

# From Rio to Beijing: Engendering the energy debate

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**New perspectives in the energy sector adopted at the Rio Conference, and new approaches to gender issues discussed at the Beijing Conference, are especially congenial to the adoption of a gender approach in energy policy and planning at this time. This article suggests that mutual concerns in energy fora and gender circles, jointly addressed, could further both the Rio energy programme goal of sustainable development, and the Beijing women's agenda of development, equality and peace. While not exhaustive, specific neglected gender issues are pointed out here in areas of current and future energy policy concern.**

The UNCED Conference in Rio in 1992 placed energy concerns mainly in the context of climate change. Women participated actively in preparations for Rio, and the advancement of women is a cross-cutting issue in Agenda 21. In September 1995, the Fourth World Conference on Women met in Beijing, placing energy under science and technology concerns. Both events have contributed to spawning new initiatives on women and energy. This article attempts to place these initiatives in a historical framework: How did we get here, and where do we need to go from here?

## **New perspectives on energy and gender**

Three major changes have established a favourable environment for efforts to establish a gender approach in energy planning:

**1. New perspectives on energy.** Energy sector thinking has undergone dramatic evolution in the past two decades, spurred by oil price rises in the 1970s and by the recognition that huge amounts of energy will be required to fuel Third World population and economic growth. Most important is the realisation that energy, environment and development are far more intimately intertwined than was believed even a few years ago.

The scope of energy policy has been gradually extended, giving increased attention to new issues such as demand analysis and management; the energy transition to more efficient fuels and technologies; social and economic objectives and constraints; linkages with the environment; privatisation and international, regional and local resource conflicts. While conventional energy paradigms virtually define women's concerns out of the (by definition) capital intensive, monetised, expert-dominated energy sector, these alternative energy perspectives have given new visibility and relevance to women's issues in energy.

For example, women are now seen as the main energy consumers in household energy demand studies and projects, as producers of woodfuel in social forestry, and as victims of indoor air pollution in environmental health concerns.

**2. New perspectives on gender.** Gender paradigms have also undergone considerable change. Since the 1970s, when "women in development" (WID) sought to integrate women into existing development programmes by increasing women's access to credit, land and

employment using both efficiency and equity arguments. The limited success of WID led by the late 1980s to “gender and development” (GAD), looking at both women's and men's roles within the family and community.

Gender analysis showed that the burden of environmental degradation often falls disproportionately on women, because of their responsibilities for subsistence such as wood and water collecting. Then in the 1990s, “eco-feminism” asserted that women were naturally more caring about the environment, and introduced a new political advocacy element allied with environmental activism. It was pointed out, though, by gender analysts, that women are not a homogeneous category; their interests in environmental protection will vary not only by gender but also by class, race, caste and other variables, and thus depend on a micro-analysis of local material realities.

The Beijing Conference on Women marked a shift away from viewing women as passive recipients of science and technology and merely getting more women into mainstream science and technology as it currently exists. Women are seen rather as active participants in the innovation process whose incorporation in science and technology (including energy) will shift the mainstream positively in the direction of meeting needs of the poor, women and the South.

Current gender perspectives and new energy-environment frameworks have in common both a concern with micro-analysis as a basis for planning and policy, and a *transformational approach* that challenges not only conventional means, but ends of development.

**3. New participants in energy and in gender work.** Finally, the actors - and actresses - in the energy sector have changed a great deal in the last decade or so. More women are working in the energy sector; we see many more young women rising through the ranks, and not just as social scientists (women staff's traditional role in energy projects), but as engineers and scientists, project planners and managers, and in funding positions. Though still in most organisations the exception rather than the rule (and there is far to go to achieve parity), there are more role models and more women in positions of power in the energy sector, establishing a critical mass for focused action.

More men are also interested in gender-relevant energy issues, too. In fact, some male energy experts have made important contributions to work on women and energy, e.g. on biomass fuel combustion and health, on human energy measurement.

### **Past research on women and energy**

Energy is a basic necessity for survival and a critical factor affecting economic development. Past research on women, energy and environment has described and analysed how energy is a critical input to women's capacity to meet their families' basic needs, through their subsistence and income-earning activities and is essential to women's ability to meet environmental objectives that they espouse. Energy's important contribution is evident in women's roles as:

- **users** of energy resources, both traditional and modern fuels. Women's use of biomass fuels in cooking (a major use of energy in developing countries) is best-known. The burning properties of different fuels, fire management, fuel-saving techniques, and the advantages and disadvantages of different fuels and stoves are hence of considerable

interest to women. Energy is also essential to the profitability of women's small-scale income-earning activities in the informal sector, many of which are energy-intensive (e.g. tea shops, street foods, beer brewing, fish drying, etc.)

- **producers** of traditional fuels and often procurers of modern fuels, responsible for their purchase and transport. Most widely recognised is that women (and children) need access to adequate biomass energy supplies, as the primary collectors of fuel (and other forestry products) for home consumption, and often, for sale to urban markets. The management and conservation of these depletable forest resources has critical importance to women, and they are the chief repositories of knowledge concerning the use and management of trees and other forest products. Women also comprise a large share of the labour force in forest industries - nurseries, plantation establishment, logging and wood processing - and depend on these activities for their livelihoods.
- **victims** of energy scarcity, technological changes in the energy sector, and environmental damage due to energy use and supply. Since women have less access to resources (land, credit, capital, education, information, training) and to power generally, they (and by extension, their families) suffer particularly from these negative effects. Gender-specific impacts on women's health and incomes derive from women's roles as energy users and producers (for example, the effects of indoor air pollution on women's health and the loss of income from forest products with deforestation).
- **activists** in energy and environmental debates and action. On the positive side, because of the importance of energy to women's roles and activities, energy policy debates have often elicited women's strong interest and distinct perspective. Women and their organisations have been active and effective in changing some energy policies. When convinced of the utility and practicality of an energy technology or forestry scheme, women have been a powerful lobby to persuade the entire household or community to invest the resources necessary to make the scheme work. When convinced of the negative effects and costs to their livelihoods, on the other hand, women have been equally forceful in blocking supposed "improvements". Women and their organisations are thus potentially a potent force for sustainable energy development.

### **What conclusions can be drawn from past work on women and energy?**

- Past research on women, energy and environment is scattered through the literature on women's work, household energy, social forestry, appropriate technology, environment, health, and science and technology. Not even an annotated bibliography exists to reflect the current state of knowledge.
- Women's subsistence activities in the rural sector and in traditional biomass fuel use and collection have received considerable attention, and many lessons have been learned in improved cook-stove programmes. However, the impact of the energy transition on both rural and urban women's incomes and livelihoods, and women's roles in interfuel substitution and in the urban, commercialised energy sector, have been little explored.
- Women have been seen largely as passive recipients of new energy technologies, or, at best, as sources of information about their needs. Relatively little research and case studies are as yet available about women's roles as active participants in the innovation

process, either their proven innovative capacities, or their vast stores of indigenous knowledge.

- Reduction of women's drudgery has been a major focus of women's concerns. But saving labour in informal household production has received little energy policy attention, because human energy is defined as outside the scope of the energy sector.
- Successes in adopting a gender approach in energy policy and research (e.g. in household energy, indoor air pollution and rural transport studies) have come as a result of micro-analysis of the energy sector, including gender analysis.
- While advances have been made in awareness of the complexity of the relationships among women, energy and environment, the bulk of energy policy research does not reflect these advances, nor, more importantly, have they been incorporated into practice.
- Increasing women's participation in energy policy making is consistent with efforts to strengthen national capacities to manage technological change in Agenda 21. Promotion of such a dialogue will require not only representation of women and their organisations in energy policy making fora, but also capacity strengthening like: women's capacity to analyse and impact on energy policy, and of energy policy makers' capacity to elicit, acknowledge, use and respect women's knowledge, needs and participation.

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## Gender issues in energy

Below are some highly relevant gender issues in sustainable energy. Although this list is not exhaustive, it indicates some of the main themes that warrant further discussions in the energy fora and gender circles

- **Human energy.** In recognition of the importance of women's labour in producing energy services, a framework for including human (metabolic) energy in energy analysis needs to be developed (a number of fledgling efforts exist to base this on) and applied in energy balances and analysis. Such an effort should lead to the recognition of the replacement of human labour as a legitimate objective of energy policy.
- **Health externalities.** Gender-specific health externalities of the current energy system need to be identified and addressed, including but going beyond indoor air pollution from biomass fuels (to e.g. indirect and nutritional impacts of fuel scarcity; occupational health hazards in fuel production and informal sector enterprises; gender-differentiated health and safety risks from modern sector energy use and supply; violence against women as a result of the current energy system).
- **Energy conservation in the household sector.** Household energy, improved stoves and social forestry programmes, which have led the way in recognising women's key role and developing project approaches to ensure women's involvement in the energy sector, need to continue and expand this critical work. Energy efficiency in the modern household sector needs equally to be recognised as a women's issue requiring women's involvement.

- **Pricing.** Gender issues in macro-level energy policy, such as energy investment, imports and pricing, need to be investigated and included in energy policy and planning (e.g., differential impacts of energy pricing on women and men, given the global feminisation of poverty and women's responsibility for fuel purchase).
- **Small-scale enterprise.** Given the importance of informal sector activities to women's incomes and family welfare, the potential role of energy in improving women's livelihoods in energy-intensive small-scale enterprises (where energy is a costly input and women face difficult and often dangerous conditions) needs focused attention. Perverse effects of improved energy efficiency on women's incomes have also been documented and need to be considered.
- **Renewable energy.** Neglect of women in conventional energy policy should not be repeated in renewable energy promotion; the different implications of the wider use of renewable energy sources for women and for men need to be addressed, including evaluation of labour-saving, income and other impacts of new energy technologies on women's work and lives. Women's role in production, finance, sale, maintenance and promotion of renewable energy could be significant, but is little considered.
- **Rural electrification.** Positive effects of rural electrification on women are often taken for granted, but have been little documented. Possible negative effects e.g. on women's workload and status, need also to be investigated.
- **Rural transport.** Rural transport studies showing women's important role in "total transport demand" should lead to broader transport and non-transport interventions directed at relieving this burden, as part of rural infrastructure planning.
- **Urban transport.** Sustainable transportation systems need to be encouraged that would take into account women's greater reliance on public and pedestrian transport systems in the urban sector.

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