

Estimating the efficiency of the power in modern residential houses.**Dr. Samah Sobhy Mansour.****Lecturer at architecture department- October high institute of engineering and technology - at 6th October city.**sameh.mohamed.nagiub2017@gmail.com**Abstract:**

The research is considered an assisting step in solving the energy problems and trying to reach self-sufficiency and decrease the level of consumption using the architectural control and modern technics that have been developed since the beginning of the current century to formulate a future that aims for sustainable development. With full clarification of the relation between the residential houses and energy and utilizing it inside the buildings with every possible means and technics. The search is concerned about explaining the guide lines related to the energy efficiency in buildings and the purpose is to assist designers and participants in the combining works and supplying the required data during the various stages of the designing operation and identifying the building that were prepared by the building designers, those guide lines are applied on the new buildings and applicable on the air conditioning supplies and the heat station in the new building, as it is assumed that it is essential to keep the circumstances of the internal space within the limits of comfort regarding the temperature, moisture, quality of airing, noise, lighting and the considerable systems in evaluating the power efficiency

Insert data from the general principles→ specifications: regulations, clients, negative and positive concepts as regarding the power efficiency and cost effectiveness.

Compatibility with the project definition, first stage→ guiding lines for efficiency and the required targets by kilowatts per hour units or by the level of energy in the required data charts, systems to be considered, the chances of using local resources.

Shape 1: illustration of the sequence of the designing process including the power efficiency in the building

The research is relying on identifying the relation between the residential houses with energy and study the contributing elements in energy consumption, and means and ways of the consumption limitation, and the new present technics as a solution to the problem of consumption, rationalization and expressing the indicators of the efficiency of the energy by studying the factors related to the building casing- the integrated energy indicators-the primitive energy indicators) and study those on the designing process during the stages of (designing concept- illustration design-detailed design-final design) by designing and constructing the building on a specific level of qualification, starting with the general methodology to benefiting from the negative sides, the process of design and constructing should involves the participation of the highest measuring standards of the systems(such as the airing, heating systems-air conditioners- lighting-hot water systems and means of their control) and matching among those high standards of those systems and the building structure.

Key words:

Designing process- location analysis- the building casing- the power systems- the integrated energy- the primitive energy.