

 त्रिभुवन विश्वविद्यालय
 इन्जिनियरिङ अध्ययन संस्थान
 ऊर्जा अध्ययन केन्द्र, पुल्चोक, लिलतपुर

अनुसन्धान सहायक (Research Assistant) पदका लागि दरखास्त आह्वान सम्बन्धी सूचना

प्रकाशित मिति 2026/07/28

ऊर्जा अध्ययन केन्द्र (CES), इन्जिनियरिङ अध्ययन संस्थान, त्रिभुवन विश्वविद्यालयको कार्यान्वयनमा रहेको **"Cost-Benefit Analysis of Demonstrated Solutions, Policy Development, and Capacity Building for Heat-Resilient Urban Planning and Implementation in Dhangadhi Sub-Metropolitan City"** परियोजनाका लागि ग्रेहायबमोजिम (तीन) जना Research Assistant आवश्यक भएकाले योग्य तथा इच्छुक नेपाली नागरिकहरूबाट दरखास्त आह्वान गरिन्छ।

क्र.सं.	पद	न्यूनतम योग्यता/मुख्य क्षेत्र
१	Research Assistant – Building Science, Thermal Performance & GIS	Architecture/Civil/Building Engineering/Urban Planning मा स्नातक; Building Science/Thermal Performance तथा GIS सम्बन्धी ज्ञान।
२	Research Assistant – Mechanical/Energy Systems, Modeling & Economics	Mechanical/Energy Engineering मा स्नातक; Energy Systems, Modeling तथा Energy Economics सम्बन्धी ज्ञान।
३	Research Assistant – Policy and Building Guidelines Preparation	Civil/Building Engineering मा स्नातक; Policy/Guideline preparation, research, writing तथा GIS सम्बन्धी ज्ञान।

कार्य अवधि: अगस्ट २०२६ देखि मार्च २०२७ सम्म (करिब ८-९ महिना), पूर्णकालीन।

स्थान: काठमाडौंमा आधारित; परियोजनाको आवश्यकता अनुसार धनगढी उप-महानगरपालिकामा field visit तथा सम्बन्धित कार्य गर्नुपर्नेछ।

प्राथमिकता: सम्बन्धित विषयमा स्नातकोत्तर तहको अध्ययन/उपाधिता सम्बन्धित कार्य अनुभव भएकालाई प्राथमिकता दिइनेछ।

आवश्यक कागजात: आवेदनपत्र, अद्यावधिक CV, शैक्षिक योग्यताको प्रमाणपत्रको प्रतिलिपि।

आवेदनको अन्तिम मिति 2026/08/04

आवेदन पेश गर्ने स्थान/माध्यम: ऊर्जा अध्ययन केन्द्र (CES), इन्जिनियरिङ अध्ययन संस्थान, त्रिभुवन विश्वविद्यालय, पुल्चोक, लिलतपुर /
 ईमेल: ces@ioe.edu.np

नोट: विस्तृत कार्यविवरण (ToR) यस सूचनासँग संलग्न गरिएको छ। परियोजनाको आवश्यकता अनुसार सम्बन्धित कार्यक्षेत्रमा यात्रा तथा field-based कार्य गर्न सक्ने उम्मेदवारलाई प्राथमिकता दिइनेछ।



TOR of RAs

Cost-Benefit Analysis of Demonstrated Solutions, Policy Development, and Capacity Building for Heat-Resilient Urban Planning and Implementation in Dhangadhi Sub-Metropolitan City

Implementing Institution: Center for Energy Studies, Institute of Engineering, Tribhuvan University

Number of Positions: 3 (three) Research Assistants

1. Purpose

The project's Terms of Reference (ToR) and expected outputs span physical/technical analysis (building science, microclimate, GIS), energy and economic analysis (energy systems, modeling, cost-benefit valuation), and policy and capacity-building work (guidelines, training, community outreach). Rather than splitting strictly along the three ToR components, the three Research Assistant (RA) positions below are organized by the disciplinary expertise the work requires, so each RA can develop real depth and directly support the corresponding senior expert on the team.

2. Positions at a Glance

Position	Disciplinary Focus	Works Most Closely With
RA 1	Building Science, Thermal Performance	Urban Planning / Architecture Expert
RA 2	Mechanical/Energy Systems, Modeling & Economics	Environmental / Resource Economist
RA 3	Policy, Building guidelines and GIS	Structural expert and GIS Expert

All three positions are fixed-term, tied to the project's 9-month duration (July 2026 – 2 March 2027, per the ToR), and based in Kathmandu, with regular travel to Dhangadhi for fieldwork, consultations, and training delivery. Together, the three RAs cover all three ToR components (Cost-Benefit Analysis, Policy Development, Capacity Building). RA 1 and RA 2 split the technical and economic work for Component 1 and the technical input for Component 2's building guidelines. In contrast, RA 3 covers the policy drafting and stakeholder side of Component 2, plus all of Component 3. All RAs will work together in interrelated field.

Research Assistant 1: Building Science, Thermal Performance & GIS

Focus Area	Supports the building/physical science side of Component 1 (microclimate analysis, GIS heat mapping, evaluation of demonstrated building-scale solutions) and provides technical input to Component 2's Energy-Efficient Building/Infrastructure Guidelines.
Duration	Up to 8-9 months (August 2026 – March 2027), full-time
Reports To	Team Leader, through the relevant Workstream Lead



Key Responsibilities

- Support the techno-legal review of DSMC's building bylaws and construction practices against the National Building Code and international green-building standards (LEED, BREEAM).
- Assist with micro-climate analysis and field measurements (temperature, humidity, surface temperature) across DSMC wards.
- Help prepare inputs for building-scale micro-climate simulations (e.g., ENVI-met) of demonstrated solutions such as retrofits and passive cooling measures.
- Support evaluation of demonstrated building/infrastructure solutions and drafting of technical inputs to the Energy-Efficient Building/Infrastructure Guidelines.
- Help prepare maps, drawings, and figures for the Technical Assessment Report.
- Help Prepare training content and deliver training on respective field.

Required Qualifications

- Bachelor's degree in Architecture, Civil Engineering, Building Engineering, or Urban Planning. Preferably a Master's graduate.
- Working knowledge of building thermal performance / passive cooling design principles.
- Working knowledge of GIS software (QGIS or ArcGIS).
- Willing and able to travel to Dhangadhi for field visits, including work in hot conditions.
- Good written and spoken English and Nepali.
- Genuine interest in building science, urban heat, or climate-responsive design, and willingness to learn the project's full methodology.
- Strong research and writing skills; able to summarize technical or legal material in plain language.
- Comfortable speaking in front of groups and organizing multi-day events.
- Strong interpersonal skills; comfortable engaging with diverse community members, including women, older adults and people with disabilities.
- Good written and spoken English and Nepali (spoken Doteli/Tharu or other local languages an advantage).
- Willing to travel and work across all 19 wards of Dhangadhi, including some early-morning or weekend events.

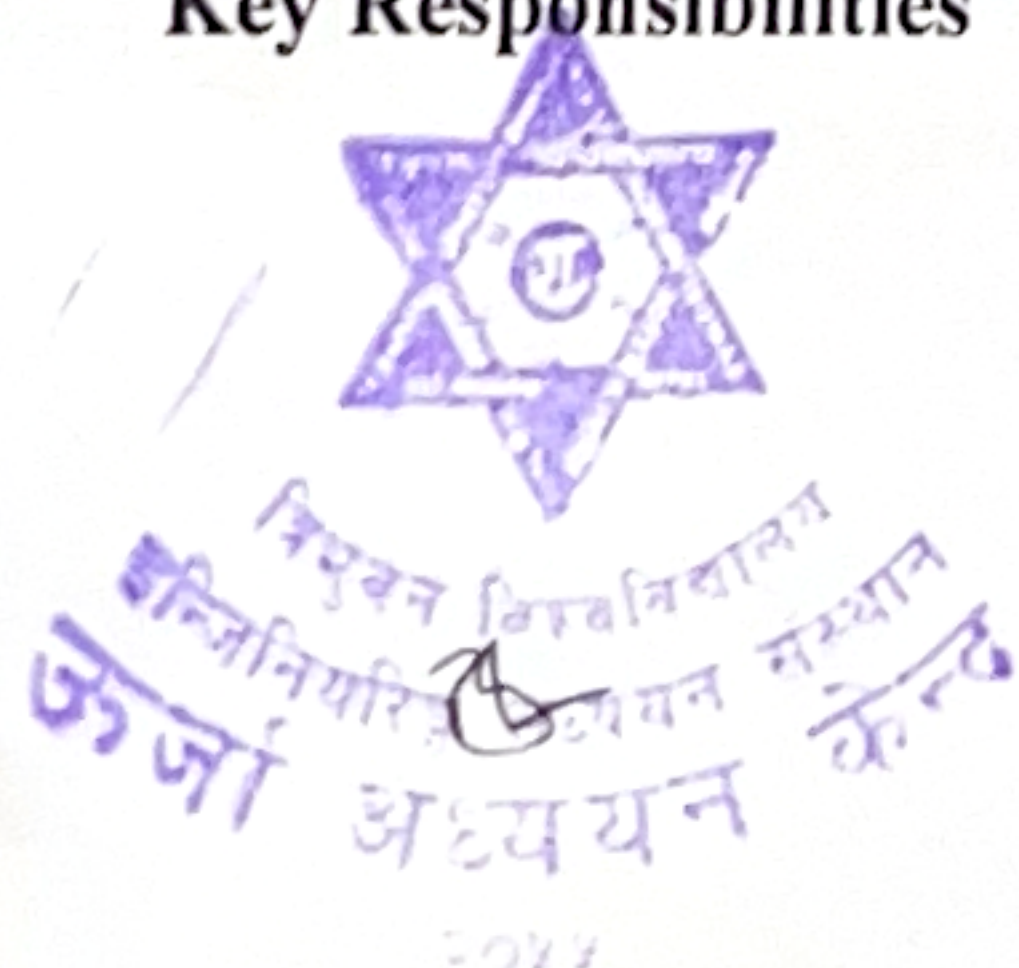
Desirable (an advantage, not mandatory)

- Exposure to building-energy or micro-climate simulation tools (e.g., ENVI-met, EnergyPlus, IES-VE).
- Familiarity with green building rating systems (LEED, GRIHA, BREEAM, EDGE).
- Exposure to remote sensing tools.

Research Assistant 2: Mechanical/Energy Systems, Modeling & Economics

Focus Area	Supports the energy and economic-analysis side of Component 1 (energy modeling and cost-benefit valuation of demonstrated solutions) and provides technical input to Component 2's energy-efficiency provisions.
Duration	Up to 8-9 months (August 2026 – March 2027), full-time
Reports To	Team Leader, through the relevant Workstream Lead

Key Responsibilities



- Support energy modeling and performance assessment of demonstrated heat-resilient solutions (e.g., cooling loads, energy savings from retrofits).
- Collect and organize cost data (capital and operating costs; and socio-economic costs) for demonstrated solutions, and help convert these into the cost-benefit analysis.
- Support economic valuation of benefits, energy savings, and avoided monetary and non-monetary costs using standard cost-benefit methods (NPV, discount rates, benefit-cost ratio).
- Help evaluate renewable energy and cooling-technology options relevant to DSMC's public buildings and infrastructure.
- Support drafting of the energy-efficiency and renewable-energy provisions of the Energy-Efficient Building/Infrastructure Guidelines.
- Assist in preparing the Cost-Benefit Analysis Report and supporting case studies.
- Help Prepare training content and deliver training on respective field.

Required Qualifications

- Bachelor's degree in Mechanical Engineering or Energy Engineering. Preferably a Master's graduate.
- Working knowledge of energy systems and building/energy modeling concepts.
- Comfortable with spreadsheets (Excel) and quantitative analysis.
- Interest in energy economics (cost-benefit analysis, tariffs, energy savings valuation).
- Good written and spoken English and Nepali.
- Willing to travel to Dhangadhi occasionally for field visits and site assessments.
- Strong research and writing skills; able to summarize technical or legal material in plain language.
- Comfortable speaking in front of groups and organizing multi-day events.
- Strong interpersonal skills; comfortable engaging with diverse community members, including women, older adults and people with disabilities.
- Good written and spoken English and Nepali (spoken Doteli/Tharu or other local languages an advantage).
- Willing to travel and work across all 19 wards of Dhangadhi, including some early-morning or weekend events.

Desirable (an advantage, not mandatory)

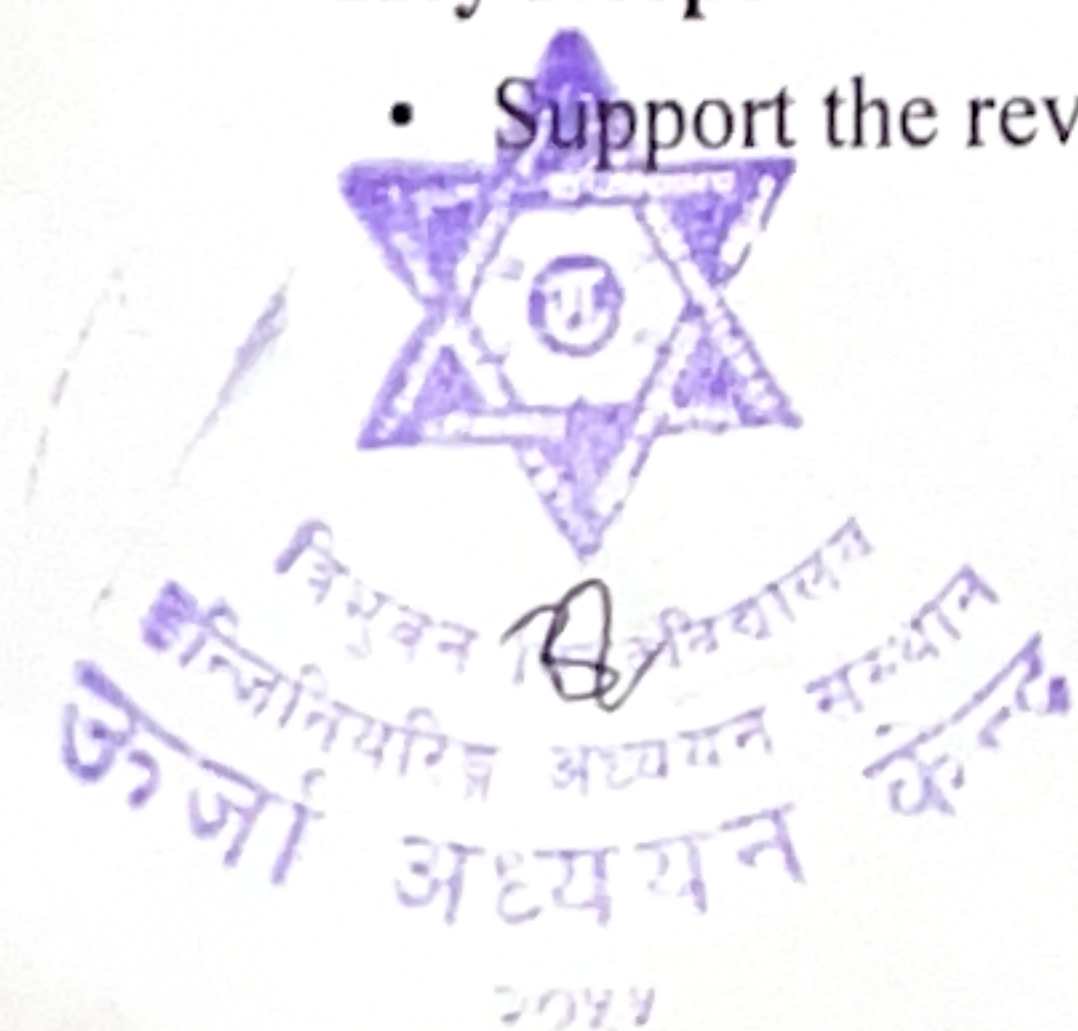
- Exposure to energy modeling software (e.g., EnergyPlus, RETScreen, HOMER, Rist Analysis Software, Excel solvers, etc.).
- Coursework or experience in engineering economics or cost-benefit analysis.
- Basic Python or R for data processing.

Research Assistant 3: Policy and Building Guidelines Preparation

Focus Area	Covers the policy-drafting and stakeholder-facing side of Component 2, and all of Component 3, the training package, training delivery, and community awareness outreach.
Duration	Up to 8-9 months (August 2026 – March 2027), full-time
Reports To	Team Leader, through the relevant Workstream Lead

Key Responsibilities

- Support the review of existing policies and plans, and institutional/regulatory gap analysis.



- Help draft Policy Briefs, General Guidelines/SoPs, and the Heat Action Plan implementation roadmap.
- Help organize and document the ToR-required stakeholder consultations (at least 4 meetings) and workshops (at least 2).
- Support the capacity-needs assessment and design of the training package (modules, tools, checklists).
- Help organize and deliver the 10 training events (3 days each, online/offline), reaching at least 200 government officials, engineers, planners and ward representatives.
- Coordinate logistics for the 25 ward-level community awareness events plus the one city-level campaign, reaching at least 1,300 people across all 19 wards of DSMC, and support monitoring & evaluation of results.

Required Qualifications

- Bachelor's degree in Civil Engineering, Building Engineering. Preferably a Master's graduate.
- Support the techno-legal review of DSMC's building bylaws and construction practices against the National Building Code and international green-building standards (LEED, BREEAM).
- Support GIS mapping and heat-hotspot analysis (land surface temperature, vegetation, impervious surfaces) for the Heat Vulnerability Atlas.
- Strong research and writing skills; able to summarize technical or legal material in plain language.
- Comfortable speaking in front of groups and organizing multi-day events.
- Strong interpersonal skills; comfortable engaging with diverse community members, including women, older adults and people with disabilities.
- Good written and spoken English and Nepali (spoken Doteli/Tharu or other local languages an advantage).
- Willing to travel and work across all 19 wards of Dhangadhi, including some early-morning or weekend events.
- Help Prepare training content and deliver training on respective field.

Desirable (an advantage, not mandatory)

- Familiarity with Nepal's National Building Code or municipal bylaws.
- Prior experience in training delivery, facilitation, or community mobilization.
- Experience working on gender or social-inclusion (GESI) programs, or basic monitoring & evaluation (M&E) experience.

3. Requirements Common to All Three Positions

- Genuine interest in the project and willingness to read the Inception Report and project documents before starting.
- Able to commit to the full or most of the 8-9-month assignment period.
- Comfortable working both independently and as part of a small team.
- Basic computer literacy (email, MS Office, video calls).
- Nepali citizenship or valid authorization to work in Nepal.
- Women and candidates from underrepresented groups are strongly encouraged to apply, consistent with the project's GESI commitments.

