

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual		
Amount of generation		272	286	334	457	443	412	398	399	347	317	302	261	4228		
Saving	Monitoring house	Buy[kWh]	543	486	452	262	252	228	266	263	230	254	265	488	3989	
		Buy[Yen]	10366	9108	8355	4744	4724	4381	5676	5646	4626	4743	4775	9160	76305	
Saving + Creation	Install PV system	Buy[kWh]	369	327	322	189	189	183	187	196	169	209	206	344	2890	
		Sell[Yen]	8925	9499	11046	16023	15000	13786	11038	11230	10656	10635	10324	8614	136776	
		Profit[Yen]	2914	4307	5983	12971	11976	10870	7671	7650	7560	7110	6782	2998	88793	
Saving + Creation + Storage	Battrry	Sell	Buy[kWh]	517	456	432	261	244	220	222	224	219	265	284	479	3822
			Sell[Yen]	7826	8394	10597	16959	15995	14801	12499	12818	11974	11487	11135	7979	142463
			Profit[Yen]	2108	3608	6388	14816	13997	12996	10681	10977	10180	9290	8758	2957	106755
		Charge	Buy[kWh]	443	395	372	223	211	189	190	190	183	219	230	230	3076
			Sell[Yen]	6668	7458	9742	16495	15581	14409	12105	12383	11523	10931	10490	7037	134822
			Profit[Yen]	2557	3855	6485	14665	13853	12861	10549	10823	10022	9136	8603	3208	106617
Self sufficiency	Buy[kWh]	323	285	243	73	50	33	25	29	33	69	95	304	1562		
	Sell[Yen]	5786	6607	8611	14829	13797	12687	10298	10622	9860	9287	9052	9052	120487		
	Profit[Yen]	-2613	-718	2494	13274	12741	11987	9762	10003	9153	7816	7011	1200	82111		

Table5 Effect of battery

CONCLUSIONS

- Using numerical simulation, predict annual energy consumption in the house, then consider effective energy-saving measures.
- By combining the change of Building specifications, Equipment and Lifestyle, energy consumption can be reduced by at most 60% when heating/cooling is intermittent for each building, and at most 62% when heating/cooling is used 24h for the whole building
- Estimate the amount of energy generation with photovoltaic pro-gram and compare it with annual energy consumption. Then clarify the possibility of Net Zero Energy.
- Combine Energy saving, Energy creation and Energy Storage, then the amount of purchase becomes about 1500kWh for a year

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