

PV for Home Energy Solution



April 11th 2016 SHC Task53/ PVPS Task 1 Joint Workshop **Izumi KAIZUKA RTS Corporation, Tokyo** kaizuka@rts-pv.com PV system providers offer some options for home energy solution

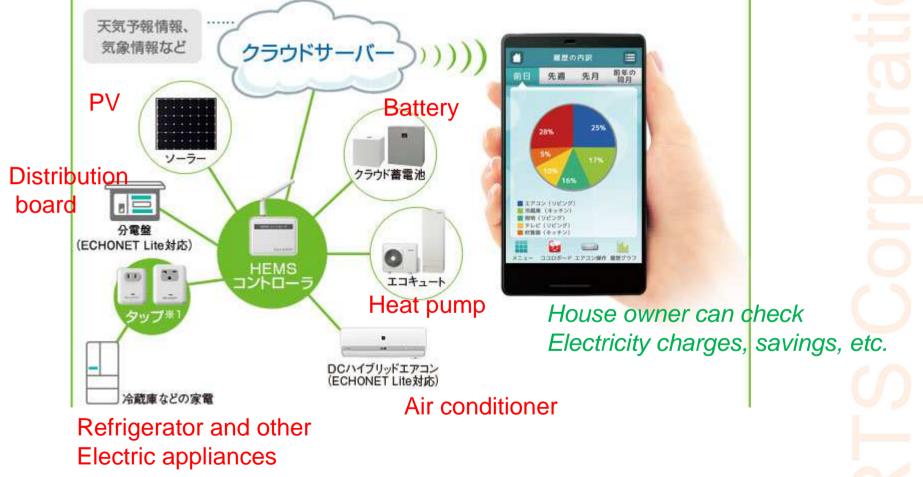
- PV + highly efficient heat pump
- PV + batteries (using subsidy for batteries)
- PV + fuel cells or gas co-generation
- PV +AC/DC-air conditioner (launched by Sharp in November 2015)

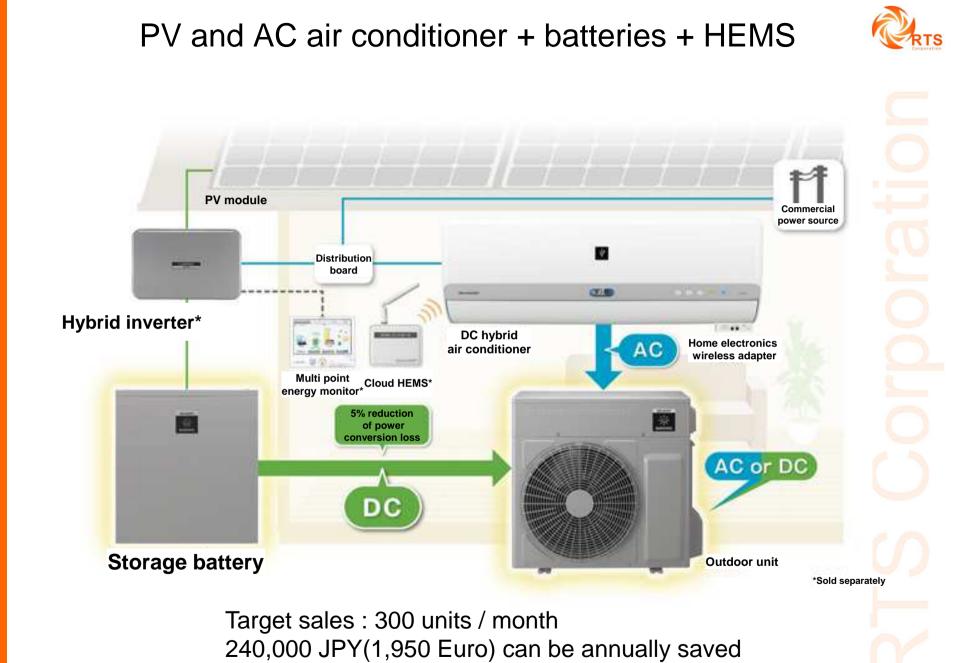




Home energy solution propsed by Sharp







EPT: depending on conditions

FIT for <10 kW PV system



Fiscal Year	FY 2015		FY 2016	
Condition for output curtailment		Required to equip a device to respond to output curtailment		Required to equip a device to respond to output curtailment
FIT for PV	33 Yen/kWh (29.2 cent/kWh)	35 Yen/kWh (30.9 cent/kWh)	31 Yen/kWh) (27.4 cent/kWh)	33 Yen/kWh (29.2 cent/kWh)
FIT for PV + α (batteries , fuel cells, co- generator	27 Yen/kWh (23.9 cent/kWh)	29 Yen/kWh (25.6 cents/kWh)	25 Yen/kWh (22.1 cent/kWh)	27 Yen/kWh (23.9 cent/kWh)

Roadmap for energy efficiency for buildings



(Fiscal Year) Present 2020 2030 2050							
(FIS	cal Ye	ear)	sent 2020 2030 20	050			
	argets Ian, et	s set in the Basic Energy c.	ZEB in newly-built public buildings, etc. ZEB in average newly-built buildings ZEH in typical newly-built houses ZEH in average newly-built houses Obligation to newly-built houses and buildings to comply with the energy conservation standard Energy conservation standard				
Newly-built	ation	Obligation to comply with energy conservation standard	Enhance regulatory scheme Obligation to compliance Enhance equilatory scheme Obligation, etc.				
	Regulation	Improvement of framework of supply side and review side	Enhancement of execution framework through cultivation and utilization of private intuitions Cultivation and improvement of technical levels of engineers and skilled workers in charge of design, installation and evaluation Reduction of burden on designers and small- and medium-sized construction companies (easy-to-apply programs)	performance of new buildings			
		Promotion of high-level energy conservation measures	Approval and support for high-level energy conservation measures Support for dissemination and establishment of ZEB, ZEH, LCCM houses, etc., providing and disseminating information on the consequent effects such as improvement of energy independence in case of disaster				
	Guidance	Improvement in energy conservation performance by top runners	Discuss standard Tenhance standard in response to progress in technology development , cost reduction, etc.	Promote improvement of energy- saving performances			
	Guid	Promotion of evaluation and indication scheme	Promote improvement, dissemination and use of evaluation and indication scheme of environmental performance. Disclose data on average primary energy consumption for design				
		Securing performance of building envelopes	Support and promote improvement of long-term excellent housing and low- carbon buildings, etc. Support improvement of rental housing with heat insulation performance, etc.				
(səsnou/sbu	Regulation	Securing appropriate response for renovation Rationalization of regular reporting, etc.	Enhance regulatory scheme regarding major renovation Enhance standard in response to progress in technology development, cost reduction, etc. - Rationalize scope of renovation work for notification - Reduce procedural burden on owners and managers - Facilitate work for obligation of compliance at agencies - Promote appropriate inspection and maintenance - Abolish regular reporting scheme - Improve support incl. providing information on appropriate inspection and maintenance Promote appropriate inspection and maintenance				
Retrofit (existing buildings/houses)		Appropriate management	Enhance support incl. providing information for promoting appropriate management such as various settings and control	Promote			
	Guidance	Improvement of energy- saving performance through renovation	Facilitate renovation through regulatory rationalization Promote highly effective and efficient renovation for energy conservation	improvement of energy- saving performance of existing			
		Improvement of evaluation and indication scheme	Support leading efforts for improving energy-saving performance Improve evaluation and indication scheme of energy-saving performance of existing buildings are appropriately evaluated and selected	buildings			
Other	Promotion of smart wellness houses Provide information on the results of verification of health effects thanks to heat insulation of houses			Promote			
	Promotion of energy-saving actions, etc.		Provide information on the status of energy use, etc. Introduce economic incentives for energy-saving actions Actions in collaboration with environmental education and field trips	creation of towns/ houses and life style contributing to healthy long life			
		omotion of low-carbon nmunity development, etc.	Promote transition to concentrated urban structure and low-carbon buildings in urban areas Promote energy-saving measures through partnership among town blocks and buildings	and low-carbon society			

Source: Ministry of Land, Infrastructure and Transport





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New Energy and Industrial Technology Development Organization

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