

Promotion of Technology Innovation and Dissemination of High-Efficiency, Low- Emissions Biomass Household Stoves in China and Abroad

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CEIHD

Center for Entrepreneurship in International Health
and Development

University of California, Berkeley

In association with

China Association of Rural Energy Industry (CAREI)

Shell Foundation and Shell China

January 28, 2006



Chinese Biomass Stoves

- ◆ **Project partners**
- ◆ **Project objectives**
- ◆ **Competition in China**
- ◆ **Selection of countries for stove promotion**
- ◆ **Promotion in selected countries**

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Chinese Biomass Stoves



Chinese Association of Rural Energy Industry

- ◆ **NGO affiliated with Ministry of Agriculture**
- ◆ **Division of Efficient Stoves has membership of >100 stove manufacturers**
- ◆ **Committed to innovation in combustion technologies**
- ◆ **Leader in drafting national standards for domestic stoves**

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Chinese Biomass Stoves



CEIHD at UC Berkeley

CEIHD was founded in 2001 and . . .

- ◆ works to improve the well-being of women and children in developing countries by providing **access** to cleaner fuels and less polluting stoves,
- ◆ promotes the use of **entrepreneurial** approaches to achieve its goals, and
- ◆ seeks to **catalyze** the development of markets that will produce and deliver cleaner household energy solutions to underserved populations.

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Project Primary Objectives

- Run a country-wide **competition** to identify the most promising high-efficiency, low-emissions biomass stove technologies and innovative enterprises in China.
- Recognize and **publicize** these stoves and enterprises within China. (CAREI)
- Strengthen the **capacity** of the selected enterprises as needed by providing management training, access to capital, and other business development assistance.
- Identify **expansion and technology transfer** opportunities for these products and promote the selected enterprises to fill this need.

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CAREI Manages the Competition

- ◆ CAREI is publicizing the competition broadly within China, to its membership and beyond.
- ◆ Professors Kirk Smith (UC Berkeley) and Bryan Willson (Colorado State University) are guiding test protocols.
Pilot testing late February
- ◆ Testing of all qualified stoves will take place in a test-kitchen in Beijing after test validation by Smith and Willson. *March to mid-April*

– continued –

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CAREI Manages the Competition

- ◆ Site visits to top candidates (up to 10) will evaluate enterprise qualitative criteria. *May*
- ◆ Chinese experts selected by CAREI, Chinese-speaking foreign experts provided by CEIHD, and a Shell China rep will comprise the judging panel.
- ◆ Judges will rank all top candidates and choose winners for Chinese prize. *Late May*
- ◆ Shell Foundation and CEIHD will conduct due-diligence visit to top-ranked enterprises. *Early June*
- ◆ Awards Ceremony *Late June or early July*

Chinese Biomass Stoves

Chinese Enterprise Development

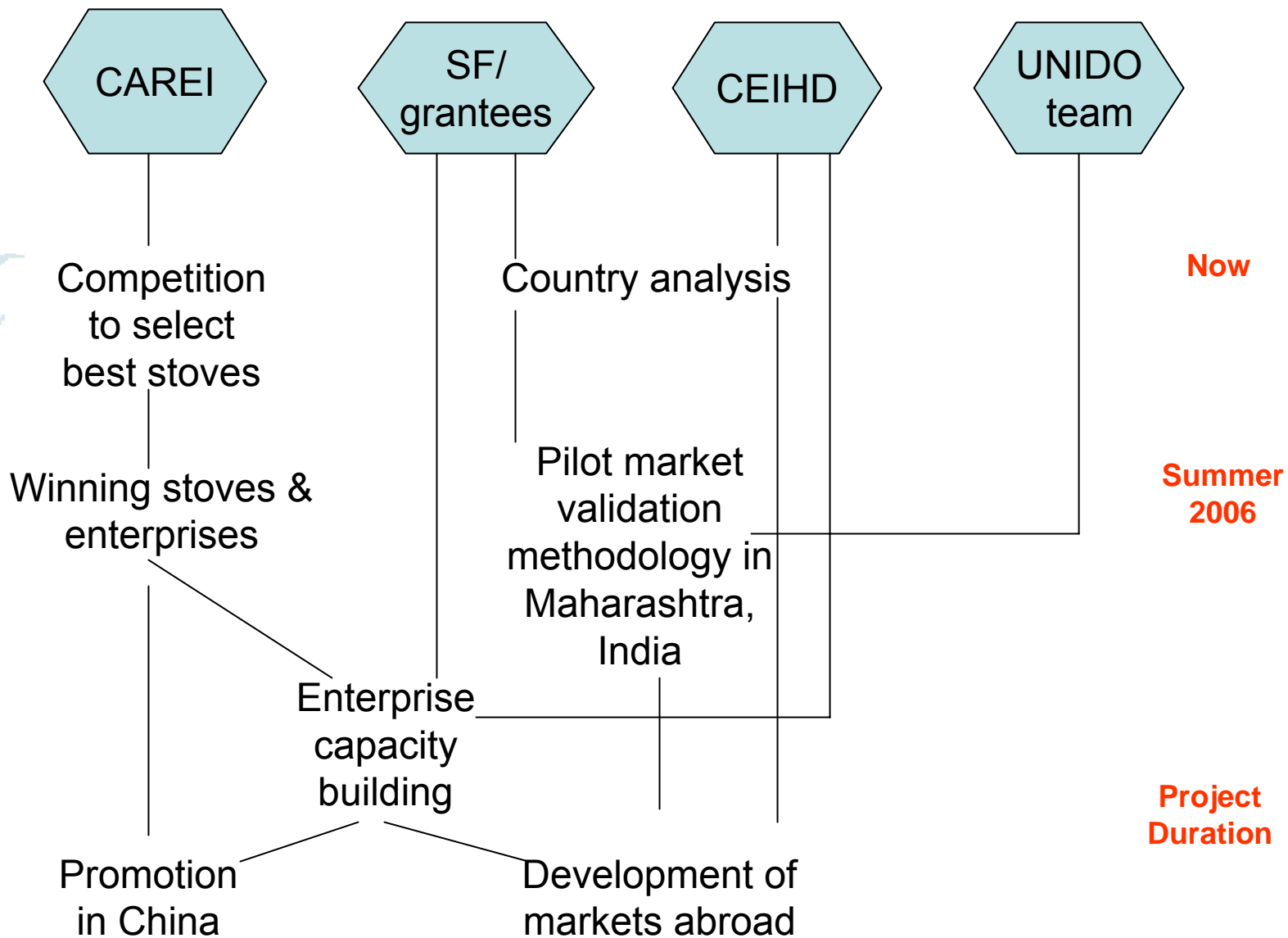
- ◆ CEIHD with CAREI & Shell China help will evaluate marketing, manufacturing, and export capacity.
- ◆ Shell Foundation is open to capacity building for enterprises selected in competition.
- ◆ Characteristics of stove finalists will feed into market analysis and will be a key factor in selection of target markets abroad.
- ◆ Aprovecho Research Center will likely conduct further tests on finalists stoves using a wider range of fuels.

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Market Analysis and Development for Chinese Biomass Stoves Abroad

Promotion Project Overview

◆ Process to Identify Potential Country

Markets:

- ◆ India & Southeast Asia
- ◆ Central & South America
- ◆ Africa

◆ Macroeconomic Overview:

Business, political & public health conditions

◆ Customer Characteristics:

Customer requirements by different products, pricing and promotion strategies

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Market Analysis and Development for Chinese Biomass Stoves Abroad

Promotion Project Overview

(continued)

- ◆ **Supply Analysis:** Channel partner study
 - ◆ Export issues or sub-assembly issues
 - ◆ Suppliers and market penetration
 - ◆ Manufacturers
 - ◆ Distributors & retailers
- ◆ **Sustainability:**
Evaluation of each product's sustainability in each selected market

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Market Analysis and Development for Chinese Biomass Stoves Abroad

Process to Identify Potential Country Markets

Original Pool – All countries with IAP issues.

Hypothesis – Best locations will have the following traits:

- ◆ Mid-to-upper income rural households, income \$3 - \$5+ per day
- ◆ Large enough national market for economies of scale
- ◆ Sufficient available data on IAP

Evaluate each of these countries using the Global Breathing Space ToolKit as a framework.

Narrow the pool using increasingly detailed modules of the ToolKit.

Select the 2 or 3 countries for market entry and work with local partners.

Market Analysis and Development for Chinese Biomass Stoves Abroad

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- ◆ Goals for 2006
 - ◆ “Successful” pilot in Maharashtra (lots of learning)
 - ◆ Identification of market partners in India
 - ◆ Adaptation, testing and installation of stoves
- ◆ Goals for 2007
 - ◆ Growth in India
 - ◆ Pilot in second country
- ◆ Long-term goals
 - ◆ Significant contribution to stove market growth
 - ◆ Shared learning on market-based promotions