

### 7.1.2 Facilities and initiatives of Green, Water and Energy

## ***1. Alternate source of energy and energy conservation measures***

### **SOLAR ENERGY**

- ❖ Catalyst College, Patna has well equipped solar panels installed on the roof-top of its campus buildings. These panels ensure that some parts of the college run entirely on solar power, thus saving electricity.
- ❖ The first solar panel 5 KVA (Off Grid) was installed in 2018 on the college building, followed by one more 5 KVA (Off Grid) in 2019 on the college building too. Both solar panels are used for supplying electricity to class rooms LED Bulbs and Fans, apart from that college canteen's equipment such coffee machine, hot water and Induction cooktop.
- ❖ Both panels installed in 2018 and 2019 respectively on College building by generating around 10kWh power per day. Both panels was purchased by ARCON DEVELOPERS PATNA.
- ❖ Both panels had become functional over the years and maintained by ARCON DEVELOPERS PATNA in annual basis.
- ❖ In the year 2022, college purchased a solar panel of 10 KVA from ADITY RENEWAL Company, PATNA in On Grid basis for making relaxation in overall electricity billing.

#### • **Year – wise Solar Power Generation:**

<b>Year</b>	<b>Inverter-1</b>	<b>Inverter-2</b>
2023	4835 kWh	4245 kWh
2022	4243 kWh	3997 kWh
2021	1023 kWh	998 kWh
2020	922 kWh	766 kWh
2019	3019 kWh	2889 kWh
2018	2988 kWh	2247 kWh

**Taking an average of the solar power generation in year 2020:**

<b>Yearly generation</b>	<b>Monthly</b>	<b>Daily</b>
4835 + 4245 = 9080 kWh	9080/12=756 kWh	756/30=25.2 kWh

- **Year 2022-2023 Inverter Readings (Inverter-1):**

The last reading for the solar power plants was taken in June 2023.

	<b>Inverter-1 Readings</b>
<b>Month-Year</b>	<b>Solar Power Generated (units)</b>
July 2022	30,251
August 2022	25,566
September 2022	29,526
October 2022	23,456
November 2022	Reading unavailable
December 2022	Reading unavailable
January 2023	14,922
February 2023	15,223
March 2023	19,882
April 2023	26,784
May 2023	28,899
June 2023	31,052
<b>Total(2022-23)</b>	<b>2,45,561 units</b>



Solar Panel (OFF GRID)

## **USE OF LED BULBS/ POWER EFFICIENT EQUIPMENT**

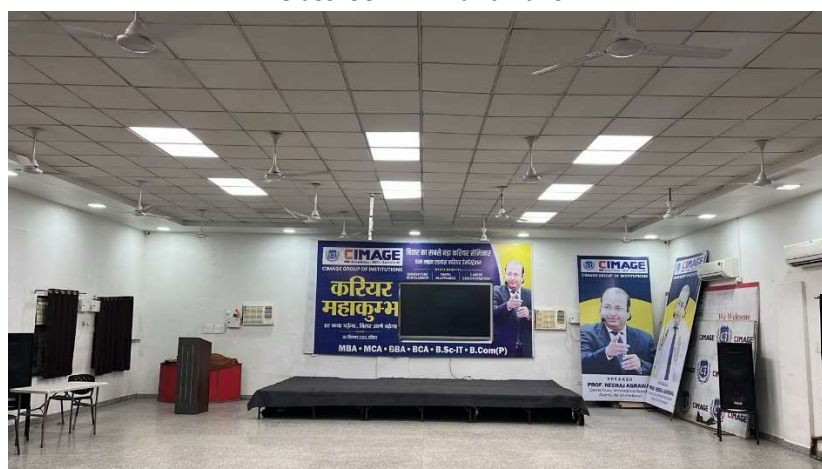
- ❖ Over the past few years, the college management has taken a conscious decision to replace existing lights and lighting equipment by LED source. Dedicated efforts have been made every year with a sizeable amount being spent on buying and fitting LED lamps and tube lights across the college premises. LED spotlights have been used to light up the class rooms, wash rooms, and other areas in college premises.
- ❖ Old fans and other electrical equipment have been regularly repaired and/or replaced with newer, energy-efficient ones. Heavy equipment like water pumps are regularly serviced and maintained to keep them functioning optimally.



Classroom LED and Fans



Classroom LED and Fans



LED Bulbs, Fans and Sound System (Hall)



LED Bulbs and Fan (Reception Area)



Water submersible motor Auto Cut Switch



Auto Cut Switch





Auto Cut Switch

 **Memorandum of Understanding**   
Between  
**Catalyst College, Patna**  
And  
**Ayan Enterprises, Patna**

Ayan Enterprises, 21A, Sultanganj, Mahendru Patna – 800006, Bihar, will facilitate to Catalyst College, Plot Nos: 16, 10 & 11 Patliputra Industrial Area, Patna - 800130, Bihar for the following:

01. Regularly Company shall visit the institution for training and placement of the Final Year students. The college shall provide IT infrastructure, classroom, Internet & Stationery and consumables for such Placement drives.
02. Facilitate the students to carry out their Trainings, Projects work in various IT Trends & Cyber Security environment.
03. Delivery of IT related experts lecture and sharing of IT, Software, Social Media related knowledge to the college students, teachers and staffs.
04. Organizing of seminar/workshop/awareness programme at the college as per mutual understanding with college.
05. Both parties have agreed to participate in Active Research, provide internship, provide Projects to your teachers and students of the college.
06. Ayan Enterprises shall empower students on various aspects which need to make them a true IT Professional.
07. Annual Maintenance Contracts of IT Infrastructure and Equipment's as per approved AMC Annexure I

In continuation of above, any other areas of co-operation that may emerge from time to time would be taken into consideration with mutual consent. This understanding will be reviewed every 3 years with effect from undersign and will revised in case necessity of mutual parties.

It is agreed between parties that whatever information is shared between the two parties, shall be treated as strictly confidential.

Signed and Agreed Between (both parties)

<b>Catalyst College</b> Principal <b>CATALYST COLLEGE</b> Plot No.- C 18(B) Patliputra Industrial Area, Patliputra, Patna-13 Principal (Seal & Sign) Address: Catalyst College, Plot Nos: 16, 10 & 11 Patliputra Industrial Area, Patna - 800130 Date: 09/08/2021	<b>Ayan Enterprises</b> Proprietor (Seal & Sign) Address: 21A, Sultanganj, Mahendru Patna – 800006, Bihar
--	--

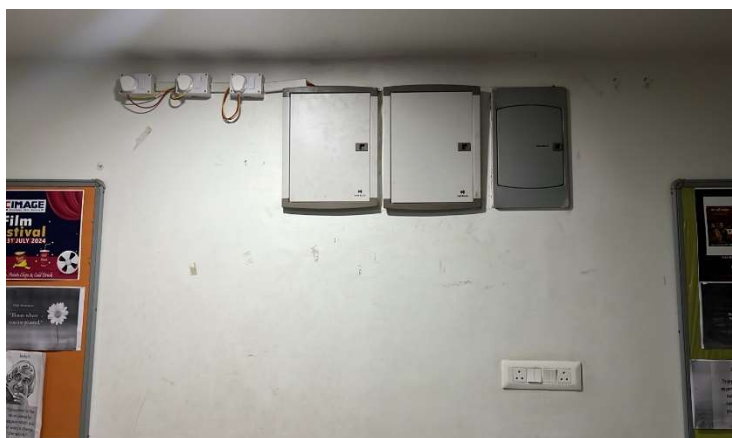
## ELECTRICAL MAPPING OF CLASSROOMS AND LABORATORIES

- Catalyst College is equipped with “Electricity Maps” for each classroom and the labs. These maps display the connection of electrical switches to the light and fans they control within a particular classroom or lab. A laminated map is pasted near the classroom/lab switchboard, greatly facilitating the switching ON of only the required lights and fans in the room and switching

OFF of those not required. Students and staff members diligently follow this, leading to huge saving and conservation of electricity.



Electric Main Panel



Electric Sub Controller (class room)



Electric Sub Controller (Lab)

## **TIMER FOR AIR CONDITIONERS IN THE CENTRAL INSTRUMENTATION FACILITY**

- ❖ The Central Instrumentation Facility (CIF) started with a DST-FIST grant houses several common instruments and analytical equipment that is shared by all departments in the college. Several instruments in the CIF like the PCR thermo cycler, Gas Chromatography instrument, centrifuges and others require lower than ambient temperature (20-25 C) for their optimal functioning. To conserve electricity at night when the instrument are not in use, a timer system has been installed. This ensures that three day time ACs functions on a 12 hours ON – 12 hours OFF cycle. This ensures that the room is properly cooled during the day when the instruments are in use and several people occupy the room, while at night with instruments on standby and no human traffic, there is less consumption of electricity with only one functioning AC.





Window Air Condition



Air Condition Remote with Time Management

## EXPENDITURE

(Representative Bills, Invoices, Purchase Orders)

**बिहार औद्योगिक क्षेत्र विकास प्राधिकार**  
पटना क्लस्टर, कार्यालय-भूतल, बीओआईडब्ल्यूएन, औद्योगिक क्षेत्र, पाटलिपुत्रा  
Website-www.biadabihar.in, Email-dgm.patna@bihar.gov.in,  
मुख्यालय-प्रथम तल, उद्योग भवन, पूर्वी गाँधी मैदान, पटना-800004  
Website-www.biadabihar.in, Email - biada-bih@bihar.gov.in, Phone: 0612- 2675352/2675296/2675002/2675889(Fax)

पत्रांक 948 दिनांक :- 30/09/24

प्रेषक, प्रबंधक (औद्योगिक विकास)  
बियाडा पटना क्लस्टर।

सेवा में, सर्वश्री विजयम एडुकेशनल ट्रस्ट  
भूखण्ड संख्या-सी0 18  
औद्योगिक क्षेत्र, पाटलिपुत्रा।

विषय बकाया राशि का भुगतान करने के संबंध में।

महाराज,

उपर्युक्त विषय के संबंध में सूचित करना है कि आपकी इकाई के लेखा विवरणी के अनुसार आपकी इकाई के विरुद्ध वित्तीय वर्ष 2024-25 तक बकाया राशि मद में लगान/सुविधा शुल्क (वित्तीय वर्ष 2023-2024 से लागू)/संचारण शुल्क एवं दण्ड सूद सहित कुल राशि मो0 24,401/- देय है, जिसका भुगतान आपके द्वारा किया जाना है।

अतः उपरोक्त के आलोक में निदेशित किया जाता है कि एक पक्ष के अन्दर बकाया राशि मो0 24,401/- का भुगतान करना सुनिश्चित किया जाय।


कृपया इसे अत्यावश्यक समझा जाये।

**RTGS Details :-**  
BENEFICIARY :- BIHAR INDUSTRIAL AREA  
DEVELOPMENT AUTHORITY  
BANK & BRANCH :- HDFC Bank, Fraser Road, Patna  
A/C NO. :- 50100451369562, IFSC CODE - HDFC0009325  
Or DD

Favour :- BIADA  
Payable at-Patna

विश्वासमाजन  
30.09.2024  
प्रबंधक (औद्योगिक विकास)  
बियाडा पटना क्लस्टर।

F No. 404

 बैंक ऑफ बड़ोदा  
Bank of Baroda

Branch: \_\_\_\_\_

Date: \_\_\_\_\_

Base Branch:	S.K. Puri
Account No.:	18630100012198
Name of the Account Holder:	Vijayam Educational Trust.


RTGS/NEFT favouring:

Bank:	HDFC Bank
Branch:	Fraser Road Patna
IFS Code:	HDFC 000 9325
Beneficiary's A/c. No.:	50100451369562
Beneficiary's A/c. Type:	
Beneficiary's Name:	Bihar Industrial Area Development Authority

Nomination Facility Available

Amount (₹)	
Amount of Remittance	24,401/-
Exchange	
Total	24,401/-

Amount (in words) Rupees Twenty  
four thousand four hundred  
one



UTR NO. BARBX24277818

567  
Acctt.

Clerk/Cashier/Teller  
(Cheque(s) subject to realization)

Toll Free No. - 1800 5700

(BIADA maintenance bill)

(AC Freight Bill)



Page 1 of 2

**UNITARY PRODUCTS BUSINESS GROUP**  
**VOLTAS LIMITED**

**VOLTAS LIMITED**  
306A, 3RD FLOOR  
MAHARAJA KAMESHWAR COMPLEX  
PRAZER ROAD  
PATNA 800001 0612-6455192 -

**Warehouse Address**  
C/O DRIVE INDIA ENTERPRISES SOLUTIO  
MAUZA SIMLIMURARPUR  
PS - MALSALAMI  
NEAR DIDARGANJ  
PATNA 800007 - -

**INVOICE-CUM-DELIVERY-CHALLAN**

**Customer No:** 26134227  
**Bill To:**  
VIJAYAM EDUCATIONAL TRUST  
CIMAGE COLLEGE, COMMERCIAL PLOT NO.-5  
ROAD NO.1  
PATNA  
PATNA  
800001  
**Contact No:** 0612-2541443  
**Mobile No:** 0612-3254591

**Billing No:** 8110043970  
**Billing Date:** 25.03.2017 12:44:52  
**Rd Permit No:** -  
**No of Pkg:** 00000  
**Gross Wt:** 900.000  
**Transporter:** DRIVE INDIA ENTERPRI  
**Vehicle No:** -  
**LL/RR No:** -  
**Sales ord no:** 1567265  
**Sales Tax Form:** VAT Full Tax

**Ship To:**  
VIJAYAM EDUCATIONAL TRUST  
CIMAGE COLLEGE, COMMERCIAL PLOT NO.-5  
ROAD NO.1  
A BEHIND S.K PURI PARK, BORING ROAD  
PATNA PATNA  
800001  
**Contact No:** 0612-2541443  
**Mobile No:** 0612-3254591

**Tax Invoice No:** 1204009266  
**Cust PO No:** MAIL  
**Cust Po Date:** 24.03.2017  
**Contact Person:** INEERAJ KUMAR  
**CST No:** -  
**LST No:** -

**Dealer Name:** Voltas Direct Service  
**Contact No:** -  
**Site Ref No/Go No:** -

**PAN:** AABTV1584H

Item Material	Material Desc	Qty	Unit Price	Basic Price
10 4502087	1.5T Voltas SAC 183#LYd Tax payable	15	23,913.04	358,695.65
			@15% on 358,695.65	53,804.35

**Serial Nos:**  
4512047H16LB13934, 4512047H16LA14381, 4512047H16LA14429, 4512047H16LA14592  
4512047H16LA14436, 4512047H16LA14387, 4512047H16LB13754, 4512047H16LA14417  
4512047H16LA14406, 4512047H16LA14408, 4512047H16LB13930, 4512047H16LA14379  
4512047H16LA14598, 4512047H16LB13759, 4512047H16LA14383  
4551988A17AA12670, 4551988A17AA12638, 4551988A17AA12667, 4551988A17AA12658  
4551988A17AA12606, 4551988A17AA12638, 4551988A17AA12614, 4551988A17AA12497  
4551988A17AA12617, 4551988A17AA12655, 4551988A17AA12596, 4551988A17AA12633  
4551988A17AA12659, 4551988A17AA12681, 4551988A17AA12669

**Net Invoice Value:** 412,500.00

**Total Invoice amount in words:** RUPEES FOUR LAC TWELVE THOUSAND FIVE HUNDRED ONLY  
**Payment Terms:** TD05 (Net due payable in 30 days)

**Special Comments:**

**Remarks:** All payments should be made by cheque/draft drawn in favour of Voltas Limited. All payments should be made only by way of crossed Cheque / Draft / RTGS / NEFT drawn in favor of Voltas Limited. NO CASH PAYMENT WILL BE ACCEPTED. Our responsibility ceases once the goods are handed over to the transporter.

**Corporate Identity Number:** L29308MH1954PLC009371  
**Website Address:** www.voltas.com

Registered Office: Voltas House, 'A' Dr. Babasaheb Ambedkar Road, Chinchpokli, Mumbai - 400 033  
Website address: www.voltas.com, Corporate Identity Number: L29308MH1954PLC009371  
Voltas Limited, Voltas House, 'A' Block, Dr. Babasaheb Ambedkar Road, Chinchpokli, Mumbai - 400 033

(AC Purchasing Bill)



UNITARY PRODUCTS BUSINESS GROUP  
LOCUS: PATNA

**VOLTAS LIMITED**

VOLTAS LIMITED  
306A, 3RD FLOOR  
MAHARAJA KAMESHWAR COMPLEX  
RAZER ROAD  
PATNA 800001 0612-6455192 -

Warehouse Address  
C/O DRIVE INDIA ENTERPRISES SOLUTIO  
HATUA SIMLIMURAKPUR  
PS - MALSALAMI  
NEAR DIDARGANJ  
PATNA 800007 -

Pages 1 of 2

INVOICE-CUM-DELIVERY-CHITAN

Customer No: 26134227  
Bill To:  
VIJAYAM EDUCATIONAL TRUST  
CIMAGE COLLEGE, COMMERCIAL PLOT NO.-5  
ROAD NO.1  
PATNA  
PATNA 800001  
Contact No: 0612-2541443  
Mobile No: 0612-3254591

Billing No: 8110043971  
Billing Date: 25.03.2017 12:46:58  
Rd Permit No: 1  
No of Pkg: 100000  
Gross Wt: 1240.000  
Transporter: DRIVE INDIA ENTERPRI  
Vehicle No: 1  
LL/RR No: 1  
Sales ord no: 1567265  
Sales Tax form: VAT Full Tax

Ship To:  
VIJAYAM EDUCATIONAL TRUST  
CIMAGE COLLEGE, COMMERCIAL PLOT NO.-5  
ROAD NO.1  
A BEHIND S.K PURI PARK, BORING ROAD  
PATNA PATNA  
800001  
Contact No: 0612-2541443  
Mobile No: 0612-3254591

Tax Invoice No: 204089261  
Cust PO No: 1  
Cust Po Date: 24.03.2017  
Contact Person: INEERAJ KUMAR  
CST No: 1  
LST No: 1  
Dealer Name: Voltas Direct Service  
Contact No: 1  
Site Ref No/Go No:

Ita Material	Material Desc	Qty	Unit Price	Basic Price
40 4011175	1.5T Voltas WAC 183 CYa	20	18,695.65	373,913.04
	Tax payable		@15% on 373,913.04	56,086.96
Serial Nos :				
4011175D170C31853, 4011175D170C31869, 4011175D170C31874, 4011175D170C31881				
4011175D170C31870, 4011175D170C31873, 4011175D170C31868, 4011175D170C31871				
4011175D170C31642, 4011175D170C31641, 4011175D170C31635, 4011175D170C31644				
4011175D170C31646, 4011175D170C31877, 4011175D170C31891, 4011175D170C31636				
4011175D170C31376, 4011175D170C31892, 4011175D170C31650, 4011175D170C31647				
Net Invoice Value				430,000.00
Total Invoice amount in words: RUPEES FOUR LAC THIRTY THOUSAND ONLY				
Payment Terms: TD05 (Net due payable in 30 days)				
Special Comments:				
Remarks: All payments should be made by cheque/draft drawn in favour of Voltas Limited. All payments should be made only by way of crossed Cheque / Draft / RTGS / NEFT drawn in favor of Voltas Limited. NO CASH PAYMENT WILL BE ACCEPTED. Our responsibility ceases once the goods are handed over to the transporter. Interest @ 24% will be charged on all over due bills. If you do not furnish Sales Tax Declaration Form within 90 days from the date of this invoice, you will be liable to pay sales tax at the full rate including interest and penalty on the differential tax amount. In the event of the declaration form furnished by you				
Corporate Identity Number: L29308MH1954PLC009371 Website Address: www.voltas.com				

Registered Office: Voltas House, 'A' Dr. Babasaheb Ambedkar Road, Chinchpokli, Mumbai - 400 033.  
Website address: www.voltas.com, Corporate Identity Number: L29308MH1954PLC009371  
Voltas Limited, Voltas House, 'A' Block, Dr. Babasaheb Ambedkar Road, Chinchpokli, Mumbai - 400 033.

(AC Purchasing Bill)

  
**IQAC, Co-ordinator**  
**CATALYST COLLEGE**  
Plot No.-C-16(P) Patliputra Industrial Ara  
Patliputra, Patna - 13

  
**Principal**  
**CATALYST COLLEGE**  
Plot No.- C-16(P) Patliputra Industrial Area  
Patliputra, Patna-13