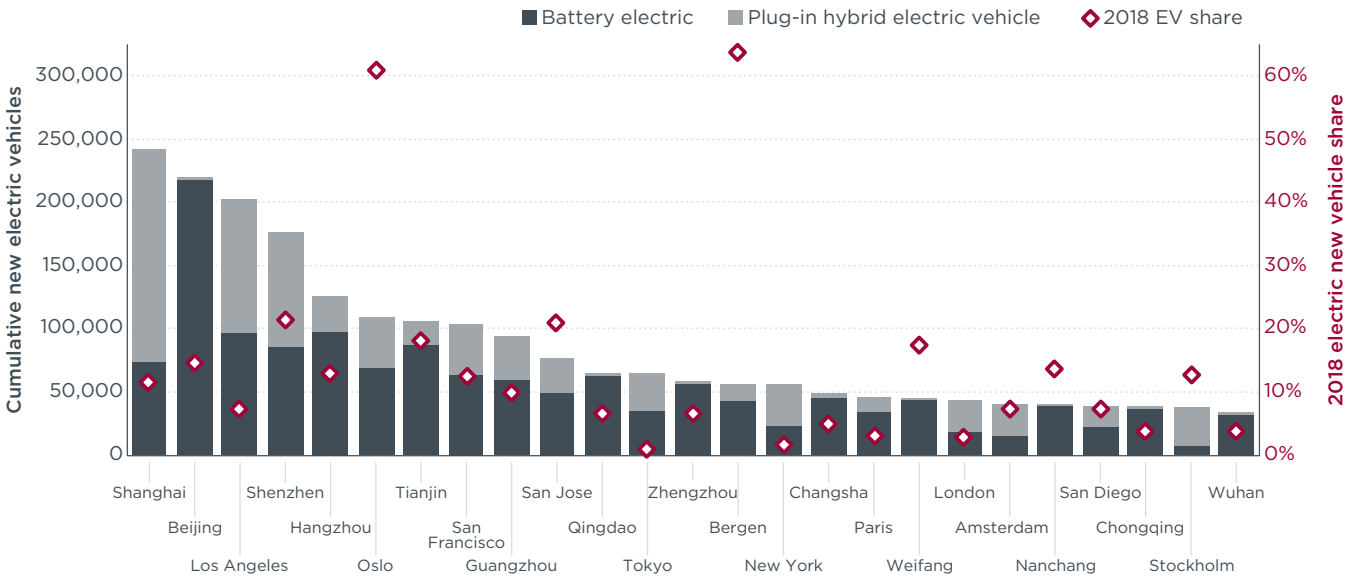


Figure: Cumulative electric passenger vehicles through 2018, and 2018 electric vehicle share of new passenger vehicles in 25 metropolitan areas.
Source: *Electric vehicle capitals: Showing the path to a mainstream market* https://theicct.org/publications/ev-capitals-of-the-world-2019

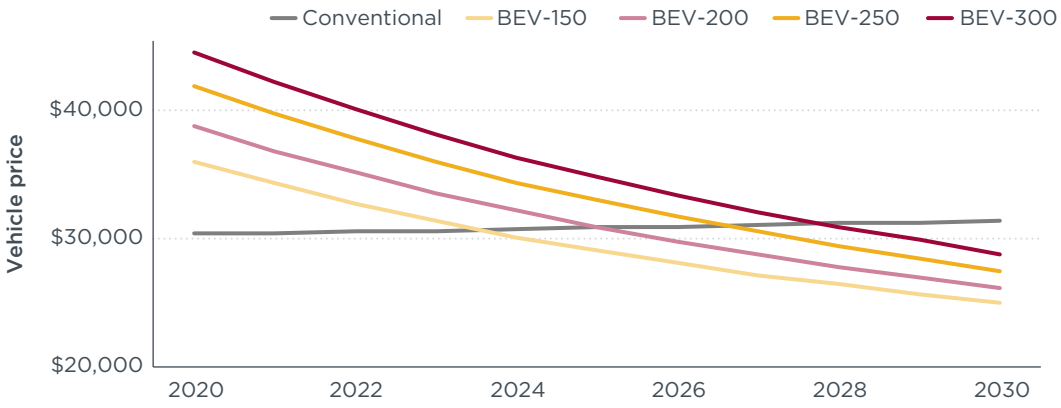


Figure: Initial purchase price of conventional gasoline and battery electric vehicles with 150-300 battery range.
Source: *Funding the transition to all zero-emission vehicles* https://theicct.org/publications/funding-ZEV-transition

PUBLICATIONS OF NOTE

Funding the transition to all zero-emission vehicles (white paper)
https://theicct.org/publications/funding-ZEV-transition

Estimating electric vehicle charging infrastructure costs across major U.S. metropolitan areas (working paper)
https://theicct.org/publications/charging-cost-US

Estimating the infrastructure needs and costs for the launch of zero-emission trucks (white paper)
https://theicct.org/publications/zero-emission-truck-infrastructure

Update on electric vehicle costs in the United States through 2030 (working paper)
https://theicct.org/publications/update-US-2030-electric-vehicle-cost

PASSENGER VEHICLES

While countries and regions are increasingly implementing policies to promote the shift to electric vehicles, standards and compliance mechanisms to monitor the emissions of combustion engine vehicles are still an important aspect of plans to combat air pollution and climate change. ICCT researchers in Europe produced a comprehensive report containing recommendations for the next stage of emissions standards in Europe, which included new limits for currently unregulated pollutants, introducing not-to-exceed limits for CO during real-world testing, and extending market surveillance effort. ICCT also released the results of a remote emissions sensing campaign in Paris, in which the emissions of over 180,000 vehicles were tested. The analysis revealed that nitrogen oxide (NOx) emissions from Euro 6 diesel cars were 4.8 times those of Euro 6 petrol cars and 6 times laboratory limits.

While the Dieselgate scandal raised awareness of "defeat devices," or software which manipulates pollutant emission controls when vehicles are operating during normal driving, third-party evaluation remains difficult. To aid in detection by governments and third parties, ICCT researchers developed a seven-step methodology that uses vehicle testing to determine the presence of an inappropriate calibration change. Using the methodology, the researchers tested two vehicles for defeat devices and found alarming increases in real-world emissions under routine urban driving conditions and after small changes in ambient temperature. In addition, as multiple defeat devices and design limitations are activated, NO_x emissions may increase to as much as 20 times the type-approval limit.

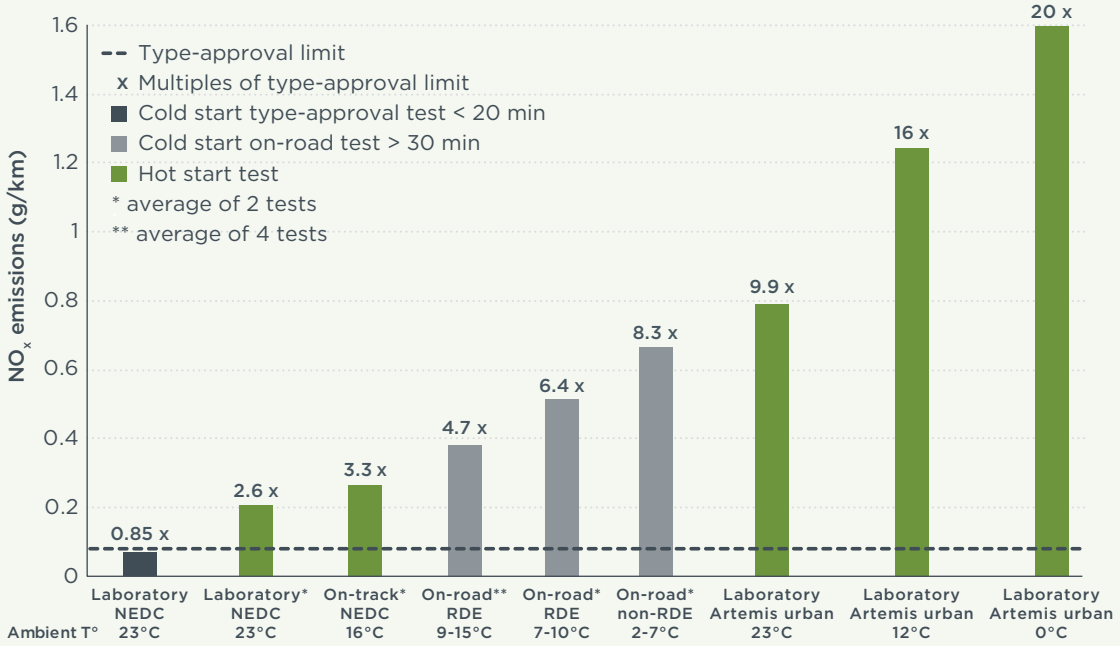


Figure: Type-approval test results and key testing conditions that led to elevated NO_x emissions on test vehicle
Source: *Catching defeat devices: How systematic vehicle testing can determine the presence of suspicious emissions control strategies* https://theicct.org/publications/detecting-defeat-devices-201906

Car manufacturers continue to report that the fuel consumption of new cars is far too low. According to a study by the non-profit organization International Council on Clean Transportation (ICCT) , the actual consumption values in 2017 deviated on average by 39 percent from the information provided by the groups. Motorists must therefore spend around 400 euros a year on the additional fuel. The climate impact is also higher than specified. The researchers compared 1.3 million cars from eight European countries.

"New cars consume significantly more fuel than specified," *ZEIT online*, January 11, 2019, https://www.zeit.de/mobilitaet/2019-01/icct-spritverbrauch-neuwagen-autohersteller-klimabelastung

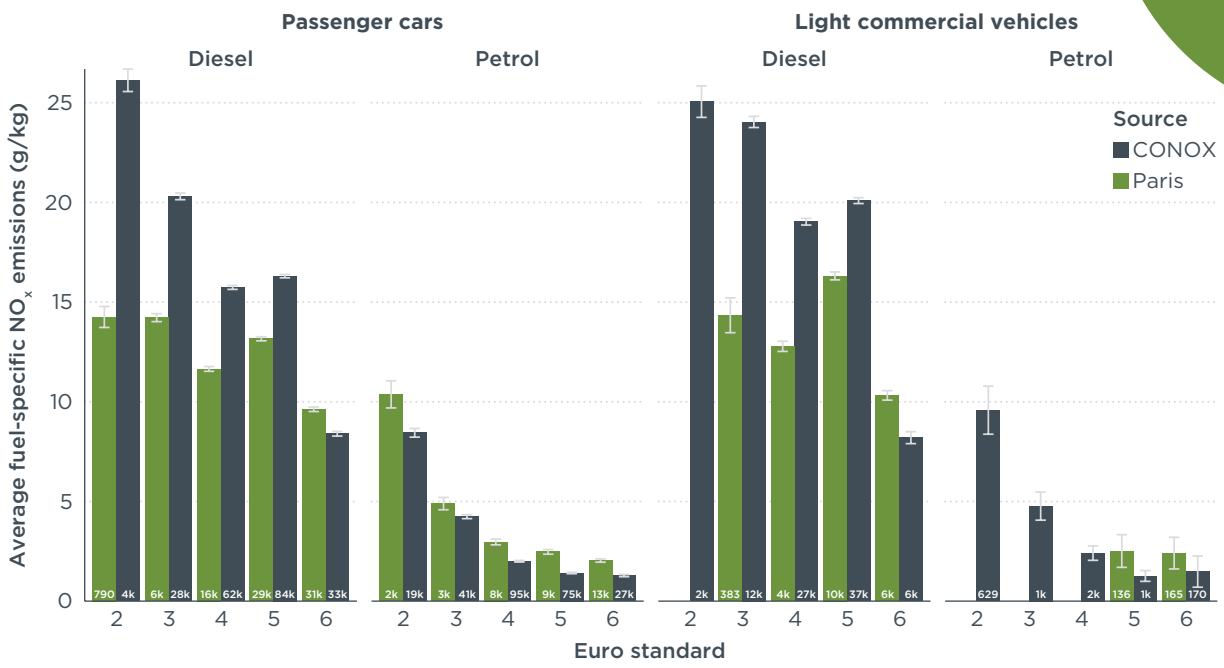


Figure: Average fuel-specific NO_x emission by fuel type and Euro standard for passenger cars and light commercial vehicles in Paris and the CONEX database.
Source: *Remote sensing of motor vehicle emissions in Paris* https://theicct.org/publications/on-road-emissions-paris-201909

Figure: NO_x emission testing
Source: *Beyond NO_x: Emissions of unregulated pollutants from a modern gasoline car* https://theicct.org/publications/beyond-nox-emissions-unregulated-pollutants

PUBLICATIONS OF NOTE

Recommendations for post-Euro 6 standards for light-duty vehicles in the European Union (report)
https://theicct.org/publications/recommendations-post-euro-6-eu

Beyond NO_x: Emissions of unregulated pollutants from a modern gasoline car (white paper)
https://theicct.org/publications/beyond-nox-emissions-unregulated-pollutants

Meeting South Africa's new passenger vehicle CO_2 emission standards (working paper)
https://theicct.org/publications/south-africa-pv-co2-std-20190409

Remote sensing of motor vehicle emissions in Paris (white paper)
https://theicct.org/publications/on-road-emissions-paris-201909

HEAVY-DUTY VEHICLES

As activity grows and other sectors become more efficient and/or shift to alternative fuels, medium- and heavy-duty vehicles are expected to be responsible for the largest fraction of transport-sector emissions by 2040. Diesel-powered trucks also disproportionately contribute to air pollution. While significant efforts are being made to decarbonize heavy-duty vehicles and eventually implement the widespread use of zero-emission transport, fuel consumption and emission standards are still an important tool for reducing emissions in the transport sector.

In 2019, the European Union and the United States initiated regulatory processes to update heavy-duty vehicle emission standards. As most countries around the world follow the U.S. and EU requirements, harmonization of these standards would have positive international repercussions. ICCT researchers offered concrete recommendations to improve and harmonize the standards, including tightening NO_x limits, monitoring via in-use testing, and increasing the use of on-board diagnostics and monitoring.

Using green strategies is important for ensuring the shipment of goods has less of an impact on the environment. To quantify the impact such strategies could have, researchers at the ICCT leveraged data from The Home Depot and the EPA's SmartWay program to assess the energy, climate, and health impacts of technology and other emissions reduction strategies on an eastbound trade route from China to the United States. The researchers found that long-term, energy use and CO_2 emissions could be reduced by more than 60% and local NO_x and $PM_{2.5}$ pollutants could be reduced by more than 80%. The study is one of the first studies to incorporate technology research, operational best practices, and emissions accounting methodologies in an in-depth assessment of a real-world supply chain.

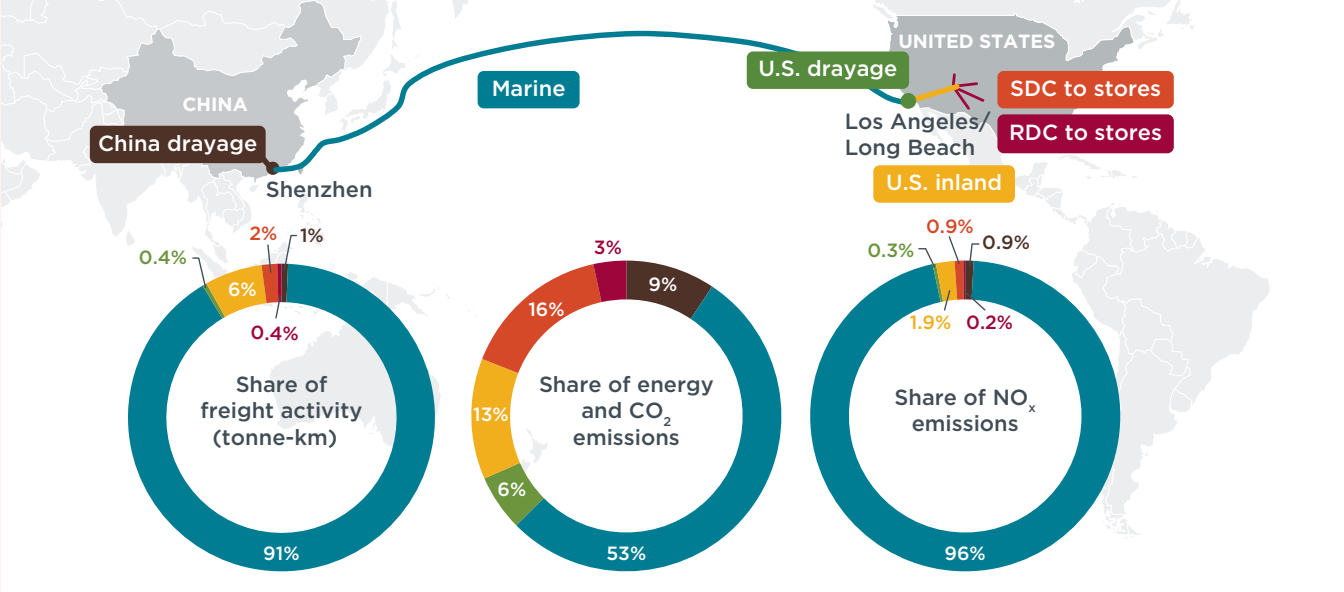


Figure: Supply chain characterization
Source: Toward greener supply chains: A critical assessment of a multimodal, multinational freight supply chain of a Fortune 50 retailer https://theicct.org/publications/greener-supply-chains-2019

> [CO_2 fleet limit values] would create incentives for manufacturers to deliver vehicles that are already in demand. However, a "higher level of ambition" is necessary to achieve the climate goals.
>
> Peter Mock from the International Council on Clean Transportation also urged increases in ambition. The current proposal is an "important and good step in the right direction," but nothing is sufficient from a climate protection perspective. Attention should also be paid to loopholes. For example, Mock warned that manufacturers could push their emission levels up in the reference year 2019 in order to make savings more easily later.

"EU fleet limit values for trucks: shared response at expert hearing," *Verkehrs Rundschau*, February 22, 2019, https://www.verkehrsrundschau.de/nachrichten/eu-flottengrenzwerte-fuer-lkw-geteiltes-echo-bei-expertenanhoerung-2265598.html

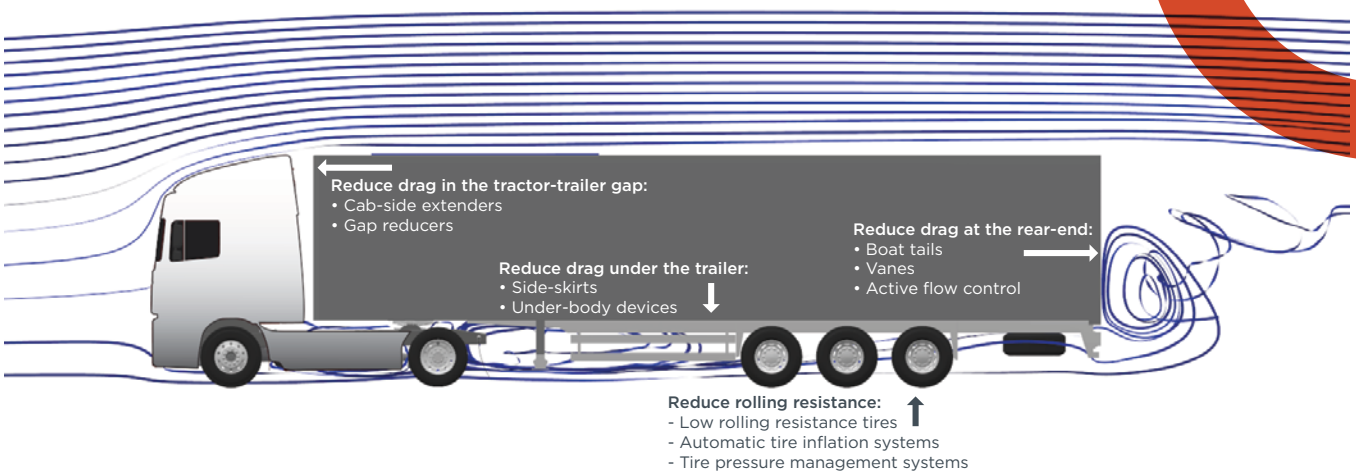


Figure: Key energy loss areas on a trailer during typical operation and technologies to reduce these losses.
Source: *The future of VECTO: CO_2 certification of advanced heavy-duty vehicles in the European Union*
https://theicct.org/publications/future-vecto-co2-certification-advanced-heavy-duty-vehicles-european-union

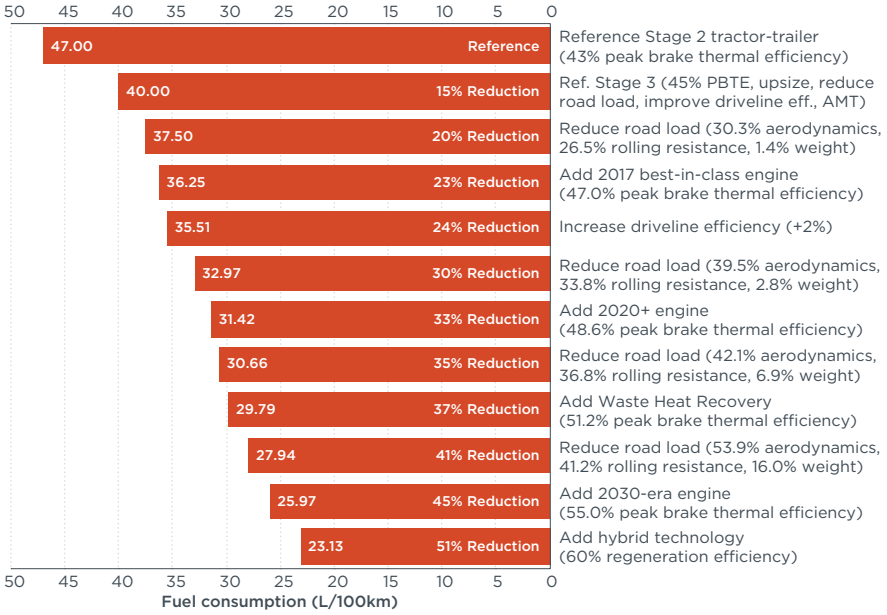


Figure: Potential cumulative fuel-consumption reduction from selected tractor-trailer efficiency technologies in China in the 2020-2030 timeframe.
Source: *Heavy-duty vehicles in China: Cost-effectiveness of fuel-efficiency and CO_2 reduction technologies for long-haul tractor-trailers in the 2025–2030 timeframe*
https://theicct.org/publications/heavy-duty-vehicles-china-cost-effectiveness-fuel-efficiency-and-co2-reduction

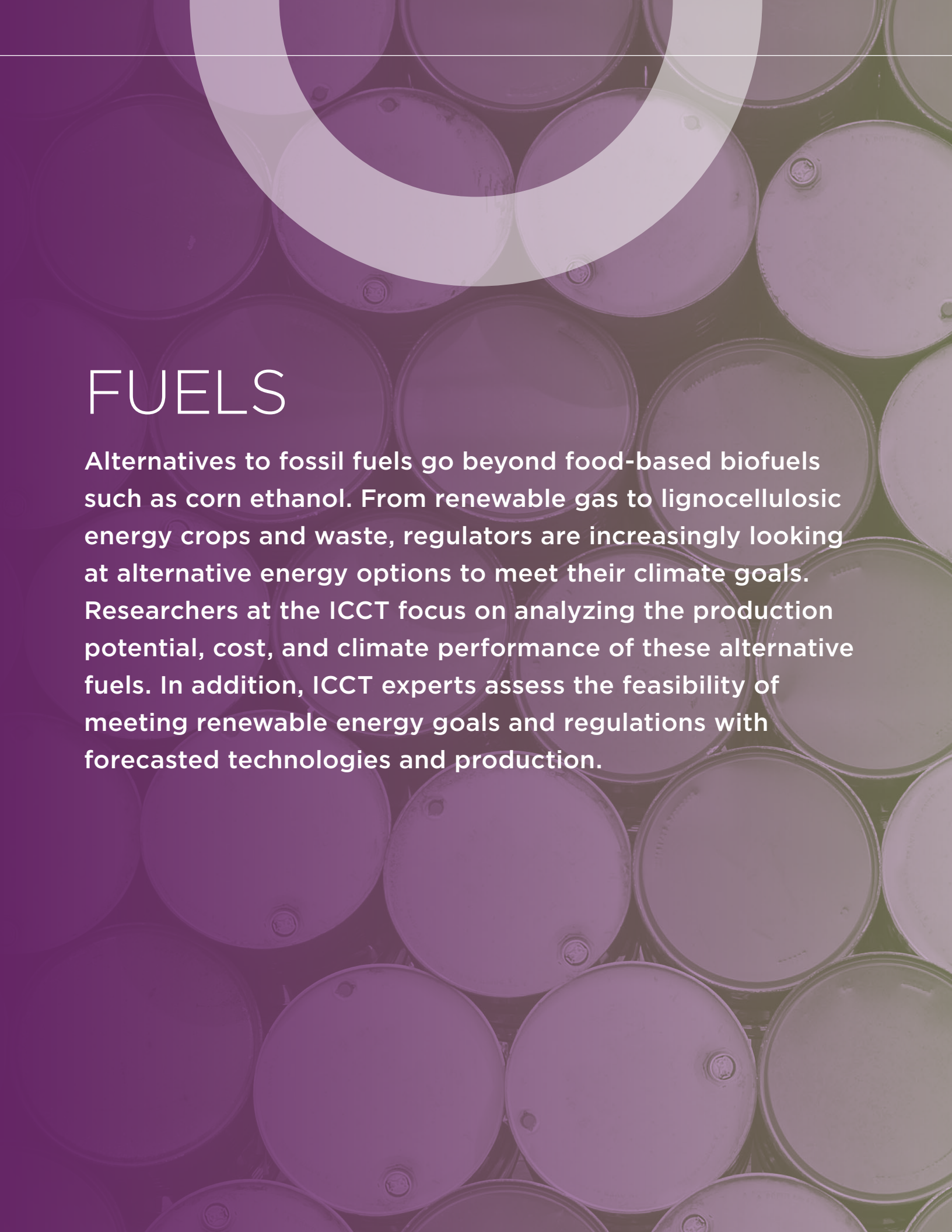
PUBLICATIONS OF NOTE

Current state of NO_x emissions from in-use heavy-duty diesel vehicles in the United States (white paper)
https://theicct.org/publications/nox-emissions-us-hdv-diesel-vehicles

Future heavy-duty emission standards: An opportunity for international harmonization (white paper)
https://theicct.org/publications/future-hdv-standards-harmonization

Global progress toward soot-free diesel vehicles in 2019 (report)
https://theicct.org/publications/global-progress-toward-soot-free-diesel-vehicles-2019

The future of VECTO: CO2 certification of advanced heavy-duty vehicles in the European Union (white paper)
https://theicct.org/publications/future-vecto-co2-certification-advanced-heavy-duty-vehicles-european-union



FUELS

Alternatives to fossil fuels go beyond food-based biofuels such as corn ethanol. From renewable gas to lignocellulosic energy crops and waste, regulators are increasingly looking at alternative energy options to meet their climate goals. Researchers at the ICCT focus on analyzing the production potential, cost, and climate performance of these alternative fuels. In addition, ICCT experts assess the feasibility of meeting renewable energy goals and regulations with forecasted technologies and production.

DOES BIOENERGY IMPROVE FOREST MANAGEMENT?

More than half of all renewable energy used in the European Union comes from biomass, and much of this is roundwood from deforestation and clearcutting of plantations.

ICCT researchers conducted a study which presented strong evidence that biomass burning is bad for climate, despite claims that it is a net positive. The study was an important contribution to the discussion surrounding the climate impact of forest bioenergy. Subsequently, the European Commission released its Biodiversity Strategy, which included language urging minimization of the burning of whole trees and amending the Recast Renewable Energy Directive to address the sustainability of forest biomass. Europe is now on the path to changing the role of roundwood in its renewable energy policy, which could have significant climate benefits.

Table: Strength of evidence that bioenergy demand has driven forest management changes that can reduce bioenergy carbon debt
Source: *Does bioenergy improve forest management?*
https://theicct.org/publications/bioenergy-demand-forest-management-20190719

Forest management change		Canada	Sweden	U.S.
Increased residue removal	Logging residues	Weak	Weak	None
	Salvage logs from infestation	Strong	Not applicable	Not applicable
More intensive stand management	Site preparation	None	Moderate	Strong
	Thinning	None	Strong	Strong
	Fertilization	None	Weak	Strong
Change to higher yielding species		None	Weak	Moderate
Afforestation / avoided deforestation		None	None	None

> In France alone, more than 75% of the 900,000 tonnes of palm oil imported each year ends up in the tanks of diesel vehicles. According to a study published in November by the NGO International Council on Clean Transportation, "analysis of satellite images has shown that between 40% and 53% of the expansion of palm oil plantations in Indonesia and in Malaysia, from 1990 to 2015, was carried out on land with a high carbon stock, such as forests, wetlands and grasslands."

Aude Massiot, "Palm oil: the EU takes a two-way decision," *Libération*, (February 11, 2019), https://www.liberation.fr/planete/2019/02/11/huile-de-palme-l-ue-prend-une-decision-a-double-sens_1708717

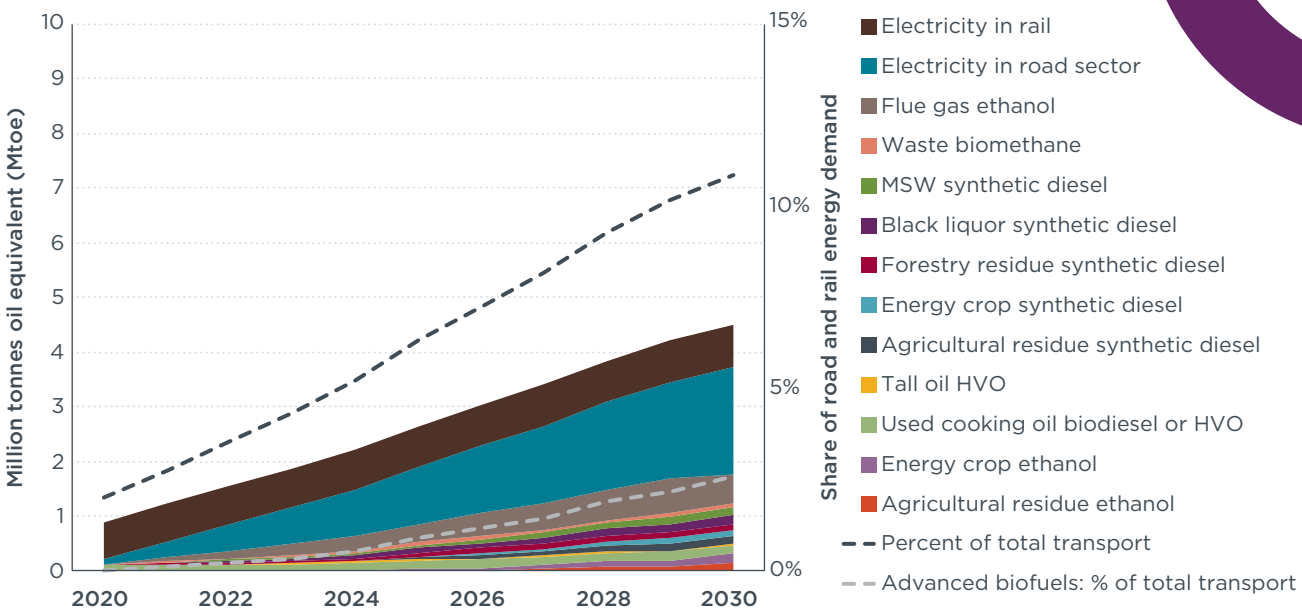


Figure: Projected advanced alternative fuel volumes with policy support of 2.00 Euros per diesel-equivalent liter
Source: *Projected contribution of advanced fuels to Germany's RED II targets in 2030*
https://theicct.org/sites/default/files/publications/Advanced_fuels_potential_Germany_fact_sheet_20190916.pdf

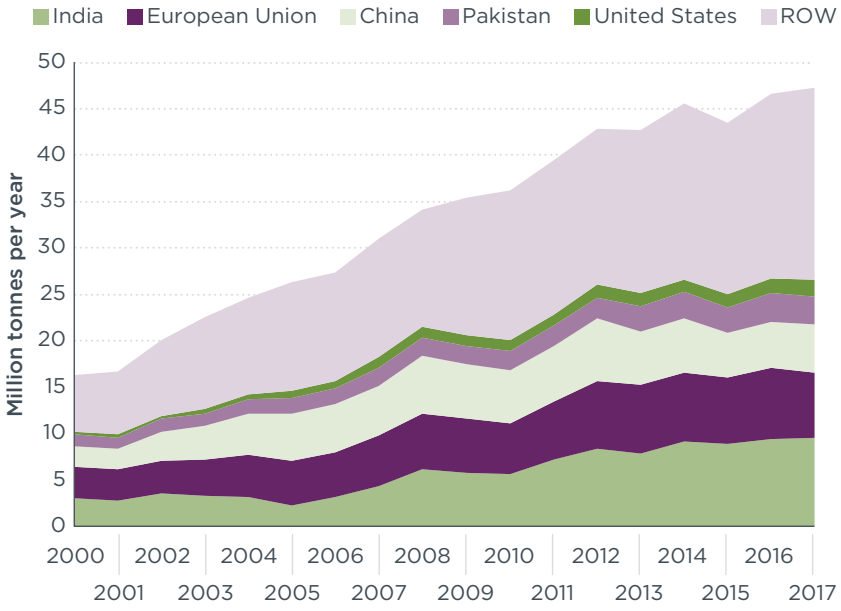


Figure: Global palm oil imports by top importing countries
Source: *International policy and market drivers of Indonesian palm oil demand*
https://theicct.org/publications/international-policy-and-market-drivers-indonesian-palm-oil-demand

PUBLICATIONS OF NOTE

The potential for advanced biofuels in India: Assessing the availability of feedstocks and deployable technologies (working paper)
https://theicct.org/publications/potential-advanced-biofuels-india-assessing-availability-feedstocks-and-deployable

Assessing the potential advanced alternative fuel volumes in Germany in 2030 (working paper)
https://theicct.org/publications/potential-advanced-fuel-volumes-germany

Opportunities and risks for continued biofuel expansion in Brazil (briefing)
https://theicct.org/publications/biofuel-expansion-Brazil

Advanced alternative fuel pathways: Technology overview and status (working paper)
https://theicct.org/publications/advanced-alternative-fuel-pathways

AVIATION

In 2019, the environmental consequences of air travel were pushed into public consciousness due to the “flygskam” or “flight shame” movement, a campaign originated in Sweden that urges people to consider taking less-polluting forms of transportation. At the same time, a possible resurgence of supersonic air travel, and the high emissions and noise pollution that go with it, threatens to drive the environmental impact even higher. Countries and international bodies have continued efforts to curb the environmental impact of air travel. As of June 2019, 114 International Civil Aviation Organization member countries, representing more than 93% of global international air traffic, submitted action plans to ICAO outlining plans to reduce aviation emissions. ICCT estimates that emissions have increased by 32% over the past 5 years despite efforts to improve efficiency, showing more action is sorely needed.

CO_2 EMISSIONS FROM COMMERCIAL AVIATION, 2018

ICCT researchers published a global emissions inventory for commercial aviation, finding that CO_2 emissions from all commercial operations in 2018 totaled 918 million metric tons, an equivalent of 2.4% of global CO_2 emissions. This is a 32% increase in emissions over the past five years.

Flights departing from the United States were responsible for about one-quarter of global passenger transport-related CO_2, two-thirds of which came from domestic flights. China, the United Kingdom, Japan, and Germany rounded out the top five countries with the highest aviation-related carbon emissions. For the global commercial fleet, 43% of CO_2 was linked to passenger movement in narrowbody aircraft, followed by widebody jets (33%), and regional aircraft (5%). The remaining aviation emissions were driven by freight carriage.

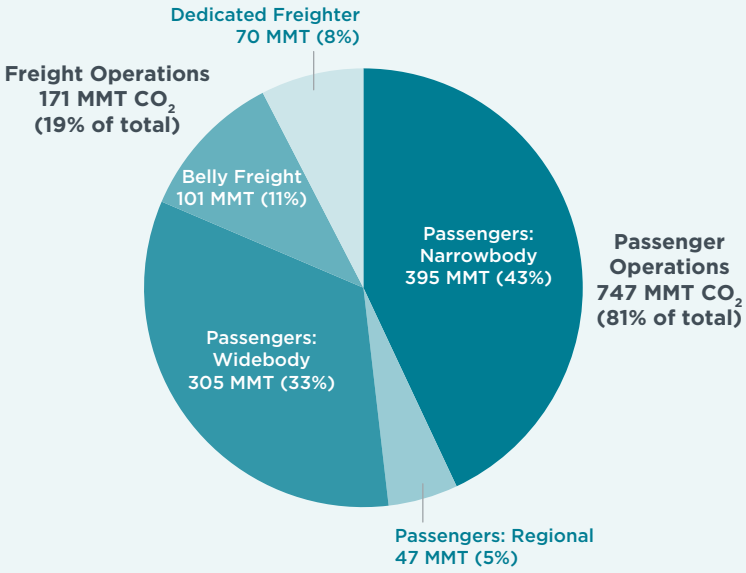


Figure: CO_2 emissions in 2018 by operations and aircraft class
Source: *CO_2 emissions from commercial aviation, 2018*
https://theicct.org/publications/co2-emissions-commercial-aviation-2018

> The International Council on Clean Transportation said recently that carbon-dioxide emissions and fuel burning rose 7 percent from 2016 to 2018, overshadowing a 3-percent gain in fuel efficiency.
>
> The report's authors say airlines could reduce emissions and fuel consumption more than 25 percent by buying newer planes and filling them with more passengers.
>
> Dan Rutherford, one of the report's authors, said airlines are slowly boosting efficiency, but not enough to keep up with the growth in travel. "We are heading off an emissions cliff right now. This is becoming even more urgent," he said.

"Report: Airlines' carbon emissions growing fast," *Associated Press*, September 23, 2019
https://businessmirror.com.ph/2019/09/23/report-airlines-carbon-emissions-growing-fast/

ICCT aviation researcher Brandon Graver discusses findings of a study on global aviation CO_2 emissions.
Source: Carbon dioxide emissions from commercial aviation in 2018
https://www.youtube.com/watch?v=oAkvaDwjsc0&t=15s

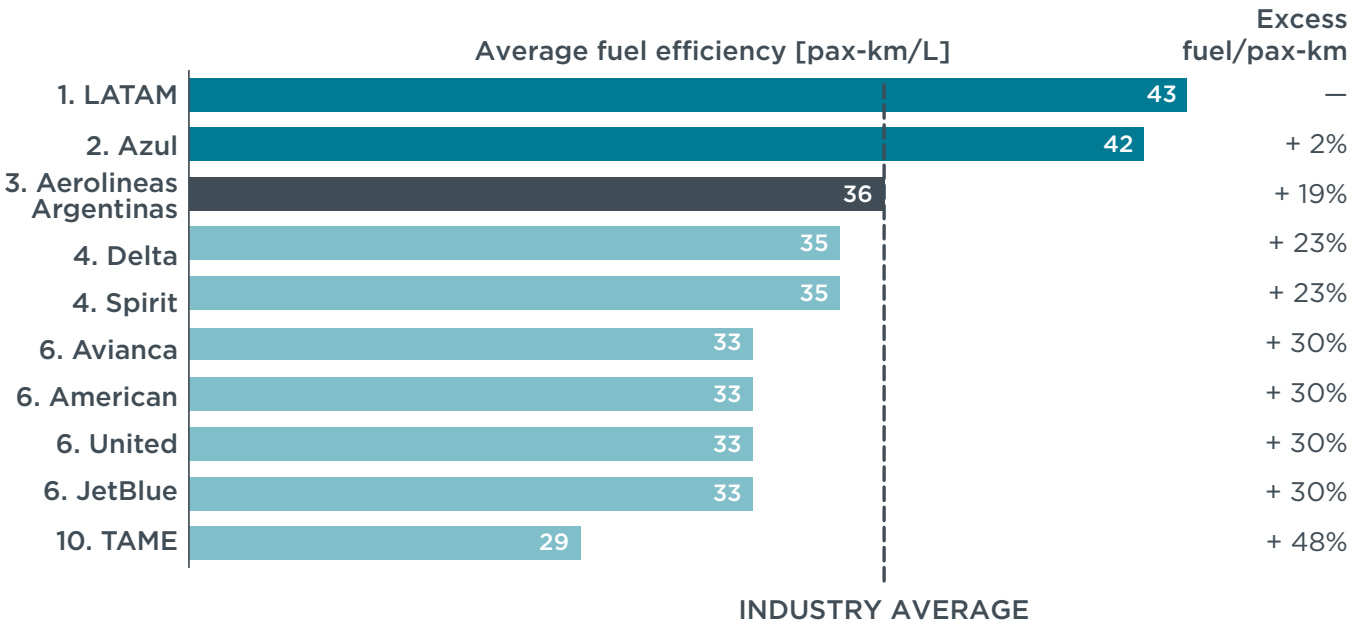


Figure: Fuel efficiency of 10 major airlines in the U.S.–SA market, 2018.
Source: *U.S.–Latin America airline fuel efficiency ranking, 2017–2018*
https://theicct.org/publications/us-latin-america-airline-fuel-efficiency-ranking-2017-18

PUBLICATIONS OF NOTE

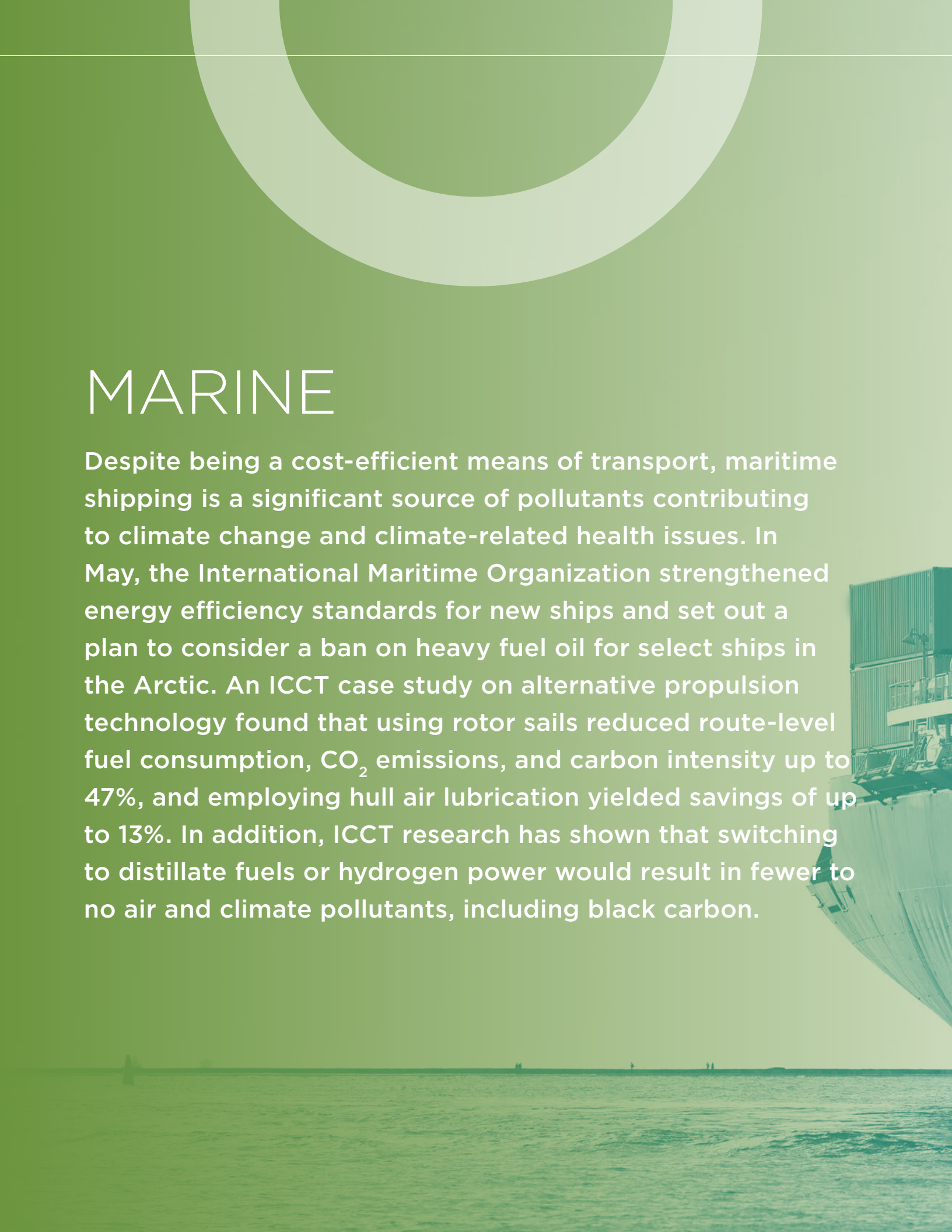
U.S. domestic airline fuel-efficiency ranking 2017-2018 (white paper)
https://theicct.org/publications/us-domestic-airline-fuel-efficiency-ranking-2017-18

Economic incentives for fuel efficiency under a U.S. aircraft CO_2 standard (working paper)
https://theicct.org/publications/economic-incentives-fuel-efficiency-under-us-aircraft-co2-standard

Noise and climate impacts of an unconstrained commercial supersonic network (working paper)
https://theicct.org/publications/noise-climate-impacts-unconstrained-supersonics

MARINE

Despite being a cost-efficient means of transport, maritime shipping is a significant source of pollutants contributing to climate change and climate-related health issues. In May, the International Maritime Organization strengthened energy efficiency standards for new ships and set out a plan to consider a ban on heavy fuel oil for select ships in the Arctic. An ICCT case study on alternative propulsion technology found that using rotor sails reduced route-level fuel consumption, CO_2 emissions, and carbon intensity up to 47%, and employing hull air lubrication yielded savings of up to 13%. In addition, ICCT research has shown that switching to distillate fuels or hydrogen power would result in fewer to no air and climate pollutants, including black carbon.



HEAVY FUEL OIL, EXHAUST GAS CLEANING SYSTEMS, AND BRITISH COLUMBIA'S RESIDENT KILLER WHALES

In order to comply with regulations to reduce air pollution and greenhouse gas emissions, many shipping companies have installed exhaust gas cleaning systems, or scrubbers, to be able to continue to use cheaper bunker fuel. However, the wastewater from these systems is harmful to sea life. Researchers at the ICCT produced a study on heavy fuel oil use and scrubber washwater discharge from ships operating off the coast of British Columbia, Canada. The study found that in 2017, 30 scrubber-equipped ships emitted nearly 35 million tonnes of scrubber washwater. Cruise ships were responsible for 90% of this discharge. Without rules requiring closed-loop or zero-discharge operations, the use of open-loop or hybrid scrubbers operating in open-loop mode is expected to grow, increasing washwater pollution discharges and perpetuating the risk of an HFO spill.

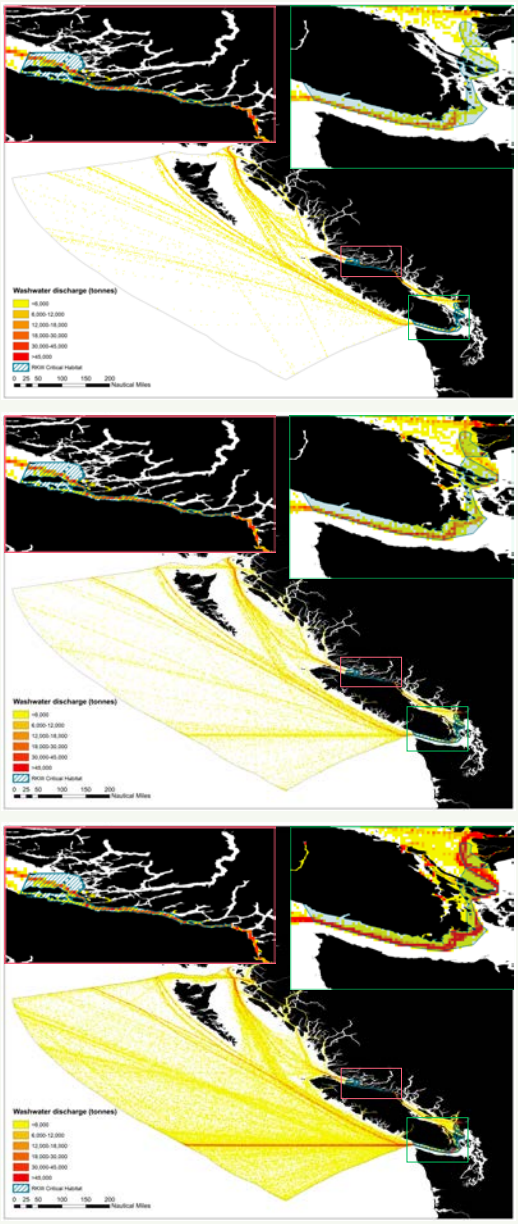


Figure: Washwater discharge in in 2017 (top), 2020 (predicted, middle), and an extreme case
Source: *A whale of a problem? Heavy fuel oil, exhaust gas cleaning systems, and British Columbia's resident killer whales* https://theicct.org/publications/hfo-killer-whale-habitat

> The ICCT has estimated that cruise ships with scrubbers will consume around 4 million tons of heavy fuel oil in 2020 and will discharge 180 million tons of contaminated scrubber washwater overboard.
>
> "About half of the world's roughly 500 cruise ships have or will soon have scrubbers installed," said Mr Comer. "Cruise ships operate in some of the most beautiful and pristine areas on the planet, making this all the more concerning."

Wil Crisp, "Thousands of ships fitted with 'cheat devices' to divert poisonous pollution into sea," *Independent*, (September 29, 2019), https://www.independent.co.uk/environment/shipping-pollution-sea-open-loop-scrubber-carbon-dioxide-environment-a9123181.html

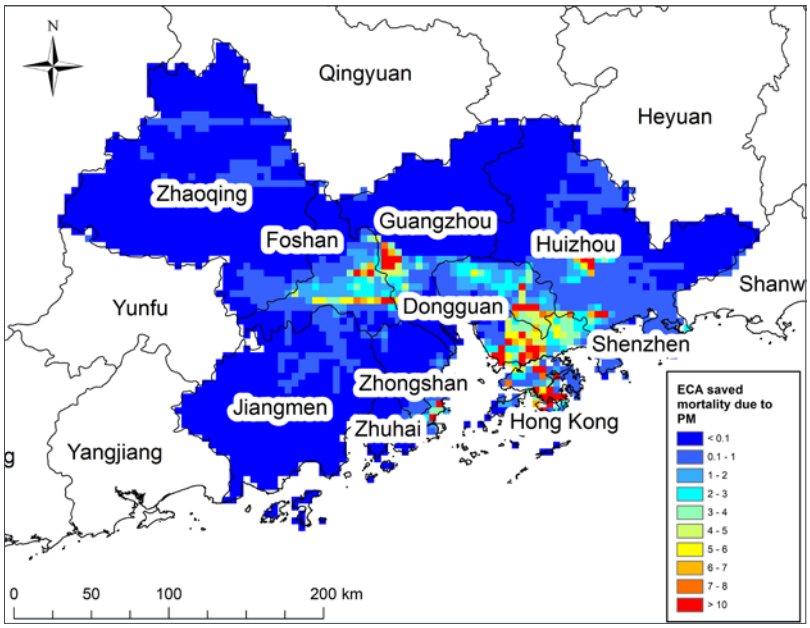


Figure: Distribution of avoided $PM_{2.5}$ chronic mortality in 2030 due to ECA controls
Source: *Costs and benefits of a Pearl River Delta Emission Control Area*
https://theicct.org/publications/pearl-river-delta-eca-201907

Participants in the sixth technical workshop on marine black carbon emissions in Helsinki, Finland
https://theicct.org/events/6th-workshop-marine-black-carbon-emissions

PUBLICATIONS OF NOTE

Costs and benefits of a Pearl River Delta Emission Control Area (report)
https://theicct.org/publications/pearl-river-delta-eca-201907

Rotors and bubbles: Route-based assessment of innovative technologies to reduce ship fuel consumption and emissions (working paper)
https://theicct.org/publications/working-paper-imo-rotorships

Action plan for establishing China's national emission control area (policy update)
https://theicct.org/publications/action-plan-establishing-chinas-national-emission-control-area

Transitioning away from heavy fuel oil in Arctic shipping (working paper)
https://theicct.org/publications/transitioning-away-heavy-fuel-oil-arctic-shipping

AUDITED FINANCIALS

Consolidated Statements of Financial Position
December 31, 2019

Assets	
Cash and cash equivalents	$ 4,106,590
Promises to give, net	6,817,917
Accounts receivable, net	923,527
Prepaid expenses	105,127
Deposit	573
Property and equipment, net	340,007
Total assets	$ 12,293,741
Liabilities and Net Assets	
Liabilities:	
Accounts payable and accrued expenses	$ 1,169,245
Deferred rent	346,470
Refundable advances	964,851
Total liabilities	2,480,566
Commitments and contingencies (Notes 1 and 11)	
Net assets:	
Without donor restrictions	1,163,407
With donor restrictions	8,649,768
Total net assets	9,813,175
Total liabilities and net assets	$ 12,293,741

Consolidated Statements of Activities
Year Ended December 31, 2019

	Without Donor Restrictions	With Donor Restrictions	Total
Revenue and support:			
Grants and contributions	$ 279,728	$ 9,465,878	$ 9,745,606
Contract income	1,230,922	-	1,230,922
Interest income, net	36,744	-	36,744
Other income	20,012	-	20,012
Net assets released from restriction	6,197,926	(6,197,926)	-
Total revenue and support	7,765,332	3,267,952	11,033,284
Expenses:			
Program services	8,597,743	-	8,597,743
Supporting services:			
Management and general	2,309,549	-	2,309,549
Communications	345,178	-	345,178
Development	652,243	-	652,243
Total expenses	11,904,713	-	11,904,713
Change in assets	(4,139,381)	3,267,952	(871,429)
Net assets:			
Beginning, as restated (Note 12)	5,302,788	5,381,816	10,684,604
Ending	$ 1,163,407	$ 8,649,768	$ 9,813,175

These 2019 financial statements have been derived from complete financial statements, which were audited by RSM US LLP.

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