

Proposing Distributed Power 30% among all generation sources in 2030

Professor Takao Kashiwagi in Tokyo Institute of Technology, Chairman of New and Renewable Energy Committee by METI, and advisory committee chairman of Japan Council for Renewable Energy states one of probable ideas about the picture of energy structure in 2030 such as 70% of power supplied from main grid and 30% of power supplied from distributed power sources. This will be well balanced as target in Japan.



Looking at more precisely, large grid power comes from fossil 32%, nuclear 30%, large scale renewable sources like hydraulic and geothermal 8% are summed 70%.

As of distributed power supply, co-generation system for power and heat to be 18%, renewable energy from natural resources like photovoltaic, wind and biomass to be 12 %, are summed 30%.

According to the energy simulation to search the optimum in city communication, best solution is to introduce co-generation to be able to supply both power and heat to be 30%. To realize this vision, dissemination of advanced co-generation is very important to raise up to society movement. To cover the fluctuation and volatility of natural resources of solar and wind, co-generation driven by gas can manage power supply to be stable.

The calculation for total demand of power shows co-generation requirement is about 32,000kW, while current National Energy Plan states it is double of current supply volume by 2030, in other word, 11,000kW in 2030. Therefore, we must increase it three folds of the 2030 existing plan. The challenge will be required so as to collect, recover, and reuse the various exhausted heat from regional or conventional routine activity such as exhausted heat from power plant. The incentive legal program may or will be also required in order to encourage the personnel and enterprises trying energy challenger. The new law so as to enable selling the generated power from co-generation in constant marginal level might be necessary.