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ENERGY AND SUSTAINABLE DEVELOPMENT

DEVELOPMENT OF STRATEGIES FOR FUTURE ENERGY SYSTEMS
COMPATIBLE WITH SUSTAINABLE DEVELOPMENT

POLICIES FOR THE IMPLEMENTATION OF ENERGY SYSTEMS
COMPATIBLE WITH SUSTAINABLE DEVELOPMENT

Mr. Thomas B. Johansson (Sweden): draft resolution

Energy for sustainable development

The Committee on New and Renewable Sources of Energy and on Energy for Development recommends to the Economic and Social Council the adoption of the following draft resolution:

The Economic and Social Council,

Recalling the objectives expressed in the International Development Strategy for the Fourth United Nations Development Decade, 1/ Agenda 21, 2/ the United Nations Framework Convention on Climate Change, 3/ and the 1979

1/ General Assembly resolution 45/199, annex.

2/ Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992 vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8), resolution, annex II.

3/ A/AC.237/18 (Part II)/Add.1, annex I.

Convention on Long-range Transboundary Air Pollution, particularly the linkages between energy and the objectives agreed in those documents in the following four domains: development and socio-economic growth, environment, stability of market conditions conducive to economic growth, and natural resources,

Noting that development and socio-economic growth and population growth will require more energy services, a requirement which must be met in a sustainable way,

Noting also that in local, national, regional and global man-made environmental issues, present energy production, conversion and utilization account for a large fraction of environmental concerns,

Nothing further that stable energy markets and reliable energy systems are vital for economic and social security and for the development of each member State,

Nothing further the need to extend the lifetime of exhaustible energy resources to future generations and to use natural resources in a sustainable way,

Stressing that energy issues, therefore, with respect to the four domains mentioned above, are of paramount importance in the quest for sustainable development in developing and industrialized countries,

Considering that present global trends in energy demand and supply are not sustainable since they are not compatible with the objectives in those four domains, and that a new path of energy development must be identified and implemented,

Noting with concern that, on the eve of the twenty-first century, 2.5 billion people in the developing countries still have no access to commercial energy supplies and electricity,

Considering that the objective of the energy system is to supply energy services, and that energy is a means to such ends, not an objective in itself, leading to the observation that the energy system encompasses the energy supply sector and all energy-using installations and devices,

Noting that full consideration should be given to the situation of countries that are highly dependent on income generated from the export and/or consumption, and/or the use, of fossil fuels, from which countries have serious difficulties in switching to alternatives,

Observing that options for developing a new energy path exist through:

(a) More efficient use of energy and energy-intensive materials;

(b) Increased use of renewable sources of energy;

(c) More efficient production and use of fossil fuels;

(d) Fuel substitution, from high-carbon- to low-carbon- or no-carbon-based fuels, and that these options, when used in an environmentally sound and safe, economically viable and socially acceptable manner, provide a large potential for change;

1. Invites each Member State to take appropriate steps to meet the objectives in the four domains noted above by stimulating the use of the above-mentioned options, and:

(a) To adopt and implement an integrated national action programme for the development of and transition to an energy system compatible with the objectives in the four domains;

(b) To establish targets derived from the above objectives for the contributions of the different options to the supply of energy services, for different points of time in the future;

(c) To restructure energy-sector expenditures so that priority is given to energy technologies compatible with sustainable development;

(d) To give appropriate institutions to mandate, responsibility and means to promote national action programmes through, inter alia, education, training and information programmes, energy-environment planning and policy coordination, the development and application of incentives, and research, development and demonstration;

(e) To gradually remove direct and indirect permanent subsidies for conventional sources of energy. If social or other considerations do not permit the complete removal of such subsidies, the new environmentally safe and sound technologies should receive corresponding financial support;

(f) To take steps to ensure that the external costs (environmental and social, among others) are reflected in the decision-making processes;

(g) To substantially increase the level and the share of public funding of research, development and demonstration in the areas of efficient use of energy and materials and renewable sources of energy;

(h) To support the creation of early markets, and market development for technologies in the two areas of efficient use of energy and materials, and renewable sources of energy;

(i) To allocate a rapidly increasing share of all aid funds from bilateral, multilateral and international agencies devoted to the energy sector in the coming years to technologies in the areas listed above, and especially focused on more efficient use of energy and materials and renewable sources of energy. The same should apply to grants and loans from international development banks;

(j) To ensure that the necessary capacity-building takes place;

(k) To keep the United Nations informed on their national programmes of action for the options listed above, in order to facilitate an international dialogue and cooperation;

2. Recommends, specifically with respect to the first option, namely more efficient use of energy and energy-intensive materials:

(a) The use of regulatory measures, inter alia, technical performance standards, with respect to use of energy in the buildings sector, for vehicles, appliances - and other energy-using equipment;

(b) The creation of an incentive structure for utilities to apply integrated resource planning and demand-side management;

(c) The creation of voluntary commitments and cooperation among industries to implement more energy-efficient technologies, systems and practices;

(d) The use by Governments of their convening ability to bring buyers of energy-using equipment together to express market demand for more energy-efficient equipment;

(e) The use of design competitions as an instrument to bring more energy-efficient technologies to the market-place;

(f) The creation of third-party financing mechanisms;

(g) The creation of an institutional setting for the competition between energy efficiency improvements and energy supply investments;

(h) That steps be taken to stimulate the use of often-wasted energy, for instance, waste heat from industrial processes;

(i) The stimulation of closing energy-intensive materials cycles - inter alia, the reuse of products and recycling of materials and the build-up of a physical infrastructure for the collection of those materials;

(j) The stimulation of technologies that minimize the use of natural resources and the generation of waste;

(k) The use of economic incentives, such as deposits to increase the collection of recyclable materials in automobiles, packaging materials, office machinery and the like, and the use of levies on the production of waste;

3. Recommends specifically with respect to the second option, increased use of renewable sources of energy:

(a) That a detailed investigation, mapping and assessment be carried out of hydro, wind, solar and geothermal energy resources, as well as evaluations of organic waste and land resource evaluations for biomass plantations in all countries;

(b) The acceleration of the development and diffusion of modular renewable energy technologies through research, development, demonstration and market expansion;

(c) Support for the up-grade or creation, on the basis of national and regional initiatives, of centres of excellence for technologies, to provide training, technology support and resource data appropriate to regional needs;

(d) Stimulation of substitutes for unsustainable use of fuelwood;

(e) That steps be taken to ensure that the share of public energy investments devoted to promoting research, development, demonstrations and training related to renewable energy sources is commensurate with their potential to meet national energy needs and global responsibilities;

(f) That steps be taken to promote the implementation of bilateral, multilateral and regional cooperation, such as joint ventures;

(g) That steps be taken to collect, review and publicize success stories involving renewable energy to provide realistic examples of what has been done and what is possible;

(h) That non-governmental organizations, United Nations specialized agencies and United Nations Member States recognize with interest the initiative of the United Nations Educational, Scientific and Cultural Organization, the International Energy Agency of the Organisation for Economic Cooperation and Development, the European Association of Solar Energy (EUROSOLAR), the International Solar Energy Society and the Commission of the European Communities for the World Solar Summit process;

4. Recommends specifically with respect to the third option, more efficient use of fossil fuels:

(a) The improvement of efficiency in fossil fuel conversion and use through, inter alia, increased use of co-generation and combined cycle technology;

(b) The introduction and improvement of cleaner coal technologies, including technologies to use waste products;

(c) The development and introduction of options for the decarbonization of fossil fuels and flue gases, especially CO_2 sequestering and deposition in the power and process industries;

5. Recommends specifically with respect to the fourth option, fuel substitution, especially from high-carbon- to low-carbon- or no-carbon-based fuels:

(a) The creation of a reliable infrastructure for the exploration and expanded use of natural gas;

(b) The development and strengthening of an institutional framework for international cooperation in major energy markets, within the framework for and objectives of sustainable development;

(c) Stimulation of the use of methanol and hydrogen first produced from natural gas and later from biomass, especially for use in fuel cells in the transportation sector;

6. Requests the Secretary-General and the United Nations system to adopt all the necessary ways and means to promote the development of a world energy system compatible with sustainable development, including the following initiatives:

(a) Promoting and supporting policy planning, inter alia, by organizing dialogues between interested Member States and upon the request of a Member State, based on national action programmes and national reports (see operative paragraph 1 (k) above);

(b) Promoting rapid and effective transfer of energy- and materials-efficient technologies and renewable energy technologies among countries, and on favourable and concessional terms to developing countries;

(c) Implementation of energy- and materials-efficient technologies and renewable energy technologies, and promotion of local production of technologies in order to enhance national self-reliance;

(d) Preparing and disseminating studies on new technological developments;

(e) Increasing capacity-building efforts, particularly in developing countries;

(f) Strengthening present efforts with respect to data banks on the experience gained from projects within the United Nations system in the field of renewable sources of energy and efficient use of energy and materials;

(g) Making efforts to extend statistics gathered to cover all the renewable sources of energy;

(h) Stimulating the implementation of the proposal by the Colloquium of High-level Experts on New and Renewable Sources of Energy (the Castel Gandolfo Group) to establish a global network of international centres of excellence in the field of renewable energy sources;

(i) Organizing and carrying out an urgent international effort, drawing on all appropriate sources of funding and other assistance, to bring energy and electricity to populations in interested countries which have no access thereto;

7. Requests the Secretary-General to prepare a biennial comprehensive report on world-wide progress in the implementation of the present resolution.
