NALSAR University of Law, Hyderabad

Sustainability and SDG Impact Report – 2025

Introduction

NALSAR University of Law, Hyderabad, continues to champion sustainable development through education, research, innovation, and community engagement. Guided by the principles of the UN 2030 Agenda, National Education Policy (NEP) 2020, and the NITI Aayog SDG India Index, the University has institutionalized sustainability in governance, curriculum design, and campus operations. This report outlines NALSAR's initiatives aligned with all 17 Sustainable Development Goals (SDGs), highlighting measurable impact, stakeholder partnerships, and transparency in progress reporting for THE Sustainability Ranking 2025.

SDG 1 (No Poverty)

In 2026, NALSAR partnered with Telangana Legal Services Authority and NGOs such as SEEDS and PRADAN, focusing on legal empowerment and socio-economic inclusion of rural and marginalized communities. It included data on beneficiaries, student participation, and community outcomes. NALSAR's Centre for Law and Poverty released policy briefs on rights-based poverty alleviation, reinforcing evidence-based advocacy. These publications reflected the university's sustained commitment to monitoring and public reporting on SDG 1 within the UN 2030 Agenda.

SDG 2 (Zero Hunger)

In 2026, NALSAR expanded its SDG 2 initiatives through partnerships with the Telangana State Food Security Mission and NGOs such as Goonj. The University's *Sustainability and Social Impact Report* documented food redistribution drives, nutrition awareness programs, and workshops on food rights under the National Food Security Act. Student volunteers led community campaigns to reduce food waste and support low-income households near the campus. The University canteen maintained a zero-food-waste policy, and impact metrics were published on the institutional website, reflecting NALSAR's measurable contribution to reducing hunger and supporting national food equity goals.

SDG 3 (Good Health and Well-being)

In 2026, NALSAR's *Health and Wellness Annual Review* showcased its progress toward SDG 3. The University adopted a comprehensive health policy promoting preventive care, mental health, and gender-sensitive wellness initiatives. Collaborations with Apollo Hospitals and NGOs supported vaccination camps, menstrual health drives, and fitness programs. The Centre for Human Rights has published policy briefs on equitable access to healthcare for marginalized communities. Results and outreach metrics were published online, evidencing NALSAR's integrated approach to health promotion, student well-being, and community resilience.

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SDG 4 (Quality Education)

In 2026, NALSAR's *Annual Academic Sustainability Report* highlighted significant achievements under SDG 4. The University launched the *SDG Learning and Research Framework 2026–2030*, embedding sustainability, ethics, and social responsibility into every program. Digital inclusion projects ensured access for rural and differently-abled students. Faculty underwent training on SDG pedagogy, and the University hosted the *National Conference on Transformative Legal Education*. Data on enrolment, employability, and learning outcomes were published, affirming NALSAR's leadership in quality and equitable education.

SDG 5 (Gender Equality)

In 2026, NALSAR strengthened its commitment to SDG 5 through the publication of the *Gender Equality and Leadership Report 2026*. The University achieved gender parity in faculty hiring and leadership roles. The Centre for Gender Studies collaborated with UN Women and the Internal Complaints Committee to conduct training on workplace equity and gender justice. New research on gender-responsive governance has been published, and measurable data on representation and outcomes have been made public. These initiatives reinforced NALSAR's position as a national leader in advancing gender equality in legal education and institutional policy.

SDG 6 (Clean Water and Sanitation)

In 2026, NALSAR's *Sustainability and Green Infrastructure Report* detailed continued progress on SDG 6. The University expanded its rainwater harvesting system, introduced smart water monitoring devices, and achieved a 30% reduction in water use. Partnerships with NGOs and the Telangana Pollution Control Board promoted hygiene awareness in local communities. Annual audits measured sanitation and recycling efficiency, with the results publicly accessible on the NALSAR website. These initiatives demonstrated strong institutional commitment to sustainable water management and campus environmental responsibility.

SDG 7 (Affordable and Clean Energy)

In 2026, NALSAR published its *Energy Sustainability and Green Campus Report* outlining measurable achievements under SDG 7. The University transitioned 45% of its energy consumption to solar power through expanded rooftop installations and adopted energy-efficient lighting systems across all academic blocks. Collaborative projects with TERI and the Telangana Energy Department focused on renewable energy education and awareness. Workshops on sustainable energy law and green infrastructure were conducted for students and policymakers. Annual data on energy savings, carbon reduction, and renewable utilization were publicly available on NALSAR's website.

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SDG 8 (Decent Work and Economic Growth)

The University enhanced student employability through internships, entrepreneurship training, and collaborations with the Ministry of Labour. Research on sustainable business and green jobs was published through the Centre for Corporate Governance. Campus employment policies ensured fair wages and equal opportunities for all staff. The report highlighted increased placements, skill-based workshops, and alignment of university operations with decent work principles under SDG 8.

SDG 9 (Industry, Innovation, and Infrastructure)

In 2026, NALSAR's *Innovation and Infrastructure Progress Report* highlighted advancements in relation to SDG 9. The University launched the *Centre for Law, Technology, and Innovation* to promote research on AI ethics, digital governance, and sustainable infrastructure policy. Collaborations with start-ups and incubators supported legal-tech innovation. Infrastructure upgrades, including smart classrooms and facilities powered by renewable energy, were completed. Progress data were published online, showing NALSAR's role in linking legal innovation with sustainable development.

SDG 10 (Reduced Inequalities)

The University implemented a Diversity and Inclusion policy to ensure equitable access for students from marginalized backgrounds. Special scholarships, disability support, and community mentorship programs were expanded to provide additional support. Research papers on social equity and affirmative action were published through the Centre for Human Rights. Publicly available data showed NALSAR's active engagement in reducing educational and social inequalities.

SDG 11 (Sustainable Cities and Communities)

In 2026, NALSAR's *Urban Sustainability and Governance Report* detailed its contributions to SDG 11. The University collaborated with the Hyderabad Urban Lab and UN-Habitat India to research sustainable urban development and legal frameworks for inclusive cities—campus design incorporated green architecture principles and biodiversity-friendly landscaping. Student projects focused on innovative governance and sustainable transport. Annual data on community engagement and green infrastructure were published on the university portal.

SDG 12 (Responsible Consumption and Production)

In 2026, NALSAR published measurable outcomes under SDG 12 in its *Resource Efficiency and Waste Management Report*. The University achieved complete segregation of waste at the source, implemented a paperless administration system, and promoted responsible consumption among students and staff. Procurement guidelines prioritized eco-friendly materials. Collaborative workshops with NGOs focused on promoting sustainable production and lifestyle awareness. These efforts and audit data were shared publicly, reinforcing accountability toward sustainable consumption goals.

SDG 13 (Climate Action)

In 2026, NALSAR published its *Climate Governance and Resilience Report*, which documented progress on SDG 13. The University collaborated with UNEP and the Telangana Climate Action Cell to assess regional legal frameworks for mitigation and adaptation. Tree plantation, carbon audit, and climate literacy programs were expanded. Research on environmental justice and climate litigation was disseminated internationally. Annual sustainability data and policy briefs were available on the university website, underscoring its leadership in legal climate advocacy.

SDG 14 (Life Below Water)

Faculty collaborated with the National Institute of Oceanography and the Ministry of Environment on coastal and freshwater regulation reviews. Students participated in awareness drives on marine conservation law. Reports and research papers were published publicly, emphasizing the legal frameworks for sustainable management of aquatic ecosystems.

SDG 15 (Life on Land)

In 2026, NALSAR's *Biodiversity and Conservation Report* documented the ongoing achievements of SDG 15. The University collaborated with the Telangana Forest Department and WWF-India on legal research supporting ecosystem restoration and wildlife protection. Campus biodiversity mapping and tree census were completed. Outreach programs educated students on ecological rights and sustainability. Annual reports, containing data and outcomes, were publicly available.

SDG 16 (Peace, Justice, and Strong Institutions)

In 2026, NALSAR's *Justice, Governance, and SDG Policy Report* showcased significant achievements under SDG 16. The University advised government bodies on justice reform, transparency, and access to law. Legal Aid Clinics provided free services to marginalized communities. Research on the rule of law, human rights, and anti-corruption was widely published. Annual governance metrics were shared online, affirming NALSAR's leadership in promoting peace, justice, and institutional integrity.

SDG 17 (Partnerships for the Goals)

In 2026, NALSAR published its *SDG Partnership and Global Engagement Report*. The University strengthened global collaborations with UNDP, Curtin University, and ICSSR for joint research and capacity-building. Partnerships with NGOs, government agencies, and academia advanced multi-sectoral SDG implementation. The report highlighted measurable outcomes from cross-border projects and student exchanges, showcasing NALSAR's leadership in promoting SDG partnerships.

Conclusion

NALSAR University of Law's sustainability journey demonstrates measurable, research-driven, and community-oriented progress across all 17 SDGs. By integrating social justice, innovation, and environmental stewardship into its institutional ethos, NALSAR stands as a national model for higher education's contribution to the UN 2030 Agenda and THE Sustainability Impact framework.

Enclosed all the relevant reports:

1. Waste Management Report
2. Green Audit
3. Energy audit Report
4. Report of conferences/seminars relating to SDGs
5. Social, Legal, and Peace activities under SDG-16
6. Solar Energy

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Waste Audit Report

Prepared For :
Nalsar University of Law

Prepared By :
Maati Foundation

Audit date
Aug 23 - Sep 4, 2025

Submitted to
Nimushakavi Vasanthi - Registrar

Date of Submission
Nov 3, 2025

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Executive Summary

INTRODUCTION

The NALSAR University of Law campus in Hyderabad stands as a vibrant academic ecosystem that houses students, faculty, and staff across multiple residential, dining, and learning facilities. With a population exceeding 1,500 individuals, the campus generates diverse streams of solid waste on a daily basis — from food waste and packaging to paper, plastics, and disposables.

Recognizing the growing environmental and operational impact of unmanaged waste, NALSAR University, in collaboration with Maati Foundation, initiated a comprehensive Waste Audit to evaluate existing waste management systems and identify opportunities for sustainable improvement. This audit represents a critical first step in the University's journey towards establishing a circular, zero-waste campus model. It aims not only to quantify the volume and composition of waste generated but also to assess the institutional, behavioural, and infrastructural factors influencing waste practices.

Through the audit, the University seeks to:

- Establish **a baseline understanding of daily and monthly waste generation** across all functional zones.
- Identify **patterns**, **inefficiencies**, and **systemic challenges** in current collection and segregation mechanisms.
- **Evaluate the extent of single-use disposable** consumption
- Develop a set of recommendations and actionable **strategies for waste reduction, segregation, composting, and recycling**.

This report consolidates the findings from an eight-day audit conducted between **23rd August and 4th September 2025**, and serves as a reference framework for designing an integrated waste management system for NALSAR University of Law.

Executive Summary (Contd.)

METHODOLOGY

To ensure a comprehensive and representative understanding of the University's waste profile, the audit employed a **mixed-methods** approach combining quantitative data collection with qualitative insights. This approach enabled the team to not only measure waste physically but also understand the behaviours, practices, and systems shaping its generation.

Overview of Approach

Two core components formed the backbone of this investigation:

1. **Physical Waste Quantification and Characterization**:

Conducted across over 20 distinct locations on campus, this process involved the physical weighing and categorization of waste collected daily. Sampling covered key operational and residential zones.

***List of Locations:**

1. Academic Block
2. Mess/Canteen
3. Ping's Kitchen
4. Boys Hostels (BH1-7)
5. Girls Hostels
6. Faculty Quarters
7. Convention Center
8. Stadium Canteens
9. Engineering Department
10. Auditorium
11. Boys Hostel - 6
12. Health Center
13. Library & DOMS
14. Video Conference Room/Classrooms
15. Neem Tree Fire Junction
16. Non-Teaching Staff Quarters
17. ATM
18. Vice Chancellor's House
19. Cafe Coffee Day
20. Main Gate

2. Single-Use Disposable Audit:

A detailed secondary assessment was conducted to record the volume and frequency of disposable items — such as cups, plates, cutlery, and packaging — being procured and discarded by on-campus vendors, including the main mess, Ping's Kitchen, Café Coffee Day Express, and other outlets.

Together, these two methodologies provided a dual perspective, quantifying waste generation while mapping the consumption patterns driving it.

Executive Summary (Contd.)

Sampling Strategy

- **Dates & duration**: Audit conducted over eight non-consecutive days between 23 Aug – 4 Sep 2023, capturing weekday and weekend variation.
- **Collection window**: Each cycle measured a 24-hour accumulation to record daily generation rates.
- **Method**: Stratified sampling divided campus into functional zones (academic, hostels, dining, residential) by user population and waste type.

Tools & Techniques

- **Weighing**: All waste was measured with digital scales (kilogram precision). Each bag was weighed separately and logged with its waste category (wet, dry, sanitary, hazardous).
- **Infrastructure check:** Condition of collection and storage points was documented.

Stakeholder Involvement

The audit was implemented through a **collaborative process**, engaging multiple campus stakeholders to ensure both data accuracy and contextual understanding.

- **Audit Team (Maati Foundation):** Designed, coordinated, and executed the audit process, including sampling, weighing, data compilation, and analysis.
- **Housekeeping Staff:** Provided access to collection points, supported waste movement and segregation, and shared valuable operational insights.
- **Vendors and Kitchen Management:** Shared procurement data for disposables and offered operational perspectives on food waste generation.

Executive Summary (Contd.)

- **Students:** Their consumption and disposal patterns were observed to understand behavioural drivers of waste.

This participatory structure ensured that the findings were grounded in both quantitative evidence and human context essential for designing an effective long-term waste management system.

Acknowledgements (Audit Support Team)

The following individuals extended critical support during the audit process:

- **Prof. N. Vasanthi** – Professor of Law & Registrar
- **Vivek Mukerjee** – Assistant Professor of Law
- **Suraj Kumar Bera** – Operations Manager
- **Avakash Kumar Choubey** – Attendant
- **M. Senthil Kumar** – Unit Manager, Shakthi's Kitchen Pvt. Ltd.
- **Jagaralamudi Koteswara Rao** – Assistant Engineer
- **Vuppala Sudheer** – Junior Assistant

Their contributions, along with the cooperation of students and staff, enabled the successful execution of this comprehensive waste audit.

FINDINGS

Waste Composition and Classification

The analysis indicates that NALSAR University generates **an average of 660 kilograms of waste per day**, reflecting a significant daily footprint for an academic campus.

Waste Categorization:

A. **Wet and organic waste**, primarily food scraps, constitutes the **largest component at about 65%**.
*Source: Waste audit findings and category-wise data identify **Mess and Canteens as the highest organic waste generators**, consistent with trends observed in institutional settings.*

Executive Summary (Contd.)

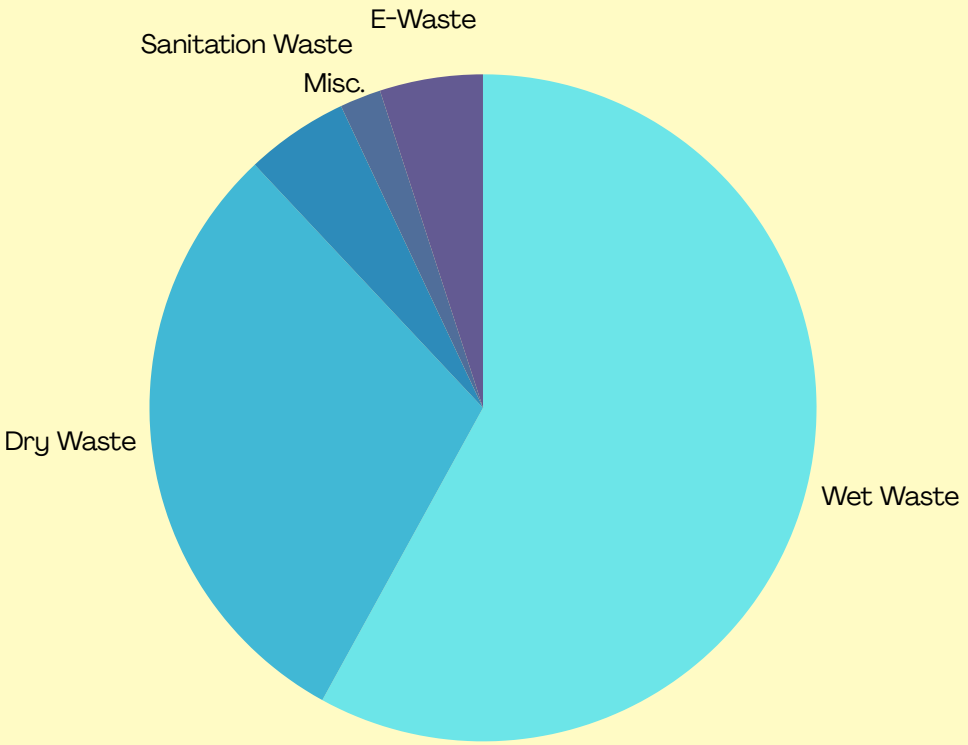
B. **Dry and recyclable waste** — comprising plastic, paper, metal, and glass from packaging and disposable serveware — forms the second largest waste stream, accounting for an estimated at about **30% of the total.**

Source: Audit data reveals monthly consumption of approximately ***90,000 plastic spoons, 57,000 paper cups, 7500 meal plates, 6000 snack plates, 3000 hand gloves, 4500 head caps, 600–750 dustbin liners*** *alongside comparable volumes from other outlets on a monthly basis —* ***indicating extensive reliance on single-use items banned under government regulations****.*

C. **Hygiene and Sanitation waste**, including personal care items, sanitary pads, cleaning materials, and bin liners, contributes approximately **5% of the total waste**.
Source: Monthly usage by 700 menstruating residents at the campus records approx. ***14,000 sanitary pads****, underscoring high dependence on such non-biodegradable/non-recyclable disposables*

D. **E-waste**, though not a significant daily contributor by weight, is generated intermittently and warrants a dedicated collection and disposal protocol to ensure compliance and safe handling.

E. **Legacy waste** comprises mainly of damaged chairs, other furniture, faulty washing machines, induction cooktop which can be attempted to be repaired on the campus itself.

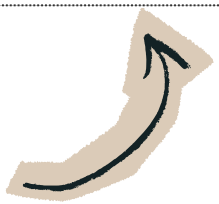


WASTE COLLECTION DATA (MIXED WASTE)

#	Building / Location	Avg. per day (Kgs)	Avg. per month (Kgs)
1	Academic Block	11.21	336
2	Mess/Cafeteria	361.28	10838
3	Ping's Kitchen	26.64	799
4	Boys Hostel - 1,2,3,4,5,7	60.50	1815
5	Girls Hostel - 1,2,3,4,5,6,7	82.56	2477
6	Faculty Quarters	9.33	280
7	Convention Center	10.31	309
8	Stadium Canteens	22.00	660
9	Engineering Dept.	3.64	109
10	Auditorium	4.06	122
11	Boys Hostel - 6	14.55	437
12	Health Center	5.37	161
13	Library & Doms	10.24	307
14	Video Conf & Classrooms	4.55	137
15	Neem Tree Junction	5.58	167
16	Non-Teaching Staff / Quarters	14.60	438
17	ATM	3.85	116
18	V. C. House	3.08	92
19	Cafe Coffee Day	4.85	146
20	Main Gate	2.40	72
Total		**660**	**19817**

DRY WASTE SUMMARY

#	Building / Location	Dry waste in Kgs / month	High Value Recyclable Dry Waste in kgs / month
1	Library	324	300
2	Convention center	380	266
3	Academic block	300	195
4	Auditorium	121	61
5	Faculty Quarters	140	84
6	Non-Teaching Staff Quarters	219	110
7	Hostels	2340	1287
8	Mess	1282	355
9	CCD	77	12
10	Ping's	88	9
11	Stadium Cafes	110	67
12	Online Orders	145	119
Total		**5526**	**2865**



Note:
If properly segregated, this waste can generate revenue. It can attract dry waste collection companies and should be prioritized by NALSAR for segregation and recovery.

Executive Summary (Contd.)

OBSERVATIONS

A. Issues with Segregation and Collection Practices

- **Segregation gaps**: Although wet and dry bins are available across campus, segregation at source is inconsistent. Most waste ends up mixed at disposal, reducing potential for composting or recycling.
- **Collection inefficiencies:** Waste is often not collected on time, leading to overflowing bins and unhygienic conditions.
- **Manual re-segregation**: Housekeeping staff frequently re-sort mixed waste—often without proper PPE—raising health and contamination risks.
- **Infrastructure inconsistencies**: Bins, trolleys, and storage points vary in capacity, labelling, and placement; many are damaged or insufficient.
- **Animal interference**: Dogs and monkeys frequently disturb waste dumping areas, spreading waste and complicating quantification.
- **Lack of system & accountability**: No clear collection schedule, monitoring protocol, or defined responsibility structure.
- **Root causes**: Limited awareness among students and staff, inadequate supervision, absence of feedback or incentive mechanisms.
- **Result**: Segregation remains largely reactive and unsystematic, preventing effective waste recovery and sustainable processing.

B. Structured Waste Management Framework missing

NALSAR lacks a centralized, codified waste management policy where waste handling is largely operational and reactive, driven by housekeeping with minimal institutional oversight.

- No formal waste-management hierarchy or reporting mechanism.
- No designated segregation zones or monitored transfer points.
- No SOPs or staff training modules.
- Responsibilities fragmented across departments with no clear ownership.
- Segregation and disposal rely on individual initiative, not a system.

LOCATION-WISE OBSERVATIONS

Location	Daily Avg. Waste (kg)	Primary Waste Type	Key Issues	Break up of Items
Mess /Kitchens	378.87	Mixed (Organic + Disposables)	Improper handling leading to leakages and stench, mixing of all types of waste	Plastic disposables, wooden cutlery, aluminium wrapping, wet food waste, oil tins, PPE's, packaging waste etc.
Hostels	~190	Mixed (Sanitary + Recyclables)	No segregation, animal scavenging, improper disposal of sanitary waste	Food waste, sanitary waste, packaging waste, generic stationary waste, SUP disposables
Canteens /Food Courts	Variable	Disposables (Packaging)	High-volume single-use items, waste strewn around the cafe	Plastic disposables, wooden cutlery, aluminium wrapping, wet food waste, oil tins, PPE's, packaging waste, glass bottles
Academic /Admin Blocks	10-20	Paper /Stationery	Recyclable paper contamination	Stationary waste, packaging waste, food waste, plastic disposables
Event Spaces	Variable (Up to 53.8)	Event-specific waste	No zero-waste protocols	Stationary waste, packaging waste, food waste, plastic disposables

Executive Summary (Contd.)

C. High Dependence on Banned Single-Use Plastics (SUPs)

The audit reveals a staggering use of banned **2 lakh (200,000) single-use plastic disposables** (like spoons, cups & plates) per month by vendors across the campus.

This alone is leading to an estimated **≈ 3.0 tonnes CO_2e per month**.

That is equivalent to running 10 air conditioners non-stop for a month or the carbon emitted by burning over 1,200 litres of petrol.

This dependence on single-use items not only increases landfill-bound waste but also inflates operational costs over time. Transitioning to reusable systems will require both administrative direction and vendor collaboration.

Lists of Single-Use Plastic Banned in India as per Solid Waste Management Rules 2016. The red circled ones are being used at the Nalsar Campus

Executive Summary (Contd.)

D. Absence of Integration with Broader Sustainability Goals

NALSAR University's sustainability efforts in water conservation, energy efficiency, and green landscaping are commendable, **but waste management remains a missing link in its broader environmental strategy**.

- Waste management is not yet embedded within the institution's sustainability charter.
- Procurement policies do not reflect environmental criteria (e.g., reusable over disposable).
- Event management guidelines lack eco-friendly protocols.

Recommendations and Implementation Plan

The waste audit at NALSAR University presents a unique opportunity to establish a **model zero-waste campus** that reflects the institution's commitment to sustainability, environmental justice, and social responsibility.

The following recommendations are designed to help the University transition from an informal, operational approach to a structured, data-driven, and community-owned waste management system. These are categorized under **policy, infrastructure, operations, awareness, and partnerships**.

1. Establish a Comprehensive Campus-wide Waste Management Policy

Objective: Institutionalize waste management through policy, structure, and accountability

Recommendations:

- Establish NALSAR's **Sustainability Charter and goals**
- Draft and adopt a comprehensive Waste Management Policy outlining **segregation norms, stakeholder responsibilities, vendor compliance requirements, and enforcement mechanisms**.
- Ensure the policy aligns with the Solid Waste Management Rules, 2016, municipal guidelines, and is integrated into NALSAR's Sustainability Charter.

- Constitute a **Cross-Functional Sustainability and Waste Management Committee** comprising faculty, students, housekeeping, and administrative staff.
- Define **clear roles and responsibilities** for waste segregation, monitoring, and reporting.
- Establish accountability measures, including strict penalties for non-compliance.
- **Develop Standard Operating Procedures (SOPs)** for waste collection, segregation, transportation, and disposal.
- **Appoint a dedicated Sustainability Officer** to strategize, oversee implementation, and ensure timely reporting and review of progress.

Expected Outcome:
Institutional ownership, improved coordination, and a clear accountability framework

Zero Waste Events Policy

All campus events can easily align with NALSAR's Sustainability Charter with a zero-waste-first approach.

- A **trained Zero-Waste Events Team** can ensure source segregation, sustainable procurement, and partnerships with specialist recyclers.
- **Event food vendor can be incentivized/penalized**
- **Reusables can be procured** exclusively for event management (Reusable Decor / Lanyards / Water bottles / Utensils etc.)
- All event-related procurements by the university can prioritize **sustainable alternatives**, for instance: recycled-paper notebooks, refillable pens, and steel water bottles and so on.
- **Mandatory sustainability report** can be prepared after each event, later consolidated into NALSAR's annual sustainability report.

With strong student engagement and wide attendance, events become a powerful way to build a campus-wide culture of sustainability and showcase NALSAR's efforts to the wider community.

2. Transition Away from Single-Use Disposables

Objective: Strategic, sustained and gradual development of a campus-wide culture of reusability and reduced dependence on single use disposables, starting with SUPs (Single Use Plastics).

Recommendations:

- Refer to the list of disposables outlined in the report and identify **suitable reusable alternatives through small-scale trials (A/B testing)** to ensure minimal inconvenience to stakeholders.
- **Expand the existing stock of reusables** at the Mess
- Set up "Drop-off Stations" across the campus to enable easy return of reusable items, especially considering the takeaway culture.
- Introduce a weekly "Bring Your Own Bottle/Cup" Day to promote personal responsibility.
- **For vendors:**
  - Phase-wise ban all single-use plastic disposables
  - Share a curated list of approved eco-friendly alternatives and facilitate bulk procurement to reduce costs.
  - Offer operational incentives (e.g., lower rents or extended operational hours) to vendors who fully transition to sustainable practices.

Expected Outcome:
Single Use Plastics disposables free model campus

Recommendations to decrease (eventually eliminate) Single Use Plastic (SUPs) disposables from the Mess

NALSAR's Mess already has **a strong foundation with its stock of steel reusables and an established cleaning system**. This system can be strengthened by **expanding the stock** to cater to all 1,000 students, **completely eliminating the need for disposables**. The roadblock is items loss and this can be addressed by an efficient return process, supported by sustained behavior change efforts.

Reusables Drop Off stations next to Waste Bins at strategic locations across the campus

Introduce Steel Mugs for hot beverages. Incorporate NALSAR-branding in all reusables to encourage returns and ensure easy traceability.

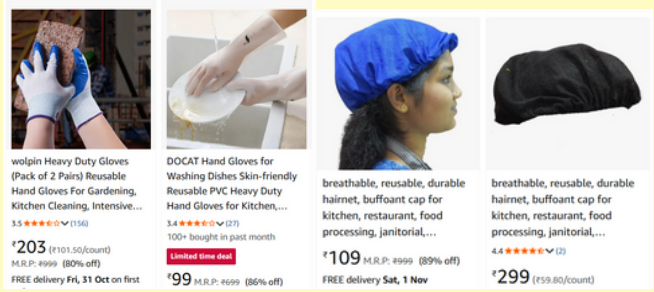
Green campus "Best Practices" communication & awareness across the campus

Recommendation for Vendors to go Single Use Plastics (SUP) Free

While the culture of reusability can be strengthened within the Mess, it may be challenging to expect the same from campus vendors who lack access to washing facilities. Imposing reusables could impact their ease of operations. For such vendors, eco-friendly disposable alternatives can be adopted instead of plastic-based ones.

Banned Single Use Plastic Disposables used by the vendors. Note: Paper cups have a plastic inner lining making them worse than a regular plastic cup

Alternative could be sugarcane pulp (bagasse) based products widely used across industries. Biodegradable & Compostable under regular conditions



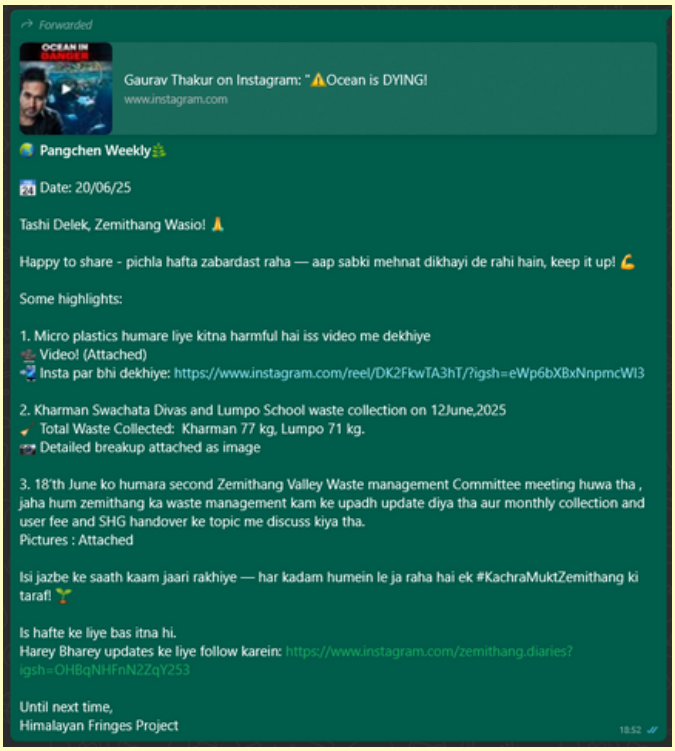
Certain single-use disposables (gloves, hairnets) used by vendors (including the Mess) can be replaced with reusable alternatives. These options should first be tested for convenience and user acceptance before large-scale procurement or mandating their use.

3. Internal & External Communication

NALSAR can play a pivotal role in shaping a culture of sustainability in educational institutions through intentional communication.

Internally, this could mean fostering awareness and pride in the university's circular practices through monthly newsletters, eco-posters across campus, and regular storytelling that celebrates student and staff contributions.

Externally, NALSAR can document and share its journey toward circularity showcasing milestones, innovations, and impact stories at social media, press, blogs, podcasts etc. By communicating these efforts with authenticity and consistency, the university can inspire other campuses to adopt similar sustainable models and position itself as a leader in institutional sustainability.



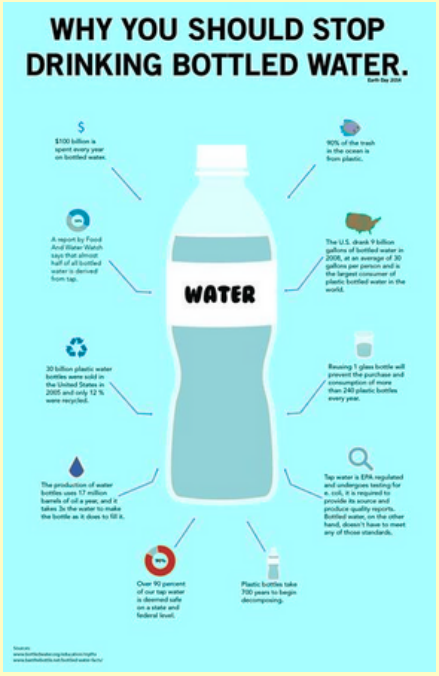
For reference, here's a glimpse of our work from Zemithang, Arunachal Pradesh, as part of the Himalayan Fringes Project funded by Royal Enfield CSR.

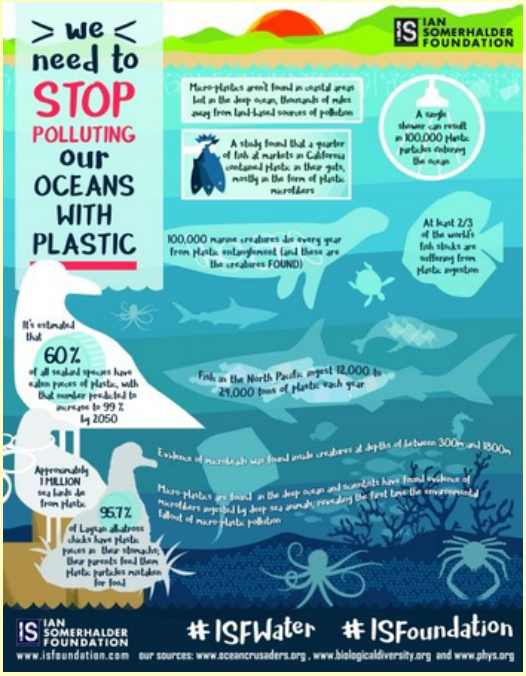
For the local community, we've designed an internal weekly newsletter that strengthens awareness and connection across a cluster of nine villages. It's a space where stories, updates, and shared learnings flow within the community itself. This is supplemented by Communication material like posters, Zero-Waste Guidelines for Homestays etc. across the villages.

For external communication, we use Instagram to showcase to the world how this inspiring, community-led waste management model is taking shape in this remote Himalayan region. Every time our posts are shared by others, it builds a sense of pride and ownership within the community reminding them that their efforts are being seen and celebrated far beyond their villages.

4. Campus-Wide Signages & Posters

Well-designed signages and environment posters across the campus serve as **constant visual reminders of NALSAR's sustainability goals**. They r**einforce mindful practices, guide waste segregation, and build a shared sense of responsibility among students and staff**. These can also become creative expressions of student engagement — developed through design contests or club-led initiatives — making sustainability both visible and participatory.





5. Integrate Waste Management with Sustainability Curriculum

Objective: Embed environmental consciousness within the academic culture.

Recommendations:

- Integrate waste management as a case study or elective within environmental law and policy modules.
- Link evaluation to it by assigning marks or offering academic incentives to encourage active participation and deeper engagement.
- Encourage student research and internships around circular economy practices.
- Document the NALSAR zero-waste journey as a live learning model for other institutions.

Expected Outcome:
Educational enrichment and long-term cultural embedding of sustainability values.

6. Infrastructure & Recycling Partnerships

Objective: Channel recyclable waste to authorized recyclers

Recommendations:

- **Material Recovery Facility (MRF)**: **Develop a dedicated sorting and storage space from where waste will be disbursed**
- Establish Daily collection of waste brought to the MRF
- Start with segregating the HIGH VALUE & easily recoverable waste
- Partner with authorized recyclers for paper, cardboard, plastics, metals, clothes, shoes etc.
- Maintain monthly tracking of recyclables collected, sold, or handed over.

Expected Outcome:
Elimination of health hazards and full compliance with waste management regulations.

Material Recovery Facility (MRF)

If Dry Waste segregated & sent for recycling - here's how much revenue can be potentially generated per waste type to feed back into the waste management system

Screenshots from an app

For **non-recyclable items** that inevitably enter the campus such as **tetra packs**, **multi-layered plastics (MLPs) like chips and biscuit wrappers**, **shoes**, **clothes**, **cigarette butts** etc. partner with specialized recyclers who are equipped to process each of these waste streams responsibly

7. Introduce On-Site Composting for Organic Waste

Objective: Once dry waste segregation is sorted, gradually focus on diverting wet waste from landfill and generate compost for campus landscaping

Recommendations:

- Set up a **decentralized aerobic composting system** (with caged units to prevent access by rodents, monkeys, and dogs).
- **Start with the Mess** - the biggest waste generator of wet waste in the campus
- Segregation already happening at the Mess. Staff has to do the same at the kitchen.
- Conduct **phase-wise training for housekeeping and mess staff** on proper waste segregation and composting techniques.
- **Utilize the compost produced within the campus** for gardens and green belts.
- Maintain a compost logbook to record daily input (kg) and output.

Expected Outcome: 50–60% reduction in landfill waste; creation of nutrient-rich compost for internal use.

The cafeteria has already implemented a two-bin system: one for disposables and another for food leftovers which is an excellent practice to build on

Basis budget various infrastructures of biodegradable waste composting, along with green garden waste, can be explored. Note: Biogas NOT recommended

8. Develop a Sanitary Waste Management System

Objective: Ensure safe and compliant handling of sanitary waste.

Recommendations:

- Install covered, foot-operated bins in all women's restrooms.
- Segregate sanitary waste using red liners and store in a designated collection box.
- Establish a tie-up with an authorized biomedical waste handler for collection and treatment.
- Most sustainable solution would be to **install a sanitary waste incinerator** for campus-level disposal complaint with CPCB norms.
- Every 6 months sessions on sustainable menstruation to decrease sanitary waste generation
- Making sustainable menstruation products available at the Campus' Green Hub

Expected Outcome:
Elimination of health hazards and full compliance with waste management regulations.



Regular orientation on Sustainable Menstruation options can go a long way in waste reduction

9. Create a Data-Driven Monitoring and Reporting System

Objective: Build transparency and measure progress through data.

Recommendations:

- Introduce waste tracking sheets for housekeeping teams to log daily collection volumes.
- Conduct monthly waste audits for verification and continuous improvement.
- Integrate data into the University's sustainability dashboard (if available).
- Publish quarterly reports on waste generation and diversion rates.

Expected Outcome:
Evidence-based decision-making and measurable progress toward sustainability goals.

10. Build Awareness and Behavioural Change Programs

Objective: Set a clear intention to foster a culture of environmental responsibility and participation across the NALSAR community. Perception change of sustainable living from inconvenience to a matter of pride.

Recommendations:

- Develop a **New Joinee Manual** for students and staff, outlining NALSAR's sustainability vision and goals.
- Conduct **mandatory orientation sessions for all new students and staff, led by NALSAR students**, to introduce sustainable campus practices.
- Instill pride and a **sense of legacy** among students, encouraging them to pass on sustainable values to each new batch.
- Launch a **continuous sustainability campaign** integrated into college fests, competitions, and interactive workshops.
- Introduce **incentives and recognition for hostels or departments** achieving the highest compliance in waste segregation and sustainability initiatives.
- **Display performance dashboards** showcasing monthly metrics to encourage accountability and healthy competition.

Expected Outcome:
A campus-wide shift toward conscious living shaping a generation of environmentally responsible citizens who carry NALSAR's sustainability legacy beyond its gates.

Nurture a sustainability culture with diverse, recurring activities that embed sustainable habits into daily campus life

Cleanup drives or Plogging Saturdays (can also invite other Plogging runners from the city / other institutes)

Once a month Donation drives in partnership with NGOs or Recycling partners

Quarterly Thrift Parties (Reduce, Reuse)

Repair Meets (Repair, Reuse)

11. Green Hub (Sustainability Recreation Center)

Objective: Create a student-and-staff built natural-materials pavilion that acts as a living showcase, hands-on learning hub, and hangout for upcycling, recycling and compost gardening deepening student connection to campus sustainability

Recommendations

- **Natural building**: Students & staff co-design and handcraft the pavilion using local, natural and reclaimed materials (mud, bamboo, salvaged wood).
- **Living exhibit & visits**: Display working demos of campus sustainability efforts and host visits from other universities and partners.
- **Make it a makerspace**: Stock basic tools, upcycling supplies and small equipment so students can drop in and create.
- **Regular programs**: Run upcycling sessions, repair cafés, composting demos, sustainable menstruation workshops, etc.
- **Edible garden**: Maintain a kitchen garden nourished with campus-made compost.

Expected Outcome:

- Stronger student ownership and daily engagement with sustainability.
- Practical, credit-linked learning that turns theory into projects.
- A visible, replicable model positioning NALSAR as a centre of excellence.
- Measurable outputs: more compost, upcycled goods, volunteer hours and content for reporting.

Green Hub (Sustainability Recreation Center)

11. Towards Recognition as a Green and Circular Campus

As NALSAR University of Law advances toward embedding circularity across its operations from waste management and resource recovery to sustainable procurement and behavioral change it positions itself as a model for institutional sustainability in India. **Formal recognition through credible certifications can further validate these efforts, offering structured frameworks to measure progress, ensure accountability, and inspire replication across other campuses**.
Below are some of the certifications and rating systems NALSAR could pursue to establish itself as a truly green and circular campus:

1. **Indian Green Building Council (IGBC) Green Campus Rating System**

Covers entire campuses (new or existing), assessing site planning, sustainable transportation, water conservation, material/resource management, health & well-being, operation & maintenance and innovation in design.

2. International Institute of Waste Management (IIWM)/All India Council for Technical Education (AICTE) Green Campus Certification
Some higher education institutions receive "Green Campus" certifications from IIWM in collaboration with AICTE, focusing on green cover, water harvesting, renewable energy, student/staff engagement, etc.

3. ISO Standards (for institutional operations)
While not always framed as "campus green certification," institutions often adopt ISO 14001 (Environmental Management System) or ISO 50001 (Energy Management) as proof of systemic sustainability practice. For example, Manipal University lists ISO 14001 & 50001 certifications in their sustainable campus ("Green Manipal") narrative. This kind of certification supports internal processes (which align well with your waste-management, procurement, behaviour change focus).

12. Annual Sustainability Report

Publishing an annual sustainability report would allow NALSAR to systematically document its environmental initiatives, progress, and impact. It serves as a transparent record of the university's commitment to circularity — tracking waste reduction, energy and water conservation, and community engagement. Beyond accountability, the report can also act as a learning tool, showcasing best practices, identifying areas for improvement, and positioning NALSAR as a thought leader among academic institutions championing sustainability.

PHASE IMPLEMENTATION PLAN

Phase	Duration	Key Actions	Lead Responsibility	Expected Output
Phase 1: Build Awareness	0-3 months	Awareness, biodegradable disposables acquisition	Sustainability Expert & Administration	Increased student participation & SUP usage reduction
Phase 2: Foundation Setup	3–6 months	Constitute committee, finalize policy, procure bins	Admin & Facilities	Policy framework & baseline established
Phase 3: Infrastructure and Training	6–9 months	Bin installation, composting setup, staff training	Admin & Housekeeping	Infrastructure & staff readiness achieved
Phase 4: Operations and Partnerships	9–12 months	Launch composting, recycler tie-ups, data tracking	Waste Coordinator & Vendors	Segregation & recycling functional
Phase 5: Monitoring and Review	12 - ongoing months	Quarterly audits, student campaigns, dashboard launch	Sustainability Committee	Continuous improvement cycle established

Conclusion

The waste audit underscores both the challenges and opportunities in NALSAR University's waste management landscape. While current systems are largely operational and unstructured, **the institution possesses the ideal scale, commitment, and leadership potential to pioneer a model zero-waste campus in India's higher education sector**.

By implementing the recommendations outlined in this report — backed by administrative leadership, community engagement, and strategic partnerships — NALSAR can divert over 70% of its waste from landfills within one year, set benchmarks for other universities, and reinforce its standing as a progressive, environmentally conscious institution.

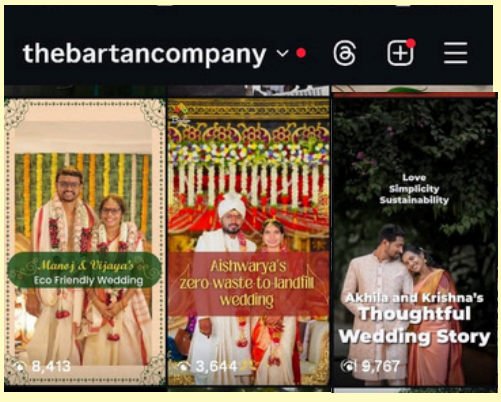
This initiative is not only about managing waste but about shaping a culture of responsibility, where every stakeholder — from student to staff — contributes to the University's shared goal of sustainability and environmental stewardship.

About Maati Foundation

Maati Foundation is a Hyderabad-based non-profit dedicated to environmental conservation and behavioral change. Rooted in the principles of circularity and coexistence, the Foundation works to enable individuals, institutions, and communities to adopt sustainable practices through practical, scalable solutions. From zero-waste events and waste management programs to awareness campaigns and capacity building, Maati Foundation partners with organizations like NALSAR to help them walk the talk on sustainability - one mindful action at a time.

Conducted over 100 workshops & awareness sessions across India

Featured by The Better India over 6 times amongst others



Part of the Maati Collective, The Bartan Company is one of India's pioneering eco-wedding planners, having conducted over 300 sustainable weddings across the country

instagram.com/maatifoundation.ngo | 9704770887

Thank You

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ACKNOWLEDGEMENTS

DevGreen Energy Consulting places on record its sincere gratitude to the management of NALSAR University of Law for awarding this prestigious project of Green Audit of NALSAR University of Law, Justice City, Shameerpet, Hyderabad, Malkajgiri-Medchal District, Telangana.

In this regard, we sincerely thank:

Prof. Faizan Mustafa, Vice-Chancellor, NALSAR University of Law, Hyderabad; and

Prof. Balakista Reddy, Registrar, NALSAR University of Law, Hyderabad

The involvement of the management of NALSAR and their commitment to Environmental Sustainability is clearly demonstrated in every stage of the Green Audit by the way of full cooperation and involvement of all the concerned persons of the University.

We thank Sri Reddy, Chief Engineer, NALSAR University of Law, Hyderabad for providing the necessary support.

Our thanks are due to Sri Koteswara Rao, Assistant Manager, Engineering Department for coordinating the study, providing the valuable information, and extending the support.

We also thank the other staff of Engineering Department and other Sections of the University.

We sincerely hope that the Green Audit Study will facilitate and contribute to a sustainable environment.

Sobhanbabu PRK

Chief Executive Officer

DevGreen Energy Consulting

1.0 INTRODUCTION

1.1 Green Audit

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of an institute. It aims to analyse environmental practices within and outside of the concerned place, which will have an impact on the eco-friendly atmosphere.

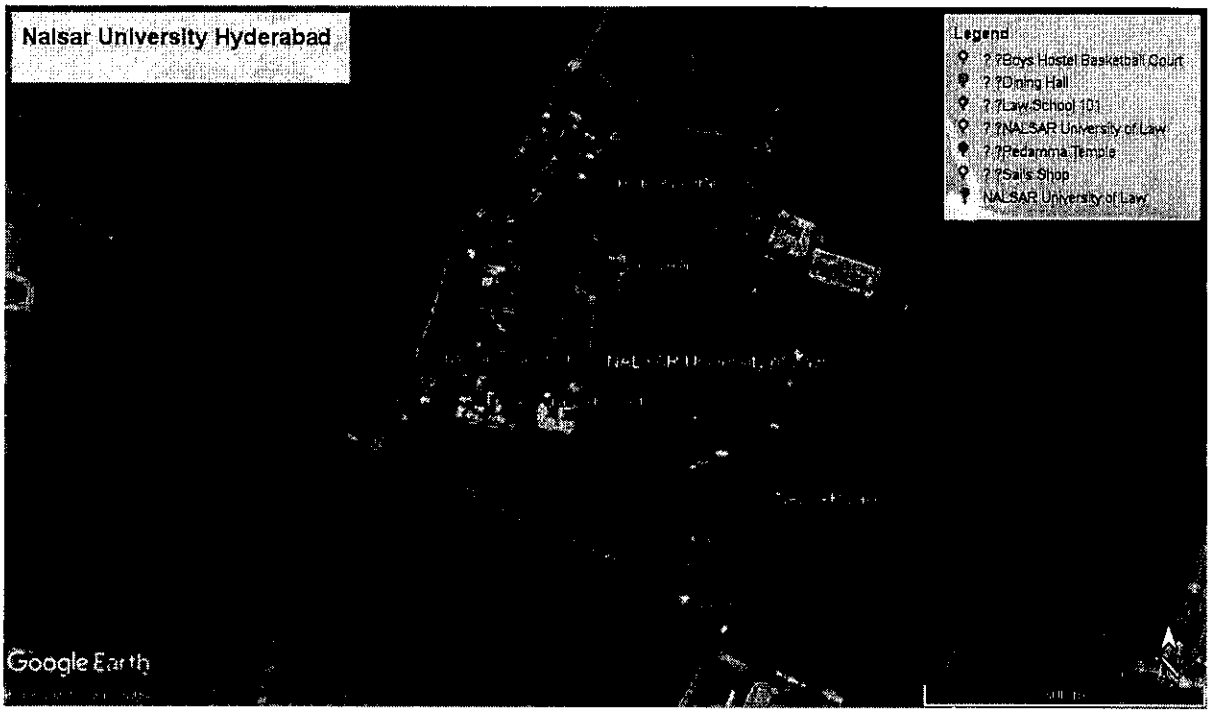
Green audit is a valuable means for an institute to determine how and where they are using the most energy or water or other resources; the institute can then consider how to implement changes and make savings. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus. If self-enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that institutional self-enquiry is a natural and necessary outgrowth of a quality educational institution. Thus it is imperative that the institute evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent.

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institutes which will lead for sustainable development and at the same time reduce a sizable amount of atmospheric CO_2 from the environment. The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory that all Higher Educational Institutions should submit an annual Green Audit Report. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through carbon footprint reduction measures.

1.2 A Brief About NALSAR University of Law

The National Academy of Legal Studies and Research (NALSAR) was established in the year 1998 by a Statute of the State of Andhra Pradesh. Since its inception, the University has been home to vital conversations on law and justice. Using law as an instrument of social change, the University has supported crusades for land rights, disability empowerment and against moral policing and hate speech. NALSAR is committed to the creation of an ethical legal culture, which protects and promotes the rule of law.

Laid over 55 acres, the NALSAR campus is a mix of architecture and stunning landscaping. The campus has its variety of trees, sprawling laws, and tastefully designed architecture—to a wildlife resort. The campus boasts of spacious dining halls, residential complexes (one each for men and women), a stadium, tennis lawns and even a small pond of its own.



With students admitted from all over the country and faculty drawn from home and abroad, NALSAR is counted amongst the top law schools of the country.

The University has the mandate of providing comprehensive legal education at all levels and award degrees or diplomas to successful candidates. The undergraduate, post graduate, and doctoral programs have been designed to enable students, depending on their inclination, to either opt for niche specializations or inter-disciplinary breadth.

The various Courses offered by the University are:

S. No.	Course	Duration
1	BA LLB (Honours)	5 years
2	LLM	1 year
3	MBA	2 years

In addition to these degrees, the University offers a range of highly specialized diploma courses.

With the objective of deep learning in niche areas, NALSAR has set up a number of research centres. The centres have been mandated to research on their domain areas, which would inform policy, strengthen teaching, and where required fuel advocacy. The various centres of the NALSAR University are:

S. No.	Centre Name
1	Centre for Air and Space Law
2	Centre for Constitutional Law, Public Policy and Good Governance
3	Centre for Corporate Governance
4	Centre for Disability Studies
5	Centre for Family Law
6	Centre for Legal Philosophy and Justice Education
7	Centre of Excellence for Economics and Finance
8	Dr. S. P. Chatterjee Centre for Environmental Law Studies
9	M K Nambyar SAARCLAW Centre for Advanced Legal Studies
10	N. C. Banerjee Centre for Intellectual Property Rights Studies

They have provided support to doctoral fellows researching in their area of specialisation; along with providing education and training to legal interns from different parts of the country.

The students and faculty strength of the University are as follows:

S. No.	Category	Strength
1	No. of Students	850
2	No. of Faculty	45

3	No. of Non-Teaching Staff	120

1.3 NALSAR – A Green Campus

NALSAR is a green campus with approximately 30% of constructed area and remaining about 70% is green.

The campus has taken several initiatives to make the campus eco-friendly and these are:

- Energy conservation
- Utilization of Renewable energy
- Water harvesting
- Efforts for Carbon Neutrality
- Plantations
- Hazardous waste management
- E-waste management

1.3 Objectives of the Green Audit

This is the first attempt to conduct Green Audit of this University campus.

The main objective of the green audit is to promote the Environment Management and Conservation in the NALSAR University Campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies, and standards. The specific objectives are:

- To monitor the energy consumption pattern in the University
- To assess the quality of water, water sources, consumption, and treatment
- To quantify the liquid and solid waste generation and management plans in the campus
- To advise resource conservation & management plan to the University covering energy, water, soil, etc.
- Provide a database for corrective actions and future plans
- To assess whether extracurricular activities of the University support the collection, recovery, reuse, and recycling of solid waste
- To identify the gap areas and suggest measures to improve the Green Campus status of the University

The above efforts are explained in the following sections.

1.4 Methodology Adopted

The methodology adopted by DevGreen Energy for conducting the Green Audit has the following key components:

- *Preparatory Work*

  Preparatory work involved preparation & finalization of data collection formats, formulation & finalization of strategy/ methodology, finalization of the field study schedule in consultation with the University, and finalization of Green Audit team.

- *Data Collection*

  It involved collection of design/ technical data of various equipment, gadgets, appliances, their inventory, energy bills, historical data collection, etc. prior to the field visit.

- *On-site Survey*

  Field study was conducted for five days by the Green Audit team to assess and ascertain the current status of various components like energy, water, waste management practices, soil, etc. Verification of information/ data gathered during the previous stage by direct/ physical survey.

- *Focus Group Discussions*

  The focus group discussions were held with the management and other key personnel from various Departments, Groups, Sections of the University such as the Engineering Department, Library, Administration, Canteen, students, non-teaching staff, and focusing on various aspects of the Green Audit.

- *Data Analysis*

  The data gathered from the above tasks has been compiled, analysed for baselines assessment, awareness on environmental sustainability, resources conservation, identify gap areas.

- *Report Preparation, Submission & Discussions*

  The report consisting of data gathered, verified, measured during the various stages of the Green Audit, observations, analysis, gap areas and recommendations

for improvement is prepared. The findings were discussed with the concerned key personnel and any comments, suggestions, observations were noted.

- *Submission of Final Green Audit Report*

  Based on the discussions, the Green Audit report was finalized and submitted to the NALSAR University of Law.

1.5 Timeframe

The Green Audit was conducted during August and September 2021.

1.6 About DevGreen Energy Consulting

DevGreen Energy Consulting is a leading technical consulting and advisory firm established in the year 2013 with a mission to provide sustainable, innovative, and knowledge solutions to core sectors thereby contribute to clean/ green energy, energy security, increase in profitability of businesses, enhanced livelihood of rural poor, improvement in global and local environmental quality, and climate change mitigation. Towards meeting these goals, DevGreen provides advisory in the areas of energy efficiency, renewable energy, rural energy access, MSME clusters development, and cleaner production/ waste minimization to clients in a highly focused manner.

DevGreen has qualified and experienced professionals from energy efficiency, renewable energy, and environment sectors. Our professionals have field research and industry experience backed with robust domain knowledge and expertise through which we support sustainable solutions, which are business centric. The team draws experts from technology, policy, finance, social, and management background with strong domain experience in energy and environmental issues. Its professionals have extensive experience of working on complex and challenging.

DevGreen empowers businesses through knowledge solutions and emphasize on being trusted long-term partner in steering businesses towards sustainable profits.
DevGreen assists a wide array of clients: multilateral and bi-lateral agencies, international organizations, Central & State governments, public sector, corporate/ private sector, foundations, NGOs, and communities to formulate and implement innovative and sustainable strategies.

The Green Audit team of DevGreen Energy Consulting is headed by Mr. Sobhanbabu PRK, M.Tech (Chemical Engineering), IIT Bombay with 30 years of experience in energy efficiency, clean/ green energy, sustainable development, cleaner production, and waste minimization. He received advanced international training as Green Productivity Facilitator by Asia Productivity Organization (APO), Japan and also received trained on various energy & environmental aspects internationally.

2.0 ENERGY AUDIT

2.1 Power Supply & Distribution

The NALSAR University of Law receives the power supply from the Southern Power Distribution Company Limited (TSSPDCL). The contract maximum demand (CMD) of the facility is 200 KVA and the supply voltage is 11 kV. The power supply information is summarised below in Table 1:

Table 1: *Power Supply Details*

S. No.	Item	Description
1	Consumer No.	MCL898
2	Present Contracted maximum demand (CMD), KVA	200
3	Supply Voltage, kV	11
4	Category	2
5	Energy charges, Rs./kWh	7.80
6	ToD Charges, Rs/kWh	1.00
6	Demand Charges, Normal, Rs/KVA/month	390
7	Demand Charges, Penal, Rs/KVA/month	780

The University has got the approval/ sanction of enhancement of CMD by TSSPDCL from the present level of 200 to 350 KVA and the required works are underway. As per the NALSAR University, the works will be completed by the end of September 2021 and the enhanced CMD will be applicable from October 2021.

The power through CTPT and VCB panel is distributed to six nos. of Transformers. The details of Transformers such as rating, supply areas, capacitor Banks, and DG Sets are summarised below in Table 2:

Table 2: *Transformers, DG Sets, Capacitors Details*

S. No.	Transformer	Rating KVA	Power Supply Areas	DG Sets KVA	Capacitors Installed
1	Transformer 1	315	• Admin Building • Academic Building • SARC Law Building • MBA Building	• 200 • 63	20 KVAR

			• IPR Building • Class Rooms • Library • Dining Hall • Class 4 Quarters • RO Plant		
2	Transformer 2	250	• Boys Hostels 1, 2, 3, 4 & 5 • Stadium	315	10 KVAR x 4 nos.
3	Transformer 3	315	• Girls Hostels 1, 2, 3, 4, 5 • Boys Hostel 6 • VC Residence • University Guest House • Faculty Quarters • Convention Centre • STP Plant	315	10 KVAR x 4 nos.
4	Transformer 4	315	• Auditorium	315	10 KVAR x 4 nos.
5	Transformer 5 (New) *(to be energized)*	315	• Boys Hostel 7 (Lifts & other loads)	315	10 KVAR x 4 nos.
6	Transformer 6 (New) *(to be energized)*	315	• Girls' Hostel 6	200 KVA x 2 nos.	10 KVAR x 4 nos.

- Transformer 1 supplies power to Class-IV Quarters with single phase power supply. There are total 12 nos. of Class-IV Quarters.
- There are three numbers of Faculty Quarters (A, B, C Blocks)
- The Capacitors are installed at each panel are manually operated for maintaining power factor.

2.2 Solar Rooftop Power Plant as Green Power for Captive Consumption

The NALSAR University has installed a solar rooftop power project of 200 kW (DC), which is green power. The project was implemented by Telangana State Renewable Energy Development Corporation (TSREDCO) on Net Metering basis in July 2018. The solar plant

generates up to 24,000 kWh per month. The monthly solar energy generation is monitored, as per the NALSAR University.

As can be seen from the electricity bills, about 10,000-15,000 units per month generated by solar rooftop project are adjusted in the total grid electricity consumption as the solar project is net metering project.

2.3 DG Sets as Standby to Grid Power

There are a total five (5) DG sets as standby to grid power comprising of four nos. of 315 KVA and one 63 KVA rated capacity. The sets are used in the event of power shut down/failure.

Logbooks are maintained for all DG sets and details like date of operation, on & off time, voltage, current, hours of operation, energy generation, and diesel consumption are recorded. The details of DG Sets and supply areas are given in Table 1.1 above. All the DG Sets are of Cummins make.

As can be seen from the Table 1.1, two DG sets comprising of one 200 KVA & one 63 KVA are standby to grid power and cater to the areas of Transformer 1 supply areas. During power shutdown, 200 KVA Transformer is operated; however, if the load is less during night or otherwise, 63KVA is operated.

The specific energy generation ratio (SEGR) is estimated to be in the range of 3.00 to 3.50 kWh/Litre, which is satisfactory considering the less operational hours and low load on the DG sets. The SEGR is expected to increase and reach optimum level once the operational hours or load on DG sets increase. As per the records and log book data, the annual HSD bill for DG sets is Rs5.00 Lakh.

2.4 Energy Consumption

The present monthly energy consumption varies in the range of 60,000 kWh (off-peak season) to 1,00,000 kWh (peak season) per month and the average is 80,000 kWh per month. Thus, the annual electrical energy consumption works out to be 10 Lakh kWh per annum. However, the consumption is expected to increase by 10-15% once the new Boys Hostel 6 (construction completed) and Boys Hostel 7 (to be completed by end September 2021) are operational.

However, during the Covid-19 period, the electricity consumption reduced significantly to 15,000 to 27,000 units per month before adjusting net metering units as the hostels were closed and off line classes were changed to online.

The energy consuming equipment/ gadgets of the facility are:

- Split Air conditioners
- Submersible Pumps
- Water circulation Pumps
- Ceiling Fans
- Blowers
- Interior Lights
- Street Lights
- Geysers
- Computers
- Printers
- Photocopying machines
- Projectors
- Lifts
- STP Plant Blowers & Pumps
- RO Plant Pumps
- Kitchen equipment like mixi, grinders, etc.

Solar street lights were replaced with LED street lights due to high maintenance cost, battery problems, and frequent failures of solar street lights.

2.5 CNG

CNG is the fuel used in the kitchen for cooking of food.

2.6 Energy Conservation Initiatives Taken by NALSAR for making the Campus Green

The NALSAR University has been emphasizing energy conservation, energy efficiency, and energy savings in the campus by implementing various energy conservation technologies, practices, and measures, which are given below:

- All the buildings in NALSAR campus are structured in such as a way that sufficient natural lighting and ventilation is available in all the rooms and buildings without using much lights, fans, air conditioners
- Roof was constructed by using appropriate thermal insulation material as per Energy Conservation Building Code (ECBC)
- Most of the buildings including Library, Dining Hall, Boys Hotels 1, 2 & 6, Girls Hostels 1 & 2, and Street Lights have energy-efficient LED lights of appropriate Wattage
- Further, NALSAR has planned replacement of lights with LED lights in Boys Hostels 3, 4, 5 and Girls' Hostels 3, 4, 5 in 2-3 months
- Replacement of remaining lights in the campus with energy-efficient LED lights are underway
- Solar Rooftop Power Project of 200 kW has been commissioned in 2018, which generates substantial amount of green energy (24,000 kWh per month) substituting the grid power to the extent
- Solar water heaters have been installed and used for hot water generation in the hostels, guest house, convention centre, and other facilities. This measure has reduced the grid power consumption of the campus substantially

The above measures have helped not only reducing grid power consumption but also reducing carbon footprint and GHG emissions in a substantial way.

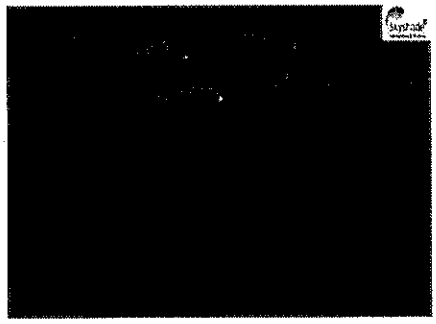
2.7 Recommendations for Energy Savings & Conservation

The site survey and study conducted at the premises shows that there is scope for reducing the energy consumption by adopting the following measures/ schemes/ practices:

1) Presently, non-LED lights like Fluorescent Tube Lights (FTL) and CFLs of different Wattage are used in boys' hostels (3, 4, 5) and girls' hostels (3, 4, 5), office buildings, buildings' exterior lighting, DG Sets rooms, and other locations. It is suggested to replace these fixtures with energy-efficient LED lighting to reduce lighting energy consumption of these buildings/ areas by about 50%.

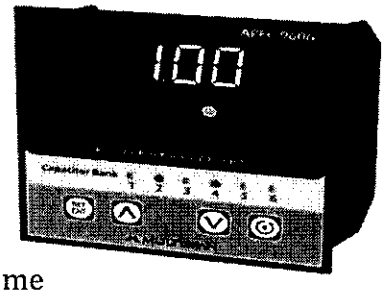
2) Stadium has a total of 35 Sodium vapour lamps (20 nos. of 125 W; and 15 nos. of 250 W). These SV lamps should be replaced with suitable wattage of energy-efficient LED lights.

3) It is suggested to implement Day lighting solutions where possible to reduce lighting energy consumption during day time. The lighting energy consumption will reduce by 30% with Day Lighting solutions.



4) Automatic power factor controller (APFC) may be installed for all distribution panels at each Transformer to maintain near unity power factor. AT present, power factor is maintained manually by switching on/off the capacitor panels. As the power load differs between night and day hours, the APFC helps maintaining the unity power throughout the day thereby reducing energy bill.

5) It is suggested to install Heat Pumps for hot water generation in all the boys' and girls' hostels in place of electrical geysers. Heat Pumps reduce electrical energy consumption by 30-40% compared to electrical geysers and provide hot water up to 60°C.



As Solar Water Heating system is provided in some hostels, which effectively supply hot water during the day, it is suggested to integrate the heat pump with solar hot water system so that continuous supply of hot water for 24 hours per day is assured.

6) Presently, the split air conditioners are 1.5 TR, 2 TR, 5.5 TR capacity and 3 Star Rating. It is suggested to replace these with energy efficient Air Conditioners of 5 Star Rating in a phased manner to reduce the energy consumption by 5 to 7%.

7) It is suggested to install Energy Saver for all Air Conditioners to save energy by 35%. The Air Conditioner Power Savers are based on Thermal Saturation Point.

The problem with relying on the present system of thermostat in Air conditioners is that it works by sensing the room temperature and operates compressor based on that, but it does not consider the energy levels in the air conditioner. Post the thermal saturation point, the air conditioner already has enough stored energy to remove the heat from the room and any excess electricity used by the compressor goes waste. An air conditioner works by compressing and condensing refrigerant gas to a high-pressure liquid, which then moves to a low-pressure area and absorbs the heat from the air in the room to convert back into gas. In an oversized air conditioner, the heat coming from the room is not sufficient to convert low-pressure liquid to back to gas and thus it goes back in the compressor as a liquid. The electricity then used by the compressor goes waste as the refrigerant is already in liquid form. Technically the point at which the liquid absorbs heat and still does not change to gas, neither does it change its temperature is called Thermal Saturation Point. The Power Savers based on Thermal Saturation Point detect occurrence of this state and switch off the compressor. This avoids wastage of electricity by the compressor. The payback period is 1 to 2 years depending on the size of the AC.

8) It is suggested to replace the old in-efficient ceiling fans with super-efficient ceiling fans which consume 35W in place of 60-80W conventional ceiling fans thereby reducing the fans consumption by 50%. Considering the large number of ceiling fans in the campus, it may be considered on priority basis. EESL, Government of India may be approached for undertaking this project under ESCO model.

9) The University may conduct in-house programs, campaigns, awareness raising programs in the campus on energy conservation by inviting experts. This will help raising energy conservation awareness and upgrade the knowledge to reduce energy consumption. The NALSAR University may also nominate students for external programs on energy conservation and clean energy. The posters on energy conservation may displayed in different locations, especially in hostels, offices to raise awareness and reduce energy wastage. This will inculcate the culture of energy conservation in the campus.

10) It is suggested to maintain a logbook to monitor and record energy generation by solar rooftop plant on daily & monthly basis. This would help monitor the energy generation and thereby tracking the performance of the solar rooftop plant and take necessary action immediately, if the performance drops.

11) The University may prepare a plan to replace the existing diesel buses, cars, other vehicles with E-vehicles and make necessary provisions for charging stations, etc. The concerned department of government of India may be consulted for assistance in this regard.

3.0 WATER MANAGEMENT

3.1 Water Supply & Distribution

The Nalsar University campus meets its water requirement by (i) ground water as well as (ii) Manjira water with ground water accounting for the major share of total water consumption of the campus.

Normally, two nos. of submersible bore well pumps are operated for a total combined duration of 12 to 15 hours per day to meet the requirement. However, during summer, four nos. of bore wells are operated to meet the increased water consumption. The raw water consumption is estimated to be 1,000 kLPD (kilo Litres per day).

The University has permission to use maximum 1,000 units of Manjira water per month. However, when water consumption exceeds 1,000 units in summer during the months of February, March, and April, the Manjira water consumption increases and hence the University pays additional charges for excess water usage above 1,000 units. The Manjira water is supplied to the campus by a 6-inch line.

There is an underground sump of 3 Lakh Litres capacity to store ground water and Manjira water. The water from the underground sump is pumped to an overhead tank (OHT) of 1.00 Lakh litres from where the water is pumped to hostels, offices, staff quarters, and other buildings for toilets etc.

The campus has an R.O plant with Raw water feed flow of 4,000 Litres per hour (LPH) consisting of two numbers of each 2,000 Litres capacity and RO water generation capacity is 2,000 LPH to meet the drinking water requirements of the campus. The RO water is stored in two storage tanks of each 5,000 Litres (total storage capacity 10,000 Litres) and supplied to all hostels, quarters, offices, class rooms, kitchen, dining hall, etc. to meet drinking water requirements. The total RO water consumption is estimated to be approximately 15,000 Litres per day. The reject water from the RO plant is collected in an underground sump and used for watering the plants, gardening, and lawn maintenance. The sources of water, water drawl/ consumption quantity, water treatment adopted, and water utilization are summarized in Table 3 below:

Table 3: *Sources of Water, Treatment, and Management*

S. No.	Parameter	Description
1	Source(s) of Water for the University	Ground water and Manjira water
2	Major Source of Water	Ground water
3	No. of Bore Well Pumps Installed	4 nos.
4	Type of Bore Well Pumps Installed	Submersible
5	Motor Rating of Bore Well Pumps, HP	5 HP
6	No. of Bore Well Pumps Operated in a day (normal)	2 nos.
7	Total combined Hours of operation of the 2 pumps per day	15 hours/day
8	Quantity of water drawl	1,000 KL/day
9	*No. of Bore Well Pumps Operated during summer#* *(Middle of February, March, & April)*	4 nos.
10	Permission for Manjira Water	1,000 units/ month
11	Underground Water Storage Sump Capacity	3.00 Lakh Litres
RO PLANT		
12	RO Plant	Yes
13	No. of RO Plants	2 nos. *(New Plant in operation; old plant not operational)*
14	Feed Flow Rate	4,000 LPH
15	Permeate Flow Rate/ Output	2,000 LPH
16	Reject water	1,950 LPH
17	System Recovery	50%
18	Source of Feed Water	Bore Water
19	TDS of RO water	<100 ppm
20	RO water usage	Drinking water for all Hostels & Buildings
21	RO water consumption	15 kL per day
22	RO Plant Operational hours per day	8 to 10 hours/day
23	RO Water Storage Tank Capacity	10,000 Litres *(2nos. of 5,000 Litres)*

 # The campus is closed for vacation in May & June and November & December

The old RO Plant is operated only when new RO plant is under maintenance or when demand for RO water increases and cannot be met by the new RO Plant, especially during summer.

3.2 Water Quality & Testing

The bore water, Manjira water and RO water samples are tested in a reputed Laboratory, twice in a year at the time of beginning of a semester and the reports are filed. Further, as and when request comes from students, faculty or staff, tests will be conducted to check water quality. The water samples are collected from each floor of Girls' & Boys Hostels, Dining Hall, Administrative Block Cafeteria, Academic Block, MBA Block, Seminar Hall, Library, etc. and tests are conducted externally by an authorized & certified laboratory. The results of biological and physico-chemical tests conducted on drinking water samples are presented in the Table 4 below:

Table 4: *Test Results of Water Quality*

S. No.	Test Carried Out	Result	Test Method
Test: Bacteriological **Sample:** Drinking Water from Girls' Hostels, Dining Hall, Boys Hostels, etc.			
1	Total Coli form (MPN/100ml)	Absent	IS:1622-1981
2	Faecal Coli form (MPN/100ml)	Absent	IS:1622-1981
3	E.Coli in 100 ml of sample	Absent	IS:1622-1981
Test: Physico-Chemical[2] **Sample:** Drinking water			
1	Odour	Agreeable	-
2	Taste	Agreeable	-
3	Turbidity	0.1	IS:3025(Part10)-1984
4	pH Value	7.85	IS:3025(Part11)-1983
5	Total Dissolved Solids	347	IS:3025(Part16)-1984
6	Total Hardness as $CaCO_3$	240	IS:3025(Part21)-2009
7	Calcium as C^{++}	51	IS:3025(Part40)-1991
8	Magnesium as Mg^{++}	27	IS:3025(Part46)-1994
9	Total Alkalinity as $CaCO_3$	200	IS:3025(Part23)-1986

10	Chloride as Cl^+	38	IS:3025(Part32)-1988
11	Total Iron as Fe	0.27	IS:3025(Part53)-2003
12	Nitrate as $NO3^-$	01	IS:3025(Part34)-1988
13	Sulphate as $SO4^-$	03	IS:3025(Part24)-1986
14	Fluoride as F^-	0.10	IS:3025(Part60)-2008

[1]*The drinking water confirms to IS10500-2012 (Second Revision), Drinking Water Specification*

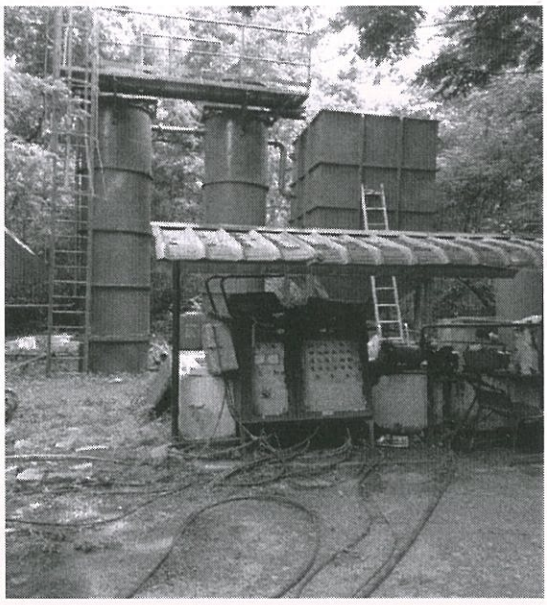
[2]*The other parameters of drinking water as per the Physico-Chemical Test (1 to 14) are also within the limits for safe drinking water*

3.3 Waste Water Generation, Treatment & Management

The sources of waste water are student hostels, toilets, canteen, dining hall, buildings, faculty rooms, faculty/ staff quarters, offices, etc.

The waste water generated from the above sources is collected and treated in STP, the details of which are furnished below:

3.3.1 STP



The waste water generated from the above sources in the campus is stored in an underground sump of 1.00 Lakh Litre capacity. The waste water from the sump is pumped to the STP (MBBR technology) of 150 kLPD capacity. The treated water is pumped by a 3 HP pump to a 30KL storage tank and used for watering the plantations, gardening, etc. The sludge generated is dried and disposed-off. The STP plant comprises four numbers of blowers (10HP) and two numbers of monoblock pumps (3HP). The STP is taken for maintenance & cleaning every three months. The waste water sources, quantity of waste water, treatment adopted, and recycle/ reuse of treated water are summarized below in Table 5:

Table 5: *Waste Water Sources, Treatment, Recycle, Reuse*

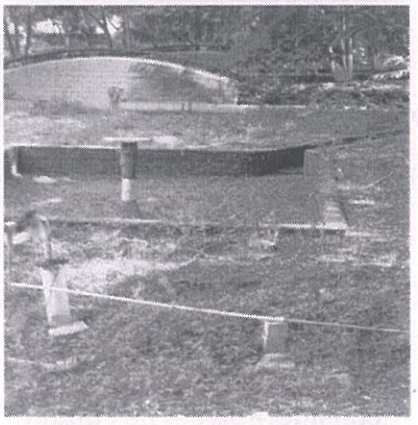
S. No.	Parameter	Description
1	Sources of Waste Water	• Hostels, canteen, dining halls, buildings, toilets, labs • RO reject water
2	STP capacity	150 LPD
3	Technology of STP	MBBR
4	Use of STP Treated water	Gardening, plantations
5	Quantity of RO Reject water	1,950 LPH 20,000 LPD
6	Use of RO Reject water	Gardening, plantations
7	Leaking taps, if any	No

3.4 Initiatives Taken by NALSAR for Water Conservation & Management to make the Campus Green

3.4.1 Water harvesting

The University has emphasized on maximum utilization of rain water for harvesting by the percolation wells made in the campus.

The necessary structures were created to divert the rain water in to the rain water harvesting pets. Check dam construction is not possible as per the condition of the site because there are under rocks.



There are two rain water harvesting pits in the campus near the bore wells for ground water recharge. Further, there is a natural storm water pond of 700 meters perimeter and 4 to 5meter depth, where storm water is stored for ground water recharge. The pond has fish and other aqua life. The over flow from this water pond goes to Shameerpet Lake. Water conservation measures adopted by the University are highlighted below in Table 6:

Table 6: *Water Conservation Measures*

S. No.	Parameter	Description
1	Rain water harvesting (RWH) available in the campus	Yes
2	No. of RWH pits	2 nos.
2	Natural storm water pond	Yes
3	Roof rain water harvesting	Not available
4	Type of taps used in toilets	Normal/ standard
5	Whether sensor type taps are used?	No
6	Whether drip system provided for watering the plantations?	Available, but limited to a few areas. In other areas, normal system is in use.
7	Whether flow meters are installed for monitoring raw water consumption	No
8	Type of flush in toilets	Normal/ standard

3.4.2 Sewage Water Treatment, Recycle and Reuse

Sewerage Treatment Plant is installed (described in Section 3.3.1) for recycling the water and the recycled water is used for gardening purpose.

3.5 Recommendations for Water Conservation and management

The water sources are safe for consumption from contamination as can be seen from the various tests conducted.

The University has been making sincere efforts for conservation of water as explained above. However, the campus will benefit by adopting the following measures towards further water conservation and costs.

1) It is recommended to make provisions to collect the rain water from the roofs of all the buildings of the campus by laying pipelines and channels and send the rain water to the rain water harvesting pits. This will help recharging the ground water considerably. The quantity of water that can be collected is substantial considering the large roof area of the buildings. It will further reduce water drawl from bore wells as well as Manjira water consumption.

It should be noted that approximately 3,000 Litres of water can be harvested for every M^2 area of the roof of a building. Since the roof area of the buildings is huge and extends to thousands of M^2, the water harvesting potential is huge.

2) It is suggested to adopt drip irrigation for gardening, plantations, and lawns where it is presently not used. Drip irrigation saves nearly 70-80% of water for gardening purposes. By adopting this measure, the STP treated water and RO reject water will suffice for plantation and gardening purposes and no ground water is required.

3) It is suggested to use pressure taps/ spray taps in wash rooms in place of standard taps. This will reduce water consumption in toilets/ wash rooms by about 80%. As a long term measure, sensor based taps may be installed for reducing water consumption. Reduction in water consumption in wash rooms/ toilers will not only reduce bore water/ Manjira water consumption, it will reduce waste water generation, hence STP treatment costs will reduce.

4) Digital water meters may be installed for bore wells for monitoring the water drawl and consumption on daily basis and the same may be recorded in log books.

5) Water conservation posters may be displayed in the campus to create awareness among students and staff. The students may be nominated for any external programs or experts may be invited to the campus.

6) Recycle and reuse of STP treated water and RO reject water should be enhanced for gardening and plantations so that the need for fresh ground water is reduced to the minimum.

(7.1.3+ 7.1.6)

4.0 WASTE MANAGEMENT

Waste management is vital for maintaining eco-friendly campus. Its collection, management, treatment is a big challenge. In the University, different types of waste are generated, as below:

- Solid organic waste from dining hall, kitchen
- Green waste from gardens, plantations and lawns
- E-waste from Computer Laboratories and Offices
- Paper waste from Library, Examination Hall
- Bio-medical waste from Clinic

The different types of solid waste generated in the campus, their particulars such as description of waste, generation quantity, and disposal method are summarized below in Table 7:

Table 7: *Different Types of Waste Generated and their Disposal*

S. No.	Type of Waste	Particulars	Quantity	Disposal Method
1	Solid Organic Waste	Cooked food waste from dining hall and uncooked waste from kitchens	600-800 kg/day	Collected by outsiders for animal food
2	Green Waste	Green garden waste such as green leaves, stems, branches, woody material, etc.	300-400 kg/day	Collected and disposed-off
3	Paper Waste	Paper waste from Library (old newspapers, Magazines, Parcels) and Examination Halls	1,250 kg/year	Direct selling to vendors through tendering
4	E-Waste	Damaged desktops, laptops, printers, cartridges, routers, switches, keyboards, projectors, electrical & electronic parts	2-3 kg/month	Reuse after refurbishment, repairs, upgradation of gadgets; Disposal by buyback arrangement

5	Plastic Waste	Pens, Refills, Plastic water bottles, wrappers, etc.	Negligible	Direct selling to scrap dealers
6	Bio-Medical Waste	Clinic waste, expired medicines, syringes, cotton, bandages, etc.	10 kg/day	Collected by M/s GJ Multiclave (Ind) Pvt. Ltd. for further treatment

4.1 E-Waste

The University has different electronic systems as listed below in Table 6.

Table 6: Electronic Items/ Gadgets in the campus

S. No.	Items	Inventory
1	Desktop Computers	100
2	Laptops to Admin	80
3	Laptops to students	15
4	Printers	70
5	Small Printers	10
6	Wi-fi access points	120
7	Data Servers	2
8	Televisions	50
9	Keyboards, routers, etc.	150
10	Photocopying machines	10

There are two Computer Labs, one Opac Lab, and two Data Servers.

The University has adopted a sound strategy to reduce and manage E-waste generation in the campus and it consists of:

- Upgradation & refurbishment of systems from time to time and using them thereby extending the life of gadgets
- Refurbishment of projectors and other gadgets for utilization
- Development of a fully equipped workshop, which undertakes refurbishment and repair of electronic items for utilization
- Refilling of cartridges
- Disposal of obsolete items under buyback arrangement with vendors.

The total E-waste generated is about 2-3 kg/month.

4.2 Paper Waste

The sources of paper waste are normally Library and Examination Centre.

The campus has a Library. In order to reduce paper waste, the Library has upgraded to digital Library where possible and has digital/ online databases, digital library, etc. There are books and magazines but there has been an overall effort towards digitization. This has considerably reduced the paper waste.

Further, Examination Section is not generating any solid waste for the past 2 years as it is paper-less and exams are conducted on-line. Prior to Covid, the paper waste generated was disposed-off once in 7 years by calling tenders.

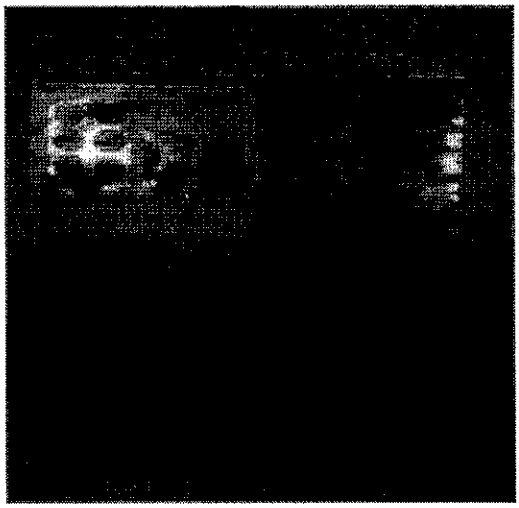
The details of paper waste are summarized below in Table 7:

Table 7: *Paper Waste*

S. No.	Paper Waste	Inventory	Method of Disposal
1	Old Newspapers	1,250 kg/year	Disposed once in a year through tendering
2	Magazines		
3	Parcels		

4.3 Bio-Medical Waste

It is generated in the clinic inside the campus. The waste is picked up by M/s GJ Multiclave (Ind) Pvt. Ltd., twice in a week (Monday and Friday). The waste is segregated and collected in three different bins of Yellow, Red, and Blue before it is being picked by the agency. The waste includes syringes, IV sets, gloves, plasters, masks, needles, vials, scissors, etc. It is noted that the medical waste is finally incinerated at a common facility by the company.



4.4 Solid Organic Waste

The kitchen and dining hall generate about 600-800 kg/day solid organic waste, which includes cooked food from dining halls and uncooked vegetables, etc. from the kitchen. In addition to this, about 300-400 kg of green garden waste is generated in the campus. Hence the total solid organic waste generated amounts to 1,000-1,500 kg/day. Presently, it is picked up by outsiders as animal food.

4.5 Recommendations for Waste Treatment

1) It is suggested to install an anaerobic digestion (Bio-methanation) based Biogas plant for treating the solid organic waste & green waste generated in the campus. A biogas plant of 200M^3/day capacity may be installed that can treat 1,000-1,500 kg food waste, solid organic waste, and green garden waste generated from plantations and lawns. The Biogas generated has a good calorific value and can be used as clean/ green fuel for cooking, heating, and hot water generation in the kitchen thereby reduce the CNG consumption and CNG bill. The bio-manure is a by-product of the Biogas plant, which produces about 300-500 kg/day bio-manure and can be used within the campus as bio-fertilizers for plantations, lawns, gardens, etc. Hence Biogas plant is an excellent zero-waste green technology for the University. A number of institutions, schools, colleges, dairy farms, poultry farms, townships, and industries have installed biogas plants and successfully managed the waste in an environmentally sustainable basis.

2) To encourage elimination of use of plastics in the campus, the University may promote biodegradable materials as alternative. Efforts should be made to make the plastic-free campus.

3) Recycle and reuse of different wastes should be emphasized to reduce waste generation in the campus.

5.0 HORTICULTURE (71.5+7+1.6)

5.1 Trees & Plantations

Continuous and consistent efforts are being made by the University for planting trees within the campus every semester; and as of now, approximately 5,000 trees have been planted and campus has green lawn of area 2,000 sq.m.

The campus is immensely diverse with a variety of tree species. Most of these tree species are naturally grown while others were planted in different periods of time. The trees and plants of the University have increased the quality of life, not only the institute's fraternity but also the people around the university in terms of contributing to environment improving air quality, conservation of water, preserving soil. Many spices of birds are dependent on these trees mainly for food and shelter. Thus, the University has been playing a significant role in maintaining the environment of the surrounding areas.

The University campus houses a large variety and population of trees and plants which helps in conservation of soil, water, air and other valuable natural resources and reduces pollution.

Some of the plants are:

- Asoka
- Bamboo
- Cactus
- Coconut
- Guava
- Henna
- Indian Banyan
- Teak
- Sappota
- Papaya
- Neem
- Mango Tree

- Lemon
- Subabul

The University is giving priority for the growth of diverse range and type of plantations, trees, and gardens by ensuring adequate supply of water.

Further, the campus is rich with plants and trees, and a lake which act as sinks and reservoirs of carbon and help the campus green with good air quality.

5.2 Observations & Recommendations on Horticulture

It is observed that, there are a number of "Subabul" (Leucaena Leucocephala) trees in the NALSAR campus. The disadvantages of the subabul trees are as follows:

- Subabul tree produces large number of seed, which get dispersed very fast by wind. This will lead to formation of thick and deep jungle in a short time inside the campus. This does not allow the growth of other plants.
- Subabul tree requires enormous amount of water for its growth and draws ground water thereby severely reducing the availability of ground water for other useful purposes of the campus
- Subabul trees have toxin in leaves called "mimosine", which causes severe allergic problems in human beings and also effect animals
- Subabul tree trunks and branches are very brittle and trees will be toppled down with high winds, which may damage nearby buildings, structures, vehicles, and cause injuries or death to human beings, animals, etc. thus causing serious damages to properties and human life.
- Its thick and deep foliage doesn't allow the sunlight to come down thereby not allowing the ground soil to get dried fast. This will lead to severe mosquito nuisance causing serious diseases like malaria, dengue, etc.
- Due to the damp ground, a lot of insects breeding will develop, eventually causing frog nuisance and attracting snakes. There are poisonous snakes in the campus which pose problems to the safety of students, faculty, staff and others.

- The large number of subabul trees in the campus has also led to monkey menace in the campus, threatening the people and causing damage to the structures in the campus.

In view of the above problems associated with the subabul trees, the University may take a decision to remove these wild trees in the campus.

5.3 Green Belt Development

The green belt is developed in the whole campus around all the buildings, electric sub-stations, and also outside the campus.

The general considerations involved while developing the green belt are following:

- Generally, local/native fast growing trees are planted
- Planting of trees is undertaken in appropriate encircling rows around the project site
- The trees are protected by plantation of non-palatable shrub species to avoid browsing by animals; and
- The plantation is developed at a spacing of 2.5 x 2.5 m and about a minimum 100 trees per hectare are planted.

6.0 NOISE POLLUTION

6.1 Noise Pollution

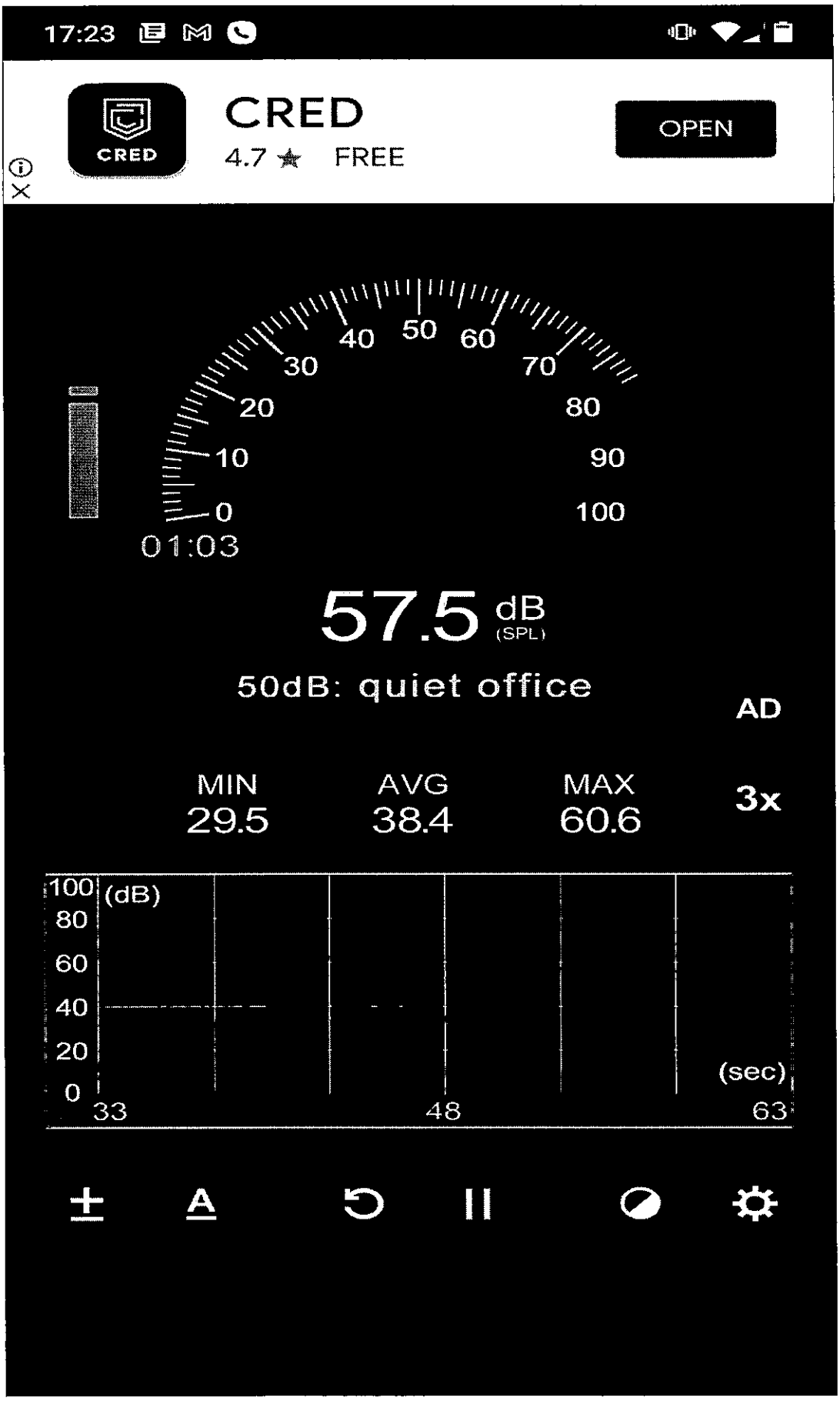
The human ear is constantly being assailed by man-made sounds from all sides, and there remain few places in populous areas where relative quiet prevails. Loudness is the strength of sensation of sound perceived by the individual. It is measured in terms of Decibels. Just audible sound is about 10 dB, a whisper about 20 dB, library place 30 dB, normal conversation about 35-60 dB, heavy street traffic 60-0 dB, boiler factories 120 dB, jet planes during take-off is about 150 dB, rocket engine about 180 dB. The loudest sound a person can stand without much discomfort is about 80 dB. Sounds beyond 80 dB can be safely regarded as Pollutant as it harms hearing system. The WHO has fixed 45 dB as the safe noise level for a city. For international standards a noise level up to 65 dB is considered tolerate. Frequency is defined as the number of vibration per second. It is denoted as Hertz(Hz).

6.2 Noise Levels in NALSAR Campus

The University campus is quite and there is no noise pollution noted. The detailed study of the operations and the activities of the campus clearly indicate that the noise levels are low and within the limits.

As per the Factories Act 1948, the Permissible Exposures in cases of continuous noise is 90 dBA for 8 hours per day. No exposure in excess of 115 shall be permitted.

The noise levels were measured inside the NALSAR campus at different important locations. At each spot, the measurements were taken for 60 seconds during day time and noted down the measurements. A screen shot of the measurements of noise taken is appended in Annexure 2. The minimum dB recorded was 29.5, maximum 0.6 and the average was 38.4. Hence it can be concluded that the noise levels in the campus are well within the stipulated range of safe noise levels.


17:23
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(SPL)
50dB: quiet office
AD
MIN
29.5
AVG
38.4
MAX
60.6
3x
100
80
60
40
20
0
(dB)
33
48
63
(sec)

7.0 SOIL

The contamination of soil can happen for a variety of reasons as explained below:

- Extensive use and disposal of chemicals on soil
- Discharge of untreated waste water
- Dumping of Construction debris and waste

It is observed from the field survey conducted at the NALSAR campus that the there is no contamination of soil due to the above activities. There are no chemicals used in the campus and the biomedical wastes are disposed-off through a third party authorized agency, which collects the waste from the campus and treats it in a common facility. No hazardous waste or medical waste is dumped on the soil. The waste water is treated in STP and used for gardening purposes. The debris or waste from construction activities is loaded on trucks by the external parties and no waste is dumped on the soil.

The quality of soil can also be gauged from the fact that the ground water is the major source of water for internal consumption in the campus and has no harmful contamination. The pH, total hardness, calcium, magnesium, and chlorides of ground water are within the permissible limits reflecting the quality of soil also in a way.

8.0 AIR

Air is one of the essential elements for sustainability of life on this planet. This is most often polluted by humans along with water. Hence air quality requires to be monitored regularly to check the status.

At NALSAR, due to excellent greenery, trees & plantations within the campus as well as outside and due to absence of any industrial activity or any other activity that cause air pollution, the air quality is good

The current Air Quality Index near the campus at Shameerpet Lake is as follows:

Parameter	Value	AQI	Comment
NO_2	14.03 µg/m^3	AQI 17	Good
O_3	41.51 µg/m^3	AQI 41	Good
$PM_{2.5}$	16.4 µg/m^3	AQI 16	Good
SO_2	17.29 µg/m^3	AQI 17	Good
PM_{10}	76.2 µg/m^3	AQI 76	Satisfactory

The NALSAR University makes all efforts required to keep the quality of air clean always. In this regard, the University uses new vehicles by replacing old vehicles.

Further, the campus is rich with plants and trees, and a lake which act as sinks and reservoirs of carbon and help the campus green with good air quality.

Annexure 1- Details of Electrical Loads

S. No.	Load Description	Rating Watts	Nos.	Total Load kW
1) CONVENTION CENTRE				
1	Air Conditioners, 2 TR	1,900	36	68.4
2	Instant Geysers, 5L	4,500	24	108.0
3	Exhaust Blowers	2,250	2	4.5
4	Door Air Curtains	1,500	1	1.5
5	Lights	20	144	2.9
6	Ceiling Fans	80	60	4.8
7	Wall mounted fans	60	20	1.2
8	LED Tube Lights	40	12	0.5
9	Air Conditioners, 2TR	1,900	2	3.8
10	LED Lights	11	40	0.4
11	UPS	10,000	1	10.0
12	Computers	140	30	4.2
13	TVs	80	24	1.9
14	Water cooler, 200L	240	1	0.2
15	Deep Freezers, 230L	220	2	0.4
16	Tube Lights, 40W	40	60	2.4
17	Sound System	10,000	1	10.0
	Total- Convention Centre	**-**	**460**	**225.2**
2) CONVENTION CENTRE FACULTY QUARTERS				
1	Tube Lights, 40W	40	10	0.4
2	Ceiling Fans	80	8	0.6
	Total- Faculty Quarters	**-**	**18.0**	**1.0**
3) MAIN GATE				
1	LED Street Lights	120	21	2.5
2	Name Board CFL Lights	11	9	0.1
3	Security Room Tube Lights	40	4	0.2
4	UPS for CCTV	5,000	1	5.0
5	TVs	80	1	0.1

	Total- Main Gate	-	**36**	**7.9**
4) AUDITORIUM				
1	Fall Ceiling Fluorescent Lights	20	30	0.6
2	LED Lights- Outside	120	10	1.2
3	Stage / Focus Lights	1,500	18	27.0
4	LED Colouring Lamps	80	48	3.8
5	UPS	20,000	1	20.0
6	Projector	250	1	0.3
7	Sound System	50,000	1	50.0
8	Outdoor Area Tube Lights	40	30	1.2
9	LED Lamps	20	15	0.3
10	Air Conditioners, 2TR	1,900	6	11.4
11	Air Conditioners, 5.5TR	6,000	14	84.0
12	Screen Rolling Motors	2,250	1	2.25
13	Wall Lights	600	3	1.8
	Total- Auditorium	-	**178**	**203.8**
5) MESS/ DINING HALL				
1	LED Tube Lights	20	48	1.0
2	Tube Lights, 40W	40	10	0.4
3	Ceiling Fans	80	3	0.2
4	Ceiling Fans	80	44	3.5
5	Grinders, 5HP	3,750	3	11.3
6	Grinder, 3 HP	750	1	0.8
7	Deep Freezer, 500L	300	2	0.6
8	Water cooler, 200L	240	1	0.2
9	Water cooler, 400L	400	1	0.4
10	Exhaust Fans	3,750	2	7.5
11	Air Curtains	1,500	1	1.5
12	Microwave, Mixi, Juicer	3,000	1	3.0
	Total- Mess/ Dining Hall	-	**117**	**30.4**
6) LIBRARY				
1	Air conditioners, 2TR	1,900	1	1.9
2	Zerox M/c	4,000	1	4.0

3	Zerox M/c	1,000	1	1.0
4	Server	10,000	1	10.0
5	UPS	10,000	1	10.0
6	Inverter	1,400	1	1.4
7	Fountain	2,250	2	4.5
8	Tube Lights,40W, LED	40	273	10.9
9	LED Lights	11	41	0.5
10	Ceiling Fans	80	106	8.5
11	Computers	140	2	0.3
	Total- Library	**-**	**430**	**52.9**
7) INTERNET CENTRE				
1	Air conditioners, 2TR	1,900	2	3.8
2	Lights	36	18	0.6
3	Computers	140	10	1.4
4	Servers	10,000	3	30.0
5	UPS	10,000	1	10.0
	Total- Internet Centre	**-**	**34**	**45.8**
8) MBA BLOCK				
1	Air conditioners, 5.5TR	6,000	4	24.0
2	Air conditioner, 3TR	3,500	1	3.5
3	Air conditioner, 2TR	1,900	6	11.4
4	Projectors	250	3	0.8
5	LED Lights	30	15	0.5
6	Zerox M, small	1,000	1	1.0
7	Sound System	5,000	1	5.0
8	Computers	140	6	0.8
9	LED Lights	10	3	0.03
	Total- MBA Block	**-**	**40**	**47.0**
9) IPR BUILDING				
1	Air conditioners, 2TR	1,900	3	5.7
2	Zerox M/c	4,000	1	4.0
3	Zerox M/c	1,000	1	1.0
4	LED Tube Lights	40	138	5.5
5	Ceiling Fans	80	22	1.8

6	Projector	250	1	0.3
7	Sound System	5,000	1	5.0
8	Computers	140	8	1.1
	Total- IPR Building	**-**	**175**	**24.4**
10) SARC LAW BUILDING				
1	Air conditioner, 5.5TR	6,000	6	36.0
2	Network Racks	5,000	1	5.0
3	Air conditioners, 2TR	1,900	12	22.8
4	Tube Lights	40	56	2.2
5	Ceiling Fans	80	18	1.4
6	Lift	3,750	1	3.8
7	Outside Lights (Conventional)	22	40	0.9
8	Ceiling Fans	80	36	2.9
9	Tube Lights	40	62	2.5
10	Sound System	5,000	1	5.0
	Total- SARC Law Building	**-**	**233**	**82.5**
11) MBA CLASS ROOMS				
1	Air conditioners, 2TR	1,900	36	68.4
2	Tube Lights	40	192	7.7
3	Ceiling Fans	80	72	5.8
4	Sound System	5,000	6	30.0
5	Projectors	250	6	1.5
	Total- MBA Class Rooms	**-**	**312**	**113.3**
12) ACADEMIC BLOCK				
1	Air conditioners, 2TR	1,900	24	45.6
2	Tube Lights	40	144	5.8
3	Ceiling Fans	80	48	3.8
4	Sound System	5,000	4	20.0
5	Projectors	250	4	1.0
	Total- Academic Blocks	**-**	**224**	**76.2**
13) FACULTY ROOMS				
1	Tube Lights	40	360	14.4
2	Ceiling Fans	80	45	3.6

3	Computers	140	45	6.3
4	Air conditioners, 2TR	1,900	7	13.3
5	Lights	22	60	1.3
6	Lights	40	12	0.5
7	Exhaust Fans	600	4	2.4
	Total- Faculty Rooms	**-**	**533**	**41.8**
14) STP PLANT				
1	Blowers	7,500	4	30.0
2	Monoblock Pumps	2,250	2	4.5
3	Treated water pump	2,250	1	2.3
	Total- STP Plant		**7**	**36.8**
15) RO PLANT & RAW WATER				
1	RO Pump1	7,500	1	7.5
2	RO Booster Pump2	2,250	1	2.3
3	RO Reject Water Pump	2,250	1	2.3
3	Raw Water Pump	5,250	1	5.3
4	Submersible Borewell Pumps	3,750	4	15.0
	Total- Raw Water & RO	**-**	**8**	**32.3**
	Sub-Total	**-**	**-**	**1,021**
16) MISCELLANEOUS LOADS				
1	Miscellaneous Loads	-	-	204
	Total- Miscellaneous	**-**	**-**	**204**
	GRAND TOTAL- LOAD	**-**	**-**	**1,225**

Conferences / Workshops (Planned & Organized)- 2023:

CONFERENCES / SEMINARS / WORKSHOPS/ TRAINING PROGAMMES / ENDOWMENT LECTURES:

- NALSAR is organized a Mediation Tournament from January 21 - 23, 2023. Hon'ble Mr. Justice Anil Sinha, Judge, Supreme Court of Nepal Judged the finals of the tournament and was the Chief Guest at the Valedictory ceremony.
- University collaboration with Truth Labs organized a National Seminar on February 4, 2023 on 'Effective Utilization of Forensic Science' towards Ensuring Rule of Law, Providing Inclusive Justice & enhancing Public Trust. Hon'ble Sri Justice U.U. Lalit, Former Chief Justice of India was the Chief Guest and delivered the inaugural address. The other eminent speakers in the inaugural function include Hon'ble Sri Justice Arun Mishra, Chairman, National Human Rights Commission, Delhi, Hon'ble Sri Justice Ujjal Bhuyan, Chief Justice of Telangana and Chancellor, NALSAR, Hon'ble Sri Justice M. Jagannadha Rao, Former Chairman, Law Commission of India and Hon'ble Sir Justice P.V. Reddi, Former Judge, Supreme Court of India.
- An Online Guest Lecture by Dr Ngozi Okonjo-Iweala, Director, World Trade Organization, Geneva was organized on March 20, 2023. The lecture was delivered on the topic "TRIPS and Covid".
- The University co-hosted a Joint Round Table conference on 'Artificial Intelligence in Legal and Judicial System in India, Opportunities and Challenges' in Coordination with CIE, IIIT-Hyderabad. The Roundtable was held on April 14, 2023.
- NALSAR in collaboration with NAAC organized the NAAC Awareness Program for Law colleges in Telangana State. The programme was held on Friday, May 19, 2023. NAAC Awareness Programme.
- A One-Day Workshop on the Prevention of Sexual Harassment Act, 2013 (POSH) was organised by 'Horizon'-The HR Club of the Department of Management Studies (DoMS), NALSAR on September 23, 2023. The resource-persons who conducted the respective sessions include Dr. Amita Dhanda (Professor Emerita, NALSAR), Vasudha Nagaraj (Advocate, High Court of Telangana), Madhujit Singh (Ananya-Women at Work) and Bhavana Arora (Ananya-Women at Work). The closing ceremony was attended by Justice P. Madhavi Devi (Judge, High Court of Telangana) who distributed certificates to the HR employees from various firms who had attended this workshop.
- NALSAR hosted an interaction with leading experts from the field of International Commercial Arbitration on October 6, 2023, in collaboration with the International Arbitration and Mediation Centre (IAMC), Hyderabad. The speakers included Justice Shamlan Al Sawalehi (Court of Appeal Judge and Judge in Charge of the Arbitration Division, DIFC Court), Prof. Sundra Rajoo (Director, Asian International Arbitration Centre, Malaysia), Mr. Thomas R. Snider (Partner, Charles Russell Speechlys) and Mr. Vikram Pooserla (Senior Advocate, High Court of Telangana). The session was moderated by Prof. Srikrishna Deva Rao (Vice-Chancellor, NALSAR) and Mr. Tariq Khan (Registrar, IAMC)
- NALSAR hosted a delegation of representatives from US Law Schools on October 8, 2023. The delegation had an interactive session with students on the Study Abroad options in the USA. The speakers included

Heather Lynn Miller (Texas A&M Law University), Shane Donald Cooper (University of New Hampshire), Catherine E. Stahl (William & Mary University), Anthony Charles Ogden (Dickinson School of Law, Penn State University) and Elenora Lucille Denson (Wake Forest University). The session was facilitated by GenNext Consultants Pvt. Ltd.

- University in collaboration with India Foundation had organized a National Seminar on Bharatiya Nyaya Sanhita-2023 (BNS-2023) on March 2, 2024. Hon'ble Sri Justice U.U. Lalit, Former Chief Justice of India was the Chief Guest and delivered the keynote address.
- HR WORKSHOP ORGANISED: Department of Management Studies conducted a one-day workshop program titled "Prevention of Sexual Harassment Act, 2013; the POSH" on 23rd September, 2023. The workshop aimed to augment the comprehension of the legal intricacies surrounding the Prevention of Sexual Harassment (POSH) Act of 2013, delving into the legal obligations imposed upon companies, elucidating the processes for operationalising POSH within organisations and engaging in in-depth case study discussions. The event saw participation of more than 200 HR leaders and was well appreciated by HR fraternity in and out of Hyderabad. Prof Amita Dhanda (Nalsar), Adv. Vasudha Nagraj (Human Rights Lawyer), Ms. Madhujit Singh, and Ms. Bhavan Arora (POSH Trainers) led the sessions
- NALSAR-Organised an Outreach Workshop – "Choice of Publishing, Patenting and Secrecy" at ICRISAT, Hyderabad on February 06, 2023
- NALSAR Organised a National Conference – "IP Education in India - Is it Churning Out the Needed Talent? Held on March 04, 2023
- NALSAR Organised a World IP Day Master class -"IP as a Business Tool" (T-HUB) on April 26, 2023
- NALSAR Organised a National Conference / Webinar – "Demystifying Copyright" on June 08, 2023
- NALSAR Organised an online National Conference / Webinar – "Careers in Intellectual Property Rights" in December 18 - 20, 2023.
- Organised a National Conference on National Conference – "IP for Start-up Business" on February 10, 2024.
- NALSAR Chief Guest & Inaugural Address – "Fundamentals of IPR", organised by DPIIT IPR-Chair, Osmania University in collaboration with PGRRCDE, Osmania University, Hyderabad on March 09, 2024.
- Prof. N. Vasanthi - CENTRE FOR CONSTITUTIONAL LAW, POLICY AND GOOD GOVERNANCE Center organised a gender sensitisation workshop for administrative staff of TISS and BITS Pilani on August 19, 2023.
- Centre for International Trade and Business Laws and Centre for Commercial Laws and Dispute Resolution of NALSAR University of Law, Hyderabad organised a one-day Seminar on "India and International Trade: Analyzing the Legal Economic and Policy Dimensions" on 23 September 2023.
- A One-Day Workshop on the Prevention of Sexual Harassment Act, 2013 (POSH) was organised by 'Horizon'-The HR Club of the Department of Management Studies (DoMS), NALSAR on September 23, 2023. The resource-persons who conducted the respective sessions include Dr. Amita Dhanda (Professor Emerita, NALSAR), Vasudha Nagaraj (Advocate, High Court of Telangana), Madhujit Singh (Ananya-Women at Work) and Bhavana Arora (Ananya-Women at Work). The closing ceremony was attended by Justice P. Madhavi Devi (Judge, High Court

of Telangana) who distributed certificates to the HR employees from various firms who had attended this workshop.

- Workshop on “Transforming Community through Dialogic Methods” on 11th March 2023 at the NALSAR University of Law”: This workshop was organised in collaboration with “Kshetra Foundation for Dialogue”, an NGO organisation. Mr. P. Ashwini Kumar explained the importance of the workshop and the need for dispute resolution to the participants. As the workshop was designed to be an interactive one, number of participants were restricted to 20. Of these, 10 were paralegal volunteers, and 10 were Anganwadi teachers. Dr. Krishna Uday Shankar, CEO and Director of “Kshetra Foundation for Dialogue”, and her team delivered lectures and interacted with participants. WhatsApp group is created to respond to the various questions the participants may have in the future. Pamphlets were distributed to generate awareness.
- Workshop on “Networking of Law Schools In Telangana to Promote Legal Aid and Access to Justice” on March 14, 2023 at the NALSAR University of Law”: This workshop was organised to deliberate on the issues involving the role of law colleges and their students in promoting access to justice and free legal aid to the vulnerable section of society. Prof. B.B. Pande delivered a motivational talk about his experiences managing the legal aid programme at the Faculty of Law, Delhi University. Prof. Srikrishna Deva Rao, Vice Chancellor of NALSAR University of Law, has delivered the inaugural lecture. Prof. M. Sridhar Acharyulu, Dean of Mahindra University School of Law, interacted with the participants and explained his experiences. Dr. Anirban Chakraborty, Dr. Murali Karnam, Dr. G. Mallikarjun, Dr. Balakrishna, and Mr. P. Ashwini Kumar delivered lectures. Faculty and students from the College of Law for Women, Hyderabad, Telangana University, Nizamabad, Mahindra University, Hyderabad, MSS Law College Hyderabad, and Kakatiya University, Warangal, attended the programme.
- Workshop on “Transforming Community through Dialogic Methods” on July 24, 2023 at the NALSAR University of Law”: This workshop was organised in collaboration with “Kshetra Foundation for Dialogue”, an NGO organisation. Mr. P. Ashwini Kumar explained the importance of the workshop and the need for the resolution of the disputes through dialogue with the participants. As the workshop was designed to be Page 110 of 155 an interactive one, the number of participants was restricted to 20 Anganwadi teachers. Dr. Krishna Uday Shankar, CEO and Director of “Kshetra Foundation for Dialogue”, and her team delivered lectures and interacted with the participants. WhatsApp group is created to respond to the various questions the participants may have in the future.

Conferences / Workshops (Planned & Organized)- 2024:

i) N.C. BANERJEE CENTRE FOR IPR STUDIES & DPIIT IPR CHAIR

(Centre Director & Chair Professor: Dr. Anindya Sircar Research Assistants: Ms. Ambika Agarwal -till March 16, 2024;

Ms. Phalguni Mahapatra- till June 30, 2024;

Ms. Aditi Malkar – from July 1, 2024 &

Ms. Rutambhara Nayak - from July 1, 2024)

- DPIIT IPR Chair was Academic Partner for the 16th Global IP Convention, 2024 held at The Leela Ambience Gurugram on January 07 - 08, 2024
- Organised National Conference – "IP for Start-up Business", at NALSAR on February 10, 2024
- Organised an online National Conference / Webinar – "IP Day 2024 - Building Our Common Future with Innovation and Creativity" on April 26, 2024
- Organised Outreach Workshop – "IP Strategies – For Academics & Startups" at CCMB, Hyerabad on December 17, 2024
- DPIIT IPR Chair was Knowledge Partner – 17th Global IP Convention, 2025 held at The Leela Mumbai on January 11-12, 2025:
- Organised a Workshop on "Trade Secrets" at NALSAR on January 17-18, 2025
- Organised a Outreach Workshop - "IP Stratigies For Startups" at tHUB, Hyderabad on January 20, 2025:
- Planned an online National Conference / Webinar – "IP Day 2025 - IP and Music: Feel the Beat of IP ~ A Rendezvous" on April 26, 2025

Conferences / Workshops (Planned & Organized)- 2025:

- NALSAR Organized the GIAN Course on Dignity Rights Clinic to be offered by my Senior Colleague, Prof. N. Vasanthi from July 8 to 12, 2025.

- NALSAR organized the of the One-week Offline In-service Training (IST) Program for Officers of All India Service in 'INTERNATIONAL TRADE AND INVESTMENT LAW'. Ambassador Manpreet Vohra was invited as Chief Guest at the inaugural session which was inaugurated on 6th January, 2025
- NALSAR Organized the National Mediation Tournament 2025 from 24-26 January, 2025.
- Prof. Anindya Sircar organized a meeting at T-Hub on 20th January under the IPR Chair activities:
  The university organized the following programmes on 15th February, 2025:

- Milon K. Banerjee Centre programme at Video Conference Hall SAARCLAW Centre. Lecture by Hon'ble Sri Justice Rohinton Fali Nariman, Former Judge, Supreme Court of India will deliver lecture from 11.00 a.m. to 12.30 p.m.

Other Events organised by the University 2025 :

NC Banerjee Centre & DPIIT IPR Chair

1) The International Journal for Intellectual Property Laws (IJIPL) has been indexed in **Scopus.**
2) DPIIT IPR Chair organised a Workshop on "Trade Secrets" at NALSAR on January 17-18, 2025
3) DPIIT IPR Chair organised a Outreach Workshop - "IP Strategies for Startups" at T-Hub, Hyderabad on January 20, 2025

DoMS

4) Panel discussion on internationalization of management education on 23-01-2025

The following International Delegates participated in the Panel Discussion:

- Andreea Willmott, Coventry University

- Supriya Nayak, University at Buffalo
- Joshua LaFave, Clarkson University, David D. Reh School of Business
- Michael Burke, Duquesne University
- Caci Cooley, International Student Recruiter, Global Engagement, The Chicago School, University of Western States, Saybrook University, Pacific Oaks College, Kansas Health Science University the Colleges of Law.
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5) DoMS Alumni Reunion Footprints 2025 was held on February 15, 2025 and "A 10-year chronicle of DoMS NALSAR" was released.
    - NALSAR students have organized Blood Donation Camp in the university on 22nd July, 2025.
    - NALSAR's Corporate Law conference in association with Institute of Company Secretaries of India (ICSI) organized conference on 12-13 September, 2025.
    - NALSAR University organized the prestigious Bodh Raj Sawhny National Moot Court Competition from 26 - 28th September, 2025.
    - NALSAR Organized the Indo-German conference on *"Dialogue of the Hemispheres: Recent developments in international law regarding the relationship of Global South and Global North" held on* **15-17 October 2025** at NALSAR University of Law campus at Shamirpet, Hyderabad, India.

xi) CENTRE FOR CRIMINAL JUSTICE REFORMS AND RESEARCH

(Centre Director: Prof. Srikrishna Deva Rao, Co-Director: Prof. Murali Karnam)

Access to Justice Program and Prison Legal Aid Clinic

In February 2024, Prof. Murali Karnam has been appointed as the director of Access to Justice Program. He runs a field action program. He guides and supervises a multidisciplinary team lawyers, social workers and researchers and law students to provide prison legal aid to prisoners in Hyderabad. His substantial amount of time is devoted to this program in addition to his regular academic teaching of mandatory courses in the University. A detailed report is attached here.

Workshops organized

- Organized a 7 days training for advocates and social workers from April 28 to May 5, 2024 at NALSAR University of Law
- Organized A Team building workshop for the staff of Access to Justice Program on 4 and 5 of June, 2024.
- Organized a Two-Day Refresher Training Workshop for the Access to Justice Program Staff on 7 and 8th of December 2024.

ACCESS TO JUSTICE PROGRAM

In pursuit of a fulfilment of justice for all guaranteed under the Article 39A of the Constitution of India, the NALSAR University of Law, Hyderabad started the Access to Justice Program in April 2024. This is the systematic extension of the Prison Legal Aid Clinic Program run by the university since 2018. Under the program, the University attempted to provide qualitative free legal aid to the under-trial prisoners in Hyderabad. It supported prisoners from vulnerable backgrounds like those who are poor, illiterate and are socially and economically disadvantaged.

The program recruited four advocates and four social workers and research associate in April 2024. The social workers were also recruited with the background of working on prisons and criminal justice system in order to enhance the effect of the program. While the field staff functioned from the city, it was coordinated and supervised by the program director Prof. Murali Karnam from both University space and the city. The team addressed all the legitimate social and legal needs of the prisoners by undertaking visits to prisons and their homes. It aligned with the legal aid system, prisons and courts to identify the reasons for longer than necessary pretrial detentions and intervened to provide timely and qualitative legal aid. The team is supported by dedicated 13 law students from Prison Legal Aid Clinic.

The program team along with students visited prisons once in two to three weeks and to prisoners homes. It collected all the legal and familial details of the prisoners and connected them with their families, friends and advocates and courts. It made socio legal aid needs assessment of prisoners and their families.

It litigated in the courts for their bails, and supported to them for their release. The law students of university supported the team and become potential criminal advocates to provide qualitative legal aid to prisoners.

Visit to Cherlapally Central Prison: The Program Team and Students from NALSAR

Results

In an effort to provide socio-legal support to prisoners, the program team of advocates and social workers reached out to a total of 480 prisoners in 3 prisons and juvenile homes. A significant 270 prisoners requested detailed socio-legal intervention, highlighting the need for comprehensive support beyond just legal representation. Of the prisoners reached out to, 100 requested legal representation in 152 cases for bails and their modifications. 96 bail applications were specifically filed for undertrial prisoners. 56 bail applications were filed for juvenile prisoners, highlighting the vulnerability of this group and the need for specialized support. The tireless efforts of the team led to the release of 58 prisoners, including juveniles, who were able to reunite with their families and reintegrate into society. 13 of the prisoners to whom we got the bails pleaded guilty and got convicted. A total of 71 prisoners were released. 10 prisoners switched to private advocates as they had more cases in other courts. Unfortunately, 19 prisoners, including juveniles, were not released, indicating that more work needs to be done to address the systemic barriers and challenges faced by this population. They thought that instead of meeting the bails conditions, it is better to plead guilty in Jail Adalat and get early release. In 6 cases bails were rejected. The team had to file multiple bail applications for granting of bails.

WOMEN PRISONERS

The program has reached out to 56 women prisoners who requested for various kinds of sociolegal assistance. The it supported them to navigate their cases with the courts and families. In cases of 7 women prisoners, we could not do anything as they have their own advocates. Another 19 cases are pending with the program waiting for various kinds of solutions.

Only 15% of the cases are taken from the Special Jail for Women; 50% of the cases from the Central Prison, Chenchalguda and rest from the Cherlapally Central Prison. Last year only the permission to visit Chenchalguda was granted and at present we are granted to visit all the three prisons in Hyderabad.

Team building workshop organized for the Access to justice Program staff by Altaf Shareef from Mumbai on 7 and 8 of December 2024 at NALSAR University of Law

PENDING CASES

As of March 15, 2025 we have 140 requests for direct intervention and 49 cases for one time intervention. Though we get lots of cases for direct intervention including for legal representation, most of the prisoners will have private advocates or LADCs on paper but not functininong and communicating about the progress of the cases to them. During prison visits we also take the advocate revocation applications and complaints against the advocates who are not cooperating with the prisoners but it involves much larger systemic problem than that we could engage with. We would like to keep on collecting this data and see what can be done with it and how to engage with those who have larger stakes with the system.

The Batch of Prison Clinic January to April 2024 along with Prof. Murali Karnam

NATURE OF THE CASES

Of the 480 prisoners, who approached the program team, 20% of the cases are related to theft, 5% are related to POSCO Act and 7.5% of the case are related to NDPS Act. In 40% of the cases, the prisoners are not aware of the nature of offences they were alleged. Only 10% of them say that they have a legal aid lawyer appointed. While 20% of the prisoners say that no bails applications were filed by their advocates, 71% of are not aware of their case statuses. What is interesting is that there is sizeable section of prisoners who were granted default bails but not communicated to the prisoners by their advocates. While 51% of prisoners have non-bailable cases, it is interesting to note that there 7.5% of prisoners with bailable offences facing.

The prisoners who have multiple number of petty cases in different courts and who are migrant labourers, most poor and who are not supported by the families are reaching out to the program in general. Sizeable section of prisoners is those who are neglected by their own advocates and LADC. There are also substantial number of prisoners who have got bails but were not released as their advocates are not processing their sureties demanding more money as fee. This is an open debate in the courts. Such issues were taken the notice of State Legal Services Authority.

The team at Chenchalguda Special Jail for Women and Central Prison, Hyderabad

ACCESSING JUSTICE TO CHILDREN IN CONFLICT WITH LAW

While the Access to Justice Program was struggling to access the prisons in a broader sense, lack of our focus on the children in the juvenile homes has hit us hard. The pro-active initiative of the social workers of the program brought the permission to full access to all the homes in the state. This is seen as timely opportunity to work towards the release of most vulnerable group of the sections of the society and a systematic and energetic intervention was started in June 2024.

REPRESENTATION OF CHILDREN BEFORE JUVENILE BOARDS/COURTS IN THREE DISTRICTS

It can be observed from the data that 52 bail applications for 28 children were filed in 3 three districts. 7 applications in Hyderabad, 35 in Medchal-Malkajgiri and 10 applications at Ranaga Reddy were filed. After joining of Ms. Archana Rao, advocate and committed social worker on child rights, the momentum to work for children in conflict with picked. In 41 of the cases, bails were granted and 23 children were released. Still 1 child in juvenile home pending surety compliance due to inability to pay Rs. 5000. The case of one child is still pending at Hyderabad as she does not have fit family to take her custody and the judge has been reluctant to even consider the bail petition and this case has been followed. In the rest of the 12 cases, there were private advocates and in four cases, bails have already been granted. Therefore, the program advocates have not pressed the cases.

IMPACT: LEGAL AID SYSTEM ESTABLISHED FOR CHILDREN

The systematic, persistent and committed efforts of the advocates and social workers of the Access to Justice Program has been recognized by all the three district courts, district legal services authority from time to time. As the results of the effort were visible, these three districts have taken the effort to appoint full time Legal Aid Défense Councils to defend the cases of the children. What kind of qualitative legal aid they are going to provide is to be seen. Downside of these

positive development is that now the advocates of the program are not allowed to represent the cases of children. The pro-active efforts of the Juvenile homes and social workers of the program has resulted in these mixed developments. Since the other districts away from Hyderabad have no legal aid Défense councils, the juvenile homes have been requesting us to undertake the cases but due to distances and lack of times and resources, we are not able to attend to these areas.

Pictures from Government Home for Boys & Girls

Advocate Farha Qureshi speaking in Awareness Program on POCSO Act at Observation Home for Girls, Nimboliadda

Advocate Archana Rao speaking at Observation Home for Boys, Saidabad

TRAININGS CONDUCTED

The Access to Justice Program conducted and involved 10 trainings on the criminal law practices. The staff were trained for 8 days from 28 April to May 5, 2024 in which experienced advocates, judges, public prosecutor and legal scholars were engaged to impart practical skills to engage with the criminal justice system. A team building exercise was undertaken with the help of an experienced trainer from Mumbai on 4 and 5 of June 2024. This revealed the challenges of building a team with diverse background. Similarly, a refresher training was conducted to the staff on 7 and 8 of December 2024. This was more productive than earlier trainings as the requirements of the program is understood far more clearly. The staff had also undergone one day training on the Management Information System on 22nd June 2024. The team was also sent to Pune as two batches between 9 to 14 June and on 20 and 21 December 2024 for an exposure visit to 39A Project area to understand the practical ways of providing legal aid to prisoners. Though the staff participated in all the trainings conducted by state legal services authority and DLSAs and in turn conducted few trainings, our efforts to organize the trainings to LADCs did not fructify so far. Since our relations with prisons and DLSAs have been improving we hope to have more meaningful collaboration with them. However, the department of Juvenile Welfare and Correctional Services have been very happy to involve the advocates and social workers of the program in trainings and awareness program of the boys and girls in these homes. They were involved in several trainings. The staff went extra-mile to accommodate the requests for time and energy. This built a good rapport with

the department and facilitated our work. This is very meaningful and satisfactory intervention by the program.

INTEGRATION OF PRISON LEGAL AID CLINIC INTO ACCESS TO JUSTICE PROGRAM

NALSAR has been running the prison legal aid clinic since 2018. Around 10 students visit the prisons every semester. They provide the legal advice to the prisoners and their families for four months and they visit prisons two days in a month. Their learning on the levers of working of criminal law is far better than those who learn it in the classroom. They always stand out among the students and have been motivated to choose career in criminal law for higher studies and research. From January 2025 onwards, the Prison Clinic has been redesigned and offered to fourth semester students (2nd year students), who have completed criminal courses and are still in the process of making career choices. The response from the young and curious students on the clinic has been tremendous.

Visit to Chenchalguda Prison by the team and students

60 students from BALLB and LLM students have applied for 13 seats in the clinic. On every Wednesday, they were thoroughly trained on POCSO, NDPS Acts, on how to fill the facts sheets, bail jurisprudence, theories of criminal law, filling the MIS, downloading the FIRs and on how to contact the families of the prisoners. This systematic work has generated good amount of information and connected the students with the advocates, prisons, courts and social workers. The students visit to the prisons are hundred percent and their learning increased many folds. The synergy between the clinic and the Access to Justice Program has increased the quality of the performance by the students as well as the staff of the Program.

COLLABORATION WITH LEGAL SERVICES AUTHORITY: DLSA AND SLSA

The Program started closely working with the State Legal Services Authority and the District Legal Services Authorities in Ranga Reddy, Hyderabad, Medchel-Malkajgiri districts. When the permission from the prison department was delayed, the staff started interacting with these authorities for

appointment of our social workers as the Para-Legal Volunteers and the advocates as the panel advocates.

First, the SLSA has involved the staff of our program into training of LADCs at the judicial academy, Hyderabad. The Director of the program delivered two lectures to 103 LADCs on the rights of undertrial prisoners and custodial justice in June 2024. The advocates of the Program were allowed to participate in the two days training.

The DLSAs of these districts have organized a number of trainings to the advocates and para-legal volunteers on various themes such as POCSO and other such laws and requested the advocates and Social Workers act as resource persons.

The staff from their own experiences of visiting prisons and juvenile home have acted as far better resources persons than others. Though the themes of these meetings were very different from our mandate, we have involved ourselves in order to continue the collaboration. The DLSAs are keen to involve the staff on routine training programs but we have used our discretion in participations.

The staff also met the Sessions Judge of Medchal-Malkajgiri district and DLSAs of Ranga Reddy and Nampally various times to extend the services of the Program to expedite the Financial Assistance Scheme to Poor Prisoners and allow us to assist the LADCs in providing the legal aid to prisoners. The responses of the DLSAs in this regard is not very encouraging, though we have been submitting the requests of the poor prisoners to the Empowered Committees of these districts for granting of money for sureties.

15. OTHER CONFERENCES / SEMINARS / WORKSHOPS/ TRAINING PROGAMMES / ENDOWMENT LECTURES / LEGAL AID PROGRAMMES

LEGAL AID AND LEGAL AWARENESS CLINIC ACTIVITIES

Agricultural Credit and State of Crop Loans in the Villages:

As part of the Agri Legal Aid Clinic, students have visited Shamirpet, Aliabad, Pudur and Medchal. Students have visited Farmer's Cooperative Societies, Banks, Court and Public offices like panchayat offices, etc. Students met with various stakeholders, interviewed them, sensitised them about their rights, and shared the perspectives of the other stakeholders, believing that sharing different perspectives would lead to improved social cohesion and resolve various issues amicably. Students recommended that, apart from the loan waiver scheme, multiple steps need to be taken which will provide the foundation for agricultural growth in Telangana.

Primary Health Care:

This study explores the intersection of primary health care and legal aid in Rural India. It primarily focussed on key areas like intimate partner violence (IPV), mental health, integration of national healing programmes (Like Ayushman Bharat) and queer health care access. Students interviewed the public and District Medical and Health Office staff, visited primary health care centres in Shamirpet, Aliabad, Tummukunta, and Pudur villages, and went to the Collectorate to collect relevant data and interview relevant people. The findings and suggestions include initiating adequate staff training, providing better resources, safeguarding privacy, and organising more cultural sensitisation programs, which will address the issues of stigma concerning issues like intimate partner violence and queer-related issues.

MGNREGA:

Students have interviewed 16 workers, 1 DRD officer, one technical engineer consultant, one panchayat secretary and 1 MPD officer in Shamirpet. Students have identified key issues and made a few interesting recommendations. They include strict implementation of a 100-day work guarantee, worker skill development programs, transportation reimbursement, timely wages, help with technology problems, strengthening redressal mechanisms and health and safety standards.

Community Dispute Resolution:

Students visited various institutions, observed their functioning, and conducted interviews. The public institutions visited by the students include Anganwadi Centres in Shamirpet, Aliabad, Pudur and Medchal, Panchayat offices, health centres, Lok Adalat court, collector office and police stations. Students' recommendations include awareness programmes on Community Dispute Resolution methods in rural villages and regular and continuous community engagement to address the disputes arising in the communities.

TELANGANA STATE RENEWABLE ENERGY DEVELOPMENT CORP. LTD
(TSREDCO)
#5-8-207/2, Pisgah Complex, Nampally, Hyderabad – 500 001. Telangana, India
Tel: Off: 040 – 23201502 / 03, Fax: 040- 23201504
E. Mail: info@tnredcl.telangana.gov.in www.tnredcl.telangana.gov.in

Ref: TSREDCO/SE/SPV/Nalsar-200KWp/2017/3606 Dt.21/06/2017

To
The Registrar,
NALSAR University of Law,
Post Box No.1, Justice City,
Shameerpet, Ranga Reddy Dist
Hyderabad, Telangana–500 101
Sir / Madam,

Sub: TSREDCO- Solar Division- Design, Supply, Installation & Commissioning of 200KWp Solar PV grid connected rooftop system in Nalsar University of Law campus, Hyderabad –Reg.

Ref: 1. Lr. No. Nil, Dated. 21/04/2017 of Nalsar University of Law, Hyderabad.
2. Tender Ref. No. TNREDCL/SE/SPV/Nalsar-200KWp/2017/Dated: 26.05.2017

&&&

With reference to the 1st cited above, the tender was called for installation of 200KWp Solar PV grid connected rooftop power plant at Nalsar University of Law, Hyderabad and finalized the same opening technical bids on 12/06/2017 and financial bids on 15/06/2017.

M/s. Solar Idea Pvt. Ltd, Hyderabad has quoted lowest price of Rs. 41.99/ per Wp. The details are as follows.

Sl. No.	Description	Amount in Rs.
01	Quoted L-I Price for installation of 200KWp SPV GCRT Power Plant	Rs. 83,98,000/-
02	TSREDCO service charges @ 3% plus 15% service tax	Rs. 2,89,731/-
03	Project proposal application fee for avail of MNRE incentives (Rs. 25000 +.15% S. Tax)	Rs. 28,750/-
	Total Amount	**Rs.87,16,481/-**

Hence, it is requested to transfer the amount of **Rs.87,16,481/-** to TSREDCO in order to issue the work order to successful bidder to take up the works at earliest date. The copy of the bank mandate form is enclosed here with for transfer of amount.

Thanking you,

Yours faithfully,

VC & Managing Director
TSREDCO

Encl. a/a

AE
JA
put up to CE Sir on arr

NALSAR University of Law, Hyderabad
Post Box No.1, 'Justice City', Shameerpet, Medchal District,
Hyderabad - 500 101, Telangana, India.
Tel: +91-40-23498104 / 23498115, Fax: +91-40-23498386
Mobile: +91-99486 60916
Email: registrar@nalsar.ac.in, balakista@gmail.com
Website: www.nalsar.ac.in

Prof. (Dr.) V. Balakista Reddy
LL.M., M.Phil., Ph.D. (JNU)
Professor of Law & Registrar

June 27, 2017

To,
The Vice- Chairmen & Managing Director,
Telangana State New & Renewable Enery Development Corporation,
5-8-207/2, Pisgah Complex,
Nampally, Hydrebad-500 001
Telanagana State,
Ph.no: 040-23201504
Email –ID – se@tnredcl.telangana.gov.in

Sir,

Sub: Installation of Aggregate / Cumulative 0.200 MWP Grid- Connected Solar Rooftop Project in NALSAR University of Law, Hyderabad –reg.
Ref: 1. Lr. No. Nil, Dated:21/04/2017 of NALSAR University of Law, Hyderabad
2.Tender Ref No. TNREDCL/SE/SPV/NALSAR 200KWp/2017/Dated:26/05/2017
3.Your LetterNo. TSREDCO/SE/SPV/NALSAR-200KWp/2017 Dated: 21/06/2017

I am to invite your kind attention to the reference 3rd cited above wherein it has been informed that the work of Installation of Aggregate / Cumulative 0.200 MWP Grid-Connected Solar Rooftop Project in NALSAR University of Law, Hyderabad has been awarded to M/s. Soalr Idea Pvt Ltd, Hyderabad at the lowest price of Rs.41.99 per WP with the net amount of Rs. 83,98,000/-. Further it is informed that the Vice-Chairmen and Managing Director has requested to transfer the amount of Rs. 87,16,481/- including all taxes to TSREDCO in order to issue the Work Order.

In this connection it is informed that Ministry of New & Renewable Energy has accorded approval for installation of 0.200 MWp od Grip Connected Solar Roop Top projkects in NALSAR University with a subsidy of 30% vide their letter no.03/45/2015-16 GCRT dated:28/12/2015.

In view of above it is requested to kindly consider the subsidy of 30% and the TSREDCO should themselves claim the subsidy, so that the balance amount is only deposited including service charges and other charges claimed. In this regard the NALSAR University is willing to transfer the amount as follows after deduction of 30% of subsidy as approved by the Ministry of New & Renewable Energy, New Delhi.

The amount to be transferred is as follows:-

a) The total amount after deduction of 30% subsidy	--	Rs. 58,78,600.00
b) TSREDCO service charges @ 3% + 15% Service Tax	--	Rs. 2,02,812.00
c) Project proposal application fee for avail of MNRE	--	Rs. 28,750.00
Total Amount		**Rs. 61,10,162.00**

If agrred the amount of **Rs. 61,10,162/- (Rupees Sixty One Lakhs Ten Thousand One Hundred and Sixty Two only)** will be transferred in favour of TSREDCO so as to take up the work on emergent basis and complete the work. I am also enclosing the copies of letters of MNRE, New Delhi for ready reference and further action in the matter.

Thnking you,

Your's sincerely,

Shri. V. Balakista Reddy
(Registrar)

తెలంగాణ రాష్ట్ర పునరుద్ధరణీయ ఇంధన వనరుల అభివృద్ధి సంస్థ లిమిటెడ్
Telangana State Renewable Energy Development Corporation Ltd.
(A State Govt.Company)
D.No.6-2- 910, Visvesvaraya Bhavan, The Institution of Engineers Building,
Khairatabad, Hyderabad - 500 004. Telangana, India.
Tel : Off : 040 - 23201502, 23201503 Fax : 040 - 23201504
E-mail : info@tnredcl.telangana.gov.in Web : www.tnredcl.telangana.gov.in

Ref: TSREDCO/SE/SPV/Nalsar-200KWp/2018 Dt.04.06.2018

To
The Registrar,
NALSAR University of Law,
Post Box No.1, Justice City,
Shameerpet, Ranga Reddy Dist
Hyderabad, Telangana – 500 101

Sir,

Sub: TSREDCO- SE Division- Design, Supply, Installation & Commissioning of 200KWp Solar PV grid connected rooftop system in Nalsar University of Law campus, Hyderabad – Requested to acquire approvals from CEA & TSSPDCL for net metering – furnishing of Inspection Report – Reg.

Ref: 1) Lr. No.TSREDCO/SE/SPV/NALSAR-200KWp/2017/Agt. No.03/2017/ dt.28.12.2017.
2) Tender Ref. No. TNREDCL/SE/SPV/Nalsar-200KWp/2017/Dated: 26.05.2017

&&&

With reference to the above cited (1), the work agreement is issued for Design, Supply, Installation, Testing and Commissioning with five years Comprehensive Maintenance Contract of 200KWp Solar PV grid connected rooftop system in Nalsar University of Law campus, Hyderabad with net metering facility.

In continuation to the above, M/s. Solar Idea Private Ltd, has installed / completed 200KWp grid connected rooftop Solar PV system in Nalsar University of Law campus, Hyderabad as per the terms and conditions of the agreement. Subsequently TSREDCO officials have conducted joint inspection along with NALSAR officials and supplier, and found the system was installed as per the terms and conditions of the agreement & MNRE standards, and the Net / Bi directional meter installation / synchronization with grid has to be done, for connectivity of Net/ Bi directional metering CEA and TSSPDCL approvals are mandatory.

In this connection, it is to inform that, the 200KWp solar plant is generating solar power avg. 900KWh (units) per day / 27000KWh (Units) per month and calculating Cost of Conventional Electricity (as per HT tariff rate): Rs 7.80 per kWh i.e. Rs.7020/- per day / Rs.2,10,600/- per month is loosing without installation of net metering.

AE G/6/18

Hence, it is requested to take the necessary action for getting the approvals from CEA & TSSPDCL in coordination with M/s. Solar Idea Pvt. Ltd for installation net/bi directional meter at earliest.

Thanking you,

Yours faithfully,

VC & Managing Director
TSREDCO

Enl: a/a
Copy To: M/s. Solar Idea Pvt. Ltd, # 8-2-277/A/7, Plot No. 126, Road No. 02, Banjara Hills, Hyderabad 500 034

Received
on 06/06/18
M. Bhaskar
Solar Idea pvt Ltd

6

NALSAR University of Law, Hyderabad

'Justice City', Shameerpet, Medchal-Malkajgiri District - 500 101, Telangana, India.
Tel : +91-40-23498104 / 23498437 **Fax :** +91-40-23498386
Mobile : +91-99486 60916
E-mail : registrar@nalsar.ac.in, balakista@gmail.com
Website : www.nalsar.ac.in

Prof. (Dr.) V. Balakista Reddy
LL.M., M.Phil., Ph.D. (JNU)
Professor of Law & Registrar

WORK ORDER

Lr no. 020/ Enggdept/Solar Hot water/ 168 /2022-23 December 30, 2022

To
N. Daniel,
Plot No. #65, B3/42,
Asbestos, Kukatpally-500 037,
Hyderabad, Telangana,
Mob: 99895027323.

Sir,

Sub: - Request for permission for replacement of SS tanks to solar hot water system at Girls Hostel –I , II & Boys Hostel –III at NALSAR University of Law- Work Order-reg
Ref: - 1. Your offer letter dated: 14/10/2022.
Auth: - Note approved by the Hon'ble Vice-Chancellor, dated: 30/12/2022.

With reference to your offer dated: 14/10/2022 the Work Order for Replacement of solar tanks in Boys and Girls Hostel Solar Hot water System is hereby awarded. Hence you are requested to start the work immediately

(Amt.in Rs.)

S No	Description	Qty	Rate	Total Amount in Rs
1	**GH-I** 1000 LPD SS Tank 316L with 2mm Thickness, Rockwool installation aluminum cladding	2 nos	1,09,000/-	2,18,000/-
2	**BH-III & GH-II** 1500 LPD SS Tank 316L with 2mm Thickness, Rockwool installation aluminum cladding	1 no	1,48,000/-	1,48,000/-
	Total Amount			**3,66,000/-**

(Rupees Three Lakhs Sixty Six Thousand only)

2/1/23

P.T.O

Terms & Conditions:

1. Payment will be made after physical completion of the job.
2. The work shall be taken up during University working hour i.e., 09.00AM to 05.00PM.
3. The work shall be carried out as per specifications and as per the instructions of Engineer – in- charge of University issued from time to time.
4. The Contractor shall be held responsible for the damages occurred if any to University property during the period.

REGISTRAR

Copy to :

Accounts Section: for making payments after completion of the work.

Ref: Vr.No. /549 Enggdpt/ 2022-23.

March 8, 2023

Note:

As per the note approved by the Hon'ble Vice-Chancellor's dated: 30/12/2022 and Work Order dated 30/12/2022, please find herewith enclosed a bill of **Mr. Daniel,** Hyderabad, for **Rs.5,14,000/-**, vide **Cash Bill dated: 31/01/2023**, (bill attached) towards the replacement of SS Tanks to solar hot water systems GH-I, GH-II, & BH-I, BH-III in the Campus. Since the work is completed in all respects satisfactorily. Hence the payment of **Rs.5,14,000/- (Rupees Five Lakhs Fourteen Thousand only)** may please be arranged **in favour of Mr. Daniel.**

Note: The amount is increased to installed one additional SS Solar Tank of 1500 Ltr capacity tank executed in Girls Hostel – II as aper the instructions of the Authorities and the same was also placed in Executive Council Meeting vide Item No: 15 (e), dated. 20.12.2022.

Increased amount is also placed in EC held on 21/02/2023

Assistant Engineer 08/03/23

REGISTRAR 8/3/2023

VICE CHANCELLOR

① 514000 - 2% TDS - 10280
② 18990 - 2% TDS - 380
532990 10660

Rs. 522330 Net : on 14/3/2023

7.1.2/1 Solar energy.

7.1.2 (1)

SOUTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LTD

Office of the
Divisional Engineer Elecl,
Operation Medchal, Vennelagadda,
Jeedimetla (V), Secunderabad - 67.

Memo No. DEE / OP / MDCL / Techl. / F. Solar Roof Top / D. No. 16 /18. Date. 19/4/2018.

Sir,

Sub:- Elecl. – Operation division, Medchal – Installation of 200 KW Capacity Rooftop Solar PV System for The Registrar (MCL – 898 with a CMD of 200 KVA), National Academy of Legal Studies and Research University, Shameerpet (V & M), Medchal Dist., in Shameerpet Section of Shameerpet Sub – division Sub – division in Operation division, Medchal of Medchal Circle – Estimate approved – Reg.

Ref:- Your application No. NT105183277, dated 22-03-2018.

****

With reference to your application for Installation of 200 KW Capacity Rooftop Solar PV System for The Registrar (MCL – 898 with a CMD of 200 KVA), National Academy of Legal Studies and Research University, Shameerpet (V & M), Medchal Dist., in Shameerpet Section of Shameerpet Sub – division Sub – division in Operation division, Medchal of Medchal Circle. The estimate is approved for an amount of **Rs. 6,767/-** as per the detailed estimate enclosed.

PM Order No. 966000004295

Reservation No. 8001446464

Encl: 1 No. Estimate.

Divisional Engineer Elecl.,
Operation Medchal, TSSPDCL.

To,

The Registrar,
National Academy of Legal Studies and Research University,
Shameerpet (V & MM), Medchal Dist.

Copy to : The Asst. Divisional Engineer/Operation/Shameerpet.
Copy to : The Asst. Engineer/Operation/Shameerpet.
Copy submitted to: The Superintending Engineer/Op/Medchal Circle. → For information please.

D:\Solar Rooftop\Estimate approval.docx

TSSPDCL

Order Type : PM66
Net Metering Order

Order release date :

PM Order Number : 966000004295

PM Order Generation Date : 19.04.2018

Name of the Work : The Registrat, NALSAR (MCL-898) 200 KW

Status of the Order : CRTD PRC MANC

Work Description

The Registrat, NALSAR (MCL-898) 200 KW

Installation of 200 KW Capacity Rooftop Solar PV System for The
Registrar (MCL # 898 with a CMD of 200 KVA), National Academy of Legal
Studies and Research University, Shameerpet (V & M), Medchal Dist., in
Shameerpet Section of Shameerpet Sub # division

General Data:

Name of the Officer :

Responsible Office : 10730000 - DE/OPN/MEDCHAL

Estimated Cost : 6,767.00

Scheme under which sanctioned : RR North Circle Net Metering Sch-2014

PM Order Issued with Amount:

Material : Rs 6,767.00

Total : Rs 6,767.00

Divisional Engineer (Tech)
Operation, Medchal TSSPDCL

Authorized Signature with Seal

TSSPDCL

PM Order Number : 966000004295

Name of the Work : The Registrat, NALSAR (MCL-898) 200 KW

Reservation Number : 8001446464

Purchase Requisition No :

List of Materials:

Material	Material Description	Qty	Units	Rate/ Unit	Amount
MTN30004	11KV HTTVR 10/5A,0.2S Class (Net Meters)	1	EA	6,767.00	6,767.00
				Total	6,767.00

Authorized Signature with Seal

Operation, Medchal TSSPDCL

Nalsar University Electricity Bill Comparission bewteen 2017 and 2018 with and Without Solar

S.No	Month	With Solar no of Units	Without Solar no of Units	MD with Solar	MD Without Solar	Arrear Charges	Bill Amount with Solar	Bill Amount Without Solar	Credit Amount	Debit Amount
1	July	86,961	81,169	187.92	271.29	0	757,261	876,034	**118,773**	
2	Aug	70,749	95,035	229.48	358.32	0	658,029	1,065,863	**407,834**	
3	Sept	95,316	106,573	198.2	447.76	Arrears on 23/09/2018 = 5,44,256	826,708	1,288,035	**461,327**	
4	Oct	88,679	86,628	282.24	265.04	0	949,871	918,785		31,086
5	Nov	49,472	62,447	193.52	205.61	0	461,180	577,060	**115,880**	
6	Dec	20,650	43,584	80.04	90.07	0	226,885	408,786	**181,901**	

Total Savings with Solar from July 2018 to Dec 2018 = 1,285,715

NALSAR NET METER REPORT with SOLAR						Date 19/11/2018 Multiply Factor 2		NALSAR NET METER REPORT without SOLAR					Date 20/11/2018 Multiply Factor 2	
S.No	Time	KWh		KVAh		MD (KVA) x 2		Time	KWh		KVAh		MD (KVA) x 2	
		Import	Export	Import	Export	Import	Export		Import	Export	Import	Export	Import	Export
1	06:10:00AM	173,524	2539	189,851	2539	96.76 X 2	54.08 X 2	06:05:00AM	174,079	2643	190,442	2643	44.02 X 2	30.60 X 2
2	06:54:00AM	173,544	2539	189,851	2539	96.76 X 2	54.08 X 2	06:57:00AM	174,102	2643	190,466	2643	44.02 X 2	30.60 X 2
3	07:55:00AM	173,573	2539	189,902	2539	96.76 X 2	54.08 X 2	08:07:00AM	174,142	2643	190,506	2643	44.02 X 2	30.60 X 2
4	08:55:00AM	173,592	2539	189,923	2539	96.76 X 2	54.08 X 2	08:55:00AM	174,170	2643	190,535	2643	44.02 X 2	30.60 X 2
5	09:56:00AM	173,602	2544	189,936	2544	96.76 X 2	54.08 X 2	09:56:00AM	174,208	2643	190,574	2643	44.02 X 2	30.60 X 2
6	11:01:00AM	173,608	2559	189,943	2544	3.3 X 2	18.68 X 2	10:57:00AM	174,249	2643	190,615	2643	44.02 X 2	30.60 X 2
7	12:01:00PM	173,613	2577	189,949	2577	8.5 X 2	18.68 X 2	11:58:00AM	174,287	2643	190,654	2643	44.02 X 2	30.60 X 2
8	01:02:00PM	173,614	2604	189,951	2604	8.5 X2	30.60 X 2	12:59:00PM	174,324	2643	190,691	2643	44.02 X 2	30.60 X 2
9	02:03:00PM	173615	2633	189,952	2633	8.5 X2	30.60 X 2	02:00:00PM	174,358	2643	190,726	2643	44.02 X 2	30.60 X 2
10	03:04:00PM	173,621	2640	189,960	2640	8.72 X2	30.60 X 2	03:01:00PM	174,395	2643	190,764	2643	44.02 X 2	30.60 X 2
11	04:05:00PM	173,631	2643	189,971	2643	16.26 X 2	30.60 X 2	04:02:00PM	174,430	2643	190,800	2643	44.02 X 2	30.60 X 2
12	05:06:00PM	173,653	2643	189,994	2643	27.50 X 2	30.60 X 2	05:03:00PM	174,464	2643	190,834	2643	44.02 X 2	30.60 X 2
13	05:32:00PM	173,662	2643	190,003	2643	27.50 X 2	30.60 X 2	05:39:00PM	174,479	2643	190,850	2643	44.02 X 2	30.60 X 2
Total Today Units		138 X 2	103 X 2	152 X 2	103 X 2				404 X2	0	408 X 2	0		
		276 Units	206	304 Units	206				808 Units	0	816 Units	0		

	Total Solar Generation Today = 732.31 Units				Total Solar Generation Today = 0 Unis			
	Total Consumption Toady 19/11/2018	KVAh Import - KVAh Export		Units	Total Consumption Toady 20/11/2018	KVAh Import - KVAh Export		Units
		304	- 206	98		816	- 0	816

7.1.2 (3)

SOUTHERN POWER DISTRIBUTION COMPANY OF TS LIMITED
HT C.C. Bill for the month of November 2022, Date: 26-Nov-22
PAYABLE ON OR BEFORE dated: 10-Dec-22 DISCONNECTION DATE: 25-Dec-22

Contracted MD (KVA/HP)	350	Consumer No.	MCL898
Specified Voltage (KV)	11	Name	THE REGISTRAR, NATIONAL
Actual Voltage (KV)	11	ADDRESS1	ACADEMY OF LEGAL STUDIES
Feeder : 107311440107 (CF)		ADDRESS2	AND RESEARCH UNIVERSITY,
Category	2	ADDRESS3	SHAMEERPET, RANGAREDDY

	KWH	KVAH	KVA	TOD1	TOD2
Reading On 17-NOV-22	1159487.20	1226719.40	65.78	158644.30	299918.60
Reading On 17-OCT-22	1137444.00	1203978.80		155654.00	294278.40
Difference ST:01	22043.20	22740.60		2990.30	5640.20
Multiplying Factor	4.00	4.00	4.00	4.00	4.00
Total Consumption	88173.00	90962.00	263.12	11961.00	22561.00
Monthly Minimum Units	7000.00		280.00		
Main Consumption	90800.00	Colony	0.00	L&F	0.00

	RATE	KVA/UNITS	AMOUNT Rs.
Demand Charges Normal	Rs.475	280	133000.00
Demand Charges Penal	Rs.950	0	0.00
Energy Charges	Ps.880	90800	799040.00
TOD Charges	Ps.100	34522	34522.00
Electricity Duty	Ps.6	90800	5448.00
Colony Charges	Ps.730	0	0.00
L&F Charges	Ps.880	0	0.00
FSA Charges			0.00

Supplier Name NetKWH KVA TOD

*****Net Meter(KWH) Details**********
|Closing/Opening Reading : 90797.4/90756.|
|Recorded Units : 162
|Opening Balance Units:0
|Cumulative Banked Units : 0 |
****

*********Arrears as on 23/11/22**********

	C.C.Charge	TCSonArrear
Court Cases Rs.	0	
Others Rs.	0	0.00

Sub Total	972010
Cust Charges	2000.00
ACD SCHG	0.00
UI Charges	0
CS Surcharge	0.00
Addl.SCHG OA	0.00
Late Pmt Charg	0.00
Interest on ED	0
Incentive TOD1	-24958.00
Incentive TOD2	-9787.00
Wheeling Charges	0
Transmission Charges	0
Other Charges-I	0
Other Charges-II	0
Gross Total	939265.00
IT TCS U/s 206C(1H)	0.00
Other Credit Adj.	
Net Bill Amount	939265

7.1.2 (3)

SOUTHERN POWER DISTRIBUTION COMPANY OF TS LIMITED
HT C.C. Bill for the month of September 2022, Date: 26-Sep-22
PAYABLE ON OR BEFORE dated: 10-Oct-22 DISCONNECTION DATE: 25-Oct-22

Contracted MD (KVA/HP)	350	Consumer No.	MCL898
Specified Voltage (KV)	11	Name	THE REGISTRAR, NATIONAL
Actual Voltage (KV)	11	ADDRESS1	ACADEMY OF LEGAL STUDIES
Feeder : 107311440107 (CF)		ADDRESS2	AND RESEARCH UNIVERSITY,
Category	2	ADDRESS3	SHAMEERPET, RANGAREDDY

	KWH	KVAH	KVA	TOD1	TOD2
Reading On 20-SEP-22	1110444.10	1176328.80	85.96	152087.20	288131.10
Reading On 16-AUG-22	1072653.70	1137825.90		146656.30	280250.00
Difference ST:01	37790.40	38502.90		5430.90	7881.10
Multiplying Factor	4.00	4.00	4.00	4.00	4.00
Total Consumption	151162.00	154012.00	343.84	21724.00	31524.00
Monthly Minimum Units	8596.00		280.00		
Main Consumption	154009.00	Colony	0.00	L&F	0.00

	RATE	KVA/UNITS	AMOUNT Rs.
Demand Charges Normal	Rs.475	343.84	163324.00
Demand Charges Penal	Rs.950	0	0.00
Energy Charges	Ps.880	154009	1355279.20
TOD Charges	Ps.100	53248	53248.00
Electricity Duty	Ps.6	154009	9240.54
Colony Charges	Ps.730	0	0.00
L&F Charges	Ps.880	0	0.00
FSA Charges			0.00

Supplier Name NetKWH KVA TOD

Sub Total	1581091.74
Cust Charges	2000.00
ACD SCHG	0.00
UI Charges	0
CS Surcharge	0.00
Addl.SCHG OA	0.00
Late Pmt Charg	0.00
Interest on ED	0
Incentive TOD1	-36522.00
Incentive TOD2	-14583.00
Wheeling Charges	0
Transmission Charges	0
Other Charges-I	0
Other Charges-II	0
Gross Total	1531987.00
IT TCS U/s 206C(1H)	0.00
Other Credit Adj.	
Net Bill Amount	1531987
Total Arrears	0
Total Amount Payable	1531987

*****Net Meter(KWH) Details***************
|Closing/Opening Reading : 90743.9/90743.|
|Recorded Units : 3
|Opening Balance Units:0
|Cumulative Banked Units : 0 |
****

*********Arrears as on 23/09/22***********

		C.C.Charge	TCSonArrear
Court Cases	Rs.	0	
Others	Rs.	0	0.00
Total	Rs.	0	

****

Note: ACD Due for 2022-23 Rs. 0
Fifteen Lakh Thirty One Thousand Nine Hundred and Eighty Seven Only

2/10/2022 AE

JA put up to EE

03/10

7.1.2-(3)

SOUTHERN POWER DISTRIBUTION COMPANY OF TS LIMITED
HT C.C. Bill for the month of August 2022, Date: 26-Aug-22
PAYABLE ON OR BEFORE dated: 09-Sep-22 DISCONNECTION DATE: 24-Sep-22

Contracted MD (KVA/HP)	350	Consumer No.	MCL898
Specified Voltage (KV)	11	Name	THE REGISTRAR, NATIONAL
Actual Voltage (KV)	11	ADDRESS1	ACADEMY OF LEGAL STUDIES/
Feeder : 107311440107 (CF)		ADDRESS2	AND RESEARCH UNIVERSITY,
Category	2	ADDRESS3	SHAMEERPET, RANGAREDDY

	KWH	KVAH	KVA	TOD1	TOD2
Reading On 16-AUG-22	1072653.70	1137825.90	67.24	146656.30	280250.00
Reading On 19-JUL-22	1045767.00	1110585.80		142837.70	274466.00
Difference ST:01	26886.70	27240.10		3818.60	5784.00
Multiplying Factor	4.00	4.00	4.00	4.00	4.00
Total Consumption	107547.00	108960.00	268.96	15274.00	23136.00
Monthly Minimum Units	7000.00		280.00		
Main Consumption	108955.00	Colony	0.00	L&F	0.00

	RATE	KVA/UNITS	AMOUNT Rs.
Demand Charges Normal	Rs.475	280	133000.00
Demand Charges Penal	Rs.950	0	0.00
Energy Charges	Ps.880	108955	958804.00
TOD Charges	Ps.100	38410	38410.00
Electricity Duty	Ps.6	108955	6537.30
Colony Charges	Ps.730	0	0.00
L&F Charges	Ps.880	0	0.00
FSA Charges			0.00
			0.00

Supplier Name NetKWH KVA TOD

Sub Total	1136751.3
Cust Charges	2000.00
ACD SCHG	0.00
UI Charges	0
CS Surcharge	0.00
Addl.SCHG OA	0.00
Late Pmt Charg	0.00
Interest on ED	0
Incentive TOD1	-26256.00
Incentive TOD2	-11253.00
Wheeling Charges	0
Transmission Charges	0
Other Charges-I	0
Other Charges-II	0
Gross Total	1101242.00
IT TCS U/s 206C(1H)	0.00
Other Credit Adj.	
Net Bill Amount	1101242
Total Arrears	0
Total Amount Payable	1101242

*****Net Meter(KWH) Details***************
|Closing/Opening Reading : 90743.2/90742 |
|Recorded Units : 5
|Opening Balance Units:0
|Cumulative Banked Units : 0
****

*********Arrears as on 23/08/22***********

		C.C.Charge	TCSonArrear
Court Cases	Rs.	0	
Others	Rs.	0	0.00
Total	Rs.	0	

****

Note: ACD Due for 2022-23 Rs. 0
Eleven Lakh One Thousand Two Hundred and Fourty Two Only

AE 2/9/22 JA put up Electrical Engr 05/9

TAX INVOICE

M/S. Sri Vinayaka Services
#3/A,VIJAYA NAGAR COLONY,PICKET, NEAR AMBEDKAR STATUE,
SECUNDERA BAD HYDERABAD - 500026 8523898532

IIVERSITY	Date:22/02/2021
	GST Reg No.36GQRPK3572E1ZF
16D1ZP	**INVOIC NUM 30**
OFFICER@NALSAR.AC.IN	

Description	HSN Code	Qty.	Unit Rate	Amount
SOLINED VALVE	39229000	3	5200	15600
PILLARCOCK SENSOR	39229000	3	2700	8100
Basic Price Total :				23700.00
CGST 9%				2322.00
SGST 9%				2322.00
TOTAL PRICE				28344.00
GHT THOUSAND THREE HUNDRED AND FORTY FOUR RUPEES				
Advance along with Purchase Order				

ıe exchanged or refunded

ɔd to realisation

ɔcted to Juridiction of courts in Delhi only

limited to the service to the product as invoiced and are not responsible for any arising from the delay in the non repairs of the product

airs of tampered / mishandled case by customer

For SRI VINAYAKA SERVICES

For M/S. Sri Vinayaka Services
Authorised Signatory

7.1.2(4,5)

ENERGY STAR CERTIFIED
Computers

DELL - D14U : OptiPlex 3090 Micro

Specifications

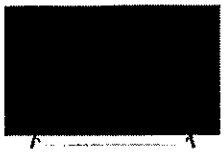
ENERGY STAR Unique ID:	2384343
Brand Name:	DELL
Model Name:	D14U
Model Number:	OptiPlex 3090 Micro
Type:	Desktop
Notebooks, Desktops, Integrated Computers, Slate/Tablets, Two-in-one Notebooks, and Portable All-in-ones Category for TEC (Typical Energy Consumption) Criteria:	Desktop I1 or Integrated Desktop 1
Category I1: Processor Brand:	Intel
Category I1: Processor Name:	Celeron
Category I1: Operating System Name:	Windows 10, Windows 11, Ubuntu
Category I1: Base Processor Speed Per Core (GHz):	3.3
Category I1: System Memory (GB):	64
Category I1: Default Low-power Mode:	Sleep Mode
Category I1: Long Idle Power Used for Sleep Mode:	No
Category I1: Off Mode (watts):	0.3
Category I1: Sleep Mode (watts):	1.3
Category I1: Long Idle (watts):	5.2
Category I1: Short Idle (watts):	5.3
Category I1: Base TEC Allowance (kWh):	26
Category I1: Functional Adder Allowances (kWh):	17.5
Category I1: TEC of Model (kWh):	23.9
Category I2: Processor Brand:	Intel
Category I2: Processor Name:	Core i7
Category I2: Operating System Name:	Windows 10, Windows 11, Ubuntu
Category I2: Physical CPU Cores (count):	8
Category I2: Base Processor Speed Per Core (GHz):	2.0
Category I2: System Memory (GB):	64
Category I2: Default Low-power Mode:	Sleep Mode

Category I2: Long Idle Power Used for Sleep Mode:	No
Category I2: Off Mode (watts):	0.3
Category I2: Sleep Mode (watts):	1.3
Category I2: Long Idle (watts):	6.9
Category I2: Short Idle (watts):	7.4
Category I2: Base TEC Allowance (kWh):	46
Category I2: Functional Adder Allowances (kWh):	17.5
Category I2: TEC of Model (kWh):	31.1
Sleep Mode Default Time Upon Shipment (min.):	30
Display Sleep Mode Default Time Upon Shipment (min.):	10
WOL (Wake on LAN) From Sleep:	Shipped Disabled
Will the Speed of Any Active 1 GB/s or Higher Ethernet Network Links be Reduced to Less Than 1 GB/s When Transitioning to Sleep or Off Mode?:	Yes
WLAN Capability:	Yes
Ethernet Capability:	Yes
Bluetooth Capability:	Yes
Touch Screen:	No
Date Available On Market:	2021-10-04
Date Certified:	2021-09-17
Markets:	United States, Switzerland, Taiwan, Japan, Canada
Category I1: Physical CPU Cores (count):	2
ENERGY STAR Certified:	Yes

Additional Model Information

UPC Codes

Captured On:
12/06/2022



Commercial Displays Android Professional Displays

LH-43AN3ND

DISPLAY PANEL	SCREEN SIZE	108 cm diagonal
	ASPECT RATIO	16:9
	RESOLUTION	UHD(3840*2160)
	DISPLAY AREA(H x V)	94.1184(H) x 52.9416(V) cm
	PIXEL PITCH	0.02451(H) x 0.02451(V) cm
CONNECTION TERMINAL	RF IN	1*Side
	DTV IN	1*Side
	AV IN	1mini *Side
	USB INPUT (2.0 SUPPORT)	2*Side(USB2.0)
	HDMI INPUT	3*Side(HDMI 2.0)
	HEADPHONE OUT	1*Side
	SPDIF OUT	YES,optical
	RJ-45	1*Side
	USB DEVICE SUPPORT	USB Supported HDD
	SUPPORTED FORMATS	PICTURE FORMAT: PNG/BMP/JPEG VIDEO FORMAT: H.265 / H.264 / H.263 / MPEG1 / MPEG2 /MPEG4 AUDIO FORMAT: MPEG1 / 2 / MPEG4 / AC3 / EAC3 / AAC / MP3/WMA/FLAC
AUDIO	AUDIO OUTPUT POWER (RMS)	20 W(10+10 W)
MAIN FEATURES	HOTEL MODE	Yes, Basic
	CEC	Yes, Basic
	SOUND OUT(ARC)	Yes
	DOLBY AUDIO	Yes
	HDR10/HDR10+/HLG	Yes
	DOT NOISE REDUCTION(DNR)	Yes

	MICRO DIMMING	Yes
	INTERNET LINK	Yes
	BLUETOOTH	Yes (Ver. 4)
	WIFI TYPE(STANDARD)	802.11a/b/g/n 2.4 G 2T2R, Built-in
	WIFI BAND TYPE	2.4 GHz
SOC SPECIFICATIONS	CPU	Cortex-A55 x4,1.1 GHz Processor
	GPU	Triple core Mali470 600 Mhz
	OS & VERSION INFO	Android 'P' - 9.0
	MEMORY FLASH	16 GB EMMC
	RAM	2.0 GB , DDR3 2133 Mhz
ELECTRICAL	OPERATING VOLTAGE	110 V-240 V~ at 50/60 Hz
	POWER CONSUMPTION	95 W
	STD BY POWER CONSUMPTION	<0.5 W
MECHANICAL	NET WEIGHT WITH PEDESTAL	6.15 kg
	NET WEIGHT W/O PEDESTAL	6.05 kg
	NET DIMENSIONS WITH PEDESTAL	96.67 cm × 61.63 cm × 22.16 cm
	NET DIMENSIONS W/O PEDESTAL	96.67 cm × 56.31 cm × 8.85 cm

MRP wherever mentioned is inclusive of all taxes

PeopleLink®

Date:- 08-12-2022

To
The Registrar,
NALSAR University,
Hyderabad.

Subject:- Declaration of Power Consumption of PeopleLink products ...

We, at **PeopleLink Unified Communications Pvt. Ltd**, having our registered office at **Q3, A3, 10th Floor, Cyber Tower, HiTech City, Hyderabad (Telangana, India) - 500081**, are the pioneers in the field of modern video conferencing. Founded in 2007, We emerged as India's first ISO 9001-2015 & ISO/IEC 27001:2013 certified Video Conference Company with the aim to unleash the power of virtual collaboration for the smarter Education.

Power Consumption of supplied PeopleLink products are as below:

Sr. No.	Description of Supplies	Local Content
1	PeopleLink Interactive Panel – T86	400 Watt
2	PeopleLink icam FHD-LT 20x Teacher Tracking camera	30 Watt
3	PeopleLink icam FHD-LT 20x Student Tracking camera	30 Watt

Manufacturing Plant:- PeopleLink Unified Communications Pvt. Ltd.,
D. No : 2-99/3/2, Ground Floor, MATHUGUDA, THATTI ANNARAM,
BANDLAGUDA, R.R.DIST HYDERABAD, TELANGANA 500068 (India)
With Factory Registration No.- MSME UAM TS02E0004105

We assure our best services at all times.

Yours faithfully,
Authorized Signatory

For PeopleLink Unified Communications Pvt. Ltd.

Name:- Jayant Kulthe
Designation:- Sr. Manager - Presales
Email:- jayant@peoplelinkvc.com
Place:- Hyderabad

Ref. Certif. No.

US-29143-UL

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product Produit	Professional Conferencing System
Name and address of the applicant Nom et adresse du demandeur	CLEARONE INC 5225 WILEY POST WAY, SUITE 500 SALT LAKE CITY UT 84116 UNITED STATES
Name and address of the manufacturer Nom et adresse du fabricant	CLEARONE INC 5225 WILEY POST WAY, SUITE 500 SALT LAKE CITY UT 84116 UNITED STATES
Name and address of the factory Nom et adresse de l'usine Note: *When more than one factory, please report on page 2* Note: *Lorsque il y plus d'une usine, veuillez utiliser la 2ème page*	FLEXTRONICS AMERICA L L C 12455 RESEARCH BLVD AUSTIN TX 78759 UNITED STATES ☒ Additional Information on page 2
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	100-240 Vac, 2 A, 50Hz/60Hz
Trademark (if any) Marque de fabrique (si elle existe)	Clearone ClearOne
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	
Model / Type Ref. Ref. De type	CONVERGE PRO 2 Family CONVERGE PRO 2 128, CONVERGE PRO 2 128D CONVERGE PRO 2 128T, CONVERGE PRO 2 128TD CONVERGE PRO 2 128V, See Page 2
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2ème page	Additionally evaluated to EN 60950-1:2006/ A1:2010/ A11:2009/ A12:2011/ A2:2013, National Differences specified in the CB Test Report ☐ Additional Information on page 2
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60950-1 (ed.2), IEC 60950-1 (ed.2) am1, IEC 60950-1 (ed.2) am2
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	E241258-A18-CB-1 issued on 2017-01-13

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**

☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2017-01-13

Signature:

Jolanta M. Wroblewska

IEC IECEE CB SCHEME

Ref. Certif. No.

US-29143-UL

Model Details:
CONVERGE PRO 2 128VD, CONVERGE PRO 2 120, CONVERGE PRO 2 48T, CONVERGE PRO 2 128SR, CONVERGE PRO 2 128SRD, CONVERGE PRO 2 48V, CONVERGE PRO 2 012, CONVERGE PRO 2XXXXXXX
(X can be 0-9, a-z, A-Z, "-" or Blank)

Factories:
FLEXTRONICS ELECTRONICS TECHNOLOGY (SHENZHEN) CO., LTD
#89, YONGFU ROAD, TONG FU YU INDUSTRIAL PARK, FUYONG, BAOAN, SHENZHEN CITY, 518103
CHINA

Additional information (if necessary)
Information complémentaire (si nécessaire)

UL

- ☒ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- ☐ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
- ☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- ☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2017-01-13

Signature:
Jolanta M. Wroblewska

DECLARATION OF CONFORMITY

ClearOne

EC DECLARATION OF CONFORMITY

This declares that the following designated product

Model No:
910-3200-202 (POE Power Supply Kit)

complies with the requirements of the European Community Directive

2014/30/EU & 2014/53/EU EMC & RED Directive
for the following standards:

EN55032:2015/AC:2016-07
EN 61000-3-2:2014
EN 61000-3-3:2013
EN 55035:2017
EN 50601-1-2:2015

2014/35/EU Low voltage Directive for the following standard:
C22.2 No. 60950-1
Issued: 2007/03/27 Ed: 2 (R2012) Amd. 1: 2011, Amd. 2: 2014
IEC 62368-1:2014

2011/65/EU RoHS Compliance Directive

This declaration is the responsibility of the manufacturer.

CLEARONE INC
5225 Wiley Post Way, Suite 500, Salt Lake City, UT 84116
Phone +1-801-975-7200

Salt Lake City
April 16, 2020

Derek Graham
Sr. V.P. of R&D

CE

IEC IECEE CB SCHEME	Ref. Certif. No.
	SG ITS-23142

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	BMA 360 Family
Name and address of the applicant	ClearOne Inc. 5225 Wiley Post Way Ste500 Salt Lake City, Utah 84116, the United States of America
Name and address of the manufacturer	ClearOne Inc. 5225 Wiley Post Way Ste500 Salt Lake City, Utah 84116, the United States of America
Name and address of the factory Note: *When more than one factory, please report on page 2*	FLEXTRONICS ELECTRONICS TECHNOLOGY (SHENZHEN) CO., LTD #89, YONGFU ROAD, TONG FU YU INDUSTRIAL PARK, FUYONG, BAOAN, SHENZHEN CITY, GUANGDONG PROVINCE 518103, CHINA
Ratings and principal characteristics	Rated input: 56Vdc, 1.6A (RMS) max Class III
Trademark (if any)	ClearOne
Customer's Testing Facility (CTF) Stage used	-
Model / Type Ref.	910-3200-208, 910-3200-208-D, 910-3200-208-I, 910-3200-208-DI
Additional information (if necessary may also be reported on page 2)	Group and national differences for CENELEC countries (EN 62368-1:2014 + A11:2017) have been considered.
A sample of the product was tested and found to be in conformity with	IEC 62368-1:2014
As shown in the Test Report Ref. No. which forms part of this Certificate	200881068SZN-001

This CB Test Certificate is issued by the National Certification Body

Intertek Testing Services (Singapore) Pte Ltd
5, Pereira Road, #06-01
Asiawide Industrial Building
Singapore 368025

Date: 11 December 2020

intertek

Signature:

Ong Keng Chuan

Sl.NO	Estimate Quantity (only Figures)	Item Detailed Specification Description	Work Type eg. Earth Work, Electrical	Item Short Description (upto 100 Characters)	APSS / Morth Cl. Number (upto 200 Characters)	Rate (INR) (Upto 2 Decimals)	UOM (upto 50 Characters)	Amount (INR) (Upto 2 Decimals)
218	1100.00	Supply and run of 4 of 10 Sq.mm (140/0.3) PVC insulated FRLS flexible copper cable in existing conduit pipe for run of mains including all labour charges etc., complete.(PHASES,NEUTRAL & EARTH)	Elec	Supply and run of 4 of 10 Sq.mm (140/0.3) PVC insulated FRLS	NA	379.00	One RM	416900.00
219	89.00	Supply ,Transportation and fixing of 112545 BGSLO Sleek Surface 18W WH RD Downlight including lamp with all standard accessories diffuser and all labour charges etc., complete. - Make:Bajaj/wipro/Philips.	Elec	Supply ,Transportation and fixing of 112545 BGSLO Sleek Surface	NA	2147.32	Each	191111.48
220	287.00	Supply ,Transportation and fixing of TMC 501 1XT-LED 22W P3241 tube Light including lamp with all standard accessories diffuser and all labour charges etc., complete. - Make:wipro/GE/Philips.	Elec	Supply ,Transportation and fixing of TMC 501 1XT-LED 22W P3241	NA	1124.79	Each	322814.73
221	96.00	Supply ,Transportation and fixing of 12w pendant Light including lamp with all standard accessories diffuser and all labour charges etc., complete - Make:wipro/GE/Philips.	Elec	Supply ,Transportation and fixing of 12w pendant Light	NA	954.37	Each	91619.52
222	24.00	Supply,Transportation and fixing of 18/20W racess mounting LED 1x1 luminaire including lamp with all standard accessories diffuser and all labour charges etc., complete - Make:Philips/Bajaj/Panasonic.	Elec	Supply,Transportation and fixing of 18/20W racess mounting LED	NA	3340.28	Each	80166.72
223	97.00	Supply ,Transportation and fixing of 6w foot lamp including lamp with all standard accessories diffuser and all labour charges etc., complete. - Make:wipro/GE/Philips.	Elec	Supply ,Transportation and fixing of 6w foot lamp including lamp	NA	1067.98	Each	103594.06

For P.R. KONDA CONSTRUCTIONS

Managing Partner

222

NALSAR University of Law, Hyderabad

'Justice City', Shameerpet, Medchal District - 500 101, Telangana, India.
Tel : +91-40-23498104 / 23498115 **Fax :** +91-40-23498386
Mobile : +91-99486 60916
E-mail : registrar@nalsar.ac.in, balakista@gmail.com
Website : www.nalsar.ac.in

Prof. (Dr.) V Balakista Reddy
LL.M., M.Phil., Ph.D. (JNU)
Professor of Law & Registrar

May 31, 2018

To,
Mr. Khaja Bahauddin,
H.no.40/4, V.C. Lodge Quarters,
Osmania University,
Hyd-500 007,
Telangana State,
Mob: 9700472766

Sir,

Sub: NALSAR- Engineering Department Issuance of "Letter of Acceptance" for the work of Provision of LED Energy saving lights in place of Fluorescent Tube lights at Library Block, Dining Hall , Boys Hostel –I, Girls Hostel –I and Street Lights (Partly) at NALSAR University of Law, Shameerpet, Hyderabad..

Ref: e-NIT No.25/ LED Tube lights /NALSAR/2018/dated: 21/05/2018

Your tender for the above work amounting to Rs. 11,48,623.94 (Rupees Eleven Lakhs Forty Eight Thousand Six Hundred Twenty Three and Ninety Four Paisa only) @ 28.66% less with respect to the Estimate Contract Value (ECV) of Rs.16,10,070/- (Rupees Sixteen Lakhs Ten Thousand and Seventy only) (SSR -2018) is accepted. So you are here by requested to attend this office during working hours for entering into an Agreement for the above subject work on before June 04, 2018 along with all original certificates which were uploaded into e-procurement market place for verification.

You are requested to bring the following:

1. Demand Draft for Rs.12,500/- (Rupees Twelve Thousand Five Hundred only) towards balance EMD in favour of Registrar, NALSAR University of Law, Hyderabad.
2. Non Judicial Stamp paper worth Rs.100/- (Rupees One Hundred only).
3. All original documents/ certificates for verifications
4. Additional Security deposit vide contract clause no. 3.6 is Rs. 2,12,300/- (Rupees Two Lakhs Twelve Thousand Three Hundred only) in the form of Demand Draft in favour of Registrar, NALSAR University of Law.

Failure on your part to execute the agreement as requested herewith will be considered just cause of annulment of the award and will lead to forfeiture of your EMD without any further notice.

Yours faithfully

REGISTRAR