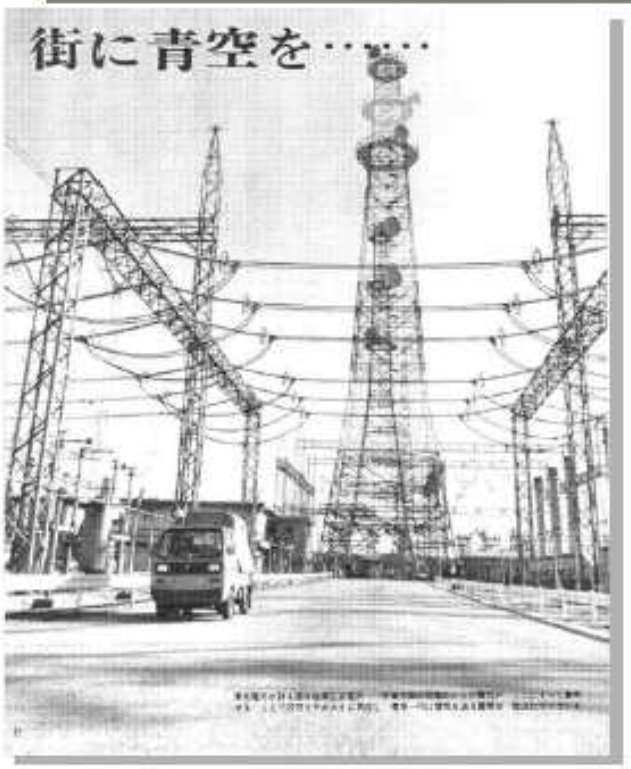
Mitsubishi i MIEV


MITSUBISHI
MOTORS
i MIEV
• Verkosta ladattava sähköauto
• Lithium - ion akusto
• Myynti alkaa Japanissa keväällä 2009
LANCER EVOLUTION

History of Mitsubishi's Electric Vehicles (EV)

- The first MMC EV was built in 1971.
- Mitsubishi provided power companies and the government with approximately 150 EVs.



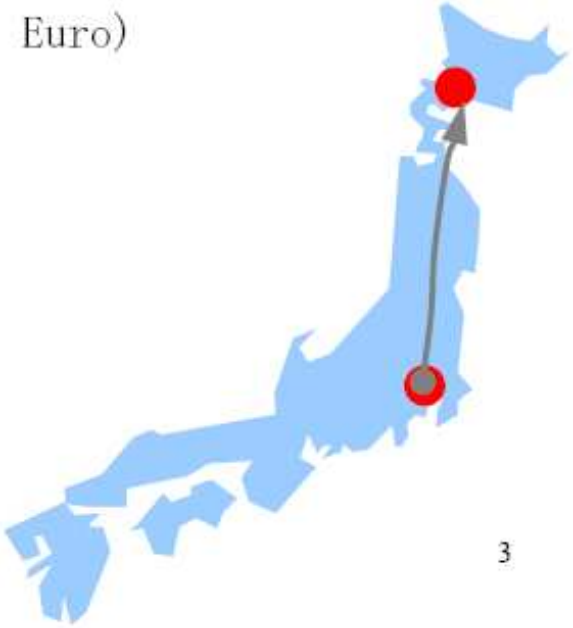
MINI CAB EV

MINICA VAN EV

in the Mitsubishi Group's PR magazine issued in 1972

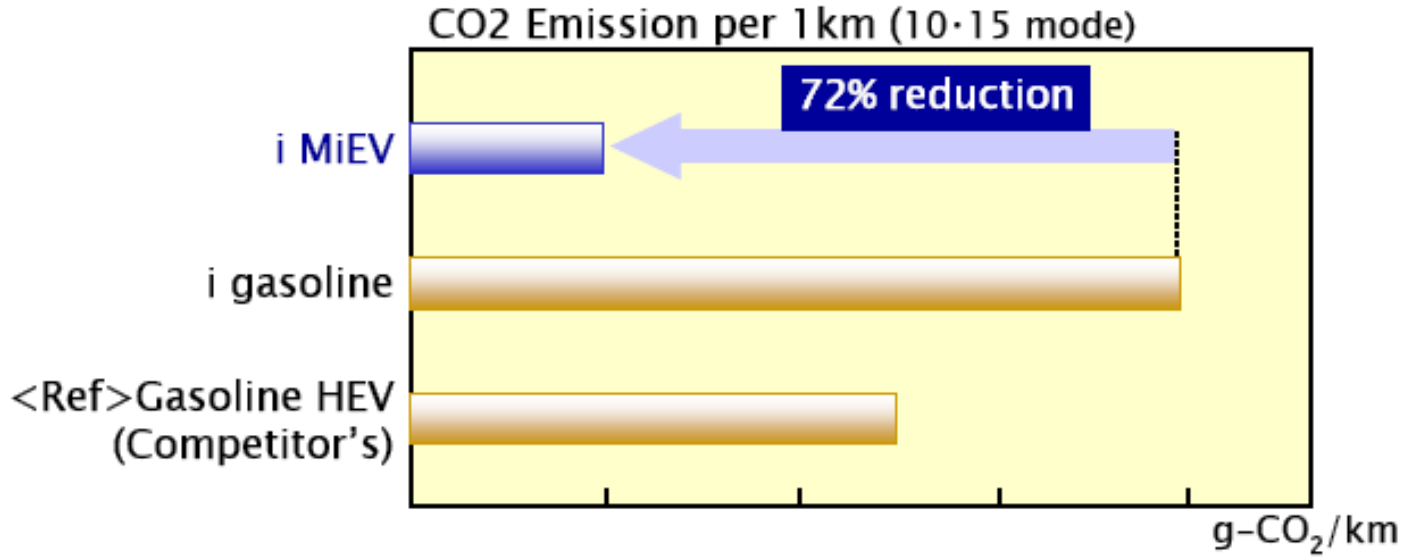
G8 Summit Caravan

Results:
Date: June 20 to June 26
Driving range : 860km
Electricity : 10 Euro
(Petrol : 77 Euro)



CO_2 Emission

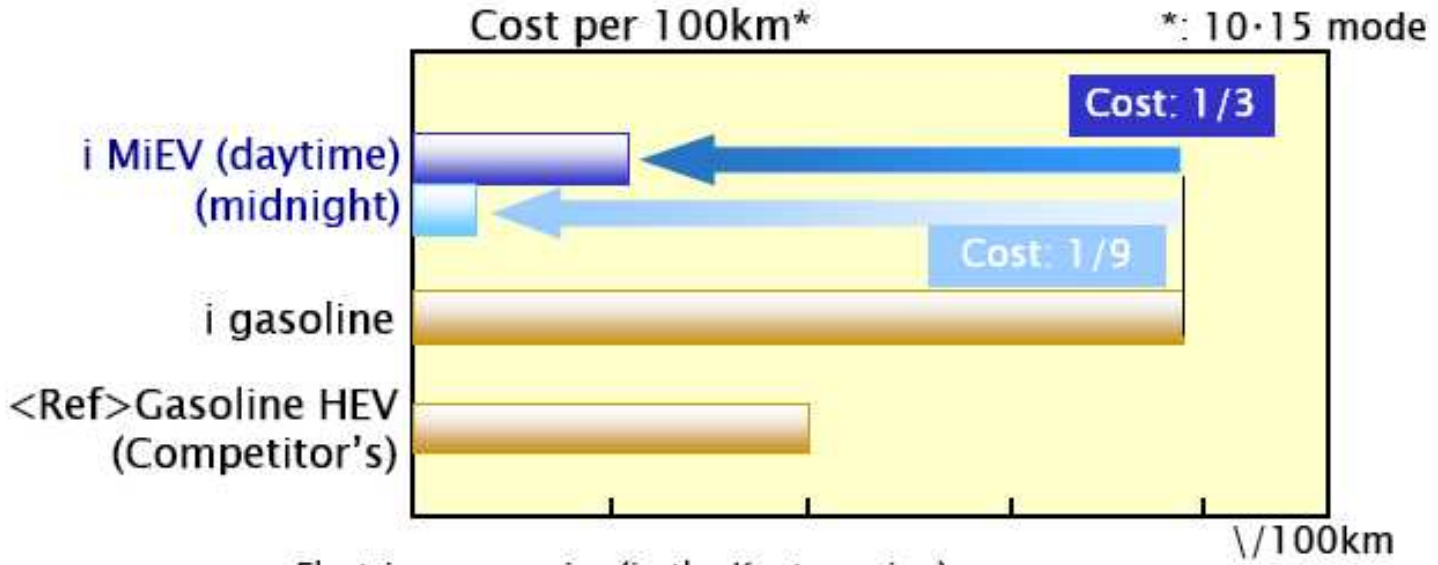
CO_2 emission from EVs is:
1/4 of gasoline vehicle, 1/2 of gasoline HEV.
(Well to Wheel)
CO_2 Reduction is: 1 ton per car (while 10,000km drive)



Ref: JHFC Seminar 2005

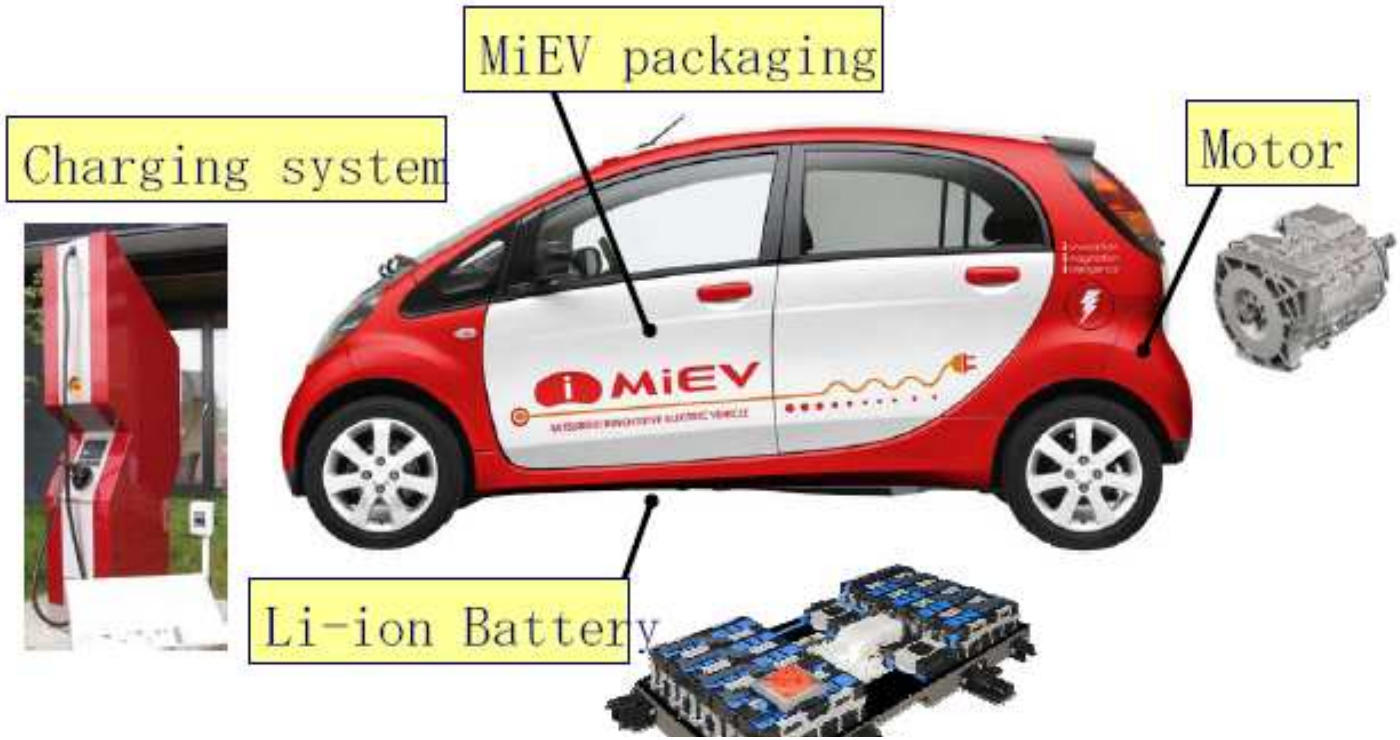
Energy Economy

Running cost required for EVs is:
1/3 of gasoline vehicle, 1/2 of gasoline HEV.
..and 1/9 of gasoline vehicle when charged at overnight rates



- Electric power price (in the Kanto region):
  Daytime \22/kWh (Contract volume 60A/no change in basic rate)
  midnight \7/kWh (excl. basic rate)
- Gasoline price: \140/L

Technical features on i MiEV



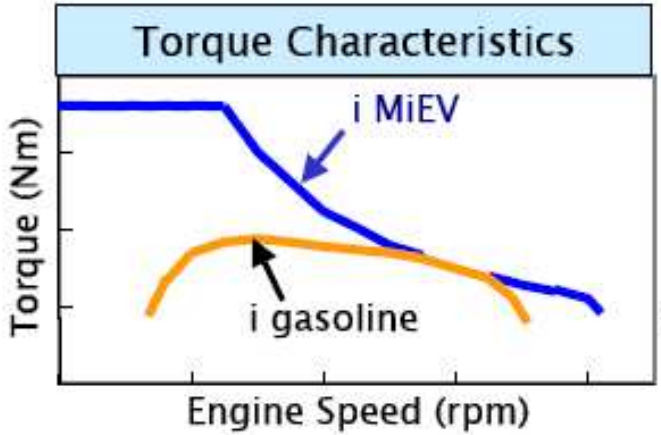
- **Akku: Lithium Energy Japan**
- **Moottori / invertteri : Meidensha Corp.**
- **DC-DC konvertterri: Nichicon Corp.**

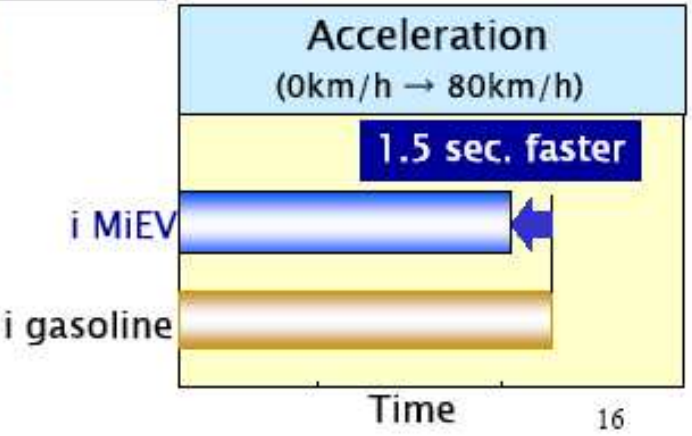
Motor

Small, high-efficiency motor technologies

Sportier and quieter driving than the i 's turbo-charged engine (660cc)

	i MiEV	Gasoline
Max.Output	47kW	47kW
Max.Torque	180Nm	94Nm
Max.Speed	8500rpm	7500rpm
Type	Permanent magnet synchronous	Turbo-charged



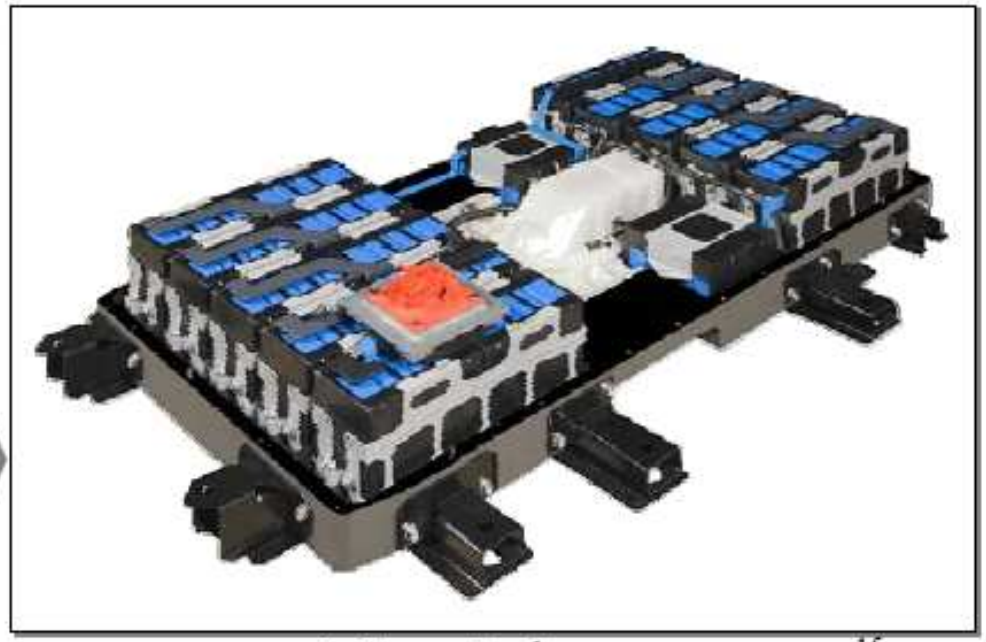


Lithium-ion Battery

High capacity battery module (max.16kWh) can be placed under the floor panel without being modified, regardless of the position, vertical or transverse.

Cell

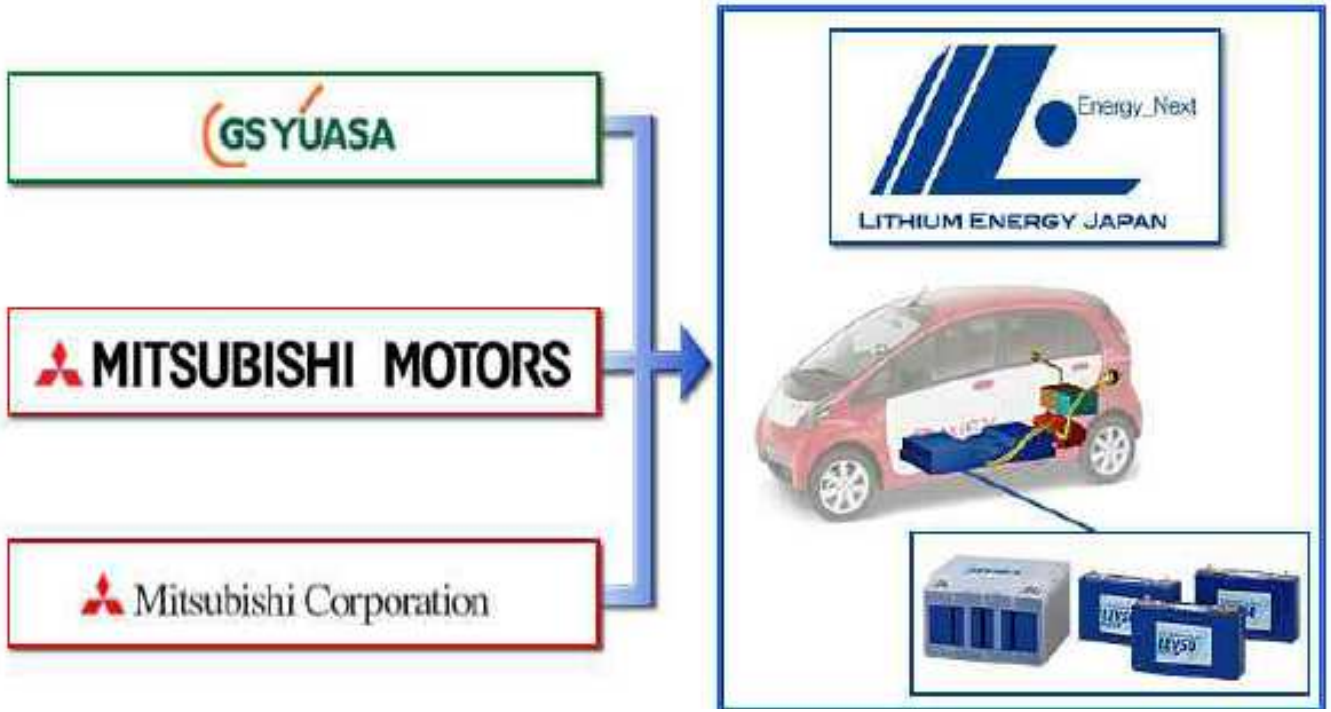
Module



Battery Package

Establishment of battery manufacturing company

GS Yuasa, Mitsubishi Corporation, and Mitsubishi Motors Corporation established a Battery Manufacturing Company (Lithium Energy Japan) in December 2007.



Toistaiseksi ainoa suurikapasiteettisten lithium-ion-akkujen massavalmistaja

- **GS Yuasa Power Supply Ltd 51 %**
- **Mitsubishi Corporation 34 %**
- **Mitsubishi Motors Corporation 15 %**

Products Information

LEV50

LEV50-4

■ Lithium-ion Battery for EVs

Lithium Energy Japan has lithium-ion battery "LEV50" which is based on GS Yuasa Group's state of the art technology and extensive experience in manufacturing large-scale industrial and small lithium-ion batteries.
Its excellent performance is brought by our latest technologies and most suitable for EV applications, and can unfold widely for other applications for energy storage etc.

■ Features

- Higher energy density
- High specific power density
- Quick charge acceptance

■ Specifications

Type		LEV50	LEV50-4
Norminal voltage(V)		3.7	14.8
Capacity(Ah)		50	50
Dimensions(mm)	Length	171	175
	Width	43.8	194
	Height	113.5	116
Mass(kg)		1.7	7.5

3-way Charging System

Easy charge by a quick charger and household charger

Charging time

	Power supply	Charging time
Quick charger	Three-phase 200V, 50kW	Approx. 30 min. (80%)
Household charger	200V (15A)	7 hours(Full)
	100V (15A)	14 hours (Full)

Quick charger

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Overseas Fleet test

Monitor test with Power Companies,etc.

Europe

Via distributors,

aprx 15 countires

starting fall 2008

Japan

U.S.

U.S & Canada

together with

Southern

California Edison

(SCE)

Satisfactory development progress

Low-temperature testing

Intermountain road

Test car for Kyushu Electric Power Co., Inc.

20-30cm water crossing

Pace car for local marathon

Around town in Yokohama, Japan

Joint research with Kanagawa prefecture

Joint research in the police business has begun with Kanagawa-prefecture on July 11.

Mini Police Car

2009

- FY2009 (4/09 – 3/10) tuotanto 200 000 akkua
- Tyyppi LEV50 (3.7V / 50 Ah)
- Yhdessä autossa käytetään 22 moduulia, joista jokainen sisältää 4 akkua => 88 akkua
- Mitsubishi i MIEV vuosituotanto FY2009 tulee olemaan 2000 autoa (teoreettinen max 2272 kpl)
- 160 km yhdellä latauksella optimiolosuhteissa
- 200V virralla 100% lataus kestää 7 tuntia
- Quick Charger system lataa akut 80%:sti 30 minuutissa

2010 =>

- **FY 2010 ennakoitu tuotanto 4000 kpl**
- **Tämän jälkeen ennakoitu tuotanto 10 000 autoa/v.**

Summary of Mitsubishi Motors approach

In order to contribute to the prevention of global warming and move toward independence from fossil fuels:

Mitsubishi Motors is leading the charge toward electric vehicle use.

- **Launch** the *i MiEV* on the Japanese Market: Summer, 2009
- **Study** possibility of launching the *i MiEV* on the global market
- **Expand** the EV and EV components business globally.


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