

# Women, Energy and Sustainability

## Making Links, Taking Action

WENDY MILNE

*Cet article examine les relations de pouvoir qui contrôlent les ressources énergétiques, la distribution et le savoir, et maintiennent les iniquités entre et à l'intérieur des nations et marginalisent le point de vue des femmes, des populations indigènes et pauvres. L'auteure assure que la porte d'entrée à de meilleures conditions de vie pour les femmes est leur participation aux projets énergétiques, aux politiques de développement de la recherche et de l'éducation, ainsi elles pourront aspirer à un développement durable.*

Energy, while a necessity for survival, presents many problems on the path to ecological sustainability, and equitable social and economic development. Dominant energy practices are non-renewable, large-scale, and highly technical requiring incalculable capital investment. Relations of power that control energy resources, distribution, and knowledge maintain inequities between nations and within nations, and marginalize the standpoint of women, the world's poor, and indigenous populations. The lack of democratic control of energy use has obstructed critical analysis and fundamental change of current energy practices. Yet, change is precisely what is required as energy is at the forefront of local, regional, and global crises as diverse as deforestation, climate change, third world debt, and international conflict.

### From Rio de Janeiro to Johannesburg

There has been some progress from Rio de Janeiro to Johannesburg to shift critical analysis of energy practices onto the international political agenda. Despite the role of energy in equitable sustainable development it was conspicuously absent from the formal deliberations at the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. It was only after lobbying by civil society that energy was eventually placed within the context of climate change and included in the program areas of *Agenda 21* on protection of the atmosphere (Cecelski 1995). *Agenda 21* asserts that protection of the atmosphere requires the global promotion of an energy transition, energy efficiency, renewable energy sources and sustainable transportation systems.

In the years between Rio and Johannesburg the International Panel on Climate Change (IPCC) and other scientists have concluded that human activities that produce greenhouse gases, like carbon dioxide, are altering

the atmosphere and contributing to climate change (Raskin and Margolis; Skutch 2002). Three quarters of carbon dioxide comes from burning fossil fuel energy sources, and

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the rest is the result of land-use change like deforestation (Dankelman). Despite the science and the formation of international negotiation processes such as the Kyoto Protocol, politics and corporate alliances continue to deflect any substantive changes toward mitigating greenhouse gases through an energy transition.

Ten years after Rio at the World Summit on Sustainable Development (WSSD) in Johannesburg the inclusion of energy as one of five major negotiating themes signaled an opportunity for significant change. However, the negotiations failed to provide concrete actions on energy prompting the World Wildlife Fund, Oxfam, and Greenpeace to jointly declare that there was nothing for the poor, and nothing for the climate. Regrettably, the accomplishments of the WSSD were limited when it came to specific actions to alleviate poverty by delivering energy to the two billion people of the world with no access to energy services, and to start the renewable energy transition outlined in *Agenda 21* that is required to protect the global climate.

Concurrent with this period of international negotiation and political inaction has been the development of diverse non-governmental and community organizations in the South and North working for a sustainable and equitable energy future. Initiatives by civil society to advance sustainable energy include renewable energy promotion, reforestation projects, research, political lobbying, policy development, community development, advocacy, education, and coalition building. Central to many alternative energy initiatives in the South, with no comparable network in the North, is the growing movement to make the link between gender and energy more visible (Cecelski 1995). Increasingly, strengthening women's

participation in energy projects, policy development, research, and education is being recognized as a strategic entry point into improving women's lives and meeting the goals of sustainable development (UNDP 2000).

### **Women and Energy in the South**

Energy is closely linked to the goals of sustainable development declared at Rio de Janeiro and Johannesburg. Eradicating poverty, expanding income-earning possibilities, increasing gender equity, improving education and health status, and protecting and regenerating the environment are all related to equitable access to

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energy (UNDP 1997). However, the majority of people in developing countries, particularly in rural areas, are lacking access to modern energy services. Many people continue to cook on traditional fuels like wood, charcoal, and dung, have limited or no available electricity for the household or workplace, and have minimal access to motorized transportation services (UNDP 2000).

Access to energy is limited further by gender and poverty. Women and girls suffer the most from the lack of appropriate and accessible energy sources and services (UNDP 2000). Men and women have different roles regarding energy within households and communities, different access to and control over energy resources, different incomes to buy energy, and different primary use of energy (Makan). Women and girl's primary responsibility for the basic survival of the household means they exert substantial amounts of time and physical energy in gathering fuels, preparing food, cooking on open fires, and washing and cleaning without any access to modern energy fuels or technology (Karlsson and Oparocha).

The intensive labour involved in energy-related activities for the household, not to mention the health and safety risks, seriously compromises the time for women to be involved in income-generating employment, continuing education, or community participation (UNDP 2000). Access to energy is also an essential resource for energy-intensive small enterprises and home industries like food-processing, beverage production, kiln operations, charcoal making and fuel distribution. Yet, past efforts to improve energy access and efficiency have tended to focus on large-scale producers ignoring women's productive activities (Cecelski 1995).

Recognizing gender in the energy sector has roots back

to the 1970s. Early projects designed to respond to women's role in household energy use, and in the agriculture, small-enterprise, and forestry sectors had mixed results, however, as they tended to focus on the technical aspects of energy ignoring the social dimensions of energy practices (Skutch 1998). During the last decade the realization that energy, environment and development are clearly linked has made women's issues in the energy sector more visible and viable (Cecelski 1995). Along with this realization has emerged a substantial gender and energy network aimed at strengthening women's participation in energy research, policy development, project planning, and education. This network has broadened the conceptual thinking and empirical knowledge on the women and energy link by exploring a wide range of issues including studies on wood-fuel depletion, time spent on fuel acquisition, basic energy security, energy poverty, assessing women's opportunities as energy entrepreneurs, determining how to increase women's participation in the energy sector, and engendering national and international energy policy development (Cecelski 1995, 2000; Karlsson and Oparocha; Makan; UNDP 2000).

Women have a pivotal role to play in a transition toward sustainable energy practices in the household, as they are the main users of energy, they influence family purchases, and are educators of children (Wakhungu and Cecelski). The assumption that women are not interested in learning about and maintaining technological energy systems has also been challenged through studies that confirm women are taking an active role in sustainable and renewable energy activities as consumers, managers, micro-entrepreneurs, extension workers, leaders, networkers and lobbyists, and even as promoters and innovators of renewable energy technologies (Cecelski 2000).

The growing knowledge of the relevance of gender and energy and the lack of an international institution with an objective to promote a gender sensitive perspective on energy led to the 1995 formation of the gender and sustainable energy network ENERGIA. ENERGIA's mission is to engender energy and empower women through the promotion of information exchange, research, advocacy, and political action aimed at strengthening the role of women in sustainable energy development. At present ENERGIA has 1,500 members in Africa, Asia, Latin America, Europe and North America.

The ENERGIA network has worked skillfully to promote its mission. At the WSSD, ENERGIA was able to ensure that gender and energy issues were a component of the discussions. ENERGIA developed a background paper on gender and energy (ENERGIA 2001) and then created strategic alliances with other organizations to successfully lobby the Women's Caucus and the Climate Change Caucus to ensure that a gender and energy perspective appeared in their statements (Karlsson and Oparocha). Ultimately the weakness in the political commitment to adequately address the linkages between

energy, gender, and poverty in the WSSD Plan of Implementation (PoI) does not negate the success of ENERGIA in raising awareness of the issue and providing rationale for gender sensitive energy planning and policies for sustainable development (de Melo Branco and Roehr).

From Rio to Johannesburg there has been valid evidence that energy policies aimed at sustainability will remain flawed until gender is taken seriously. However, in the lives of everyday women in the South there has been minimal translation of these significant findings into change in the dominant political and economic policy approaches to energy.

### Women and Energy in the North

Energy presents a much different profile in the North. Energy is accessible everyday, taken for granted, and ultimately rendered unseen. It is consumed at an alarming rate with little knowledge of the consequences. Canadians, for example, are for the most part unaware that they consume more energy per capita than in any other country, and more energy as a nation than all African nations combined (Suzuki Foundation).

Accordingly, and in sharp contrast to the South, recognition of the link between energy and gender is virtually invisible in the North. Energy is considered gender-neutral; women and men are seen as equal in their use of and attitudes about energy (Clancy and Roehr). The tendency to believe that women's role in energy use ends once modern forms of energy became readily available (Wakhungu and Cecelski) is reflected in current approaches to energy policies, programs, research, and education.

Along with the many differences concerning energy in the North and the South there are crucial similarities. Sustainability in the North, like in the South, requires social, economic, and environmental justice, and sustainable energy use demands equitable access and influence in energy decision-making. As well, the limited research on women and energy in the North indicates there are gendered differences in relation to energy consumption, energy sector involvement, and decision-making capacity over energy issues. Women in the North have also demonstrated the potential to be substantial contributors in the energy sector, and to energy efficiency, conservation and in energy transition.

Household energy use reflects the gendered dimensions of society. While a significant number of women in the North are in the paid labour force the growing distinction between wealth and the feminization of poverty means that more women than men, especially in northern climates like Canada, live in fuel poverty (defined as spending more than 20 per cent of their household income on fuel) (ENERGIA). Many single women, senior women and women-led families spend at least 20 per cent of their income on heating and electricity, especially since poverty

is linked to less energy-efficient housing and reliance on older inefficient appliances (Clancy and Roehr).

There is a growing network of women working in the energy sector but the ability to shape energy decisions continues as a male domain (Clancy and Roehr). Statistics Canada data on the energy sector in Canada indicates that women make for 24.2 per cent of employees in the petroleum sector, with 60 per cent of these women working in support, sales and service, and one quarter of the professional positions in the sector being held by women (Dowse, Horton, Lele and Sherk). The report *Women and the Oil and Gas Sector in Canada* (Dowse et al.) concludes that the number of women working in the

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energy field has increased in the last decade, particularly after the sector has attempted to address a number of equity issues. Gender-related equity initiatives that have been implemented in the energy sector include: subsidized childcare, the introduction of training opportunities for non-traditional occupations, anti-harassment training, and diversity sensitive hiring policies. Despite an increase in women working in the energy sector studies in Canada and Europe suggest that female employees are reluctant to address gender aspects of energy due to the male-dominated organizational culture and established process and rules (Dowse et al.).

Women have been successful in building the capacity to work outside the established power structures to affect change toward sustainable energy. Studies confirm women are more supportive than men of renewable energy and conservation, and demonstrate less support for highly technical and potentially environmentally damaging energy sources like nuclear power (ENERGIA). A study on the gender differences in support for soft energy (renewable) and hard energy (oil, gas and nuclear) concludes that hard energy sources are more opposed by women than men, and that reliance on oil that leads to war is more opposed by women than men (Longstreath). These kinds of gender differences are reflected in the leading roles that women and women's organizations have taken in the nuclear disarmament movement (Wittner) and in the anti-nuclear energy movement (Clancy and Roehr).

Currently, the direct link between climate change and energy use is increasing the potential for women in the North to once again become actively engaged in energy issues and take a role in shaping a gender sensitive movement toward sustainability.

## Climate Change and Women

Climate change from fossil fuel energy use presents a serious and imminent threat to the sustainability of the planet. The International Panel on Climate Change (IPCC) concludes that regional climate changes like temperature increases are already affecting many physical and biological systems and increasing floods and droughts in some areas. The effects of climate change are threatening livelihoods and human security around the globe. The IPCC further concludes that the impacts of climate change will be experienced differently by region, age, class, income, occupations and gender, and that those with limited resources are not only the most vulnerable to the effects of climate change, but have the least capacity to respond and recover from the changes (IPCC).

Climate change like energy is not gender neutral. Fatma Denton (2000) observes that the topic of gender and climate change is such a burgeoning area of study that the findings are often more theoretical than empirical. However, it is being argued that women, particularly in the South, will be especially vulnerable to the effects of climate change (Denton 2002; Dankleman). Building on existing research in gender and energy, environment and sustainable development a number of factors have been identified that make women particularly vulnerable to climate change. The possible health effects of climate change and caring for the ill will fall within women's areas of responsibility, as will expected nutritional problems, food and water shortages (Villagrasa). The affects of climate change on agriculture, fishing, and the tourism sectors also have the potential to affect women more than men (Denton 2000). As well, there is some indication that women are more vulnerable to disasters related to climate change (Dankleman; Skutch 2002)

Women are also vulnerable to the changes that will be required to curb fossil fuel energy use, particularly in the household (Wamukonya and Skutch). While women around the world have a primary role in the use and conservation of household energy the responsibility of mitigating greenhouse gases has not been considered within a gendered framework. In Canada, for example, the climate change plan asks that citizens reduce their greenhouse gas emissions by one tonne by taking actions at home, at work, and on the road (Government of Canada). While the plan states it intends to develop an approach that is fair and equitable across regions and sectors it does not currently consider other dimensions of inequity like gender and poverty.

A strategy to ensure meaningful consideration of gender in climate change issues is being formulated through the gender and energy networks. At the outset, responses for equitable climate change requires increasing women's participation in climate change negotiations, and building the capacity of women's organizations to work on the issues of climate change and energy (Villagrasa).

The two principal treaties related to climate change, the UN Framework Convention for Climate Change (UNFCCC) and the Kyoto Protocol, are lacking references to women, gender, and poverty, and only generally refer to social and economic sustainable development (Skutch 2002). Gender sensitive responses to climate change require more women on the various commissions within the climate change development process, and gender needs to be included in future policy formulations and activities (Denton 2002; Villagrasa). Women need to be active participants in policy-making on mitigation strategies, vulnerability studies, and in projects for adaptation, technology transfer, and capacity building (Wamukonya and Skutch). Skutch (2002) adds that explicitly including gender considerations in all climate change negotiations and strategies will increase the efficiency of the negotiation process and keep gender equity issues on the international agenda.

Women have already demonstrated the positive role they can play in climate protection by influencing the outcome of previous negotiations and preparatory meetings (Dankleman; Villagrasa). Delia Villagrasa reports that during the Kyoto negotiations the small number of female delegates representing the government sector differentiated themselves from their male colleagues by actively building alliances with other delegates, particularly from developing countries, to push for the adoption of the protocol despite powerful opposition. Also women representing the NGO sector were able to make significant contributions by working together, despite differences, to ensure that the debates came to a successful outcome and that there was a flow of accurate information from the meetings to the public (Villagrasa).

Ensuring that more women are involved in the complex negotiation process for climate change and are able to be directly involved in the development and delivery of sustainable energy technology requires capacity building through education and training, and access to funding mechanisms (Dankelman). According to Skutch (2002) the international community has formally recognized capacity building as necessary for implementing climate change plans, but there remain major gender-based inequities in capacity building plans.

Women's groups require mentoring on the complex and detailed nature of climate change negotiations. Women's groups in the South require support from NGO's now active on climate change to secure plans for climate protection that are compatible with the goals of sustainable development and improved livelihoods (Villagrasa). Women's groups in the North need to develop the capacity to respond to climate change as they have had limited involvement in the issue. However, Villagrasa argues that

if mobilized, they could put tremendous pressure on wealthier countries to provide the policies and measures needed for climate protection, such as stronger

development of renewable energy technologies. (43)

Women in the North can take this opportunity to learn with women around the world how to shape actions for a transition toward sustainability that will address excessive energy use in the North while enabling women in the South to escape poverty and equitably share in energy resources and alternatives.

## Conclusion

A sustainable energy future is about placing energy in the context of the broader transition to social and environmental sustainability. It is about changing the way energy is currently controlled by power interests. It is about all citizens, including women, having an opportunity to influence the direction of energy supply, use and alternatives. Ulrike Roehr argues that

the solution is not to take part in destructive power structures . . . At the local level, both Southern and Northern, women can work toward decentralized production from renewable sources. At the international level, women should work together to change the structures and instruments, and to develop new ones that are environmentally and climate friendly, and at the same time ensure that these are just, both socially and in terms of gender. (16)

From Rio de Janeiro to Johannesburg women have been working toward alternatives to current energy practices. But much more needs to be done. There needs to be more research in the South and North on the linkages across gender, energy, and sustainability. Women must continue to build global networks that are essential for research, advocacy, and action on energy and climate change that effect women around the world. Only then will there be a chance for equitable sustainable development supported by gender and climate justice.

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## THELMA WHEATLEY

### Aged

Some old women glow with a deep knowing,  
 their tender lidded mouths mottled skin  
 opening the truths &  
 long reptile eyes  
 merciful with the century  
 scale every part of you,  
 everything you've ever been  
 in their smiles,  
 each twist of deception;  
 their furrowed breasts  
 breath another secret.

*Thelma Wheatley has published short stories in many literary magazines and won several awards including for best short story from Cross-Canada Writer's Quarterly.*

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