

**MID-CAFE REPORT
FOR
2017 MODEL YEAR
OF
HYUNDAI MOTOR COMPANY**

- Light Trucks -



NOTE : THIS REPORT CONTAINS [REDACTED] INFORMATION.

THE PRODUCTION VOLUME IS [REDACTED] INFORMATION
AND THIS INFORMATION IS DEEMED BY HMC TO BE EXEMPT
FROM DISCLOSURE UNDER 5 U.S.C. 552(B)(4) AND
49 U.S.C 32910(c).

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Note * : These sections contain [REDACTED] information

I. Introduction

As required by 49 CFR Part 537.9, estimated fuel economy values for Santa Fe FWD, Santa Fe Ultimate FWD, Santa Fe AWD, Santa Fe Ultimate AWD are included in this report.

The certification emission-data and fuel economy data of the above-mentioned vehicles used to get the following fuel economy values were tested in accordance with applicable exhaust emission test procedures and complied with applicable 2017 exhaust emission standards as defined 40 CFR §86.

II. Projected Average and Required Fuel Economy

1. Projected Average Fuel Economy

- LT : **26.4** MPG (without A/C efficiency & off-cycle credits)

- LT : **27.1** MPG (with A/C efficiency & off-cycle credits)

2. Projected Required Fuel Economy

- LT : **31.2** MPG

At this point in time and based on available best present information, the above projections represent the Hyundai Motor Company (HMC) average and required fuel economy for the 2017 model year for the purpose of the Act.

II. Projected Average and Required Fuel Economy



- Projected Required Fuel Economy

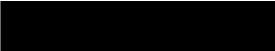
Projected Required	31.2
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Model Type Description	Carline	Basic Engine (disp)	Drive	T/M class	Base Tire	Projected sales	Track width FR (inch)	Track width RR (inch)	Average Track width (inch)	Wheelbase (inch)	footprint (sqr feet)	Target standard	ETW	IWC
Santa Fe FWD 3.3 AT	Santa Fe FWD	3.3	FWD	SA6	235/60R18	19,079	64.1	64.5	64.3	110.2	49.2	31.17	4,250	4,000
Santa Fe Ultimate FWD 3.3 AT	Santa Fe Ultimate FWD	3.3	FWD	SA6	235/55R19 P235/55R19	12,173	64.1	64.5	64.3	110.2	49.2	31.17	4,250	4,000
Santa Fe AWD 3.3 AT	Santa Fe AWD	3.3	AWD	SA6	235/60R18	16,527	64.1	64.5	64.3	110.2	49.2	31.17	4,500	4,500
Santa Fe Ultimate AWD 3.3 AT	Santa Fe Ultimate AWD	3.3	AWD	SA6	235/55R19 P235/55R19	12,081	64.1	64.5	64.3	110.2	49.2	31.17	4,500	4,500

Projected Required	31.2
Total Sales Volume	59,860

$$CAFE_{required} = \frac{\sum_i PRODUCTION_i}{\sum_i TARGET_i}$$

II. Projected Average and Required Fuel Economy



- Projected average Fuel Economy

Projected Average	26.4
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Model Type Description	Carline	Basic Engine (disp)	Drive	T/M class	Base Tire	Projected sales	City_FE	Hwy_FE	Combined FE	IWC	Model Type Comb.FE	Model Type Vol
Santa Fe FWD 3.3 AT	Santa Fe FWD	3.3	FWD	SA6	235/60R18	19,079	22.8	35.8	27.2534	4,000	27.3	15,966
Santa Fe Ultimate FWD 3.3 AT	Santa Fe Ultimate FWD	3.3	FWD	SA6	235/55R19 P235/55R19	12,173	21.7	34.0	25.9196	4,000	25.9	8,740
Santa Fe AWD 3.3 AT	Santa Fe AWD	3.3	AWD	SA6	235/60R18	16,527	22.7	35.1	26.9909	4,500	27.0	14,178
Santa Fe Ultimate AWD 3.3 AT	Santa Fe Ultimate AWD	3.3	AWD	SA6	235/55R19 P235/55R19	12,081	21.1	32.0	24.9197	4,500	24.9	8,950

Average	26.4
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IV. A/C Efficiency Credits

Model Type Description	Carline	Basic Engine (disp)	Drive	T/M class (Drive, type, gear)	Base Tire	Refrigerant	A/C Drive System	Projected sales	Reduc'd Reheat with variable displ compressor 2.2 qpm	Reduced Reheat with fixed displ or pneumatic compressor 1.4 qpm	Default to Recirc with feedback sensor 2.2 qpm	Default to Recirc without feedback sensor 1.4 qpm	Efficient Slower Motor Controls 1.1 qpm	Internal Heat Exchanger 1.4 qpm	Improved Condenser and/or Evaporator (requires EPA approval) 1.4 qpm	Oil Separator (requires EPA approval) 0.7 qpm	Total Menu-based Credits qpm	A/C Efficiency Credit megagrams	VLM
Santa Fe FWD 3.3 AT	Santa Fe FWD	3.3	FWD	SA6	235/60R18	R134a	V-Belt Driven	19,079	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	17,038	225,865
Santa Fe Ultimate FWD 3.3 AT	Santa Fe Ultimate FWD	3.3	FWD	SA6	235/55R19 P235/55SR19	R134a	V-Belt Driven	12,173	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	5,381	225,865
Santa Fe AWD 3.3 AT	Santa Fe AWD	3.3	AWD	SA6	235/60R18	R134a	V-Belt Driven	16,527	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	16,142	225,865
Santa Fe Ultimate AWD 3.3 AT	Santa Fe Ultimate AWD	3.3	AWD	SA6	235/55R19 P235/55SR19	R134a	V-Belt Driven	12,081	2.2	0.0	0.0	0.0	0.0	1.4	0.0	0.7	4.3	6,277	225,865

ACCredit	58,137
LT volume	59,860
FCV _{ac} (Gal/mi)	0.000483851

$$FCV_{Ac} \text{ (gal/mi)} = \frac{(ACCredit \times 1,000,000)}{(VLM \times Production \times 8887)}$$

V. Off-cycle Credits

Model Type Description	Carline	Basic Engine (disp)	Drive	TM class (Drive, type, gear)	Base Tire	Description	Projected sales	Off-cycle benefit per vehicle	Off-cycle credits	VLM
								gpm	megagrams	
Santa Fe FWD 3.3 AT	Santa Fe FWD	3.3	FWD	SA6	235/60R18	ATF warmer 3.2, Glazing 1.1	19,079	4.3	18,530	225,865
Santa Fe Ultimate FWD 3.3 AT	Santa Fe Ultimate FWD	3.3	FWD	SA6	235/55R19 P235/55R19	Active seat ventilation 1.3, ATF warmer 3.2, Glazing 1.0	12,173	5.5	15,122	225,865
Santa Fe AWD 3.3 AT	Santa Fe AWD	3.3	AWD	SA6	235/60R18	ATF warmer 3.2, Glazing 1.1	16,527	4.3	16,051	225,865
Santa Fe Ultimate AWD 3.3 AT	Santa Fe Ultimate AWD	3.3	AWD	SA6	235/55R19 P235/55R19	Active seat ventilation 1.3, ATF warmer 3.2, Glazing 1.0	12,081	5.5	15,008	225,865

OCCredit	64,711
Truck volume	59,860
FCV _{oc} (Gal/mi)	0.000538564

$$FCV_{oc} \text{ (gal/mi)} = \frac{(OCCredit \times 1,000,000)}{(VLM \times Production \times 8887)}$$

VI. Projected Average Fuel Economy Adjustment

Average MPG	27.1
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P4	MPG	26.4
P6	FCIV _{AC} (Gal/mi)	0.000483851
P7	FCIV _{OC} (Gal/mi)	0.000538564
N/A	FCIV _{PU} (Gal/mi)	0

$$\text{Average MPG} = \frac{1}{\left[\frac{1}{\text{MPG}} - (\text{FCIV}_{AC} + \text{FCIV}_{OC} + \text{FCIV}_{PU}) \right]}$$