

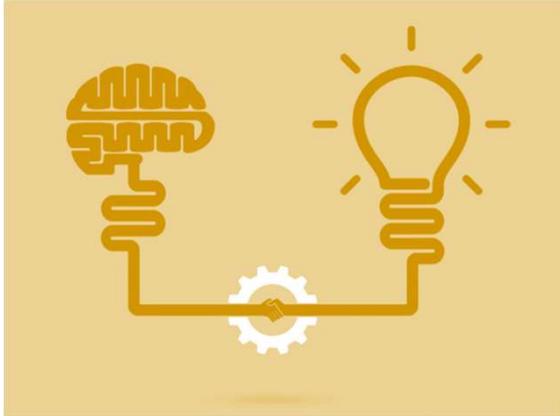


Modern Energy Cooking Services -Technology Research Innovation for International Development (MECS-TRIID): Webinar Presentation On 18th & 30th April 2019



Please note that this presentation will be available as a recorded download on 2nd May on the following link <http://www.mecs.org.uk/challenge/mecs-triid>

Overview



- Introduction
- Themes
 1. Energy storage for cooking;
 2. Grid and infrastructure adaptability;
 3. Alternative fuels;
 4. Delivery models (related to business or finance) and gender, accessibility and inclusion in MECS
- Application process
- Assessment of applications
- Funding
- Dates and deadlines

In this presentation we'll run through all the information you need to be able to make an application to the MECS-TRIID Competition

Introduction



MECS-TRIID is part of the DFID-funded MECS programme – a 5 year funding programme of over GBP 39 million.

The purpose of MECS-TRIID is to support innovative projects that can:

- Reduce barriers to innovation and advance technology in modern energy cooking;
- Enable a more sustainable, economical and easily accessible cooking system in countries supported by DFID;
- Develop smart ideas that have the potential to advance further;
- Fund early-stage innovations to take to the next stage of development.

The MECS programme is a 5 year, £39million programme funded by UKAid.

The MECS programme will focus on; understanding why we are not making more progress in the transition to modern energy cooking services; taking advantage of new technological developments, relative price movements and new knowledge; generating new knowledge on how to scale the transitions and transformations, putting these into practice in collaboration with private sector partners and on strengthening the monitoring of global progress in order to influence the policy environment.

Through the MECS challenge fund we are running a series of open competitions. MECS-TRIID is one of these competitions.

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energy cooking;

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Introduction



- The initiative funds projects up to GBP 30,000 each;
- Open to all companies/organizations, any size, based anywhere;
- Challenge and solutions must apply to a country supported by DFID;
- Novel and innovative solutions that use science, engineering or technology focussed on [DFID's priorities](#);
- Collaborations with companies/organizations based in a country supported by DFID are encouraged;

- **There are 1-6 projects under each of the 4 themes being funded GBP30,000 each**
- Open to companies of all sizes and based anywhere in the world just as long as the solution is applicable to a DFID Low Income Country.
- We welcome collaborations with companies in the LIC as we want to see skills transfer to these countries.

MECS-TRIID Themes



Energy
storage for
cooking



Grid and
infrastructure
adaptability



Alternative
fuels



Delivery models,
Gender,
Accessibility
(vulnerable groups
such as people with
disabilities) and
inclusion in MECS

There are four main themes and we'll talk through each of them individually;

1. Energy storage for cooking
2. Grid infrastructure adaptability
3. Alternative fuels
4. Delivery models, gender, accessibility (vulnerable groups such as people with disabilities) and inclusion in modern energy cooking services

Cooking is a uniquely cultural activity and any innovations in cooking must take into account the cultural context and needs of the consumer

Energy storage for cooking



- To stimulate ideas generation and test initial concepts around how energy storage could be used in transitions towards the use of modern energy cooking services in one or more countries supported by DFID
- Past research has focused on the potential for utilising Lead Acid, Lithium Ion Phosphate and Salt Water chemistries in batteries.
- Price reductions of Lithium based batteries are driven by manufacturing developments in the electronic industry, electric vehicles and larger and domestic scale energy storage. This suggests that Lithium based batteries may be, for the near future, the 'chemistry of choice'.
- Salt water and Nickel Iron batteries may have potential.

There are emerging possibilities for enhancing the transition of African and Asian economies to modern energy cooking services, by the inclusion of energy storage.

To date, research has focused on the potential for utilising Lead Acid, Lithium Ion Phosphate and Salt Water chemistries in batteries. While Lead Acid seems to have limited application, the ongoing price falls of Lithium based batteries driven by the learnings from manufacture in the electronic industry, electric vehicles and larger and domestic scale energy storage, suggests that Lithium based batteries may be, for the near future, the 'chemistry of choice'. Salt water and Nickel Iron batteries also hold some promise.

This targeted call is to stimulate ideas generation and to test initial concepts around how energy storage could be used in the transition towards the use of modern energy cooking services in one or more countries supported by DFID.

Energy storage for cooking

Seeking solutions to:

- Demonstrate, model and experiment the relative merits of different battery chemistries and other forms of energy storage for this particular application.
- Mitigate the detrimental effects of higher C rates.
- Modelling of sizing and system configurations that achieve the desired effect of delivery on demand
- Extend battery life
- Leverage the learning from electric vehicles for application to MECS.
- Improve safety issues.
- Manage disposal Issues

Ideas for projects include but are not limited to;

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- Modelling of sizing and system configurations that achieve the desired effect of delivery on demand
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- Leveraging the learning from electric vehicles for application to modern energy cooking services
- Safety issues
- Disposal Issues
- Managing energy storage

Grid and infrastructure adaptability



- Ideas for new solutions and approaches which help to improve the transition to MECS by improving grid (both national and localised grids) infrastructure.
- Access challenges will remain and getting the grid to reach all households and enabling consumers to connect to the grid remain a challenge.

Applicants should consider and incorporate accessibility issues within their project specifications.

Building on the introductory outline above, while the original concept of eCook was based on Solar home systems, it is clear now that eCook has potential within grid architectures of varying sizes. Moreover, there are clear opportunities for the introduction of cooking to enhance the financial returns and cash flows of grid operators within these different contexts.

Grid and infrastructure adaptability

Seeking solutions to:

- Economic scenario modelling that explores the role of cooking in grid development.
- Innovative ideas for improving the quality (strength, reliability and sustainability) of supply by the inclusion of cooking in grids.
- Innovative configurations of systems and networks that provide for cooking. For instance, should energy storage for the (mini, micro, nano) grid be held in one location or distributed to each household.
- Experimentation with tariff on a (mini, micro) grid to illustrate consumers' willingness to pay.
- Other experimentation that demonstrates consumers willingness to pay.
- Control of grids to match supply and demand (for cooking), including micro control of equipment, zone switching, etc.

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Alternative fuels



The competition will fund research into developing new solutions and approaches that improve the implementation and adoption of modern energy cooking services based on fuels other than electricity and provide tangible benefits.

The first two themes focus on electricity as a major potential fuel for cooking with modern energy. There is also of course a rising momentum of work on Liquid Petroleum Gas, Ethanol and Biogas among other possibilities.

MECS has been funded on the basis that it is trying something other than 'business as usual' in the cooking sector. As discussed above, 3 billion cooking on biomass leads to 4 million deaths a year, and a number of associated problems. The deaths are predominantly associated with air pollution, both within the household and within the community.

LPG as a petroleum based fuel solves the localised air pollution by offering a tier 5 stove. Regarding the carbon balance and climate change, however, LPG is not necessarily the best option, nevertheless it (and derivatives such as natural gas) are likely to remain important sources of 'relatively' clean cooking for some years to come.

Biogas as an alternative to petroleum based gas, has had a long history within the development sector. At scale and attached to supplies such as

municipal waste, it has shown itself to be reliable, affordable and sustainable. However, actions to apply it at the domestic level have achieved mixed results

Ethanol production as a fuel has prompted debates about food substitutions and use of land. However, at the household level it does present a clean cooking solution. Recent research suggests existing stoves cook food quite slowly and consumer acceptance is low. Innovations at the household level for the use of ethanol for cooking are within scope.

Solar thermal. MECS is focused on using modern energy for cooking services. In its background documents, when it discusses the use of 'solar' it refers to using solar PV to deliver electrical energy that is then used for cooking (often with the mediation of energy storage).

Alternative fuels

Seeking solutions to:

- Improve the reliability, affordability and sustainability of supply of LPG.
- Improve the efficiency of use of LPG.
- Improve the applicability of ethanol as a modern energy cooking service.
- Improving the potential of biogas as an alternative to petroleum based gas.
- Solar thermal as an additional or alternative cooking medium.
- Unknown alternatives.

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- Improve the reliability, affordability and sustainability of supply of LPG
- Improve the efficiency of use of LPG
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- Solar thermal as an additional or alternative cooking medium
- Unknown alternatives

Delivery models, Gender, Accessibility (vulnerable groups such as people with disabilities) and inclusion in MECS



The competition will fund research into developing new services, solutions, and approaches which can demonstrate how modern energy cooking services can be made equitable for men and women, people of different social groups and people with different physical, sensory or cognitive impairments or mental health issues and which will provide tangible benefits and impact.

This competition will fund research into developing new services, solutions, and approaches which can demonstrate how modern energy cooking services can be made equitable for men and women, people of different social groups and people with different physical, sensory or cognitive impairments or mental health issues and which will provide tangible and impactful benefits.

Delivery models, Gender, Accessibility (vulnerable groups such as people with disabilities) and inclusion in MECS

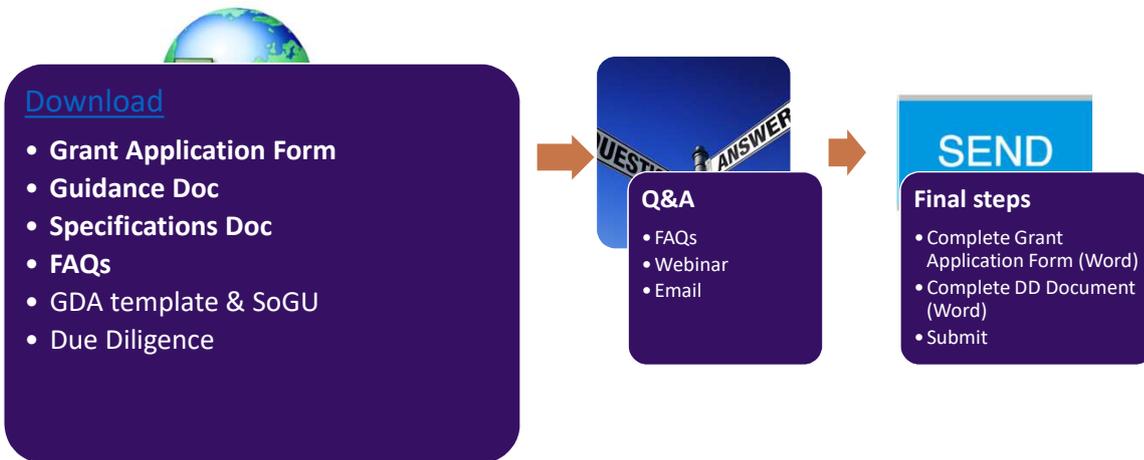
Seeking solutions to:

- Identify and evidence the drivers and barriers for the uptake of electricity for cooking.
- Improve the understanding on the intra and inter household dynamics that might lead to the utilization of a greater diversity of cooking fuels.
- Improve the understanding of the potential of a wider range of business models and use cases.
- Promote greater involvement of women employees and entrepreneurs in the delivery of MECS and enhance the development of gender-responsive service delivery.
- Improve the collection of data on cooking patterns among different social groupings.
- Demonstration of rapid uptake.

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- Improve the understanding of the potential of a wider range of business models and use cases to promote greater involvement of women employees and entrepreneurs in the delivery of modern energy cooking services and enhance the development gender-responsive service delivery
- Improve the collection of data on cooking patterns among different social groupings.
- Demonstration of rapid uptake

Application Process



You will need to download the Grant Application Form, Guidance Document (which gives you the general rules), Specifications (gives examples of types of projects of interest under each of the four theme), FAQs documents (this provide answers to most of your questions), GDA-Grant Disbursement Agreement (the terms and conditions) and DDQ (Due Diligence) questionnaire. The Statement of Grant Usage will be needed for the end of the project when reconciling all expenses against actuals and making the final grant claim.

The Application Form and the Due Diligence questionnaire are in Word format and needs to be kept in that way. If you have problems accessing these forms please get in touch with us via the mecs@lboro.ac.uk .

The Statement of Grant Usage is in Excel – all others are available in Pdf format.

There will be an opportunity at the webinars for FAQs and afterwards via mecs@lboro.ac.uk

Final step is to complete the Application Form in Word and send via email mecs@lboro.ac.uk .

Application Process

SP6

www.mecs.org.uk/challenge/mecs-triid/

Home Team Resources MECS Challenge Fund Blog



MECS-TRIID

The Modern Energy Cooking Services- Technology Research for International Development (MECS-TRIID) competition is open! Below you will find all the documents related to the competition. Please read each document carefully and in full. The deadline for applications is 23:59 BST on Tuesday 4th June. Details of how to submit your application can be found in the Guidance document.

If you are interested in learning more about the MECS-TRIID competition we will be hosting a webinar on Thursday 18th April at 08:30 BST. You can register your interest [here](#). A second webinar will be hosted on Tuesday 30th April at 14:00 BST. You can register your interest [here](#).

[MECS-TRIID Grant Specification April 2019](#) [Download](#)

[MECS-TRIID FAQs April 2019](#) [Download](#)

[MECS-TRIID Guidance Document April 2019](#) [Download](#)

[MECS-TRIID Grant Application Form April 2019](#) [Download](#)

Blog posts

Cooking up a storm at the Modern Energy Cooking Services Programme Launch

5 April 2018

Bangladesh, Biogas and Clean Cooking – A 'Direction, Not a Destination'?

28 March 2018

Tweets by @UKMECS

Modern Energy Cooking Services
Interested in the MECS-TRIID Challenge Fund Competition but not available for the webinar on 18th April? We are holding a second, identical webinar on 30th April, register at: eventbrite.co.uk/e/mecs-996-c #Cooking@MECS #Renewables #funding

This is where on the MECS website you will find the documents, under MECS Challenge fund.

Slide 15

SP6 replace with MECS website
Sviti Pabari, 03/04/2019

Applications Process

- Sections A – F are important but not assessed
- Section G – questions 1 – 6 are very important and assessed
- Good quality applications:-
 - Read the question carefully
 - Consult the notes for each question in the Guidance document
 - Consult the assessment criteria (Guidance document), FAQs and Specification Document

Sections A-F are important and you need to completed these carefully.

However it is section G that is where you provide your proposal in the Application Form and this is where you can earn the points.

To achieve a good quality Application you need to :

- Read the questions carefully
- Consult the notes for each question in the Guidance and use the Criteria FAQs and Specification for project ideas

Assessment Process

- Step 1 – Triage review of questions 1,2 & 3 (The Challenge, Innovation & Local Partner/Technology Knowledge Transfer). Score of 50% or greater will progress to a full assessment.
- Step 2 - Full assessment of all six questions against criteria in the guidance document.
- Due diligence assessment as part of step 2.

There is a two stage Assessment Process.

Initially, only questions 1,2 & 3 (The Challenge, Innovation & Local Partner/ Technology Knowledge Transfer) will be assessed by at least two members of staff of MECS team. Only those applications receiving an aggregated score of 50% or greater for the three questions (30 or more out of 60) will progress to a full assessment. Any applications scoring less than 30 will not progress to full assessment.

During the full assessment, all six questions will be reviewed by at least three expert assessors at Loughborough university, KTN and other partner organisations.

At this point Loughborough university will conduct Due Diligence on those going into the 2nd stage. This will undergo Loughborough university's process ensuring the organisations involved are trustworthy and follow good conduct.

Assessment Process

FULL ASSESSMENT PROCESS

Applications will be assessed on all six questions by at least three expert assessors from Loughborough University and partner organisations.

Question	Weighting factor	Maximum score
1. The Challenge What is the challenge being addressed by the proposed project?	1	10
2. Innovation How is your Application innovative?	★ 4	40
3. Local Partner/Technology Knowledge Transfer to country supported by DFID What measures are being taken to ensure the knowledge is retained in the country being supported by DFID?	1	10
4. Project Management and Team What is your project plan to deliver the project? What are the relevant skills and expertise of the team?	1	10
5. Impact and Maximise Outcome How will the outcome from this research have a beneficial impact on transport in National Country?	★ 2	20
6. Project Finances/ Value for money How much will the project cost to deliver and how will this be spent to ensure value for money?	1	10
TOTAL	10	100

The two questions that need more attention are questions 2 and 5 as the answers can earn more scores – it has a weighting factor of 4 and 2 respectively and so needs more consideration. As this is funding an innovation, it is not surprising that the question on innovation scores the most and has a weighting factor of 4.

Assessment Process

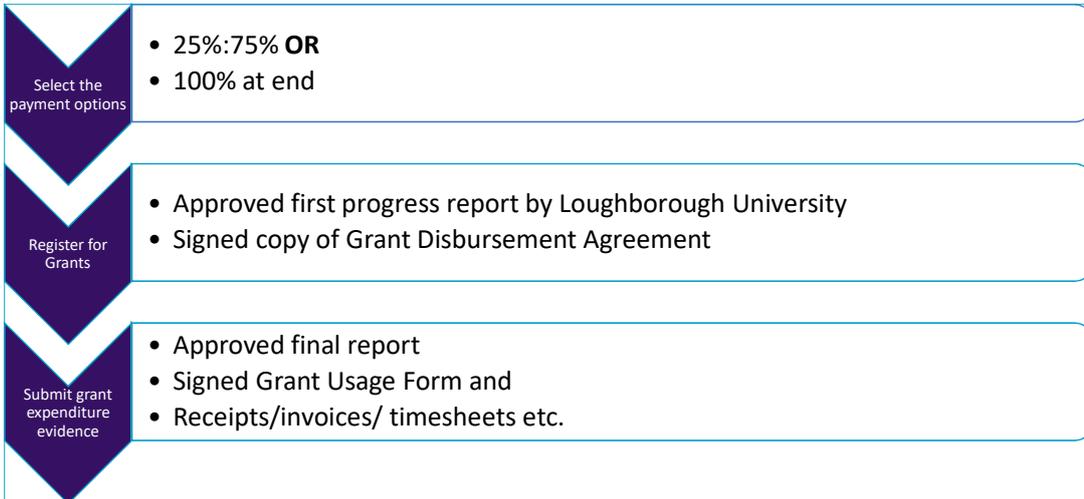
- See Guidance Document
- Marking scheme of 0, 2, 4, 6, 8, 10 (out of 10)
- **Example: Section G, Question 4 Project Management**
- Score of 0 :
 - *There is a poor project plan. Little or no details are given of the aims and objectives; deliverables; milestones, the team, or risks. No Gantt Chart is provided.*
- Score of 10 :
 - *The project plan is highly credible and likely to deliver the project effectively. The plan clearly conveys the aims and objectives, deliverables, timescales, milestones and skill of the project team. Comprehensive risks are identified, and suitable mitigation measures are given. A comprehensive and detailed Gantt Chart is provided.*

We have provided you with a clear indication for marking structure. So for example if you look at Project Management, if we receive an Application where there is a poor project plan, little or no details of objectives, deliverables, milestones or staff skills. If the project does not have any risk assessment or a Gantt Chart it will score 0.

However at the other end of the scale if an Application provides a project plan that is highly credible, with clear timescales, objectives, milestones and staff skills. There is a comprehensive Gantt chart, it will score 10.

Funding

Finance (3 Steps) *(Please share this slide with your finance contacts)*



The Finance side is very simple steps.

You need to first choose whether or not you want 25% early payment or 100% at end in the Application form.

If you have opted for the 25% first, only after approval of the first progress report can we process your grant instalment as well as acceptance of the GDA.

For the remaining 75% or if you opted for 100% funding at end, you will need to have an approved final report, plus a signed Grant Usage Form as well as electronic copies of receipts and invoices.

Dates and Deadlines

Competition opens	16th April 2019
Briefing webinars for all 4 themes	18 th & 30 th April 2019
Availability of webinar recordings	2 nd May 2019
Competition closes, application deadline	23:59 BST 4th June 2019
Decision to successful applicants	30 th July 2019
Notification to unsuccessful applicants	7 th August 2019
Initiation meetings commence	24-31 st July 2019
Projects start	5 th August 2019
Draft Report	7 th January 2020
Final Report	5th February 2020
Approve all final finance documents	13 th March 2020

Read the notification:

- **Competition opens 16th April 2019**
- Briefing webinars for all 4 themes 18th & 30th July 2019
- Availability of webinar recordings 2nd May 2019
- **Competition closes, application deadline 23:59 BST 4th June 2019**
- Decision to successful applicants 30th July 2019
- Notification to unsuccessful applicants 7th August 2019
- Initiation meetings commence 24th July 2019
- Projects start 5th August 2019
- Draft Final report 5th February 2020

- **Final report – around two weeks later 19th
February 2020**
- Approve all final finance claim documents 13th
March 2020

Q & A selection

Q1: In the MECS-TRIID application downloads, the due diligence questionnaire seeks information about whether people are public officials. In many low-income countries, Universities are frequently state institutions therefore senior University academics are essentially, Public Officials. As a Public Official, would I be excluded from applying for the MECS-TRIID competition?

A1: No. If an academic is a public official, they would not be excluded from submitting an application. The Due Diligence Questionnaire (DD) should be completed honestly and fully, providing requested information on their public office role.

Q2: What documents do I need to submit to claim my Grant?

A2: To enter the competition, you must submit the following: Grant Application Form and the Due Diligence questionnaire in Word format.

Q3: When does the project work have to be completed by?

A3: The majority of the project work will need to be completed by mid January 2020, with a final draft report of the work carried out/ key findings provided to Loughborough University by 5th February 2020. The amended Final Report is due in the following couple of weeks once MECS team have reviewed the draft report and provided any comments for amendments.

Here are a selection of questions that Applicants may have and answers.



mecs@lboro.ac.uk

If you have any questions please email the MECS email address. Please allow plenty of time to receive an answer and to apply the response in your application.

Countries supported by DFID

Afghanistan, Angola, Azerbaijan, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic Chad, Comoros, Congo (Democratic Republic of the), Côte d'Ivoire, Djibouti, Egypt (Arab Republic of), Eritrea, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Haiti, Iraq, Kenya, Kyrgyz Republic, Lao People's Democratic Republic, Lebanon, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Nigeria, The Occupied Palestinian Territories, Pakistan, Papua New Guinea, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sudan, Swaziland, Tajikistan, Tanzania (United Republic of), Togo, Turkmenistan, Uganda, Uzbekistan, Venezuela (República Bolivariana de), Yemen, Zambia and Zimbabwe.

Here is the list of countries supported by DFID