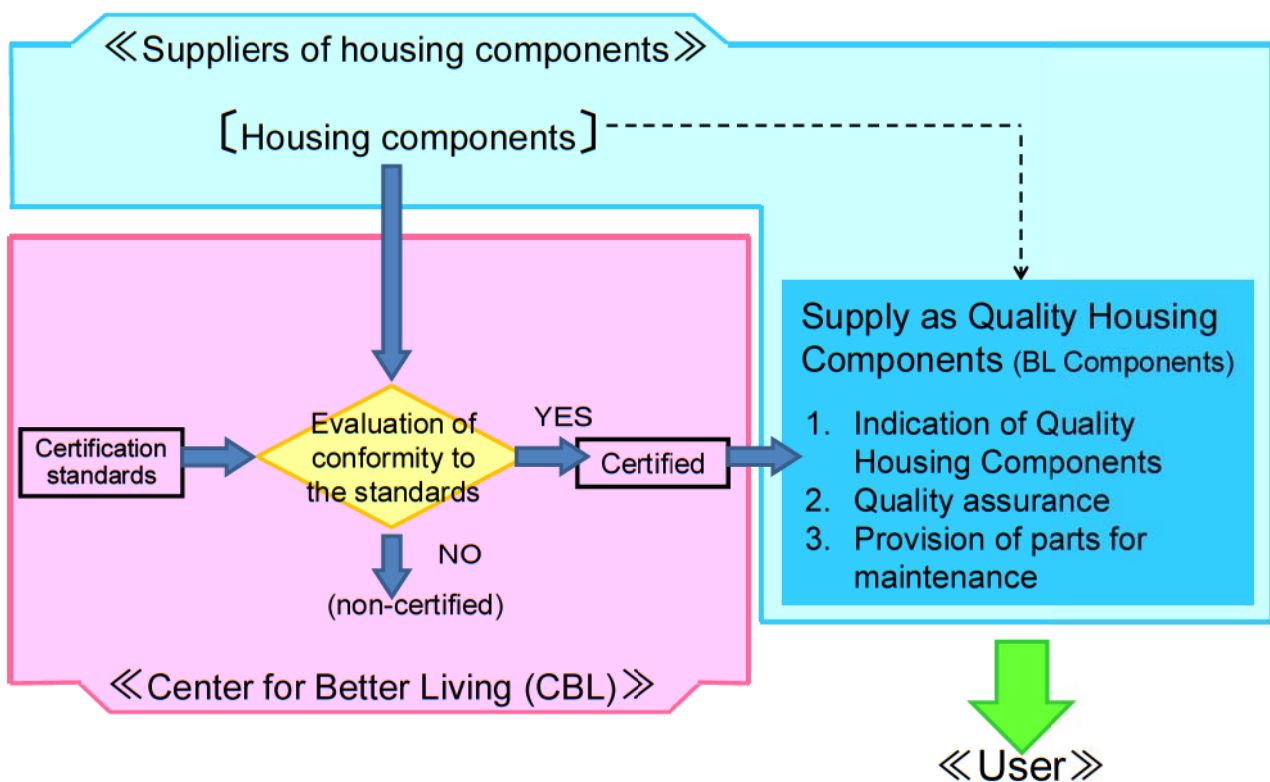


Certification of Environmentally Friendly Housing Components in Japan

Jun-ichi Murakami
Executive Director
Center for Better Living

Outline of Quality Housing Components Certification System



Fundamental requirements

- ① Excellent functionality, offering a comfortable residential environment
- ② High degree of safety
- ③ Superior durability and maintenance
- ④ Proper installation guaranteed
- ⑤ Reliable supplies, quality assurance, and maintenance services



← Specific features by items

- Certification standards for each item (Required performance etc.)
- Evaluation standards for each item (Evaluation standards for conformity to certification standards)

Indication of Quality Housing Components



The image shows a sample BL Label (example) with three callouts pointing to specific parts of the label:

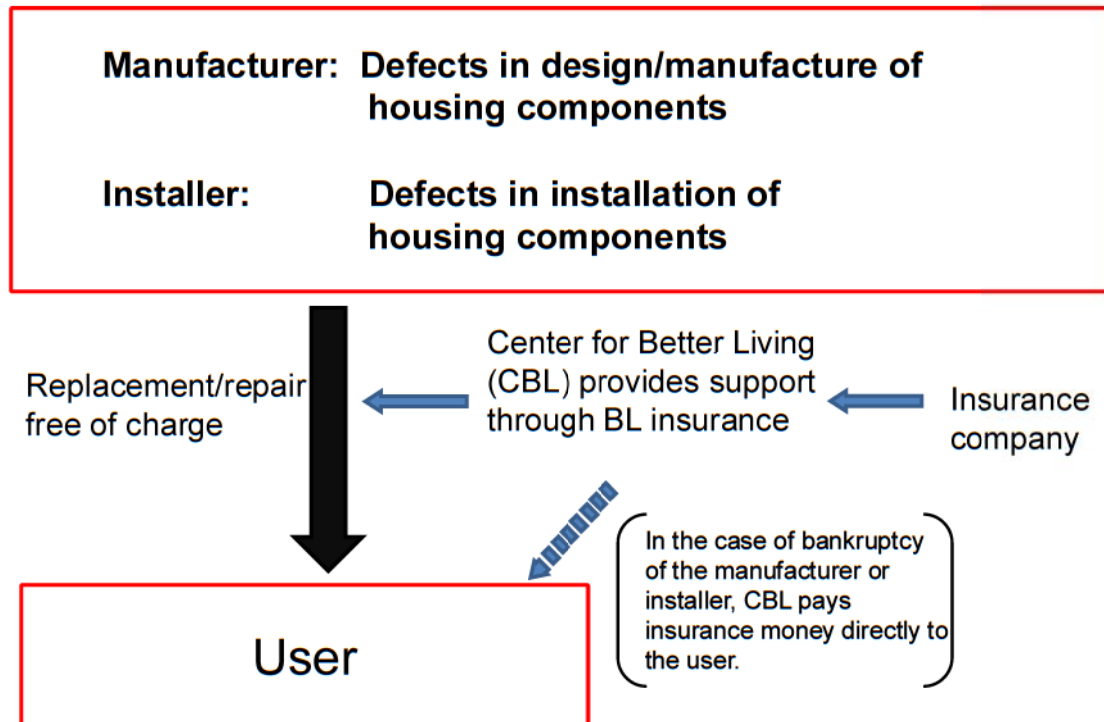
- Name of item:** Points to the text "品名" (Item Name) above the company name.
- Telephone number of the Customer Service Division:** Points to the phone number "Tel.03-5211-0680".
- Shown that covered by BL insurance:** Points to the text "瑕疵保証・賠償責任保険付" (Defect Guarantee and Compensation Liability Insurance).

The label itself contains the following text:

BLマーク証紙
品名
財団法人 **ニッポーリビング**
Tel.03-5211-0680
瑕疵保証・賠償責任保険付

優良住宅部品

BL Label (example)



- Certification items: 53 items

(Bathroom units, Interior systems, Kitchen systems,
Gas water heaters, Heating and cooling systems,
Front doors, Door closers, Windows, Storage units,
Ventilation units, etc.)

- Certified manufacturers: 281 companies
- BL labels issued: approx. 8.8 million

BL-bs Components

BL-bs (Better Living for better society) Components that are certified as having the following specific features to contribute to a better society.

- ① Environmental conservation
- ② Production and use of housing stock as social assets
- ③ Creation of a society in which everyone, including the elderly and disabled, can live in safety and comfort
- ④ Improvement in crime prevention

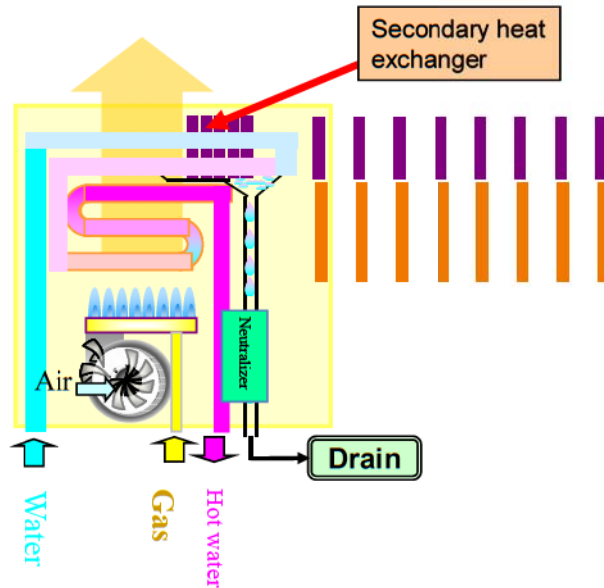
Indication of BL-bs Components contributing to environmental conservation



1. Gas water heaters (latent heat recovery type)

Thermal efficiency at least 95%

Gas consumption was reduced by at least 13% annually and CO₂ emissions decreased at least 13% compared with conventional gas water heaters.



2. Electric water heaters (heat pump type)(1)

●COP (indicator of heat pump performance) of at least 3.5

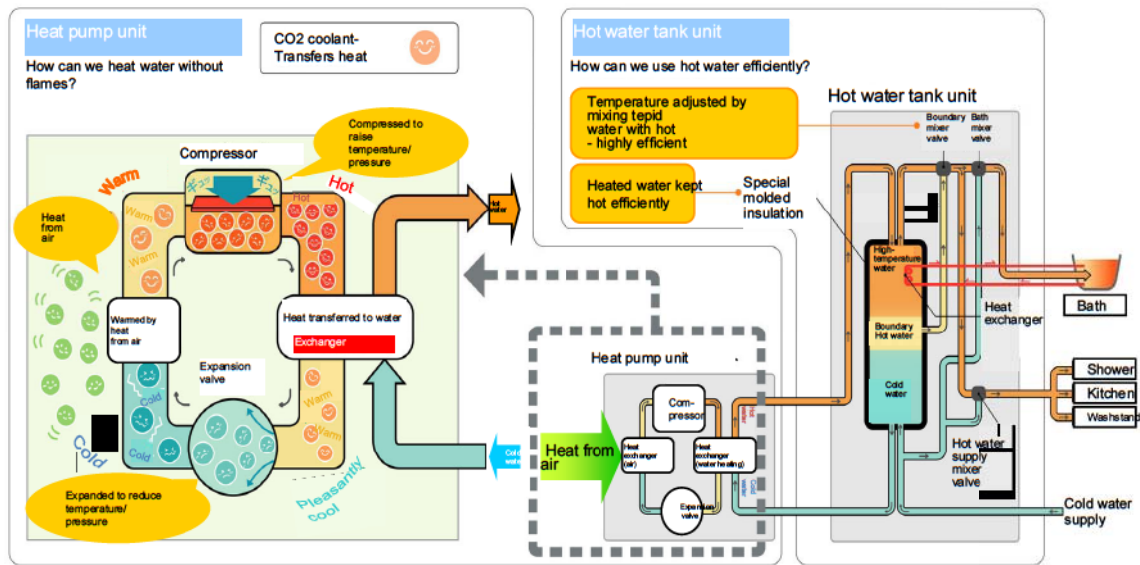
●Total system energy efficiency (average for summer and winter) of at least 245%

Annual power consumption estimated to be around 1/3 of that of conventional electric water heaters (heater type)



CHP-HX371DA8

2. Electric water heaters (heat pump type)(2)



3. Household gas co-generation system (1)

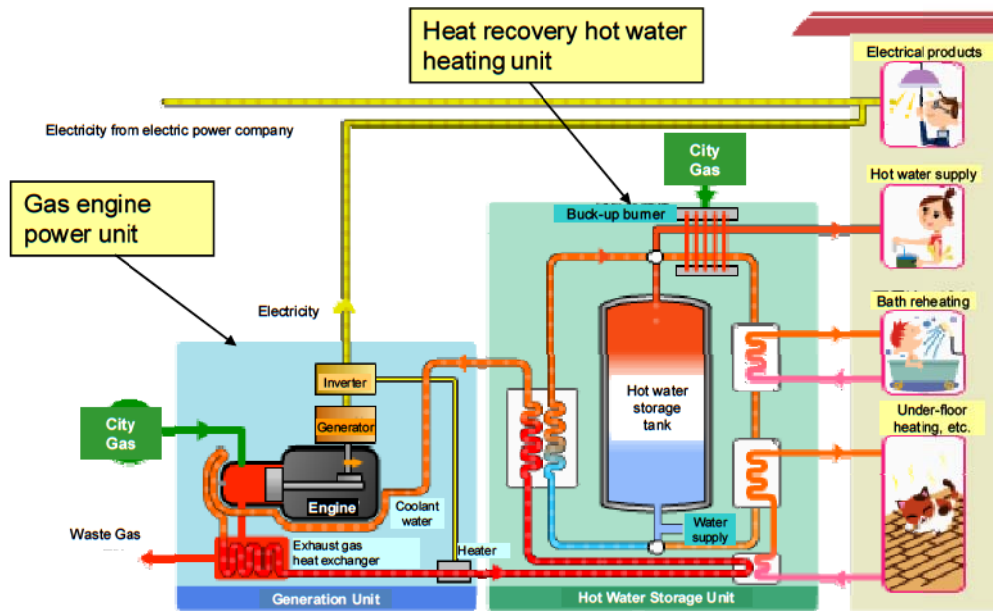
The system is comprised of a heating & hot water supply that generates electricity with a gas engine and utilizes the exhaust heat to supply hot water. Achieving total energy efficiency of at least 80% at the setting of thermal output of 2.8 kW and electrical output of 1 kW.



(Tokyo Gus Co., Ltd.)



3. Household gas co-generation system (2)



4. Household fuel cell co-generation system (1)

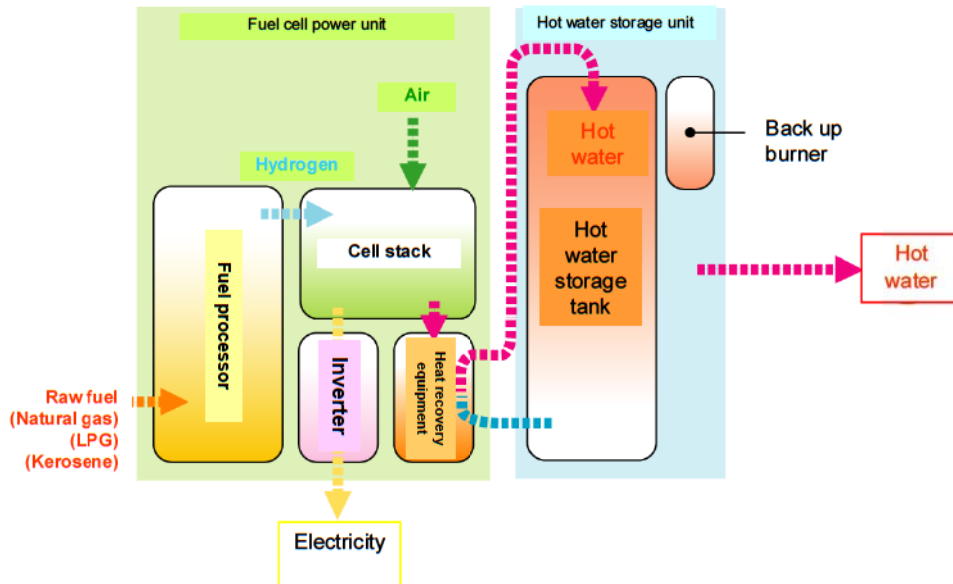
A hot water supply system that uses gas or kerosene as raw fuel. The system generates power by making use of the chemical reaction between hydrogen and oxygen and produces hot water using the heat released during the reaction.

Combined efficiency (power generation efficiency + exhaust heat recovery efficiency) is at least 80%.



	環境の保全 BL -bs 省エネルギー	BLマーク証紙 品名 家庭用燃料電池 コージェネレーションシステム 財団法人 エネファーム Tel.03-5211-0680 瑕疵保証・賠償責任保険付
	省エネルギー	

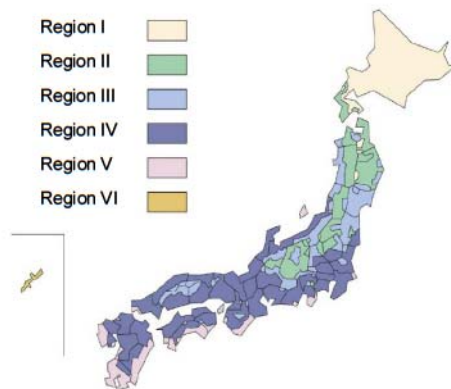
4. Household fuel cell co-generation system (2)



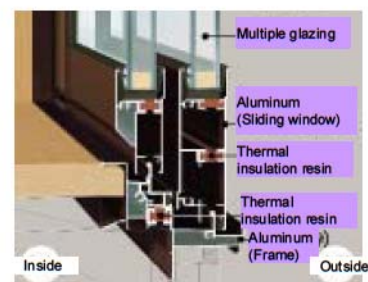
5. Heat insulating windows (Multiple glazing)

Thermal insulation performance
(Thermal transmittance: U, units: W/m²:k)

Type S	U ≤ 2.33	(Region: nationwide)
Type 1	2.33 ≤ U ≤ 2.91	(Region: III - VI)
Type 2	2.91 ≤ U ≤ 3.49	(Region: III - VI)
Type 3	3.49 ≤ U ≤ 4.07	(Region: IV - VI)
Type 4	4.07 ≤ U ≤ 4.65	(Region: IV - VI)



Note: The regions use the Next-generation Energy Conservation Standard



BL-bs Components with Environmental Conservation Features B 17

6. Inner windows (Heat insulation)

Thermal insulation performance
(Thermal transmittance: U , units: $W/m^2 \cdot k$)

• For double glazing with inner window (Multiple glazing)

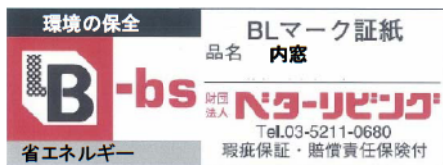
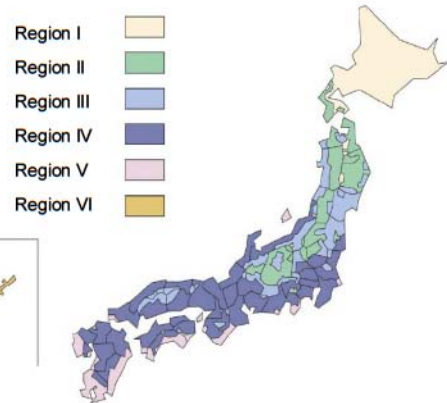
$$U \leq 2.33 \text{ (Region: nationwide)}$$

• For double glazing with inner window (single pane)

$$2.33 < U \leq 2.91 \text{ (Region: III - VI)}$$

Note 1: If specification for outer window is single-pane aluminum sash

Note 2: The regions use the Next-generation Energy Conservation Standard



BL-bs Components with Environmental Conservation Features B 18

7. Front doors (Heat Insulation)

Thermal insulation performance
(Thermal transmittance: U , units: $W/m^2 \cdot k$)

Type S $U \leq 2.33$ (Region: nationwide)

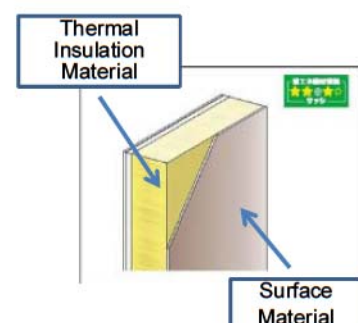
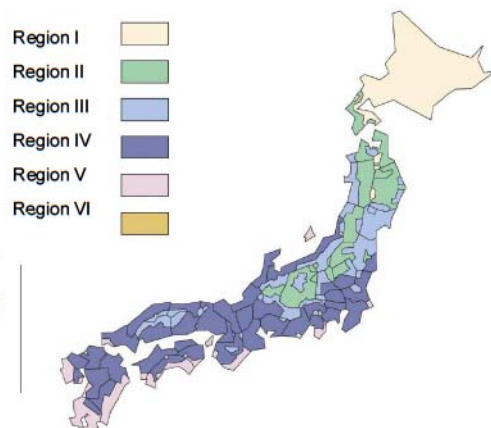
Type 1 2.33 $U \leq 2.91$ (Region: III - VI)

Type 2 2.91 $U \leq 3.49$ (Region: III - VI)

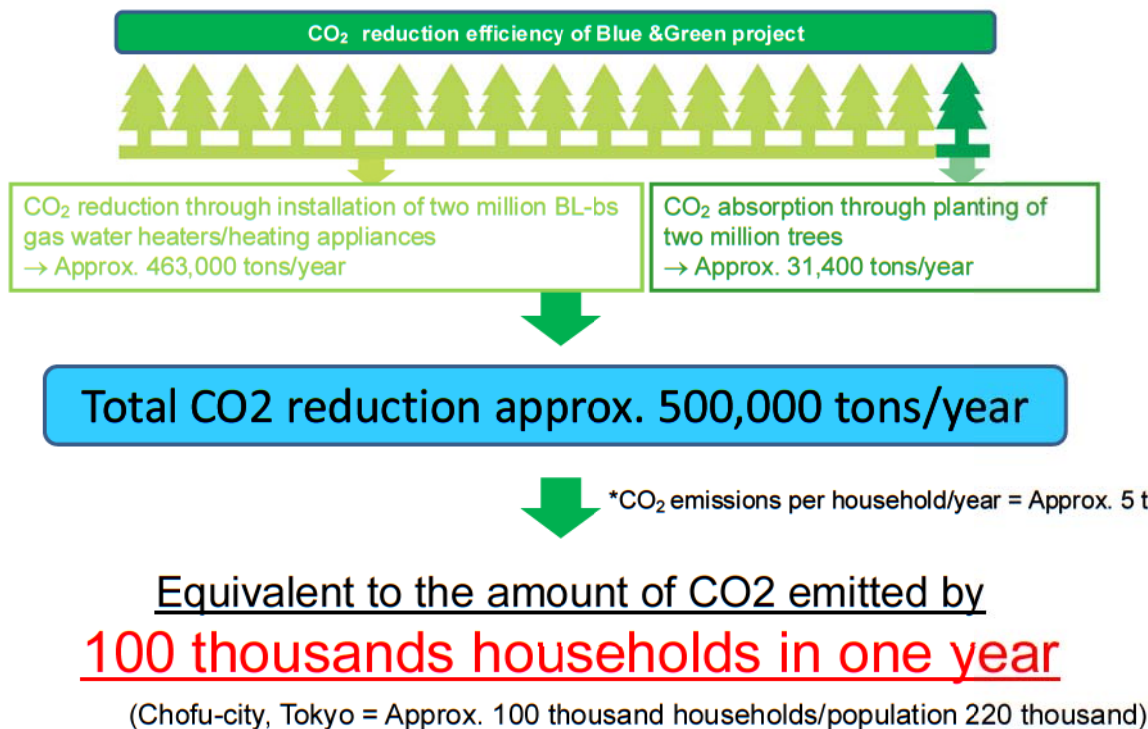
Type 3 3.49 $U \leq 4.07$ (Region: IV - VI)

Type 4 4.07 $U \leq 4.65$ (Region: IV - VI)

Note: The regions use the Next-generation Energy Conservation Standard



CO₂ reduction effect of the project



Center for Better Living strives to continue to promote the certification of environmentally friendly housing components.

Thank you for your understanding and support.

Thank you for your attention.