

Background

The focus of this project on enterprise level electric cooking responds to a clear gap identified in the MECS Nepal Jigsaw to scale up. Whilst progress on electric cooking is being made at the household level, enterprise level (defined as including both commercial and institutional organisations) transitions have been overlooked.

Many enterprises use firewood (primarily via improved cookstoves) for cooking and/or LPG. Recent price hikes in LPG are set to continue and MECS ECO research has shown sizeable cost savings at the household level when switching from firewood to electric cooking. eCooking at enterprise/institution level has some potentially unique benefits in terms of using daytime surplus electricity loads. Industries already benefit from differentiated tariffs for daytime use.

Scope of Work

MECS is seeking a consultant/s to conduct a study on the potential for electric cooking in enterprises

The core research questions to be addressed are:

1. What are the opportunities and challenges for enterprise level transitions to eCooking?
2. What is required to assist transitions to electric cooking in different enterprise sectors (see below for examples of possible enterprise sectors)?
3. What is the extent of the potential transition to electric cooking in different enterprise sectors?

In answering the core questions, the research should address the following themes and sub-questions:

1. **Cooking practices and customer needs.** What is the compatibility of eCooking with enterprise level cooking practices and enterprise/customer needs (e.g., do appliances fit the menus and customer tastes, does eCooking offer convenience/quick service, etc)? Do commercial/institutional practices evolve with eCooking adoption?
2. **Existing beliefs.** Are enterprise staff familiar with eCooking? aware of the potential benefits of eCooking? What existing beliefs, factual or otherwise, hold back the transition for enterprise level stakeholders?
3. **Appliances.** What type(s) of eCooking technologies are appropriate for different enterprises and what are the particular requirements of devices for enterprise level eCooking (e.g., size of device, durability of device, warranties for commercial/institutional use)?
4. **Supply chain.** Can appliances in the market meet the requirements identified by theme 3? (Domestically available? Imports?). How reliable and sustainable is the supply chain for enterprise level eCooking? Are after sales services, and repair and maintenance for the appliances locally available?
5. **Energy.** Access to, cost and reliability of energy is of paramount importance to the viability of enterprise level operations (Scott et al., 2020). How compatible is enterprise level eCooking with the electricity supply (e.g., availability, reliability, cost,) and the infrastructure of the enterprise premises (e.g., wiring, meter connections, etc)? What are the impacts of eCooking transitions on non-cooking energy needs of enterprises (e.g., preparing, storing, distributing etc)? When addressing the questions in this theme, please include comparative analysis of electric cooking with other widely used cooking fuels.
6. **Cost.** Does switching to eCooking make economic sense for enterprises? Could enterprises scale up through a transference to electrical cooking? Economic analyses which could be used (but are not limited to) include: comparative fuel savings, payback periods, internal rate of return (IRR).

7. **Networks.** What are the (sometimes invisible) social networks in patterns around food, appliance and fuel purchasing that might impact transitions to enterprise level cooking?
8. **Gender and inclusion.** What are the Gender, Inclusivity and Leave No One Behind (GILNOB) implications of enterprise level transitions to eCooking? (e.g. could it provide employment opportunities for people with disabilities?)
9. **Wider impact.** What are the potential wider impacts of enterprise level transitions to eCooking on nutrition and diet diversification, food safety, food waste, household cooking energy transitions, and local economic development?

Three different enterprise sectors should be incorporated into the study and the rationale for their inclusion provided. A minimum of 20 enterprises for each of the 3 categories should be included in the research.

Initial stakeholder discussions suggest sectors where there may be particular opportunities for enterprise level eCooking include (but are not limited to):

- Restaurants. Within this sector, there are various sub-categories of restaurant types (e.g., kiosk, fast food, full service, etc) which will likely have (very) different responses to the research questions (see Scott et al., 2020 for a fuller discussion). Therefore, the type(s) of restaurant being targetted by the research should be identified.
- Commercial enterprises which have customers throughout the day and which may also have potential for electric food/drink warming devices (e.g., hotels).
- Institutional cooking where daytime cooking is a notable feature (e.g., schools).
- Online food delivery services (including cloud kitchens).

Deliverables, budget, and duration

The research is expected to commence no later than **1st November 2022**. All deliverables must be completed and delivered no later than **31st May 2023**. These dates are non-negotiable. The consultant should demonstrate in their response to these ToRs how the work can be completed within the time available.

The total budget is a maximum of £15,000 (ex VAT where applicable).

Payment is contingent on successful completion of all deliverables.

Deliverable	Payment value
Contract signing	20%
At 12 weeks - a presentation on progress to date	20%
At 24 weeks – final report submitted for review	
At 28 weeks - final report submitted including: <ul style="list-style-type: none"> - Review of existing literature - Analysis of data collected to identify the opportunities, challenges, and requirements to develop eCooking at enterprise level and the extent of the potential transition in each enterprise sector. - Lessons learned, conclusions, and recommendations - A PowerPoint presentation detailing main research findings, conclusions, and recommendations (separate to main report) - All raw data sets (separate to main report) - 9 vignettes (3 from each enterprise sector)* - Research tools used (separate to main report) 	60%

* A vignette is a descriptive story accompanied by an image, or series of images, or a short video (e.g. a talking head). Vignettes should be developed, in collaboration with willing research participants, during the data collection phase. Consent forms for the collection and use of personal images will be provided by MECS.

Responding to these ToRs

Each submission will be evaluated based on the following combination of price and quality;

Quality	Score
Appreciation and understanding of the task.	5%
Quality of proposal and methodology	50%
Skills, expertise and experience of consultant/organisation team members including evidence of similar work completed	10%
Proposed management of the activities including Gantt chart	5%
Price and costs	30%
Total	100%

The University will accept the quotation which is the best value for money i.e. a balance between cost and quality. Shortlisted organisations may be invited to an interview (online) to finalise selection.

Responses should be a maximum of 12 pages (plus up to 3 CVs, 2 pages each).

Please send all responses to mecs@lboro.ac.uk with the subject ‘Enterprise level eCooking’ by 23:59 BST on **13th September 2022**.

Contract Management

This contract will be managed by Dr Louise Medland. All deliverables should be emailed to her on or before the date required. Loughborough University reserves the right to request the consultant to make revisions to the deliverables if they do not meet the required quality. The consultant will be required to make these revisions at no additional cost to Loughborough University.

Appointments to discuss the overall progress against the contract will be agreed at mutually convenient times to the consultant and the project manager.

Ethical considerations

All research must be in line with the Code of Practice for research, Promoting good practice and preventing misconduct (UK Research Integrity Office, 2009).


The UK Research Integrity Office (UKRIO) is an independent charity, offering support to the public, researchers and organisations to further good practice in academic, scientific and medical research. Its confidential advice service is available to free of charge to individuals (members of the public, research participants, patients, researchers and students) and subscribing organisations. Their advice service can be [accessed here](#).

At a minimum, participants must not be subjected to physical, social, legal or psychological harm. Due consideration and ethical steps must be taken into safeguarding all participants, especially the vulnerable. A detailed Participation Information Sheet explaining the full scope of the study, what confidentiality entails, and that no participants will be

forced into participating, must be provided at recruitment. Participants are to be made aware that participation is fully voluntary and there are no repercussions if they choose to no longer participate in the study at any point in time. Participants should, ideally, sign a consent form which includes consent for the use of photographs and videos.

Confidentiality must be maintained at all times. With regards to confidentiality and privacy of participation, participants must be informed that their anonymity will be maintained in any outputs and that all identifiable markers will be removed from any data sets that are published. Additionally, due consideration must be made to ensure that participants are safeguarded during the research process in line with the local government issued guidelines around COVID-19.

The consultant will be responsible for securing any research or ethical permissions needed from local authorities in each of the field work locations. There may be additional ethical, or research clearance needed for this kind of user centric design research in the chosen country.



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