

17.3.12 c – Progress against SDG12- Policy Document for Waste Disposable – Tracking and Recycling

POLICY DOCUMENT ON CLEAN WATER AND SANITATION

Clean water being the absolute necessity for sustenance of life, the Institution has ensured that clean water is provided by establishing RO drinking water plants there after initial treatment the water is retreated by the reverse osmosis before being supplied for drinking purposes. The totally treated water for the purposes of drinking is 36500 litres per day and the total capacity is 8000 litres per hour per day.

DRINKING WATER FOR DOMESTIC PURPOSES

The RO drinking water domestic units are established which is having a total capacity of 536 litres per hour and 1640 litres of treated water is supplied through these domestic units.

WATER TREATMENT PLANTS

Water treatment plants are provided to treat water before it is being used in toilet, Quarters, Men's hostel and Ladies Hostel and the capacity is 3350000 litres per day. Five water treatment plants are used for this purpose. There is a well chartered water balance mechanism where the requirement is met by recycling treatment and used for all the necessary purposes. The housekeeping, landscaping necessities are fully met by ensuring the generation of clean water. The total water consumption per day in litres is 457775.

RECYCLED WASTE WATER

The campus has a well planned waste sewage system, affluent disposal system which ensures zero discharge of waste in the campus. There is an active recycle waste water plant, capacity 500 KLD, two sewage treatment plants. The recycled water thus produced is used for landscaping and dual plumbing & flushing purposes. For instance, the total water collected in the college campus

is 250 KL, the water is recycled therein is 220 KL. Sprinkler system is used for the purpose of gardening which ensures minimum wastage of water and at the same time providing for maintaining a clean and green campus.

WATER EFFICIENT CAMPUS

The appliances that are used for efficient water management include sensors for automated flushing and automatic water level controller for avoiding overflow in over head tanks.

RAIN WATER HARVESTING

The most efficient mechanism for uninterrupted water supply which is most commonly used in the present day is Rain water harvesting. The rain water is collected from the terrace and is diverted to the open wells in the Institute and is used most efficiently. The dual insensity filter works on the principle of cohesive and centrifugal force. No extra energy is required as it works on gravitational force. It is perfectly wall mounted and is compact in size. It automatically flushes out dirty particles. It can be connected at any angle and turned to any degree because of its flexibility. The rain water collected is efficiently harvested.

SANITATION

Sewage Treatment Plants

The Institute has two well built sewage treatment plants. One commissioned as 150 KLD plant, which was revamped and the capacity was increased to 250 KLD in 2015. The menø hostel has a sewage treatment plant with a capacity of 250 KLD commissioned in 2014.

Napkin Burner

As the Institute comprises of a large women population, it has installed an Incinerator machine for the purpose of disposing sanitary napkins hygienically. With the focus on absolute hygiene, wet scrubber is attached at the outlet of burner fume where the fumes get scrubbed in water and get filtered to remove the harmful emissions.

Toilet

Clean and neat toilet which are properly tiled and fitted with modern equipments are provided in the campus, the hostel and in other departments. Water closets, ablution taps, urinals, wash basins, showers and drinking water tap are provided. Day to day cleaning of the toilet is ensured by outsourcing 118 cleaning staffs who attend to the cleaning round the clock. In every block is provided with adequate number of toilets for both male and female members of the campus. *{Non Residential Male : 3587 ; Female : 1624 ; Residential : Male : 1500 ; Female : 400}*. *Urinals are provided in the ratio of 1:23 and toilets are 1:28 within the Institute where in men's hostel is in the ratio of 1:10 and 1:6 and in ladies hostel, the ratio is 1:3.* To conserve water, sensors are used for automated flushing and automatic level controller are used for controlling overflow in over head tanks.

Toilet facilities are provided for differently abled persons taking into account their special needs. Eco friendly signages are provided for the purpose of hygiene and sanitation throughout the campus.

WASTE MANAGEMENT

The management of waste possess a great threat to the environment and to conserve the environment in all its pristinely. Effective waste management techniques are employed for the effective disposal of waste. A composting unit

and an organic waste converter are used and a separate SWM team (Solid Waste Management Team) is employed for this purpose.

Solid Waste Management System

To safely dispose the waste, the solid waste is segregated into organic Waste, recyclable waste and inert waste. Three different colour bins are separately provided for dry leaf & food waste, waste papers and cotton boxes and waste plastic and covers.

Garbage Incinerators

The waste collected is used for generating fly ash at the rate of 500 kg per day which is used as manure for gardening. It is also used as an alternate solution to fill land. The composting unit and organic waste converter converts waste into manure at the rate of 250 kgs per day.

Records

The Institute has also secured a proper Certificate for Water Quality under Water Act,1976. Five water treatment plants are provided at various places in the campus to treat the water before use and tested through a vendor periodically and certificate for such quality and purity of the water is obtained.

The Institute also secured a Certificate for Sanitation from the Deputy Director of Health Sciences, Kancheepuram District, the statutory body empowered to issue such Certificates.

. The Crescent University has to its great credit the Guinness Record for creating a Recycle symbol where 1726 students and staff clad in green T shirts and caps formed a human recycling logo measuring 45 x 75 ft to mark the World Water Day. This was done by breaking the record made by 750 people in

Turkey. The achievement has been recognized by Asian Book of World Records. This is a great achievement for the Institute.

POLICY DOCUMENT ON AFFORDABLE AND CLEAN ENERGY

In modern times, the generation of energy is disproportionate to the demand. Therefore, conservation of energy is a pivotal requirement to meet the demand. The minimal use of energy and finding alternative sources ensures its continuous supply for a long time. With this aspect in mind, energy conservation is done by using the most modern techniques.

Renewable Energy

The demand that is contracted from TANGEDCO is 1200 KVA and the backup power capacity is 2350 KVA(100%).

SOLAR POWER

Three roof top solar power plants are present inside the campus and the capacity of the first solar power plant is of 150 kWp commissioned in June 2014 at a cost of 1.32 Cr. The second solar power plant is of 100 kWp commissioned in October 2014 at a cost of 62 Lacs. New roof top Solar Power Plant III is of 300 kWp capacity and it was commissioned in October 2018 at a cost of 1.20 Cr. So the total power generated through the solar plant is 27,04,654 units till 31st July 2020 and our average monthly energy savings is 43%. Installation of additional 100 kWp Solar PV project on the RCC Roofs of School of Architecture Building and Innovation & Incubation Centre at a cost of Rs. 40 lakhs (work in progress). The campus also has an Online monitoring solar power system.

Solar Water Heaters

Three solar water heaters having a capacity of 36,500 litres which is equivalent to 365 numbers are installed. By this the saving of power is approximately Rs. 24 lacs per annum. Sub meters are provided in canteens, hostels and quarters

Solar Street Lights

Solar street lights have been installed in the campus by a 3rd year EEE students along with our estate electrical department team. It is installed towards staff quarters to Men's hostel road and Architecture block area.

Bio gas Plant

A bio gas plant of 50m³ capacity was commissioned in the Ladies Hostel in the month of June 2017 to recycle the food waste generated from the Hostel mess and Canteen in the campus. The bio gas generated is used in the Ladies Hostel mess kitchen.

The Institute has a bio gas plant in order to handle the food waste generated from hostel kitchens and canteens. It will generate 15-20m³/day from the plant and the same shall be used for the cooking purposes at hostel kitchen and canteens. The total project amount is 35 lakh and the Institute have contributed Rs.10 lakh.

Energy efficient Appliances in Campus

LED fixtures are being extensively used for all new interior renovation works in the campus. So far, 50.87 kW capacity of LED lights are fixed which provide around 70% of energy saving compared to conventional lighting.

With an emphasis to energy conservation, all split AC units purchased since the year 2012 are of BEE 5- star energy rating. The AC units are free from ozone depleting CFC.

Motion sensor lights are provided in computer science lab, staff cabins and toilets for energy savings.

The Institute is a proud owner of "Tissue Cultured bamboo plant" of variety "Beema." This is one of the super bamboo, developed by the Biotechnology lab, grown in greenhouse for six months and now it is ready for planting in the soil. The full growth of the bema bamboo is achieved only by providing the best care by us; both at the time of planting and growing it for at least 4 to 5 years. Every plant when it is fully grown to its best growth generates over 300kg of oxygen every year, it is just sufficient for one person for a whole year.

The Institute has an Air Quality Sensor Station which helps to know the air quality.

Recognitions

ASSOCHAM award " University of the year for Eco-Friendly Sustainable Campus" for its eco-friendly self-sustaining efforts in conserving the environment. The award was presented by Dr. Mahendra Nath Pandey, Honorable Minister of Skill Development and Entrepreneurship, Govt. of India in 2020.