

Overview

MECS is seeking a consultant(s) to undertake research to explore and develop opportunities for Commercial eCooking. The research entails undertaking a scoping study to develop understanding of the main commercial cooking segments in the target country, their energy demands, supply chains and the wider economic and policy landscape, and the factors that might drive or impede eCooking transitions in these commercial cooking segments. The work is intended to be completed in 8 weeks*. See below for the definition of 'commercial organisation' used for this study, and eligible countries.

Pre-existing knowledge or links to the commercial cooking sector are desirable to help build the relationships with commercial cooking organisations required for this study. Depending on the success of this study and the broader development of the MECS programme, there may be scope for a future follow up study focussing more in-depth on the opportunities and challenges for commercial eCooking transitions. Relationships with commercial cooking organisations will be particularly valuable to enable the detailed survey and ethnographic research activities envisioned. Where studies are successful and MECS programme development allows, organisations will be contacted and invited to apply for a follow up study.

Definitions

- **Commercial organisations** are defined as businesses or profit-making ventures. Organizations which are within scope for this study are those which are the place of food production and service. Examples include, but are not restricted to, restaurants, hotels, banqueting halls, bakeries, street food vendors (of snacks, of staples), roadside eateries.
- Institutions, which are taken to mean organisations with a more public serving purpose, such as schools and hospitals, are **NOT within the scope of this study**.
- While commercial food manufacturers and processors have eCooking opportunities, they are **NOT within the scope of this study** which centres on the distinct circumstances for organisations which are both the place of food production and service.

Countries of interest

The work should be based in one of the following countries: Bangladesh, Bhutan, Cambodia, Ghana, Indonesia, Laos, Malawi, Mozambique, Morocco, Nigeria, Rwanda, Sierra Leone, Tanzania, Uganda, Vietnam and Zambia. Consultants can only submit a proposal in one country, multiple-country proposals will be rejected.

Background

In 2022, MECS partners in Nepal undertook study to shed light on enterprise level eCooking (commercial & institutional eCooking) in Nepal. Using surveys, ethnographic study and interviews the organisations [identified several opportunities for commercial eCooking](#). Findings indicated the scale of cooking emissions at the commercial level (e.g. restaurants, hotels, street food vendors) and at the same time the scope for cost, energy, and carbon savings through transitions to energy efficient eCooking appliances which can cater for common commercial cooking processes (Dharel et al, 2024; PAC, 2023, Fodio Todd & Sieff: MECS Working Paper, 2024). Further study is required

* The time period is the project duration and there is not an expectation that staff work full time for this period.

to discover the opportunities in different contexts and unlock potential, address barriers, and support scaled commercial eCooking transitions.

This new data is needed for a range of purposes:

- **Policy making:** The studies can provide an evidence base to inform decision making on pro-eCooking energy policy and regulation. A key area centres on the scope for commercial eCooking to provide flexible demand – particularly via pre-service batch cooking. This potential could be attractive to utilities in terms of load balancing and profit-making potential and therefore it is important to understand the load profile of eCooking in different commercial settings. This data could then be used to advocate for pro-eCooking measures – such as supportive time of day tariffs.
- **Demand creation:** The studies can help demonstrate more accurately to commercial organisations the potential benefits (e.g. energy saving, cost saving, convenience, quality control) of eCooking transitions and help to showcase successful eCooking adoption in different sectors.
- **Supply chain:** By de-risking the trial of eCooking devices, the pilot study can serve as a demonstrator to help stimulate the supply chains for commercial eCooking in low- and middle- income markets, which can support manufacturers, suppliers, distributors, vendors, after sales providers and other organisations engaged of considering engagement in the sector.
- **Carbon finance:** The new MECS-supported Gold Standard for digitally connected cooking is based on calculations that require evidence on the energy use by the project devices (currently expressed as thermal efficiency, but likely to expand to allow use of data on energy use instead). This methodology has been successfully applied at household level but for it to be applied with commercial organisations, data on eCooking on commercial scale energy efficient devices is required, which is currently a particular gap.
- **Product innovations:** Where applicable, new data can help eCooking equipment manufacturers and supplier better understand the needs of commercial cooks and open up opportunities to improve existing and create new eCooking appliances, utensils, integrated products, and even product-service offerings for commercial settings.

Scope of work:

The research entails undertaking a scoping study to develop understanding of the main commercial cooking segments in the target country, their energy demands and supply chains, the wider economic and policy landscape, and the factors that might drive or impede eCooking transitions in these commercial cooking segments.

In undertaking this assignment, the study should address the following research questions (RQs) along with the themes and objectives listed below each research question.

RQ1. What are the key commercial cooking segments and their characteristics within the target country?

- Provide analysis to develop understanding of the core commercial cooking segments in the selected country of interest. Segments may be analysed according to size (small, medium, large), end user (hotel, quick-service, restaurant) or other contextual factors relevant to the specific national setting. Applicants may need to develop a framework or other suitable analysis methods to capture this data.
- Provide descriptions of the main segments and describe their cultural significance, for example if they are long existing practices (e.g. traditional food premises), new entries to the market (e.g. global fast food chains) or occupy a specific niche (e.g. single dish vendors).
- Provide summaries and analysis of quantitative data available. Key considerations include: number and type of commercial organisations, customer bases, relative sector turnover and/or popularity,

geographical coverage, staff composition in terms of gender, age, and other socio-economic and cultural indicators. Methodological challenges in the process of doing this should be highlighted.

- Determine approximate energy demand for the different commercial cooking sector segments and the sector as a whole, including as a proportion of national energy consumption. Provide breakdowns of common fuel use, commercial sector network and infrastructure details, and electricity access.

RQ2. How does the wider economic and policy landscape impact the commercial cooking sector?

- Analyse the landscape and background context around the commercial cooking sector. Coverage should include but is not limited to: relevant policy, regulatory environment (e.g. those affecting appliance standards, food safety, etc...), the wider economic environment, and any relevant finance and fiscal mechanisms.
- In-country geographical variations should also be analysed (including variations between rural and urban environment/s).

RQ3. What are the characteristics of commercial cooking equipment supply chains and how well established are these supply chains?

- Assess commercial cooking equipment supply chains including those for eCooking appliances. Factors which should be assessed include, but are not restricted to, manufacture, import, distribution and availability, repair, and marketing of commercial cooking equipment.
- Where relevant, disaggregate the analysis according to commercial cooking segment type.

RQ4. Who are the key stakeholders in the commercial cooking sector and how they are interlinked?

- Develop a stakeholder map of the key stakeholders in the commercial cooking sector including coverage of the supply chains for different commercial eCooking segments.
- Highlight linkages and relationships between stakeholders, including those which could potentially drive or impede eCooking transitions.
- Provide analysis and commentary of the key/influential organisations within different stakeholder groups and different commercial cooking segments.

RQ5. What are the factors that drive or impede the uptake of eCooking in the commercial cooking sector?

- Draw on the findings from the above research questions and additional research activities, provide commentary and analysis of the opportunities and challenges for commercial organisations to transition to eCooking.
- Highlight any knowledge gaps and areas for potential future research which could aid understanding to support eCooking transitions.

Research methods: The following methods are recommended for addressing the research questions. However, this list is not exhaustive and applicants are free to use other methods in addition to those below.

Desk research

- Recommended sources: academic, grey and industrial literature (including sources such as census data), energy data platforms, trade publications, company data, utility company sources, energy tariffs, local government documents, relevant food, safety and health bodies outputs, tourism and hospitality information, policy and regulatory documents.

Key informant interviews (KII)

- The stakeholder mapping (RQ4) should be used to help relevant identify organisations and individuals with whom to conduct KIIs.
- Recommended stakeholder groups to target include: relevant government bodies, sector associations, appliance distributors/suppliers, commercial cooking organisations .

Deliverables, budget, and duration

The research is expected to commence no later than **4th November 2024**. All deliverables must be completed and delivered no later than **17th January 2025**. These dates are non-negotiable. Organisations or consultant/s 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 £10,000 (ex VAT where applicable).

Payment is contingent on successful completion of all deliverables.

Timeline

Total project duration: 8 weeks

Phase 1 work package deliverables and payments	Payment value
Contract signing	50%
8 weeks: WP1: Scoping study final report and presentation delivered including: <ul style="list-style-type: none"> - Executive summary (two pages maximum) - Introduction, - Literature review/state-of-the-evidence review - Methodology - Results and findings (addressing all research questions) - Conclusions and recommendations - A PowerPoint presentation with key findings - Consultative webinar to discuss, elicit feedback, and disseminate findings. - Where possible, provide photos and videos of premises, equipment and individuals, in collaboration with willing research participants, during the project activities. These are highly valuable for understanding commercial cooking realities. Consent forms for the collection and use of personal images will be provided by MECS. 	50%

Responding to these ToRs

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

Quality Score	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).

Proposals should be sent to MECS (mecs@lboro.ac.uk) with the subject '**Commercial eCooking**'. All proposals must be received by 23:50 BST on **Thursday 19th September 2024**.

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.

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.

MECS is funded by UK Aid through the Foreign and Commonwealth Development Office. It is a partnership between researchers, innovators, policy makers, and ESMAP drawing on their expertise and relevant work from around the world to co-construct new knowledge with practitioners and the private sector. It is led by Loughborough University, UK.