

Residential Fuel Cell

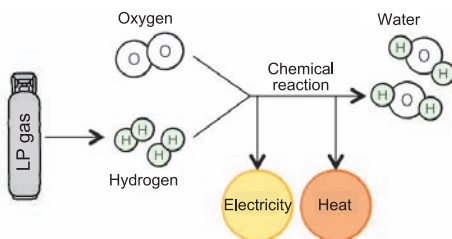
Features

- ◎ ENE FARM is a cogeneration (CHP: combined heat and power generation) system.
- ◎ Generated electricity can cover a maximum of 70% of typical household electricity needs.*
* Depends on usage conditions per house and season.
- ◎ Hot water from ENE FARM can be used in the bath, shower, and the kitchen.



Basic Concept or Summary

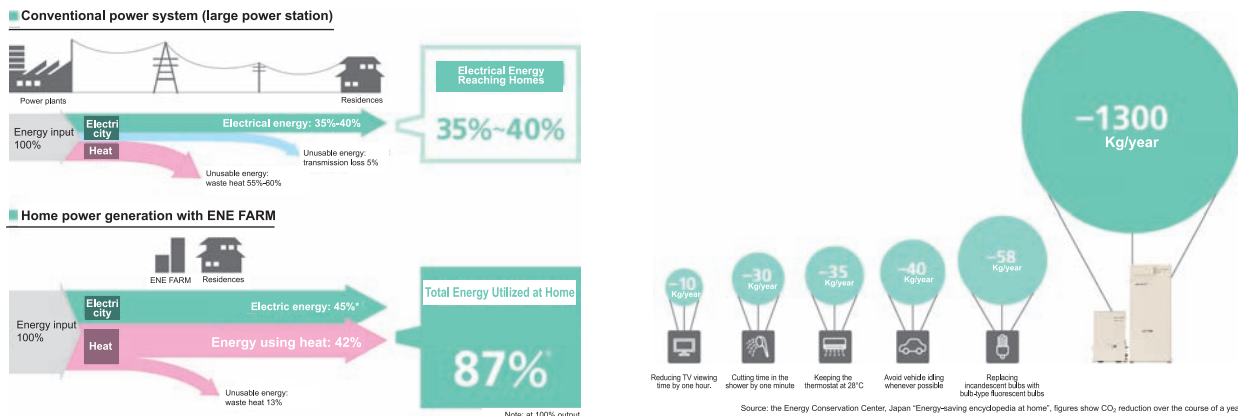
ENE FARM generates electricity in a chemical reaction of hydrogen from gas and oxygen from the air. It concurrently collects heat generated in this process to make hot water.



1. Fuel Processing Unit
Produces hydrogen in a chemical reaction between gas and steam
2. Air Supply System
Supplies air (oxygen) to the fuel cell stack
3. Fuel Cell Stack
Generates electricity in a chemical reaction between hydrogen and oxygen.
4. Power Conditioner
Converts electricity to alternating current (AC) from direct current (DC) generated by the fuel cell stack
5. Heat Recovery System
Recovers heat generated from the fuel cell stack to make hot water
6. Hot Water Tank
Stores hot water from the heat recovery system and supplies it to house when needed
7. Backup Boiler
Operates when hot water in the hot water tank becomes insufficient

Image picture

ENE FARM generates electricity at the point of use, so there is no loss through transmission. ENE FARM can collect heat in the form of hot water and use it at home rather than simply wasting it as a power plants do. Because ENE FARM generates electricity at a high energy efficiency (as much as 80-87%), it can greatly reduce CO₂ emissions compared to a conventional energy supply system*.



(The term “conventional energy supply system” used in this report means energy from thermal power plants and conventional boilers).

Installation in Practice or Schedule

Domestic Since ENE FARM was launched on the public market in 2009 in Japan, JX have sold more than 2,000 ENE FARMS in the first two years. In addition, we started to sell the new ENE FARM in October 2011.

Overseas JX will expand our business to overseas market in the near future.

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