BRIEFING NOTE

Renewable domestic energy through Islamic microfinance

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Green energy

Green or renewable energy refers to energy that is generated from natural resources, such as sunlight, wind, water, geothermal or biomass. Green energy sources are usually naturally replenished, as opposed to fossil fuel sources like natural gas or coal, although green sources also often avoid mining or drilling operations that can be damaging to eco-systems which is not necessary the case with all renewables.

Access to renewables is extremely limited in low to middle income countries as the investment required at household level for, for example, even a small domestic solar system is prohibitive. Providing access to affordable – and in Muslim countries – Sharia-compliant renewable energy alternatives is therefore urgently needed to reduce the pressure on finite natural resources and reduce pollution through $C0_2$ emitting fuels. The use of dirty, dangerous or polluting fuels such as kerosene, wood or charcoal also affects the household economy and diverts scarce economic resources away from using energy efficiently and productively. Access to energy for the myriad of MSMEs and households to run machinery, generate light, heat and cold which drive economic growth and well-being is going to be critical but has put further strain on the environment.

Yet the solution can be simple in many countries with plenty of sunshine – harnessing the power of the sun. This can range from solar thermal water heating systems to solar photo-voltaic panels for electricity generation that in turn can be used for, for example, air-conditioning or via batteries to run domestic lights.

ISLAMIC FINANCE AT A GLANCE: PRINCIPLES

All Islamic finance products must adhere to the basic principles that avoid:

- **Riba** – this is usually translated as 'interest', although strictly it has a much wider meaning. **Shariah** regards the charging of interest on financial transactions as a form of exploitation, in that reward is earned without effort or risk;
- **Gharar** – excessive uncertainty. There is a very high standard regarding certainty in all contractual matters from the outset of an agreement, including price and subject matter;
- **Maysir** – speculation. Shariah-compliant financial products should not profit from pure chance, as opposed to ordinary commercial risks such as risks of ownership;
- **Qimar** – gambling. This is considered similar to Maysir and is prohibited for the same reason;
- **Ihtikar** – hoarding or price manipulation. Since money is treated as a means of exchange only and not an end in itself, Shariah encourages people to put their money to work for the benefit of the community;
- **Haram** – an object or purpose which is haram is one that is unethical or unlawful. The subject of an investment cannot be a business dealing with something prohibited by Shariah; including pork products, alcohol, armaments or gambling.

ISLAMIC FINANCE AT A GLANCE: PRODUCTS

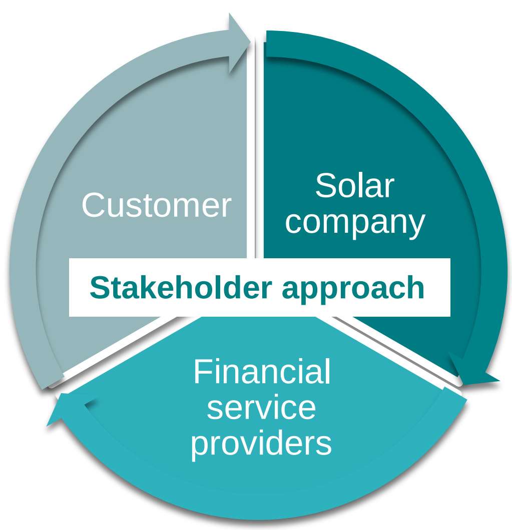
To adhere to Islamic financing principles a range of products have been developed. The most wide-spread are:

- ***Murabaha:*** This is used for short term finance, and involves the MFI purchasing and paying for a product on behalf of a client. The MFI is liable for the goods until the client takes possession, and in return for holding this risk charges the client a pre-declared mark-up on the goods.
- ***Mudaraba:*** This involves a financial investment in the business of an entrepreneur who provides their skills and effort. The profits are shared with the MFI according to a prearranged ratio.
- ***Musharaka***: This means partnership, so that both parties contribute to a joint venture sharing in profits or losses related to the proportion of the commitment.
- ***Ijara:*** This is the Islamic equivalent of leasing, and is little different from the conventional use of the term. The client pays regular instalments to pay for goods bought by the MFI.
- ***Qard Hassan:*** This is essentially an interest-free loan although under Islamic finance rules, commercial providers can recover the direct cost involved in the delivery.

Islamic financial inclusion to access renewables?

For most rural households and MSMEs in low income countries access to electricity remains out of reach. This is primarily because the electricity grid infrastructure is lacking and also electricity generating power plants do not produce the required output. At the same time the investment cost for obtaining a diesel generator is high (and undesirable from an environmental perspective) whilst installing self-owned solar photo-voltaic arrays remains unaffordable for most.

But through a partnership between the manufacturer or retailer of solar energy systems and financial service providers (FSPs), domestically produced solar or equally many other renewable energy can be affordable. With an emphasis on 'inclusion' GEMicro seeks not just to provide access to energy but also to create a stake for poor people through an affordable ownership model.



Especially Sharia-compliant Pay-As-You-Go (PAYG) solar technology promises clean energy for domestic or MSME customers in developing countries, thereby reducing $C0_2$ emissions and building prosperity.

Case study: Solar power in Pakistan

144 Million Pakistanis do not have reliable access to the electricity grid, spending almost $ 2.3 billion each year for alternate often unsustainable solutions. For households living off-grid, kerosene lamps are the primary lighting source and are also used for cooking - an expensive 'technology' that is also unsafe, because kerosene is highly flammable as well as poisonous when inhaled or ingested. The World Bank estimates that breathing kerosene fumes is the equivalent of smoking two packs of cigarettes a day, and two thirds of adult females with lung cancer in developing nations are non-smokers.

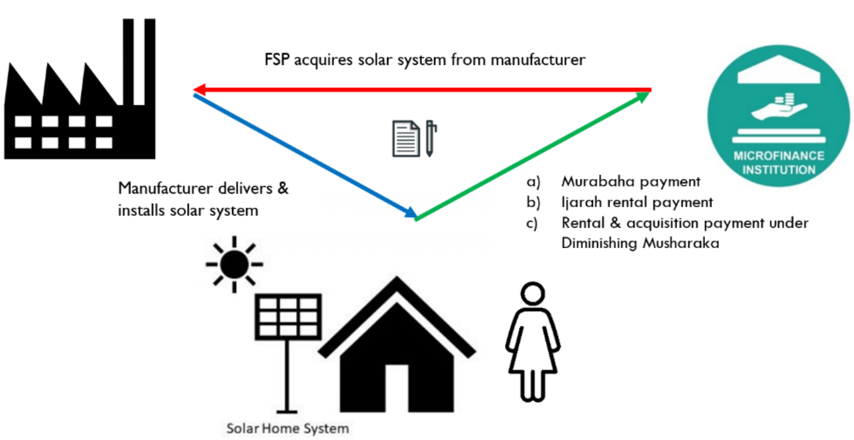
Health concerns apart, kerosene is expensive but used by almost 54.6% off-grid households. A villager in rural Pakistan spends on average 14% of their monthly disposable income for lighting. Charging a mobile phone is even more expensive.

High initial cost is the main reason why people are not adopting solar energy.

The GEMicro team developed a PAYG model that is based on a range of Islamic products with the objective to create affordable solar system ownership:

a) Murabaha, where the solar system is sold to the client on cost-plus basis and allowing for monthly instalments. Upon installation of the solar system, the customer takes possession and also the responsibilities that come with ownership. Credit risk can be mitigated by taking a charge out on the system.
b) Ijara Muntahiyah bi Tamleek, where the user makes monthly rental payments until the end of the agreed rental period, when the system's ownership is transferred.
c) Diminishing Musharaka, where the solar system is jointly owned and the user makes a monthly payment of rental payment and an acquisition payment until the FSP has been bought out.

How does Sharia-compliant PAYG work?



MEET JASIM SHEIKH, GEMICRO'S SOLAR FINANCE CONSULTANT

Jasim provides solar finance expertise to GEMicro and has extensive experience managing Islamic microfinance programmes, including development and deployment of domestic solar power schemes. He has worked for a wide range of microfinance providers in Pakistan, including consulting companies, commercial non-bank financial institutions (NBFIs) and non-profit organisations.

Jasim has run his own and previously worked for another solar technology company that provides off-grid products through microfinance distribution channels. Prior to this, he managed microfinance operations and led the development of key management information systems in Pakistan, Africa and central Asia.

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