Policies and Audit Certificate

Policy Title: Policy for Waste Management

1.	Functional Area	Waste Management
2.	Brief discretion of the policy	Purpose: Promoting waste management measures in campus. Audience: All stakeholders of the institution.
3.	Policy applied to	All academic, administrative and managerial process in the organization.
4.	Effective from	11th July, 2022
5.	Responsible Authority	IQAC Coordinator, DBIMSCA.
6.	Superseding Authority	Principal, DBIMSCA.
7.	Last reviewed/ Updated	New Policy
8	Reference for the Policy	NAAC (Continuous Improvements)

1) **Introduction:** Waste management policy of a college reflects its commitment to the issues related to environment. The college management, staff, and students are highly committed to it. The college is doing green activities within and outside the college campus to make environment healthy and rich. For the conservation of conventional source of energy (electricity) solar plants are installed. The green waste collected from all the lawns in the form of dead leaves and plants, and kitchen waste collected from college canteen is thrown in separate bins to be used as manure. The solid waste approx. 10kg per day is being discarded with proper norms. For the purpose of Waste Management Solar Plants and Coloured Dustbins, are being used. The college is also committed to implement the latest techniques to make campus more eco- friendly.

2) **Policy Statement:** The policy was framed with the aim of segregation of waste i.e. Solid and Liquid. The policy also aimed to inculcate eco-friendly habits among different stakeholders and to add to sanitation and beauty of the campus. The policy has been framed, finalized, communicated, executed, and improved upon through certain practices that include participation of different stake holders.

3) Objectives:

- To implement the waste management measures in campus.
- The waste collected from the campus is collected by the garbage collectors.
- To reduce use of plastic.
- To promote mechanism that aims to practice various latest techniques to discard waste.
- To enrich the process of waste management in such a way that it creates awareness among students.
- To involve students in cleanliness activities.
- Use of Jute and cloth bags is encouraged for the faculty as well as students.
- To minimize waste generation at source and facilitate repair, reuse and recycling over the disposal of wastes in a cost effective manner.

4) Processes:

- **Creation of Policy**: Policies are created to institutionalize quality, inclusion and persistent efforts for improvement. It also aims to develop correct methodology to achieve the optimum result with maximum utilization of given resources. Areas of policy making for segregation of waste are:
  - **a) Academics:** To aware students regarding segregation of waste and their different methods.
  - **b) Administration and Governance**: Solid Waste is collected by Municipal Corporation of City.

- **Execution of Policy:** The IQAC of the college frames policy regarding it. The same is sanctioned by the apex body of the college. It has been resolved in the policy that all the waste generated by campus will be discarded as per Government norms and conditions. Various activities are conducted to make students aware of the importance of waste management and other related environment issues. The policy is communicated to all the concerned, especially the office staff. The staff members ensure the proper execution of the policy. In case of any issue, the staff members have been instructed to bring the matter in the notice of IQAC.

5) **Future course of Policy:** The College has planned to install biomedical waste management system in the near future to reduce cost and to save energy. It has been decided that some equipment would be purchased to dispose of biomedical waste. It has also been resolved that there is an urgent requirement of Installation of Effluent Treatment Plant for disposal of chemical waste water.

IQAC Coordinator

Principal

Principal
Don Bosco Institute of Management
Studies & Computer Applications
Kumbalagodu, Mysore Road,
Bangalore - 560 074.

Don Bosco Institute of Management Studies & Computer Applications Kumbalagodu Mysore Road Bangalore - 74

Policy Title: Policy for Energy Conservation

1.	Functional Area	Energy Conservation
2.	Brief discretion of the policy	Purpose: To promote energy conservation in campus. Audience: All stakeholders of the institution with special focus on energy conservations measures.
3.	Policy applied to	All academic, administrative and managerial process in the organization.
4.	Effective from	11th July, 2022
5.	Responsible Authority	IQAC Coordinator, DBIMSCA.
6.	Superseding Authority	Principal, DBIMSCA.
7.	Last reviewed/ Updated	New Policy
8.	Reference for the Policy	NAAC (Continuous Improvements)

1) **Introduction**: Policy of Energy Conservation involves spreading consciousness related to environment among students. Don Bosco Institute of Management Studies and Computer Applications College has adopted Energy Conservation Policy for an "educational excellence in environment." Energy conservation involves methods of reduction in energy usage by promoting awareness about different energy saving measures and taking steps to save energy. Solar Power Plants has been installed in campus to conserve electricity. Campus is also equipped with power saving L.E.D. lights.

Don Bosco Institute of Management Studies & Computer Applications Kumbalgodu, Mysore Road Bangalore - 74

2) **Policy Statement**: The Policy is aimed at environmental responsibility and optimum usage of the given resources. For this, there has been focus on a constant replacement of conventional energy with renewable energy. There have also been attempts to aware different stakeholders about the importance of energy so conservation and renewable energy. The Policy is framed, finalized, communicated, executed, and improved upon through certain practices that include participation of different stake holders.

3) **Objectives:**

- To reduce energy consumption by using energy saving equipment.
- To lower down electricity cost.
- To maximize use of day light and natural ventilation.
- To use solar power plants for energy saving purpose
- To promote mechanism that aims to practice various latest techniques to save energy.
- To enrich the process of Energy Conservation in such a way that it creates awareness among students.
- To Monitor Electricity bills for efficient use of solar power.
- To develop a system that helps in creation, execution and assessment of the policy.
- To take additional measures to continuously improve our energy consumptions.
- To ensure the availability of necessary resources to achieve our objectives.

4. Processes:

→ **Creation of Policy**: Policies are created to institutionalize quality, inclusion, and persistent efforts for improvement. It also aims to develop correct methodology to achieve the optimum result with maximum utilization of given resources. Areas of policy making for segregation of waste:

a) Academics: To aware students regarding importance of energy saving and measures to be taken to achieve the goal.

b) Administration and Governance: To administer policy and practices, measures are taken as per Institutional Guidelines to conserve energy.

→ **Execution of Policy**: The IQAC of the college frames policy regarding it. The same is sanctioned by the apex body of the college. The policy is communicated to all the concerned, especially the office staff. The staff members ensure the proper execution of the policy. In case of any issue, the staff members have been instructed to bring the matter in the notice of IQAC. Slowly but surely, the college is switching over to renewable energy in the form solar power plants. There have also been constant attempts on the part of the college to adopt practices like usage of LED bulbs to conserve energy.

5. Future Course of Policy: The College is planning to install effective energy conservation methods in the near future to lower electricity cost and preserve energy. The college intends to install energy- efficient fans and more L.E.D. lighting.

IQAC Coordinator

Principal

Principal
Don Bosco Institute of Management
Studies & Computer Applications
Kumbalagodu, Mysore Road,
Bangalore - 560 074.

Don Bosco Institute of Management Studies & Computer Applications Kumbalagodu Mysore Road Bangalore - 560 074

Policy Title: Green campus Initiative Policy

1.	Functional Area	Green campus initiatives
2.	Brief discretion of the policy	Purpose: To promote clean and green environment in and around the campus. All stakeholders of the institution with the aim of making them aware about environmental issues.
3.	Policy applied to	All academic, administrative and managerial process in the organization.
4.	Effective from	11th July, 2022
5.	Responsible Authority	IQAC Coordinator, DBIMSCA.
6.	Superseding Authority	Principal, DBIMSCA.
7.	Last reviewed/ Updated	New Policy
8.	Reference for the Policy	NAAC (Continuous Improvements)

1. **Introduction**: This Policy of Green Campus Initiatives involves environmental consciousness and development of students. Don Bosco Institute of Management Studies and Computer Applications has adopted Green Campus Initiatives Policy for an "Educational excellence in environment." This Policy focuses on clean and green environment in and around the campus by promoting awareness and by using different sustainable initiatives for environmental protection. The policy aims that despite the relatively small campus, majority of the open areas should be covered with natural greenery. The aim of the policy is to sensitize different stakeholders towards environment in general.

2)

1. **Policy Statement**: Environmental issues are part and parcel of academia and the policies related to it. No educational institute can turn its back to the question of sustainable growth and global warming. The Green Campus Initiatives Policy of the college aims to frame policies and execute practices that will aware different stake holders more responsive and conscious about environment in general. The policy is framed, finalized, communicated, executed, and improved upon through certain practices that include participation of different stake holders.

2. **Objectives:**

   - To sensitize students towards a Clean, Green, and Sustainable Environment.
   - To optimize the use of water and energy.
   - Proper handling of solid waste from the campus.
   - Encourage the use of public transport and car-pooling for minimizing fuel consumption.
   - Smoke-free and tobacco-free campus.
   - To restrict single-use plastics.
   - To adopt methods for water recycling and rainwater harvesting.

3. **Processes:**

   a) **Creation of Policy**: Policies are created to institutionalize quality, inclusion and persistent efforts for improvement. The policies also aim to develop correct methodology to achieve the optimum result with maximum utilization of given resources. Areas of policy making for greenery of the campus are:

      - Academics: To make students aware of the importance of environment conservation and measures to be taken to achieve the goal.
      - Administration and Governance: To administer policy and practices, measures are taken as per Government Guidelines to conserve environment.

b) **Execution of Policy**: The IQAC of the college frames policy regarding it. The same is sanctioned by the apex body of the college. The cell directs different departments and cell to undertake activities that address the concerned question comprehensively. The policy is communicated to all the concerned, especially the office staff. The staff ensures the proper execution of the policy. In case of any issue, the staff members have been instructed to bring the matter in the notice of IQAC.

5. Future Course of Policy: The College is planning to conduct more effective green campus initiatives in the near future to avoid pollution and maintain clean campus. The college intends to planting more plants in the college premises.

IQAC Coordinator

Principal

Principal
Don Bosco Institute of Management
Studies & Computer Applications
Kumbalagodu, Mysore Road,
Bangalore - 560 074.

PRAKRUTHI
INSTITUTE OF ENVIRONMENTAL STUDIES
UNIT OF PRAKRUTHI FOUNDATION®

Estd: 2019

Ref: PIES/DBIT/AUDIT/2021-22 Date: 07.03.2022

CERTIFICATE

SUB.: "GREEN AUDIT REPORT"

This is to certify that **M/s. DON BOSCO INSTITUTE OF TECHNOLOGY KUMBALAGODU, MYSORE ROAD BENGALURU - 560074.** has successfully undergone **GREEN AUDIT**.

The audit was conducted as per GRI indicators and other ISO standards as applicable with the moral support of the Principal, Teaching staff, non – teaching staff and Students.

The on-site audit was successfully conducted from 18-Jan-2022 to 06-Mar-2022 by Prakruthi Institute of Environmental Studies. Sustainability Assessor, Er.Ramesh Kumar BN, Er. Tushali Jagwani who are qualified personnel have carryout out green auditing.

Environmental GRI indicators considered in these auditing are Water, Air, Noise, Energy, Wastes, Carbon Footprint and Biodiversity. The recommendations are put forth by the audit committee wherever there is scope of improvement.

We thank the college management for taking this proactive initiative for a sustainable journey.

Thanks and Regards
For Prakruthi Institute of Environmental Studies

07/03/22

Authorized Signatory

#93 (New No. 5), 2nd Floor 7th Cross, Lower Palace Orchards,
Bengaluru-560003 Tel: 080-23464664/65
E-Mail: prakruthienv08@gmail.com

PRAKRUTHI
INSTITUTE OF ENVIRONMENTAL STUDIES
UNIT OF PRAKRUTHI FOUNDATION®

Estd: 2019

Ref: PIES/ DBIT /AUDIT/2021-22 Date: 07.03.2022

CERTIFICATE

SUB.: "ENVIRONMENTAL AUDIT REPORT"

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#93 (New No. 5), 2nd Floor 7th Cross, Lower Palace Orchards,
Bengaluru-560003 Tel: 080-23464664/65
E-Mail: prakruthienv08@gmail.com

Don Bosco Institute of Technology, Bangalore

(NAAC Accredited Institution)
(Accredited by NBA



ENERGY AUDIT REPORT FOR THE YEAR -2020

Don Bosco Institute of Technology Bangalore

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

PREPARED BY

Dr. H. Naganagouda,
Former Director NTCST-KPCL, Bangalore, Karnataka State – India
Chartered Engineer

DECEMBER - 2022

ENERGY ENVIRONMENT AND ECONOMY
RENEWABLE ENERGY & ENERGY CONSERVATION FOR SUSTAINABLE DEVELOPMENT

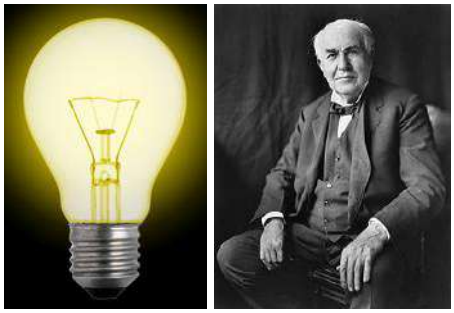
The Air, the Water and the Earth are Not Gift From Our Parents But are Loan From Our Children

- RIGVEDA

SOLAR ENERGY – A BRIGHT IDEA!

"I'd put my money on the sun and solar energy. What a source of power! I hope we don't have to wait 'til oil and coal run out before we tackle that."

- THOMAS EDISON



BHARAT RATNA
Dr. Sir. MOKSHAGUNDAM VISVESVARAYYA
MANAGEMENT

1. ***Accountability***
2. ***Responsibility***
3. ***Sincerity***
4. ***Honesty***
5. ***Providing Natural Justice to the Society***

"Whenever You Take A Decision, Keep The Common Man Requirement In Your View and Act Accordingly"

- MAHATMA GANDHIJI

You Have To Salute Your Duty,
You Need Not Salute any Body.
If You Pollute Your Duty,
You Have To Salute Every Body,
Is It Required…

BHARAT RATNA
Dr. ABDUL KALAM,
FORMER PRESIDENT OF INDIA

Today, the World is Suffering Not Because of Violence of Bad People, Because of Silence of Good People

NAPOLEON BONAPARTE

We are All Accountable for Our Parents, Our Institution, Where we have Studied and We Are All Accountable for Our Country as A Citizen of Our Country, But we Are All Accountable for Whole World as A Human Being

Dr. H. NAGANAGOUDA

Dr. H. NAGANAGOUDA

INDEX

PROMOTION OF ENERGY EFFICIENT BUILDING DESIGN

1. INTRODUCTION:

Energy is one of the major inputs for economic development of any country. In the case of developing countries like us, the energy sector assumes critical importance in view of the ever-increasing energy needs, widening of supply demand gaps and also huge investments required to meet them. The availability of energy is limited and known resources of energy are exhausting fast. In order to conserve the available resources, there is need to promote the renewable energy and energy conservation.

It is necessary to make adequate energy available to the people at an affordable price to facilitate this process and enhance the quality of life of all sections of the people especially in the case of the majority of people who live in rural areas. The production and distribution of energy to the consumers have to be simultaneously supplemented with concentrated efforts to use energy efficiently as otherwise the wasteful energy consumption will defeat the very purpose of economic development and lead to serious problems in all sectors of economy - whether industry, agriculture or other social sectors. In this scenario, it is very important to focus on energy conservation aspects and take necessary steps at the earliest to ensure that energy is produced with maximum efficiency, transformed and transmitted with minimum losses and at the same time technologies to maximize end use energy efficiently are adopted. There is urgent need for conservation of energy in domestic, agriculture, commercial, transport and industrial sectors. The promotion of energy efficiency devices and technologies will not only reduce the need to create new capacities requiring mobilization of huge resources but also results in significant environmental benefits. Energy security can be enhanced by supply side as well as demand side measures. While the former aimed at increasing energy availability has limitations, the latter targets reduction in energy demand through conservation, demand restraint and fuel-switching which is more sustainable in the long term. Large-scale development of renewable energy and efficient use of available conventional energy. together, constitute Energy Security.

Buildings are major consumers of energy in their construction, operation and maintenance. About 50% of global energy demand is estimated to be due to buildings. Energy requirements in buildings are further increasing in

developing countries with rising economy. In India, buildings accounts for 30-40% of total energy consumption. ENERGY CONSCIOUS ARCHITECTURE addresses these issues.

What is Building Energy?

Building energy consists of the following:

- Energy for lighting
- Energy for comfort – fanning/air circulation, cooling and heating of conditioned space
- Energy for lifts, water pumps, and
- Energy losses in the local electrical distribution network.

Key Factors

Building energy depends on factors such as:

- Ambient temperature
- Weather conditions and daylight hours
- Building design
- Inherent efficiency of equipment used, and
- Installed efficiency of equipment used.

Energy Conscious Architecture

It includes the following

- Use of solar passive concepts including daylight features in building design and operation
- Use of eco-friendly and less energy intensive building materials
- Integration of renewable energy technologies
- Use of energy efficient appliances
- Conservation of water/ waste water recycling/rain water harvesting

Pioneering been done internationally and in India. However, lot more is required to be done to adopt energy conscious architecture on a widespread level in the country.

Energy Efficient Solar/ Green Buildings

- Designed to provide internal comfort with much less consumption of conventional fuel; results in savings of recurring and capital costs
- Design depends on direction & intensity of sun & wind, ambient temperature, humidity etc. Different designs for different climatic zones.
- Key features: Orientation, double glazed windows, window overhangs, thermal storage walls/ roof, roof painting, ventilation, evaporation, day lighting, construction material etc.
- Active solar thermal and photovoltaic systems can also be incorporated.
- Additional cost could be up to 10% with annual savings of energy up to 30 to 40%.

2. WAYANAMAC EDUCATION TRUST (WET):

The Wayanamac Education Trust was started following a realization that education is the foundation for a healthy and vibrant society. This initiative has now burgeoned into a chain of educational institutions ranging from pre-university to Professional colleges. WET's vision is to become a world class center in providing globally relevant higher education in all fields blended with its mission to foster an intellectual and ethical environment in which both skills and spirit will thrive so as to impart high quality education, training and services with an international outlook in creating technocrats and business leaders.

Don Bosco Institute of Technology (DBIT):

Don Bosco Institute of Technology established in the year 2001 is situated in a 36 acres sprawling campus on Bengaluru-Mysuru State high way and is 18 KM from the heart of Bengaluru city. The Institute is an affiliated college of VTU Belgavi. The college offers quality Technical and Management Education. The college is accredited by NAAC and engineering courses are accredited by NBA*. The college offers Bachelor Degree in

(1) Artificial Intelligence & Machine Learning,
(2) Artificial Intelligence & Data Science
(3) Computer Science & Engineering*
(4) Information Science & Engineering*
(5) Mechanical Engineering*
(6) Electronics & Communication Engineering*
(7) Electrical & Electronics Engineering*
(8) Civil Engineering

The college offers Master degree in Business Administration in dual specialization. The specializations are

(1) Marketing and Finance
(2) Finance and HR
(3) HR and Marketing

3. Institutions Existing in the DBIT Campus, Bangalore

1). DONBOSCO Institute Of Technology

2). DONBOSCO Pre University College

3). DONBOSCO Institute Of Management

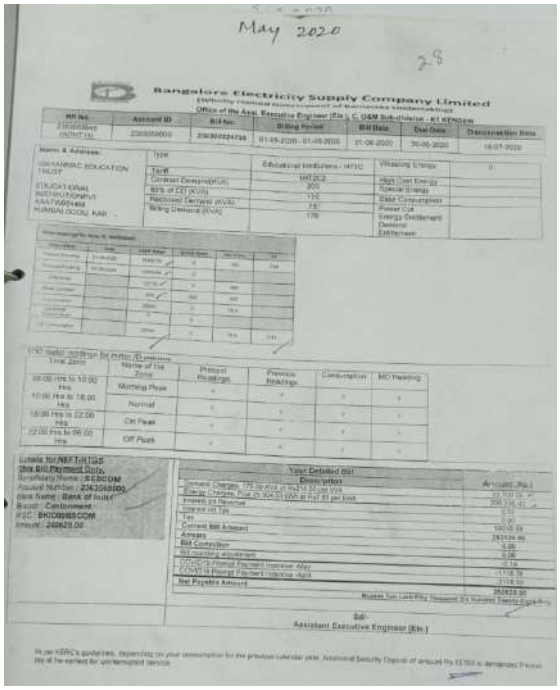
4). Boys Hostel, Total -1 No.

5). Girls Hostel, Total - 1 No.

4. Technical Details Existing in the Institution

1) Electrical Energy Details :

1. Total Sanctioned Load - 200 kVA
2. RECORDED DEMAND(Average) – 99.92 kVA
3. BESCOM Tariff - Rs. 8.699/Unit


May 2020

Bangalore Electricity Supply Company Limited

2) Power Transformer :

1. 500 kVA

3) Diesel Generator Set

1. 200 kVA
2. 40 kVA

4) U P S

1. Total UPS Capacity 319 kVA (total 17 Nos)

5) Solar Roof Top Power Plant with Net Metering

1. Installed Capacity 170 kWp

6) Sewage Treatment Plant

1. Total 10 Motors-Pump
2. Total Capacity – 20 kW

7) Rain Water Harvesting

1. 2 Nos. Provision for Bore well Charging

8) Water Pump (Bore well_

1. Near Girls Hostel – 10 HP
2. Near Temple – 10 HP
3. Near STP – 10 HP

9) Solar Water Heaters

1. Girls Hostel – 4600 LPD and 13 kW Heat Pump
2. Boys Hostel – 2700 LPD and 20 kW Heat Pump

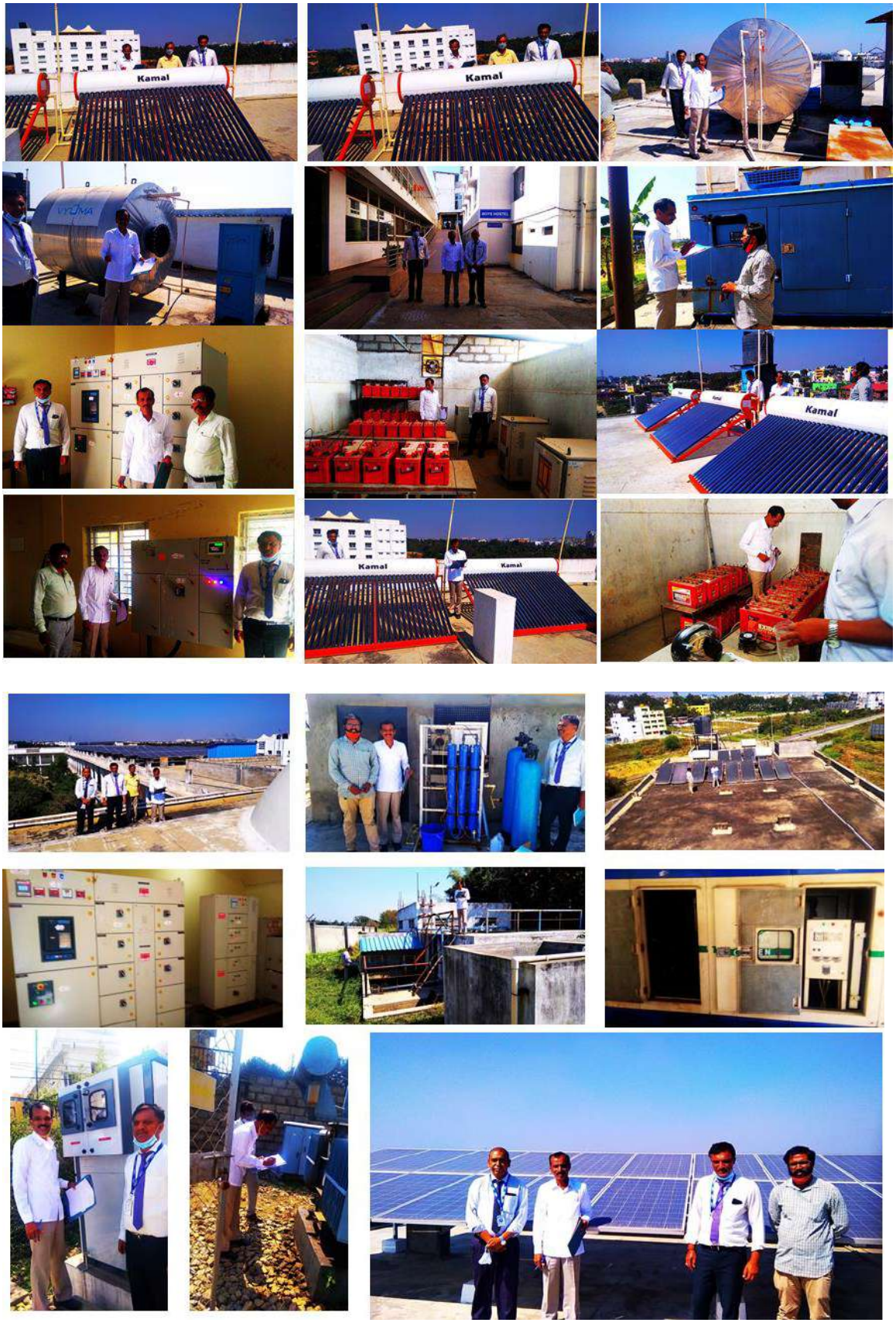
10) Air Conditioning Units

1. Total 37 Systems with a Capacity of 1.5 to 2 ton

11) Table -1 Abstract of Existing Lighting Fixtures and Fans

Sl. No.	Details	Total Nos.	Capacity Watts
1	Lights Existing TFL	706	48
2	Lights LED	1635	20
3	Lights Existing Sodium lamps	5	150
4	Ceiling fans	1188	65
5	Occupancy Sensors	25	156

Pictures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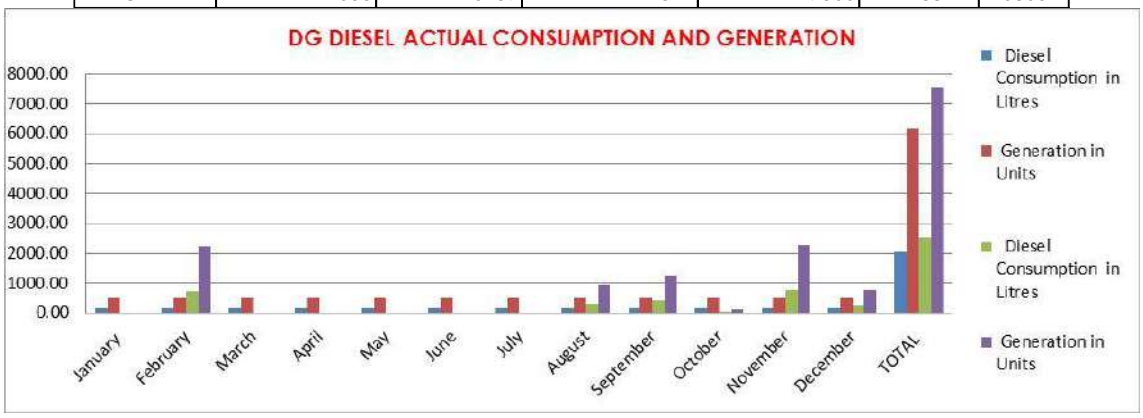
5. ENERGY CONSUMPTION AND EXISTING DETAILS IN THE INSTITUTIONS INSIDE THE DON BOSCO INSTITUTE OF TECHNOLOGY CAMPUS:

Table – 2 ENERGY CONSUMPTION AND EXISTING DETAILS IN THE INSTITUTIONS INSIDE THE DON BOSCO INSTITUTE OF TECHNOLOGY CAMPUS:

DG - ACTUAL GENERATION

DG DIESEL ACTUAL CONSUMPTION AND GENERATION						
	CAPACITY in kVA 200		CAPACITY in kVA 40		Before SPVPP	After SPVPP
	Diesel Consumption in Litres	Generation in Units	Diesel Consumption in Litres	Generation in Units	240	
January	171.08	513.25	0	0	86	257
February	171.08	513.25	738	2214	455	1364
March	171.08	513.25	0	0	86	257
April	171.08	513.25	0	0	86	257
May	171.08	513.25	0	0	86	257
June	171.08	513.25	0	0	86	257
July	171.08	513.25	0	0	86	257
August	171.08	513.25	320	959	245	736
September	171.08	513.25	413	1239	292	876
October	171.08	513.25	43	130	107	322
November	171.08	513.25	754	2262	463	1388
December	171.08	513.25	254	762	213	638
TOTAL	2053	6159	2522	7566	2288	6863



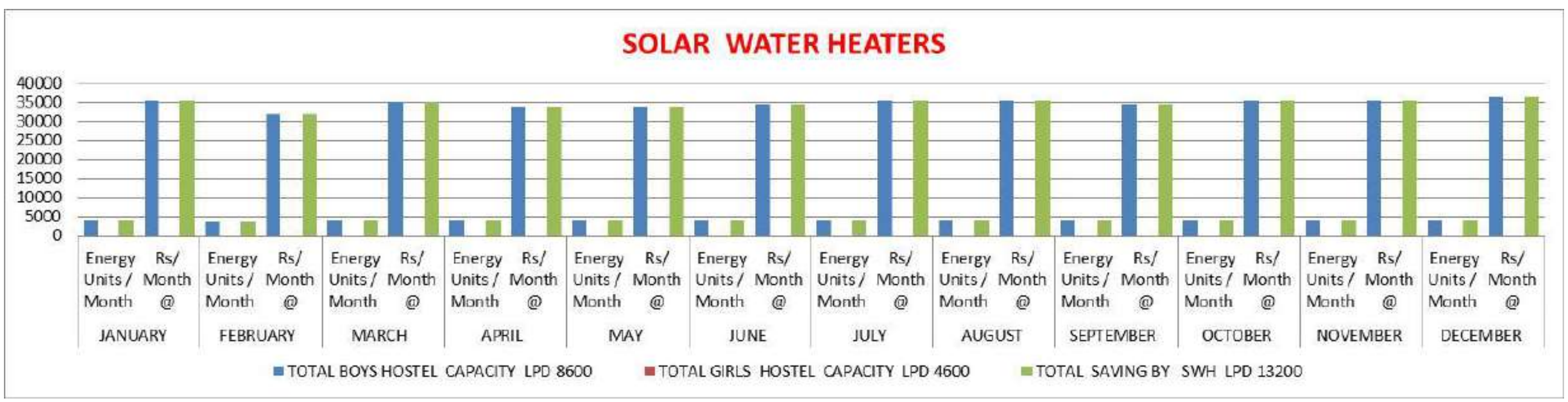
DG DIESEL ACTUAL CONSUMPTION AND GENERATION

Year	Diesel Generator Deatilas			Generator Running Hours
	Diesel consumption in Liters	Actual Generation in Units	Porposed Generation in Units	
2018	3133	17994	9399	208
2019	8790	28987.4	26370	198
2020	2053	7566	6159	193

SOLAR WATER HEATERS

5 SOLAR WATER HEATERS	Total LPD	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		GRAND TOTAL	
		31		28		31		30		31		30		31		31		30		31		30		31			365
			Rs/ Month @		Rs/ Month @		Rs/ Month @		Rs/ Month @		Rs/ Month @		Rs/ Month @		Rs/ Month @		Rs/ Month @		Rs/ Month @		Rs/ Month @		Rs/ Month @		Rs/ Mont h @		Rs/ Month @
AT 1 Unit/100 LPD/Day		Energy Units / Month	8.677	Energy Units / Month	8.677	Energy Units / Month	8.557	Energy Units / Month	8.557	Energy Units / Month	8.557	Energy Units / Month	8.677	Energy Units / Month	8.677	Energy Units / Month	8.677	Energy Units / Month	8.717	Energy Units / Month	8.717	Energy Units / Month	8.989	Energy Units / Month	8.909	Energy Units / Month	8.7
1 Solar Water Heaters - BOYS@ 1Unit/100 LPD/Day	8600	2666	23131.55	2408	20893.01	2666	#####	2580	22075.77	2666	22076	2580	22385.37	2666	23132	2666	23132	2580	22489	2666	23238	2580	23192	2666	23751	31390	272306
2 Solar Water Heaters - GIRLS @ 1 Unit/100 LPD	4600	1426	12372.69	1288	11175.33	1426	#####	1380	11807.97	1426	11808	1380	11973.57	1426	12373	1426	12373	1380	12029	1426	12430	1380	12405	1426	12704	16790	145652
3	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL SAVING BY SWH	13200	4092	35504	3696	32068	4092	35013	3960	33884	4092	33884	3960	34359	4092	35504	4092	35504	3960	34517	4092	35668	3960	35596	4092	36456	48180	417958

		JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		GRAND TOTAL	
		Energy Units / Month	Rs/ Month @	Energy Units / Month	Rs/ Month @	Energy Units / Month	Rs/ Month @	Energy Units / Month	Rs/ Month @	Energy Units / Month	Rs/ Month @	Energy Units /	Rs/ Month @	Energy Units / Month	Rs/ Month @	Energy Units / Month	Rs/ Month @	Energy Units / Month	Rs/ Month @	Energy Units / Month	Rs/ Month @	Energy Units / Month	Rs/ Month @	Energy Units / Month	Rs/ Mont h @	Energy Units / Month	Rs/ Month @
TOTAL BOYS HOSTEL CAPACITY LPD	8600	4092	35504.2	3696	32068.3	4092	35013.2	3960	33883.7	4092	33884	3960	34358.9	4092	35504	4092	35504	3960	34517	4092	35668	3960	35596	4092	36456	48180	417958
TOTAL GIRLS HOSTEL CAPACITY LPD	4600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL SAVING BY SWH LPD	13200	4092	35504.2	3696	32068.3	4092	35013.2	3960	33883.7	4092	33884	3960	34358.9	4092	35504	4092	35504	3960	34517	4092	35668	3960	35596	4092	36456	48180	417958



Solar Power Plant

3 Solar Power Plant	Units	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	GRAND TOTAL
		31	28	31	30	31	30	31	31	30	31	30	31	365
1		Local Load	Local Load	Local Load	Local Load	Local Load	Local Load	Local Load	Local Load	Local Load	Local Load	Local Load	Local Load	Local Load
2 Solar Power Plant Installed Capacity	kW	170	170	170	170	170	170	170	170	170	170	170	170	170
3 Total Solar Energy Generation	Units /Month	0	0	0	0	0	0	0	0	0	0.0	0	0	0
4 Solar Energy Generation	Units/ Day/kW	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Actual Solar Purchasing Tariff,Cost	Rs/Unit	8.68	8.68	8.56	8.56	8.56	8.68	8.68	8.68	8.72	8.72	8.99	8.91	0.00
6 BESCOM TARIFF (INCLUDING ALL CHARGES)	Rs/Unit	8.68	8.68	8.56	8.56	8.56	8.68	8.68	8.68	8.72	8.72	8.99	8.91	
7 Total Generation Cost By Solar Energy as per BESCOM Tariff	Rs/ Month	0	0	0	0	0	0	0	0	0	0	0	0	0
8 Total Generation Cost By Solar Energy as per PURCHASE Tariff	Rs/ Month	0	0	0	0	0	0	0	0	0	0	0	0	0
9 Total Generation Cost SAVING By Solar Energy	Rs/ Month	0	0	0	0	0	0	0	0	0	0	0	0	0

9. Proposed Energy Conservation Measures by Replacing Existing Lighting Fixtures and Fans

Sl. No.	Details	Units	TFL TUBE	L E D	CFL	L E D	Sodium Lamps	L E D	Ceiling Fans	BLDC	Occupancy Sensors		Total Saving
			Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	
1	Total No, Of Fittings	Nos.	706	606	0	0	5	5	1188	1188	25	25	
2	Capacity	Watts	48	20	20	12	150	90	65	35	156	156	
3	No. of Hours Operation	Hours /Day	8	8	8	8	12	12	4	4	12	4	
4	Total Energy Consumption/ Day	Watts /day	271104	96960	0	0	9000	5400	308880	166320	46800	15600	
		Units/ Day	271	97	0	0	9	5	309	166	46.80	15.60	
	BESCOM Ave. Tariff	Rs/Unit	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	
5	Total Energy Cost/Year (300Days)	Rs/Unit	707466	253024	0	0	23486	14092	806046	434025	122128	40709	
6	Total Cost Saving	Rs. Lakhs / Year		4.54		0.00		0.09		3.72		0.81	9.17
7	Total Energy Saving/Year	Units/ Year		52243		0		1080		42768		9360	105451
8	SOCIAL IMPACT: ENERGY, ENVIRONMENTAL AND NATURAL RESOURCES												
			AT CONUMER POINT (CP)	AT Generation POINT (2XCP)	AT CONUMER POINT (CP)	AT Generation POINT (2XCP)	AT CONUMER POINT (CP)	AT Generation POINT (2XCP)	AT CONUMER POINT (CP)	AT Generation POINT (2XCP)	AT CONUMER POINT (CP)	AT Generation POINT (2XCP)	AT Generation POINT (2XCP)
A	Total Coal Saving @ 1kg/Unit	Tons/ Year	52	104	0.00	0.00	1.08	2.16	42.77	85.54	9.36	18.72	105.451	210.90
B	Total water Saving @ 3.3 Liters/Unit	KL/ Month	172	345	0.00	0.00	3.56	7.13	141.13	282.27	30.89	61.78	347.989	695.98
C	Total CO2+GHG Saving @ 1kg/Unit	Tons/ Month	52	104	0.00	0.00	1.08	2.16	42.77	85.54	9.36	18.72	105.451	210.90

10. Implemented Energy Consevation Measures by Replacing Existing Lighting Fixtures and Fans

Sl. No.	Details	Units	TFL TUBE	L E D	CFL	L E D	Sodium Lamps	L E D	Ceiling Fans	BLDC	Occupancy Sensors		Total Saving	
			Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed		
1	Total No, Of Fittngs	Nos.	1635	1635	0	0	0	0	0	0	0	0		
2	Capacity	Watts	48	20	20	12	150	90	65	35	156	156		
3	No. of Hours Operation	Hours/Day	8	8	8	8	12	12	4	4	12	4		
4	Total Energy Consumption /Day	Watts/day	627840	261600	0	0	0	0	0	0	0	0		
		Units/ Day	628	262	0	0	0	0	0	0	0.00	0.00		
	BESCOM Ave. Tariff	Rs/Unit	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70		
5	Total Energy Cost/Year	Rs/Unit	1638396	682665	0	0	0	0	0	0	0	0		
6	Total Cost Saving	Rs. Lakhs / Year		9.56		0.00		0.00		0.00		0.00	9.56	
7	Total Energy Saving/Year	Units/ Year		109872		0		0		0		0	109872	
8	SOCIAL IMPACT: ENERGY, ENVIRONMENTAL AND NATURAL RESOURCES													
			AT CONUMER POINT (CP)	AT Generation POINT (2XCP)	AT CONUMER POINT (CP)	AT Generation POINT (2XCP)	AT CONUMER POINT (CP)	AT Generation POINT (2XCP)	AT CONUMER POINT (CP)	AT Generation POINT (2XCP)	AT CONUMER POINT (CP)	AT Generation POINT (2XCP)	AT CONUMER POINT (CP)	AT Generation POINT (2XCP)
A	Total Coal Saving @ 1kg/Unit	Tons/ Year	110	220	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	109.872	219.74
B	Total water Saving @ 3.3 Liters/Unit	KL/ Month	363	725	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	362.578	725.16
C	Total CO2+GHG Saving @ 1kg/Unit	Tons/ Month	110	220	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	109.872	219.74

6. ENERGY MANAGEMENT

1). NEED FOR ENERGY CONSERVATION

(1) Apart from saving the investment required for additional power plant capacity, energy savings achieved through energy conservation & energy efficiency, also avoids capital investment in fuel, mining, port, transport, water & land.

(2) Energy conservation thus saves cost to the consumer, utility as well as to the total society and hence should be harnessed to the maximum

2). NEED FOR ENERGY MANAGEMENT

(1) Energy management involves a combination of managerial and technical skills.

(2) One way of defining energy management is that it is "the judicious and effective use of energy to maximize profits (that is, minimize costs) and enhance competitive positions".

(3) Proper development of renewable sources for sustainable development.

3). PRINCIPLES OF ENERGY MANAGEMENT

(1) Procure all the energy needed at the lowest possible cost.
(2) Manage energy at the highest energy efficiency.
(3) Reusing & Recycling Energy By Cascading.
(4) Use the most appropriate technology.
(5) Reduce the avoidable Losses.

4). ENERGY MANAGEMENT SKILLS

Combination of both Managerial &Technical Skills and Knowledge.

(1) Motivating people at all levels, Creating the awareness. Involvement of employees and general public through awareness and recognition.

(2) Continuous training and create awareness , Promoting & Propagating Energy Awareness among all the employees. to conserve energy and natural resources. And efficient use of energy.

(3) Changing the structure and procedures. Monitoring the energy consumption.

(4) Energy Utilization Technology. Improvement overall capacity utilization of the plant. Effective utilization of energy resources through improved operational practices, higher capacity utilization and use of appropriate technology.

(5) Awareness of statistical Techniques of data processing.

(6) Applied economics and cost accountability

(7) Identifying and Eliminating wastage of Energy

(8) Adopting Energy Efficient and Eco friendly Technologies

(9) Implementing Energy conservation activities

(10) Benchmarking and best practices

(11) Carrying out regular internal and external energy audits

(12) Institutionalizing total energy management system

5). Some Basic Methods to SAVE Energy AND Energy Cost Reduction

(1) Switch off fans & lights when not in use

(2) Use Air Conditioner only when absolutely necessary

(3) Use Energy efficient lamps like LEDS

(4) Keep the refrigerator /coolers Door always Closed

(5) Experience shows that the Electricity cost reduction opportunities are

a. Decide on appropriate energy required
b. Identify energy conservation equipment and technologies
c. Retrofits for energy conservation equipment

(6) ENERGY SAVING MEASURES

a. Active or efficient in-house management of energy efficiency through maintenance and housekeeping measures involves no or only very minimal investments.
b. Replacement of selected equipment which may require medium-size investments can be taken up.

6). HOLISTIC APPROACH TO

(1) Adopting cleaner and Energy Efficient and Eco friendly technologies.

(2) Improving Energy Efficiency is need of the day

a. REDUCE ENERGY CONSUMPTION

b. Conservation & optimal utilization of natural resources by adopting reduce, reuse and recycle methods.
c. Promote use of Energy Efficient Alternatives and use of alternative fuels.

(3) ENERGY AUDIT AND IMPLEMENTATION OF ENERGY AUDIT RECOMMENDATIONS CONTINUOUS MONITORING

7). RENEWABLE ENERGY OPTIONS

INTEGRATED SOLAR WATER HEATER & ENERGY EFFICIENCY IN RESIDENTIAL BUILDINGS

(1) Energy form water heating in domestic Solar thermal system to replace boilers for hot water. It is terribly wasteful to use high – grade energy source for water heating, SWH is a simple device which uses Solar energy for heating water and storing it. Most important features of SWH is its convenience of use and safety features ,SWH is normally installed on the rooftop
(2) Solar energy which is renewable, environment friendly and available in abundance can easily substitute ,Solar Photovoltaic grid connected system to maintain sufficient power
(3) Solar water Pumps and Solar Lighting
(4) Biogas from Food waste and Human waste Power generation through Biomass gasification and or heating

8). Energy Audit Covered

(1) Energy Forms like Electricity, UPS, D G Power, Bio Gas, SWH and SPV Energy
(2) Lighting, Hot Water, AC System
(3) Air-conditioning
(4) Energy Efficient Lighting Systems
(5) Rain Water Harvesting
(6) Sewage Treatment Plant Process
(7) Measurement and analysis of energy consumption data
(8) Exploring energy saving opportunities
(9) Setting up an energy Monitoring and reporting system
    a) Collect, analyze & report on the organization's energy cost and consumption.
    b) Identification of savings.
    c) Record both historical and ongoing energy use.
    d) Cost information from billing data.
    e) Summary report on regular basis.
    f) Trends analyzed and tariff reviewed.

7. TECHNICAL ANALYSIS;

The following details are considered for the Technical analysis

(1) Energy Forms like Electricity, UPS, D G Power, Bio Gas, SWH and SPV Energy.

(2) Lighting, Solar Hot Water, AC System

(3) Solar PV Power Plant

(4) Air-conditioning

(5) Energy Efficient Lighting Systems

(6) Un-Interruptible Power Supply (UPS)

(7) Rain Water Harvesting

(8) Sewage Treatment Plant Process

(9) Exploring Energy Saving Opportunities

(10) Energy Consumption Data, Energy Monitoring and reporting system

(11) Collect, analyze & report on the organization's energy cost and consumption.

(12) Identification of savings.

(13) Record both historical and ongoing energy use.

(14) Cost information from billing data.

(15) Summary report on regular basis.

(16) Trends analyzed and tariff reviewed.


DONBOSCO INSTITUTE OF TECHNOLOGY BANGALORE
SOLAR PV ROOFTOP GRID CONNECTED WITH NET METERING
277 kW
BUILDING LOAD
EXISTING SYSTEM
EXISTING SYSTEM
170 kVA
GRID TIE INVERTER
NET METER
SPV Power Plant
170 kW
SOLAR-LIGHT
240 kVA
EXISTING SYSTEM
EXISTING SYSTEM

Table -3 ENERGY CONSUMPTION DETAILS AT DON BOSCO Institute Of Technology Campus, BANGALORE FOR THE YEAR 2020

Sl. No.	Details	Units	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		GRAND TOTAL	
			31		28		31		30		31		30		31		31		30		31		30		31		365	
			Before $PV/PP	After $PV/PP	Before $PV/PP	After $PV/PP	Before $PV/PP	After $PV/PP	Before $PV/PP	After $PV/PP	Before $PV/PP	After $PV/PP	Before $PV/PP	After $PV/PP	Before $PV/PP	After $PV/PP	Before $PV/PP	After $PV/PP	Before $PV/PP	After $PV/PP	Before $PV/PP	After $PV/PP	Before $PV/PP	After $PV/PP	Before $PV/PP	After $PV/PP	Before $PV/PP	After $PV/PP
1	Total Sanctioned Load	kVA	200		200		200		200		200		200		200		200		200		200		200		200		200	
2	RECORDED DEMAND	kVA	153		159		157		0		76		79		79		96		90		95		88		145		99.91666667	
3	Demand charges @85% of Sanctioned Load	kVA	170		170		170		170		170		170		170		170		170		170		170		170		170	
4	Demand charges / Fixed Charges	Rs./kW	210		210		210		210		210		210		210		210		210		210		220		220		212	
5	Demand charges @85% of Sanctioned Load Rate Charges @	Rs./Month	35700		35700		35700		35700		35700		35700		35700		35700		35700		35700		37400		37400		36983	
6	Total Energy Drawn from BESCOM Before	Units/Month	44634		45760		46750		21966		25504		25052		23196		29920		28556		27216		28122		36016		31891	
7	Total Solar Generation	Units/Month	0		0		0		0		0		0		0		0		0		0		0		0		0	0
8	Solar Generation Consumed	Units/Month	0		0		0		0		0		0		0		0		0		0		0		0		0	0
9	Total Solar Energy Generation Exported to Grid	Units/Month	0		0		0		0		0		0		0		0		0		0		0		0		0	0
10	Total Energy Drawn from BESCOM After Solar	Units/Month	44634	45760	45760	46750	46750	21966	21966	25504	25504	25052	25052	23196	23196	29920	29920	28556	28556	27216	27216	28122	28122	36016	36016	31891	31891	
11	NET Energy drawn from BESCOM by Consumer	Units/Month	44634	45760	45760	46750	0	21966	0	25504	0	25052	0	23196	0	29920	0	28556	0	27216	0	28122	0	36016	0	3826492	0	
12	Total Energy Consumption by	Units/Day	1440	1634	1608	732	823	835	748	945	952	878	937	1162	1048														
13	As per BESCOM Generation / CONSUMER cost @Rs./Unit	Rs./Unit	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	8.10	8.10	8.10	8.10	7.89	7.89
	As per BESCOM Generation / CONSUMER cost @1% FACtake.		0.12	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.12	0.12	0.12	0.12	0.16	0.16	0.16	0.16	0.16	0.16	0.08	0.08	0.10	0.10
	As per BESCOM Generation / CONSUMER cost @FF RS -		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	As per BESCOM Generation / CONSUMER cost @TAX 9%		0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7065	0.7290	0.7290	0.7290	0.7290	0.71	0.71
14	BESCOM TARIFF (INCLUDING ALL CHARGES)		8.6765	8.6765	8.6765	8.5565	8.5565	8.5565	8.5565	8.5565	8.5565	8.5565	8.6765	8.6765	8.6765	8.6765	8.6765	8.6765	8.7165	8.7165	8.7165	8.7165	8.9890	8.9890	8.9090	8.9090	8.70	8.70
15	Actual Solar Purchasing Tariff Cost			8.68		8.68		8.56		8.56		8.56		8.68		8.68		8.68		8.72		8.72		8.99		8.91		
16	EXPECTED ENERGY COST USED BY Consumer	Rs./MONTH	387267	397037	397037	400016	400016	187952	187952	218225	218225	217344	217344	201260	201260	259601	259601	248936	248936	237228	237228	252789	252789	320867	320867	3328878	3328878	
17	ACTUAL BESCOM Bill EXCLUDING DEMAND CHARGES	Rs./MONTH	387267	397037	397037	400016	400016	187952	187952	218225	218225	217344	217344	201260	201260	259601	259601	248936	248936	237228	237228	252789	252789	320867	320867	3328878	3328878	
18	Others -1Rebates, Interest,adj	Rs./Month	0	0	0	0	0	0	0	-1116	0	0	0	0	0	0.00	0	0.00	0	57260.01	51550	0	0	0	0	0	0	
	Manual Energy Charges	Rs./Month				0	0	0	0	21179	0	-1253	627	627	0	0	0	0	0	-53624	4296	0	0	0	0	0	0	
	Others -2 LATE FEE	Rs./Month	0	0	0	0.00	0	0	0	0	0	-627	0	0	0	0	0	0	0	-3654	57624	0	0	0	0	0	0	
	Others -3 ADD	Rs./Month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0	0	0	-3654	0	0	0	0	
	Tariff short claim	Rs./Month		0																0								
	Total BESCOM	Rs./Month	387267	397037	397037	400016	400016	187952	187952	218225	218225	217344	217344	201867	201867	259601	259601	248936	248936	185678	251357	252789	252789	320867	320867	3328878	3328878	
19	ACTUAL BESCOM Bill INCLUDING DEMAND CHARGES	Rs./Month	422967	432737	432716	223652	206628	251184	237387	295301	284608	221378	288757	358267	3364862														
20	Total Energy Cost by using Solar Generation as per BESCOM Tariff EXCLUDING DEMAND CHARGES	Rs./Month	387267	397037	397037	400016	400016	187952	187952	218225	218225	217344	217344	201260	201260	259601	259601	248936	248936	237228	237228	252789	252789	320867	320867	3329513	3329513	

2	DIESEL GENERATOR	Units	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		GRAND TOTAL	
			Before SPVPP	After SPVPP	Before SPVPP	After SPVPP	Before SPVPP	After SPVPP	Before SPVPP	After SPVPP	Before SPVPP	After SPVPP	Before SPVPP	After SPVPP	Before SPVPP	After SPVPP	Before SPVPP	After SPVPP	Before SPVPP	After SPVPP	Before SPVPP	After SPVPP	Before SPVPP	After SPVPP	Before SPVPP	After SPVPP	Before SPVPP	After SPVPP
1	**TOTAL D.G.SET CAPACITY**	KVA	240		240		240		240		240		240		240		240		240		240		240		240		240	
2	Total Diesel Consumption	Litres	861	861	455	455	861	861	861	861	861	861	861	861	861	861	2451	2451	2921	2921	1071	1071	463	463	2131	2131	2286	2286
3	Diesel Cost	Rs./Litre	80.00		80.00		80.00		80.00		80.00		80.00		80.00		80.00		80.00		80.00		80.00		80.00		80.00	
4	Total Diesel Cost per Month	Rs/Month	68843.333333	68843.3333	36363.33	36363.33	68843.333	68843.33	68843.33	68843.3	68843.333	68843.33	68843.333	68843.333	68843.33	68843.333	196300	196300	233633.333	233633.33	85676.67	85676.67	37000.3	37000.3	170003.3	170003.3	183000	183000
5	Total Diesel Saving by Installing SPVPP	Litres/Month	0		0		0		0		0		0		0		0		0		0		0		0		0	
6	Total Cost saving by installing SPVPP	Rs/Month		0		0		0		0		0		0		0		0		0		0		0		0	0	
7	Total Energy Generation by way of Diesel @ 3Unit/Litre	Units/Month	257	0	1364	0	257	0	257	0	257	0	257	0	257	0	736	0	876	0	322	0	1388	0	638	0	6825.5	0
8	Diesel generation Cost	Rs./Unit	24.67		24.67		24.67		24.67		24.67		24.67		24.67		24.67		24.67		24.67		24.67		24.67		24.67	
9	Tariff/ Purchase Cost as per BESCOM	Rs./Unit	387266.90		397036.64		400016.38		187952.08		218224.98		217363.68		201260.09		259600.88		248908.37		237228.26		232788.66		320666.54		277376.12	
10	Actual Solar Purchasing Tariff	Rs./Unit		387266.90		397036.64		400016.38		187952.08		218224.98		217363.68		201260.09		259600.88		248908.37		237228.26		232788.66		320666.54		277376.12
11	Cost Saving using Solar Instead of Diesel Generation	Rs/Unit		-387240.23		-397009.97		-399988.71		-187923.41		-218198.31		-217337.01		-201233.43		-259374.21		-248881.71		-237201.60		-232761.99		-320839.88		-277349.46
12	Total Cost Equivalent to Solar Generation	Units/Month		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
13	**SOCIAL IMPACT: BY SAVING DIESEL CONSUMPTION - DIESEL**		A1 (CP)	GP=2XCP	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XC P	A1 (CP)	GP=2X CP	A1 (CP)	GP=2XC P	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XC P	A1 (CP)	GP=2XC P	A1 (CP)	GP=2XC P	Total At Consumer Point (CP)	Total AT Generat Ing Point
a	Total Diesel Saving by Installing SPVPP	Litres/Month	0		0		0		0		0		0		0		0		0		0		0		0		0	0
b	Solar Energy Generation SAVING	Units/Month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c	Total Coal Saving @ 1kg/Unit	KGS/Month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d	Total water Saving @ 3.3 Liters/Unit	Liters/Month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
e	Total CO2+GHG Saving @ 1kg/Unit	KGS/Month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3	Solar Power Plant	Units	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		GRAND TOTAL
				31		28		31		30		31		30		31		31		30		31		30		31		365
1				Local Load		Local Load		Local Load		Local Load		Local Load		Local Load		Local Load		Local Load		Local Load		Local Load		Local Load		Local Load	0	0
2	Solar Power Plant Installed Capacity	kW	170		170		170		170		170		170		170		170		170		170		170		170		170	
3	Total Solar Energy Generation	Units /Month		0		0		0		0		0		0		0		0		0		0		0		0	0	0
4	Solar Energy Generation	Units/ Day/kW		0		0		0		0		0		0		0		0		0		0		0		0	0	0
5	Actual Solar Purchasing Tariff Cost	Rs/Unit		8.68		8.68		8.56		8.56		8.56		8.68		8.68		8.68		8.72		8.72		8.99		8.91		0.00
6	BESCOM TARIFF (INCLUDING ALL CHARGES)	Rs/Unit	8.68		8.68		8.56		8.56		8.56		8.68		8.68		8.68		8.72		8.72		8.99		8.91		0.00	
7	Total Generation Cost By Solar Energy as per BESCOM Tariff	Rs/ Month		0		0		0		0		0		0		0		0		0		0		0		0	0	0
8	Total Generation Cost By Solar Energy as per PURCHASE Tariff	Rs/ Month		0		0		0		0		0		0		0		0		0		0		0		0	0	0
9	Total Generation Cost SAVING By Solar Energy	Rs/ Month		0		0		0		0		0		0		0		0		0		0		0		0	0	0
10	**SOCIAL IMPACT: ENERGY, ENVIRONMENTAL AND NATURAL RESOURCES - SOLAR ENERGY**		A1 (CP)	GP=2XCP	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XC P	A1 (CP)	GP=2X CP	A1 (CP)	GP=2XC P	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XC P	A1 (CP)	GP=2XC P	A1 (CP)	GP=2XC P	Total At Consumer Point (CP)	Total AT Generat Ing Point
a	Solar Energy Generation SAVINGS	Units/Month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b	Total Coal Saving @ 1kg/Unit	KGS/Month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c	Total water Saving @ 3.3 Liters/Unit	Liters/Month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d	Total CO2+GHG Saving @ 1kg/Unit	KGS/Month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

4	U P S LOSSES	Units	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	GRAND TOTAL
1	Total UPS Capacity	KVA	319	319	319	319	319	319	319	319	319	319	319	319	319
2	Total UPS Energy Loss per day for 10 Hours @ 3% loss	Units/day	160	160	160	160	160	160	160	160	160	160	160	160	1914
3	Total UPS Energy Loss per day for 10 Hours @ 3% loss	Units/Month	4943	4466	4945	4785	4945	4785	4945	4945	4785	4945	4785	4945	58218
4	Total UPS Energy Loss per day for 24 Hours @ 3% loss	Units/Month	4984	4502	4984	4823	4984	4823	4984	4984	4823	4984	4823	4984	56683
5	Total cost LOSSES	Rs/Month	44051	39788	43655	42247	43655	40376	41722	41722	43534	44491	42481	44194	511914
6	Total Energy Losses can reduces by Solar for 8 Hours	Units/Month	1648	1489	1648	1595	1648	1595	1648	1648	1595	1648	1595	1648	19406
7	Total Cost Saving (UPS) by Solar	Rs/Month	29367	26525	29103	28165	29103	26917	27814	27814	29023	29660	28321	29463	341276

8	SOCIAL IMPACT: UPS BY SOLAR ENERGY		A1 (CP)	GP=2XCP	A1 (CP)	GP=2XC P	A1 (CP)	GP=2XC P	A1 (CP)	GP=2X CP	A1 (CP)	Jan-00	A1 (CP)	GP=2XC P	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XC P	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XC P	A1 (CP)	GP=2XC P	Total A1 Consumer Point (CP)	Total AT General Ing Point
a	Solar Energy Generation SAVING	Units/Month	1648	3296	1489	2977	1648	3296	1595	3190	1648	3296	1595	3190	1648	3296	1595	3190	1648	3296	1595	3190	1648	3296	19406.83	388117
b	Total Cost Saving @ 1kg/Unit	KGS/Month	1648	3296	1489	2977	1648	3296	1595	3190	1648	3296	1595	3190	1648	3296	1595	3190	1648	3296	1595	3190	1648	3296	19406.83	388117
c	Total water Saving @ 3.3 Liters/Unit	liters/Month	5439	10878	4913	9825	5439	10878	5264	10527	5439	10878	5264	10527	5439	10878	5264	10527	5439	10878	5264	10527	5439	10878	64039.25	1280785
d	Total CO2+GHG Saving @ 1kg/Unit	KGS/Month	1648	3296	1489	2977	1648	3296	1595	3190	1648	3296	1595	3190	1648	3296	1595	3190	1648	3296	1595	3190	1648	3296	19406.83	388117

5	SOLAR WATER HEATERS	Total LPD	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		GRAND TOTAL	
	A1: 1 Unit/100 LPD/Day		Energy Units / Month	Rs/ Month @ 8.4765	Energy Units /	Rs/ Month @ 8.4765	Energy Units /	Rs/ Month @ 8.5565	Energy Units /	Rs/ Month 8.5565	Energy Units /	Rs/ Month @ 8.5565	Energy Units /	Rs/ Month @ 8.4765	Energy Units /	Rs/ Month @ 8.4765	Energy Units /	Rs/ Month @ 8.4765	Energy Units /	Rs/ Month @ 8.7165	Energy Units /	Rs/ Month @ 8.7165	Energy Units /	Rs/ Month 8.989	Energy Units /	Rs/ Month 8.989	Energy Units /	Rs/ Month 8.699
1	Solar Water Heaters - BOYS@ 1Unit/100 LPD/Day	8600	2656	23131.549	2408	20893.01	2656	22811.6	2580	22075.8	2656	22705.8	2580	22383.37	2656	23131.55	2656	22488.57	2656	23128.7	2656	23128.7	2580	23191.6	2656	22751.4	31990	277306
2	Solar Water Heaters - GIRLS @ 1 Unit/100 LPD	4600	1426	12372.689	1288	11175.33	1426	12201.6	1380	11808	1426	11808	1380	11973.57	1426	12372.69	1426	12372.689	1380	12028.77	1426	12428.7	1380	12404.8	1426	12704.2	16790	145652
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL SAVING BY SWH	13200	4092	35504	3696	32068	4092	35013	3960	33884	4092	33884	3960	34359	4092	35504	4092	34517	3960	35668	4092	35668	3960	35596	4092	36456	48180	417988

G	SOCIAL IMPACT: SWH		A1 (CP)	GP=2XCP	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XC P	A1 (CP)	GP=2X CP	A1 (CP)	GP=2XC P	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XCP	A1 (CP)	GP=2XC P	A1 (CP)	GP=2XC P	Total A1 Consumer Point (CP)	Total AT General Ing Point
a	Solar Energy Generation /SWH SAVING	Units/Month	4092	8184	3696	7392	4092	8184	3960	7920	4092	8184	3960	7920	4092	8184	3960	7920	4092	8184	3960	7920	4092	8184	48180	96360
b	Total Coal Saving @ 1kg/Unit	KGS/Month	4092	8184	3696	7392	4092	8184	3960	7920	4092	8184	3960	7920	4092	8184	3960	7920	4092	8184	3960	7920	4092	8184	48180	96360
c	Total water Saving @ 3.3 Liters/Unit	Liters/Month	13504	27007	12197	24394	13504	27007	13068	26136	13504	27007	13068	26136	13504	27007	13068	26136	13504	27007	13068	26136	13504	27007	158994	317988
d	Total CO2+GHG Saving @ 1kg/Unit	KGS/Month	4092	8184	3696	7392	4092	8184	3960	7920	4092	8184	3960	7920	4092	8184	3960	7920	4092	8184	3960	7920	4092	8184	48180	96360

	Table -4 Total Energy Summary Details at	ENERGY CONSUMPTION DETAILS AT DON BOSCO Institute Of Technology Campus BANGALORE FOR THE YEAR 2020		
1	**STATE ELECTRICITY SUPPLY - BESCOM**			
1	Total Sanctioned Load	kVA	200	
2	RECORDED DEMAND	kVA	99.92	Averag
3	Demand charges @85% of Sanctioned Load	kVA	170	70.08
4	Demand charges / Fixed Charges	Rs./kW	212	Averag
5	Demand charges @85% of Sanctioned Load Fixed Charges @ Rs. -/kW	Rs. / Year	35983	
	Total Energy Drawn from BECSCOM Before	Units/Year	382692	
	Total Energy Drawn from BECSCOM Before	Units//Month	31891	
6	Total Energy Drawn from BECSCOM Before	Units// Day	1048	
7	BESCOM TARIFF (INCLUDING ALL CHARGES)	Rs./Unit	8.699	Averag e
	ACTUAL BESCOM Bill EXCLUDING DEMAND CHARGES	Rs./ Year	3328878	
8	ACTUAL BESCOM Bill INCLUDING DEMAND CHARGES	Rs. /Year	3364862	
9	Saving by way of Solar Energy against BESCOM Energy	Rs. /Year	0	
2	**DIESEL GENERATOR**			
1	TOTAL D G SET CAPACITY	kVA	240	
2	Total Diesel Consumption	Liters/Year	2287.5	
3	Total Diesel Cost	Rs. /Year	183000	At Rs. 80/Liter
4	Total Energy Generation by way of Diesel @ 3Units/Litre	Units/ Year	6862.5	
5	Actual DG Generation	Units/ Year	0	
5	Difference in Generation	Units/ Year	6862.5	
6	Diesel generation Cost	Rs./Unit	26.67	At Rs. 80/Liter
7	**DG Generation Loss**	**Rs. / Year**	**183000**	No Optimum

3	Solar Power Plant			
1	Solar Power Plant Installed Capacity	kW	170	
2	Total Solar Energy Generation	Units/Year	0	3 Months
3	Total Solar Energy Generation	Units/Month	0	
4	Total Solar Energy Generation	Units/Day	0	
5	Solar Energy Generation	Units/ Day/kW	0	
5	Actual Solar Puchasing Tariff,Cost	Rs/Unit	8.6765	
6	BESCOM TARIFF (INCLUDING ALL CHARGES)	Rs./Unit	8.699	Average
7	Total Generation Cost By Solar Energy as per BESCOM Tariff	Rs./ Year	0	
8	Total Generation Cost By Solar Energy as per PURCHASE Tariff	Rs./ Year	0	
9	Total Generation Cost SAVING By Solar Energy	Rs./ Year	0	

4	U P S LOSSES			
1	Total UPS Capacity	kVA	319	
2	Total UPS Energy Loss per day for 10 Hours @ 5% loss	Units/day	159.5	
3	Total UPS Energy Loss per day for 24 Hours @ 5% loss	Units/Year	58683	
4	Total cost LOSSES	Rs./ Year	506397	
5	Total Energy Losses can reduces by Solar for 8 Hours	Units/Year	19406	**Needs Check with Inverter System**
6	Total Cost Saving (UPS) by Solar	Rs./ Year	337598	

5	SOLAR WATER HEATERS			
		TOTAL SWH CAPACITY LPD	Energy Units/ Year	Rs/ Year
1	BOYS HOSTEL	8600	31390	272306
2	GIRLS HOSTEL	4600	16790	145652
3	TOTAL SAVING BY SWH	13200	48180	417958

6	Total Energy Consumption in the Campus			
			Units/Year	%
1	NET Energy drawn from BESCOM by Consumer	Units/Year	382692	88.82
2	by Solar Energy	Units/Year	0	0.00
3	By Diesel	Units/Year	0	0.00
4	By UPS	Units/Year	0	0.00
5	BY SOLAR WATER HEATER	Units/Year	48180	11.18
6	Total	Units/Year	430872	100
7	Total Ener Consumption by	Units/Month	35906	
8	Total Ener Consumption by	Units/day	1180	

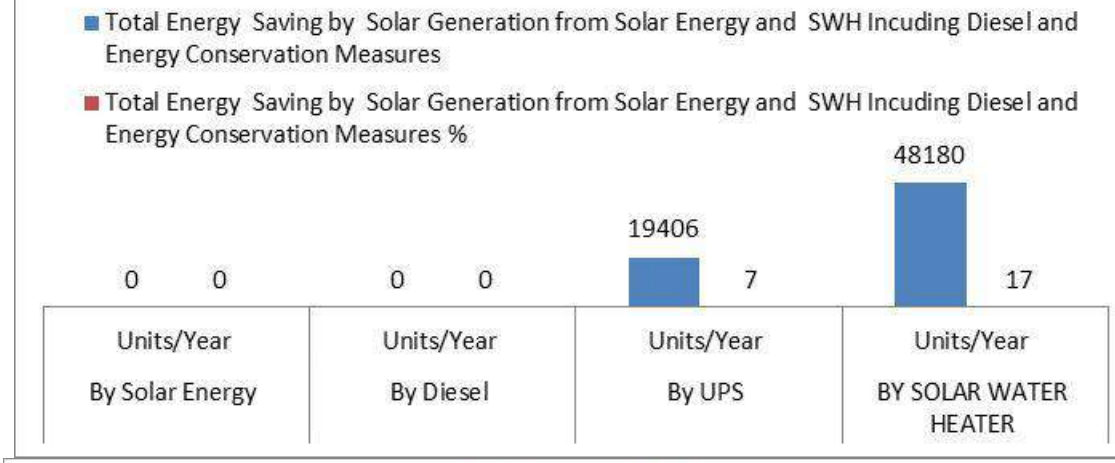
7	Total Energy Saving by Solar Generation from Solar Energy and SWH Incuding Diesel and Energy Conservation Measures			
				%
1	By Solar Energy	Units/Year	0	0
2	By Diesel	Units/Year	0	0
3	By UPS	Units/Year	19406	7
4	BY SOLAR WATER HEATER	Units/Year	48180	17
5	Adopted / Implemented Proposed Energy Conservation Measures(ECM)	Units/Year	109872	39
6	Proposed Energy Conservation Measures(ECM)	Units/Year	105451	37
	Total by SOLAR	Units/Year	282909	100.00

8	**Total Energy Utilised by**			%
1	By Renewable Energy	Units/Year	48180.00	**11.18**
2	BY Conventional Energy	Units/Year	382692.00	88.82
	Total (1+2)	Units/Year	430872.00	100.00
3	Adopted / Implemented Proposed Energy Conservation Measures(ECM)	Units/Year	109872	**22.31**
4	BY Conventional Energy	Units/Year	382692.00	77.69
	Total (3+4)	Units/Year	492564.00	100.00
5	Proposed Energy Conservation Measures(ECM)	Units/Year	105451.2	**21.60**
6	BY Conventional Energy	Units/Year	382692	78.40
	Total (5+6)	Units/Year	488143.2	100
9	**Total Energy Cost Details including Saving and by using Renewable Energy Sources including BESCOM and Energy Conservation Measures**			%
1	Total Energy Cost	Rs./Year	3747976.00	
2	By Solar Energy	Rs./Year	0.00	0.00
3	By UPS	Rs./Year	168374.71	6.84
4	BY SOLAR WATER HEATER	Rs./Year	419097.75	17.03
5	Adopted / Implemented Proposed Energy Conservation Measures(ECM)	Rs./Year	955730.75	38.84
6	Proposed Energy Conservation Measures(ECM)	Rs./Year	917276.05	37.28
	Total (2+3+4)	**Rs./Year**	**2460479.26**	100
10	**Total Energy Cost**			%
1	Total BESCOM Cost	Rs./Year	3364861.59	94.84
2	Total Renewable Energy Cost	Rs./Year	0.00	0.00
3	Total Diesel Cost	Rs./Year	183000	5.16
	Total	Rs./Year	3547861.59	100.00
11	**SOCIAL IMPACT: ENERGY, ENVIRONMENTAL AND NATURAL RESOURCES**		At Consumer Point	At Generating Point
1	By Solar Energy	Units/Year	0	0
2	By Diesel	Units/Year	0	0
3	By UPS	Units/Year	19406	38812
4	BY SOLAR WATER HEATER	Units/Year	48180	96360
5	By (adapted /Implemented)Energy Conservation Measures(ECM)opted	Units/Year	109872	219744
6	By Proposed Energy Conservation Measures(ECM)	Units/Year	105451	210902
7	Total	Units/Year	282909	565818
			At Consumer Point	At Generating Point
6	Total Coal Saving @ 1kg/Unit	Tons/ Year	283	566
7	Total water Saving @ 3.3 Liters/Unit	KL/ Month	934	1867
8	Total CO2+GHG Saving @ 1kg/Unit	Tons/ Month	283	566

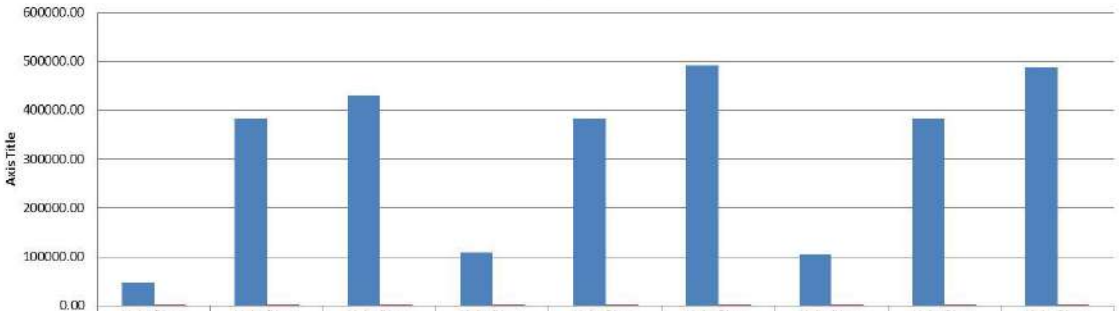
Total Energy Consumption in the Campus

	Units/Year NET Energy drawn from BESCOM by Consumer	Units/Year by Solar Energy	Units/Year By Diesel	Units/Year By UPS	Units/Year BY SOLAR WATER HEATER	Units/Year Total
Units/Year	382692	0	0	0	48180	430872
%	88.82	0.00	0.00	0.00	11.18	100

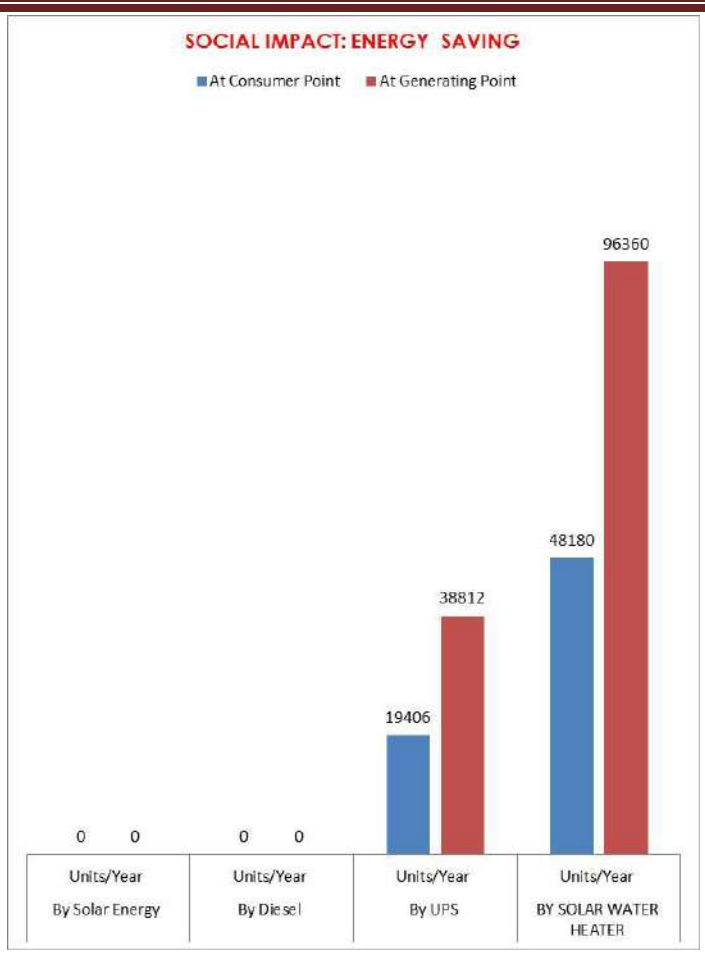
Total Energy by Solar Generation from Solar Energy and SWH Including Diesel

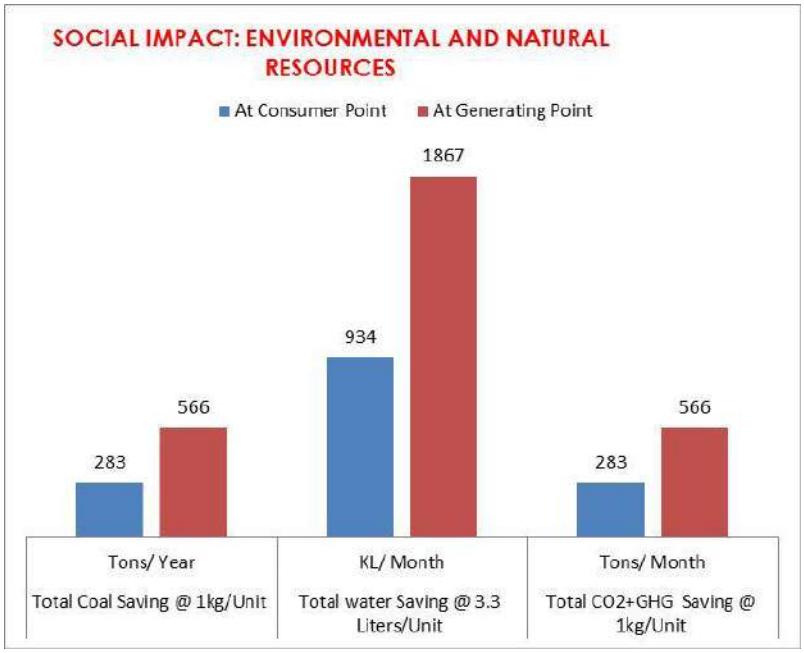


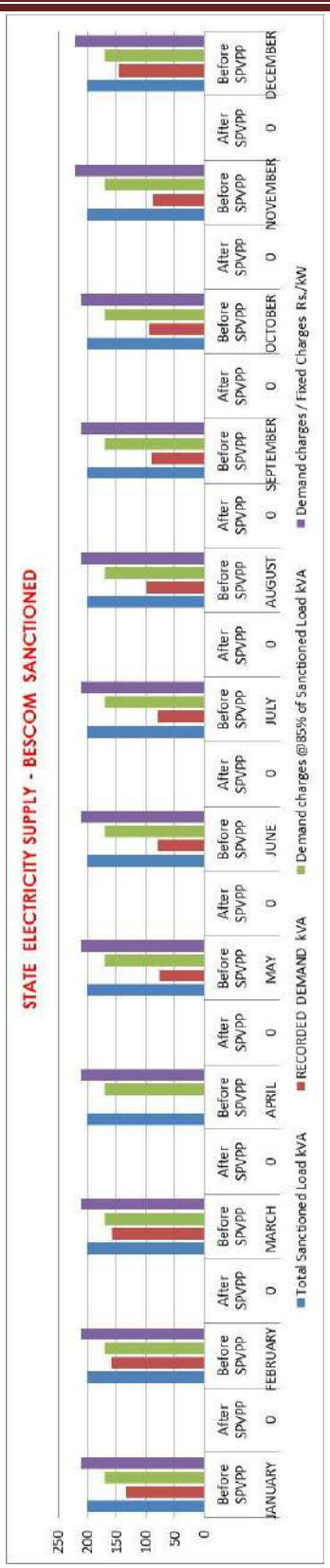
Total Energy Utilised

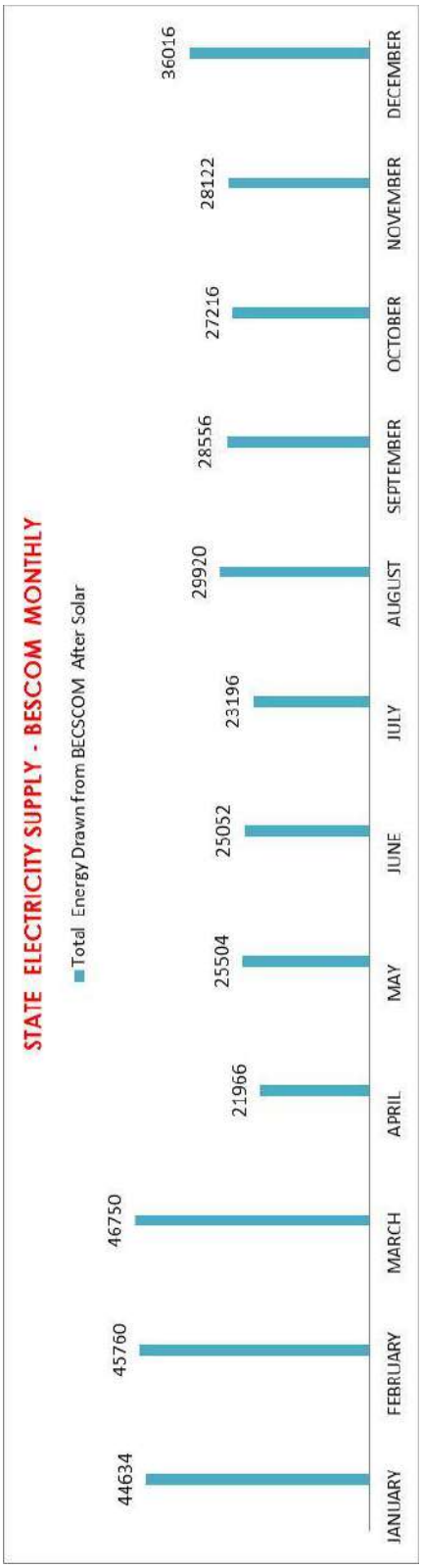


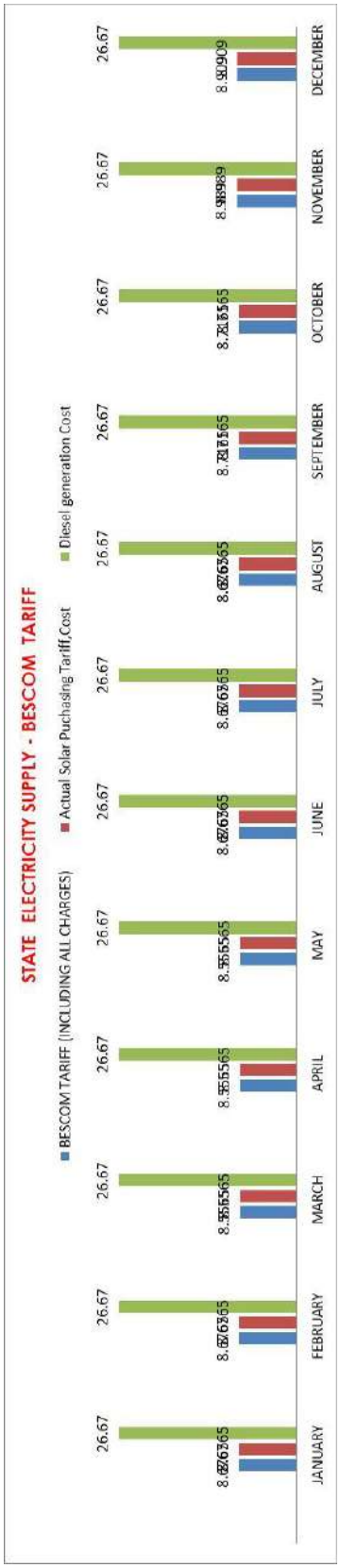
	Units/Year By Renewable Energy	Units/Year BY Conventional Energy	Units/Year Total (1+2)	Units/Year Adopted / Implemented Proposed Energy Conservation Measures(ECM)	Units/Year BY Conventional Energy	Units/Year Total (3+4)	Units/Year Proposed Energy Conservation Measures(ECM)	Units/Year BY Conventional Energy	Units/Year Total (5+6)
	48180.00	382692.00	430872.00	109872	382692.00	492564.00	105451.2	382692	488143.2
%	11.18	88.82	100.00	22.31	77.69	100.00	21.60	78.40	100


SOCIAL IMPACT: ENERGY SAVING
At Consumer Point
At Generating Point
0
0
0
0
19406
38812
48180
96360
Units/Year
By Solar Energy
Units/Year
By Diesel
Units/Year
By UPS
Units/Year
BY SOLAR WATER HEATER


SOCIAL IMPACT: ENVIRONMENTAL AND NATURAL RESOURCES
At Consumer Point
At Generating Point
283
566
934
1867
283
566
Tons/ Year
Total Coal Saving @ 1kg/Unit
KL/ Month
Total water Saving @ 3.3 Liters/Unit
Tons/ Month
Total CO2+GHG Saving @ 1kg/Unit


STATE ELECTRICITY SUPPLY - BESCOM SANCTIONED
250
200
150
100
50
0
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
Before SPVPP
After SPVPP
Total Sanctioned Load kVA
RECORDED DEMAND kVA
Demand charges @85% of Sanctioned Load kVA
Demand charges / Fixed Charges Rs./kW


STATE ELECTRICITY SUPPLY - BESCOM MONTHLY
Total Energy Drawn from BECSCOM After Solar
44634
45760
46750
21966
25504
25052
23196
29920
28556
27216
28122
36016
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER


STATE ELECTRICITY SUPPLY - BESCOM TARIFF
BESCOM TARIFF (INCLUDING ALL CHARGES)
Actual Solar Puchasing Tariff,Cost
Diesel generation Cost
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER

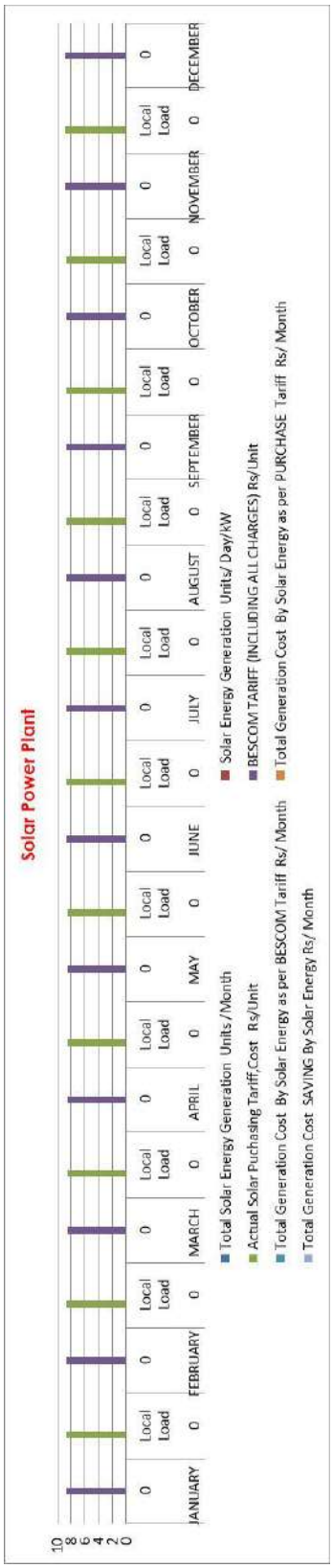

Solar Power Plant
Total Solar Energy Generation Units /Month
Actual Solar Puchasing Tariff,Cost Rs/Unit
Total Generation Cost By Solar Energy as per BESCOM Tariff Rs/ Month
Total Generation Cost SAVING By Solar Energy Rs/ Month
Solar Energy Generation Units/ Day/kW
BESCOM TARIFF (INCLUDING ALL CHARGES) Rs/Unit
Total Generation Cost By Solar Energy as per PURCHASE Tariff Rs/ Month
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER

Table -5 YEAR WISE ENERGY CONSUMPTION

Year	2018 Units	2019 Units	2020 Units
JANUARY	39292	43998	44634
FEBRUARY	49954	52062	45760
MARCH	57532	60914	46750
APRIL	58974	58636	21966
MAY	61024	61460	25504
JUNE	49238	52714	25052
JULY	37002	39864	23196
AUGUST	48150	48062	29920
SEPTEMBER	53054	51660	28556
OCTOBER	54350	49606	27216
NOVEMBER	46964	52242	28122
DECEMBER	49232	49356	36016
Average/ Month	50397	51715	31891
Total	604766	620574	382692

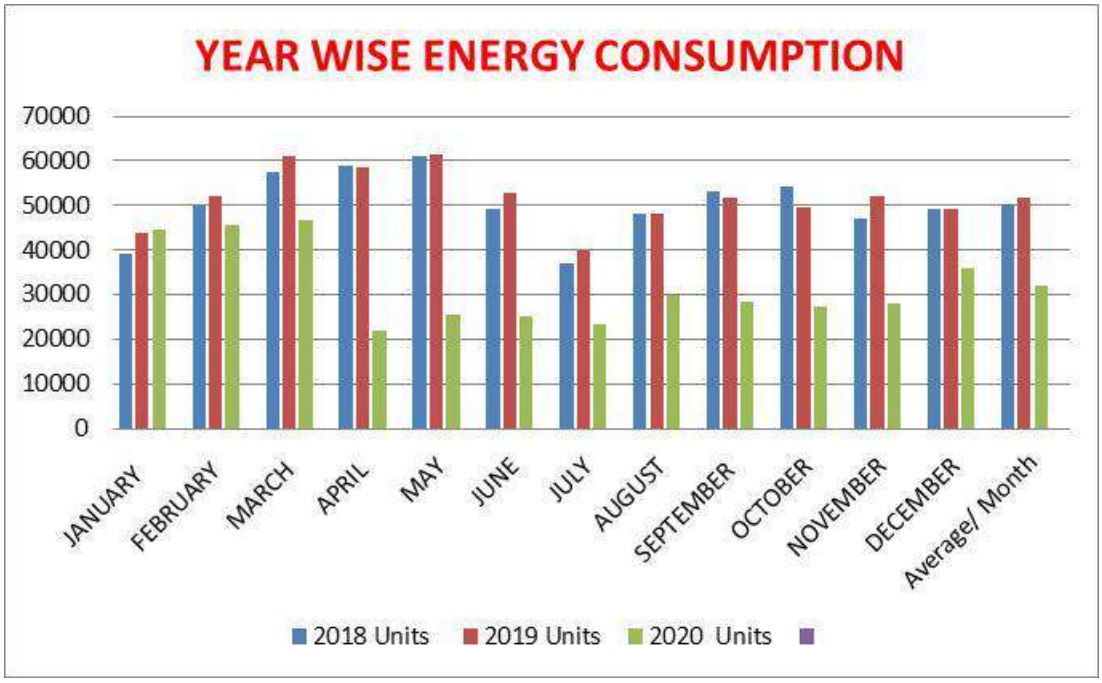


Table -6 Existing Lighting Fixtures and Fans

SL.No.	Details	LED in Nos.	FAN in Nos.	F T L in Nos.
1	**MBA + PUC BLOCK**			
	GROUND FLOOR	37	51	53
	FIRST FLOOR	35	64	46
2	**MBA BLOCK**			
	GROUND FLOOR	73	34	0
	FIRST FLOOR	76	30	0
	SECOND FLOOR	98	60	0
	THIRD FLOOR	110	56	
3	**A WING RIGHT SIDE /PRINCIPAL**			
	GROUND FLOOR	243	116	66
	FIRST FLOOR	134	128	125
	SECOND FLOOR	156	145	98
4	**B WING LEFT SIDE**			
	GROUND FLOOR	75	78	44
	FIRST FLOOR	7	79	107
	SECOND FLOOR	24	52	75
	CELLER	11	30	47
	WASHROOMS	144	0	0
	WORK SHOP	12	25	45
5	**MESS**	30	55	0
6	**BOYS HOSTEL**	230	115	0
7	**GIRLS HOSTEL**	140	70	0
	TOTAL	**1635**	**1188**	**706**
8	**STREET LIGHTS**			
		10	200	WATTS
		5	100	WATTS
		3	15	WATTS

8. Observations and Recommendations on the basis of Technical Analysis

(1) As per the Analysis The total generated and Consumed from Renewable energy , mainly by taping Solar Energy both Light and heat Energy For the Year 2021 is **11.18 %.**

(2) In the Boys Hostel Total 1500 LPD Solar Water Heater not Function and it requires little Maintenance

(3) For Girls Hostel, Total 4000 LPD Solar Water Heater installed at another building, it is better to shift from existing building to Girls Hostel Building

(4) In the both Hostels, Heat Pump Water with capacity of 13kW and 20 kW installed , it is required review in the operation time/ process.

(5) It is proposed to 170 kWp Solar Rooftop Power Plant with Net Metering to install at Main Building.

(6) UPS – In this system lot of Energy loss in the form of Heat as well as Charging and discharging loss, it can be / possibility is there to minimize the loss with proper wiring arrangement / connection with Off Line UPS System.

(7) Already Implemented Energy Conservation Measures by Replacing Existing Lighting Fixtures and Fans with Efficient systems. Saving of Energy about **22.31 %.**

(8) Proposed Energy Conservation Measures by Replacing Existing Lighting Fixtures and Fans with Efficient systems. Saving of Energy about **21.60 %.**

(9) The Records of BESCOM Bills, DG Set, SWH, Solar PV Power Plant and UPS along with other details, proper recording and maintain data BANK is very much required.

(10) Energy Consumption Data, Energy Monitoring and reporting system is very much required.

(11) Proposed for Bio Gas Plant for Gas generation and for Heating purpose by Human waste under Sewage Treatment Plant concept.

(12) Motivating people at all levels, Creating the awareness. Involvement of employees and general public through awareness and recognition.

(13) Continuous training and create awareness , Promoting & Propagating Energy Awareness among all the employees. to conserve energy and natural resources. And efficient use of energy.

(14) Switch off fans & lights when not in use, To facilitate effective control, Invite SUGGEST for IMPROVEMENTS from employees.

(15) Display Board mentioning Switch off fans & lights when not in use at important places and issue direction in this matter to all the Staff at all level.

9. Conclusion:

1. SOCIAL IMPACT

Every country should have abundant, affordable and reliable energy. During the past few years, renewable energy sources have received greater attention and considerable inputs have been given to develop efficient energy conversion and utilization techniques. Energy Conservation is the Best Reservation for the Future Generation. Today's clean environment is tomorrow's safe environment and today's world is yesterday's creation, tomorrow's world will be today's conservation. Today's wastages is tomorrow shortage, Saving energy is simple, it needs a change in attitude, using and buying energy efficient equipment's. Large capacity addition requires capacity building of vendors, construction agencies, transportation and infrastructure. Government of India is taking steps in this regard. There are many environment related issues. Good, safe and healthy air and environment are paramount for our citizens. Climate issues are of global concern. All the stake holders need to understand the various issues in the right balance and perspective to ensure the targeted growth in GDP and removal of poverty.

Main objective of grid connected SPV system is to provide demand side management, tail end voltage support and peak shaving requirements. Grid Interactive SPV system has the following benefits / advantages

1. Better quality of power than utility grid as the power factor is unity.
2. Modular in construction and expandable.
3. Generation of the power at the point of consumption thus avoiding transmission losses.
4. Minimum maintenance
5. Very low running cost
6. No pollution

2. ENERGY

a. Transmission and Distribution Loss Reduces
b. UPS Energy Charging and Discharging Loss reduction

3. NATURAL RESOURCES

a. Diesel Saving
b. Saving / Reduces Consumption of Coal and Water

4. ENVIRONMENTAL Protection

a. Reduces the Emission of Carbon Dioxide (CO2) and Green house Gases(GHG)
b. Air Quality Improves and Temperature Reduces

5. Economics

a. Cost of Production reduces as the time passes
b. Life of the Battery Increases
c. Under Net Metering Scheme revenue generates and also roof top area better utilized with roof heating reduces in turn temperature reduces inside the room/ hall.

Though, it is the responsibility of the Government to provide basic needs to society , at the same , it is also the responsibility of the society to conserve energy, energy resources and protect the environment and SAVE THE MOTHER LAND.

10. Tables

11. Graphs

12. Documents :

Bangalore Electricity Supply Company Limited
(Wholly Owned Government of Karnataka Undertaking)

BESCOM GSTN No: 29AACCB1412G1Z5

Office of the Asst. Executive Engineer (Ele.) C, O&M Sub-division - K1 KENGERI

RR No.	Account ID	Bill No.	Billing Period	Bill Date	Due Date	Disconnection Date
2363068845 (WTHT1S)	2363068000	236306666398	01-12-2020 - 01-01-2021	01-01-2021	15-01-2021	31-01-2021

Name & Address:	Type	Educational Institutions - HT2C	Wheeling Energy	0
WAYANMAC EDUCATION TRUST EDUCATIONAL INSTITUTIONPVT AAATW0544M KUMBALGODU, KAR -	Tariff	1HT2C2	High Cost Energy	
	Contract Demand(KVA)	200	Special Energy	
	85% of CD (KVA)	170	Base Consumption	
	Recorded Demand (KVA)	145	Power Cut	
	Billing Demand (KVA)	170	Energy Entitlement Demand Entitlement	

Description	Type				PF
Present Reading					
Previous Reading					
Difference					
Meter Constant					
Consumption					
Loss/Add Consumption					
Net Consumption					

D.B.I.T. Kumbalgodu, Bangalore

TOD meter readings for meter ID ---------

Time Zone	Name of the Zone	Present Readings	Previous Readings	Consumption	MD Reading
06:00 Hrs to 10:00 Hrs	Morning Peak				
10:00 Hrs to 18:00 Hrs	Normal				
18:00 Hrs to 22:00 Hrs	On Peak				
22:00 Hrs to 06:00 Hrs	Off Peak				

Details for NEFT/RTGS
This Bill Payment Only
Beneficiary Name : BESCOM
Account Number : 2363068000
Bank Name : Bank of India
Branch : Cantonment
IFSC : BKID0SSCOM
Amount : 356267.00

Your Detailed Bill Description	Amount (Rs.)
Demand Charges 170.00 KVA at Rs220.00 per kVA	37,400.00
Energy Charges: First 36,016.00 kWh at Rs6.10 per kWh	291,729.60
Fuel Cost Adjustment Charges: 36,016.00 KWH at Rs0.06 per KWH	2,581.28
Interest on Revenue	0.00
Interest on Tax	0.00
Tax	25755.86
Current Bill Amount	356466.54
Arrears	0.00
Bill Correction	0.00
Bill rounding adjustment	0.46
Net Payable Amount	356267.00

Rupees Three Lakh Fifty-Eight Thousand Two Hundred Sixty-Seven Only

Sd/-
Assistant Executive Engineer (Ele.)

1 As per KERC's guidelines, depending on your consumption for the previous calendar year, Additional Security Deposit of amount Rs.05760 is demanded. Please pay at the earliest for uninterrupted service.

2 For any billing clarification call 1912 / contact Sub- Division.

4/1/2021

Head of the Department
Dept. of Electrical & Electronics Engg
Bosco Institute of Technology

Bangalore Electricity Supply Company Limited
(Wholly Owned Government of Karnataka Undertaking)

BESCOM GSTN No: 29AACCB1412G1Z5

Office of the Asst. Executive Engineer (Ele.), C, O&M Sub-division - K1 KENGERI

RR No.	Account ID	Bill No.	Billing Period	Bill Date	Due Date	Disconnection Date
2363068645 (W7HT15)	2363068000	2363079980227	01-11-2020 - 01-12-2020	01-12-2020	15-12-2020	31-12-2020

Name & Address:	Type	Educational Institutions - HT2C	Wheeling Energy	0
WAYANMAC EDUCATION TRUST EDUCATIONAL INSTITUTIONPVT AAATW0544M KUMBALGODU, KAR	Tariff	1HT2C2	High Cost Energy	
	Contract Demand(KVA)	200	Special Energy	
	85% of CD (KVA)	170	Base Consumption	
	Recorded Demand (KVA)	68	Power Cut	
	Billing Demand (KVA)	170	Energy Entitlement	
			Demand Entitlement	

Description	Date	Time	Present Reading	Previous Reading	MD Reading	PF
Present Reading	01-12-2020	10:00:00	0	44	5.54	
Previous Reading	01-11-2020	10:00:00	0			
Difference			0	44		
Meter Constant			200	200		
Consumption			0	80		
Less/PNG Consumption			0	0		
Net Consumption			0	80	5.54	

D.B.I.T. Date 4/12/20 Sl. No. 5

100 meter readings for meter ID xxxxxxx

Time Zone	Name of the Zone	Present Readings	Previous Readings	Consumption	MD Reading
06:00 Hrs to 10:00 Hrs	Morning Peak	0	0	0	0
10:00 Hrs to 18:00 Hrs	Normal	0	0	0	0
18:00 Hrs to 22:00 Hrs	On Peak	0	0	0	0
22:00 Hrs to 06:00 Hrs	Off Peak	0	0	0	0

Details for NEFT/RTGS
This Bill Payment Only.
Beneficiary Name : BESCOM
Account Number : 2363068000
Bank Name : Bank of India
Branch : Cantonment
IFSC : BKID0008SCOM
Amount : 288787.00

Your Detailed Bill Description	Amount (Rs.)
Demand Charges: 170.00 KVA at Rs220.30 per KVA	37,400.00
Energy Charges: First 26,122.00 kWh at Rs6.10 per kWh	227,288.20
Fuel Cost Adjustment Charges: 26,122.00 KWH at Rs0.38 per KWH	4,496.53
Interest on Revenue	0.00
Interest on Tax	0.00
Tax	20520.94
Current Bill Amount	290106.66
Arrears	0.00
Bill Correction	51550.00
Bill rounding adjustment	0.34
TOD on KID	4206.00
Interest on SD(MSD (KID)	-53024.00
Interest on MSD (KID)	-3854.00
Net Payable Amount	288787.00

Rupees Two Lakh Eighty-Eight Thousand Seven Hundred Fifty-Seven Only

Sd/-
Assistant Executive Engineer (Ele.)

1 As per KERC's guidelines, depending on your consumption for the previous calendar year, Additional Security Deposit of amount Rs.55700 is demanded.Please pay at the earliest for uninterrupted service.

Ek kopy

9/12/20

7/12/2020

Bangalore Electricity Supply Company Limited
(Wholly Owned Government of Karnataka Undertaking)

BESCOM GSTN No: **29AACCB1412G1Z5**

Office of the Asst. Executive Engineer (Ele.), C, O&M Sub-division - K1 KENGERI

RR No.	Account ID	Bill No.	Billing Period	Bill Date	Due Date	Disconnection Date
2363068645 (W7HT15)	2363068000	236303886972	01-10-2020 - 01-11-2020	01-11-2020	15-11-2020	01-12-2020

Name & Address:	Type	Educational Institutions - HT2C	Wheeling Energy	0
WAYANMAC EDUCATION TRUST EDUCATIONAL INSTITUTIONPVT AAATW0644M KUMBALGODU, KAR -	Tariff	3HT2C2	High Cost Energy	
	Contract Demand(KVA)	200	Special Energy	
	85% of CD (KVA)	170	Base Consumption	
	Recorded Demand (KVA)	95	Power Cut	
	Billing Demand (KVA)	170	Energy Entitlement Demand Entitlement	

Description	Date	KWH Meter	KVAH Meter	MD meter	PF
Present Reading	01-11-2020	96120.00	0	473	0.92
Previous Reading	01-10-2020	75884.4	0		
Difference		19235	0	473	
Meter Constant		200	200	200	
Consumption		20314	0	94.6	
Loss/Less Consumption		0	0		
Net Consumption		20314	0	94.6	0.92

TOD meter readings for meter ID

Time Zone	Name of the Zone	Present Readings	Previous Readings	Consumption	MD Reading
06:00 Hrs to 10:00 Hrs	Morning Peak	0	0	0	0
10:00 Hrs to 18:00 Hrs	Normal	0	0	0	0
18:00 Hrs to 22:00 Hrs	On Peak	0	0	0	0
22:00 Hrs to 06:00 Hrs	Off Peak	0	0	0	0

Details for NEFT/RTGS
This Bill Payment Only.
Beneficiary Name : BESCOM
Account Number : 2363068000
Bank Name : Bank of India
Branch : Cantonment
IFSC : BKID0BESCOM
Amount : 221378.00

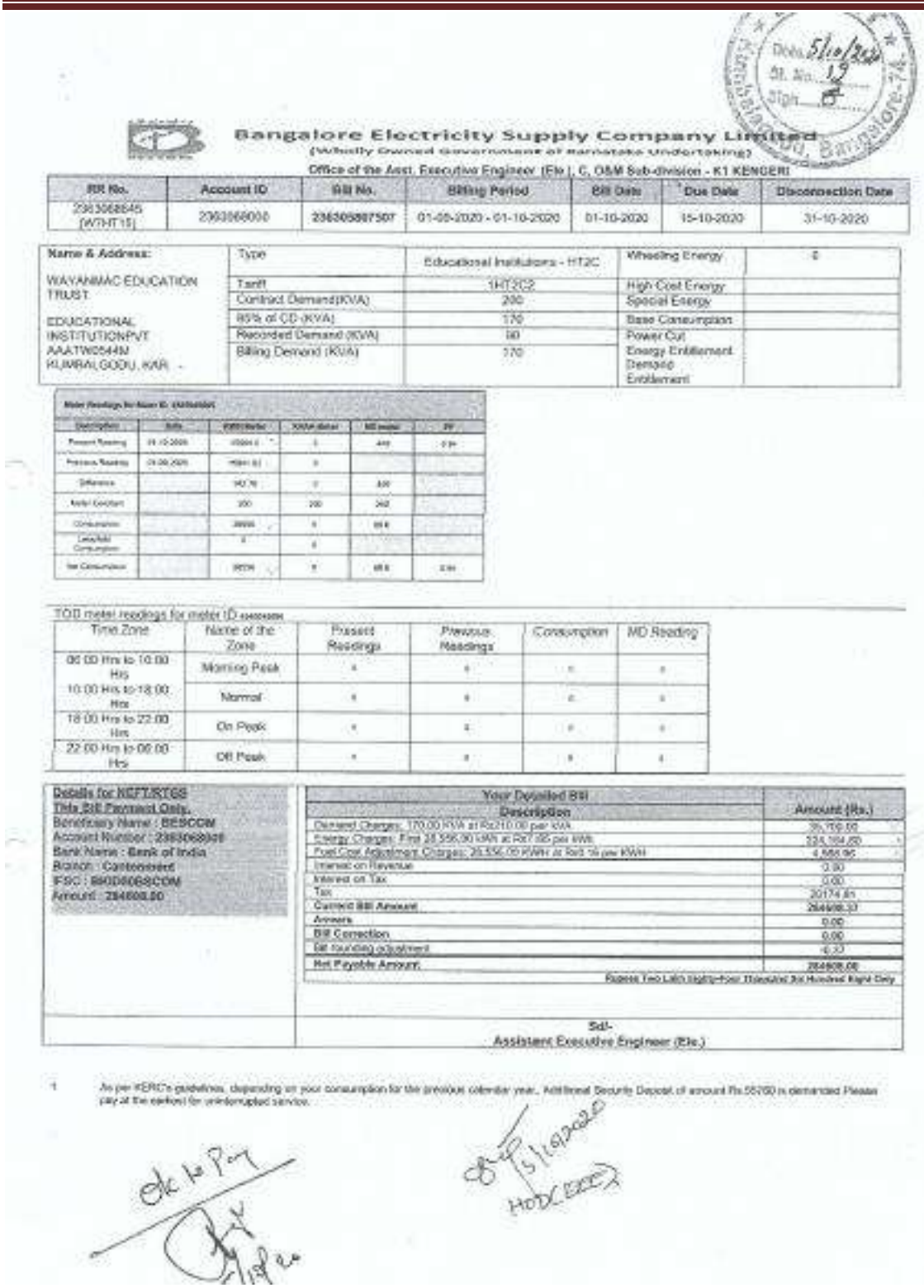
Your Detailed Bill Description	Amount (Rs.)
Demand Charges: 170.00 KVA at Rs210.00 per kVA	35,700.00
Energy Charges: First 27,210.00 kWh at Rs7.85 per kWh	213,648.50
Fuel Cost Adjustment Charges: 27,210.00 KWH at Rs0.16 per KWH	4,354.56
Interest on Revenue	0.00
Interest on Tax	0.00
Tax	19018.19
Current Bill Amount	**272920.25**
Arrears	0.00
Bill Correction	0.00
Bill rounding adjustment	-0.25
TDS on IOD	5720.00
Interest on SD/ASD (IOD)	-10635.00
Interest on MSD (IOD)	-3964.00
Net Payable Amount	**221378.00**

Rupees Two Lakh Twenty-One Thousand Three Hundred Seventy Eight Only

Sd/-
Assistant Executive Engineer (Ele.)

1 As per KERC's guidelines, depending on your consumption for the previous calendar year, Additional Security Deposit of amount Rs.55760 is demanded.Please pay at the earliest for uninterrupted service.

PRINCIPAL
Don Bosco Institute of Technology
Kumbalagodu, Mysore Road
Bangalore - 560 074



Bangalore Electricity Supply Company Limited
(Wholly Owned Government of Karnataka Undertaking)
Office of the Asst. Executive Engineer (Ele.), C, O&M Sub-division - K1 KENGERI

RR No.	Account ID	Bill No.	Billing Period	Bill Date	Due Date	Disconnection Date
2363068645 (W/HT 15)	2363068000	236305887507	01-09-2020 - 01-10-2020	01-10-2020	15-10-2020	31-10-2020

Name & Address:	Type	Educational Institutions - HT2C	Wheeling Energy	0
WAYANMAC EDUCATION TRUST EDUCATIONAL INSTITUTIONPVT AAATW0544N KUMBALGODU, KAR -	Tariff	1HT2C2	High Cost Energy	
	Contract Demand(KVA)	200	Special Energy	
	85% of CD (KVA)	170	Base Consumption	
	Recorded Demand (KVA)	90	Power Cut	
	Billing Demand (KVA)	170	Energy Entitlement	
			Demand Entitlement	

Description	Date	KWH Meter	KVAH Meter	MD reading	PF
Present Reading	01-10-2020	0	0	0	0.00
Previous Reading	01-09-2020	0	0		
Difference		0	0	0	
Meter Constant		200	200	240	
Consumption		0	0	0.0	
Less/Add Consumption		0	0		
Net Consumption		0	0	0.0	0.00

TOD meter readings for meter ID

Time Zone	Name of the Zone	Present Readings	Previous Readings	Consumption	MD Reading
06:00 Hrs to 10:00 Hrs	Morning Peak	0	0	0	0
10:00 Hrs to 18:00 Hrs	Normal	0	0	0	0
18:00 Hrs to 22:00 Hrs	On Peak	0	0	0	0
22:00 Hrs to 06:00 Hrs	Off Peak	0	0	0	0

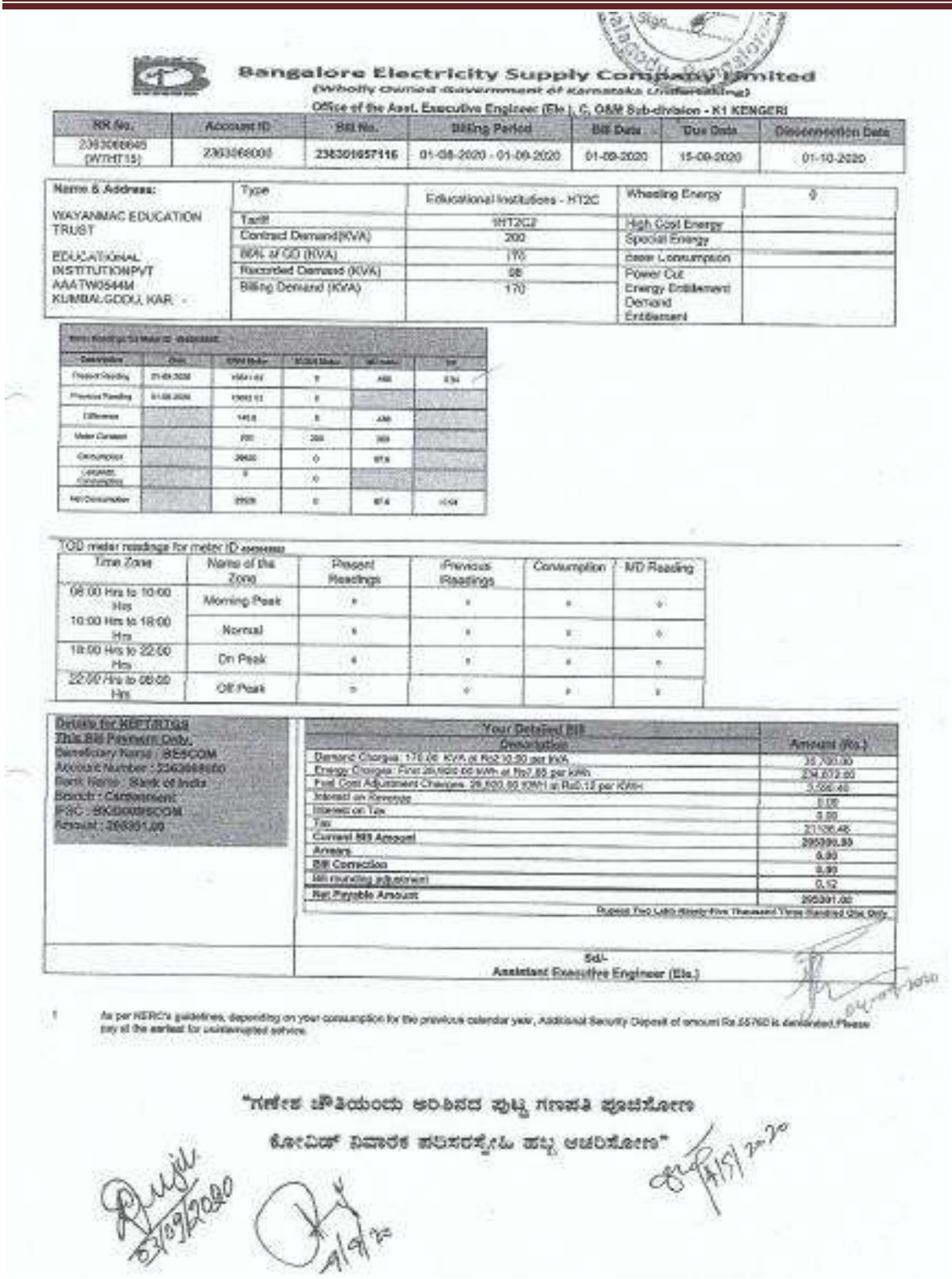
Details for NEFT/RTGS
This Bill Payment Only.
Beneficiary Name : BESCOM
Account Number : 2363068000
Bank Name : Bank of India
Branch : Cottonpet
IFSC : BKID0008COM
Amount : 284608.00

Your Detailed Bill	
Description	Amount (Rs.)
Demand Charges: 170.00 KVA at Rs.210.00 per KVA	35,700.00
Energy Charges: First 28,556.00 KWh at Rs7.85 per KWh	224,164.60
Fuel Cost Adjustment Charges: 28,556.00 KWh at Rs0.16 per KWH	4,568.96
Interest on Revenue	0.00
Interest on Tax	0.00
Tax	20174.81
Current Bill Amount	284608.37
Arrears	0.00
Bill Correction	0.00
Bill rounding adjustment	-0.37
Net Payable Amount	284608.00

Rupees Two Lakh Eighty-Four Thousand Six Hundred Eight Only

Sd/-
Assistant Executive Engineer (Ele.)

1 As per KERC's guidelines, depending on your consumption for the previous calendar year, Additional Security Deposit of amount Rs.55700 is demanded. Please pay at the earliest for uninterrupted service.



Bangalore Electricity Supply Company Limited
(Wholly owned Government of Karnataka Undertaking)
Office of the Asst. Executive Engineer (Ele.), C, O&M Sub-division - K1 KENGERI

RR No.	Account ID	Bill No.	Billing Period	Bill Date	Due Date	Disconnection Date
2363068040 (WTHT15)	2363068000	236301657116	01-08-2020 - 01-09-2020	01-09-2020	15-09-2020	01-10-2020

Name & Address:	Type	Educational Institutions - HT2C	Wheeling Energy	0
WAYANMAC EDUCATION TRUST EDUCATIONAL INSTITUTIONPVT AAATW0544M KUMBALGODU, KAR. -	Tariff	WT2G2	High Cost Energy	
	Contract Demand(KVA)	200	Special Energy	
	66% of CD (KVA)	170	ctase Consumption	
	Recorded Demand (KVA)	98	Power Cut	
	Billing Demand (KVA)	170	Energy Entitlement Demand Entitlement	

Description	Date	KWH Meter	KVAH Meter	MD Meter	PF
Present Reading	31-08-2020	14541.62	0	488	0.94
Previous Reading	01-08-2020	13082.62	0		
Difference		1459	0	488	
Meter Constant		200	200	200	
Consumption		29600	0	97.6	
Unbilled Consumption		0	0		
Net Consumption		29600	0	97.6	0.94

TOD meter readings for metric ID [illegible]

Time Zone	Name of the Zone	Present Readings	Previous Readings	Consumption	MD Reading
06:00 Hrs to 10:00 Hrs	Morning Peak	0	0	0	0
10:00 Hrs to 18:00 Hrs	Normal	0	0	0	0
18:00 Hrs to 22:00 Hrs	On Peak	0	0	0	0
22:00 Hrs to 06:00 Hrs	Off Peak	0	0	0	0

Details for NEFT/RTGS
This Bill Payment Only.
Beneficiary Name : BESCOM
Account Number : 2363068000
Bank Name : Bank of India
Branch : Cantonment
IFSC : BKID0008SCOM
Amount : 295301.00

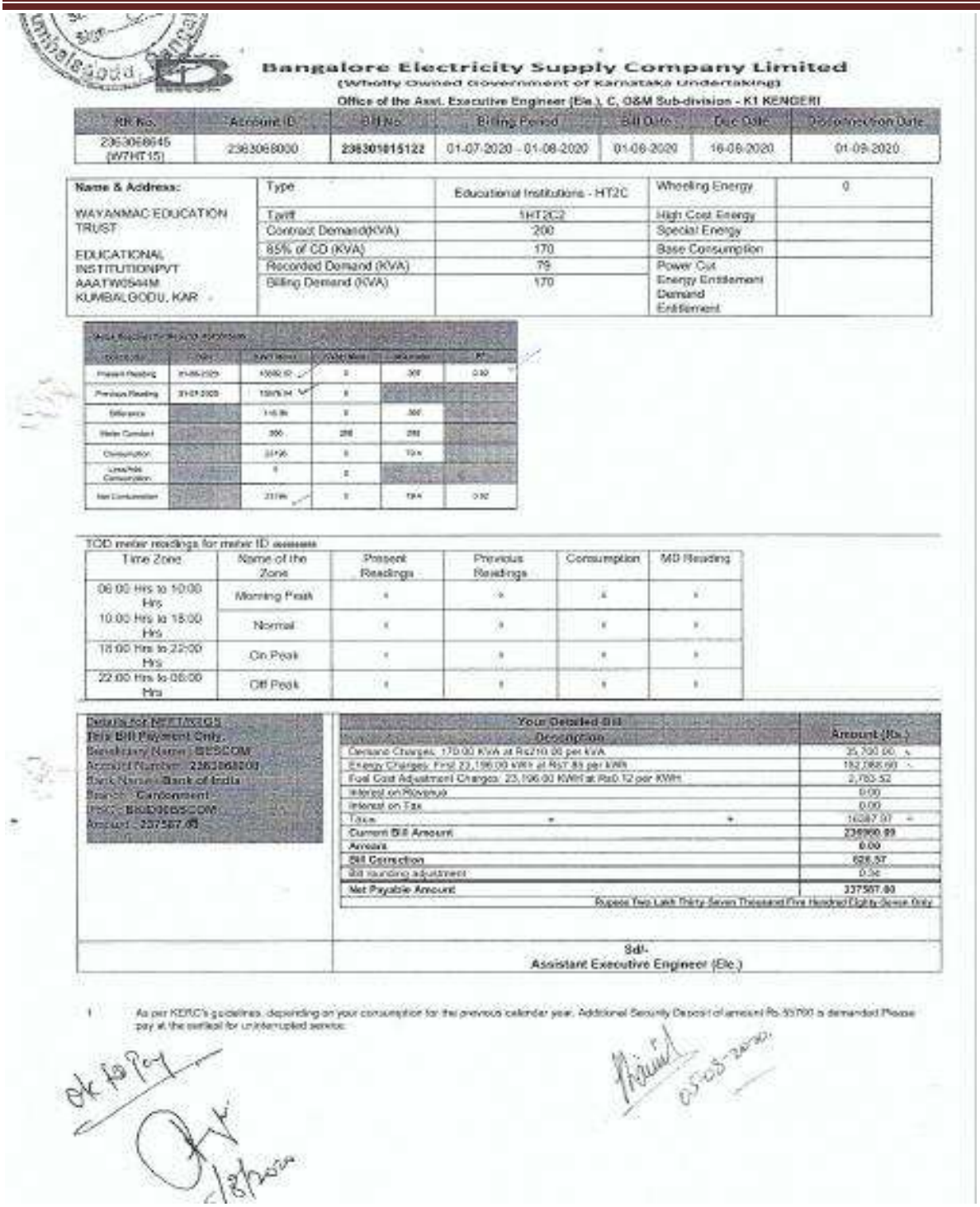
Your Detailed Bill Description	Amount (Rs.)
Demand Charges: 170.00 KVA at Rs2,100.00 per KVA	35,700.00
Energy Charges: First 29,600.00 kWh at Rs7.85 per kWh	234,872.00
Fuel Cost Adjustment Charges: 29,600.00 KWH at Rs0.12 per KWH	3,696.48
Interest on Revenue	0.00
Interest on Tax	0.00
Tax	21,126.45
Current Bill Amount	295301.93
Arrears	0.00
Bill Correction	0.00
Bill rounding adjustment	0.12
Net Payable Amount	295301.00

Rupees Two Lakh Ninety Five Thousand Three Hundred One Only.

Sd/-
Assistant Executive Engineer (Ele.)

1 As per KERC's guidelines, depending on your consumption for the previous calendar year, Additional Security Deposit of amount Rs.55760 is demanded.Please pay at the earliest for uninterrupted service.

"ಗಣೇಶ ಚೌತಿಯಂದು ಅರಿಶಿನದ ಪುಟ್ಟ ಗಣಪತಿ ಪೂಜಿಸೋಣ
ಕೋವಿಡ್ ನಿವಾರಕ ಹಸಿರನ್ನೆಸೋಣ ಪುಟ್ಟ ಆಚರಿಸೋಣ"



Bangalore Electricity Supply Company Limited
(Wholly Owned Government of Karnataka Undertaking)
Office of the Asst. Executive Engineer (Ele.), C, O&M Sub-division - K1 KENGERI

RR No.	Account ID	Bill No	Billing Period	Bill Date	Due Date	Disconnection Date
2363068645 (W7HT15)	2363068000	236301815122	01-07-2020 - 01-08-2020	01-08-2020	16-08-2020	01-09-2020

Name & Address:	Type	Educational Institutions - HT2C	Wheeling Energy	0
WAYANMAC EDUCATION TRUST EDUCATIONAL INSTITUTIONPVT AAATW0544M KUMBALGODU, KAR	Tariff	1HT2C-2	High Cost Energy	
	Contract Demand(KVA)	200	Special Energy	
	85% of CD (KVA)	170	Base Consumption	
	Recorded Demand (KVA)	79	Power Cut Energy Entitlement	
	Billing Demand (KVA)	170	Demand Entitlement	

Description	Date	Current Meter	Old Meter	Multiplier	MF
Present Reading	01-08-2020	43660.80	0	300	0.80
Previous Reading	31-07-2020	43075.84	0		
Difference		115.96	0	300	
Meter Constant		300	200	200	
Consumption		23196	0	72k	
Loss/Pilfe Consumption		0	0		
Net Consumption		23196	0	72k	0.80

TOD meter readings for meter ID xxxxxxxx

Time Zone	Name of the Zone	Present Readings	Previous Readings	Consumption	MD Reading
06:00 Hrs to 10:00 Hrs	Morning Peak	x	x	x	x
10:00 Hrs to 18:00 Hrs	Normal	x	x	x	x
18:00 Hrs to 22:00 Hrs	On Peak	x	x	x	x
22:00 Hrs to 06:00 Hrs	Off Peak	x	x	x	x

Details for NTTDCCS
Bills Bill Payment Only.
Beneficiary Name : BESCOM
Account Number : 236306800
Bank Name : Bank of India
Branch : Cantonment
IFSC : BKID0006SCOM
Amount : 237507.00

Your Detailed Bill Description	Amount (Rs.)
Demand Charges: 170.00 KVA at Rs210.00 per KVA	35,700.00
Energy Charges: First 23,196.00 KWH at Rs7.85 per KWH	182,088.60
Fuel Cost Adjustment Charges: 23,196.00 KWH at Rs0.12 per KWH	2,783.52
Interest on Revenue	0.00
Interest on Tax	0.00
Taxes + +	16287.97
Current Bill Amount	236960.09
Arrears	0.00
Bill Correction	626.57
Bill rounding adjustment	0.34
Net Payable Amount	237507.00

Rupees Two Lakh Thirty Seven Thousand Five Hundred Eight by Seven Only

Sd/-
Assistant Executive Engineer (Ele.)

1 As per KERC's guidelines, depending on your consumption for the previous calendar year, Additional Security Deposit of amount Rs.55700 is demanded Please pay at the earliest for uninterrupted service.

Date 6/7/20
Sl. No. 05
Sign

Bangalore Electricity Supply Company Limited

(Wholly Owned Government of Karnataka Undertaking)

Office of the Asst. Executive Engineer (Ele.), C, O&M Sub-division - K1 KENGERI

RR No.	Account ID	Bill No.	Billing Period	Bill Date	Due Date	Disconnection Date
2363069945 (WH1T15)	2363068000	2363067762979	01-06-2020 - 01-07-2020	01-07-2020	16-07-2020	31-07-2020

Name & Address:	Type	Educational Institutions - HT2C	Wheeling Energy	0
WAYANMAC EDUCATION TRUST EDUCATIONAL INSTITUTIONPVT AAATW0544M KUMBALGODU, KAR	Tariff	1HT2C2	High Cost Energy	
	Contract Demand(KVA)	200	Special Energy	
	85% of CD (KVA)	170	Base Consumption	
	Recorded Demand (KVA)	75	Power Cut Energy Entitlement	
	Billing Demand (KVA)	170	Demand Entitlement	

Description	Date				
Present Reading	01-07-2020		0	367	0.91
Previous Reading	01-06-2020		0		
Difference			0	367	
Meter Constant		200	200	200	
Consumption		25562	0	764	
Less/Add Disc/Conn		0	0		
Net Consumption		25562	0	764	0.91

TOD meter readings for meter ID xxxxxxx

Time Zone	Name of the Zone	Present Readings	Previous Readings	Consumption	MD Reading
06:00 Hrs to 10:00 Hrs	Morning Peak	0	0	0	0
10:00 Hrs to 18:00 Hrs	Normal	0	0	0	0
18:00 Hrs to 22:00 Hrs	On Peak	0	0	0	0
22:00 Hrs to 06:00 Hrs	Off Peak	0	0	0	0

Details for NEFT/RTGS
This Bill Payment Only
Beneficiary Name : BESCOM
Account Number : 2363068000
Bank Name : Bank of India
Branch : Cantonment
IFSC : BKID0005COM
Amount : 251184.00

Your Detailed Bill Description	Amount (Rs.)
Demand Charges 170.00 KVA at Rs210.00 per KVA	35,700.00
Energy Charges First 25,562.00 kWh at Rs7.85 per kWh	198,858.20
Fuel Cost Adjustment Charges 25,562.00 KWH at Rs0.12 per KWH	3,069.24
Interest on Revenue	0.00
Interest on Tax	0.00
Tax	17,690.24
Current Bill Amount	253083.68
Arrears	0.00
Bill Correction	0.00
Bill rounding adjustment	0.03
CD/ND10-Prompt Payment Incentive -June	-1253.14
Prompt Payment Incentive	-626.57
Net Payable Amount	251184.00

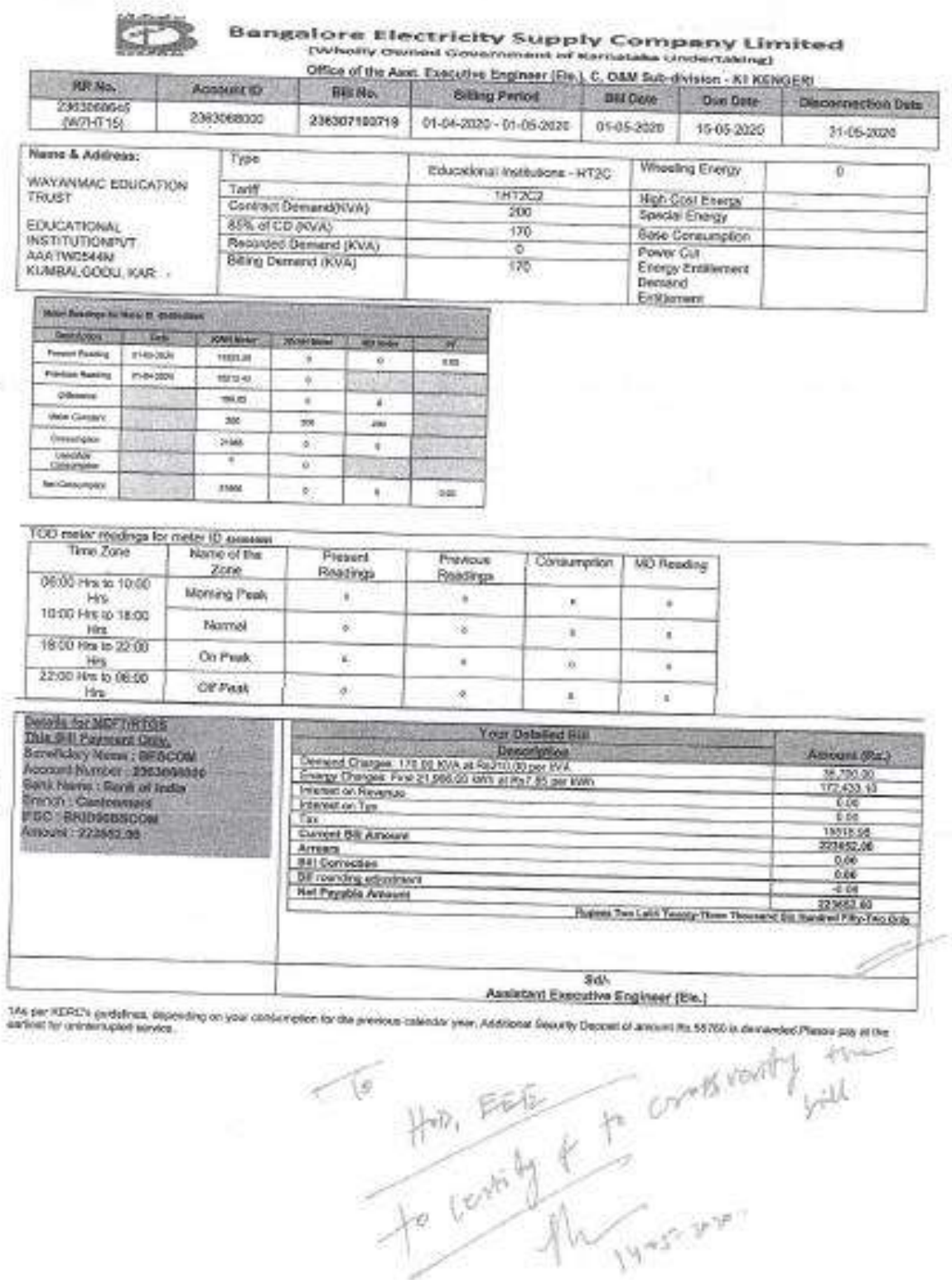
Rupees Two Lakh Fifty-One Thousand One Hundred Eighty Four Only

Sd/-
Assistant Executive Engineer (Ele.)

1 As per KERC's guidelines, depending on your consumption for the previous calendar year, Additional Security Deposit of amount Rs 55700 is demanded. Please pay at the earliest for uninterrupted service.

8/7/2020 (SDE).

7/2020



Bangalore Electricity Supply Company Limited
(Wholly Owned Government of Karnataka Undertaking)
Office of the Asst. Executive Engineer (Ele.) C. O&M Sub-division - KI KENGERI

RR No.	Account ID	Bill No.	Billing Period	Bill Date	Due Date	Disconnection Date
2363068000 (W7HT15)	2363068000	236307193719	01-04-2020 - 01-05-2020	01-05-2020	15-05-2020	31-05-2020

Name & Address:	Type	Educational Institutions - HT2C	Wheeling Energy	0
WAYANMAC EDUCATION TRUST EDUCATIONAL INSTITUTIONPVT AAATW0544M KUMBALGODU, KAR	Tariff	1HT2C2	High Cost Energy	
	Contract Demand(KVA)	200	Special Energy	
	85% of CD (KVA)	170	Base Consumption	
	Recorded Demand (KVA)	0	Power Cut Energy Entitlement	
	Billing Demand (KVA)	170	Demand Entitlement	

Description	Date	KWH Meter	KVAH Meter	MD Meter	PF
Present Reading	01-05-2020	19923.00	0	0	0.00
Previous Reading	01-04-2020	19216.43	0	0	
Difference		706.57	0	0	
Meter Constant		300	300	200	
Consumption		21968	0	0	
Used kVAh Consumption		0	0		
Net Consumption		21968	0	0	0.00

TOD meter readings for meter ID [redacted]

Time Zone	Name of the Zone	Present Readings	Previous Readings	Consumption	MD Reading
06:00 Hrs to 10:00 Hrs	Morning Peak	0	0	0	0
10:00 Hrs to 18:00 Hrs	Normal	0	0	0	0
18:00 Hrs to 22:00 Hrs	On Peak	0	0	0	0
22:00 Hrs to 06:00 Hrs	Off Peak	0	0	0	0

Details for NEFT/RTGS
This Bill Payment Only.
Beneficiary Name : BESCOM
Account Number : [redacted]
Bank Name : Bank of India
Branch : Cantonment
IFSC : BKID0BESCOM
Amount : 223652.00

Your Detailed Bill

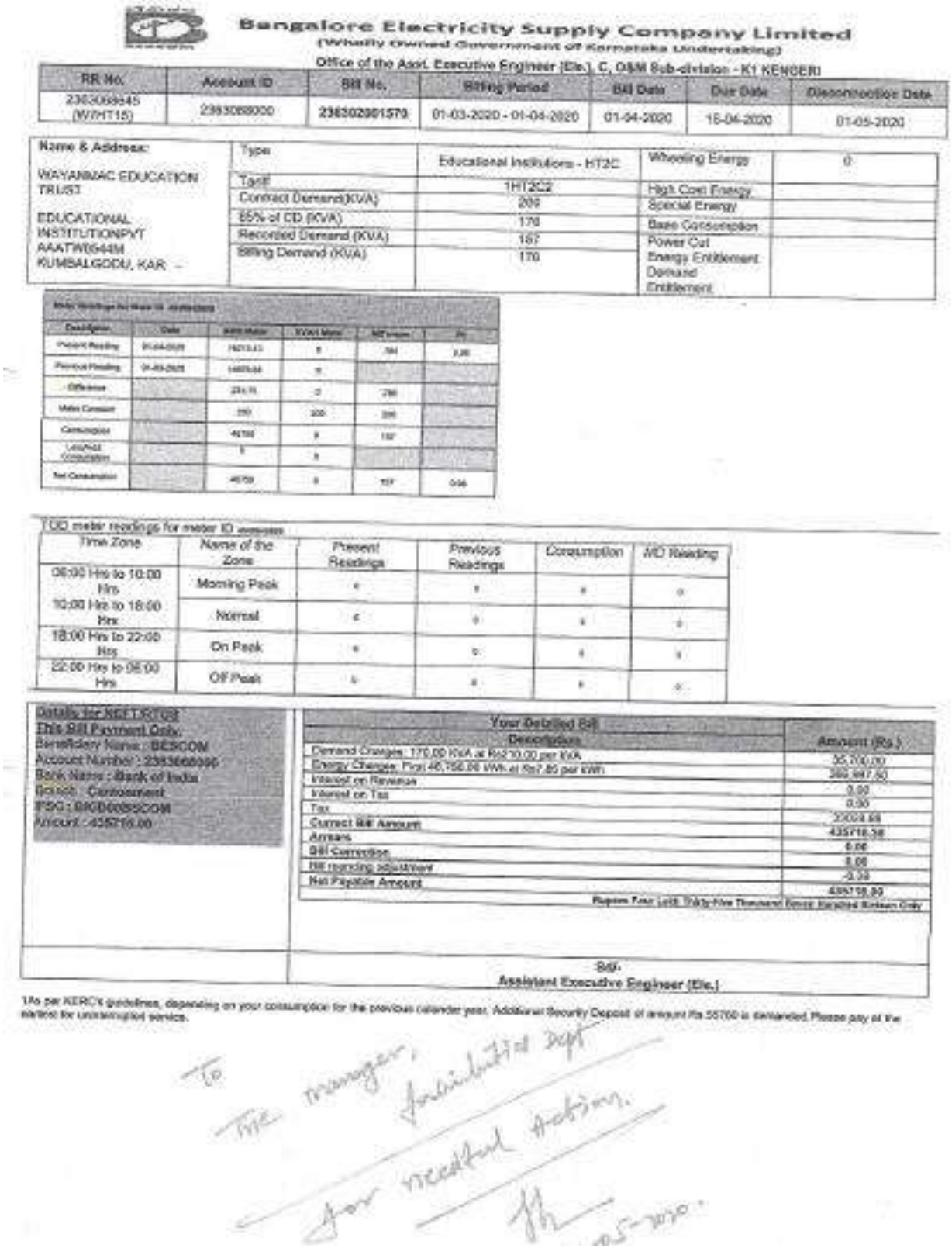
Description	Amount (Rs.)
Demand Charges 170.00 KVA at Rs.210.00 per KVA	35,700.00
Energy Charges: First 21,968.00 kWh at Rs.7.85 per kWh	172,423.48
Interest on Revenue	0.00
Interest on Tax	0.00
Current Bill Amount	19515.96
Arrears	223652.00
Bill Corrections	0.00
Bill rounding adjustment	0.00
Net Payable Amount	-0.04
	223652.00

Rupees Two Lakh Twenty-Three Thousand Six Hundred Fifty-Two Only

Sd\-
Assistant Executive Engineer (Ele.)

As per KERC's guidelines, depending on your consumption for the previous calendar year, Additional Security Deposit of amount Rs.55700 is demanded.Please pay at the earliest for uninterrupted service.

To
Hon, EE
to certify & to consolidate the bill
14-05-2020



Bangalore Electricity Supply Company Limited
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Office of the Asst. Executive Engineer (Ele.), C, O&M Sub-division - K1 KENGERI

RR No.	Account ID	Bill No.	Billing Period	Bill Date	Due Date	Disconnection Date
2383088645 (W/HT15)	2383088000	236302001570	01-03-2020 - 01-04-2020	01-04-2020	16-04-2020	01-05-2020

Name & Address:	Type	Educational Institutions - HT2C	Wheeling Energy	0
WAYANADAC EDUCATION TRUST EDUCATIONAL INSTITUTIONPVT AAATW0644M KUMBALGODU, KAR	Tariff	1HT2C2	High Cost Energy	
	Contract Demand(KVA)	200	Special Energy	
	85% of CD (KVA)	170	Base Consumption	
	Recorded Demand (KVA)	167	Power Cut Energy Entitlement	
	Billing Demand (KVA)	170	Demand Entitlement	

Description	Date				
Present Reading					
Previous Reading					
Difference					
Meter Constant					
Consumption					
Less/Add Corrections					
Net Consumption					

TOD meter readings for meter ID

Time Zone	Name of the Zone	Present Readings	Previous Readings	Consumption	MD Reading
06:00 Hrs to 10:00 Hrs	Morning Peak				
10:00 Hrs to 18:00 Hrs	Normal				
18:00 Hrs to 22:00 Hrs	On Peak				
22:00 Hrs to 06:00 Hrs	Off Peak				

Details for NEFT/RTGS
This Bill Payment Only.
Beneficiary Name : BESCOM
Account Number : 2383088000
Bank Name : Bank of India
Branch : Cantonment
IFSC : BKID0008SCOM
Amount : 435718.00

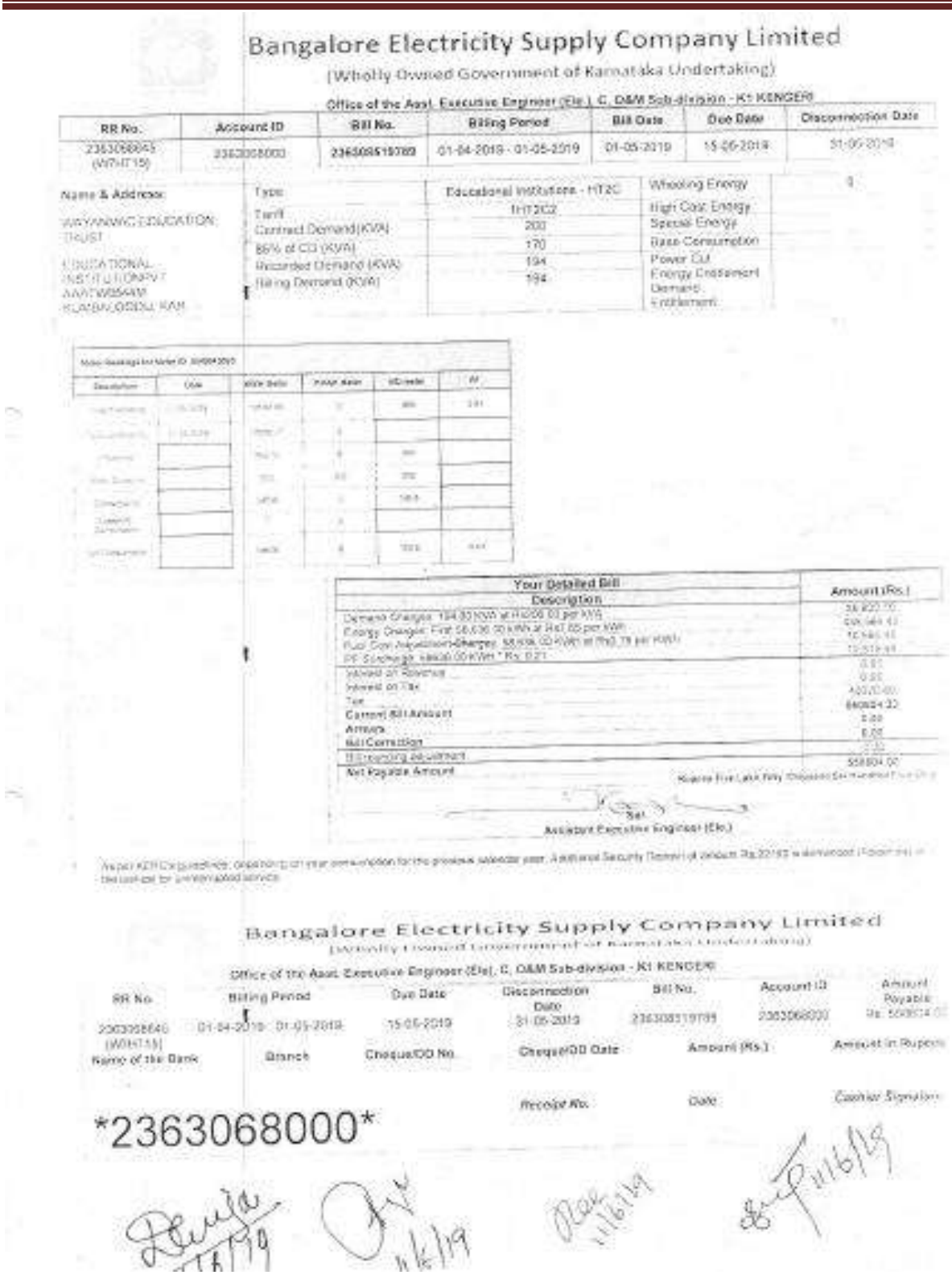
Your Debited Bill	
Description	Amount (Rs.)
Demand Charges: 170.00 KVA at Rs230.00 per KVA	39,100.00
Energy Charges: First 46,756.00 kWh at Rs7.85 per kWh	366,997.50
Interest on Revenue	0.00
Interest on Tax	0.00
Tax	2000.88
Current Bill Amount	435718.38
Arrears	0.00
Bill Correction	0.00
Bill rounding adjustment	-0.38
Net Payable Amount	435718.00

Rupees Four Lakh Thirty-five Thousand Seven Hundred Eighteen Only

Sd/-
Assistant Executive Engineer (Ele.)

1As per KERC's guidelines, depending on your consumption for the previous calender year. Additional Security Deposit of amount Rs 55700 is demanded. Please pay at the earliest for uninterrupted service.

To
The manager,
Audit & Inspection Dept
for needful action.
05-2020.



Bangalore Electricity Supply Company Limited

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Office of the Asst. Executive Engineer (Ele.), C, O&M Sub-division - K1 KENGERI

RR No.	Account ID	Bill No.	Billing Period	Bill Date	Due Date	Disconnection Date
2363068643 (WHIT15)	2363068000	2363085119789	01-04-2019 - 01-05-2019	01-05-2019	15-05-2019	31-05-2019

Name & Address:

MAYANMC EDUCATION TRUST

EDUCATIONAL INSTITUTIONPVT AAATM9554M KUMBALGODU, KAR

Type	Educational Institutions - HT2C
Tariff	HT2C2
Contract Demand (KVA)	200
85% of CD (KVA)	170
Recorded Demand (KVA)	194
Billing Demand (KVA)	194

Wheeling Energy	
High Cost Energy	
Special Energy	
Base Consumption	
Power Cut Energy Entitlement	
Demand Entitlement	

Your Detailed Bill	
Description	Amount (Rs.)
Demand Charges: 194.00 KVA at Rs.200.00 per KVA	38,800.00
Energy Charges: First 58,636.00 kWh at Rs.7.60 per kWh	445,543.60
Fuel Cost Adjustment Charges: 58,636.00 kWh at Rs0.78 per kWh	45,736.08
PF Surcharge: 14636.00 kWh * Rs. 0.21	3,071.56
Interest on Advance	0.00
Interest on Tax	0.00
Tax	69,824.32
Current Bill Amount	0.00
Arrears	0.00
Bill Correction	0.00
Rounding adjustment	0.04
Net Payable Amount	558804.00

Assistant Executive Engineer (Ele.)

Bangalore Electricity Supply Company Limited

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RR No.	Billing Period	Due Date	Disconnection Date	Bill No.	Account ID	Amount Payable
2363068643 (WHIT15)	01-04-2019 - 01-05-2019	15-05-2019	31-05-2019	2363085119789	2363068000	Rs. 558804.00

Name of the Bank	Branch	Cheque/DD No.	Cheque/DD Date	Amount (Rs.)	Amount in Rupees

Receipt No. Date Cashier Signature

2363068000
