





#Smooth  
#Materials

#Lightweight construction  
#Green mobility

#Energy

Campus\_NLI  
#Traffic  
#Technology



Lightyear

[www.lightyear.one](http://www.lightyear.one)



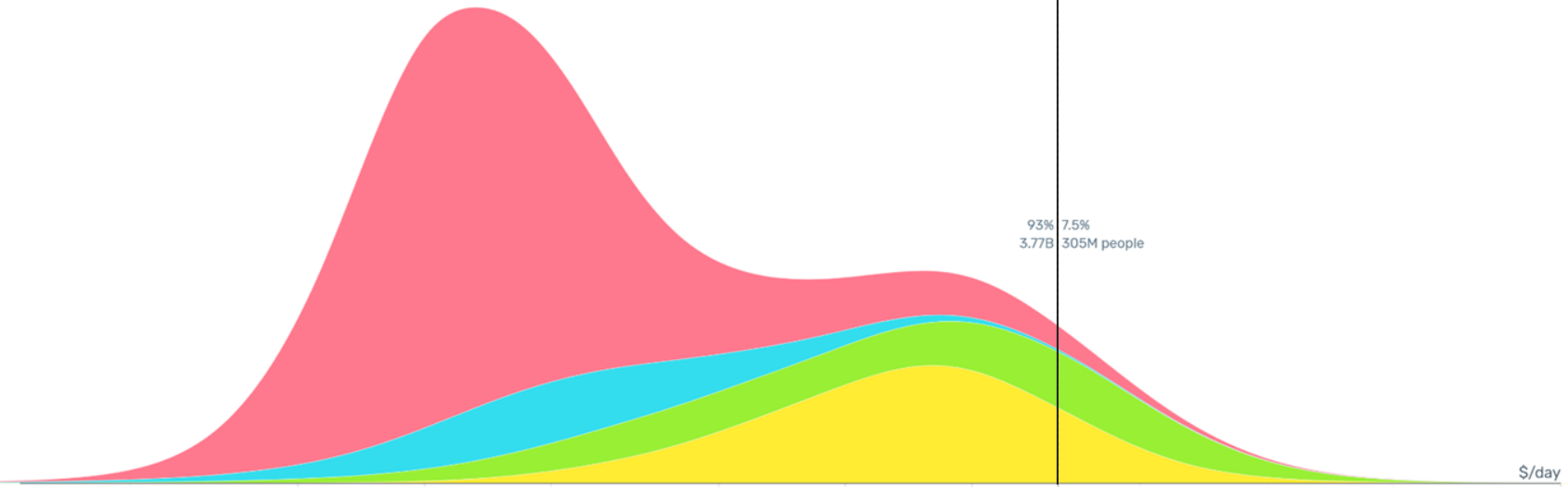
Color World in 4 Regions



Select Search...

- Africa
- Asia
- Europe
- The Americas

# 1975



\$/day

Src: Gapminder



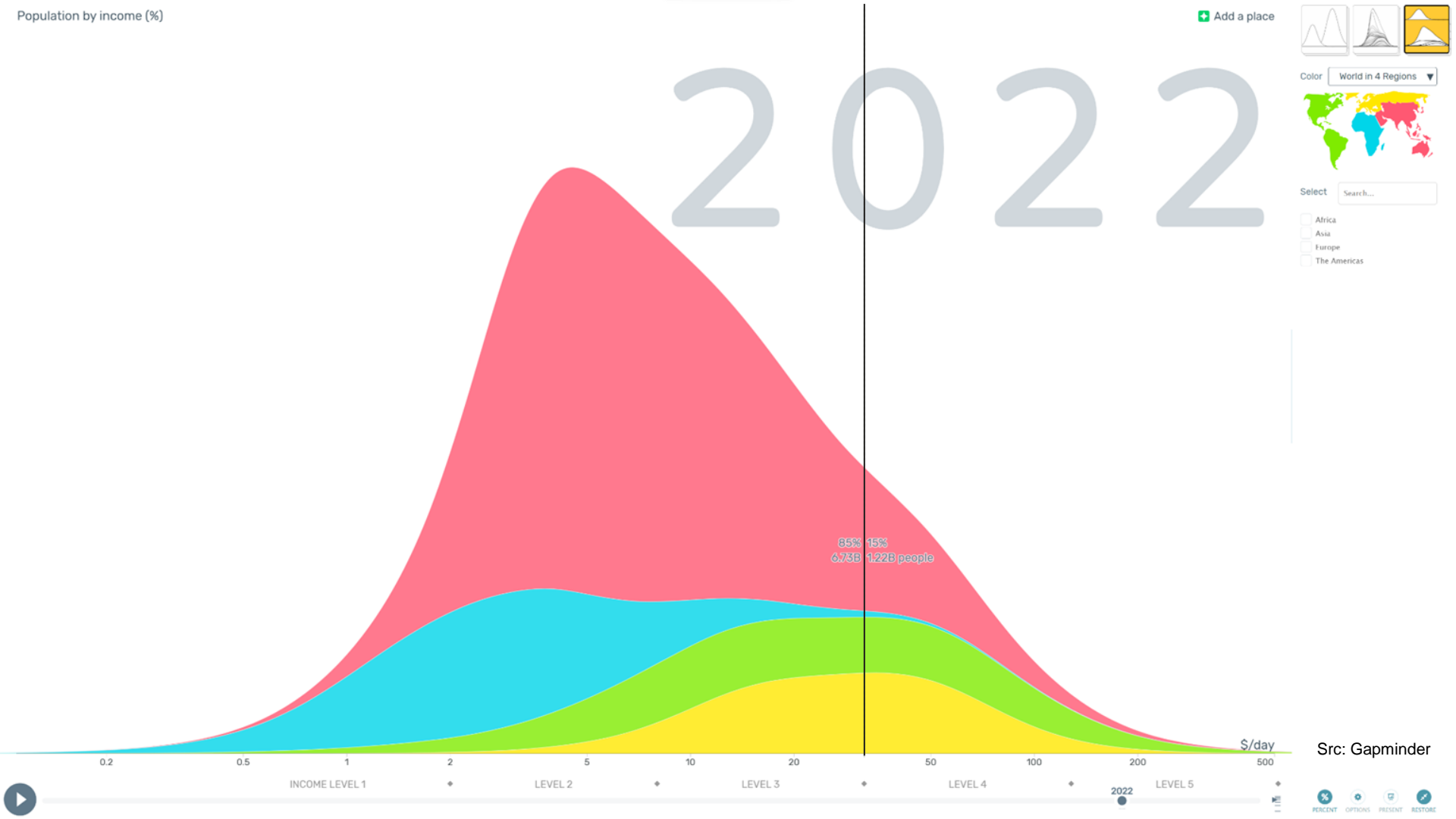
Color World in 4 Regions



Select Search...

- Africa
- Asia
- Europe
- The Americas

# 2022



Src: Gapminder



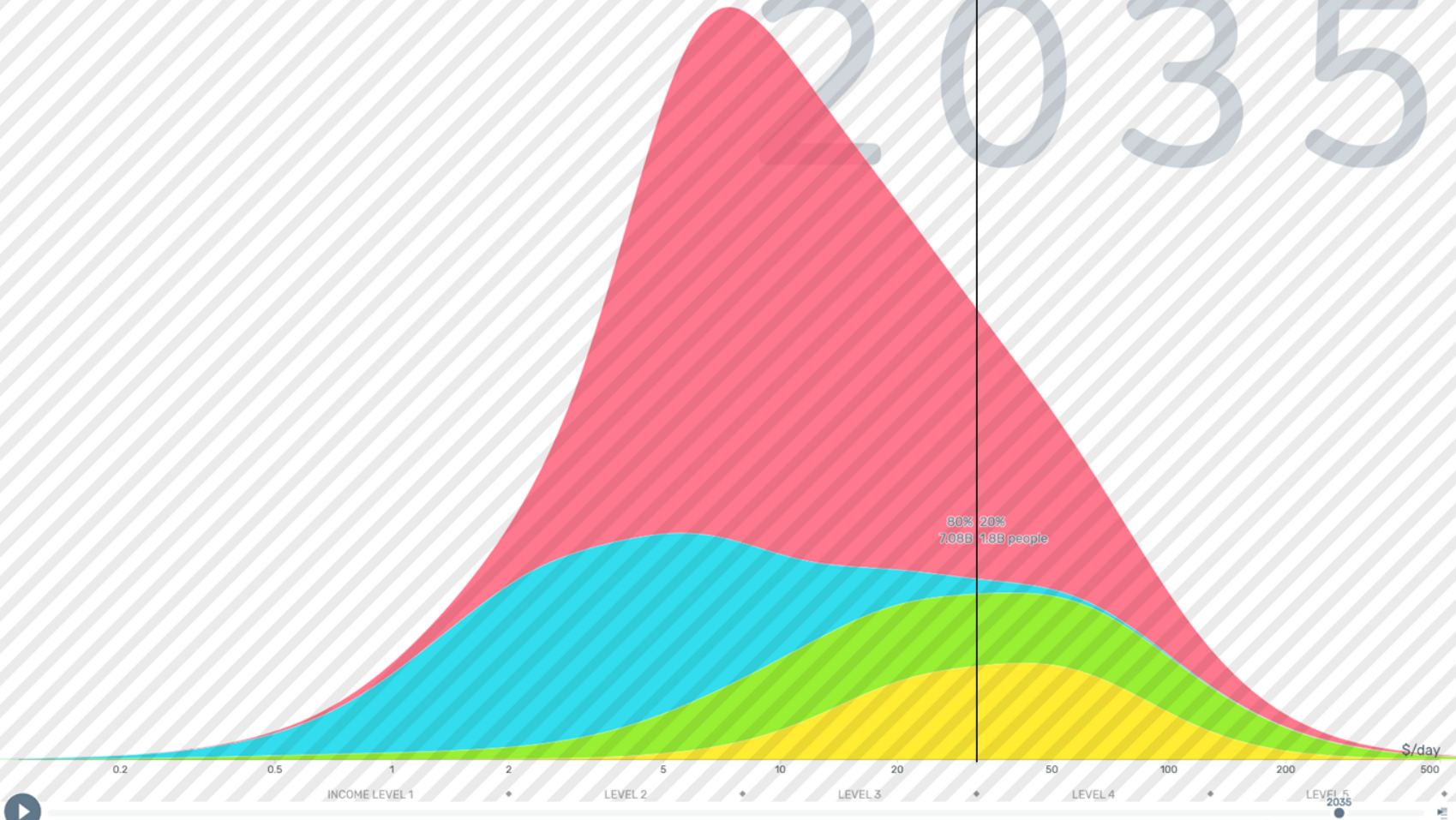
Color World in 4 Regions



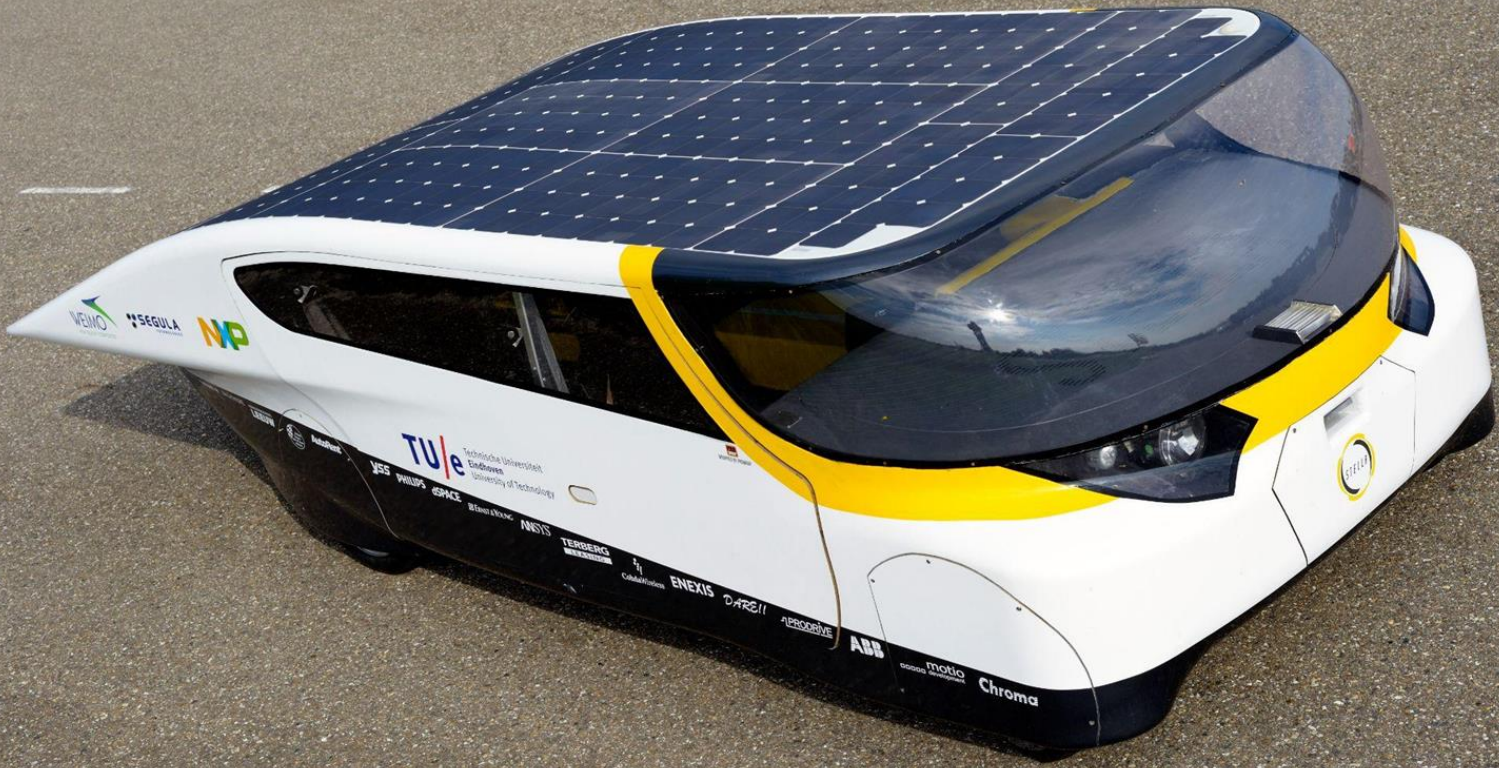
Select Search...

- Africa
- Asia
- Europe
- The Americas

# 2035



Src: Gapminder



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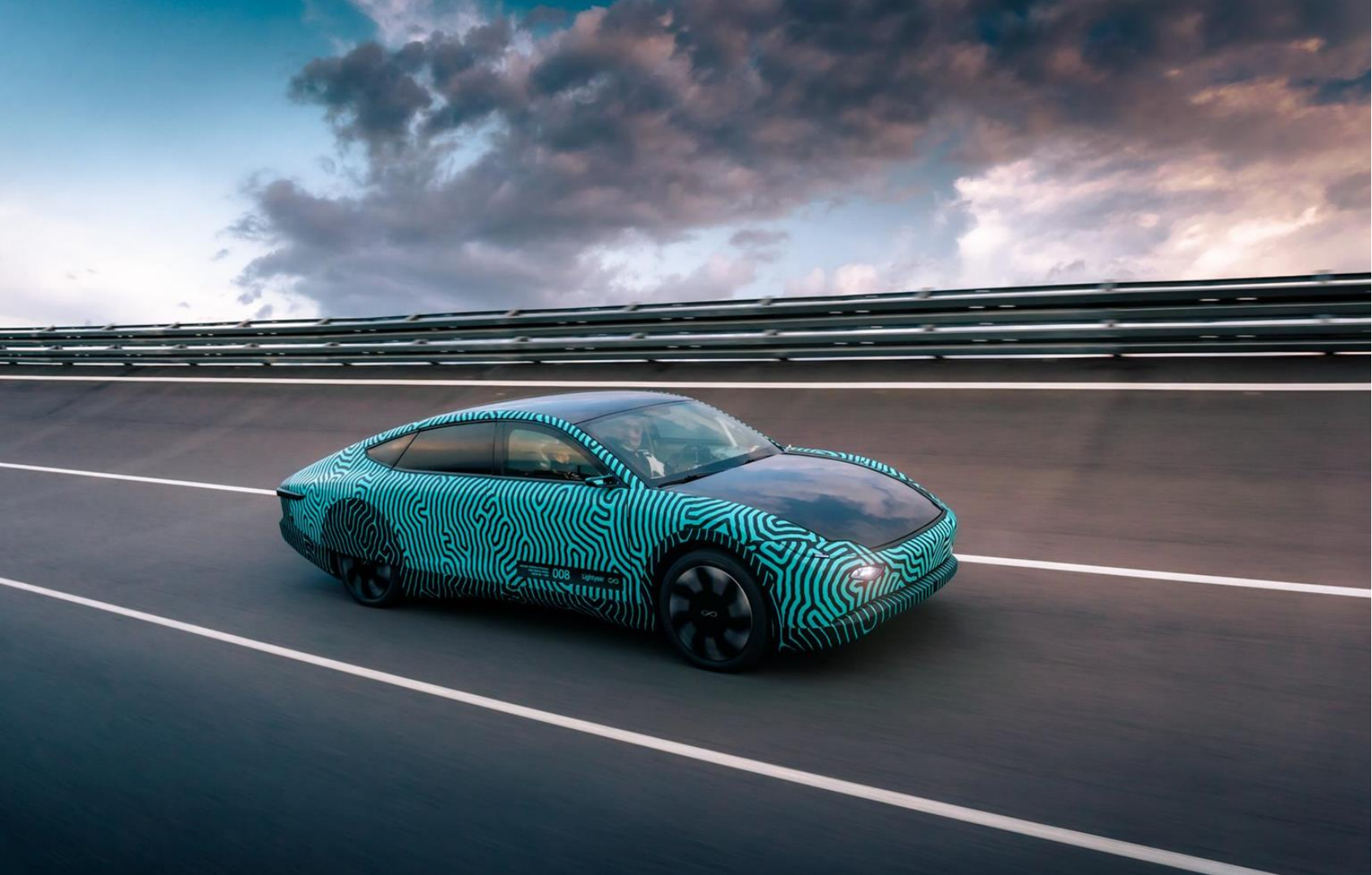


Our mission

—

Clean mobility for  
everyone, everywhere





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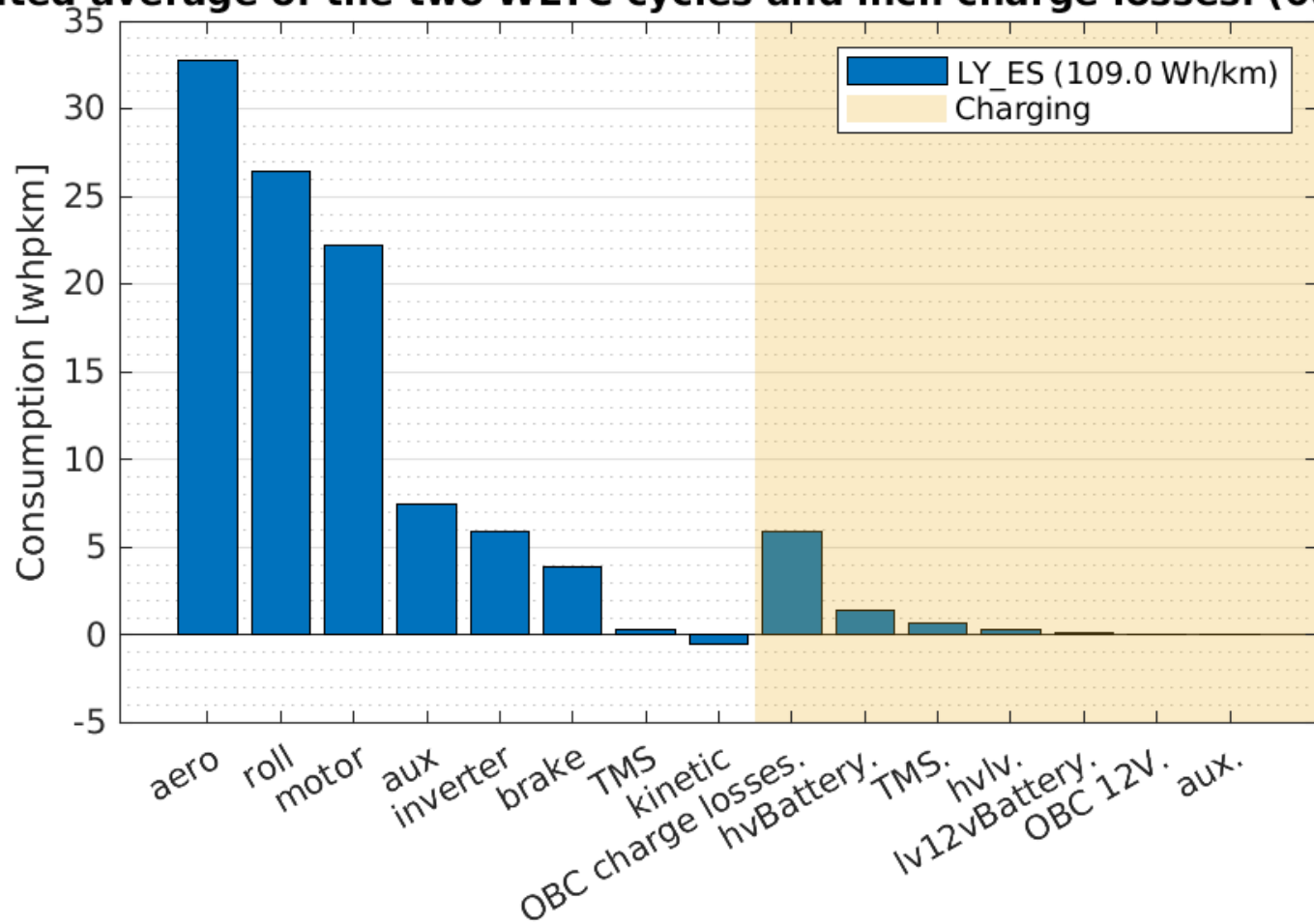
# Baseline Scenario: Target Car 20181205

Light

Car:	Car One 60 - Target		Settings			Results		
Mass (empty)	1250	[kg]	Standard Slope	0	[%]	Top Speed		
Rolling Resistance	0.0085	[-]	Steep Slope	47.5	[%]	Standard Slope	186.6	[km/h]
Cd	0.182	[-]				Steep Slope	Too Steep!	[km/h]
Frontal Area	2.202	[m2]	Gravitational constant	9.81	[m/s2]	Steep Slope (peak)	12.4	[km/h]
Wheel Radius	0.3335	[m]	Air Density	1.225	[kg/m3]	Acceleration		
# Motors	4	[-]				0 - 100	8.8	[s]
Motor Power Continuous	10	[kW]	Annual Solar irradiance	1000	[kWh/m2/year]	peak on standard slope	4.09	[m/s2]
Motor Power Peak	20	[kW]	Shadow Correction	0.7	[-]	peak on steep slope	0.00	[m/s2]
Motor Torque Continuous	200	[Nm]						
Motor Torque Peak	482.5	[Nm]	Drive Cycle	WLTP		Energy Usage	105.5	[Wh/km]
Power Train Efficiency	90	[%]				Range	569	[km]
Battery Size	60	[kWh]	Passenger Weight	75	[kg]	Annual Solar Kms	7004	[km/year]
Solar Panel Area	5.05	[m2]	Nr. Of passengers	1.3	[-]	Daily Solar Kms	19	[km/day]
Cell Efficiency	22	[%]						
Conversion Efficiency	95	[%]						
Auxiliary Power	250	[W]						
HVAC Power	850	[W]						
Inertia (% of vehicle mass)	3	[%]						



**Consumption breakdown for WLTP for config "LY\_ES",  
 eighted average of the two WLTC cycles and incl. charge losses. (08-Jun-20**





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V2.0 220609

Thank you.

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