Implementation Conference
Stakeholder Action For Our Common Future

Sustainable Energy

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1. Preamble

"To implement the goal accepted by the international community to halve the proportion of people living on less than US$1 per day by 2015, access to affordable energy services is a prerequisite" (CSD-9). The decade since UNCED in 1992, has witnessed great enthusiasm in both public and private sectors for expanding the use of renewable energy technology. The G8 Task Force (2001) concluded that "renewable energy resources can now sharply reduce local, regional and global environmental impacts as wells as energy security risks".

2. Framework for the IC process

The IC process should contribute to the implementation of recent international agreements, such as the CSD-9 decision, and the work done by the G8 Renewable Energy Task Force, through joint stakeholder action

The work on sustainable energy should take advantage of the media attention it can generate. Linkages to freshwater issues, health issues, and corporate / stakeholder citizenship should be developed.

The IC process should also aim to influence the intergovernmental process towards the Johannesburg Summit. It seems most effective and mutually reinforcing to take an integrated approach to maximize the output from the Summit. Hence, the group may choose to develop joint statements and lobbying strategies as well as develop joint implementation action.

3. History of the IC process on Sustainable Energy to date

- First IAG meeting held in New York, 31 Jan 2002.

4. Planned activities between now and the IC event

- Hold IAG telephone conference, either the 7th or 14th March; discuss possible joint action (towards collaborative action plans and intergovernmental process)

  Points of Discussion for this telephone conference are:

  □ *We have included in this paper (Some of sections 1, 3 and all of Section 6), some issues relating to fossil fuels, focusing on corporate social responsibility through improving community participation and increasing community benefit. There are other issues related to fossil fuels that need to be included. HOWEVER, the IC must decide whether they want to focus soley on renewables; or include some issues relating to fossil fuels; or decided to put them to a separate group/sub-group. We suggest that this question be addressed upfront at the telephone conference to settle on one of these three options.*

  □ *Within Part I & II: Which focus areas/government action/possible stakeholder action are missing? Which should be changed/amended?. Which ideas should fill the empty cells*

  □ *Prioritise and develop a more focused detailed action plan that we can move forward on*

  □ *Government involvement: Which? When? On which issue?*

  □ *Finalise the composition of the Issue Advisory Group*

  □ *Next steps: plan for Prep Comm 111*

- IC to produce Issue Paper V2
- IAG dinner meeting during first week of Prep Comm III (24thor 25th March); discuss possible joint action; start identifying IC participants
- IC to produce Issue Paper V3
- In the next two weeks a website for the Renewable Energy strand will be established for the gathering of information for IAG members to access as they so wish.

5. Introduction to Parts I, II, and III

The following section below is to enable discussion at the next IAG telephone conference as to how we move forward for the Implementation Conference. This is not prescriptive by any means and is there as a framework to instigate discussion and help guide us to the next stage which will be about defining key issues which we want to work on that can actually deliver some tangible results. It has been split into three parts: Part I: Creating an enabling sustainable energy framework. Also included in Part I, is the role of fossil fuels and their future usage, which takes into account corporate social responsibility, through community participation and how to increase community benefit; Part II: Further Practical ideas/solutions for implementing sustainable energy projects and finally Part III: A conceptual background.

Please note when reading this section that each possible stakeholder action plan should be examined for its potential to contribute to poverty eradication; social inclusion and empowerment; good governance; and gender equity.

Part I: Creating an enabling sustainable energy framework

Section 1: The strengthening of institutional capacity and policy framework for sustainable energy

Target./Goal	Existing Barriers	Government Action	Possible Stakeholder Action
• To ensure that renewables are adequately considered as part of international energy policy • To help formulate and implement domestic sustainable energy policies taking into account both the role of renewables (solar, wind, bio-mass, geo-thermal, hydro) and fossil fuels.	• Insufficient human and institutional infrastructure • Weak institutional capacity (human and infrastructure), in developing countries due to unaccountable governance and lack of funds which encourages inadequate environmental legislation and the inability to enforce, and energy policy frameworks which cannot be implemented effectively.	• Develop and implement appropriate national, regional and international policies and measures to create an enabling environment for the development, utilisation and distribution of renewable energy sources. • Institutional capacity strengthening to support the development of comprehensive national renewable energy strategies within National Strategies for Sustainable Development (NSSDs) • Integrating energy considerations in socio-economic programmes in policy making	• Institutional Capacity building at national and local levels in support of sustainable energy policies. Private-Public partnerships should be encouraged with a view to advancing energy for sustainable development. • Devise appropriate training and education programmes in-country at national and provincial levels on implementing sustainable energy policies effectively • Strengthen information networks, compilation and dissemination systems and public awareness programmes on renewable energy sources and technologies.

Section 2: Opening up the renewable energy market and making it more competitive

Target/Goal	Existing Barriers	Government Action	Possible Stakeholder Action
• To expand domestic renewable energy markets in order to drive down costs and make renewables more cost effective and competitive with conventional alternatives • To phase out subsidies on fossil fuels and phase in subsidies for renewables.	• Although cost of renewables are falling as volumes increase, in most cases it is not yet directly competitive with conventional alternatives. • Market distortion and harmful subsidies are detrimental to a thriving renewable energy market	• Encourage the role of the private sector in the development and utilisation of renewable energy technologies, through appropriate incentives and regulations. • Policies to reduce market distortions, including restructuring taxation and the phasing out of harmful subsidies, to promote energy systems compatible with sustainable development. • G8 should place more trust fund (?) resources with International Finance Institutions (IFIs) that can be accessed by private sector project developers for renewable energy projects	• Global corporations investigate renewables and strategies for cost effective usage……. • Lobby for change the International Finance Corporation (IFC) guidelines to make them more appropriate for small-scale entrepreneurs • Strengthen information networks for SMEs to exchange and develop new ideas

Section 3: Advanced Research & Technology development for sustainable energy

Target/Goal	Existing Barriers	Government Action	Possible Stakeholder Action
• To strengthen the co-operation with developing countries on R&D will assist in appropriate environmentally sound technology transfer towards systems tailored for developing country usage • To strengthen advanced research and innovation for renewables and also managing fossil fuels more effectively and efficiently by financing energy institutions and organisations and encourage businesses at all levels to participate and contribute in a positive way	• Lack of funding for research and technology development for renewables. • Inappropriate technology transfer to developing countries	• Strengthen national and regional research institutions/centres, on sustainable energy including renewable energy technologies, energy efficiency, advanced energy technology, and sustainable use of traditional energy resources. • Enhance developing countries access to environmentally sound and economically viable technologies for sustainable energy. • Support electricity services based on grid extension and/or decentralised energy technologies, particularly in isolated areas. • Promote an environment which enables the public & private sectors (incl. partnerships), energy co-operatives to engage in the transmission and distribution of electricity at affordable rates.	• To help advocate the importance of research and technology development by establishing information networks which promotes the importance of sustainable energy for the future. • A network & information sharing for renewable energy cooperatives

4: Finance mobilisation to encourage and enable renewable energy to flourish

Target/Goal	Existing Barriers	Government Action	Possible Stakeholder Action
• Establishing an appropriate enabling environment conducive to attracting investments that is supportive to the objectives of sustainable development and ensures public participation	• High up front costs of renewables and other impediments to capital mobilisation, leading to inadequacies and shortfalls in financing programmes	• Strengthen financial support to developing countries for the promotion of renewable energy usage (ODA, WB) • Provide incentives for energy conservation in all sectors taking into account domestic priorities. • G8 countries and IFIs should help formulate well-defined subsidy programmes "smart subsidies" in promotion of renewable energy • Develop and implement common environmental guidelines among Export Credit Agencies by establishing criteria to assess environmental, economic and social impacts of ECA financed projects.	• Micro-credit and revolving funds in support of renewable energy projects should be encouraged and supported. (Any micro-credit scheme should be reviewed on the basis of latest analyses of their impact on gender relations) • Estabishing public-private partnership renewable energy projects that are attractive to securing funding.

Section 5: Stronger Community Participation in the promotion and involvement of sustainable energy

Target/Goal	Existing Barriers	Government Action	Possible Stakeholder Action
• To develop and strengthen community participation and benefits in the planning and implementation of renewable energy projects. • Focus on strengthening participation of disadvantage groups, including women, by involving them in key decision making of policy, strategy, planning and implementation of renewable energy projects.	• A lack of understanding of what sustainable development really means • A lack of knowledge about renewable energy technologies and their advantages. • Exclusion of parts of civil society, particularly women in policy decision making and implementation. • Corporations are not good at communicating with local communities (ivory towers).	• Encourage communities to participate in energy policy making and implementation, particularly women • Run public awareness campaigns on sustainable energy and support national, regional and international NGO networks promoting the use of renewable energy.	• Develop and encourage the use of indigenous sources of renewable energy where appropriate • Strengthen capacity building, including education and training and public awareness programmes on the importance of sustainable energy. • Develop networks that promote renewable energy. • Encourage private/public partnerships for developing renewable energy projects. • Involve communities, particularly women in key decision making, planning and implementation of renewable energy projects.

Section 6: Improving community participation and increasing community benefits from fossil fuel extraction activities

Target/Goal	Existing barriers	Government Action	Possible Stakeholder Action
• To achieve more sustainable consumption patterns, particularly in the developed countries. • Strengthen Corporate Social Responsibility within the fossil fuel industry by promoting tangible targets that can and indeed must be adhered to. • Encourage & promote accountable and transparent governance • Institutional capacity building to enable the development, implementation and enforcement of environmental legislation.	• Lack of transparency and accountability within the fossil fuel industry • Lack of accountable and transparent governance and very weak institutional capacity to develop and enforce environmental legislation effectively. • Poor communication and relations with local communities (ivory towers/gated community syndrome). This leads to the use of inappropriate security forces to protect their interests and hostile environments occurring. • Lack of competition from the alternative energy technologies. • Inappropriate subsidies	• Promote sustainable consumption patterns and energy consumer awareness. • Encouragement and support for environmental legislation in developing countries, that can be regulated and enforced. • Incentives to encourage more accountable governance in order that local communities do actually benefit from oil revenues. • Encourage independent EIAs and audits in relation to HSE and Ethical Codes of Conduct. • Recognise companies who do take a positive stance on issues such as no gas-flaring/re-injection and encourage other companies to follow suit. • Encourage advanced technology that promote more environmentally friendly practices of fossil fuel exploration and usage.	• Look for best and worst practice examples of oil and gas exploration and identify practical solutions towards more sustainable development and the avoidance of conflict. • Lobby to for increased financial disclosure to encourage more accountable use of oil revenues • Encourage the participation of communities in influencing Corporate Social Responsibility and promoting that double standards are unacceptable. Encourage the use of independent Environmental and Social Impact Assessments EIAs/SIAs. • Wherever possible a local workforce should be used and ex-patriates kept to a minimum. Thereby corporations have a responsibility to train and transfer skills in both technical/non-technical roles encourage/develop/ support local services.

Part II: Some practical ideas/solutions for implementing Renewable Energy Projects

Issue	Target/Goal	Government Action	Possible Stakeholder Action
Introduction of Renewable Energy	To commit to the introduction of at least 20% of global electricity generation from renewable energy resources by 2010.	To implement this target, Renewable Energy Set-Aside Programmes and/or Renewable Portfolio Standard (RPS), is one innovate option under active consideration as a mechanism to ensure renewable energy plays a meaningful role in the national energy mix of portfolio. The standard ensures that a minimum amount of renewable energy is included in the country's energy portfolio. Standards can be dynamic, designed to increase the renewable energy market share over time, in order to expand the renewables market. By establishing long-term market demand for renewable energy, this type of policy encourages investors to develop local, national and regional renewable resources. Such programmes could be targeted at both the utility levels– state owned and private as well as local government and municipal structures.	This would require that all energy distributors or generators (depending on how the standard is designed) use renewable energy to meet a specified percentage of electricity sales or total generation. Stakeholders to commit themselves independently to that target and lobby governments to include the target in the J'Burg agreements

Issue	Target/Goal	Government Action	Possible Stakeholder Action
Green Buildings Heating, cooling and lighting the worlds built structures consumes roughly one third of the all energy flows used by modern societies. There is growing recognition of the role that green buildings and the application of renewables technologies can play in reducing energy consumption and greenhouse gas emissions. Combining active solar and passive solar systems and designs can reduce a consumption of conventional energy in buildings from 30 up to 80% with these saving accumulating year after year. Building design is an area with tremendous potential for energy savings. Thick insulation combined with passive solar design techniques can virtually eliminate the need for traditional heating systems. Simple measures like planting shade trees, orienting building for optimal exposures, and placing windows for cross ventilation can dramatically reduce costs and energy use. In addition to preventing pollution, improving a building's efficiency is an effective way to lower operating costs and thereby increase asset value.	To ensure that at least 50% of all new infrastructure projects at the government, local government and private sector level, use construction techniques, which allow for recycling, dismantling and re-erection of structures and materials as well as considering the life cycle costing of materials and product and the use of renewable energy power generation.	dito	Stakeholders to commit themselves independently to that target and lobby governments to include the target in the J'Burg agreements

Issue	Target/Goal	Government Action	Possible Stakeholder Action
Solar Homes Solar home systems can bring cost effective power to people and institutions in off grid or remote areas, particularly for lighting, and equipment. Apart from SHS, other applications of PV in developing countries include 1) PV-powered remote telecommunications equipment; 2) rural health clinic refrigerators; 3) rural water pumping; and 4) PV battery-charging programs, which allow rural residents to purchase or rent batteries to provide electricity to their homes, and then recharge them at PV-powered charging stations. Widespread SHS use could help developing countries onto a low-carbon path for rural electrification while providing an important market niche to help make PVs more competitive for a range of applications worldwide.	Significantly increase the number of solar homes	To establish a target to ensure that at least 5 million homes are electrified by using renewable energy technologies by 2010 and include in the J'Burg agreements	Stakeholders to commit themselves independently to that target and lobby governments to include the target in the J'Burg agreements

Issue	Target/Goal	Government Action	Possible Stakeholder Action
Technology research and demonstration	Technology research and demonstration can lower long-term technology costs, improve available information, and reduce uncertainty. Some technologies may require further application-oriented research, for example to better understand and demonstrate installation costs, performance, reliability, and institutional issues in a specific context.		
Local development or community organisations	Local organisations, whether municipal agencies, cooperatives, or non-governmental organisations, can promote renewable energy locally and provide resources for energy enterprise development, financing, and technology assessment, as well as adaptation for local needs and conditions.		
Energy service companies	Energy service companies can be especially important for small-scale dispersed renewable energy applications. An energy service company should integrate technical, legal, managerial, and financial capacities for identifying, assessing, proposing, financing, and implementing renewable energy projects.		

Issue	Target/Goal	Government Action	Possible Stakeholder Action
Awareness campaigns	Increased awareness by potential end-users about costs, benefits, performance, and maintenance of commercially available technologies can provide an important stimulus to market demand. Almost all GEF projects ***????*** Training can provide technical, business, regulatory, managerial, financial, and legal skills needed for purchasing, promoting, regulating, financing, and commercialising technologies.		
National, regional, and local energy strategies and planning	Policy-makers can plan least-cost energy strategies and enact or revise policies that "level the playing field" for renewable energy relative to conventional energy sources, by means of government investments, energy price reforms, institutional and regulatory reforms, tax incentives, and privatisation and competition in the energy sector.		
Electric power utility regulation	Changes to regulatory and legal frameworks can encourage independent power producers to finance and install new renewable generation sources in existing grids and sell the power to electric utilities.		

Issue	Target/Goal	Government Action	Possible Stakeholder Action
Codes and standards	Codes, standards, and certification can reduce commercial and purchase risks as well as negative perceptions of technology performance. Certification and testing agencies can allow manufacturers to easily verify compliance with standards and provide purchasers with performance assurance.		
Information centres	Information centres can provide education, analytical design tools, market analysis, and information for evaluating technological options, determining relative costs and benefits, and understanding implementation requirements and operation and maintenance of renewable energy technologies. These centres can actively promote information dissemination among government officials, electric utilities, potential end-users, and the general public.		A network & information sharing for renewable energy cooperatives

Issue	Target/Goal	Governement Action	Possible Stakeholder Action
Resource assessments	Access to existing resource assessments, resource assessment tools and techniques (including training and assistance in using the tools), and resource monitoring and data-acquisition programs can reduce risks associated with renewable energy-resource uncertainty.		
Financing mechanisms and guarantee innovations	Innovative financing mechanisms and financial intermediaries can connect end-users to sources of capital and bundle small projects for commercial financing. Successful examples of revolving loan funds or micro-credit for renewable energy already exist in many developing countries. Intermediaries can take many forms, including local development NGOs and energy service companies.		
Best Practice Examples around the world	E&Co (Energy Through Enterprise) E&Co have a presence in Latin, America, Africa and Asia, and provide business development services and moest loans or equity investments. E&Co invest seed capital to implement sustainable ventures that might otherwise not advance. (www.energyhouse.com)		Other best practice models to explore.

Part III: Conceptual Background

1. A Broad Approach to Renewable Energy Project Implementation

Renewable energy may be given a special status, including more incentives than other energy sources. The justification is that:

- Renewable energy sources are environmentally friendly. Using renewable energy will therefore reduce the economic burden of mitigating energy sector environmental impacts.
- Renewable energy sources are domestic energy sources, thereby saving foreign exchange and improving the security of supply.
- Disposal of biomass residues poses considerable environmental problems. Using the residues for energy production offers a solution to these problems. However, it may be necessary to keep some of the residues for soil protection.
- World wide, renewable energy is a fast growing industry. Being pro-active in this field therefore opens up opportunities for export industries.

Driving principles for the Implementation of Renewable Energy Projects in developing countries

- It must deliver clear added benefits for renewable energies and cutting-edge demand side energy efficiency technologies.
- It must promote sustainable development by maximising other environmental and social benefits, for example cutting air pollution and creating new jobs.
- Ability to meet user needs.
- Availability of maintenance services and spare parts.
- Demonstrated cost recovery.
- Retention of skilled personnel.
- Continued operation and viability of financing mechanisms or services.
- Participation of local stakeholders.

The Transfer of Technologies should meet three basic criteria:

- They should be inherently very low emitters of greenhouse gases and air pollution.
- The technologies and processes involved in all projects must be locally appropriate.
- Technologies must reflect best practice at the time of the project, so as to avoid the dumping of technologies already obsolete in developed countries.

Preferential treatment for renewable energy and energy efficiency projects would have the following positive impacts:

- Ensure decentralised energy services delivery through the use of independent power producers.
- Time scale in operationalising renewable energy projects.
- Ensuring equity amongst technologies and moving towards a holistic energy mix.
- Catalyse the introduction of market ready low or zero carbon renewable energy technologies in developing countries at low transaction costs and the minimum bureaucratic requirements.
- Delivering clear added benefits for renewable energies and cutting-edge demand side energy efficiency technologies.
- Promoting sustainable development by maximising environmental and social benefits, for example reducing air pollution and creating new jobs.

Renewable energy and energy efficiency projects can contribute to the pillars of sustainable development in the following manner:

- Delivering environmental protection.
- Enhancing social development by delivering electricity to rural areas, enabling skills development and reducing rural to urban migration.
- Assisting in removing the barriers to the implementation of renewable energy projects at both micro and macro levels.
- Providing additional financial resources for technological leapfrogging that would enable developing countries to bypass the inefficient choices made by developed countries.
- Supporting economic development through the creation of new jobs and the payment of taxes and by increasing labour productivity.
- Developing an indigenous renewable market and kick-starting sustainable energy markets and providing an important stimulus to new industries. If this were to happen, many developing countries would have a head start in establishing a home grown technology base or locally based industry will be in a strong position to assume the role of exporters in markets of immense potential.
- Creating local based capacity and widen skill levels and create a new manufacturing class that could eventually form new lobbies for sustainable energy.
- Broadening awareness of sustainable energy opportunities, This could include training and education in order to create local manufacturing capabilities, sales, and service industries related to sustainable energy thus creating new jobs and economic activity.
- Training government officials and development workers and building organisational capacity for creating and sustaining programmes that promote renewable energy and energy efficiency technologies.

2. Renewable Energy Stakeholders

The successful implementation of local to global renewable programme requires the identification of the role-players and stakeholders in the local renewable energy sector. The following could be put forward as a generic definition of the renewable energy sector:

- First is **government**, which must encourage technology development, provide a policy framework and offer various incentives and measures to promote renewable energy technologies.
- Second there is the **renewable energy manufacturing industry**. In some sectors, large multinational are establishing renewable energy portfolios, reflecting the expectations of important sales and profits in the future. But most of the manufacturers are small, with limited research capacity.
- Third, there are **the renewable energy service industries**, including distributors, retailers, installers and consultants.
- Fourth are the **traditional energy companies**, which are either starting to develop renewable technologies, or is a potential vehicle for such utilisation.
- Fifth are **the trade union organisations** within the conventional and renewable energy industries.
- Sixth are the **energy and environmental NGO's**, which are active in pushing government and utilities to increase the share of renewable energy technologies and increase their environmental performance.
- Last are the **consumers** who need energy services, and those who are increasingly buying and demanding renewable energy services.
- In addition to those identified above**, the poor**, **women**, **indigenous peoples**, the **disabled**, **youth**, and **other under-represented groups** in civil society should have key, institutionalised roles in renewable energy decision-making at all levels and in all sectors.