

NEWS LETTER



10th Anniversary

INSTITUTION OF INCORPORATED ENGINEERS, SRI LANKA - UAE BRANCH

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10th Anniversary Celebration of the Institution of Incorporated Engineers Sri Lanka UAE Branch

UAE Branch will proudly be celebrating its 10th Anniversary this year with its members.

Celebration will take place together with the Annual Sessions and the AGM in 11th November 2016 at Hotel Holiday Inn – Bur Dubai

Engineering Council Sri Lanka,

The most awaited bill of “Engineering Council of Sri Lanka” was endorsed by the parliament of the Democratic Socialist Republic of Sri Lanka, as of the gazette issued on 1.08.2016.

We, Incorporated Engineers of Sri Lanka, have to be proud that, there should be 4 members of Institution of Incorporated Engineers, Sri Lanka (IIESL) in the council, which will be chaired by the Pry minister of Sri Lanka.....

Further reading;

<http://www.iesl.lk/resources/Eng%20Act/Engibeering%20Council%20Bill%20Sri%20Lanka%20gassted.pdf>

Electric Vehicles,

E Vehicles or EVs

Electric vehicles, e-vehicles or EVs are a promising technology for the global move to zero emission vehicles (ZEVs), and this is the main impetus for e-vehicle industry.



Figure 1: Edison and a 1914 Detroit Electric model 47 (courtesy of the National Museum of American History)

Nevertheless, e-vehicles are not a new technology, which first came into the existence in mid-19th century.

E-Vehicles are the machines which uses electric or traction motors one or more for propulsion, which may be powered through an accumulator system by electricity from off-vehicle sources, or may be inbuilt with a battery or generator to convert fuel to electricity.

There are many categories of e-vehicles; BEV or FEV, EREV, PHEV, FCEV, are the main.

BEV or FEV: Battery Electric Vehicle or Full Electrical Vehicle

Those, which have electric engine with battery for energy storage and no internal combustion engine (ICE), battery to be charged from grid power or any external power source.

EREV: Electric Vehicles with a Range Extender

Those have electric engine and drive on battery electricity only and the ICE in EREVs is solely used to charge the battery and extend the vehicle's range and also the battery can be charged on the grid.

PHEV: Plug in Hybrid Electric Vehicle

Those have both an ICE and an electric engine with separate drive trains, with a battery that can be charged on the grid. Hence can run independently with ICE for limited distance. When battery is drained vehicle will run on ICE while charging the battery with same ICE.

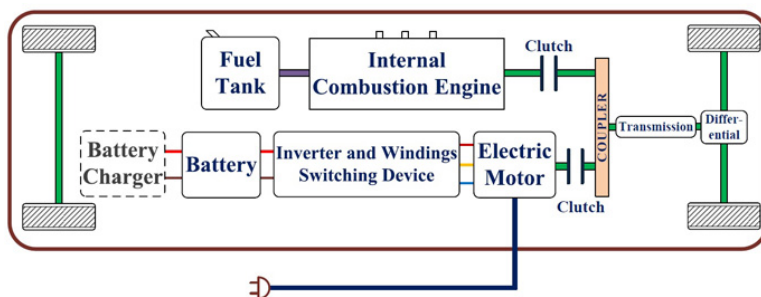


Figure 2 Typical PHEV configuration

FCEV: Fuel Cell Electrical Vehicle

Fuel cell electric vehicle (FCEV) is a type of hybrid vehicle which uses a fuel cell, instead of an engine, in combination with a storage device, such as a battery, to power its on-board electric motor. Fuel cells in vehicles generate electricity to power the motor, generally using oxygen from the air and compressed hydrogen.

The above mentioned entire car categories share similarity, that they use electric batteries as power source to various extents.

Present Status:

Still the initial purchasing cost of EVs are high compared to the counterpart; conventional gasoline ICE vehicles. The range of all e-vehicles are directly correlated to the size of the battery, thus major determinant of costs. The more capacity batteries have, the longer the electric car can run; the lower the cost, the battery they can compete against ICE vehicles. Battery cost has come down from \$ 1,000 / Kwh in 2008 to \$ 145 / Kwh in 2015 and further decreasing.

Table 1 – Comparison: FEV Vs ICEV

S/N	Model	Type	Range		Price USD OEM	MPGe	Time to 60 MPH - Secs.
			Miles	Km			
1	Nissan Leaf	FEV	84	134.4	29,010.00	114	10.2
2	Toyota Corolla	ICEV	N/A	N/A	17,300.00	32	10.5

Source: OEM Nissan leaf and OEM Toyota corolla, (MPGe –Miles Per Gallon equivalent)

However, the less maintenance, without fueling but only battery charging will tremendously effect to the low running cost will be a long term saving in-addition to the energy saving for the sustainability of the environment.



Author:

ENG. SUNIL JAYANTHA HETTIARACHCHI - FIIESL, I ENG.

Congratulations for new achievements.....



Eng. Anura Jagoda
Fellow Member of
Australian Institute of Quantity Surveyors
(AIQS)



Eng. Sanjeewa Wijayathilaka
Fellow Member of
Institution of Incorporated Engineers
Sri Lanka (IIESL)



Eng. Chandrasiri Wanasinghe
President of
Institution of Incorporated Engineers
Sri Lanka (IIESL)