Recommendations for Climate Negotiators on Energy Technologies and Gender Equity

The technology transfer, capacity building and financing provisions of climate agreements and response plans should be inclusive and equitable so that both women and men can have access to, and benefit from, the development and transfer of new energy technologies, and should specifically:

- Require gender balance on management boards, expert panels and advisory groups for international, national and local climate response planning, energy technology transfer and dissemination, and carbon financing;
- Support training of women on the use, development, production and marketing of low-carbon energy technologies, and opportunities to share that knowledge with other women;
- Set targets for women's participation in projects and programs designed to expand energy access, including as designers, managers and entrepreneurs;
- Establish programs and centers focused on capacity building for women on clean energy business initiatives and opportunities;
- Create financing mechanisms for making access to carbon finance easier for smaller projects;
- Engage gender and energy experts to apply a gender analysis in the development of climate and energy policies and projects.

ENERGIA, the International Network on Gender and Sustainable Energy, takes the view that projects, programs and policies that explicitly address gender and energy issues will result in better outcomes in terms of the sustainability of energy services as well as the human development opportunities for women and men. The network has a direct presence in 22 countries in Africa and Asia working through its members organizations from NGOs, government, academia and the private sector. ENERGIA has developed a series of tools for gender mainstreaming in energy policies, programs and projects, and is working with partners to identify how gender-responsive technologies combined with local innovations and ownership can be upscaled to provide locally-appropriate climate change mitigation and adaptation solutions. For more information, go to **www.energia.org** or contact Ana Rojas at **a.rojas@etcnl.nl** or **energia@etcnl.nl**.

WEDO is a global women's advocacy organization working on issues of sustainable development, women's leadership and global governance and finance; climate change has been a cross-cutting priority for several years. The results of WEDO's efforts to integrate gender equality concerns and perspectives into international agreements and national plans can be found in numerous documents, declarations, resolutions and policies, including the negotiating drafts of the UNFCCC. WEDO's mission is to empower women as decision-makers to achieve economic and social justice, a healthy and peaceful planet, and human rights for all. For more information, go to www.wedo.org, or contact Cate Owren at cate@wedo.org.

ENERGIA and WEDO have been working together for a number of years, particularly in advocacy at the UN Commission on Sustainable Development (CSD), in the lead-up to Rio+20 and at the UN Framework Convention on Climate Change (UNFCCC). Both are members of the Global Gender and Climate Alliance and are committed to ensuring that climate change policies, decision-making and initiatives at all levels are gender responsive.

Photo credits **FRONT**: ***top left***, Women working on solar panels, http://diverseeducation.com/article13091; ***center***: biofuel powered tiller, Emily Plessis, CTxGreEn; ***right***: biodigester to produce biogas fuel, ENERGIA Phase 3 Programme; ***bottom right***: Upesi stove, www.practicalaction.org.
BACK PAGE: Gail Karlsson, ENERGIA • Design and layout: Laurel Marx and Mary Zehngut

Gender, Energy Technology and Climate Change

This factsheet, jointly produced by the Women's Environment and Development Organization (WEDO) and ENERGIA - the International Network on Gender and Sustainable Energy, highlights some of the key gender and energy technology issues related to climate change. The emphasis is on the needs of women in developing countries - many of whom are already dealing with poverty and lack of opportunities and are now faced with growing risks of climate-related flooding, droughts, ecosystem degradation and natural disasters - and the possibilities for engaging women as innovative energy entrepreneurs.

Energy is a key factor for economic and social advancement, as it is an essential input for increased access to food, water, shelter, sanitation, medical care, schooling and information. Energy technologies are needed for household uses as well as modern agricultural production, commerce, manufacturing and industrial development.

Women in developing countries are already facing many challenges, especially those who are living in poverty and/or dependent on small-scale agriculture and collection of water and fuel from their local environment to meet their daily needs. In many cases they lack even basic technologies like lights, stoves, grinders and pumps that could ease their daily household burdens, or any modern equipment that could provide opportunities for sustainable livelihoods.

Climate change is likely to make the lives of women in developing countries even more difficult. However, there is also great potential for climate-related funds and mechanisms to support new investments in low-carbon, renewable and energy-efficient technologies that would benefit women while at the same time reducing greenhouse gas emissions.

Low-carbon energy technologies can be used to provide electricity in off-grid or underserved areas, as well as motorized power, for agricultural production and processing machinery, water pumps, communications technologies, and other equipment that frees up women's time, expands their access to information, and provides new employment and business opportunities. Examples of these technologies include: solar photovoltaic panels, small hydro systems, wind turbines, and generators fueled by plant oils or biofuels (including biogas, biodiesel, and bioethanol) produced locally in ways that do not adversely affect food supplies.

Improved cooking stoves provide one key entry point for simultaneously reducing: greenhouse gas emissions, indoor air pollution that damages women's health, the amount of women's time and labor expended in collecting fuel, and the increasing pressures on forests and woodlands as fuel sources. Recent research on the contributions of 'black carbon' or soot to climate change has focused new attention on the potential for innovations in cooking stove designs.

This factsheet was prepared by Gail Karlsson, ENERGIA Senior Policy Advisor, Cate Owren, WEDO Program Director, Ana Rojas, ENERGIA International Secretariat, and Rachel Harris, WEDO Advocacy and Outreach Coordinator.

Women's Environment & Development Organization

ENERGIA
INTERNATIONAL NETWORK ON GENDER AND SUSTAINABLE ENERGY

Carbon Financing Possibilities to Expand Women's Access to Energy

Emission reduction credits under the Clean Development Mechanism (CDM) could potentially be used to expand energy access and improve energy efficiency in ways that would provide benefits to women in poor areas, but so far it has been used mainly for efficiency gains in large facilities, and the transaction costs have generally been too high for small-scale projects led and implemented by women. There are special provisions for 'bundling' small projects, and projects can also be aggregated as 'Programmes of Activities', but these procedures have not been very effective in expanding energy access. Additional reforms are still needed to more fully realize the 'development' aspect of the Clean Development Mechanism.

There are some cook stove programs that have applied for CDM financing; for example, in Nigeria, the Developmental Association for Renewable Energies and other partners have sought programmatic CDM status for highly efficient wood stoves that reduce firewood use by about 80%. However, in situations where the exact amount of emissions savings from each stove has to be reported, the logistical challenges add to the transaction costs.

It may be somewhat easier to obtain carbon financing for projects that actually eliminate the combustion of traditional biomass fuels (wood, charcoal, dung and agricultural wastes) and provide cleaner-burning biogas technologies instead. For instance, the Biogas Support Programme in Nepal has received CDM credits for domestic biogas plants. The initiative encourages women's ownership of biogas digesters and has set targets for women's participation in training programs. Despite the time required to collect the cattle dung and water needed for the biogas plants, women using them have nevertheless seen reductions in their workloads by as much as three hours per day, which has enabled them to undertake more productive farm and off-farm activities.

There are also climate-related initiatives involving water management, ecosystem conservation and telecommunications that are important for women's health, safety, and sustainable livelihoods. For example, Vestergaard Frandsen, a private company, plans to use carbon credits to distribute LifeStraws that filter water from contaminated local sources, thereby reducing the fuel use and greenhouse gases associated with boiling water to purify it.

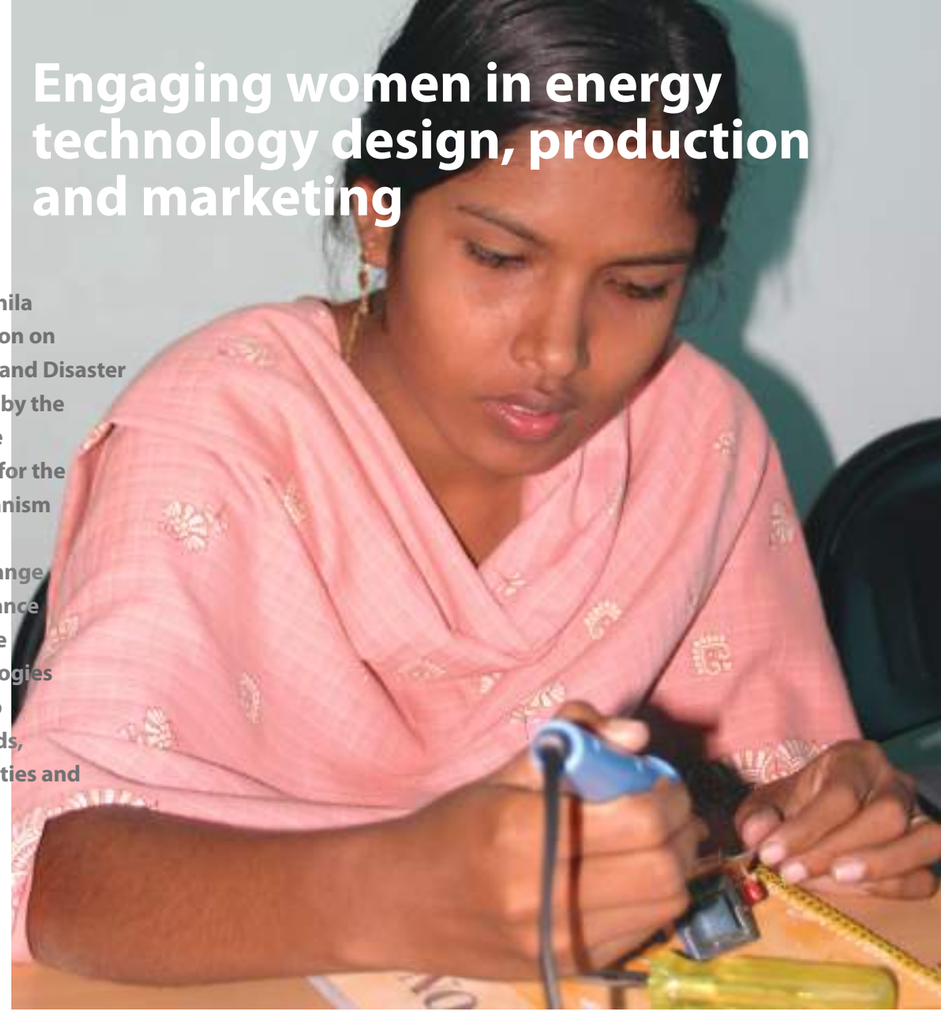
In 2007 the GERES New Lao Stove project was validated under the Voluntary Carbon Standard. GERES Cambodia is also working on generating emissions reductions from other biomass technologies such as improved palm sugar stoves, improved charcoal kilns, improved brick kilns and charbriquette programs.

In the area of electricity generation, Grameen Shakti in Bangladesh has bundled projects for CDM financing that involve training women and employing them as engineers to install solar panels.

www.gshakti.org

Grameen Shakti photos
above right:
www.ashdenawards.org/images/hi_res/grameen06a.jpg
left: www.t4cd.org/Resources/ICT_Resources/Projects/Pages/ICTProject_274.aspx

Engaging women in energy technology design, production and marketing



In November 2008 the 'Manila Declaration for Global Action on Gender in Climate Change and Disaster Risk Reduction' supported by the Global Gender and Climate Alliance specifically called for the Clean Development Mechanism under the UN Framework Convention on Climate Change to "fund projects that enhance energy efficiency and make renewable energy technologies available and affordable to women for household needs, enhancing economic activities and socio-economic mobility".

Technology development and use is widely viewed as 'men's work'. However, in many developing countries, it is traditionally women's work to gather wood, provide food, and generate income for their own and their children's needs. It therefore makes sense to enlist women in designing and producing locally-appropriate energy technologies that they can use for their own household and income needs, and also market to other women in similar situations.

Mainstreaming gender-sensitivity into energy and climate-related policies and projects requires a paradigm shift that recognizes women's contributions to climate change responses and promotes the development of new opportunities for women in the energy sector. To accomplish this goal, women generally need to gain greater confidence and expertise in business management to build their capacity to undertake new economic activities. They may also require technical training to enable them to operate, manage and market new energy equipment.

Innovative financing and credit schemes for expansion of energy services can serve as a catalyst for new entrepreneurial activities for women, if energy access is effectively linked with income-generating opportunities. Women could use equipment for their own activities, plus also sell energy services to earn income, or actually learn to build, sell, maintain or repair energy technologies.

The ability of women to take advantage of business opportunities offered by new energy options is often constrained, though, by legal or social barriers that limit their property rights, land tenure, and access to credit. Government policies are needed that go beyond climate change and energy sector planning, and expand women's overall opportunities for economic empowerment.

THE ROLE OF WOMEN AS ENERGY PROVIDERS CAN BE TRANSFORMED INTO SUITABLE MICRO-ENTERPRISES IF THEY CAN MANAGE FUEL WOOD OR OIL SEED PLANTATIONS, DISPENSE KEROSENE OR LPG, ASSEMBLE SOLAR PANELS, BUILD COOK STOVES AND BRICK KILNS, AND EVEN MANAGE ELECTRICITY DISTRIBUTION AND BILL COLLECTION.
Where Energy is Women's Business, ENERGIA 2007.