MINISTRY OF ENERGY AND MINERAL RESOURCES REPUBLIC OF INDONESIA
DIRECTORATE GENERAL OF NEW RENEWABLE ENERGY AND ENERGY CONSERVATION
JALAN PEGANGSAAN TIMUR NO. 1, MENTENG, JAKARTA 10320
Telphone: (021) 319 24583 Faksimile: (021) 319 24585 Website: www.ebtke.esdm.go.id Email: info@ebtke.esdm.go.id

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To:
Bioenergy Stakeholders

Subject : Call for Clean Stove Technology for Testing

Dear All Bioenergy Stakeholders,

We would like to inform you that the Ministry of Energy and Mineral Resources c.q. Directorate General of New Renewable Energy and Energy Conservation is working in collaboration with the World Bank on a Clean Stove Initiative Program. The objective of this collaboration is to increase access to clean stoves in Indonesia and to promote exchange of knowledge and experience, as well as international cooperation, through the Clean Stove Initiative.

In this regard, we would like to invite all stakeholders to send applications for your stoves to be tested. Stoves that pass the criteria will be promoted in the Indonesia CSI pilot program.

An application form and information regarding the "Call for Clean Stove Technology" are attached to this letter.

Thank you for your kind attention.

Yours sincerely,

Dadan Kusdiana
Director for Bioenergy

Cc:
Director General for New Renewable Energy and Energy Conservation

CALL FOR TESTING CLEAN STOVE TECHNOLOGY FOR CLEAN STOVE INITIATIVE PILOT PROGRAM

The Indonesia Clean Stove Initiative (CSI) is a collaborative effort between the Directorate General of New Renewable Energy and Energy Conservation, the Ministry of Energy and Mineral Resources of Indonesia, and the World Bank.

To support the CSI, a pilot program will be launched with the following objectives: to pilot the results-based financing (RBF) approach, and to generate lessons learned for the future national scale-up that aims to achieve universal access to clean cooking in Indonesia.[1]

The design of the pilot program's RBF approach includes selecting eligible stoves for promotion based on a trial stove performance assessment system, allocating performance-based incentives, and implementing a monitoring and verification system. A public campaign will be conducted to raise awareness and stimulate demand for clean cooking technology. Advisory services related to stove designs, technology and marketing will also be provided to stove producers and designers. This call for Clean Stove Technology refers to the first stage of selecting eligible stoves to support the RBF Pilot Program.[2]

This program will also pilot the Clean Stove Testing Protocol, which has been formally registered in the Indonesia National Standard (SNI) Number 7926-2013, and the CSI Water Heating Test Protocol. Results will be used as input for future improvement of the SNI.

The Indonesia CSI is open to anyone who is involved in, or is interested in, clean stove technology. They are encouraged to apply to have their stove(s) tested, and if the

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[1] Further information on Indonesia CSI is available in the report, *Indonesia: Toward Universal Access to Clean Cooking*, which can be found on the Aliansi Tungku Indonesia (ATI) website: http//tungkuindonesia.org/images/download/Indonesia_toward_universal_access_pdf

[2] A description of the RBF approach can be found at the ATI website: http//tungkuindonesia.org/images/RBF-Indonesia-LI-SF1

stove(s) fulfills certain criteria, the product(s) will be promoted in the pilot program areas of Central Java and Yogyakarta Provinces.

The criteria to be fulfilled are as follows:

Indonesia CSI is seeking to receive two categories of products that use solid biomass as their main fuel: cook stoves with controllable/adjustable power capable of performing cooking tasks typical in the target region, and high performance water boilers. The dedicated water boilers will be tested for efficiency and emissions but will not be tested for user-controlled cooking power. The key performance indicators include system efficiency (overall thermal efficiency), emissions (PM and CO), safety and durability.

I. Criteria for Clean Stove

Clean stoves submitted for Indonesia CSI should satisfy the following conditions:

- Stoves function either as cook stoves for households/small industries or as stoves dedicated to boiling water (water boilers).
- Stoves can be made of ceramic, terracotta, zink, or any other materials.
- Types of technology uses uncontrolled draught, controlled natural draught, or forced draught (e.g. by adding fan, etc.)
- Types of fuel used: raw solid biomass (wood, rice husk, saw dust, etc.) or processed biomass (briquettes, pellets, charcoal, etc.)
- Stove power can be controlled/adjusted to perform cooking tasks typical to the target region. (Note: This applies only for cook stoves and not for dedicated water boilers.)

II. Application Process

1. Fill in the application form in Attachment 1.
2. The application form should contain a short background of the applicant (individual, organization, institutions, company, etc.), experiences (especially ones relevant to clean stove development and dissemination), interest in the clean stove market in Indonesia, and a description of the product, including product characteristics and how the product may serve the needs of the Indonesian market/consumers.

3. Interested applicants should send their application form to YDD by email to tshe@tungkuindonesia.org. The application form is attached to this invitation and may also be downloaded from www.tungkuindonesia.org.

4. Applicants whose product(s) fulfill the criteria will be contacted on how to proceed, especially regarding the logistics of sending their respective product(s) to the laboratory.

5. Each applicant can submit only a maximum of 2 (two) types of technology/designs. For every technology/design accepted, applicants should send 3 (three) stoves per model/design.

6. Applicants should cover all cost incurred to transport the stoves to Yayasan Dian Desa (YDD) lab.[3], in Yogyakarta, Indonesia.

7. The deadline to submit applications is April 30, 2014. Applications will be reviewed on a rolling basis.

III. Selection Mechanism

Every submitted stove design will be tested in 2 (two) steps. The first step of the test will be conducted using the Indonesia National Standard (SNI) Methods.[4]

Stoves that pass the SNI standard will then move on to the second step, testing by Indonesia CSI Water Heating.[5]

It should be noted that stoves that will be promoted in the Indonesia CSI Pilot Program are stoves that have passed the two steps of testing.

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[3] The designated pilot program stove testing center is Yayasan Dian Desa (YDD) in Yogyakarta, Indonesia, with technical support from Group for the Environment, Renewable Energy and Solidarity (GERES) and international experts

[4] SNI 7926-2013- Biomass stove performance can be downloaded from the website: www.bsn.go.id

[5] Details of the stove performance assessment method, as well as sample test results for the baseline stoves, are available in the following link on the ATI website: http//tungkuindonesia.org/images/downloads/CSI_Indonesia_Test_Methods_2014-14_v7.pdf Additional product acceptability assessments will be conducted based on the social and anthropological studies conducted in the target region.

The stoves will have to fulfill criteria of stove performance related to CO and PM2.5 emissions, stove system efficiency, as well as other criteria related to safety, environment and durability.

Indonesia CSI uses a 3-star rating system as presented in the following table:

	System (Overall Efficiency)	Efficiency Thermal	Emission Factor		Safety, Environment and Durability	
	Cooking Stove	Water Boiler	[g CO/HNET]	[mg PM2.5 /HNET]	Safety Enviro1/	Durability
One Star	>25%	>45%	<12	<300	Expert	1 year
Two Stars	>30%	>55%	<10	<200	Expert	1 year
Three Stars	>40%	> 65%	< 8	<100	Expert	1 year

Note 1: Expert will determine the safety and environmental aspect of stoves

A tier is assigned to a product (cooking stove or water boiler) on the basis of the highest tier for which all three parameters System Efficiency, EFCO and EFPM2.5 meet the relevant criteria. If a product qualifies for a tier on the above criteria, the product report will contain a statement: "This product has been assigned a one/two/three star rating under the Indonesian Clean Stove Initiative." However, if a product fails on one or more of the criteria at the One Star tier, then the product report will contain the statement: "This product has not been assigned a star rating under the Indonesian Clean Stove Initiative."

The results of the tests are final and may not be contested.

The stove testing results will be provided to each applicant on a confidential basis. However, if a stove satisfies the program's performance requirements and is qualified for the pilot program, then the applicant agrees that the program reserves the right to make any test results public.

Applicants with stoves that meet program's performance requirements will be matched to local business partners, manufacturers, and investors (if needed) for promotion under the CSI pilot program.

CLEAN STOVE APPLICATION FORM

I. APPLICANT

1. **Name:** .....

   - ☐ **Address:**
   - ☐ **Post code:**
   - ☐ **Country:**
   - ☐ **Phone:**
   - ☐ **Fax:**
   - ☐ **Email:**
   - ☐ **Website:**
   - ☐ **Mobile:**
   - ☐ **Profile:** *provide a summary of your background and activities related to clean stoves*

2. **For this application, do you represent a company/organization/ institution/etc.?**

   If Yes, **please fill in the following:**

3. **Company/Organization/Institution/etc.**

   - ☐ **Name of company/organization/institutions/etc:**
   - ☐ **Address:**
   - ☐ **Post code:**
   - ☐ **Country:**
   - ☐ **Phone:**
   - ☐ **Fax:**

- ☐ **Email:**
- ☐ **Website:**
- ☐ **Contact person:**
- ☐ **Email:**
- ☐ **Mobile/Cell:**
- ☐ **Profile:** *provide a short description of the company/organization/institution/etc. especially those related to clean stoves*

4. **Photo of producer/manufacturer:** *please provide a photo in JPG format, minimum 1 MB.*

II. PRODUCT DETAILS

1. **Name of product:**
2. **Product materials:** *please list and describe*
3. **Types of product:**
   - ☐ **household stove**
   - ☐ **small industry stove**
   - ☐ **water boiler**
4. **Photo of product:** *please provide photos of the product from different angles (sides, top and bottom) in JPG format, minimum 1 MB for each photo.*
5. **Technical drawing:** *Please provide a technical drawing of the product with accurate measurements*
6. **Fuel: What types of fuel that can be used for the stove?**
   - ☐ **Wood:** *(dimension, types, moisture content)*
   - ☐ **Charcoal:** *(dimension, types, moisture content)*
   - ☐ **Ricehusk:** *(moisture content)*

- ☐ **Sawdust:** *(types, moisture content)*
- ☐ **Pellet:** *(dimension, types, moisture content)*
- ☐ **Briquette:** *(dimension, types, moisture content)*
- ☐ **Agricultural and plantation waste:** *(dimension, types, moisture content)*

7. **Product Technology**
   - ☐ **Uncontrolled draught**
   - ☐ **Controlled natural draught**
   - ☐ **Forced draught (e.g. through use of a fan, etc.)**
   - ☐ **Other.** *Please specify:.....*

III. FUEL AVAILABILITY

1. **Is the type of fuel used in the stove available and easily accessible, and can it be easily purchased?** *If YES, please explain ..... If NO, explain how you envision consumer access to fuel needed for the stove at an affordable price and in a sustainable way.*

IV. PRODUCT AVAILABILITY

1. **Has the stove been produced?**
2. **How many stoves have been produced?**
3. **Is the stove produced on regular basis, or on a per-order basis?**
4. **What is your production capacity?**
5. **If the stove has not been produced, what is your plan if the stove passes the test?**
6. **Marketing of the stove**
   - ☐ **Has the stove ever been in the market?**
   - ☐ **If "YES" where and how many have been in the market?**

- ☐ **If "NO" has the stove been used or disseminated in a community/household? How many? Has it been used by any households?**

7. **Product origin**

   - ☐ **Indonesia**
   - ☐ **Outside Indonesia.** *Please specify location:.....*