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ELECTRICAL POWER SYSTEM WORKING MODEL

MR. PATIL SAURABH PRAKASH
(Vidyavardhini Institute of Technology PAL)
saurabhpatil566456@gmail.com

MR. MORBALE HARSHVARDHAN SANJAY
(Vidyavardhini Institute of Technology PAL)
morbaleharsh@gmail.com

MISS. PATIL SNEHAL SUBHASH
(Vidyavardhini Institute of Technology PAL)
snehalpatil2262@gmail.com

MISS. SHENAVI POOJA JAYVANT
(Vidyavardhini Institute of Technology PAL)
poojashenavi720@gmail.com

ABSTRACT
Electricity is an invisible phenomenon created by the movement of electrons in a conductor. This seemingly simple explanation leads us to a whole world of possibilities and unknowns! Curiously enough, it is a challenge to define electrical energy. However, we understand its properties, how to generate it and transmit it from point A to point B and, especially, how to use it.
Measuring electricity an electric current can be compared to the water flowing through a hose. The pressure inside the hose, or the force with which the water flows, is like voltage (V). The hose's discharge, or the amount of water flowing, is like current intensity, measured in amperes (A). Friction along the hose's inner wall is similar to resistance (Ω). Power is what is produced by multiplying voltage by intensity, and is expressed in watts (W). Consumption is expressed in watt hours (Wh) and indicates the energy used by a system or device over a given period of time.

KEYWORDS – Transformer, LED, Battery, Motor, Plywood, Switches & Wires.

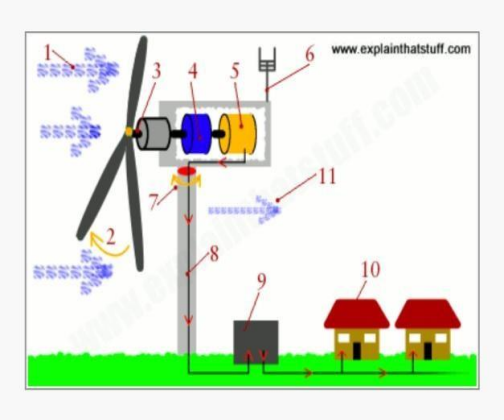
I. INTRODUCTION

Nearly 125 years have gone by since Quebecers began to enjoy the benefits of electricity. Here are some of the key events that have marked the growth and development of electricity in Québec. Of course, Hydro-Québec is a fundamental part of the history of electric power in this part of North America.
1908 – UNDERGROUNDING AND URBAN AEETHETICS A growing number of companies tried to carve out a place for themselves in the lucrative public lighting market. More and more electric wires crossed overhead, and the montréal cityscape grew increasingly ugly. Influenced by climate and urban aesthetics, Montreal became one of the first cities in North America to adopt a policy of undergrounding— burying power lines, a practice that improved the city's appearance and protected the distribution grid against bad weather.
1889 – ELECTRICITY OVERTAKES GAS! in the streets of montréal, electricity finally succeeded in replacing gas as the method of choice for public lighting. by 1889, electric streetlights could be found all over the city.
1901 – EMERGENCE OF A POWERFUL MONOPOLY: MONTREAL LIGHT, HEAT AND POWER COMPANY the merger of the Montreal Gas Company and the Royal Electric Company laid the groundwork for what would become a vast industrial and financial empire: the Montreal Light, Heat and Power Company. The company sought to tap into the immense potential for expansion offered by the electricity market. It consistently refused any form of cooperation with commissions of inquiry and agencies established by the government in an effort to regulate the sale of electricity.

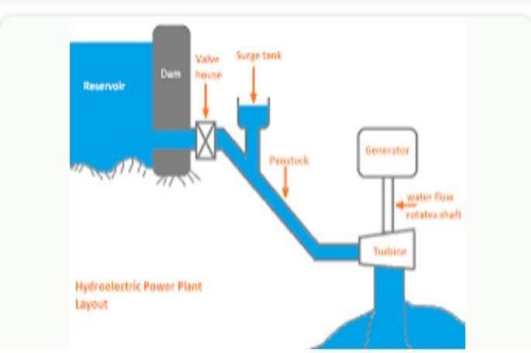
1879 – PUBLIC DEMONSTRATION OF THE ARC LAMP IN MONTRÉAL On may 16, 1879, there was a public demonstration of the arc lamp at montréal's champ-de-mars. According to the following day's edition of the newspaper la minerve, several thousand spectators expressed their satisfaction. later that year, American inventor thomas Alva Edison improved the incandescent lamp, which he marketed successfully 10 years afterwards.

II. CONSTRUCTION:-

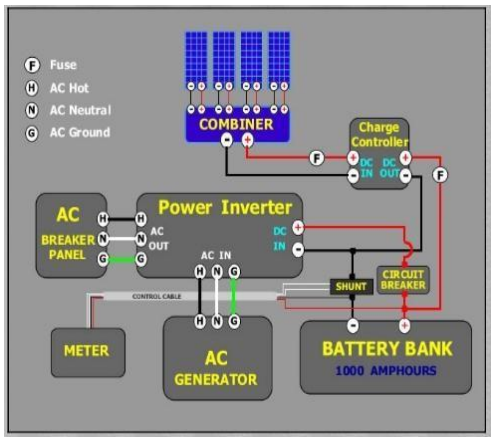
Wind power Plant:



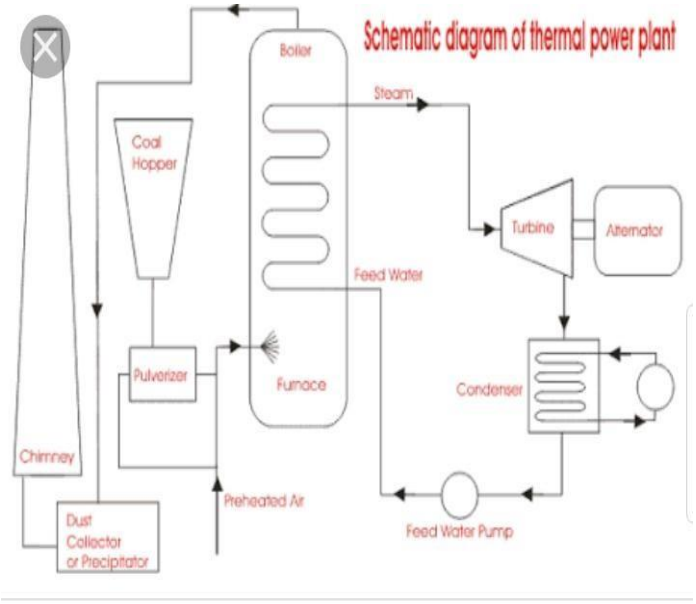
HYDRO POWER PLANT:



SOLAR POWER PLANT:



THERMAL POWER PLANT:



III. WORKING PRINCIPLE :-

Wind turbine operate on a simple principle. The energy in the wind turns two or three propeller-like blades around a rotor. The rotor is connected to the main shaft, which spins a generator to create electricity….Wind turbine convert the K.E.in the wind into mechanical power.

It is the power generated by water, using its gravitational force when it is flowing or

Falling. This is how the plant changes the potential energy of standing water to kinetic energy by moving it, then converting it into mechanical energy which produces electric energy.

Photovoltaic directly convert solar energy into electricity. They work on the principle of the photovoltaic effect. When certain materials are exposed to light, they absorb photons and release free electrons. This phenomenon is called as the photoelectric effect.

In the condenser the steam reduces its temperature and changes its state and becomes liquid. Thermal power station has steam drive which produces rotating magnetic field in the generator. Hence, electric power is produce.

IV. PHOTOGRAPH OF ACTUAL PROJECT :-

VI. CONCLUSION

Single power plant can use only for particular seasons but this type of plant is used for all seasons. By using solar thermal energy it is possible to generate power in large value. It is required to generate electrical power 100% renewable sources. Hydro power generation is the direct energy conservation system in which water flow covert into electrical energy by this generation techniques in large power is generated without pollution.

Power output from wind turbines is proportional to the area swept by their blades, and to the cube of wind speed the narrow range of useable wind speed restricts the area where wind energy can be exploited.

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