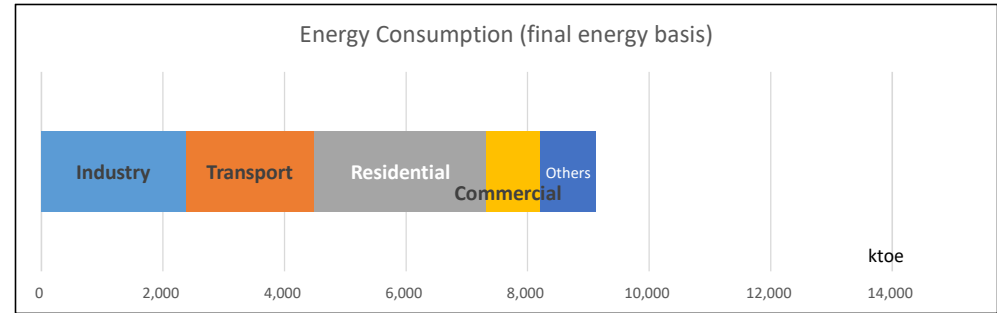


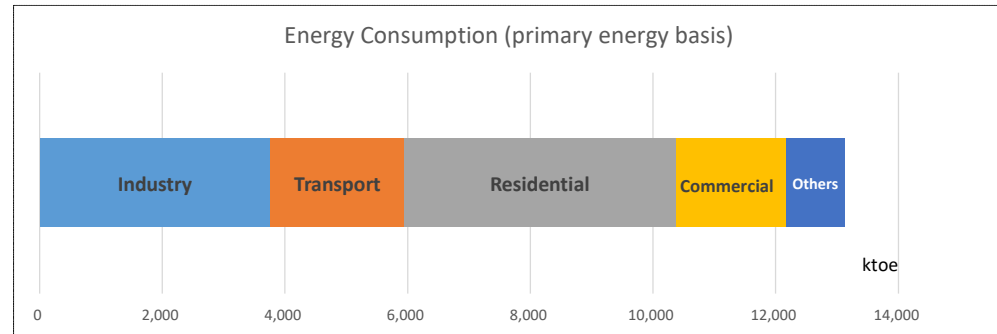
Final energy base

	Industry	Transport	Residential	Commercial	Others	Total
Power	751	32	1,153	448	32	2,416
Coal	292		208	31	5	536
Crude oil						
Oil Products	327	2,079	37	63	685	3,191
Gas	615	11	194	199	176	1,195
Heat	213		404	121		738
Biofuel	174		841	27	7	1,049
Total	2,372	2,122	2,837	889	905	9,125



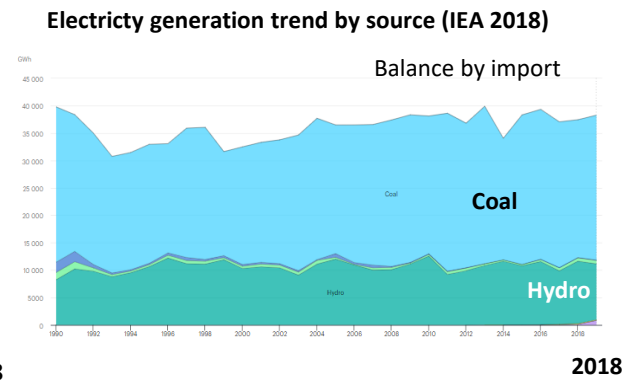
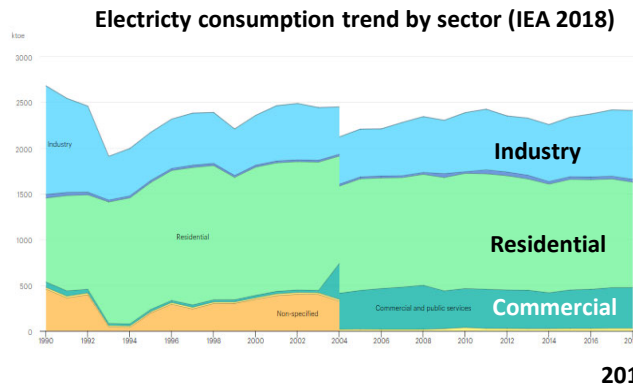
Primary energy base (excluding biomass)

	Industry	Transport	Residential	Commercial	Others	Total
Power	2,258	96	3,466	1,347	96	7,263
Coal	292	0	208	31	5	536
Crude oil		0	0	0	0	0
Oil Products	327	2,079	37	63	685	3,191
Gas	615	11	194	199	176	1,195
Heat	273	0	518	155	0	738
Biofuel						
Total	3,765	2,186	4,424	1,795	962	13,132
Total(%)	29	17	34	14	7	100



Back data: IEA 2017	Heat	Primary/ Final E	1.28
	Electricity	Primary/ Final E	3.01

	Input energy	Power supply	Heat supply	Total Eff.
EP	4,341	2,176		
CHP	3,189	992	267	
Heat	680		597	
Own use		362	52	
Loss		390	74	
E Total	7,263	2,416	738	
Eff.		33.3%	77.9%	
Total losses %		23.7%	14.6%	



Ranking	Sector and energy type	Consumed primary energy (ktoe)	%
1	Electricity for residential	3,466	26.4%
2	Electricity for industry	2,258	17.2%
3	Oil for transport	2,079	15.8%
4	Electricity for building	1,347	10.3%
5	Gas for industry	615	4.7%
	Others	3,367	25.6%
Total		13,132	100.0%

Eligible measures for saving	Expected saving % in sub-sector (JICA estimate)	
Efficient cooling, lighting	▲20.0%	0.052787
Efficient cooling, lighting	▲12.5%	0.021493
RE+EV, regulation for vehicle efficiency, LRT, MRT	▲30.0%	0.047495
Efficient cooling, lighting	▲35.0%	0.035901
	▲15.8% for total	0.157676

40% of residential is for cooling and lighting
25% of industry is for cooling and lighting
70% of building is for cooling and lighting