

Best practices, business models
for marketing biomass cook-stoves
and scope for India

Presentation at RE-INVEST

New Delhi, India; 17 February, 2015

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- The business model, based on low profit and high-volume production and sales, includes four innovative practices:
- 1. Involve users in stove design process, backed by research.
- 2. Capitalize on the strengths of existing distribution channels including governments, dealers, village entrepreneurs and not for profit organizations.
- 3. Cross-subsidize stoves in developing countries through sale of stoves (at market price) to developed countries.
- 4. Work with organizations attracted by the multiple MDG impacts (improved health, reduced indoor air pollution, improved local environment, freeing time for women, and fuel/monetary savings).

Stove Progress Since 2012

Great progress. Stoves are now a very “hot” topic. Not yet in 2012.

1. **Charcoal** is at the center of current stove business discussions.
2. Char-making relates closely to CO and particulates (IAP).
3. These two cause about 1 million deaths per year in India; about 20 Indian stove-related deaths during this 10 minute talk.
4. Prof. Kirk Smith & WHO, for health reasons, favor LPG, electric (not bio-stoves). Prof. Tami Bond (Black Carbon) agrees with Smith.
5. Re this bio-cooking controversy, see Slide #6: “..collaborate ... (Global Alliance, governments, NGOs, funders)” [DoE, EPA; “Apro”]
6. GACC: Dr. Ranyee Chang (\$\$\$, see ETHOS last month)
7. Testing (tiers) now a major activity (TERI, IIT, Prakti); ARTI
8. Slide #7 typifies the charcoal-related stove discussion
9. Char-making, for RWL, leads to **biochar** - next/last slide

Char-Making/Biochar Progress Since 1995

(Warning!! This topic is controversial - in both stove and CDR circles.)

1. Char-making stoves (CMSs) first thought of to save forests.
2. Then progressed to IAP; are appreciably cleaner.
3. Then to saving time/money; can be left alone for an hour.
4. Now CMSs are often focussed on CDR (half of "Geoengineering").
5. Fits between mitigation (Solar/Wind) and adaptation (dikes, acid).
6. Seems most feasible of half-dozen CDR approaches - because of favorable impact of biochar on NPP (Net Primary Productivity).
7. NPP helps on land scarcity, water/fertilizer reduction, food - but mainly CDR ("knock-on effect). Food may be key in India for CMSs
8. CMSs work by metering air, not fuel. Primary and secondary; fans. Should couple with solar cooking.
9. CMSs can lead CDR (carbon credits). See "Cool Planet" re bio LPG. See "V-Grid" re biomass electricity. Both with biochar much larger scale.
10. To follow biochar: "biochar" list and IBI (and Indian) web site.