

Green Audit Recommendations 2018-2019 & Measures taken 2019-2020

The recommendations suggested by the Green audit report for the year 2018-2019 has been taken into consideration in the year 2019-2020 as it is advisable to fulfil the recommendations before conducting the green audit for this year. The following audit framework is used for conducting in-house Green Audit in 2019-2020:

Heads	Recommendations made by green audit 2018-2019	Measures taken 2019-2020
Energy Conservation	Sanctioned load should be reduced to 300 KVA to save Rs 37,500/- per month i.e. Rs 4.5 lakhs/year.	Recommendations have been fulfilled. Annexure I.
	The Solar PV potential of the College is 121 kW. It is highly recommended that the College puts up a Solar PV system.	The solar panels were installed in December 2019. The capacity of the solar panel is 3 KW & consumption is 2.75 KW. Annexure II
	Replacing Fluorescent Tube lights with LED Tube lights	Recommendations have been fulfilled and saving of approx Rs 36,000 per month has been noticed after replacing the tube lights to LED lights in the campus. Annexure II
	To take up a Program towards energy conservation, with awareness and novel ideas to ensure participation from staff and students	Due to pandemic (COVID-19) situation, as students were not on campus, could not be carry out.
	Need to save energy, labels/messages should be put in strategic locations.	Recommendations have been fulfilled through DBT star college funding. Annexure III
	Estate/Facility Management should regularly keep a track of the Energy Consumption in the College	College energy consumption is being regularly tracked during working hours by Estate manager and his team.
	Improvements in Power Factor by installing suitable Capacitor Bank, etc.	Not carried out due to financial problem
	Need to start waste segregation on Campus	Solid waste management: The biodegradable waste on the campus, especially litter fallen off from the trees all around the campus is collected and utilised for the preparation of compost. Annexure IV Liquid waste management - student's



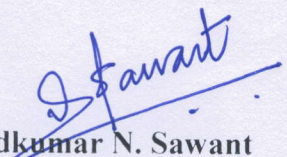
Waste Management		pilot level projects are being carried out to recycle the canteen waste water.
	Reduce and Refuse opportunities should be actively and continuously explored and implemented	Awareness programme on 'No Single Use Plastic' (No SUP) organised by Botany in association with Arannya Environment Research Organization (AERO) on 13 th July, 2019. Annexure V
	Recycling Program for non-biodegradable waste such as tetra packs, PET bottles, Paper, Cardboard, Aluminium foils, etc. This initiative can be started through a Students start-up	Due to pandemic (COVID-19) situation, as students were not on campus, could not be carry out.
	E-waste Management Program should be immediately started in the Campus to ensure safe disposal of E-waste.	The irreparable things are inspected by the authorities and disposed through contractors or vendors for reuse / recycling purpose. The waste compact discs are used by students for decoration and participation in competitions on 'Best out of Waste'.
	The vermi-compost bin near the Canteen should be immediately put to use.	It is functional and regularly in use and maintained by the Estate manager. Annexure VI
Biodiversity Conservation	The butterfly garden area should be touched up and expanded.	Yet to be upgraded
	The Greenhouse is in a dilapidated condition. The same should be revived as a part of Internship/ Student Projects/ NCC/ Start-ups or any other way possible so that it is appropriately utilized.	Due to pandemic situation, as students were not on campus no activities were carried out.
	A biodiversity register of the College should be prepared. The College can take up this as a continuous activity with each new batch of Zoology/ Botany students so that all the biodiversity changes over the years are captured and also Students are exposed to the variety of flora and fauna on campus.	Biodiversity register of the College has been prepared. Also activities like 'Van Mahotsav' celebration was done on 15th August 2019 to increase the green cover of the environment by planting 50 saplings sponsored by the Forest Department, Aquem, Goa. Annexure VII

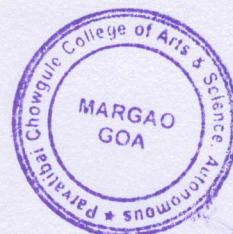


	<i>Maintenance of Well:</i> The open well present near the Greenhouse area should be maintained regularly to free it from leaves and other litter.	Maintenance of well is done and it is in use for routine work on campus. Annexure VIII
Policy level Recommendations	The College should chalk out a phase-wise plan to become a zero waste Campus, through active involvement of the Management, Faculty and Students	No measures could be taken due to pandemic situation
	<i>Environmental Policy:</i> It is recommended that the College formulates its own Environmental Policy which clearly provides practical guidelines from the Environmental perspective. This shall include a policy that all Events and Functions in the Campus shall be Green Events, the standard operating procedures for managing and monitoring environmental factors such as waste, water, energy, biodiversity, etc. in the College Campus. This should also include the sensitization of Students towards the subject of Environmental Conservation. This can also include structured tie-ups and Internships around these topics	Policy Document on Environment and Energy Usage has been prepared and implemented. Annexure IX

OTHER INITIATIVES UNDERTAKEN

1. The Department of Physics organized a subject talk on "**The charm and beauty of Nature**" by Dr. Santosh Kumar Das, School of Physical Sciences, IIT, Goa on 31st August 2019. This talk was attended by 30 students and 5 faculty members. Annexure X
2. The Department of Chemistry organized a talk on "**Green Research Methodology for Green Campus-Innovative Thinking for Beginners**" by Dr. Narendar Bhojak, Associate Professor, Department of Chemistry of Dugar college for the Faculty members of our college on 21st September 2019. Total Attendees: 53 students & 19 faculty members. Annexure XI


Dr. Nandkumar N. Sawant
PRINCIPAL





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No. 3556

Place of vend. QUEPEN. Date of issue 7/11/19

A 099700

Value of Stamp Rs. One hundred only
For Pur Shri. Suresh A. Hegde Dargai

Residing at Son

As there is no stamp of the value of Rs 100/-

Additional stamp paper for the completion of the value is attached

alongwith

Signature of Purchaser

Signature of the
Suhas K. Konde
Licence No.
DL 14/10/2005
QUEPEN

THIS AGREEMENT is made at Margao on this **Twenty Eight** day of **November** Two thousand and **Nineteen** between the GOVERNOR OF GOA (hereinafter called 'the Supplier' which expression shall, unless the context does not so admit, include his successors and assigns) of the one part and Shri/Smt./ M/s The Principal, Chowgule College HTC-186//4186 with CA no. 60002128266 son/ daughter/wife/proprietor/Director of M/s **Chowgule Education Society** (hereinafter called 'the Consumer' which expression where the context so admits shall include his heirs, executors, administrators, legal representatives, successors in business and assigns) of the other part.

WHEREAS the Consumer is being supplied/has agreed to receive supply of electricity in his premises situated at Smt. P. Chowgule C. F. College of Arts Science Fartoda, Margao Goa for the purpose of Motive and Lighting Load and the Supplier has agreed to supply to the Consumer such electricity upon the terms and conditions hereinafter contained.



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NOW IT IS HEREBY DECLARED AND AGREED AS FOLLOWS:

(1) CONTRACT DEMAND.— (a) Subject to the provisions hereinafter contained, the Supplier shall supply and the Consumer shall take from the Supplier electrical energy for a maximum demand not exceeding 300 KVA (hereinafter called "the contract demand") for its exclusive use for the purpose above mentioned at the premises having address at **Fatorda Margao Goa 403602** The connected load shall be **300 kVA/kW/ /HP**.

(b) The Consumer may from time to time request the Supplier in writing for additional power in excess of the 'Contract Demand' and the Supplier shall make such additional power available within 180 days from the date of such written request or any longer period as may be required by the Supplier for the purpose, provided the Supplier has such additional power and the materials to make such additional power available for supply and provided further, that having regard to the unexpired term of this agreement, it would, in the opinion of the Supplier, be economical to the Supplier to make such additional power available to the Consumer.

(c) In the event of the Supplier agreeing to make such additional power available, the Consumer shall be liable to pay the cost of making such additional power available, as may be determined by the Commission.

(d) If such additional power is made available by the Supplier, the Contract Demand specified in Clause 1 (a) hereto shall be increased to the same extent.

2. CONDITIONS OF SUPPLY.— (a) The Supplier shall furnish to the Consumer and the Consumer shall accept at the premises mentioned in the Schedule hereto on and from the date on which the said premises shall be connected with the Supplier's distributing main a constant supply of electrical energy for the purpose and up to the maximum specified and under the conditions laid down in the Conditions of Supply of Electrical Energy for Electricity Department, Goa. But the Supplier or its employees, servants or agents will not be responsible for any interruption or diminution of the supply due to lockouts, strikes of the employees of the Supplier, breakdown of machinery or plant, flood or other force majeure or any other cause beyond the control of the Supplier.

(b) The conditions if any imposed by the Supplier based on the directions of the Commission shall bind the Consumer. The Consumers shall commence to take supply within a month from the date of receipt of intimation from the officers of the Supplier that supply is available unless the Consumer, in the opinion of the Engineer, is unable to do so for causes reasonably beyond control. Where the supply is not availed of within one month from the date of intimation as aforementioned, the sanction for the load shall lapse and this agreement also shall stand cancelled.

(c) The energy shall be utilized within the premises mentioned in the schedule hereto or outside the premises for the bonafide use of the Consumer. In case of difference of opinion as to whether any utilisation of energy outside the premises is for the bonafide use of the consumer, the matter shall be referred to the Chief Electrical Engineer, whose decision shall be final.

(d) The consumer shall permit the Supplier free of cost to erect the posts, distribution/service line, structures and other apparatus necessary for the supply of electrical energy under this agreement over the land belonging to the Consumer and the Consumer shall have no claim whatsoever on account of any damage to his/her property by reason of such erection of, or any other work on the posts, distribution/service lines, structures and other apparatus.

(e) The Consumer agrees to take supply under any conditions of restrictions of load and time that may be fixed by the Supplier from time to time and to pay the minimum under this agreement in full, notwithstanding such restrictions.

(f) Supply is liable to be restricted, staggered or cut off altogether, as the case may be, if the power position or any other emergency warrants such a course of action.



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(g) The Supplier reserves the right to periodical shut down as and when required for purposes of routine maintenance after giving reasonable notice to the Consumer.

(h) The Supplier shall commence to lay service line only after he is satisfied that the Consumer has the requisite equipment at site to receive power and will be in a position to utilize it within one month from the date to be notified by the local officer of the Electricity Department which shall be the date by which time the service line is expected to be completed.

(i) If in the opinion of the Chief Electrical Engineer, the Consumer is unable to commence to take supply from such date for causes beyond his control, the date of commencement of supply shall be such other date as the Chief Electrical Engineer may determine and the opinion and the decision of the Chief Electrical Engineer in this behalf shall be final and binding on the Consumer.

(j) The Consumer shall become liable to pay to the supplier the amounts of requisite charges determined by the Commission from the date determined by the Chief Electrical Engineer under Clause (i) as the case may be.

3. PAYMENT FOR SERVICE LINES ETC.— (a) The Consumer shall pay to the Supplier on demand the cost of any service lines/service connection charges in respect of which requisition has been made in accordance with the prevailing Tariff Order of the Commission.

(b) In the event of the Consumer requesting for an increase in his connected load after the commencement of supply, and if the same is made available by the Supplier at an additional cost, the Consumer, shall pay such contribution towards the additional cost of such service line increase in accordance with the prevailing Tariff Order of the Commission.

4. DATE OF COMING INTO FORCE OF THE AGREEMENT.— (a) Under the conditions of this contract, the Consumer shall take electrical energy/ /power supply from the Supplier within a period of three months from the date of issue of intimation by the Chief Electrical Engineer, Government of Goa (which expression shall include any other Officer authorized by him to perform the functions of the Supplier specified in this agreement and any other Officer or Officers authorized by the Supplier) of the Licensee that supply of electrical energy is available;

(b) The provisions of this agreement shall be deemed to have come into force from the date of commencement of supply of energy or the date of expiry of three months notice above referred to, whichever is earlier;

(c) In case the Consumer is unable to receive supply of electrical energy before expiry of three months period from the date of issue of intimation by the Chief Electrical Engineer, it shall be considered as the power supply deemed to have been commenced from the date immediately following the date of expiry of three months period and the consumer shall be liable to pay the FIXED / DEMAND CHARGES as may be applicable from time to time;

(d) If the consumer fails to avail the supply within 3 months, a further three months extension will be granted by the Supplier, after collecting the FIXED/ /DEMAND CHARGES for the extended period in advance.

5. RESALE OF ENERGY.— (a) The Consumer shall not sell the electrical energy obtained under this agreement without the sanction in writing of the Supplier.

6. PERIOD OF AGREEMENT.— (a) The period of supply of electrical energy under this Agreement shall be a minimum period of two years from the date of the commencement of supply and from month thereafter. The Consumer may terminate this Agreement at any time after the said period of two years giving to the Chief Electrical Engineer not less than six calendar month's notice in writing in that behalf and upon the expiration of the period of such notice this Agreement shall cease and terminate.

(b) After the expiry of the initial Agreement period specified above, the Agreement for power supply is deemed to have been renewed from year to year thereafter, until it is terminated by either party.



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7. TERMINATION OF AGREEMENT.— (a) The agreement shall remain in force even after completion of the initial period of agreement until it is terminated. HT and EHT Consumers may terminate the agreement after giving six month's notice.

(b) Provided that the agreement shall normally be terminated after expiry of the initial period of agreement. However, if the agreement is to be terminated for any reasons whatsoever, before expiry of the initial period of agreement, the Consumer shall be liable to pay charges as per tariff order for the balance period of the said two-year or notice period specified in the agreement whichever is later.

(c) The Department shall arrange for special meter reading, at a mutually acceptable date, to facilitate preparation of the final bill of the Consumer. The agreement shall be terminated on the last day of the billing month and the Department shall raise the final bill accordingly.

(d) If power supply remains disconnected for a period more than notice period for non-payment of charges or dues or non-compliance of any direction issued under Conditions of Supply, the Department shall issue a show cause notice, to be replied within seven days for termination of the agreement. In case no effective steps are taken for removing the cause of disconnection and for restoration of power supply, the agreement of the Department with the Consumer for power supply shall be terminated on expiry of the period of seven days, provided the initial period of the agreement is over. If initial period is not over, the provision given under Condition 6.9 (1) of the Conditions of Supply shall apply. During the period of temporary disconnection the Consumer shall be liable to pay the demand charges or minimum charges as applicable. The Department shall record and keep the total outstanding amount due on termination of the agreement and shall have the right to recover the same under RR Act, Court of Law, if necessary.

(e) On termination of the agreement, the Department shall be entitled to remove the service line and other equipment of the Department for supply of power from the premises of the Consumer. After permanent disconnection, if the Consumer wishes to revive the connection, then it would be treated as an application for new connection and would be entertained only after all outstanding dues have been cleared.

8. SYSTEM OF SUPPLY.— (a) The supply of electrical energy to the Consumer shall be in the form of three phase alternating current at a frequency of 50 cycles per second and a pressure of **11000** volts subject to the tolerance limits permitted by the Act;

9. POINT OF SUPPLY.— (a) The point of delivery for the supply of electrical energy/point of supply of electrical energy shall be as mutually agreed between the Supplier & the Consumer and shall always be at the main entrance of the Consumer's premises, provided the decision of the Supplier in respect of location of point of delivery for the supply of electrical energy/point of supply of electrical energy shall be final;

(b) The Supplier shall install energy meter & other metering equipment of appropriate design, make & capacity at the point of delivery for the supply of electrical energy/point of supply of electrical energy.

(c) For the purpose of this Agreement, availability of the electrical energy of the above stated voltage and frequency at the said point of delivery shall constitute the supply of electrical energy;

10. ACCOMMODATION FOR SUPPLIER'S APPARATUS.— (a) The Consumer shall provide and continue to provide, during the continuance of this Agreement, suitable accommodation, to be approved by the authorized Officer of the Supplier, for placing equipment and apparatus of the Licensee, necessary for the performance of this agreement.

(b) The Supplier shall be at liberty to bring upon the accommodation so provided at the Consumer's premises, not only the cables required for the supply of electrical energy to the Consumer but also the cables and other accessories & equipment necessary for giving connections to other Consumers through the cables and terminals situated on the Consumer's premises, provided the supply to the Consumer shall in no way be interfered with or its continuity jeopardized as a result of such action on the part of the Supplier.



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(c) The Consumer shall take all precautions for the safety of the Supplier's equipment erected at his premises.

(d) The Consumer may with the written approval of the Supplier house his own HT switchgear and other apparatus, which must necessarily be installed near/enclosure within such enclosure, but he shall not use such enclosure for any other purpose.

11. METERING EQUIPMENT.— (a) For the purpose of registering the electrical energy supplied to the Consumer, under this agreement, suitable metering equipment shall be provided by the Supplier.

(b) Wherever the Supplier is not in position to provide the metering equipment on account of its non-availability, he may request the Consumer to provide his own metering equipment as required by the Supplier. The Consumer may also at his own cost install check-meters for his own convenience.

(c) The meter shall be properly sealed by the Supplier in the presence of Consumer or his representative and shall not be interfered with by either party, except that the Supplier may change/ replace the seals as and when required, in the presence of the Consumer or his representative.

(d) The readings of the meters except the checkmeters mentioned above shall be taken by the accredited representatives of the Supplier and the Consumer regularly on the pre-determined date of every month and the readings so recorded shall be binding on the Consumer.

(e) Provided that in the event of any meter (excluding the check meters, if any) either belonging to the Supplier or to the consumer being found defective, the energy Consumed during the month shall be determined unless otherwise mutually agreed upon, by taking the average consumption recorded during the previous three months.

12. DEFECTIVE METERS.— (a) If the consumer shall at any time consider that any such meter is not in proper order and does not correctly register the quantity of the supply, the Engineer will on receipt of a representation in writing in that behalf from the Consumer take necessary steps as per Condition 7.5 of the Conditions of Supply document.

13. CONSUMER'S APPARATUS.— (a) All transformers, switchgears, motors and other electrical equipments belonging to the Consumer which are connected to the Supplier's apparatus shall conform to the standards and specifications prescribed by the Bureau of Indian Standards or Equivalent and be maintained to the reasonable satisfaction of the Supplier. The capacity of fuses and setting of relays on the Consumer's control gear shall also be subject to the approval of the Supplier.

14. PAYMENT OF CHARGES.— (a) The Consumer shall pay to the Supplier every month or after every such duration as may be prescribed by the Supplier, charges for the electricity supplied to him during the preceding month at the tariff applicable to the Consumer category for which supply of electricity has been agreed including variable cost adjustment charges, if any, as per the orders of the Commission from time to time.

(a) If during the currency of this agreement, the rates including Fixed Charges, are revised, replaced, increased or decreased, such revised, replaced, increased or decreased rates from the date specified, shall apply to the Consumer during and for the unexpired period of this agreement;

(b) A copy of the current Tariff Schedule in force with effect from 2018-19 referred hereinabove in this agreement is set out in the First Schedule attached hereto, which however does not include any tax, duty or other direct or indirect charges on electrical energy that may be payable in accordance with any law in force or which may increase the cost of production and such charges will be payable by the Consumer in addition to the tariff charges.

15. CONTINUITY OF POWER SUPPLY.— (a) The Supplier shall take all reasonable precautions to ensure continuity of supply of power to the Consumer at the point of supply but he shall not be liable to the Consumer for any loss due to the interruption in the supply of power by reason of damage to the equipment of the Supplier during war, mutiny, riot strike or by reason of earthquake, hurricane, tempest or any accident or for routine maintenance of the lines and associated equipment or such other causes



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as may be beyond the control of the Supplier. The Supplier shall give notice as early as possible of the probable duration of such interruptions in supply of power to the Consumer.

16. STAGGERING OF SUPPLY BY THE SUPPLIER.— (a) The Consumer agrees to restrict, stagger or cut off the consumption of electrical energy under this agreement during the peak hours as may be directed by the Supplier in writing and at any other hours, if so required to do, if the power position or any other emergency in the power system warrants such a course of action.

17. DISCONTINUANCE OF POWER SUPPLY FOR ROUTINE TESTS.— (a) The Supplier shall always be entitled for reasons of testing or outages or maintenance or any other cause for efficient working of the undertaking to temporarily discontinue the supply for such period as may be necessary subject always to adequate advance notice being given in this behalf, with the object of causing minimum inconvenience to the Consumer. No indemnity or compensation shall be claimed by the Consumer for such stoppages and inconveniences resulting therefrom.

18. DISCONNECTION OF POWER SUPPLY.— (a) The Consumer hereby agrees that its/his/her supply will be disconnected in case it/he/she fails to deposit arrears of electricity charges and other charges as may be due within 15 days from the date of receipt of demand notice for such charges.

(b) The Consumer hereby agrees that in the event it/he/she is found, prima-facie, involved in committing theft of electricity or its unauthorized use, the Supplier shall have right to disconnect the supply forthwith without notice.

(c) In the event of the supply of electrical energy being discontinued by the Supplier in consequences of any breach or default on the part of the Consumer entitling the Supplier so to do under the provisions of the Act and Rules, the amount of charges for the electrical energy already supplied and all other moneys then payable under this Agreement shall become due and recoverable forthwith provided always and it is hereby expressly agreed and declared that during the period of such discontinuance the Consumer shall continue to pay the FIXED/DEMAND CHARGES payable as per the Supplier's tariff in force.

19. TRANSFER OF AGREEMENT.— (a) During the continuance of this Agreement, the Supplier shall be at liberty and shall disconnect the power supply of the Consumer on account of any or all of the following reasons, provided the Supplier shall issue a fifteen days notice to the Consumer in this regard and shall give an opportunity to the Consumer to make submissions in his support:

(i) The Consumers being a limited company pass a resolution for winding up or be ordered to be wound up by a Court of competent jurisdiction or being an individual or individuals commit any act of insolvency or be adjudged insolvent; or

(ii) The Consumer executes or creates any mortgage, charge or other encumbrances on any property or asset of the Consumer so as to prejudicially affect the Suppliers's electric meter, plant, apparatus and equipment at the Consumer's premises or any part thereof or any right exercisable by the Supplier in connection with said electric meters, plant, apparatus and equipment;

(iii) The Consumer commits any breach of or fails to observe and perform any of the conditions and provisions contained in this Agreement on his part to be observed and performed;

(iv) The Consumer shall not, without the previous consent in writing of the Supplier, assign, transfer, or part with the benefit of this Agreement nor shall the Consumer in any manner part with or create any partial or separate interest in it.

20. ARREARS OF ELECTRICITY CHARGES OR ANY SUM OTHER THAN A CHARGE FOR ELECTRICITY DUE TO BE CHARGES ON PREMISES.— (a) The Consumer hereby agrees that any charge for electricity or any sum other than a charge for electricity due to Supplier, which remains unpaid shall be charge on its/his/her premises and also on the premises transmitted to Legal Representative, Successor in law, new owner.

21. SECURITY DEPOSIT.— (a) The Consumer hereby agrees to pay as security deposit the amount equivalent of the average of two/three month's consumption, as per Condition 6.10 of the Conditions of Supply of Electrical Energy for Electricity Department of Goa.



Seal of Chowgule Education Society has been affixed hereto pursuant to a Resolution passed by the Managing Committee at its meeting held on 26th November day of 2019 in the presence of Dr Nandkumar Sawant and Sanjay Swain Copy of which has been attached hereto in original and forms part of the agreement.

Name of Authorized Signatory Sanjay Swain Signature: [Signature]

Permanent Address: FLAT-14, CREC Qtrs, Vasco. Goa-403802

Name of Director: Signature:

Permanent Address:

Witness of the Company who have set their respective hands thereto in the presence of:

Name: Vijaykumar V. Patil Name: Sanjay Hegde Desai

Address: T-11-KC A-Pondra Witness: [Signature]
Goa.

Countersigned by the Managing Agents

Name:

Address:



ENERGY CONVERSATION THROUGH SOLAR ENERGY AND LED BULBS

DEPARTMENT OF PHYSICS INTERDISCIPLINARY PROJECT

ON

INSTALLATION OF SOLAR PANELS AND SOLAR STREET LIGHTS TO HARNESS SOLAR ENERGY

The project is an internship project undertaken by a group of students. The objective of this project is to harness the solar energy as a renewable source of energy. The project is comprised of two parts, the first part included the installation of solar panels on the rooftop of building block D to utilise solar energy to empower electrical gadgets on the first floor of D-block. The second part of the project included the illumination of road from college main gate to college office using solar street lights.

1. **Installation of solar panels:** The process involved the identification of a suitable shadow-free space on the roof top of D-block. Nine solar panels of each with maximum power of 330 watts were procured. Thus total maximum power that could be generated is 2.97 kilowatts. The metallic frames were fabricated and fixed on the terrace on which the solar panels were installed. The inverter is installed on the adjacent wall near the roof-top which is used to convert DC voltage output to an AC voltage. The inverter output was wired to different installations by electrical cables. The load is distributed as follows:

<i>D - BLOCK, FIRST FLOOR</i>				
<i>Room Number</i>	Entity	Quantity	Starting Load (watts)	Total load (watts)
<i>D201</i>	Tube light	4	36	144
	Ceiling fan	1	40	40
<i>D202</i>	Tube light	4	36	144
	Ceiling fan	1	40	40
<i>D203</i>	Tube light	4	36	144
	Ceiling fan	1	40	40
<i>D204</i>	Tube light	8	36	288
	Ceiling fan	2	40	80
<i>D205</i>	Tube light	12	36	432
	Ceiling fan	6	40	240
<i>D207</i>	Tube light	26	36	936
	Ceiling fan	5	40	200
			TOTAL	2728



Total Solar PV system size = 2.72 KW

Sunshine period = 7 Hours

Units generated = 19.04 kWh/day

Average electricity cost = 6.05 Rs/kWh

Daily cost saving = 115. 192 Rs/day

Monthly cost saving = 3455.00 Rs/month

Yearly cost saving = 41,460.00 Rs/month

Solar PV system cost = Rs. 200000.00

Payback period = 4.8 years

The average life of Solar PV system is 15 – 20 years.

2. Installation of solar street lights:

Objective is to illuminate the road from college main gate to gymnasium. For proper illumination, we proposed to install the solar powered LED lights at every 10 meters. Accordingly six poles were erected from college main gate to college office. Solar street light works on the principle of solar cells. Solar cell absorb solar energy during the day. The solar cell then converts the solar energy into electrical energy which is stored in the battery. During night time street light starts automatically and consumes energy already stored in the battery. Solar street lights are composed of LED lights. LED lights are used since it works on small currents and hence smaller sized solar panels suffice the solar street lights with LEDs. These LEDs work on directly on DC current and hence there is no additional requirement of DC to AC converter unit.

Units composed of solar panels and LED bulbs were procured and assembled. Each unit is also fixed with motion sensors. During the night time if there is a motion near the solar street light as detected by the motion sensor and all LEDs glow 100%. If there is no motion only 33% of LEDs glow resulting in higher backups and energy savings. For effective functioning of the solar street lights, an array of LEDs bulb of 60 Watts giving light intensity of 30 to 40 lux in the vicinity of the electricity pole are installed.



Photographs:



SHIELDED ARC WELDING OF THE FRAME



THE STANDS USED FOR SUPPORTING THE SOLAR PANELS



MOUNTING A SOLAR PANEL





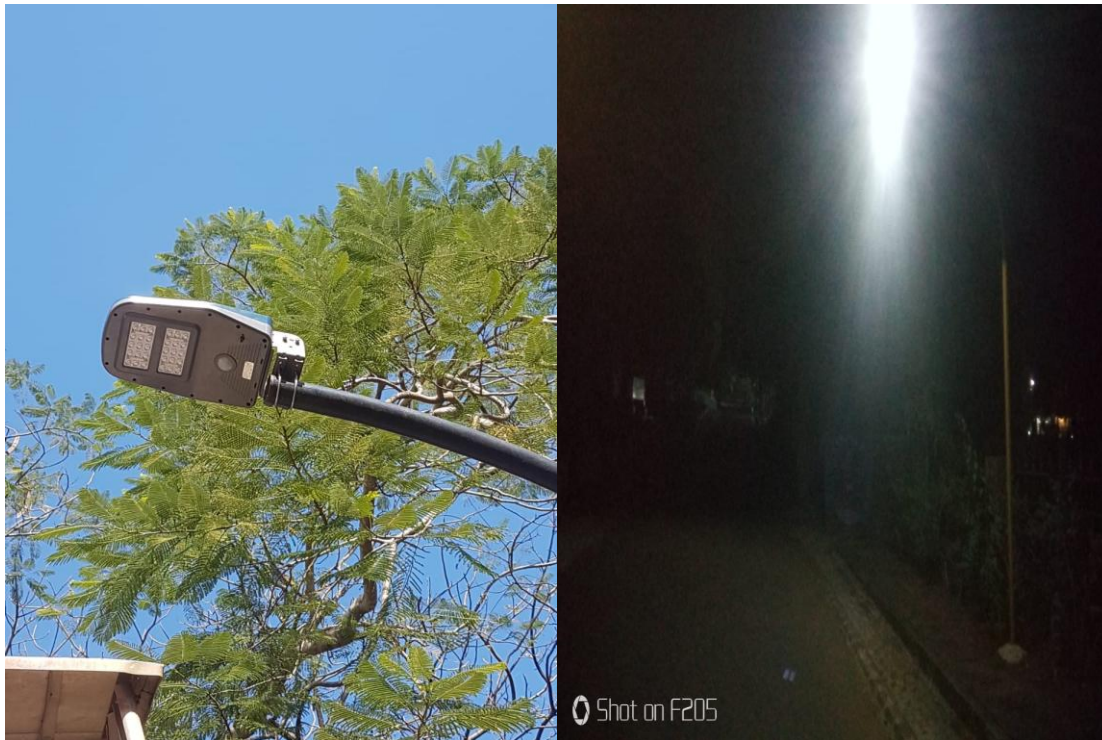
MOUNTED SOLAR PANELS

CONNECTING THE SOLAR PANELS IN
SERIES



(FROM LEFT TO RIGHT) AC DISTRIBUTION BOX, SOLAR INVERTER, DC DISTRIBUTION BOX





PANEL FOR SOLAR STREET LIGHT MOUNTED ON THE POLE AND ITS ILLUMINATION DURING NIGHT

Energy Conversation through LED Bulbs

Saving of approx Rs 36,000 per month has been noticed after replacing the tube lights to LED lights in the campus.

The electricity bill of Dec 2019 & 2020 are herewith.

Dec 2019 - Rs 2,60,894

Dec 2020 - Rs 2,24,271

Difference - Rs 36,623



**PARVATIBAI CHOWGULE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS) - GOGOL, MARGAO-GOA
DEPARTMENT OF PHYSICS**

REPORT -

Title:	Subject Talk on: "The charm and beauty of Nature"
Date and year:	31/08/2019
Venue:	B 204
Resource person/s:	Dr. Santosh Kumar, Assistant Professor, School of Physical Sciences, IIT, Goa
Organising Committee	Physics Department
No. of Participants	Students: 27 Faculty: 05
Objective:	To help students gain a broader perspective of recent trends in Physics research.
Summary of the proceedings	The activity began by a welcome note by Head of the department Mr. Yatin P. Desai which was followed by the introduction of the resource person Dr. Santosh Kumar Das by Dr. Ananya Das. Dr. Santosh Kumar presented a talk on "The charm and beauty of Nature". In his talk he discussed the zoo of elementary particles and how they behave at the most fundamental level. He also highlighted on the physics opportunities at the Large Hadron Collider, the mini-bang machine, and the knowledge it imparts to our scientific understanding of the early universe. At the end of the talk, Mr. Yatin Desai presented a memento to Dr. Venkatesha Hathwar. Ms. Suvarna Patil proposed vote of thanks who also compered the event.

Photographs:



DEPARTMENT OF PHYSICS

Subject Talk on "The Charm and Beauty of Nature"

Resource Person: Dr. Santosh Kumar,

Assistant Professor, School of Physical Sciences, IIT, Goa

Saturday, 10th August, 2019

02:30 pm

ATTENDANCE SHEET

Sr. No.	Roll No	Name	Class	Signature
1	SU190352	Sidharth Yalappa Bidikan	F.Y.	
2	SU190355	Nehal. C. Nolk	F.Y.	
3	SU190101	Meliza Maria Souza	F.Y.	
4	SU190101	Fatima Nyrim Bezuro	F.Y.	
5	SU190330	Shivangi Devi Yadav	F.Y.	
6	SU190215	Titha R. Bage	F.Y.	
7	SU190052	Sunka Rosa	F.Y.	
8	SU190347	Aloma D'Silva	F.Y.	
9	SU180110	Saloni Desai	SYBSc	
10	SU180353	Omkar Shikhar	SYBSc	
11	SU180313	Shreya Godi	SYBSc	
12	SU180109	Velosha Dourado	SYBSc	
13	SU180330	Wishaka Vaz	SYBSc	
14	SU180343	Late Sumantra Vaz	SYBSc	
15	SU180432	Rohan K Singh	SYBSc	
16	SU170378	Simidhi Pande	TYBSc	
17	SU170247	Ahantadurga R. Desai	TYBSc	
18	SU170138	Nikhil Keshav	TYBSc	
19	SU170152	Megha Vaid	TYBSc	
20	SU190016	Joydny Fernandes	FYBSc	

22	SU190176	Keegan Fernando	F.Y. BSc	Kidley
23	SU190081	Kunt Pacheco	FY BSc	Facheco
24	SU190384	Darshan Hegde	FYBSc	Bhale
25	SU190113	Valencia Fernandes	TYBSc	Quel.
26	SU190114	Malika Desai	TYBSc	Agua.
27	SU190262	Alon Calonge	TYBSc	Agua.
28		Joseph Pinto	TYBSc	Agua.
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ELECTRICITY DEPARTMENT - GOVERNMENT OF GOA

HT Bill for Month-October-2019

Ref:EE/Div 04 : Margao/TECH/

Name :	THE PRINCIPAL, CHOWGLE COLLEGE	Sanctioned Load(KW/KVA) :	450KVA	CA No :	60002128266
Legacy No :	HTC-186 / 4186	Contract Demand-CD (KVA) :	450	Energisation Date :	12/05/2008
Billing Address :	SMT. P. CHOWGLE C.F. COLLEGE OF ARTS SCIENCE FATORDA MARGAO, GOA 403602	85% of Contract Demand :	382.5	MRU No :	HT1041
		Billing Demand :	383	Meter Status :	OK
		Avg. Power Factor (Lag) :	0.99	Connection Status :	Active
Supply Address :	SMT. P. CHOWGLE C.F. COLLEGE OF ARTS SCIENCE FATORDA MARGAO, GOA 403602	Line Min Charges :		Tariff Category :	HTC
		Security Deposit (SD)-CD/IG :	300000.00	Voltage Level (KV) :	11.00
		Division :	Div 04 : Margao	Bill Date :	04/11/2019
		Sub Division :		Bill Basis :	Actual
Mobile / Tel No :		Prev. Meter Reading Date :	01/10/2019	Bill Number :	10060126217
e-mail id :	MSS006@CHOWGULES.AC.IN	Curr. Meter Reading Date :	01/11/2019	Last Bill Reading Date :	01/10/2019

Equipment Details		Unit	TQD Period	Meter Reading		Reading Difference	MF	Total Consumption(KWh)	
				Current	Previous			Current Month	Corresponding Month of Last Year
Meter No	12042186	KWH	Cumulative	3971.56	3933.04	38.52		38520.00	49750
Meter Type	HTCT Meter	KW	Cumulative	0.2085				208.50	225
Meter Make	HT Meter 110 V, -5 A (GED)	KVAH	Cumulative	4307.95	4269.09	38.86		38860.00	53240
MRT testing date		KVA	Cumulative	0.2087				208.70	244
Transformer No		KVARH	Cumulative	1579.28	1577.34	1.94	1000	1940.00	18330
CTPT No		KWH	Peak	577.54	570.91	6.63		6630.00	34980
CTPT make		KWH	Normal	2845.99	2818.72	27.27		27270.00	7960
PT Ratio	11000 / 110	KWH	Off Peak	548.03	543.41	4.62		4620.00	6810
CT Ratio	50.0 / 5.0								

Your Bill Summary :

Previous Arrears/Advance (A)	Amount under Litigation / Disputed/Deferred (B)	DPC Till Bill Date(C)	Present Total Bill(D)	Rounding amount(E)	Amount Payable on or before due date 18-NOV-2019 (A + C + D + E)
	0.00		346251.48	0.48-	346251.00

Amount payable - RUPEES THREE LAKH FORTY SIX THOUSAND TWO HUNDRED FIFTY ONE

Payment after due date attracts penal charges @ 2% per month on daily basis compounded every month.

Non-Payment of bill by the due date will render the connection liable for disconnection of power supply as per JERC clause 9.1.

Amount of prompt payment Rebate is Rs. 798.22 which will be effected in the next bill subject to realization of payment in our account before 1 week before the due date

Now you can pay bills through RTGS/NEFT/IMPLS. For details please check our website at <https://www.goaelectricity.gov.in>

Current Demand Calculation Details				Present Bill Charges	
Particulars	Quantity	Rate	Amount	Particulars	Amount
Demand /	383	250.0000	95750.00	Demand Charges	95750.00
Fixed Charges				Energy charges	216612.00
Energy Charges	4620	4.9500	22869.00	FPPCA	18219.96
	27270	5.5000	149985.00	Penal Charges (DC)	0.00
	6630	6.6000	43758.00	Penal Charges (EC)	0.00
				Sundry Charges	
				Adv / PP Rebate	
				Meter Rent	1200.00
				Electricity Duty @ Rs 0.70/KWh	26964.00
				Power Factor Penalty / Incentive @	12494.48-
				Installment due	
				Total Current Demand	346251.48
Penal Charges (DC)					
Penal Charges (EC)					
FPPCA	38520	0.4730	18219.96		

Last Payment of: 344808.00 Received on 15-OCT-2019

Help Line 1912

For Any grievance Please contact Help Line or Executive Engineer, Div 04 : Margao. Phone No-

If not satisfied with the response, you can file complaint with the Consumer Grievance Redressal Forum, 4th floor, Vidut Bhavan, Vasco, Goa - Ph: 0832-2501836

Payment Slip:-

GOA ELECTRICITY DEPARTMENT

Name: THE PRINCIPAL, CHOWGLE COLLEGE
Legacy No : -HTC-186 / 4186

Division : Div 04 : Margao

CA No :- 60002128266

Sub Division :

Bill Number :- 10060126217

Now you can pay bills through RTGS/NEFT/IMPS. For details please check our website at <https://www.goaelectricity.gov.in>

Telephone Number:
Pay your electricity bill online at www.goaelectricity.gov.in

Bill Amount Payable Rs. 346251.00

Due Date : 18-NOV-2019 :

Copy to Accounts



Report of **Awareness on 'No Single Use Plastic' (No SUP)**
Date 13 July 2019
Organized by
Department of Botany
Parvatibai Chowgule College of Arts and Science, (Autonomous)
under DBT Star College Scheme

Participants (eligibility): NIL (Open to all)

Number of Participants: 50

Venue: Lower Auditorium

Objectives:

1. To enlighten students to reduce the use of plastic especially single use plastic.
2. To spread awareness among the students on how plastic is affecting the life of organisms
3. To spread awareness on the extinction of species.

Resource Persons:

1. Mr. Vighnesh Shinde, Arannya Environment Research Organization (AERO)

Detailed deliberations of the event/visit:

An awareness programme on No Single Use Plastic (No SUP) was organized by the Department of Botany of Parvatibai Chowgule College of Arts and Science, Autonomous, in association with **Arannya Environment Research Organization (AERO)** on Saturday, 13th of July 2019 in the Lower Auditorium.

The programme was open for all.

Mr. Vignesh Shinde, content designer and outreach person of Arannya ERO, was the speaker for the same. Mr. Shinde, emphasized on how we need to reduce the use of plastic especially single use plastic. He also made a mention of the various organisms that have gone extinct due to various anthropogenic activities and stressed on the negative effect of plastic on the organism especially birds and marine life and that reducing the use of plastic is the need of the hour. He said that as students of life science, our students need to create awareness about the same.





**Dean of Life Sciences offering token of
Appreciation to the Guest Speaker**



Mr. Shinde interacting with the audience



The audience listening to the talk delivered





The team after the No SUP Programme



ELECTRICITY DEPARTMENT - GOVERNMENT OF GOA

HT Bill for Month-December-2020

Ref:EE/Div 04 : Margao/TECH/



Name: THE PRINCIPAL, CHOWGLE COLLEGE	Sanctioned Load(KW/KVA): 300KVA	CA No: 80002128266
Legacy No: HTC-186 / / 4186	Contract Demand-CD (KVA): 300	Engrisation Date: 12/05/2008
Billing Address: SMT. P. CHOWGLE C.F. COLLEGE OF ARTS SCIENCE FATORDA MARGAO, GOA 403602	85% of Contract Demand: 255	MRU No: HT1042
	Billing Demand: 255	Meter Status: OK
	Avg. Power Factor (Lag): 0.94	Connection Status: Active
Supply Address: SMT. P. CHOWGLE C.F. COLLEGE OF ARTS SCIENCE FATORDA MARGAO, GOA 403602	Line Min Charges: 300000.00	Tariff Category: HTC
	Security Deposit (SD)-CD/BG: Div 04 : Margao	Voltage Level (KV): 11.00
	Division: Div 04 : Margao	Bill Date: 04/01/2021
	Sub Division:	Bill Basis: Actual
Mobile / Tel No: *****5408	Prev. Meter Reading Date: 01/12/2020	Bill Number: 10041369934
e-mail id: ACCOUNTS@CHOWGULES.AC.IN	Curr. Meter Reading Date: 01/01/2021	Last Bill Reading Date: 01/12/2020

Equipment Details		Unit	TOD Period	Meter Reading		Reading Difference	MF	Total Consumption(KWH)	
				Current	Previous			Current Month	Corresponding Month of Last Year
Meter No	12042166	KWH	Cumulative	4327.26	4304.52	22.74		22740.00	29820
Meter Type	HTCT Meter	KW	Cumulative	0.0997				99.70	177
Meter Make	HT Meter 110 V, -/5 A (GED)	KVAH	Cumulative	4670.68	4646.60	24.08		24080.00	30490
MRT testing date		KVA	Cumulative	0.1002				100.20	177
Transformer No		KVARH	Cumulative	1618.76	1612.06	6.70	1000	6700.00	1700
CTPT No		KWH	Peak	638.39	634.34	4.05		4050.00	20210
CTPT make		KWH	Normal	3073.17	3059.14	14.03		14030.00	5450
PT Ratio	11000 / 110	KWH	Off Peak	615.70	611.04	4.66		4660.00	4160
CT Ratio	50.0 / 5.0								

Your Bill Summary :

Previous Arrears/Advance (A)	Amount under Litigation / Disputed/Deferred (B)	DPC Till Bill Date(C)	Present Total Bill(D)	Rounding amount(E)	Amount Payable on or before due date 18-JAN-2021 (A + C + D + E)
	0.00		224271.02	0.02-	224271.00

Amount payable - RUPEES TWO LAKH TWENTY FOUR THOUSAND TWO HUNDRED SEVENTY ONE

Payment after due date attracts penal charges @ 2% per month on daily basis compounded every month.

Non-Payment of bill by the due date will render the connection liable for disconnection of power supply as per JERC clause 9.1.

Amount of prompt payment Rebate is Rs. 520.88 which will be effected in the next bill subject to realization of payment in our account before 1 week before the due date

Now you can pay bills through RTGS/NEFT/IMPLS. For details please check our website at <https://www.goaelectricity.gov.in>

Particulars	Quantity	Rate	Amount
Demand /	255	250.0000	63750.00
Fixed Charges			
Energy Charges	4660	4.9500	23067.00
	14030	5.5000	77165.00
	4050	6.6000	26730.00

Present Bill Charges

Particulars	Amount
Demand Charges	63750.00
Energy charges	126962.00
FPPCA	16441.02
Penal Charges (DC)	0.00
Penal Charges (EC)	0.00
Sundry Charges	
Adv./ PP Rebate	
Meter Rent	1200.00
Electricity Duty @ Rs 0.70/KWh	15918.00
Power Factor Penalty / Incentive @	0.00
Installment due	
Whooling Charges	0.00
Total Current Demand	224271.02

Penal Charges (DC)
Penal Charges (EC)

FPPCA 22740 0.7230 16441.02.

Consumption History

Billing Period	Consumption
02/12/20 to 01/01/21	22740
02/11/20 to 01/12/20	23990
02/10/20 to 01/11/20	22740
02/09/20 to 01/10/20	20520
02/08/20 to 01/09/20	17130
02/07/20 to 01/08/20	17150

Bank Guarantee Details
SL No. B. G. No. Amount Validity Date

Jedrej Glass
11/1/2021

Assistant Engineer,
Elec. Div. IV Margao

Last Payment of 151282.00 Received on 11-DEC-2020

Please note that amount in Arrears column is to be paid as per previous bill due date failing which DPC shall be levied.

Payment Slip:-

GOA ELECTRICITY DEPARTMENT

Name: THE PRINCIPAL, CHOWGLE COLLEGE
Legacy No: HTC-186 / / 4186

Division : Div 04 : Margao
Sub Division :

CA No : 60002128266
Bill Number : 10041369934

Now you can pay bills through RTGS/NEFT/IMPS. For details please check our website at <https://www.goaelectricity.gov.in>

Telephone Number:
Pay your electricity bill online at www.goaelectricity.gov.in

Bill Amount Payable Rs. 224271.00 Due Date : 18-JAN-2021 :

Copy to Accounts

A. Swain
11/01/2021



Consumer Copy

Office Copy

ANNEXURE IV

SOLID WASTE COLLECTION AND DISPOSALS



TAX INVOICE

M/s ALTERENERGYZ

D-206, TAMARIND, CD SCENIC ACRES,
FATORDA, MARGAO, GOA -403602
GSTIN No 30ABEFA4565H1ZR

Ph. 9370919201/9370919202 Email: info@alterenergyz.com

Bill to	Place of Supply			INVOICE No	Dated
Parvatibai Chowgule College Of Arts & Science	Gogol, Margao, Goa 403602			AE/19-20/105	27-Jul-19
Gogol, Margao, Goa 403602 GSTIN No:- URP					
Description of Goods	HSN/ SAC CODE	QTY	Units	RATE	Amount
THEA SE TH 3.0 TL1 Single Phase Including WIFI			1 Nos	44000	44000
Total					44000
Taxable Value					44000
ADD CGST 2.5%				2.50%	1100
ADD SGST 2.5%				2.50%	1100
					46200.00

Total 46200.00

Amount Chargeable (in words)

Rs. Forty Six Thousand Two Hundred Only

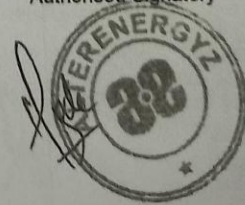
Bank details:

Account Name:-ALTERENERGYZ
Account No:-50200014999411
BANK :- HDFC Bank, Aquem Margao
RTGS/NEFT :- HDFC 0000370
Company's PAN: ABEFA4565H

Note-Please make cheques in favor of
"ALTERENERGYZ"

Customer's Signature

For ALTERENERGYZ
Authorised Signatory



Any controversy or claim arising out of or relating to this contract or the breach thereof shall be settled by arbitration in Margao only.



TAX INVOICE

M/s ALTERENERGYZ

D-206, TAMARIND, CD SCENIC ACRES,

FATORDA, MARGAO, GOA -403602

GSTIN No 30ABEFA4565H1ZR

Ph. 9370919201/9370919202 Email: info@alterenergyz.com

Bill to	Place of Supply			INVOICE No	Dated
Parvatibai Chowgule College Of Arts & Science	Gogol, Margao, Goa 403602			AE/19-20/104	27-Jul-19
Gogol, Margao, Goa 403602					
GSTIN No:- URP					
Description of Goods	HSN/ SAC CODE	QTY	Units	RATE	Amount
Solar PV Module			9 nos	10550	94950
Total					94950
Taxable Value					94950
ADD CGST 2.5%				2.50%	2373.75
ADD SGST 2.5%				2.50%	2373.75
Round off					0.5
					99698.00

Total

Amount Chargeable (in words)

Rs. Ninety Nine Thousand Six Hundred Ninety Eight Only

Bank details:

Account Name:-ALTERENERGYZ

Account No:-50200014999411

BANK :- HDFC Bank, Aquem Margao

RTGS/NEFT :- HDFC 0000370

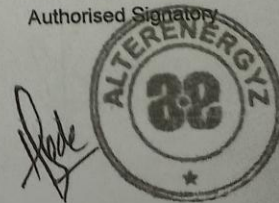
Company's PAN: ABEFA4565H

Note-Please make cheques in favor of
"ALTERENERGYZ"

Customer's Signature

For ALTERENERGYZ

Authorised Signatory



Any controversy or claim arising out of or relating to this contract or the breach thereof shall be settled by arbitration in Margao only.




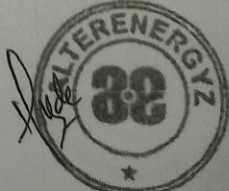
TAX INVOICE

M/s ALTERENERGYZD-206, TAMARIND, CD SCENIC ACRES,
FATORDA, MARGAO, GOA -403602

GSTIN No 30ABEFA4565H1ZR

Ph. 9370919201/9370919202 Email: info@alterenergyz.com

Bill to Parvatibai Chowgule College Of Arts & Science Gogol, Margao, Goa 403602 GSTIN No:- URP	Place of Supply Gogol, Margao, Goa 403602		INVOICE No AE/19-20/106	Dated 27-Jul-19
Description of Goods	HSN/ SAC CODE	QTY	Units	Amount
Solar Street Light		6 Nos	11800	70800
Total				70800
Taxable Value				70800
ADD CGST 2.5%			2.50%	1770
ADD SGST 2.5%			2.50%	1770
Total				74340.00

Amount Chargeable (in words) Rs. Seventy Four Thousand Three Hundred Forty Only Bank details: Account Name:-ALTERENERGYZ Account No:-50200014999411 BANK :- HDFC Bank, Aquem Margao RTGS/NEFT :- HDFC 0000370 Company's PAN: ABEFA4565H Note-Please make cheques in favor of "ALTERENERGYZ"	Customer's Signature 	For ALTERENERGYZ Authorised Signatory 
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Any controversy or claim arising out of or relating to this contract or the breach thereof shall be settled by arbitration in Margao only.



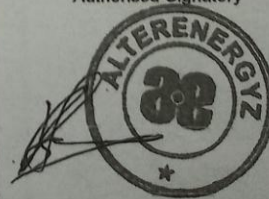
TAX INVOICE

M/s ALTERENERGYZD-206, TAMARIND, CD SCENIC ACRES,
FATORDA, MARGAO, GOA -403602

GSTIN No 30ABEFA4565H1ZR

Ph. 9370919201/9370919202 Email: info@alterenergyz.com

Bill to Parvatibai Chowgule College Of Arts & Science Gogol, Margao, Goa 403602 GSTIN No:- URP	Place of Supply Gogol, Margao, Goa 403602	INVOICE No AE/19-20/131	Dated 13-Aug-19		
Description of Goods Solar Street Light Poles Labour Solar System Fabrication Labour Total Taxable Value ADD CGST 9% ADD SGST 9%	HSN/ SAC CODE	QTY	Units 6 Nos 1 Nos 1 Nos 1 Nos	RATE 6800 10000 10000 10000	Amount 40800 10000 10000 10000 70800 70800 9% 6372 9% 6372
Total	83544.00				
Amount Chargeable (in words) Rs. Eighty Three Thousand Five Hundred Forty Four Only	For ALTERENERGYZ Authorised Signatory				
Bank details: Account Name:-ALTERENERGYZ Account No:-50200014999411 BANK :- HDFC Bank, Aquem Margao RTGS/NEFT :- HDFC 0000370 Company's PAN: ABEFA4565H Note-Please make cheques in favor of "ALTERENERGYZ"	Customer's Signature				
Any controversy or claim arising out of or relating to this contract or the breach thereof shall be settled by arbitration in Margao only.					



TAX INVOICE

M/s ALTERENERGYZ

D-206, TAMARIND, CD SCENIC ACRES,
FATORDA, MARGAO, GOA -403602
GSTIN No 30ABEFA4565H1ZR

Ph. 9370919201/9370919202 Email: info@alterenergyz.com

GSTIN No 30ABEP4355					
Ph. 9370919201/9370919202 Email: info@alterenergyz.com					
Bill to Parvatibai Chowgule College Of Arts & Science Gogol, Margao, Goa 403602 GSTIN No:- URP	Place of Supply Gogol, Margao, Goa 403602			INVOICE No	Dated
				AE/19-20/132	13-Aug-19
Description of Goods	HSN/ SAC CODE	QTY	Units	RATE	Amount
Inverter Accessories		1	Nos	2250	2250
Lightening Arrester		1	Nos	2400	2400
AC DB		1	Nos	2500	2500
DC		1	Nos	3811	3811
SPD		1	Nos	3000	3000
MCB		2	Nos	3150	6300
Cables					
Total					20261
Taxable Value					20261
ADD CGST 9%				9%	1823.49
ADD SGST 9%				9%	1823.49
Round off					0.02
					23908.00

Amount Chargeable (in words)

Rs. Twenty Three Thousand Nine Hundred Eight Only

Bank details:

Account Name:-ALTERENERGYZ

Account No:-50200014999411

BANK :- HDFC Bank, Aquem Margao

RTGS/NEFT :- HDFC 0000370

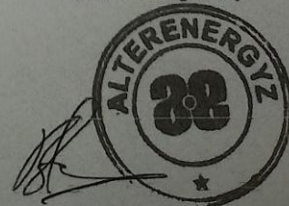
Company's PAN: ABEFA4565H

Note-Please make cheques in favor of
"ALTERENERGYZ"

Customer's Signature

For ALTERENERGYZ

Authorised Signatory

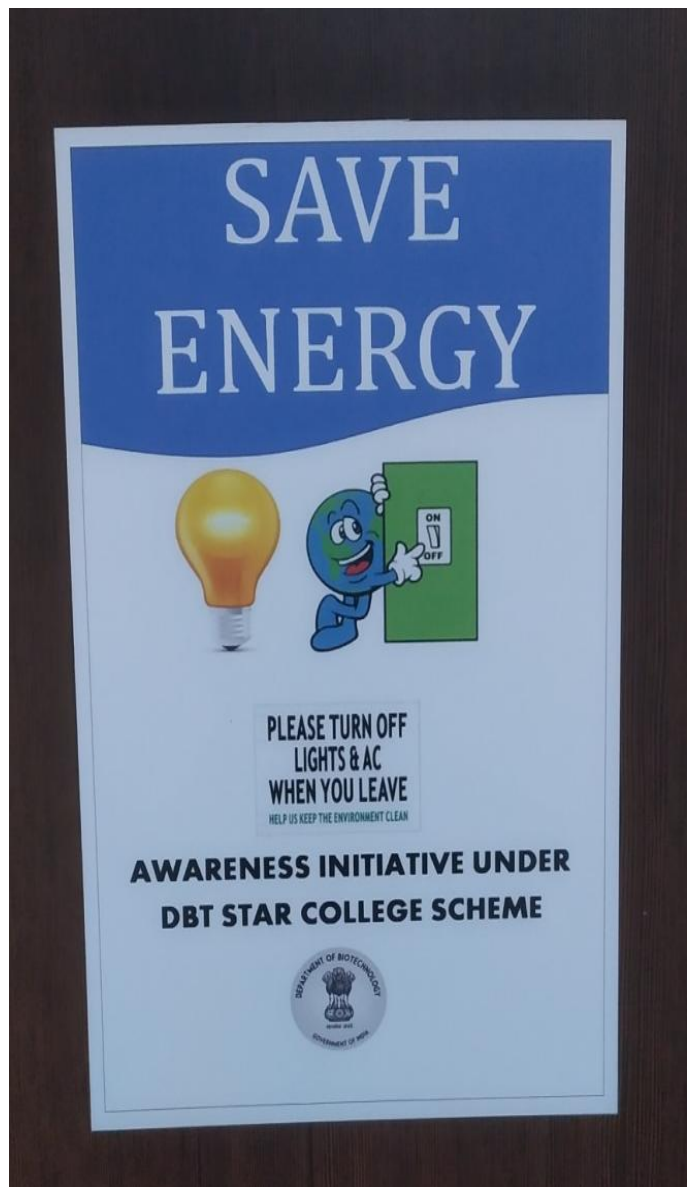


Any controversy or claim arising out of or relating to this contract or the breach thereof shall be settled by arbitration in Margao only.



ANNEXURE III

SAVE ENERGY LABELS PUT UP ON VARIOUS RELEVANT AREAS OF THE COLLEGE



ANNEXURE IV

SOLID WASTE COLLECTION AND DISPOSALS



Report of **Awareness on 'No Single Use Plastic' (No SUP)**
Date 13 July 2019
Organized by
Department of Botany
Parvatibai Chowgule College of Arts and Science, (Autonomous)
under DBT Star College Scheme

Participants (eligibility): NIL (Open to all)

Number of Participants: 50

Venue: Lower Auditorium

Objectives:

1. To enlighten students to reduce the use of plastic especially single use plastic.
2. To spread awareness among the students on how plastic is affecting the life of organisms
3. To spread awareness on the extinction of species.

Resource Persons:

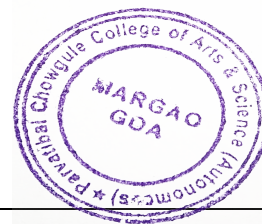
1. Mr. Vighnesh Shinde, Arannya Environment Research Organization (AERO)

Detailed deliberations of the event/visit:

An awareness programme on No Single Use Plastic (No SUP) was organized by the Department of Botany of Parvatibai Chowgule College of Arts and Science, Autonomous, in association with **Arannya Environment Research Organization (AERO)** on Saturday, 13th of July 2019 in the Lower Auditorium.

The programme was open for all.

Mr. Vignesh Shinde, content designer and outreach person of Arannya ERO, was the speaker for the same. Mr. Shinde, emphasized on how we need to reduce the use of plastic especially single use plastic. He also made a mention of the various organisms that have gone extinct due to various anthropogenic activities and stressed on the negative effect of plastic on the organism especially birds and marine life and that reducing the use of plastic is the need of the hour. He said that as students of life science, our students need to create awareness about the same.





**Dean of Life Sciences offering token of
Appreciation to the Guest Speaker**



Mr. Shinde interacting with the audience



The audience listening to the talk delivered





The team after the No SUP Programme



ANNEXURE VI

VERMICOMPOSITING BIN



(Highlight the appropriate for **Community outreach**, Social service in terms of impact and sensitizing students to social issues of gender/hygiene/ nutrition/ domestic violence /environment/ community assistance etc)

REPORT OF 'Van mahotsav'

Title:	Van Mahotsav
Date and year:	15 th August 2019
Venue:	Parvatibai Chowgule College Campus
Resource person/s:	-
Organising Committee	Biochrome Club of the dept of Biotechnology
No. of Participants	60
Objective:	To raise awareness about the environmental problems and trying to be individually responsible for helping to increase the green cover of the environment
Summary of the proceedings	Biochrome – Biotechnology Club of Department of Biotechnology celebrated 'Van Mahotsav' on 15th August 2019 on the occasion of 73rd Independence Day celebration by planting 50 saplings of Gulmohar, Neem, Almond, Flame tree, Ornamentals and flowering plants sponsored by the Forest Department, Aquem, Goa in the college campus with the theme 'Planting trees: A stride towards Green Goals'. Students, faculties and non-teaching staffs from various departments participated in this event.

Photographs



ANNEXURE IX

OPEN WELL



Maintained Open well



Open well being used



**PARVATIBAI CHOWGULE COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS) - GOGOL, MARGAO-GOA
DEPARTMENT OF PHYSICS**

REPORT -

Title:	Subject Talk on: "The charm and beauty of Nature"
Date and year:	31/08/2019
Venue:	B 204
Resource person/s:	Dr. Santosh Kumar, Assistant Professor, School of Physical Sciences, IIT, Goa
Organising Committee	Physics Department
No. of Participants	Students: 27 Faculty: 05
Objective:	To help students gain a broader perspective of recent trends in Physics research.
Summary of the proceedings	The activity began by a welcome note by Head of the department Mr. Yatin P. Desai which was followed by the introduction of the resource person Dr. Santosh Kumar Das by Dr. Ananya Das. Dr. Santosh Kumar presented a talk on "The charm and beauty of Nature". In his talk he discussed the zoo of elementary particles and how they behave at the most fundamental level. He also highlighted on the physics opportunities at the Large Hadron Collider, the mini-bang machine, and the knowledge it imparts to our scientific understanding of the early universe. At the end of the talk, Mr. Yatin Desai presented a memento to Dr. Venkatesha Hathwar. Ms. Suvarna Patil proposed vote of thanks who also compered the event.

Photographs:



DEPARTMENT OF PHYSICS

Subject Talk on "The Charm and Beauty of Nature"

Resource Person: Dr. Santosh Kumar,

Assistant Professor, School of Physical Sciences, IIT, Goa

Saturday, 10th August, 2019

02:30 pm

ATTENDANCE SHEET

Sr. No.	Roll No	Name	Class	Signature
1	SU190352	Sidharth Yalleppa Bidikan	F.Y.	
2	SU190355	Nehal. C. Nolk	F.Y.	
3	SU190101	Meliza Maria Souza	F.Y.	
4	SU190101	Fatima Nyrim Bezuro	F.Y.	
5	SU190330	Shivangi Devi Yadav	F.Y.	
6	SU190215	Titha R. Bage	F.Y.	
7	SU190052	Sunka Rosa	F.Y.	
8	SU190347	Aloma D'Silva	F.Y.	
9	SU180110	Saloni Desai	SYBSc	
10	SU180353	Omkar Shikhar	SYBSc	
11	SU180313	Shreya Godi	SYBSc	
12	SU180109	Velosha Dourado	SYBSc	
13	SU180330	Wishaka Vaz	SYBSc	
14	SU180343	Luke Seneviratne Vaz	SYBSc	
15	SU180432	Rohan K Singh	SYBSc	
16	SU170378	Simidhi Pande	TYBSc	
17	SU170247	Shantadurga R. Desai	TYBSc	
18	SU170138	Nikhil Keshav	TYBSc	
19	SU170152	Megha Vaidik	TYBSc	
20	SU190016	Joydny Fernandes	FYBSc	

22	SU190176	Keegan Fernando	F.Y. BSc	Kidney
23	SU190081	Kunt Pacheco	FY BSc	Facheco
24	SU190384	Darshan Hegde	FYBSc	Hegde
25	SU190113	Valencia Fernandes	TYBSc	Valencia
26	SU190114	Malika Desai	TYBSc	Malika
27	SU190262	Alon Calonge	TYBSc	Alon
28		Joseph Pinto	TYBSc	Pinto
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