

Clean Cooking: financing appliances for end users

Peter Weston
Energy 4 Impact
July 6, 2021



Agenda

1. Setting the scene
2. Appliance pricing
3. Payment models
4. PAYGO
5. Utility-led financing
6. Pricing vs aspiration



Photo courtesy of MECS

Setting the scene

- To reach universal access to modern energy cooking by 2030
 - \$150 billion investment a year is needed**
 - Over \$100 billion to come directly from household contributions for stoves and fuels**
- Vast majority of clean cooking appliances still sold for cash



Appliance pricing

Most modern energy cooking services priced between \$30 and \$100, so are out of the reach of the poorest households

Appliance	Price range
Improved biomass stoves	\$5 to \$40
LPG solutions	\$30 to \$110*
Ethanol stoves	\$25 to \$36
Electric hotplates	\$10 to \$30
Induction stoves	\$35 to \$80
Microwaves	\$70 to over \$110
EPCs	\$60 to over \$100
Gasification stoves	\$110 to \$130
Biodigesters	\$500 to \$750
Battery-supported e-cooking appliances e.g. solar electric systems	\$150 to \$2000

*Depends on size of LPG cylinder and accessories

Payment models

- Cash & carry
- Layaway savings
- Third-party financing partnerships
- Crowd-based micro-lending
- Automated pay-as-you-go (PAYGO)
- Asset financing loans
- Razor and blades
- Utility-led financing



Photo courtesy of World Bank

PAYGO

- Removes upfront price barrier: end-users pay small or zero deposit followed by installments over time
- PAYGO solutions developed for multiple appliances: EPCs, induction stoves, LPG kits, biomass gasifiers, biodigesters, solar hybrids
- Most companies use PAYGO to directly serve end-users (B2C), but some go through intermediaries (B2B)



Photos courtesy of PayGo Energy which offers PAYGO solution for gas companies

PAYGO

- Distributor rents or sells cooking kit (stove + fuel dispensers)
- Customers make regular payments through mobile money or cash dispensers
- Customer payments are tracked. Kit can be remotely enabled or disabled if customer tops up or falls behind on payments
- Smart meters allow customer usage to be tracked and devices to be remotely managed. Fuel companies can dispatch refills to customers before they run out
- Some PAYGO providers do not use smart meters due to cost and instead use existing metered PAYGO technologies for non-metered cooking
- Customer relationship management software is another potential benefit

Utility-led financing

- Reduces upfront cost of e-cooking devices & increases uptake of e-cooking
- On-bill financing
 - Devices financed on balance sheet of utility
 - Repayments collected through utility bill
- On-bill repayment
 - Devices financed by third party
 - Repayments collected through utility bill
- Co-marketing and data-sharing
 - Finance and billing for devices done by third party
 - Utility provides data and support related to customers for credit scoring and marketing purposes



Photo courtesy of MECS

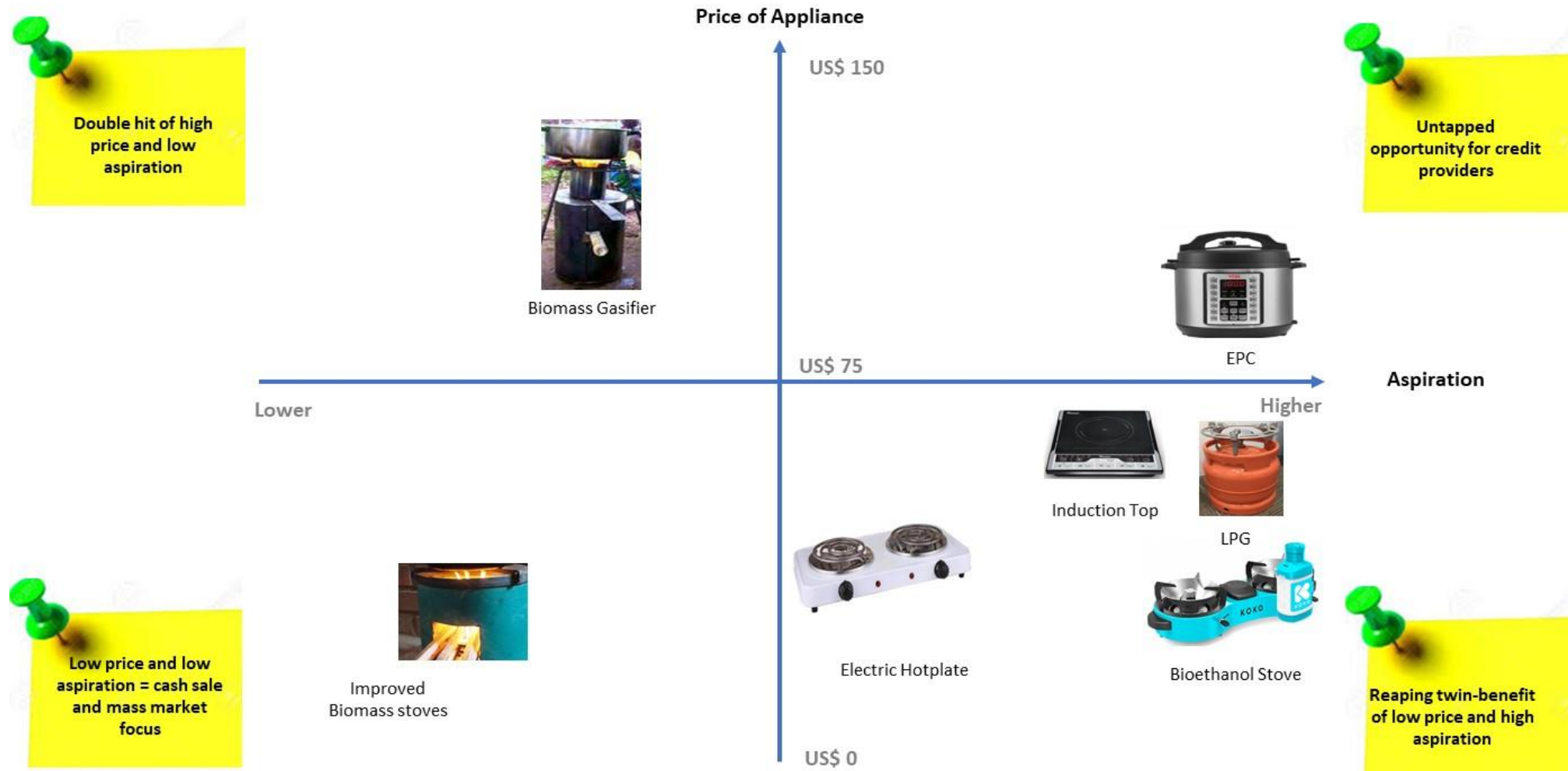
Utility-led financing

- Main advantages for utilities
 - Increased sales of electricity
 - Switch to energy efficient appliances can reduce load on grid and cut load shedding
- Main challenges
 - Programme cost – most utilities are cash constrained
 - Payment collection – OBF increases financial burden on customers
 - Regulatory hurdles – customer disconnections, consumer finance
 - IT and billing systems – may need to be upgraded
 - Quality standards and control



Photo courtesy of MECS

Pricing vs aspiration



Contact details

Peter Weston
Director of Programmes
Energy 4 Impact
Peter.Weston@Energy4Impact.org