ENERGY EFFICIENCY & WATER USAGE

USCET Climate Team

THE PROBLEM

1. Universities are massive consumers of water & energy
2. Hidden environmental impact
3. Data gaps
4. Financial motivations may overshadow environmental initiatives

OUR GOAL

1. Raise awareness of common energy & water usage in American & Chinese universities
2. Make this invisible problem visible!
3. Create an actionable movement through initiatives that are supported by students & universities

OUR APPROACH

For each university (Tsinghua and George Washington), we:

1. Conducted research on:
    a. Sustainability goals & initiatives
    b. Current consumption patterns
    c. Existing programs
2. Evaluated student engagement through:
    a. Surveys
    b. Interviews with student eco-groups
3. Conducted expert interview with:
    a. School sustainability officers
    b. Jing Hou - China Association of Building Energy Efficiency

KEY TAKEAWAYS- US TEAM

01
STUDENT AWARENESS

02
COLLECTIVE ACTION

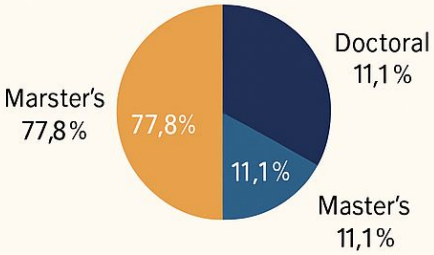
03
SCHOOL COMMITMENT

04
GOVERNMENT SUPPORT

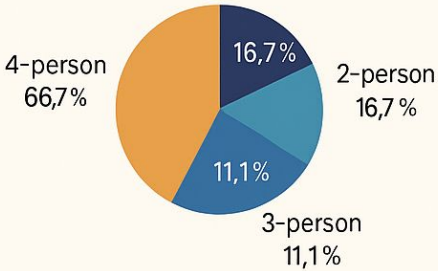
KEY SURVEY RESULTS - CHINA TEAM

A total of 18 valid responses were collected in this survey, with majorities of respondents being undergraduates and living in shared dormitors.

Academic Level



Dormitory Types



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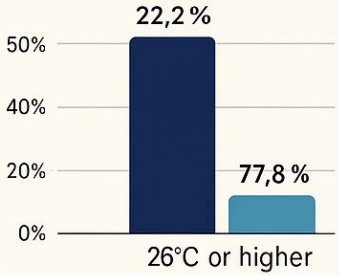
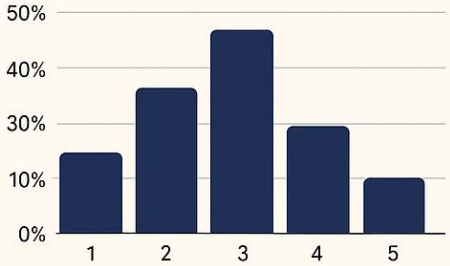
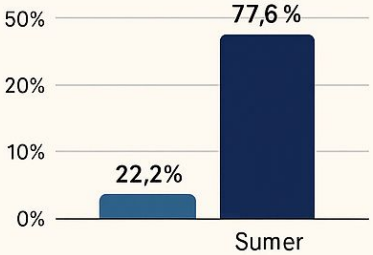


Power Off Habits for Electronic Devices

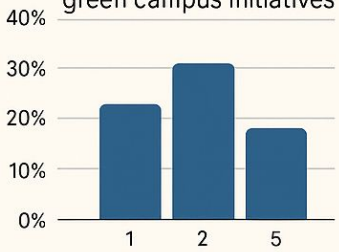


Air Conditioning Temperature Settings



Policy Awareness

Tsinghua University's green campus initiatives



KEY TAKEAWAYS- CHINA TEAM

01
AWARENESS GAP
Lack awareness of green campus policies

02
STRONG PARTICIPATION WILLINGNESS
Show high-enthusiasm to join energy saving initiatives

03
GOOD BUT INCONSISTENT DAILY HABITS
Use of air-conditioning varies significantly

04
COMMUNICATION & SIGNAALING NEEDS IMPROVEMENT
Need for better visual guidance & environmental messaging

WHY ENERGY EFFICIENCIES AT UNIVERSITY DESERVES MORE ATTENTION?

💡 Universities are mini-cities: With 24/7 operations, labs, dorms, and heating/cooling systems, they are major energy consumers.
💸 Tight budgets, rising costs: Energy bills can be >5% of total university expenditures. Savings = scholarships, research, student support.
🌱 Untapped climate potential: Unlike large cities, campuses can implement fast pilot programs and scale successes.
🇺🇸🤝🇨🇳 Shared challenge, joint solution: US and Chinese universities share similar infrastructure and challenges. Cross-cultural lessons can accelerate innovation.
🚀 Student-powered change: Student involvement = behavior change, accountability, and future sustainability leadership.

CHALLENGES & PATHWAY FORWARD

⚠️ CHALLENGES

• Low student awareness of green campus initiatives
66.7% of surveyed students were unaware of Tsinghua's sustainability programs.
• Limited visibility of energy-saving measures
Students reported unclear signage and insufficient outreach.
• Fragmented institutional priorities
Balancing energy goals with research, teaching, and operations remains complex.
• Lack of shared metrics for collaboration impact
• Need for standardized indicators

📢 PATHWAYS FORWARD

• Enhance communication strategies
Multi-channel outreach campaigns led by student groups and faculty.
• Create standardized performance benchmarks
Joint carbon accounting frameworks or energy savings dashboards.
• Empower student participation
Leverage high willingness scores (Avg. 4.8/7) via workshops, contests, and co-design.
• Use CERC/GAUC as innovation incubators
• Pilot joint initiatives, from HVAC optimization to behavior-based energy apps.

ACTION PLAN

STUDENT ORIENTATION & AWARENESS BUILDING

INCREASE CAMPUS VISIBILITY OF THE PROBLEM

FOSTER COLLABORATION BETWEEN STUDENT GROUPS & SCHOOLS

LEVERAGE JOINT PLATFORMS FOR INNOVATION & IMPACT

THANK YOU