# Status of national H2 and Fuel Cell programmes in Japan

14 November 2012

# Michio Hashimoto

New Energy and Industrial Technology Development Organization (NEDO)

Japan

# Recent developments in Japanese Energy Situation

- ■50GW nuclear capacity still off line
- ■FiT scheme commenced in July 2012
- ■Higher public attention to energy security and efficiency pushed gov more support to cogeneration system

# Residential Fuel Cells Government Subsidy

- The Ministry of Economy, Trade & Industry (METI) introduced a subsidy program for ENE-FARM in FY2009.
- The subsidy will be phased out by FY2015.
- ENE-FARM dissemination is expected without a subsidy after FY2016.

#### **ENE-FARM subsidy**

		FY 2009	FY2010	FY 2011				FY
				Initial	'	<sup>st</sup> tional	2 <sup>nd</sup> additional	2012
Budget	Total	8,110	6,770	8,670	3,900		5,000	9,000
(M Yen)	Per unit	1.40	1.30	1.05	1.05	0.85	0.85	0.70
Inst. number		5,030	4,985	8,000	585	3,775	5,635	12,300
Accum. number		5,030	10,015	18,015	22,375		28,010	40,310

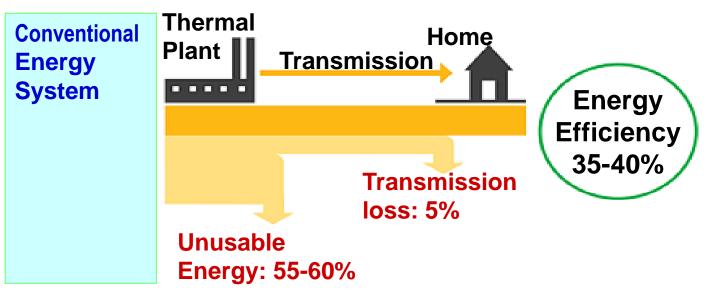
Actual for FY2009 and FY2010, planned for FY2011 and FY2012.

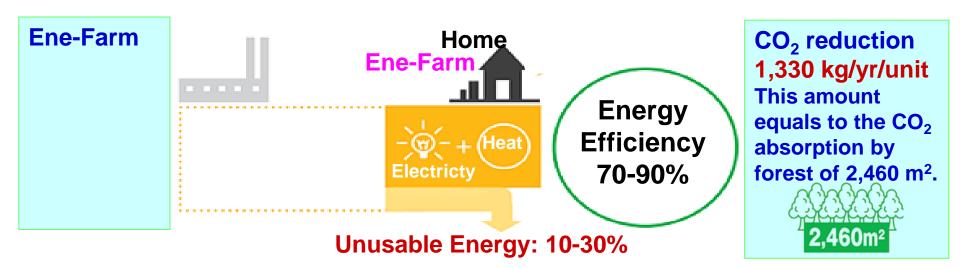


International Partnership for Hydrogen and Fuel Cells in the Economy



## Comparison of energy efficiency between conventional system and Ene-Farm





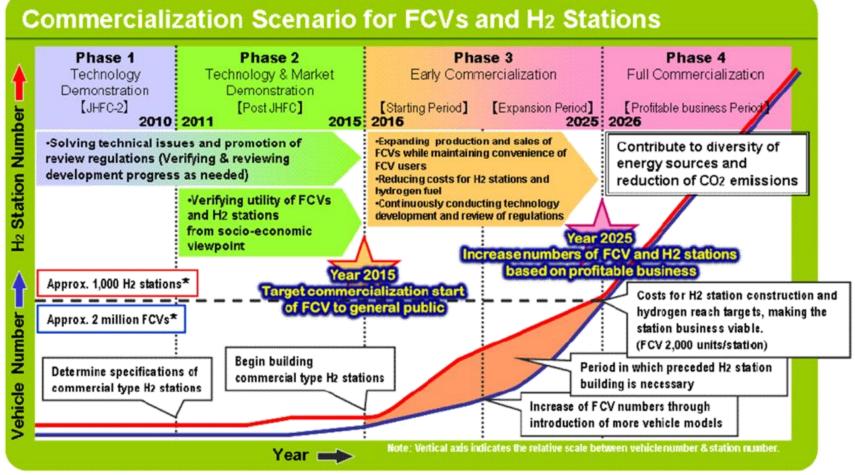
Source: New Energy Foundation

# FCV & H2 INFRASTRUCTURE

#### International Partnership for Hydrogen and Fuel Cells in the Economy

#### 

Scenario of Industries for FCVs and Hydrogen Stations (2010)



<sup>\*</sup> Precondition: Benefit for FCV users (price/convenience etc.) are secured, and FCVs are widely and smoothly deployed

Source: Fuel Cell Commercialization Conference of Japan (FCCJ)



#### International Partnership for Hydrogen and Fuel Cells in the Economy

# Hydrogen supply infrastructure in Japan



Yokohama-Daikoku (70/35MPa, Off-site)



Yokohama-Asahi (70/35MPa, On-site)



NEDO's another project



Tokyo-Suginami (35MPa, Off-site)



Nikko (35MPa, Off-site)



Senju (70/35MPa, On-site)



Narita (35MPa, Off-site)



Kasumigaseki (70/35MPa, Off-site)



Ariake (35MPa, Off-site)

### 16 stations in operation

- Technical & Social Demonstration (by HySUT/HySUT's members)
- Regional Demonstration (by local government etc.)



Kitakyushu (35MPa, Off-site)



Kyushu-Univ. (35MPa, On-site)



Tosu (35MPa On-site)





Kansai-airport (35MPa, Off-site)



Osaka (35MPa, On-site)



Centrair (35MPa, On-site)



Haneda (35MPa. On-site)

Source: The Research Association of Hydrogen Supply/Utilization Technology (HySUT)