

# ASIA CLEAN ENERGY FORUM 2018

HARNESSING INNOVATION TO POWER THE FUTURE

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energy  
for all

GLOBAL ALLIANCE FOR  
CLEAN COOKSTOVES



## Deep Dive Workshop on Clean Cooking

5 June 2018 (Tuesday), 09.00 a.m. - 12.30 p.m.

***Session 1: Best Practices and Solutions for scaling-up of Access to Clean Cooking***



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CEO





  
**ផ្សងអនាម័យ**

SGFE produces **char-briquettes**  
from **recycled biomass waste**.





# A 120 YEARS OLD “INNOVATION”



- first invented and patented by Ellsworth B. A. Zwoyer of Pennsylvania in **1897**
- **Henry Ford** used wood and sawdust by-products from automobile fabrication as a feedstock.
- Ford Charcoal went on to become the Kingsford Company, currently enjoying about **80% of USA market**

***WHY HAS NEVER ANY COMPANY (PROJECT) SUCCEEDED TO PRODUCE AND SELL CHAR-BRIQUETTES IN A DEVELOPING COUNTRY WHERE THE MARKET OPPORTUNITIES ARE IMMENSE?***

***(besides SGFE...)***

# BARRIERS

- |   |   |                                 |
|---|---|---------------------------------|
| <b>1. Competition with traditional charcoal</b> | } | <b>PRIVATE SECTOR</b>           |
| <b>2. Top-down vs bottom-up approach</b>        |   |                                 |
| <b>3. Technical assistance</b>                  | } | <b>DEVELOPMENT<br/>PARTNERS</b> |
| <b>4. Market approach</b>                       |   |                                 |
| <b>5. The rules of the game</b>                 | } | <b>GOVERNMENT</b>               |



# 1. COMPETITION

Competition with traditional charcoal is based on:

**QUALITY**

and

**PRICE**



# EXAMPLE: SGFE's char-briquettes compared to other “commercial” char-briquettes

## 5.1 Fuel test results

Table 1: Physical properties and heating value / calorific value of the fuels

Fuel Id	%Moisture content	%Volatile matter	% Analytical ash	%Fixed carbon	Heating Value (KJ/KJ)
[REDACTED]	8.6	19.6	32.8	39.0	19423
[REDACTED]	7.6	20.8	31.8	39.8	19479
[REDACTED]	7.3	20.9	22.4	48.7	18709
[REDACTED]	7.7	19.8	23.4	49.1	25105
[REDACTED]	7.0	18.2	34.4	40.4	20714
[REDACTED]	7.8	21.0	25.1	46.1	24007
[REDACTED]	8.5	21.7	19.4	50.3	23980
SGFE	11.5	12.5	3.2	74.1	28757
Traditional charcoal	7.8	20.7	5.7	65.7	29405
[REDACTED]	8.0	20.9	22.4	48.7	19845

## 2. APPROACH: bottom-up vs top-down



**VS**



Sustainable Green Fuel Enterprise (SGFE)



# “Bottom-up approach for solar cars”



# 3. TECHNICAL ASSISTANCE

The usual technical assistance which is provided is:

- business planning
- marketing strategies
- etc.

What is needed is literally **TECHNICAL** assistance such as:

- technical aspects related to **quality briquettes production**
- **industrial engineering knowledge and mechanical skills** to design, set-up and manage/operate an efficient and effective production process





It's not rocket science, but....

Former interns of SGFE now work at:



**amazon**  
logistics





## 4. MARKET APPROACH



# 5. THE RULES OF THE GAME

## The biomass sector in developing countries:

- Unsustainable
- INFORMAL ECONOMY
- Extremely low prices



**Tax incentives for sustainable fuels in the formal economy** have a crucial role for their competitiveness compared to traditional fuels which operate in the informal economy.



# Thank you for your attention!

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