

Case Study for Clean Stove Production, Promotion and Marketing

——Anshun Huifeng Energy-saving Stoves Co., Ltd.

1. Company profile

Anshun Huifeng Energy-saving Stoves Co., Ltd is a high-tech enterprise with registered capital of 10 million RMB, which develops on the basis of Anshun Xixiu Huifeng Stoves Manufactory since 1992, specializing in manufacture, R&D and marketing for over 20 years. Huifeng started working on the stoves suitable for mountain areas in Guizhou and the application of biomass energy in 1990s.

The company is one of the members of China Association of Rural Energy Industry and is the key stove enterprise in Guizhou. Located in Xixiu Industrial Park of Anshun, Huifeng's annual production capacity reaches 50,000 stoves that are sold to more than 40 counties in Guizhou as well as Jiangxi, Guangxi, Yunnan, Sichuan, Hunan Province, etc. The products have ever been awarded honorary titles including Energy Conservation Enterprise in China, China Top Ten Leading Brands of Energy-saving Stoves, and China Top 100 Companies of Bioenergy Industry.

Huifeng has participated in making the standards of stove products quality in Guizhou and has won the bids of government project Cure Endemic Diseases and Grain for Green for years. The new multi-function biomass stoves that feature clean efficient, environmentally friendly, and energy-saving have received praises from customers.

In 2011, cooperating with China Association of Rural Energy Industry and the U.S. NGO Impact Carbon, Huifeng took part in the first biomass stove VER carbon offset project in China. The project has obtained 2 times of issuances and the carbon finance is used to subsidize over 10,000 biomass stoves.

2. Technological characteristic and innovation of products

The Huifeng products including biomass combined cooking and heat radiant stoves, biomass heating stoves and cookstoves have integrated the customs of people living in southwest China and the energy structure in this area. With the excellent performances including stylish appearance, extensive source of fuel, energy and labor

saving, strong and changeable firepower, fast heat transfer, high thermal efficiency, no use of electricity and no pollution as well, these products can offer users satisfied experiences. The stoves are totally different from the traditional stoves that are health-damaged with high exhaust emissions. Conversely, they are small, light, affordable, and easy to remove, completely meeting the needs of rural households.

Technical innovation is always regarded as a key point of Huifeng. Through the introduction, understanding, absorption and re-innovation and integrating local tradition together, Huifeng has developed new clean biomass stove, which makes significant contribution to the development of stoves in Guizhou. New product is a kind of advanced biomass semi-gasified, which could make the fuel burn sufficiently through the inlet device added on the upper part and the appropriate secondary airflows, achieving the cleaner combustion and higher efficiency. The semi-gasified could use both wood and coal as fuel, and the annual coal saving amount reaches about 1 ton. This type of stove could be suitable for the actual local situation of energy use because they are fuel saving, convenient, clean, sanitary, economic and practical.

Guizhou is rich in coal, resulting in the large proportion of coal stove adoption in winter. In recent years, with the coal price increasing, majority of users have started to use wood and straw, leading to a big booming in the sales of multi-functional stoves. The new products manufactured by Huifeng appropriately fill in the gap in the market. While getting widely praised, Huifeng has won the bids of government projects of Cure Endemic Diseases and Grain for Green for years. The total accumulative promotion of stoves has reached about 30,000.

In addition, the company has made a breakthrough in the development of biomass briquettes by inventing a new type of biomass briquette made of Crofton Weed. This kind of plant is commonly known as “aircraft grass”, which is an invasive species with strong survival and reproduction ability, causing great harm to the farmland, pond and forests. The government has invested a large amount of money in eradicating it each year without any favorable achievements. The way of making Crofton Weed into compressed shaping fuel could not only address the problems of waste and pollution, but also widen the source of materials and increase the income of

farmers, through which the worries of government would be released to some extent. By the means of introducing and absorbing new technologies, Huifeng has overcome difficulties in key technology and invented a kind of equipment that produces biomass briquette mainly using Crofton Weed mixed with straw, leaves, weeds, sawdust, etc as raw materials. In addition to substituting for coal, new briquettes have good qualities such as high density, high thermal efficiency, low cost, abundant materials, and have been highly praised by users.

At present, two production bases for biomass briquette have been built in Anshun and Xingren City, each of which has a capacity of more than 10,000 tons of biomass briquettes. The industry of biomass utilization technology has been initially formed. Furthermore, the products are in top level in terms of quality and performance. For next step, Huifeng plans to integrate superior resources to promote biomass stoves and biomass boilers combined with biomass briquettes, achieving the rural renewable energy industrialization in Guizhou, which would definitely make huge contribution to the development of local economy and society.

3. Production and quality control

3.1 Commitment to product quality

3.1.1 All the stoves should be made of brand new steel without cheating; the welding of each stove should be neat; the surface should be smooth and bright; the size should be precise.

3.1.2 All the products shall be strictly inspected and attached with quality certificates; the replacement and repair are guaranteed during the warranty period.

3.1.3 After-service centers are set up in each county, responsible for after-service.

3.2 Production management regulations

3.2.1 In accordance with the Basic Norms for Work Safety Standardization of Enterprises AQ/T9006-2010, the safety standardization management system has been established.

3.2.2 Organize the hazard identification and risk assessment and implement control measures to reduce the risk based on the assessment results.

3.2.3 Make a plan for the training of safe production and implement the plan to raise the awareness of safe production safety of employees.

3.2.4 Pay attention to locale management to ensure the safe production and regularly inspect the production. Address the problems in time.

3.2.5 In accordance with the relevant national requirements, purchase standard labor protection appliance and ensure the employee's safety during the process of production.

3.2.6 Operate according to the safety standardization management system, and punctually complete each mission.

4. Market distribution and sales model

Huifeng stoves are widely welcomed because of excellent quality and service. Guizhou Province is regarded as the main market with other markets in Jiangxi, Guangxi, Yunnan, Sichuan and Hunan Province. When the Grain for Green project implemented in Xingren City, the method of live demonstration and free choosing was adopted. Huifeng stove was the only product selected by the farmers themselves. The local farmers could hardly afford to burn coal especially after a large number of small coal mines being shut down by government. On the contrary, wood and straw are more convenient and economic for them. Consequently, increasingly more households changed to use biomass stoves.

The sales model consists of, direct marketing and retail. In recent years, government procurement and wholesale are the main models while other models just account for a small proportion.

5. Construction of after-service system

Huifeng always pays attention to the improvement of service ability and quality. In order to win the trust of users, Huifeng carefully studies the users' actual demand, accelerates the innovation step and provides users with comprehensive after- service.

5.1 Build customers service center

For the projects service and technical support personnel, users are provided with systematic service for five years and door-to-door service. Customer requirements are accepted and handled in 24 hours. Quick and high quality after-service is provided to the customers. In order to make the users conveniently and timely communicate with the company, Huifeng tells the contact information for all the services such as consulting, repair, technical support, etc to the users. The service employee can obtain the user's information in the first time to provide convenient and quick service and support.

5.2 Make detailed service content

5.2.1 Provide the service of on-site installation and maintenance of stoves.

5.2.2 Users can receive repair service and technical support services anytime, including non-technical service support requests.

5.2.3 Supervise and track the maintenance and service process. Archive the service records.

5.3 Provide professional technical support

Huifeng has technical engineers who are in charge of all related fields such as analysis, design, testing and installation to ensure the stoves can realize the best performance. Special project team is formed to utilize the advantages and achieve better management. Project managers and technical engineers understand all the details of the project, provide business and technical services, and set up the solid relationships with customers to ensure the successful implementation of the project.

5.4 Build after-service documentation

Learning from the experience of carbon offset project, company makes the documentation for all the customers. Basic information of the users, the equipment list, installation, after-service, technical problems are included in the documentation.

5.5 Regular visit and inspection

Regular site visit is carried out by the company team led by the manager to know the product quality, service and maintenance, learned users' advice, and help users solve

the problem in actual usage. Coordinate the collaboration of all departments in order to provide comprehensive service and support. The service quality and level are the important basis and indicators of the comprehensive employee evaluation for reward and punishment. For each repair request, the company arranges specific employee to conduct telephone interview, require the repair results and satisfaction of service.

5.6 Guarantee the quality and spare parts support

Huifeng promises a lifetime warranty. Only the expense of materials without service need be paid.

6. Major achievements and experience

Since 2008, Huifeng has won the bids of government projects of Cure Endemic Diseases and Grain for Green for years and has assisted the government at all levels to implement the projects. Cooperating with China Association of Rural Energy Industry and the U.S. NGO Impact Carbon, Huifeng is also the main participant of the first biomass stove VER carbon offset project in China. The new type of biomass stoves developed by Huifeng is warmly welcomed by farmers who become increasingly aware of biomass stoves and are willing to buy the biomass stoves. Biomass stoves promotion also brings in comprehensive benefits such as energy-saving, cost-saving, environmental protection, and farmers' life improvement, etc. Use agricultural and forestry residues as fuel, each household can save an average of 1-2 tons of coal per year. In addition, due to the increasing price of coal, fuel switch from coal to biomass can greatly save the cost, which is estimated to save 1500 RMB per year.

The main experiences are as follows.

6.1 Design of the stove products must meet the customers' needs and be suitable for local condition. Widely carry out the market investigation and survey, develop new products and local market, and realize high market penetration gradually.

6.2 Talent is important. Huifeng not only cultivates technical personnel but also introduces technical personnel to improve the products quality and performance. Develop new environmental products consist with policies and phase out inefficient stoves. Only clean and environmental stoves can occupy the market.

6.3 In order to manufacture the affordable and premium stoves for rural households, it's important to increase the investment of R&D, enhance the technology innovation, raise the productivity and reduce the cost.

6.4 Develop the market cooperating with other companies and take the advantage of the whole industry. The collaboration among companies can realize the complementary advantages, integration development, and risk & benefit sharing.

6.5 Take a variety of cooperative approaches to promote technology development. Cooperating with China Association of Rural Energy Industry and Beijing University of Chemical Technology on the development of biomass stoves carbon project, Huifeng has achieved fruitful outcomes including 2 times of issuances and over 10,000 stove promotion subsidized by the carbon revenue, which makes Huifeng obtained valuable international project experience.

6.6 According to the current rural resources and the daily fuel use, the newly developed product should have adaptation to a wide range of fuels and clean performance and fully consider the local practice and habits. Only by solve the problems can the stove be well accepted by the farmers and enterprise can achieve good economic and social benefits.

7. Obstacles and problems

7.1 Lack supporting funds, especially in the period of construction of new manufactory.

7.2 The supporting system combining the biomass briquettes and stoves still need scale up. System construction and marketing need further strengthened to form the sustainable and large-scale industry.

7.3 Lack talents of enterprise management and need cultivate and introduce more talents.

7.4 Due to the sluggish international carbon market, the sale of carbon credits is not good.

8. Development direction and objectives

8.1 The company will integrate the advantage resources and further develop the market of biomass briquettes fuel. Promote biomass briquette fuel and biomass stoves, realize the industrialization operation of rural renewable energy, and promote in the whole Guizhou Province, making contribution to the energy-saving and emission-reduction and developing of recycling economy in Guizhou Province.

8.2 Try to take part in all kinds of government projects, provide high-quality clean biomass stoves to meet rural households' needs, and strengthen the construction of after-service system.

8.3 Further strengthen the cooperation with universities and research institutions. Adopt the approach of production-university-research to improve the products and technologies.

8.4 Widely conduct the market research, develop efficient and environmental products. The development of new products need fully consider the geographical location, daily habits and living standard.

8.5 Continue cooperating with other stove enterprises and establish stove alliance in Guizhou Province to expand the market together.

8.6 Keep in touch with the African stove manufacturers we met when visiting Africa, seek cooperation opportunities, design small cookstoves suitable for Africa and try to open the African stove market.