CHAPTER 4 - ONSITE SYSTEMS: GENERATION & RENEWABLE ENERGY

504.01 ON-SITE RENEWABLE ENERGY – SMALL TO MEDIUM SCALE EMBEDDED GENERATORS

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INTENT

To regulate the design and installation of on-site electricity generators using renewable energy.

REQUIREMENT

For all new buildings, where a building incorporates on-site generation of electricity from a solar photovoltaic system, it can be a solar grid connected system or a solar off-grid system.

A. The grid connected solar generator shall be connected to Dubai Electricity and Water Authority (DEWA) network, operated and maintained according to DEWA regulations.

B. For off-grid solar system, the backup off-grid load is to be indicated in the Total Connected load (TCL) along with the grid based battery charger load, if applicable.

SIGNIFICANCE

As the rising cost of energy is an issue in today's world and also energy resources are depleting, the demand of renewable energy such as solar energy continues to rise. As a result, small and medium scale renewable energy systems are becoming more feasible both technically and financially. They also offer many benefits including distribution of energy, energy efficiency and reduced CO_2 emissions.

APPLICABILITY

This regulation is applicable to all building types. Refer to Table 101.07(1) in Section One - Administration for detailed applicability levels.

IMPLEMENTATION

Small-scale and medium scale embedded generators refers to power generation unit, which are located on residential, commercial, schools or small-scale industrial projects.

On-site electricity generators using renewable energy sources are classified based on their connection to other power sources and electrical loads. It is classified as stand-alone systems (off-grid) and grid connected systems.