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SUMMARY OF THE NATIONAL REPORT SUBMITTED BY DENMARK*

* The designations employed, the presentation of material and the views expressed in this paper are those of the submitting Government and do not necessarily reflect the practices and views of the Secretariat of the United Nations in any of these respects.

1. Denmark is more dependent on imported oil than most other industrialized countries of the western world. Oil imports account for 70 per cent of the consumption of primary energy. Around 35 per cent of the oil imported by Denmark is used for heating.
2. Considerable efforts have been undertaken to reduce dependence on imported oil. To this end, Denmark has devised a comprehensive energy conservation programme, a policy for the development of domestic resources of oil and gas and systematic development of co-generation of heat and power as an element in promoting district heating.
3. To encourage the use of renewable energy, Denmark has introduced schemes for 1979, 1980 and 1981 for financial support of the establishment of plants for the utilization of renewable energy.
4. Danish energy planning envisages a modest share from new and renewable sources of energy in 1995. In the longer term, however, the potential will be substantially larger.
5. Over the next few years, 200 million Danish kroner will be devoted to research and development in renewable energy sources. Denmark also participates actively in research and development programmes in energy within the International Energy Agency and the European Communities.
6. Industrial production of renewable energy systems has been established for the home market. The export is in rapid development.
7. Danish experience is particularly extensive in the field of wind power. In recent years, several hundred small windmills with generators have been built in Denmark and a few large electricity-producing wind-power plants have also been built. The possibilities of placing 1,000 to 2,000 large windmills in Denmark is under consideration.
8. The comprehensive Danish know-how on wind power has resulted in the capacity to produce wind-power plants of various sizes and of such high quality that they can compete well in export markets. Today about 20 Danish enterprises are producing windmills on a commercial basis. Their know-how is fitted to transfer to developing countries.
9. In recent years, solar heating systems have gained some ground in Denmark. They supply energy for hot-water consumption and, to a lesser degree, for the heating of minor houses. The present number of installed plants is estimated to be 2,000 to 3,000.
10. Today, the systems of some 30 Danish manufacturers have been approved as eligible for financial support. Most of the systems sold in the domestic market are designed for the supply of hot water to households. Solar collectors producing energy for heating of one-family houses are also on the market. Danish industry has furthermore achieved remarkable results in the production of large units for use in factories and public buildings.

11. Heat pump systems for the heating of buildings are already a technologically and economically relevant supply alternative which is being used quite extensively in Denmark (about 3,000 systems have been installed). There is considerable export of heat-pump systems.
12. Denmark has only a limited possibility of direct utilization of energy from biomass because of the high degree of land use for agricultural purposes. The sources used are almost exclusively waste products. These include biogas systems installed at Danish farms, straw fired plants for heating purposes, and refuse which will be especially important over the next years.
13. Denmark attaches great importance to international co-operation in science and technology and takes an active part in this co-operation, bilaterally as well as multilaterally. The development in recent years in the field of energy, and technological development in general, make a further expansion of this co-operation desirable.
14. International co-operation will not only promote exchange of and produce new knowledge, it will also be an incentive to devising more efficient methods of utilizing existing knowledge and technology for development, inter alia, of new and renewable sources of energy.
15. Concurrently with national and international efforts, other channels for transfer of technology on energy, including the commercial, should be strengthened. Private enterprises have a considerable role to play in that connexion.
16. The public sector and the private sector co-operate in the transfer of know-how and technology. Through co-operation with relevant public authorities, Danish enterprises may, on certain conditions, gain access to public sector expertise in scientific and administrative matters. Thereby, the Danish Government frequently takes an indirect part in joint venture projects or agreements on transfer of know-how.
17. In 1978, Denmark surpassed the 0.7 per cent target for official development assistance set by the United Nations. It is envisaged that aid will be maintained at not less than this level in the years up to 1985. A further increase might materialize if economic development makes it possible. Denmark is well aware of the wish of developing countries to see an increase in development assistance to strengthen their energy sector and, in particular concerning transfer of energy technology. Denmark is prepared to discuss this issue in the appropriate multilateral fora and to take requests for bilateral assistance in this field under positive consideration.
