

## Enabling women's development and empowerment through access to clean, affordable, sustainable energy

*"Energy decides our lives ... If women are going to make decisions about their lives they have to be able to make decisions about energy"* (Chitaroopa Palit, Narmada Bachao Andalan social movement)<sup>i</sup>

### Background

There is a growing focus on access to clean, affordable, sustainable energy as a key development issue. The United Nations (UN) Secretary General has designated 2012 the "International Year of Sustainable Energy for All", calling for concrete actions that will lead to the achievement of three key objectives by 2030: achieving universal access to modern energy services, doubling the rate of improvement in energy efficiency, and doubling the share of renewable energy in the global mix. 2012 marks the 20<sup>th</sup> anniversary of the 1992 UN Conference on Environment and Development and the Rio+20 Conference, which takes place this June, will review progress and determine future commitments. The Rio 20 Conference provides an opportunity to highlight the importance of improved access to clean, affordable, sustainable energy for all, in particular women. It is well understood that universal access to energy is essential for the achievement of the Millennium Development Goals (MDGs) and sustainable development.<sup>ii</sup>

Globally, an estimated 2.7 billion people still rely on biomass - wood, agricultural residues and dung - for cooking and heating while 1.4 billion people lack access to electricity, particularly in rural South Asia and Sub-Saharan Africa.<sup>iii</sup> Lack of energy access stymies development at local and national levels, affecting agriculture and other productive activities, children's education, access to clean water, health and wellbeing. As populations continue to grow, there is increasing demand for clean, affordable and sustainable energy solutions.<sup>iv</sup>

This brief sets out why it is vital to ensure that processes such as the Sustainable Energy for All initiative and Rio+20 have gender dimensions at their heart. This brief focuses on the opportunities energy access provides for promoting gender equality and women's empowerment, especially in rural communities. It is also important to note that addressing the challenge of access to clean, affordable, sustainable energy is an opportunity to progress climate justice principles such as ***the right to development and sharing the benefits and burdens equitably.***<sup>v</sup>

### Why is a gender-sensitive approach to energy access so important?

It is important to acknowledge and highlight the links between access to clean, affordable, sustainable energy and gender. Development is not possible without access to energy and energy is vital for women's development in terms of reducing their time burden for collecting firewood used in cooking and heating, supporting livelihoods activities, improving health and wellbeing, and providing opportunities for enterprise and capacity-building. Conventional energy policies have tended to focus on energy supply, with little attention to the social issues relating to energy.<sup>vi</sup> Gender blind energy policies miss vital opportunities to ensure projects draw on women's vital local knowledge and their influencing capacity within households and communities.

Case Study: The **construction of hydroelectric dams in Brazil** has been increasing since the 1980s in an attempt to improve Brazil's energy security, promote renewable energy and mitigate climate change. Yet a lack of gender perspective in these policies has led to extremely negative impacts, especially for women. Loss of land and decimation of agricultural activities through flooding affect women particularly because of their lack of land rights and limited access to alternative livelihood options.<sup>vii</sup>

### Embracing innovation and creating opportunities in energy access

#### Energy efficiency and improved cookstoves

The gender division of household tasks and reproductive activities around cooking and food production means that women are often the primary users of household energy and are therefore often the most adversely affected by the lack of access to clean, affordable, sustainable energy. Studies show that many rural women spend up to three hours a day gathering fuel and carrying heavy loads.<sup>viii</sup> This burden leaves them with little time for productive activities or leisure, can put women and girls at risk of long-term health problems and increases their vulnerability to physical or sexual violence. In addition, spending long hours indoors with traditional wood burning stoves can result in health hazards such as lung disease and eye infections for women and children.<sup>ix</sup> The provision of clean cook stoves can mitigate these negative impacts while promoting women's empowerment, as the time that would have been used to collect fuel can now be used for other productive and economic activities.<sup>x</sup>

Case Study: The **Self Employed Women's Association (SEWA)**, a trade union that serves the needs of poor and self-employed women and their families in India, has been building awareness about the benefits of clean fuels and cook stoves.<sup>xi</sup> SEWA buys the stoves in bulk and provides loans to enable their members to access them with small monthly payments.<sup>xii</sup> "Wood collection used to take me four hours a day with additional time needed when people came to visit," says Sharadaben, a Gujarati member of SEWA. "With an efficient stove, it is easier to welcome guests. I also used to have problems with my eyes because of the smoke blowing from the traditional *chulha* [traditional cooking stove]. The new stoves will ease the discomforts faced by many cooks."<sup>xiii</sup>

#### Food security and nutrition

According to the Food and Agriculture Organisation (FAO), more than 70% of economically active women in least developed countries work in agriculture.<sup>xiv</sup> Yet women farmers' productive potential is undermined by lack of access to essential resources, in particular water and the energy needed for irrigation. A recent field survey conducted by an Indian NGO revealed that rural women were using around 40% of energy resources for water pumping and irrigation.<sup>xv</sup> Creating clean, affordable, sustainable sources of energy such as solar-powered drip irrigation systems can free up household income to invest in other productive activities.

**Case Study: Solar Electric Light Fund's (SELF) Solar Market Garden** project uses solar-powered drip irrigation systems to support women's collectives in Benin maintain their crops and vegetable gardens. The irrigation system delivers water directly to plant roots and uses 40-80% less water than the traditional irrigation systems previously used. The project has led to marked transformations for women farmers. Women growing vegetables with the technology were able to feed their families three to four more servings of vegetables each day during the project's first year. In addition the women often use the extra income to buy staples for their families.<sup>xvi</sup>

## Training and employment

To address both gender inequalities and empower women, it is vital to ensure that women have equal opportunities to energy-related jobs and training. Developing clean energy solutions can act as a means of building local capacity and providing access to paid employment for women, for example through work with solar energy supply companies.

**Case Study: The Barefoot College**, an Indian NGO, provides training for women to become leaders in creating alternative energy solutions for their rural villages. The college provides six months' training in installing, repairing and maintaining solar lighting units for women to become 'Barefoot Solar Engineers' (BSEs). As a result women have built around 10,000 household solar lighting systems globally since 1986, and report an increase in social status in their villages.<sup>xvii</sup>

## Women energy entrepreneurs

There are many potential business opportunities arising from clean, affordable, sustainable energy supply. Yet, the restrictions and strict conditions women often face around access to credit make it difficult for them to start up and run their own enterprises. However, with the right kind of support women can succeed in energy sectors normally dominated by men, such as solar power and biogas.

**Case Study: The Global Village Energy Partnership (GVEP) Developing Energy Enterprises Programme (DEEP)** provides affordable small loans along with training and mentoring in modern energy supply business.<sup>xviii</sup> Success stories include Immaculate Nakitende from Kalungu, Uganda, an entrepreneur in solar lanterns, improved cook stoves and briquettes production. She received a loan from GVEP which she used to re-stock and diversify her business. She has now opened up outlets selling solar lanterns in three more villages and serves around 70 customers a month.

## Involving women in energy decision-making

Women are universally under-represented in energy decision-making processes at international, national and local levels as well as in the private sector. Within energy companies for example, women are in the minority and not well represented in senior or technical positions.<sup>xix</sup> There are some signs of change, particularly in developing countries. Women have held the post of Minister of Energy in countries including, Zambia, South Africa, Uganda and Botswana. Where women hold such positions, there is evidence that gender issues have a higher profile in energy policy formulation and implementation.<sup>xx</sup> Above all, it is vital to remember that **women are a key part of energy solutions**: they often have useful knowledge and understand their own needs. Therefore they must play an integral role in defining the way forward on access to clean, affordable and sustainable energy.

<sup>i</sup> *Power Surge: Lessons for the World Bank from Indian women's participation in energy projects.* (2011), Bretton Woods Project, London

<sup>ii</sup> There is no universally-agreed definition of access to energy but for the purposes of this brief we will use the OECD/IEA definition of modern energy access as "a household having reliable and affordable access to clean cooking facilities, a first connection to electricity and then an increasing level of electricity consumption over time to reach the regional average".

<sup>iii</sup> International Energy Agency (IEA) (2011) *Energy For All: Financing access for the poor.* IEA World Energy Outlook, Paris

<sup>iv</sup> Estimates from the UN Population Fund indicate that the current 6.2 billion may rise to 9 billion by 2050. United Nations Population Fund (UNFPA) <http://www.unfpa.org> (Accessed 23 February 2012)

<sup>v</sup> The Mary Robinson Foundation – Climate Justice (MRFJC) <http://www.mrfcj.org/about> (Accessed 23 February 2012)

<sup>vi</sup> *Energy and Gender in rural sustainable development*, (2006) Food and Agriculture Organisation (FAO), Rome

<sup>vii</sup> Mara, Sonia (2011) *Brazil: Discrimination and violence against women in the construction of hydroelectric dams.* World Rainforest Movement Bulletin, Montevideo

<sup>viii</sup> International Union for Conservation of Nature (2004) *Fact Sheet: Energy, Gender Makes the Difference.* IUCN, USAID, and Chemonics

<sup>ix</sup> Gradl, Christina, Knobloch, Claudia (2011) *Energize the BoP! Energy Business Model Generator for Low-Income Markets.* Endeava, Berlin

<sup>x</sup> According to SEWA, for saltpan workers in Gujarat a fuel efficient stove would halve the workers' current average need for wood, now about 5 kilograms (11 pounds) per week.

<sup>xi</sup> Bretton Woods Project (ibid)

<sup>xii</sup> The cook stoves cost approximately US \$55 - \$60.

<sup>xiii</sup> Alert Net, *Climate Conversations – curbing wood use in India's salt pans.* <http://www.trust.org/alertnet/blogs/climate-conversations/curbing-wood-use-in-indias-salt-pans/ar>. (Accessed 23 February 2012)

<sup>xiv</sup> FAO <ftp://ftp.fao.org/docrep/fao/011/i0765e/i0765e10.pdf> (Accessed 23 February 2012)

<sup>xv</sup> Bretton Woods Project (ibid)

<sup>xvi</sup> Good Environment <http://www.good.is/post/in-benin-solar-powered-irrigation-pollutes-less-and-produces-more/> (Accessed 23 February 2012)

<sup>xvii</sup> Barefoot College [http://www.barefootcollege.org/sol\\_approach.asp](http://www.barefootcollege.org/sol_approach.asp) (Accessed 23 February 2012)

<sup>xviii</sup> Global Village Energy Partnership (GVEP) [http://www.gvepinternational.org/sites/default/files/gveps\\_experience\\_with\\_working\\_with\\_women.pdf](http://www.gvepinternational.org/sites/default/files/gveps_experience_with_working_with_women.pdf) (Accessed 23 February 2012)

<sup>xix</sup> Clancy, Joy (undated) *Late Developers: Gender Mainstreaming in the Energy Sector.*

[http://www.devstud.org.uk/aqadmin/media/uploads/4ab8efeb3f827\\_SA3-clancy-dsa09.pdf](http://www.devstud.org.uk/aqadmin/media/uploads/4ab8efeb3f827_SA3-clancy-dsa09.pdf) (Accessed 23 February 2012)

<sup>xx</sup> Clancy, Joy (ibid)