

Corporate Profile

Primearth EV Energy Co., Ltd. (PEVE)



Company Outline

Location : Kosai, Shizuoka, Japan
Taiwa, Miyagi, Japan

Establishment : December 11th, 1996

Capital : 20 Billion Yen

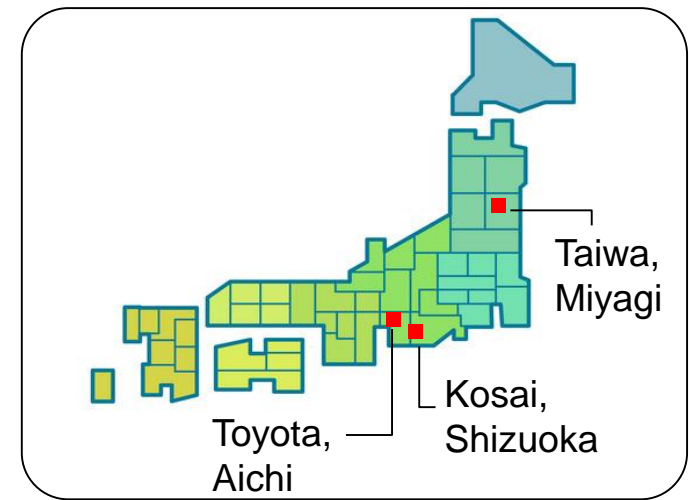
Capital Ratio : Toyota Motor Corporation 80.5%

Panasonic Corporation 19.5%

Employees : 3,743 (April, 2016)

Sales Turnover : 152 Billion Yen (2013), 143 Billion Yen (2014), 142 Billion Yen (2015)

Main Products : Ni-MH and Li-ion Batteries for HV and Battery Management System



Kosai

Omori HQ/ Plant



Est. : Feb. 2008
Area : 168,900m²

Sakaijuku Plant



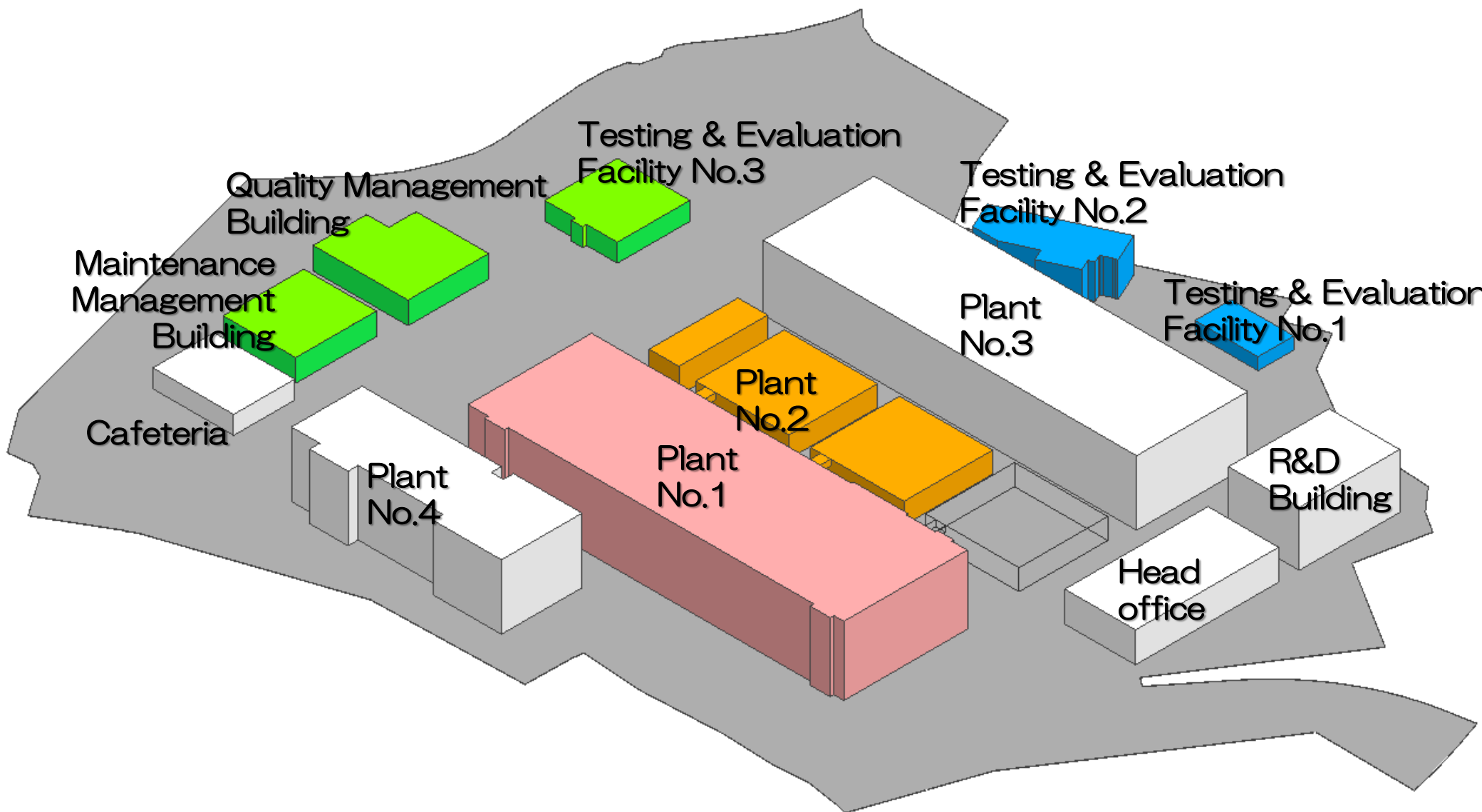
Est. : Dec. 1996
Area : 37,800m²

Miyagi Plant



Est. : Jan. 2010
Area : 248,300m²

Map of Omori HQ & Plant



Miyagi Plant

【Facts:】

- Plant No.1 300K units/year
- Plant No.2 100K units/year
- Plant No.3 100K units/year

total 500K units/year

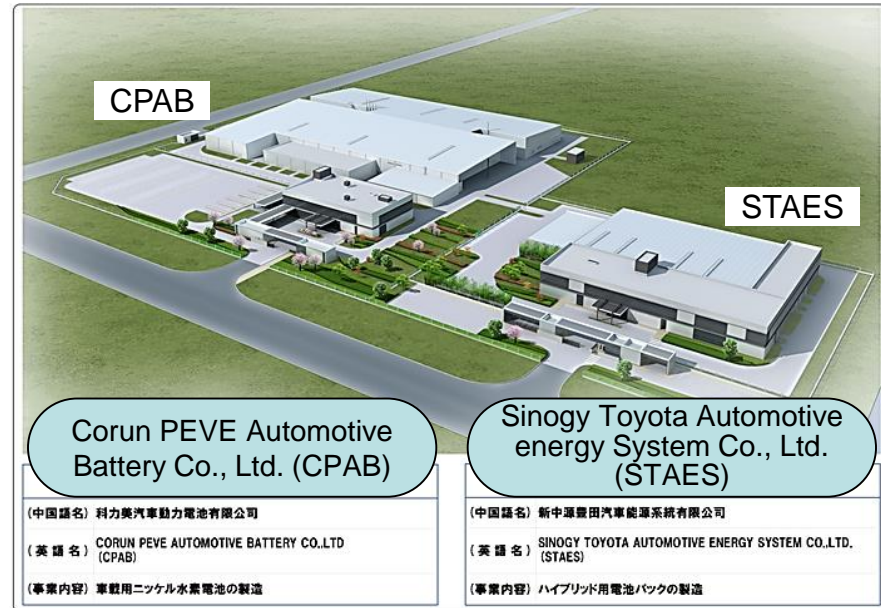
Plant No.1

Plant No.3

Plant No.2



Affiliated companies



2014年8月設立

2013年11月設立

Shanghai, Jiangsu, Xuzhou, Nanjing: Whereabouts



CPAB and its surrounding area in Jiangsu



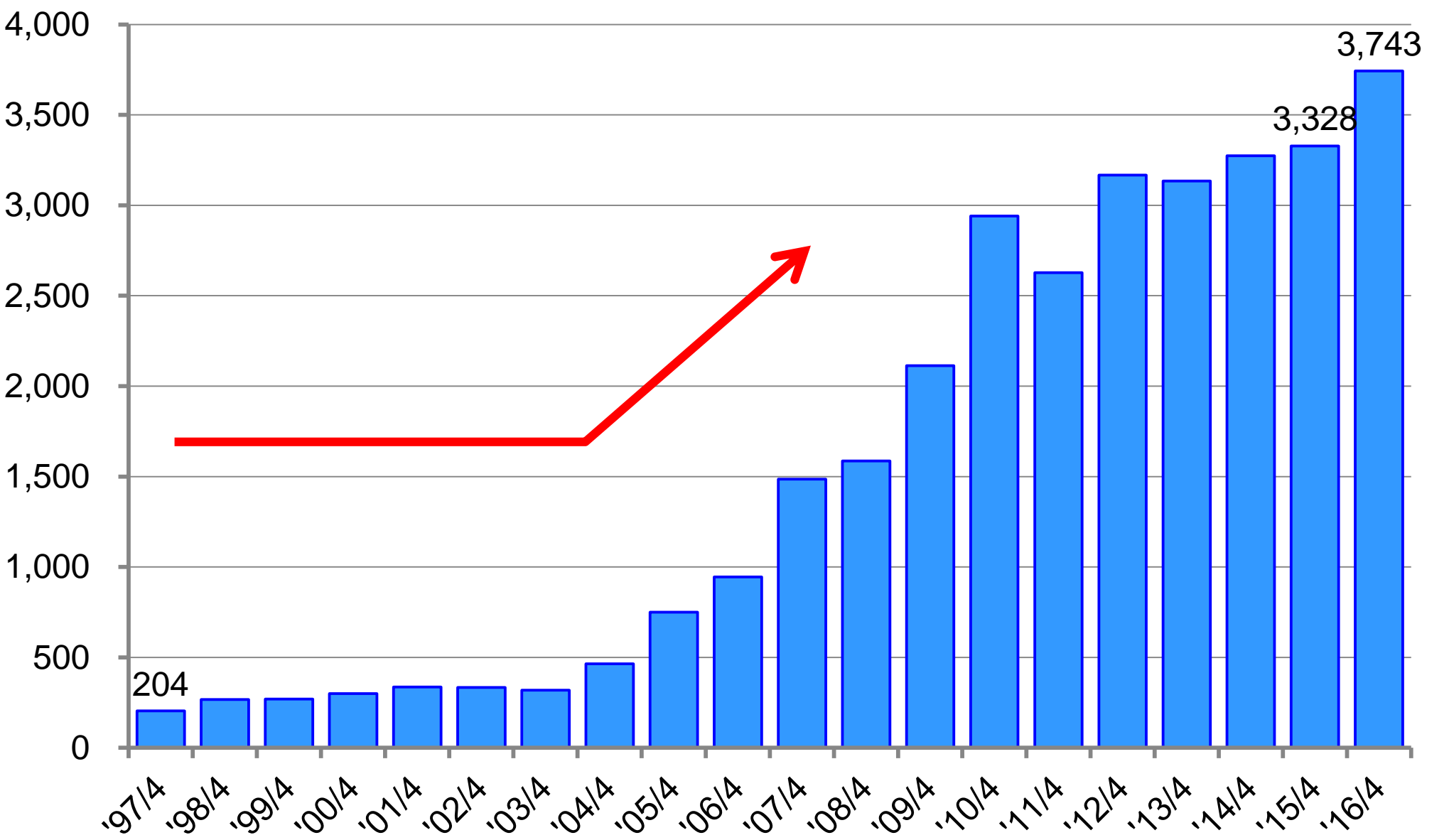
Production Capacity of HEV Battery Packs

Production sites		Battery packs for:	Production capacity(annual)	Total
Omori	Ni-MH (NP2.2) Operation began in Feb. 2007	Toyota: Prius, Aqua, Auris, Camry, Crown, Harrier, Noah/Voxy etc. Lexus: CT200h, ES, GS, HS, IS, etc.	500K	<until 2014> 1.2 Million ↓ <beyond 2015> 1.4 Million
Sakaijuku	Ni-MH (NP2.2 & NP2.7) Operation began in Dec. 1996	Toyota: Estima, Alphard, Vellfire Lexus: LS600h and RX	400K	
Miyagi (Plant No.1)	Ni-MH (NP2.2) Operation began in Jan. 2010	Toyota: Yaris, Aqua, Prius, Collora, Camry	300K	
Miyagi (Plant No.2&3)	Ni-MH (NP2.2) Operation will begin in 2015	Toyota: Yaris, Aqua, Prius,	200K	

Teiho, Toyota *closed in Dec. 2014	Li-ion(Li1.0) Operation began in Aug. 2008	Toyota: Prius α (7 passenger)	36K	<Previously> 36K ↓ <beyond 2015> 200K
Omori	Li-ion(Li2.0) Operation will begin in 2015	Toyota: Prius	200K	

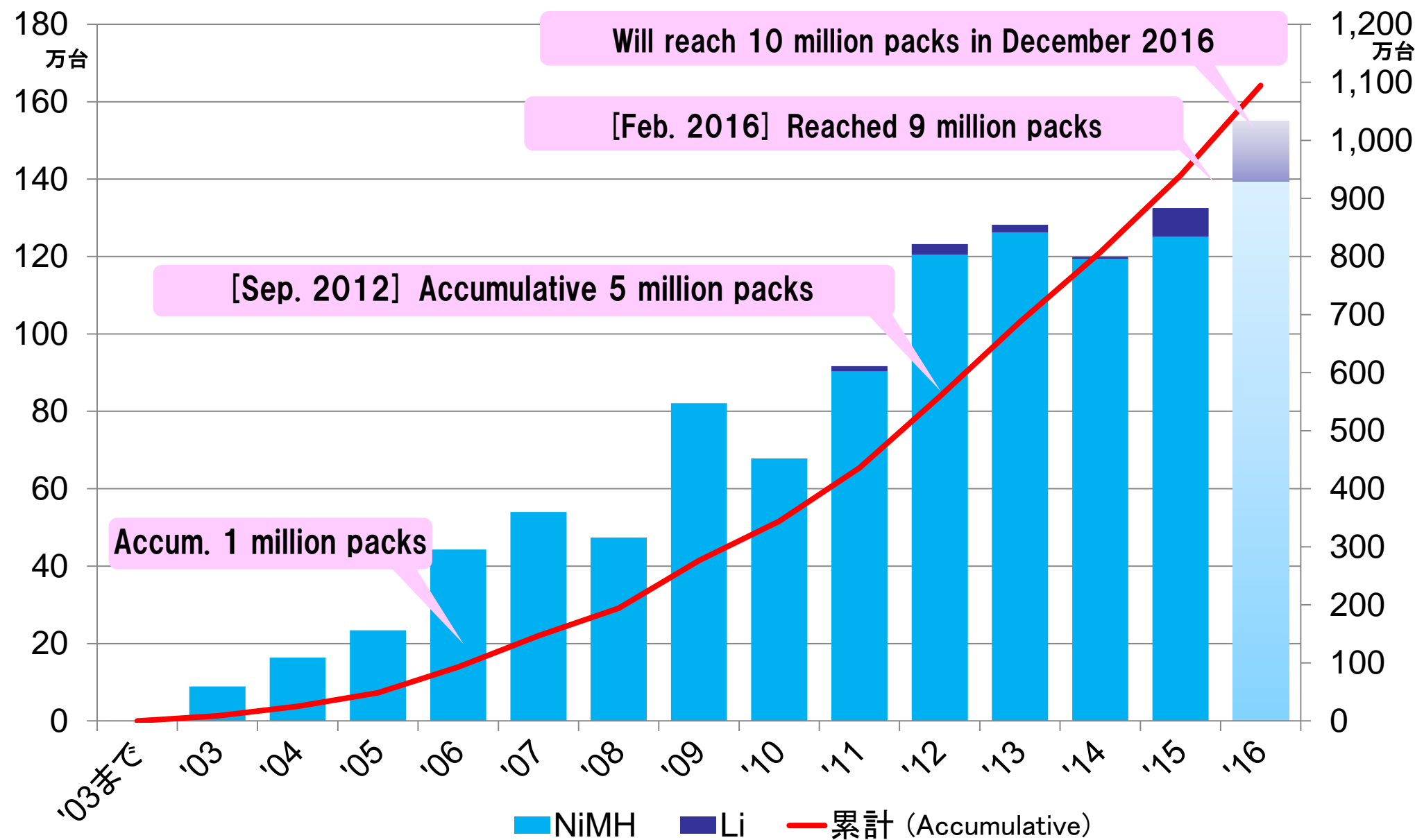
CPAB (China) *affiliated company	Ni-MH (NP2.2系) Operation will begin in 2016		100K	<beyond 2016> 100K
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Number of Employees



HV Battery Production Growth

10K battery pack basis (Annual) ▶▶ bar chart
10K battery pack basis (Accumulative) ▶▶ line chart



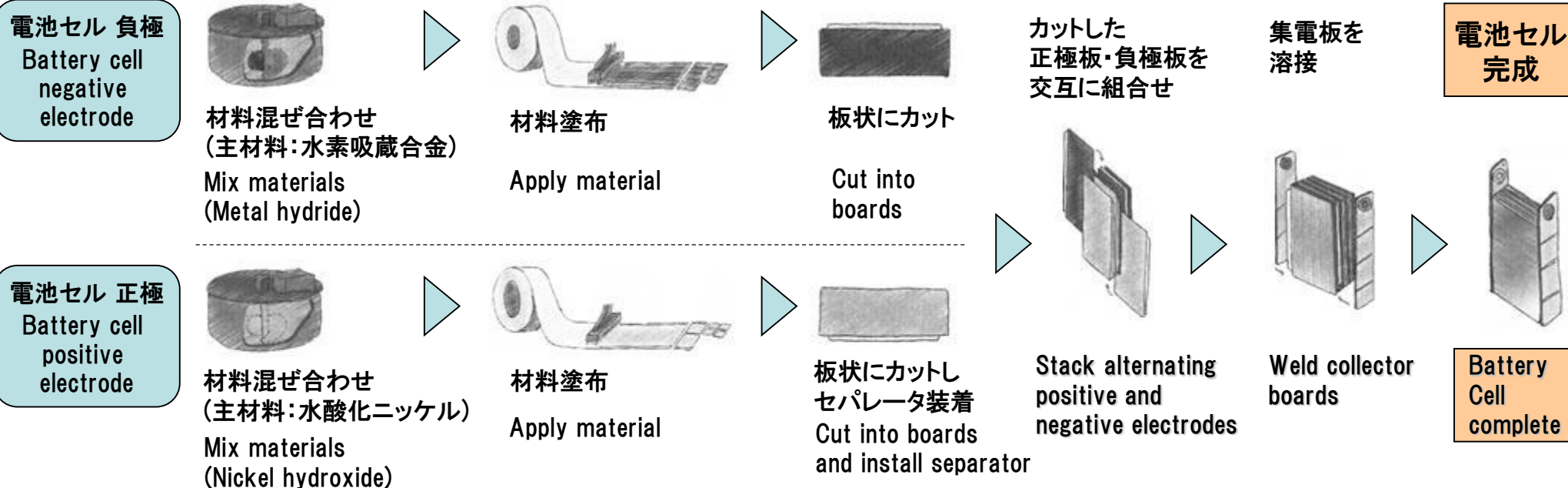
A collection of five Toyota vehicles. In the top left is a black Toyota Camry sedan. In the top right is a red Toyota Yaris hatchback. In the center is a silver Toyota Camry sedan. In the bottom left is an orange Toyota Yaris hatchback. In the bottom right is a black Toyota RAV4 SUV. A horizontal dashed line is positioned between the orange hatchback and the black SUV.

Bar chart showing Toyota's sales in Japan from 1996 to 2015. The Y-axis represents sales in Billion Yen, ranging from 0 to 2,000. The X-axis represents the years. The chart shows a steady increase in sales, with a significant jump starting in 2006. Various Toyota models are illustrated above the bars, corresponding to the years they were sold.

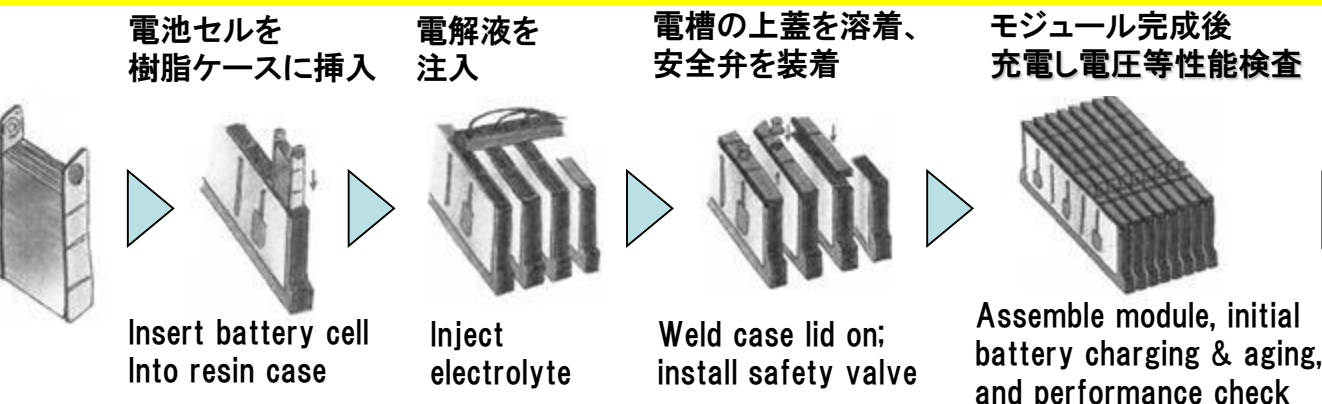
Year	Sales (Billion Yen)
1996	~50
1997	~100
1998	~120
1999	~80
2000	~100
2001	~110
2002	~120
2003	~180
2004	~280
2005	~450
2006	~620
2007	~880
2008	~750
2009	~1050
2010	1000
2011	1300
2012	1600
2013	1520
2014	1430
2015	1420

NiMH Battery Production Process

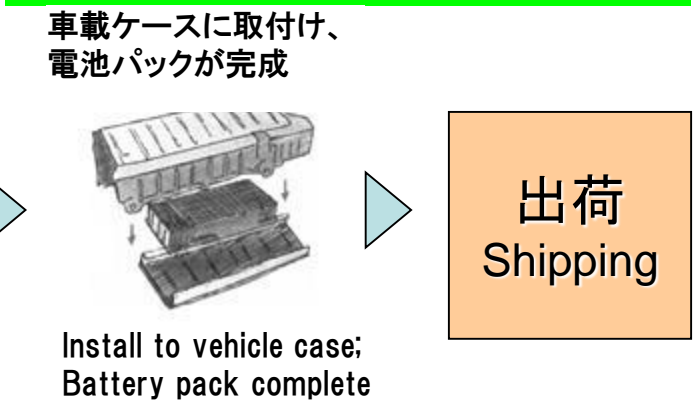
① 電池セル (Battery cell)



② 電池モジュール (Battery module)



③ 電池パック (Battery pack)



Battery Testing & Evaluation Facility (TEF)

Testing & Evaluation Facility No.2

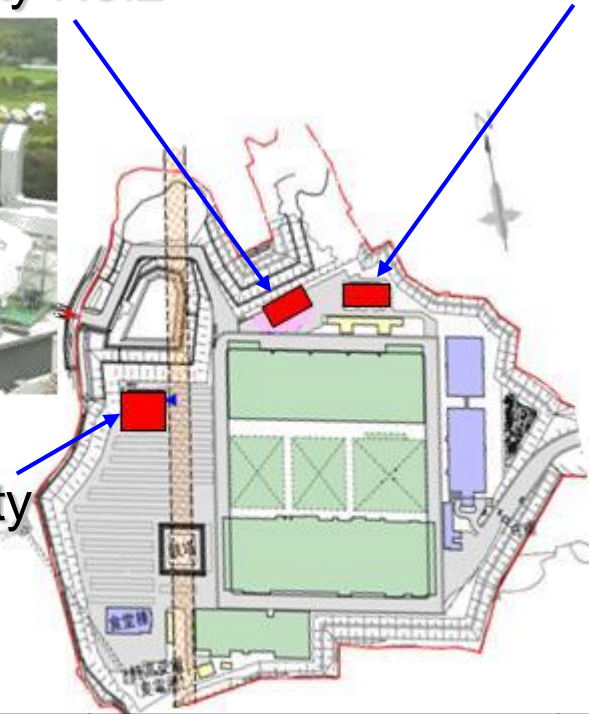


Operation began in Oct. 2012

Testing & Evaluation Facility No.3



Operation began in Apr. 2014



Testing & Evaluation Facility No.1



Operation began in Apr. 2011

“Manufacturing backed by the testing facilities in order to meet the toughest standards worldwide”

Facility fact sheet

	TEF No.1	TEF No.2	TEF No.3
Object	Battery cell & module	Battery pack system	Battery pack system
Tests	overcharge, crush, drop, penetration, external short-circuit	Combustion, crush, drop, overcharge, submerge	vibration, crush, thermal impulse, decompression,
Area	480㎡	1, 100㎡	1, 500㎡

Perform thorough safety evaluation tests for HV battery pack system in order to correspond strict safety regulations by United Nations and other countries worldwide.

Sakichi Toyoda: Dream for Battery



豊田 佐吉



Sakichi Toyoda, the founder of Toyota Industries Co., Ltd. from which Toyota Motor Corporation developed, was born in 1867 here in Kosai where Primearth EV Energy is located.

In 1925, according to his diary for invention, he offered donation of 1 Million YEN (equivalent to the current 600 Million YEN or \$10 Million US) to then Japan's Imperial Institute of Invention and Innovation for prize money of

invention of secondary (rechargeable) battery with the following capability/specs:

“Max. of 100 horse power, 36-hour running capability with no maintenance, less than 225 Kilograms of weight, and less than 280 square Liters of capacity”

Unfortunately no such battery had been come to life at that moment...

A century later, Sakichi's aspiration and dream for good and better secondary battery has never ceased as Primearth EV Energy Co. Ltd. has been established at his birthplace and has since developed and mass produced batteries for leading edge HEVs today. We keep our untiring effort to produce ever-better batteries for “ever-better cars.”

Sakichi's quote : 「Open the window. It's a big world out there!」

(Open your mind, and look at the great world outside. Chances & ideas are everywhere.)