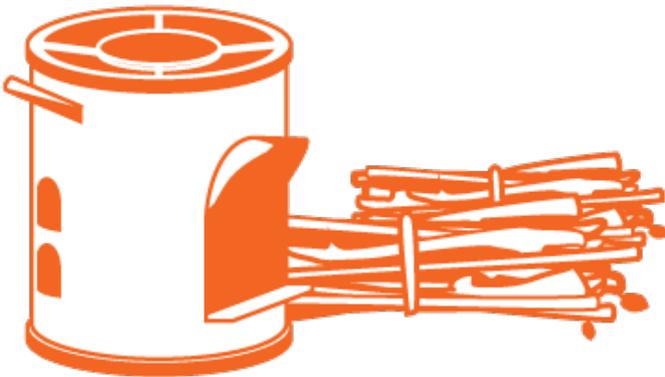




# Smart Villages and Gender

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## Abstract

This policy brief summarises key gender issues associated with rural energy access for development and establishing smart villages. It draws on a more detailed technical report (Welland, 2015) which identifies the reports and papers on which this review has been based.

## Gender, Smart Villages and the Sustainable Development Goals

Gender equality has been an essential pillar of the current Millennium Development Goals. As propositions are made in 2015 for the Sustainable Development Goals that will succeed them, achieving gender equality and empowering women will take a prominent position again. And as we look to the future, the availability of sustainable energy services in rural areas is an immutable part of development planning. We therefore need to think about how to maximise the benefits of energy access: to do this gender needs to be taken into account.

In smart villages access to sustainable energy services acts as a catalyst for development – enabling the provision of good education and health-care, access to clean water, sanitation and nutrition, the growth of productive enterprises to boost incomes, and enhanced security, gender equality and democratic engagement. Due to

gendered differences in experiences, needs and roles in household decision-making if smart villages are to be realised we need to ascertain how energy access projects should be formulated to take into account differences between men and women.

This brief focuses on women reflecting their role as energy managers and their energy intensive day to day tasks. Women's experience of poverty is also different to that of men due to the gendered division of labour, with

much unpaid care work undertaken by women being energy intensive. Energy can enable women to change their status in the home and in the community and empower themselves, helping with longer term goals of women's empowerment.

There are two lines of thinking that are relevant here: how energy can help rural women's empowerment and how taking account of gendered needs and experiences can make energy initiatives more successful.

*“Access to energy can enable women to set up new, or expand existing, income generating activities.”*

## How can energy provision help rural women?

### Education

Women account for two-thirds of the world's 774 million illiterate adults. Electricity, particularly when associated with modern information and communication technologies, can substantially enhance the quality of education that can be provided in rural villages. Access to light also means increased time for studying and the potential to participate in adult evening classes. Girls who are no longer required to help their mothers with survival activities can attend school.

### Gender roles and women's empowerment (through TV and increased mobility)

By allowing more time for leisure activities women's mobility and participation in the community can be enabled. One of the ways this can be done is through street lighting, which makes it safer for women to move around at night. In addition, energy provision can heighten gender awareness through television with women becoming more aware of gender equality issues by seeing images of empowered women and a vision of gender equality.

### Health

Provision of clean energy provides benefits to women's health. Women and girls spend more time cooking over smoky traditional stoves than their male counterparts: use of clean cook-stoves and fuels minimises indoor air pollution and the associated ill-health and mortality of women. In addition, energy provision can improve the safety and working of health clinics, which can keep vaccines cold and provide light to help the safe delivery of babies at night. The reduction of arduous work can also reduce risks of injury and exhaustion.

### Entrepreneurship

Access to energy can enable women to set up new, or expand existing, income generating activities. As a result women can gain an income outside the household (although they may not maintain control over this resource), enhance their social/political status, expand their ability to take a greater role in decision-making in the household, and participate in community life. Becoming entrepreneurs can also increase women's self-worth and confidence as well as challenging traditional repressive gender norms of labour. In terms of income, women's micro-enterprises such as knitting and beer brewing can benefit from extended working hours through access to lighting. The availability of mechanical and heat process technology can also contribute to the start-up and efficiency/productivity of these small-scale industries.

Of particular relevance to smart villages is how energy provision can directly provide employment for women as energy entrepreneurs. They can play a role in the creation and dissemination of sustainable energy solutions, not only increasing their own income and skill set, but also contributing to the success of energy initiatives, helping ensure interventions and solutions such as cook-stoves are tailored to the real needs of communities. By integrating energy entrepreneurship schemes with those in finance and capacity building we can aid women in their access to credit and new skills which are necessary for successful enterprise, enabling women to empower themselves.

### Time and Drudgery

In many rural communities women are responsible for gathering firewood and cooking, and for basic subsistence tasks. Recent studies suggest that access to modern energy services can save 1 to 4 hours daily in cooking, fuel collection and food processing. Freeing up women's time from arduous tasks can allow them more time for educational, social, and income-generating activities. These activities in turn can open up opportunities for women to empower themselves, gaining access to their own resources and to new skills, as well as time to participate in community activities which may improve their social status and ability to contribute to household decisions.

### Violence against Women

Around 40% of women in Sub-Saharan Africa, South Asia, the Middle East and North Africa have experienced physical/sexual intimate partner violence. Increasing women's bargaining power through resource ownership and entrepreneurship can help protect women from spousal abuse, increasing their ability to negotiate and strategise in the household and in the community. Electricity and energy provision can also restrict the area of vulnerability to sexual violence and assault by reducing the need for firewood collection (involving long journeys to remote areas) as well as by providing street lighting allowing for a greater sense of security.

## How can rural women help establish smart villages?

*“Actively involving women in the design of energy technologies and systems can improve their chances of success.”*

### Identifying needs

Women play a prominent role in energy provision and consumption and are often the primary energy managers in households and communities (for example, firewood collection, food preparation and processing). Their knowledge of village life and how energy is used can help ensure that energy interventions are effective and lead to the intended development benefits.

### Designing solutions

Actively involving women in the design of energy technologies and systems can improve their chances of success. For example, cook-stoves can be tailored to meet women’s requirements and take into account constraints they face in their social context

### Distributing Energy Solutions:

Women are often in the driver’s seat as entrepreneurs and providers of sustainable energy solutions at the community level. They can draw on local knowledge and their influencing capacity within households and communities. Making use of their natural circles of family, friends and community can be an effective way of distributing solar technology to rural households. This can help contribute to the success of energy initiatives positioning women in the community, as well as men, as effective energy entrepreneurs.



Women bear the main burden of providing and using fuels, their situation can be made worse by fuel scarcity – heightening their burden and reducing opportunities for income-generating.

## Why a Smart Villages Solution?

### Bottom-up and Integrated Approach

By providing a bottom-up approach with a grassroots focus, smart villages cannot only account for the different needs of women but also the diversity among women in a particular social group.

And by integrating energy initiatives with complementary interventions in other sectors smart villages can realise the benefits of energy access for women.

### Off-grid solutions

Smart villages, by focusing on off-grid smaller-scale energy solutions can allow more room for women's position to be factored into planning in a way that may be difficult in larger traditional grid extension programmes as well as being able to involve them in new ways as energy entrepreneurs.

### Entrepreneurship

By drawing attention to entrepreneurship in particular the smart villages concept increases the choices available to rural women, giving them more opportunity not only to empower themselves economically, but also socially, developing skills and increasing their opportunity to improve their status within the community.

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## Notes

Smart Villages aims to provide policy makers, donors and development agencies concerned with rural energy access with new insights on the real barriers to energy access in villages in developing countries - technological, financial and political - and how they can be overcome. We are have chosen to focusing on remote off-grid villages, where local solutions (home- or institution-based systems, and mini-grids) are both more realistic and cheaper than national grid extension. Our concern is to ensure that energy access results in development and the creation of 'smart villages' in which many of the benefits of life in modern societies are available to rural communities.

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