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Hyundai and Kia Clean Air Act Settlement

(Washington, DC - November 3, 2014) – Automakers Hyundai and Kia will pay a \$100 million civil penalty to resolve alleged Clean Air Act violations based on their sale of more than 1 million vehicles that collectively will emit approximately 4.75 million metric tons of greenhouse gases (GHG) in excess of what the automakers certified to the EPA. The companies will forfeit GHG emission credits in order to put the companies in the place they would have been had they accurately reported the GHG emissions from these vehicles in the first place. The companies also will take measures to prevent future violations. On November 3, 2014, the EPA and the U.S. Department of Justice (DOJ) announced this settlement, and lodged a consent decree embodying the settlement in the United States District Court for the District of Columbia. The California Air Resources Board joined the United States as a co-plaintiff in this settlement.

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Defendants

- Hyundai Motor Company** is a light-duty motor vehicle manufacturer headquartered in Seoul, South Korea. In 2012, the company manufactured over 4.4 million cars and SUVs, and sold approximately 19 percent of them in North America. The company owns a portion of Kia Motors Corporation, and each belong to Hyundai Motor Group, which is one of the world's largest automakers.
- Hyundai Motor America** is the American sales, marketing, and distribution subsidiary of Hyundai Motor Company. This company is based in Fountain Valley, California.
- Kia Motors Corporation** is a light-duty motor vehicle manufacturer headquartered in Seoul, South Korea. In 2012, the company manufactured over 2.7 million cars and trucks, and sold approximately 20 percent of them in North America. Again, Hyundai Motor Company owns a portion of Kia Motors Corporation. Importantly for this enforcement case, both companies utilize the same corporate group to perform vehicle emission testing for EPA certification.
- Kia Motors America** is the American sales, marketing, and distribution subsidiary of Kia Motors Corporation. The company is based in Irvine, California.
- Hyundai America Technical Center, Inc.** handles design and engineering matters for North American Hyundai- and Kia-brand vehicles. This company is based in Superior Township, Michigan.

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Clean Air Act Certification Requirements

The Clean Air Act and its regulations aim to protect human health and the environment, in part, by reducing harmful emissions from mobile sources of air pollution. The United States' allegations here concern motor vehicles, specifically light-duty vehicles like cars and SUVs. Light-duty vehicles must satisfy tailpipe emission standards for certain air pollutants. Beginning with the 2012 model year, greenhouse gases are among these air pollutants. The terms "greenhouse gases" and "GHGs" refer to an aggregate group of six gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

The EPA administers a certification program to ensure that every vehicle introduced into United States commerce satisfies applicable emission standards. Under this program, manufacturers apply to the EPA for a certificate of conformity and must demonstrate in their applications that representative test vehicles meet emission standards. The EPA issues certificates of conformity (COCs) to vehicle manufacturers based on these applications. A COC covers only those new motor vehicles that conform, in all material respects, to the design specifications described in the manufacturer's application for that COC. Manufacturers are prohibited from selling any new motor vehicle unless that vehicle is covered by an EPA-issued COC.

A vehicle's road load force is one of the vehicle specifications manufacturers must describe in a COC application. Road load force is the total force encountered by a vehicle by reason of motion on a level, smooth surface. This includes the internal forces (e.g., driveline friction) and external forces (e.g., wind resistance) that cause a vehicle to lose speed. A vehicle's road load force and its GHG emissions are closely correlated. A vehicle with higher road load force needs to overcome greater resistance to move at a given speed compared to a vehicle with lower road load force, and therefore consumes more fuel and emits more GHGs.

Road load force determines the laboratory settings for testing vehicle tailpipe emissions. Test vehicles are mounted on a piece of equipment called a chassis dynamometer that allows the test vehicle's wheels to turn while the vehicle remains stationary. A vehicle's road load force is used to program the chassis dynamometer to simulate real-world driving conditions. If the accurate road load force is used, then the vehicle's tailpipe emissions during laboratory testing are the same as its emissions during real-world driving conditions. If the dynamometer is programmed with an inaccurately low road load force, however, the test vehicle consumes less fuel and emits less GHGs compared to real-world driving conditions.

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Alleged Violations

The United States alleged that each Hyundai and Kia vehicle identified by the table below has a higher road load force than was described in the application for the COC for the vehicle. Accurate road load force is critical for obtaining accurate results in the vehicle emission testing that determines GHG emissions and fuel economy. Therefore, each production vehicle within the test groups identified by the table below does not conform in a material respect, namely road load force, to the vehicle specifications described in the corresponding COC application. As such, Hyundai and Kia allegedly violated the Clean Air Act each time it sold one of the approximately 1,181,776 new motor vehicles within these test groups.

The EPA discovered these violations in 2012 during audit testing. This involved running tests to measure road load force, called coastdown tests, on various production vehicles from many manufacturers. In a coastdown test, one drives a test vehicle on an outdoor track, allows the vehicle to coast in neutral from a high speed, and measures how quickly the vehicle loses speed. Coastdown testing of certain representative Hyundai and Kia vehicles yielded road load forces that were higher, in some cases substantially higher, than what Hyundai and Kia reported in the application for the COCs for those vehicles.

The EPA subsequently investigated the coastdown test protocol Hyundai and Kia used to measure the road load force of their vehicles. That protocol appears to have included numerous elements that, once aggregated, generated inaccurately low road load forces. For example, Hyundai and Kia restricted their testing to a temperature range where its vehicles coasted farther and faster and prepared vehicle tires for optimized results. In

processing test data, Hyundai and Kia chose favorable results rather than average results from a large number of tests. In certain cases, Hyundai and Kia relied predominantly on data gathered when test vehicles were aided by a tailwind.

In November 2012, Hyundai and Kia restated the fuel economy ratings for many of their [2011–2013 vehicles](#).

Model Year	Manufacturer	Test Group	Model(s)
2012	Hyundai	CHYXV01.6RW5	Accent
		CHYXV01.8SW5	Elantra
		CHYXV01.8SPC	Elantra PZEV
		CHYXV01.6AW5	Veloster
	Kia	CKMXV01.6BW5	Rio
		CKMXV01.6AW5	Soul 1.6L, Soul Eco 1.6L
		CKMXV02.0LW5	Soul 2.0L
2013	Hyundai	DKMXV01.6DBE	Accent, Veloster
		DKMXV02.0DCE	Elantra, Elantra Coupe, Elantra GT
		DHYXV01.8BDP	Elantra PZEV, Elantra Coupe PZEV, Elantra GT PZEV
		DHYXV02.01TE	Sante Fe Sport 2.0L Turbo
		DHYXV02.41UE	Sante Fe Sport 2.4L
	DHYXV01.61CE	Veloster Turbo	
	Kia	DKMXV01.6DBE	Rio, Rio Eco, Soul 1.6L
		DKMXV02.0DCE	Soul 2.0L, Soul Eco 2.0L

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Injunctive Relief

The consent decree requires defendants to enact three types of injunctive relief:

Greenhouse Gas Emission Credit Forfeiture

This case concerns the EPA's tailpipe GHG emission standards. Those standards took effect in the 2012 model year and will become increasingly stringent with each subsequent model year. The standards are expressed in terms of grams of GHGs (calculated as an equivalent to carbon dioxide) per mile, or gpm, for the average across an automaker's whole fleet of vehicles.

One way automakers are allowed to comply with the standard is through "averaging, banking and trading" of GHG emission credits. Credits represent surplus emission reductions that manufacturers achieve beyond those required under the emission standards. If the vehicles in an automaker's fleet, on average, emit less gpm than the standard for that model year, that automaker generates one GHG emission credit for each metric ton of GHGs by which they beat the standard. If the vehicles in an automaker's fleet, on average, emit more gpm than the standard for that model year, that automaker either (1) incurs a credit deficit equal to the number of metric tons of GHGs by which it fell short of the standard, or (2) uses GHG emission credits—either previously generated or purchased from another automaker—to make up the difference and meet the standard. Therefore, one GHG emission credit is adequate to demonstrate compliance, and equal to an actual vehicle improvement that reduces lifetime emissions by one metric ton of GHGs. Automakers can carry a deficit for three model years before they are considered to have violated the fleet-based GHG standard.

In this case, just as Hyundai and Kia over-stated fuel economy, they under-stated the GHG emissions of their fleets by approximately 4,750,000 metric tons. To ensure that Hyundai and Kia cannot take advantage of emission credits they did not rightfully earn, Hyundai and Kia will forfeit 4,750,000 metric tons worth of GHG emission credits. The forfeiture of 4,750,000 GHG emission credits corrects these automakers' compliance status, and puts them in the place they would be had they accurately reported their GHG emissions in the first place.

The forfeited credits are estimated to be worth in excess of \$200 million. The value for GHG emission credits is not set or controlled by EPA; it is determined by the market of automakers that buy and sell these credits.

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Corrective Measures

Under the decree, Hyundai and Kia must take certain measures to prevent future violations like those alleged here. These corrective measures must be completed before defendants perform vehicle emission testing to certify their model year 2017 vehicles. The defendants must reorganize their certification group, revise test protocols, improve management of test data, and enhance employee training.

Audit Testing

Until the above-described corrective measures are fully implemented, defendants must audit their fleets to ensure that vehicles sold to the public conform to the vehicles' certification. These audits will involve performing coastdown testing in order to measure the test vehicle's road load force. The audit team will be in the United States, will be independent from the group that performed the original certification work, and will not have access to the original certification test data.

The corrective measures and audit testing will cost approximately \$50 million.

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Health and Environmental Benefits

In 2009, the EPA found that current and projected concentrations of GHGs threaten the public health and welfare of current and future generations. At the same time, EPA found that GHG emissions from motor vehicles contribute to these threats, which include: hotter, longer heat waves that threaten the health of the sick, poor or elderly; increases in ground-level ozone pollution linked to asthma and other respiratory illnesses; as well as other threats to the health and welfare of Americans.

To address these threats of climate change, EPA set limits on GHG emissions for passenger vehicles for model years 2012 through 2025. This enforcement effort against Hyundai and Kia protects the integrity of the light-duty vehicle GHG standards by ensuring that emissions reduction credits claimed by automakers are tied to actual reductions of GHGs. Without this enforcement action, Hyundai and Kia would have been credited for reducing emissions by roughly 4,750,000 in excess of what they actually achieved. This is equal to the GHG emissions from each of the following: 1,000,000 passenger vehicles being driven for a year; energy use from over 433,000 homes for one year; over 11 million barrels of oil consumed; and over 14 months of operation from an average coal-fired power plant in the U.S.

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Civil Penalty

The consent decree requires defendants to pay \$100 million. This is the largest-ever penalty under the Clean Air Act. Payment is due within 15 days from the date that the court enters the decree. Defendants must pay \$93,656,600 to the United States and \$6,343,400 to the California Air Resources Board.

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Comment Period

The proposed settlement, lodged in the United States District Court for the District of Columbia, is subject to a 30-day public comment period and final court approval. Information on submitting comment is available at the [Department of Justice](#) website.

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