

6. FACTORS REQUIRED FOR PRODUCTION OR SERVICE DELIVERY

Various factors are required for production delivery, but the report will focus on the most important factors:

6.1 Credit to purchase (end-user credit)

The target market of the rural poor or biomass dependents require some form of credit in order to purchase a solar cooker. Monthly instalments, lay buys and savings clubs are important tools to extend credit to the end-user. Research also indicated that affordability was judged not on the end price of the solar cooker, but on the monthly instalment of the cooker.

6.2 Capital for tooling costs

Solar cooker manufacturers require capital for tooling up costs and preparation for the production process. In order to produce high quality cookers, injection moulding is recommended for example, and the capital required for the mould would be in the order of approximately \$200 000.

6.3 Marketing

The marketing of solar cookers requires substantial capital to be effectual. General awareness raising around the concept of solar cooking as well as the marketing of the products themselves are required. Marketing is an expensive undertaking and in the experience of the solar cooker field test, manufacturers can not afford to pay for awareness raising and advertising.

One of the most effective ways to market solar cookers is to demonstrate the cookers in action. Demonstrations are also expensive and labour intensive, but should form an integral part of any marketing exercise. It is estimated that a marketing campaign, including radio and print adds could cost between \$200 000 and \$400 000.

6.4 End-user training and support

The importance of end-user training and support as a critical success factor in the dissemination of solar cookers has been well documented in international literature. However, training would need to be extended to different target groups to ensure successful utilisation of the solar cookers.

During the Solar Cooker Field Test, training efforts were largely focussed on the area monitors who in turn trained and assisted the user families. Additional support was provided through the management team's monthly visits and discussions with end-users. Training support material was developed in the form of an information brochure, which was disseminated to user families who bought a solar cooker at the end of the study period.

The following training materials should be developed and made available in the local language:

- Recipe booklet:
The recipe booklet should contain recipes for all the basic dishes prepared in the area. Recipes were collected during phase 1 of the field test for this purpose. Other interesting recipes should also be included, for example how to cook fruit preserve in the solar cookers. The recipe book should also contain hints and tips regarding solar cooking.
- Training manual:
A training manual available in the local language should be developed. The manual should make use of visuals to a large extent since illiteracy could be a problem amongst certain groups of the potential target market.

Groups requiring training

Three different groups have been identified which would require training. These groups are:

- Sales personnel responsible for selling solar cookers to customers:
Large retail outlets indicated that their sales personnel or shop assistants undergo product specific training when a new item is being sold. The training is required to provide their personnel with the necessary knowledge to sell the product efficiently.
- Employees in repair shops providing a back-up service to retail outlets:
The training of technicians to repair and service solar cookers would require detailed knowledge of the materials used as well as the solar cooker design. The training would therefore be very specific and technical.
- End-user training:
Each end-user or customer buying a solar cooker should be adequately trained to ensure that the solar cooker purchased be utilised to its fullest extent. This would require a short personal training session (individually or in groups) supported by good material such as the proposed training manual. One concept that could be considered would be the sewing machine training concept. When a new sewing machine is bought, training is provided on specific scheduled days. A back-up service to answer user inquiries from end-users and to provide hints and tips in the form of the solar cooker hotline should also be considered.

7. TECHNOLOGY SUPPLIERS

The solar cooker models currently available can be produced by local or international manufacturers. In terms of the international co-operation between South Africa and Germany, the cooker designers waived any licensing fees, patent rights or manufacturing rights in favour of local producers. Licensing fees and patent rights would not be an important issue to consider in other commercialisation projects, since most designers are willing to waive such fees in favour of producing their solar cooker, but it would have to be negotiated on an individual basis.

Problems experienced with local production included the requirement of specialist materials, poor quality of workmanship and the inability of the project to attract a large-scale manufacturer. For example, the izola cooker is manufactured in Germany and only assembled in South Africa.

Local production, although desirable in terms of job creation, economic growth and building local expertise, is only recommended once a complete cycle of technology transfer has been complete. Local production is preferred above importing solar cookers since importing solar cookers increases the price beyond affordability for the lower end of the market. However, local production requires substantial support to ensure quality and it is possible to start off with importing while local producers are preparing for production. Lastly, in order to reach mass production targets (10 000 units per annum), it is also worthwhile to consider a regional manufacturing centre with assembly and packaging in neighbouring countries.

8. GUARANTEES AND USER PACIFIERS

The solar cookers are guaranteed by the manufacturer for a period of one year. The project policy has however, been to exchange cookers in cases of damage (glazing broke during postage) or in cases where customers were unsatisfied with the cookers.

Next steps are to include a money-back guarantee if you don't like to cooker as well as an option to offer a buy-back service – consumers can trade in their old cooker for a same but new or different model of solar cooker.

Research indicated that consumers regard guarantees as important and especially with a new product such as a solar cooker, consumers feel that a manufacturing guarantee protects them. It also provides security in terms of after sales service and it contributes to the commercial “seriousness” of the product. Lastly, it provides the possibility of maintenance, should it be required by the consumer.