Residential PV system installation in Japan
- Example of PV community -

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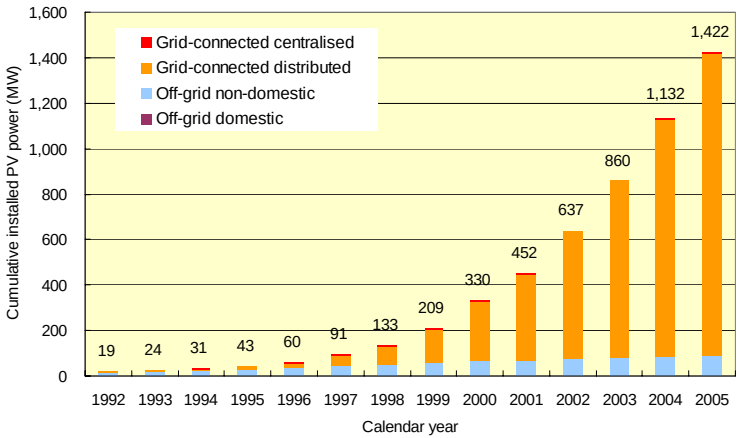
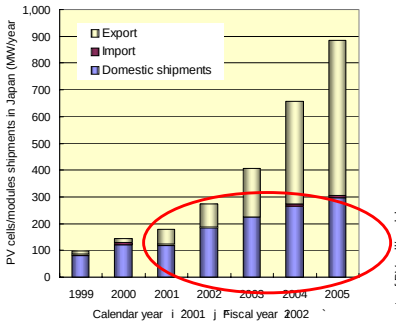
Trends in residential PV system installation in Japan

Cumulative PV installation in Japan

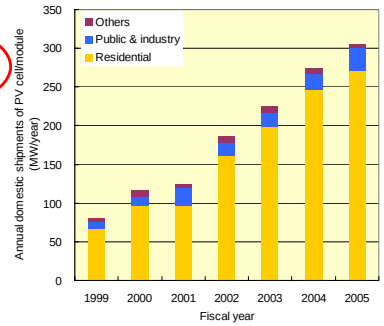


Ref: IEA/PVPS, Trends in Photovoltaic Applications

Shipments of PV cells/modules

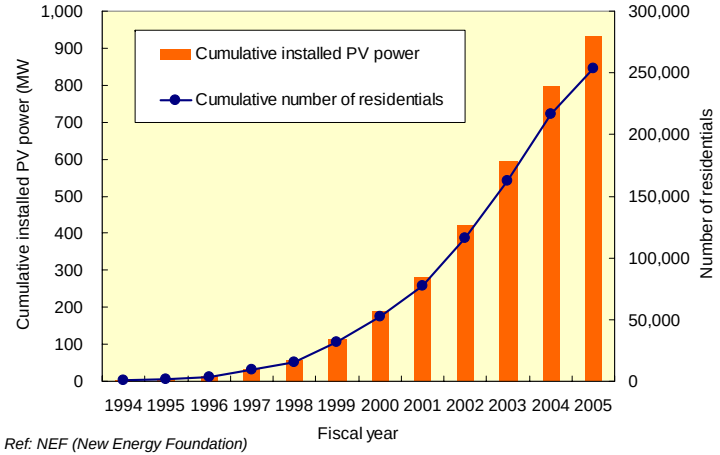


Ref: JPEA (Japan Photovoltaic Energy Association)



Residential PV system installation by national subsidy program (1)

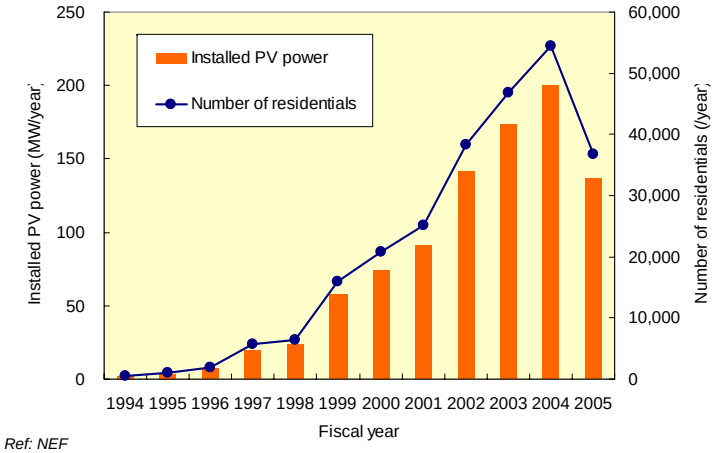
- Cumulative installation



Ref: NEF (New Energy Foundation)

Residential PV system installation by national subsidy program (2)

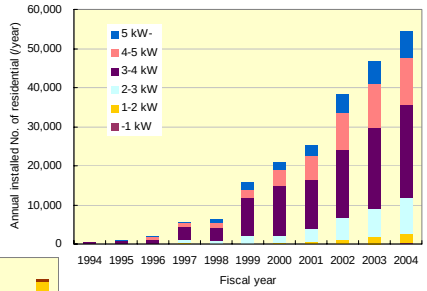
- Annual installation

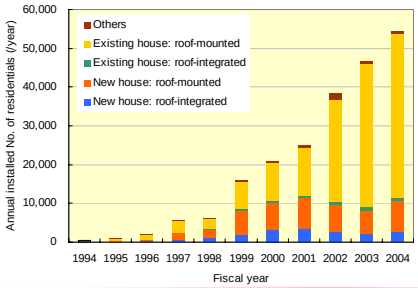


Ref: NEF

Residential PV system installation by national subsidy program (3)

- Annual installation
  - Capacity of system
  - Type of installation

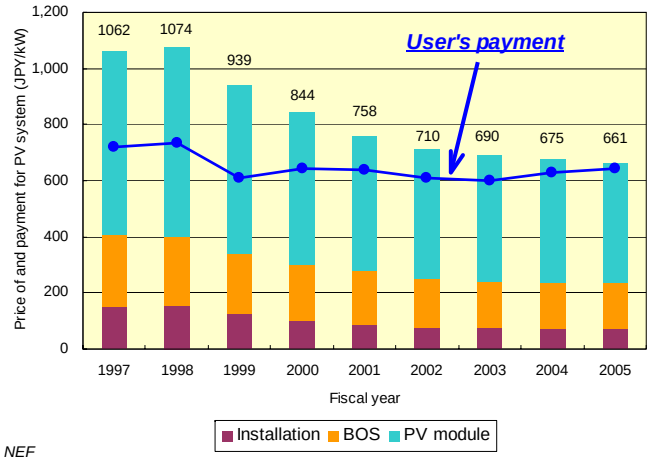




Ref: NEF

Residential PV system installation by national subsidy program (4)

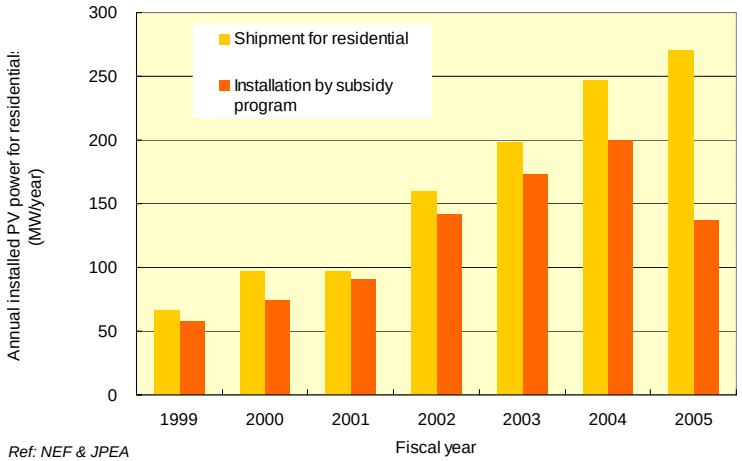
- Averaged price of PV systems



Ref: NEF

Residential PV system installation

- Annual installed PV power



Ref: NEF & JPEA

Areal installation of residential PV systems

(Example of PV community in residential area)

Definition of PV Community

- Option for the future
  - Further deployment of conventional installation of residential PV systems

Plus

  - Areal installation of PV systems to residential area

- Definition of PV community
  - Area where a significant number of dwellings are equipped with PV systems

Examples of PV Community in Japan

Name	Location	No. of houses	Total PV Power	Start of Operation
Tiara Court Kasukabe	Kasukabe, Saitama	35	101 kW	Dec. 1998
Villa Garten Shin-Matsudo	Matsudo, Chiba	36 +5	108 kW + 15 kW	Jan. 1999 + 2002
Tamanodai	Kasugai, Aichi	40		Sep. 1999
Cosmo-Town Kiyomino	Yoshikawa, Saitama	79	237 kW	Aug. 2001
Cherry-Town Izumi-Chuo	Izumi, Osaka	30	90 kW	Jan. 2002
Jo-Town Kanokodai	Kobe, Hyogo	95	285 kW	Sep. 2002
Laperta Tahi	Takamatsu, kagawa	49	100 kW	Sep. 2003
Cherry-Town Izumi-Sunagawa	Sennan, Osaka	43 (planned)	129 kW (planned)	Apr. 2004
Solche Katsuyama-Kita	Osaka	16	48 kW	Aug. 2004
Sekisui Harmonate-town Shin-kamagaya	Kamagaya, Chiba	29		2004 - 2005
Sekisui Harmonate-town Tsurunoura	Kurashiki, Okayama	32 (planned)		2006-
Panahome-city Seishin-Minami	Kobe, Hyogo	100	296 kW	2005 - 2006
Jo-Town Rinkuu-Hawaiian-Village	Tajiri, Osaka	258 (planned)	516 kW (planned)	
Hills-Garden Kiyota	Sapporo, Hokkaido	500 (planned)	1 500 kW (planned)	
Pal-Town Jyosai-no-mori	Ota, Gunma	533	2 160 kW	(2003-) 2006

Outline of some PV communities

Tiara Court Kasukabe

- Location: Kasukabe, Saitama
- No. of houses: 35
- Total PV power: 101 kW (2,9 kW/house)
- Start of operation:
  Dec. 1998

Outline of some PV communities

Villa Garten Shin-Matsudo

- Location: Matsudo, Chiba
- No. of houses: 41 (=36+5)
- Total PV power: 123 kW (2,9-3,1 kW/house)
- Start of operation:
  36: Jan, 1999
  +5: 2002

Outline of some PV communities

Tamanodai

- Location: kasugai, Aichi
- No. of houses: 40 (all-electric houses)
- Total PV power: ??
- Start of operation: Sep. 1999

Outline of some PV communities

Cosmo-Town Kiyomino

- Location: Yoshikawa, Saitama
- No. of houses: 79
- Total PV power: 237 kW (3 kW/house)
- Start of operation:
  Aug. 2001

Outline of some PV communities

Jo-Town Kanokodai

- Location: Kobe, Hyogo
- No. of houses: 95
- Total PV power: 285 kW (3 kW/house)
- Start of operation: Sep. 2002

Outline of some PV communities

Jo-Town Rinkuu-Hawaiian-Village

- Location: Tajiri, Osaka *(under construction)*
- No. of houses: 258 *(planned)*
- Total PV power: 512 kW *(planned)*

Outline of some PV communities

Panahome-city Seishin-Minami

- Location: Kobe, Hyogo
- No. of houses: 100
- Total PV power: 296 kW (3 kW/house)
- Start of operation: 2005

Outline of some PV communities

Pal-Town Jyosai-no-mori

- Location: Ota, Gunma
- No. of houses: 553
- Total PV power: 2,16 MW
- NEDO's R&D project (FY2002-2007)

Multi dwelling houses equipped with PV

Outline of some PV communities

Nagoya-city public houses: Hazama-so (rental houses)

- Location: Nagoya, Aichi
- No. of buildings: 8
- Total PV power: 200 kW (11-30 kW/building)
  - PV systems supply electricity for intercommunity.
- Start of operation: 2000

Outline of some PV communities

Ikuji public-house (rental houses)

- Location: Kurobe, Toyama
- No. of houses supplied PV electricity: 12
  - Total number of houses: 24
- Total PV power: 32 kW
- Start of operation: 1998

Outline of some PV communities

Advance-21 Kifune

- Location: Shimonoseki, Yamaguchi
- No. of houses supplied PV electricity: 16
  - Total number of houses: 32
- Total PV power: 48 kW (3kW/house)
  - plus 3 kW for intercommunity (Total 51 kW)
- Start of operation: 2001

Outline of some PV communities

New-Gaia (all-electrified rental houses)

- Location: Kitakyusyu, Fukuoka
- No. of houses: 43
  - All houses are supplied PV electricity
- Total PV power: 64,5 kW (1,5 kW/house)
  - plus 1.6 kW for intercommunity (Total 66 kW)
- Start of operation: 2005

Concluding remarks

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- National subsidy program for residential PV system by METI was terminated.
- Subsidy programs by METI will be moving to for public & industry buildings.
- Some local governments have their programs for residential PV system in the regions.
- Areal installation is a promising option for further deploying PV systems in urban-area.
- Programs for developing 'environmental-friendly urban-area' are expected for deploying urban-scale PV installation.