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Implementation Plan & Project Timeline

The goal of the project is to bring this innovative technology to the point of commercialization and validation in the marketplace. In order to achieve that goal, the following activities and sub-activities will be carried out. The section below Activities ties them together with Deliverables and Milestones.

The duration of the project is 12 months and will take place between Kenya and the United States. The project is split into four primary Activities (aligned to the left in the chart below). Sub Activities are indented below each primary activity.

Activity	Location	Month											
		1	2	3	4	5	6	7	8	9	10	11	12
1. Preliminary Design of FDS	US & Kenya												
1.1 Design of charge controller	US												
1.2 Stove Design Optimization	US												
1.2 Laboratory Performance Testing	US												
1.3 Assessment of Competitive Stoves	US												
1.4 Focus groups & In-Home Testing	Kenya												
1.5 Initial Durability Testing	Kenya												
2. Detailed design of FDS	US & Kenya												
2.1 Detailed design of charge controller	US												
2.2 Design for manufacturability	US												
2.3 Manufacturing Process Design	US												
2.4 Laboratory Performance Testing	US												
2.5 Focus groups and in-home testing	Kenya												
2.6 Extended Durability Testing	Kenya												
2.7 Final material selection	US												
3. Pilot program	US & Kenya												
3.1 Update List of Distribution Partners	Kenya												
3.2 Produce and ship pilot stoves	US												
3.3 Identification and data collection of participants	Kenya												
3.4 Baseline data collection	Kenya												
3.5 Experimental data	Kenya												
3.6 Analysis and reporting	Kenya												
4. Determine the best fuel supply for the stove	US & Kenya												
4.1 Fuel characterization and lab testing	US												
4.2 Supply chain analysis	Kenya												

1. BURN’s market research team in Kenya and engineering team in the US will design a robust power controller that will feature an intuitive user interface (Activity 1.1).

2. The stove ‘chassis’ will be designed to be fully compatible with alternative power sources (solar cell or other). For example, the interface between the stove, fan, & fan speed controller system, battery and the solar panel will be designed as a system. (Activities 1.1 & 2.1).



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3. Initial user research conducted by in-house market research team in Kenya will be used to optimize the stove for the Kenyan context (Activity 1.1).
4. Based on feedback from field work, previous products and competitor products, multiple unique iterations to be constructed at the lab and shop (Activities 1).
5. Performance and CO and PM_{2.5} emission testing will be conducted at BURN's lab in Washington State (Activities 1.2 & 2.4).
6. Production Processes, equipment, tooling, jigs and fixtures will be identified and scoped for production in Kenya(Activity 2).
7. Field emission testing will be conducted by Berkeley Air Monitoring Group (Activities 3.4 & 3.5).
8. Kitchen performance tests will be conducted by BURN's M&E team in Kenya (Activities 3.4 & 3.5).
9. Results from the kitchen performance tests and emission data from Berkeley Air Monitoring Group will be compared with lab results from Washington State (Activity 3).
10. BURN will conduct pilot distributions with one or more pay as you go distributors (Activity 3).
11. Alternative pelletized fuels, chipped wood, and sticks will be characterized and then tested in the stove to determine the stoves performance and versatility with different fuels (Activity 4.1)
12. Basic supply chain analysis will be conducted for the most promising fuel options (Activity 4.2)

Program Activities & Metrics

The key activities/results and metrics listed below capture both development progress and stove performance. These items will be tracked throughout the project.

Improved Cookstove Metrics - vs. Baseline

- High Power Efficiency
- Low Power Specific Consumption
- High Power PM_{2.5}
- Low Power PM_{2.5}
- High Power CO
- Low Power CO
- Indoor Emissions CO
- Indoor Emissions PM_{2.5}
- Safety Score



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Activities & Results

- Preliminary Design:
 - CAD model
 - Signed product parameters document
 - Laboratory test results
 - Focus group and in-home user testing reports & data
 - Physical stove
- Detailed Design
 - Manufacturing Process flow diagrams
 - Bill of materials
 - Lab and field durability reports
 - Physical stove
- Pilot Program
 - Serial #s, map, and contact info of pilot participants
 - Baseline data
 - Experimental data
 - Pilot program final report and analysis
- Fuel Supply Assessment
 - Supply chain analysis
 - Lab results of fuels rated highly in supply chain analysis