



EV Remote Internship Project Report

Created by

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Project Name

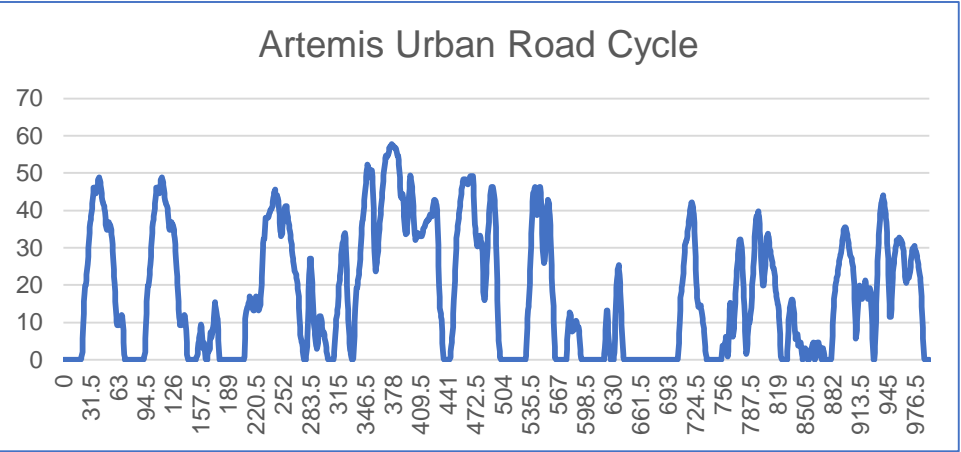
Ather 450

Case Studies: Artemis Urban/Artemis Rural/HWFET Drive Cycle

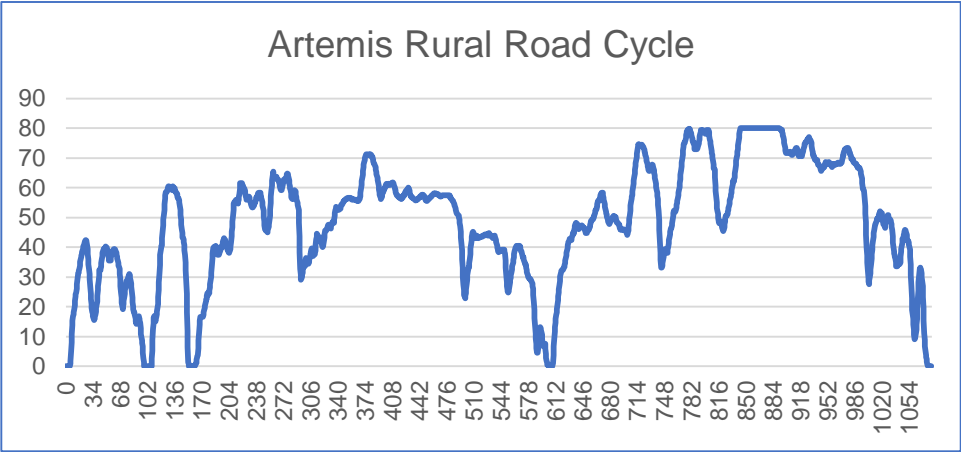


Drive Cycles

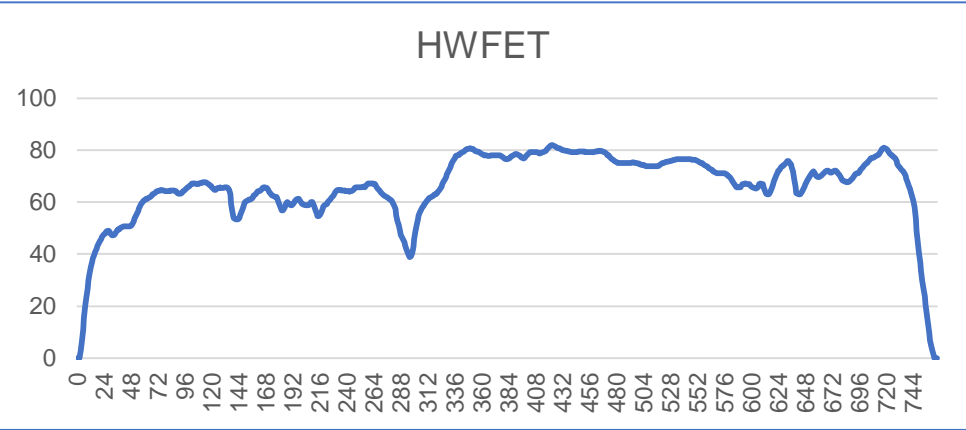
Artemis Urban Drive Cycle



Artemis Rural Drive Cycle



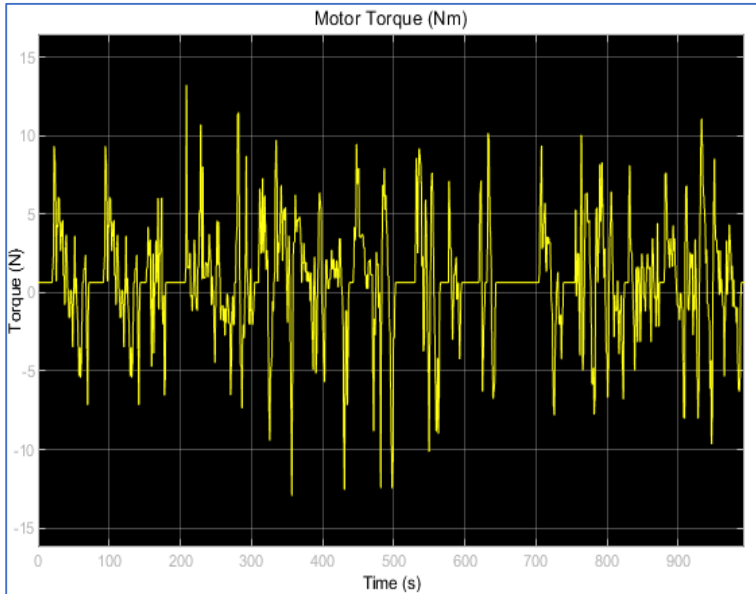
HWFET Drive Cycle



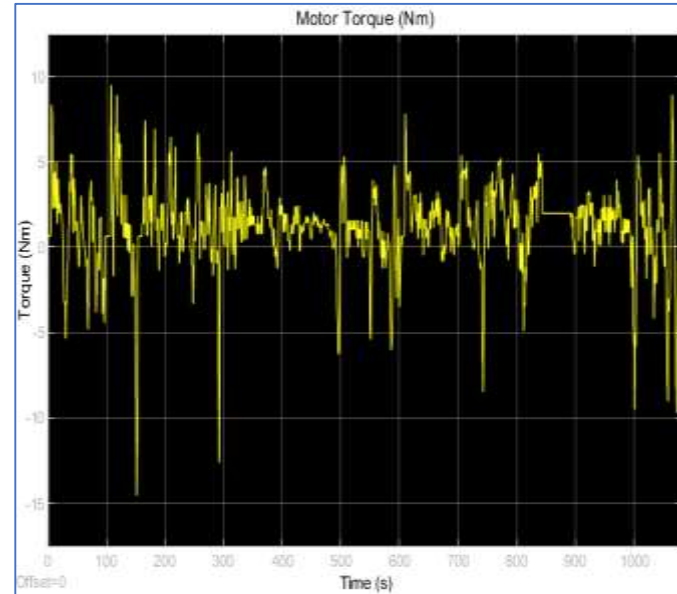


Motor Torque for different Drive Cycles

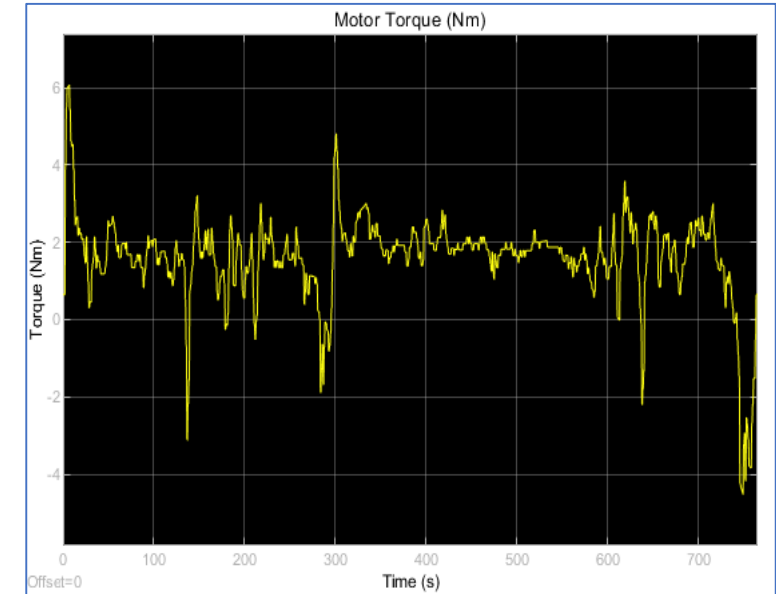
Artemis Urban Drive Cycle



Artemis Rural Drive Cycle



HWFET Drive Cycle



Nominal Torque = 13 Nm

Nominal Torque = 9 Nm

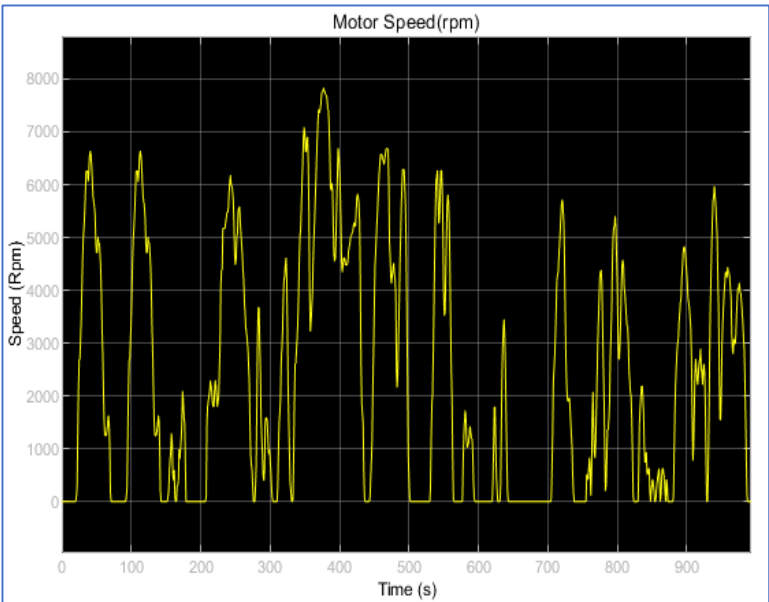
Nominal Torque = 6 Nm

Nominal Torque = 13 Nm

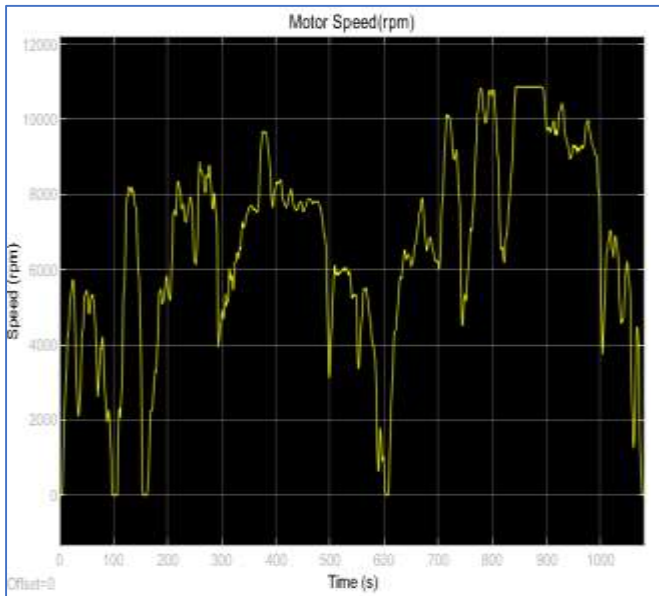


Motor Speed for different Drive Cycles

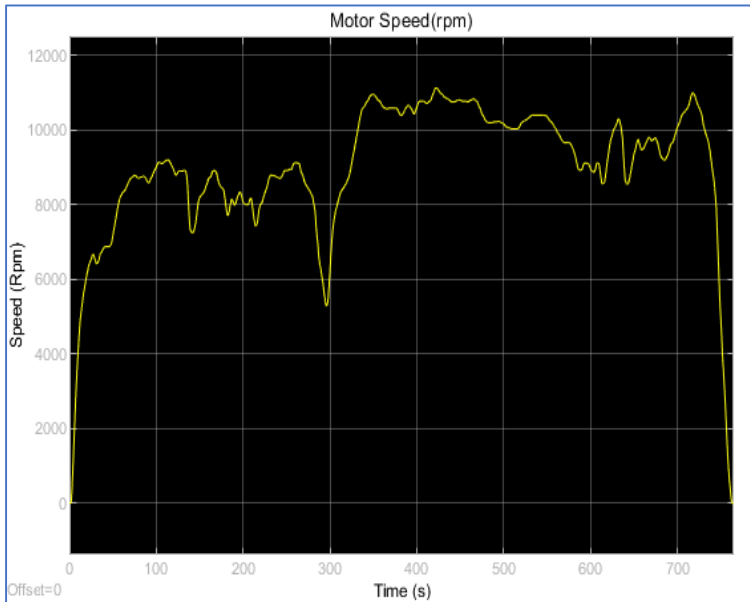
Artemis Urban Drive Cycle



Artemis Rural Drive Cycle



HWFET Drive Cycle



Motor Speed = 7800

Motor Speed = 11000

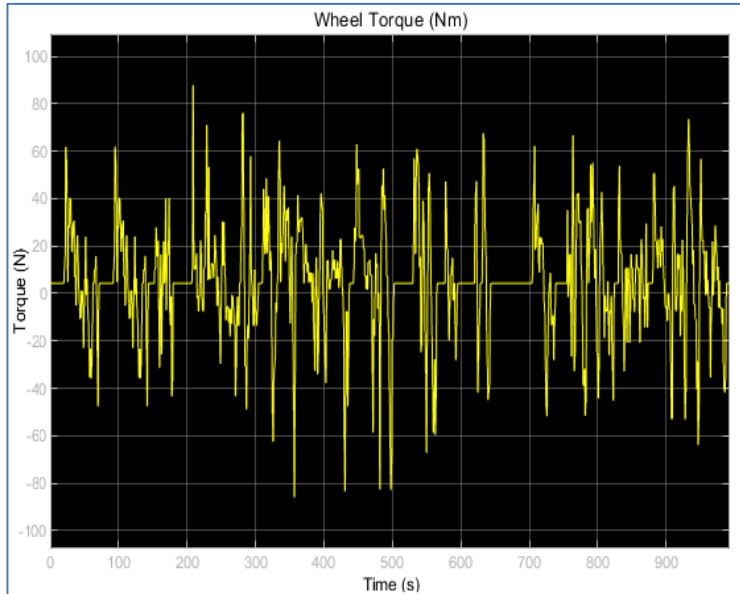
Motor Speed = 11000

Motor Speed = 11000 rpm

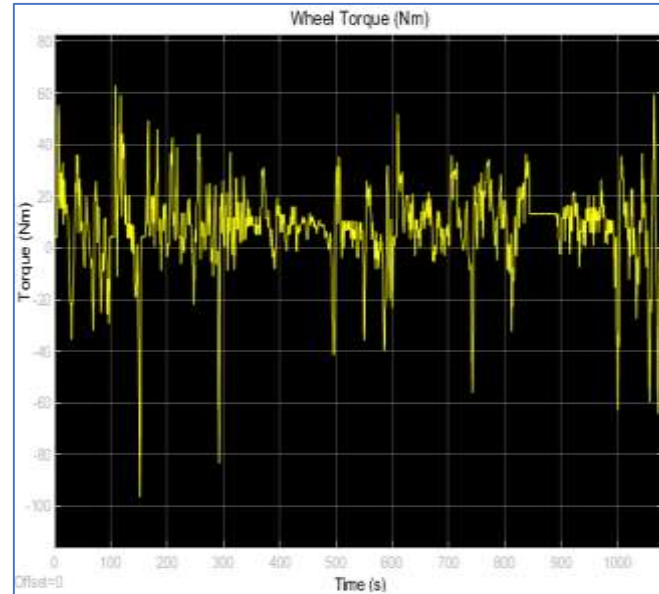


Wheel Torque for different Drive Cycles

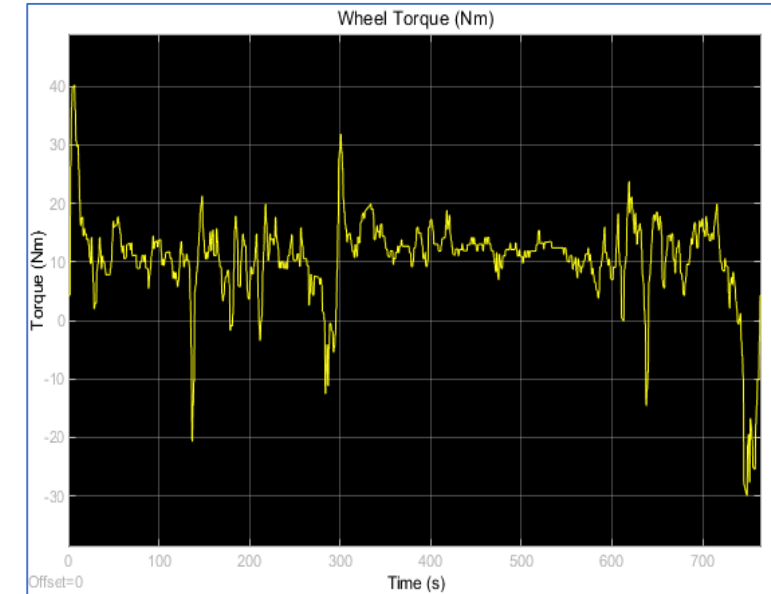
Artemis Urban Drive Cycle



Artemis Rural Drive Cycle



HWFET Drive Cycle



Nominal Torque = 87

Nominal Torque = 63

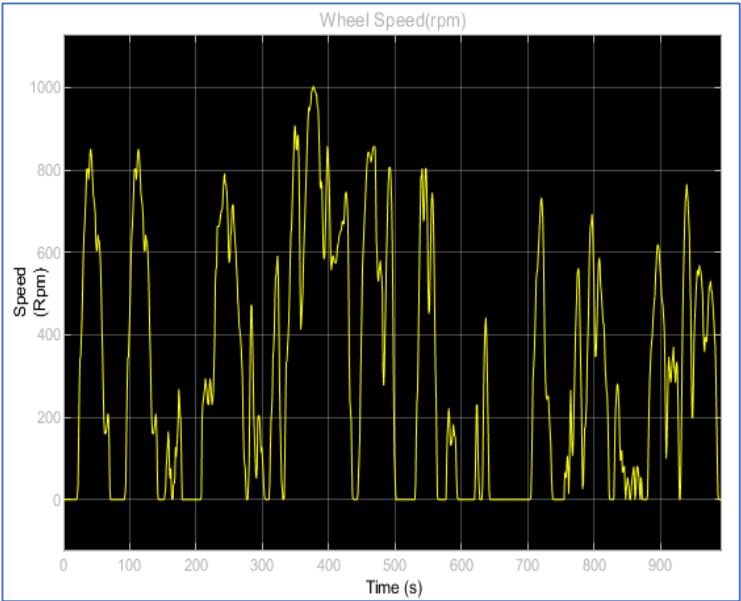
Nominal Torque = 40

Average Nominal Torque = 40 Nm – 87Nm

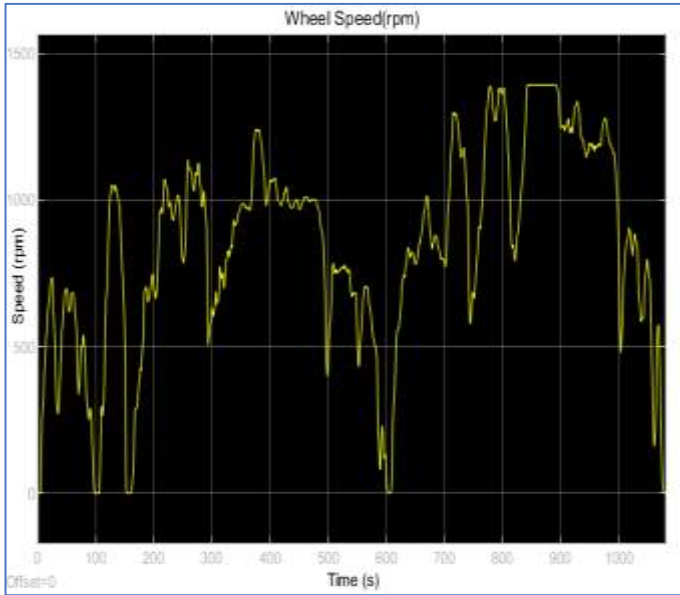


Wheel Speed for different Drive Cycles

Artemis Urban Drive Cycle



Artemis Rural Drive Cycle



HWFET Drive Cycle



Wheel Speed = 1000

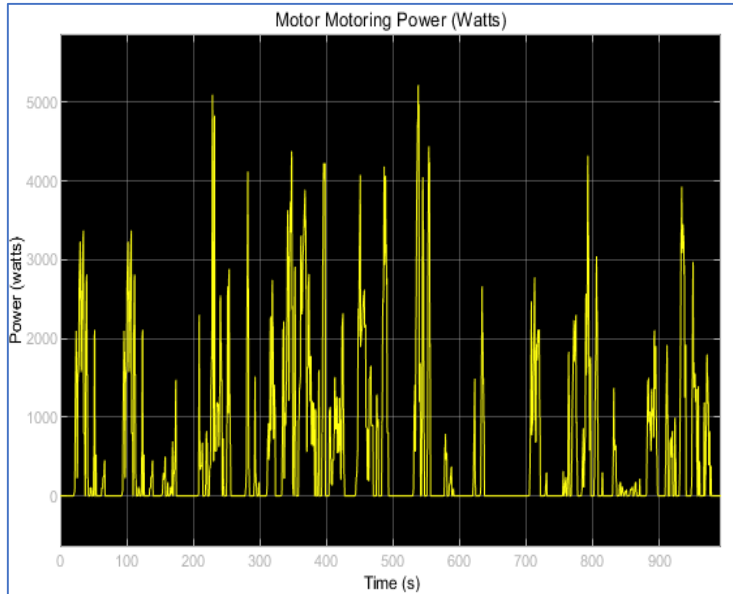
Wheel Speed = 1400

Wheel Speed = 1462

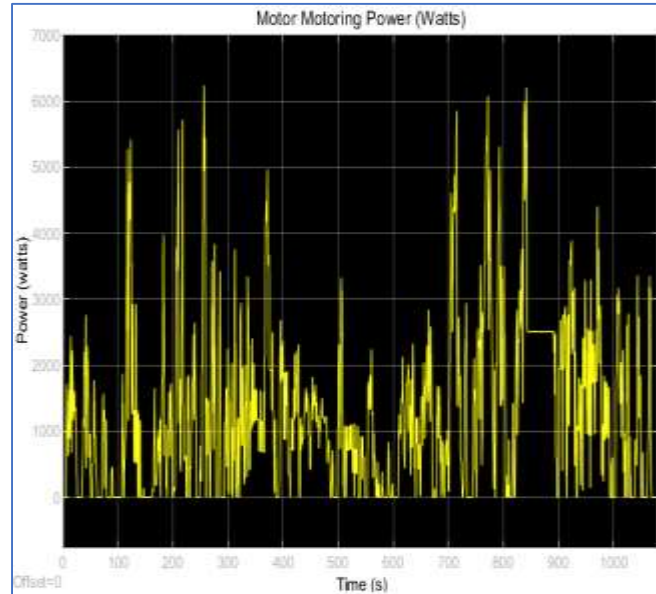


Motor Power for different Drive Cycles

Artemis Urban Drive Cycle



Artemis Rural Drive Cycle



HWFET Drive Cycle



Nominal Power = 3000

Nominal Power = 3300

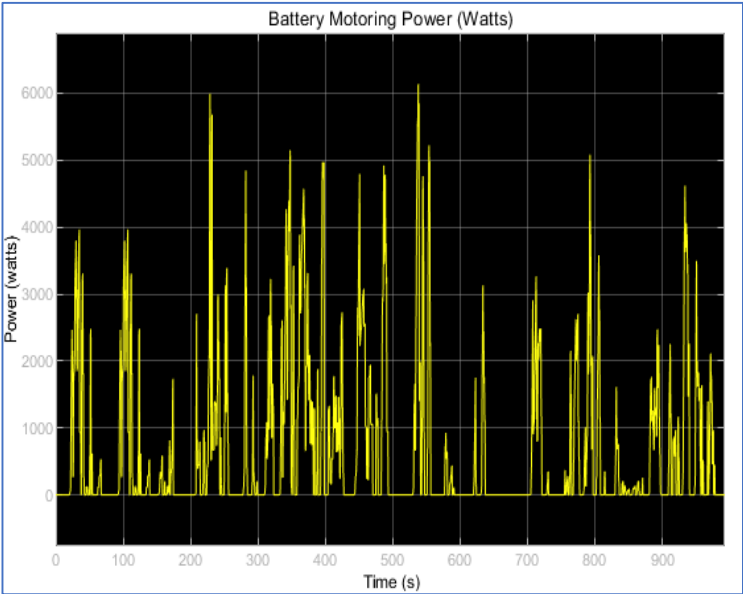
Nominal Power = 3800

Average Motor Nominal Power = 3000 to 3800 Watts



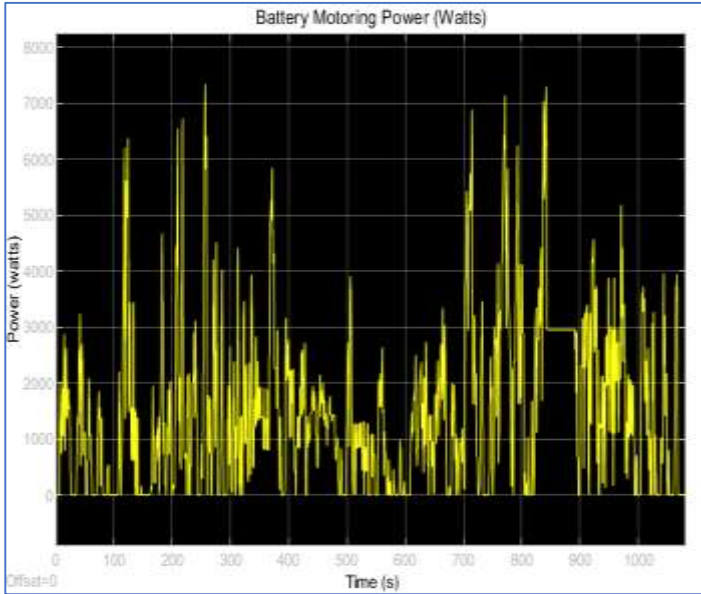
Battery Power for different Drive Cycles

Artemis Urban Drive Cycle



Nominal Power = 3000

Artemis Rural Drive Cycle



Nominal Power = 3000

HWFET Drive Cycle



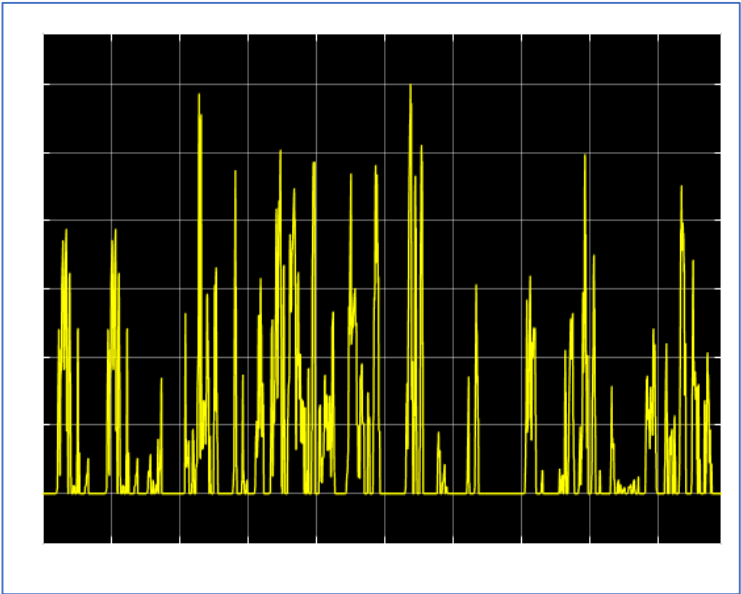
Nominal Power = 4400

Average Battery Nominal Power = 3000 to 4400 Watts

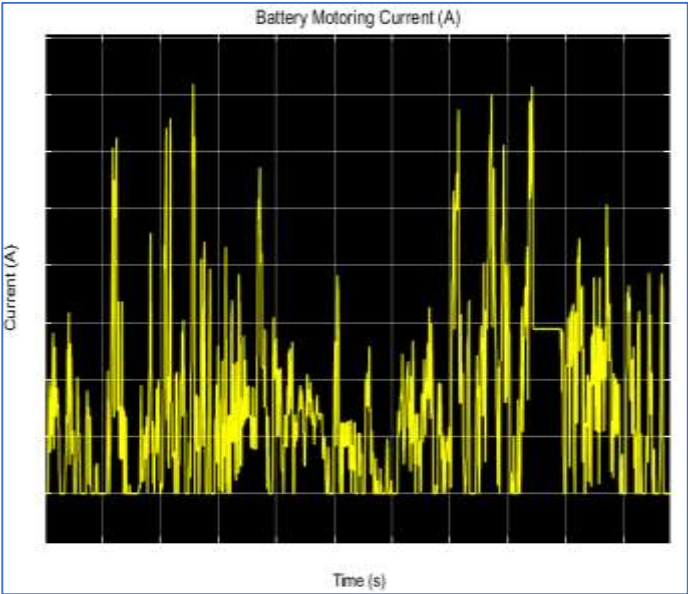


Battery Current for different Drive Cycles

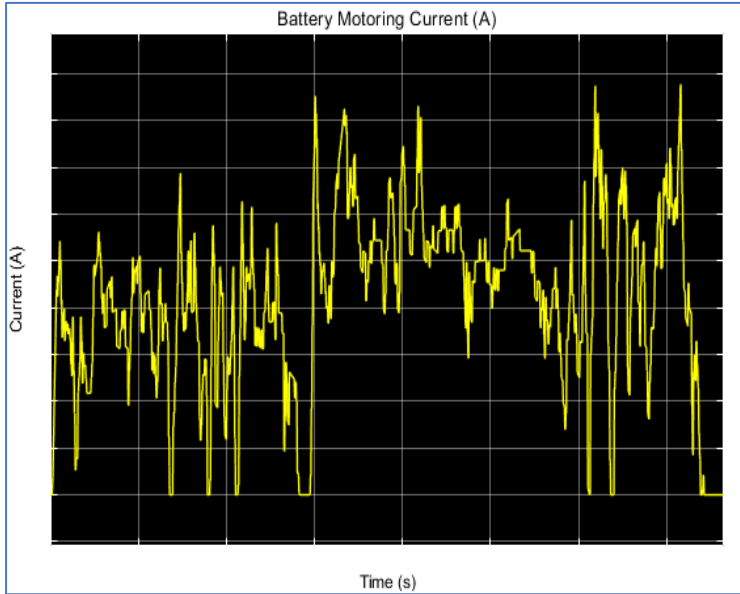
Artemis Urban Drive Cycle



Artemis Rural Drive Cycle



HWFET Drive Cycle



Nominal Current = 78

Nominal Current = 65

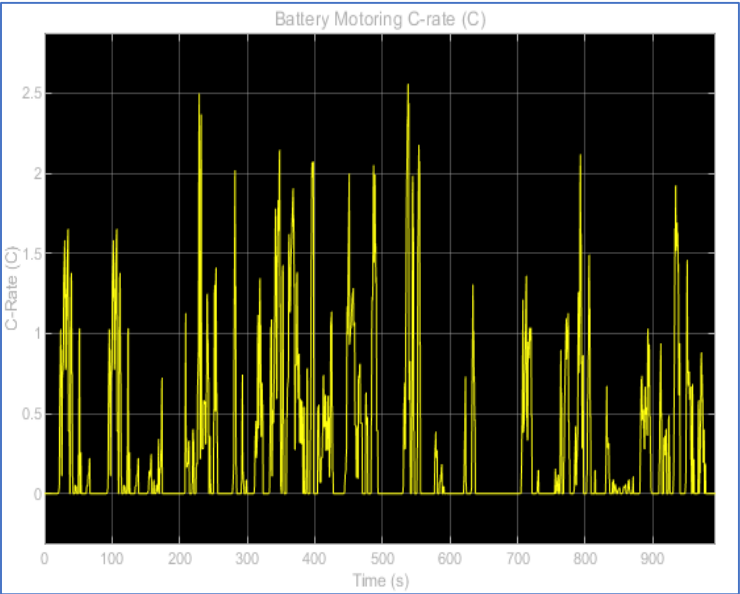
Nominal Current = 87

Average Battery Nominal Current = 65 to 87 A

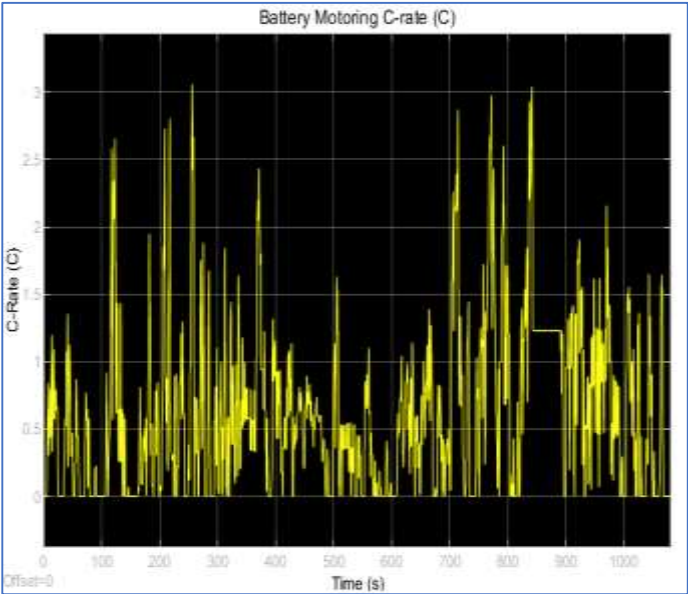


Battery Discharge C-Rate for different Drive Cycles

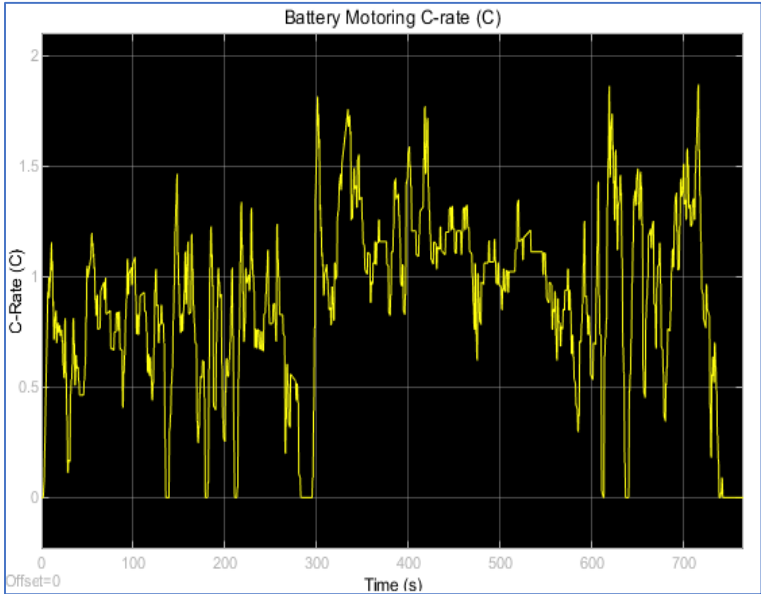
Artemis Urban Drive Cycle



Artemis Rural Drive Cycle



HWFET Drive Cycle



Nominal C-rate = 1.4

Nominal C-rate = 1.6

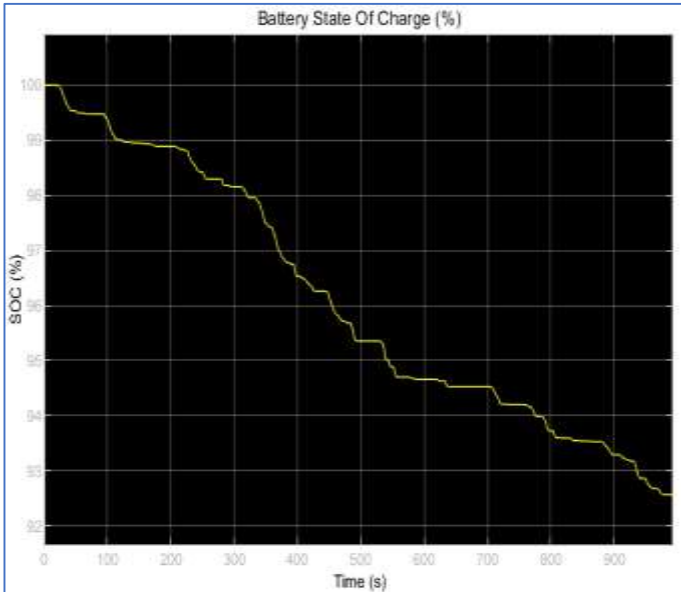
Nominal C-rate = 1.8

Average Battery Nominal C-rate = 1.4 to 1.8 C



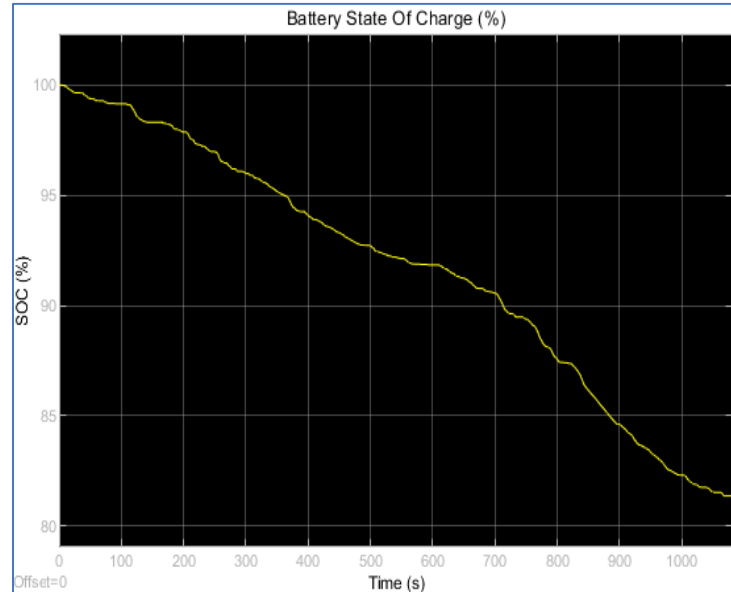
Battery SOC for different Drive Cycles

Artemis Urban Drive Cycle



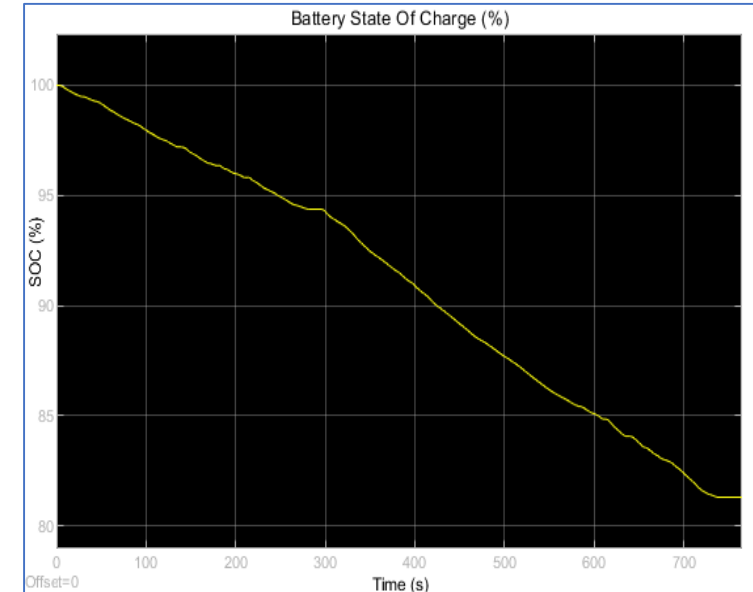
SOC = 92

Artemis Rural Drive Cycle



SOC = 82

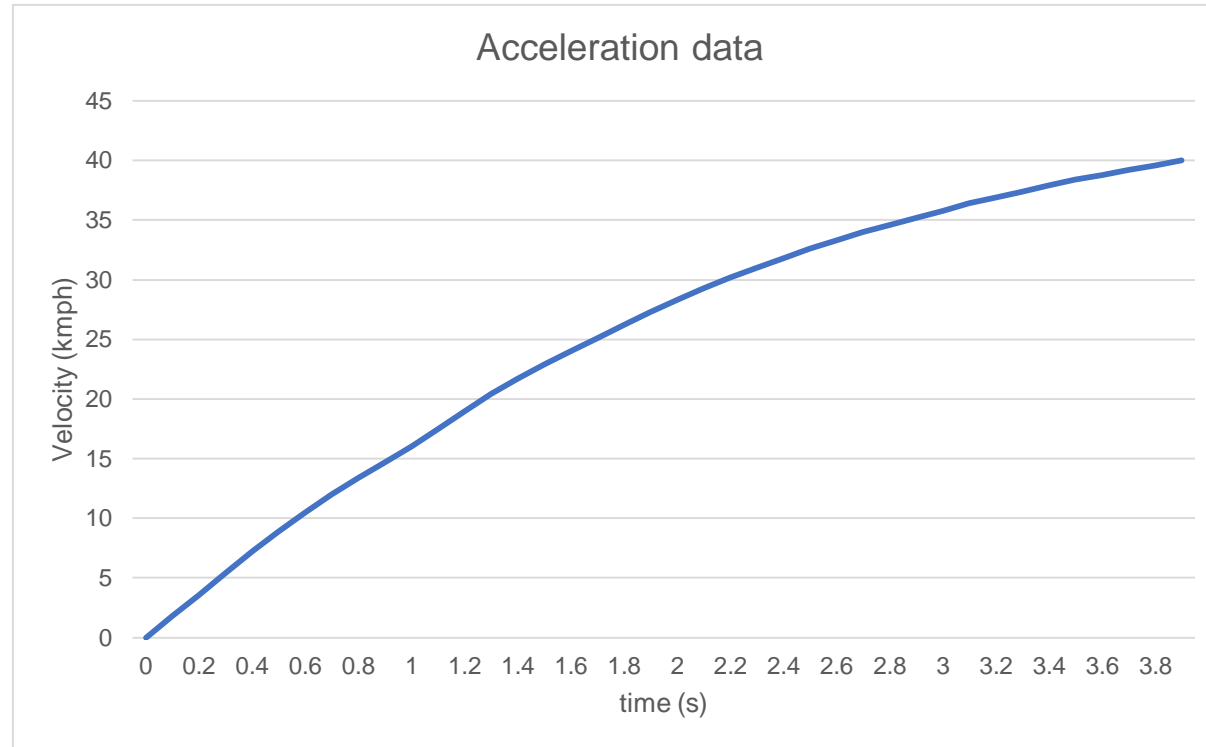
HWFET Drive Cycle



SOC = 81



Acceleration Test





Range for different Drive Cycles

Artemis Urban	Artemis Rural	HWFET
66.7 Km	78.43 Km	75 Km



Thank you

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