

1	2	3
15.	Uttar Pradesh	0.01
16.	West Bengal (including Andaman and Nicobar Islands)	2.30
TOTAL		49.09

Tidal Power Project at Kandla

769. SHRI MOHANBHAI PATEL: Will the Minister of ENERGY be pleased to state:

(a) whether Tidal Power Project at Kandla has been found feasible and if so, the details thereof;

(b) the expected generation of power from this project and at what cost and how it would compare with the production of conventional energy;

(c) when this plan is likely to be implemented;

(d) whether any experiment on other sea coasts has also been made and if so, the details thereof and the results achieved;

(e) whether any foreign technology or assistance has been sought in this field; and

(f) if so, the details thereof?

THE MINISTER OF STATE IN THE DEPARTMENT OF POWER IN THE MINISTRY OF ENERGY (SHRI KALPNATH RAI):

(a) Yes, Sir. The Techno-economic feasibility report prepared by the Central Electricity Authority envisages installation of a 900 MW tidal power project in Gulf of Kutch near Kandla.

(b) The Project is expected to generate 1690 million units of energy annually. The cost of generation has been estimated to be

90 paise/unit at December, 1987 prices which is comparable with the cost of generation of new coal based thermal power plants.

(c) The project can be implemented after the investment decision and detailing of the design and construction features.

(d) No, Sir.

(e) and (f). French experts were invited to India for consultations during the course of techno-economic feasibility study of the project. Some engineers of the Central Electricity Authority were also sent on study tours/training to U.K. and France.

[Translation]

Expenditure on Solar Energy Research

770. SHRI S.D. SINGH: Will the Minister of ENERGY be pleased to state:

(a) the amount spent so far on the research in the field of solar energy and the results achieved;

(b) the steps taken by Government for putting it to use;

(c) the details of Government buildings where solar energy is being used and the number of Central Government offices/buildings where it is proposed to be used in the next five years; and

(d) if not, the reasons therefor?

THE MINISTER OF ENERGY (SHRI VASANT SATHE): (a) An amount of Rs. 45 crores approximately has been spent on development and demonstration of solar photovoltaic technology and solar thermal technology for the conversion of solar energy into electrical and thermal energy, respectively. In addition to this, approximately Rs. 60 crores have been spent on developing and demonstrating technologies based on indirect use of solar energy such as biogas, biomass and wind etc. As a result of these efforts low grade solar thermal technologies have been successfully commercialised in the country. Photovoltaic technology has also been developed to the commercial level. Biogas has become a fully commercialised and widely used technology. Biomass technologies have also started being used.

(b) Low grade solar thermal devices such as Solar Water Heaters, Solar Air Heater/Dryers, Solar Timber Kilns, Solar Desalination Systems and Solar Cookers are being made available to the users under the investment sharing scheme of Government. Solar Photovoltaic Systems for lighting, water pumping, communication and other applications are also being installed in villages including remote and hilly areas under nation wide programme supported by Government. Programmes for wind energy use for water pumping and for power generation have been initiated. Major Programmes for biogas and biomass utilisation are already being implemented. All these can be expanded if funds are made available.

(c) and (d). Over 2150 Solar Water Heating Systems have been installed on Central and State Government buildings, hotels, hospitals and industries etc. All the Central Government Departments and Undertakings are being advised to go for Solar Water Heating Systems for meeting their hot water requirements.

[English]

Per Capita Public Sector Investment in States

771. SHRI SOMNATH CHATTERJEE: Will the Minister of INDUSTRY be pleased to state:

(a) whether any study has been made regarding the per capita investment in the public sector by Union Government in different States and Union Territories from First Five Year Plan to Sixth Five Year Plan;

(b) if so, the state-wise and planwise details thereof; and

(c) State-wise per capita investment during the Seventh Plan?

THE MINISTER OF INDUSTRY (SHRI J. VENGAL RAO): (a) and (b). No, Sir. But the State-wise investment in terms of gross block is given every year in Volume-1 of Public Enterprises Survey placed on the Table of the House during the Budget Session.

(c) As the 7th Plan will end only 31.3.1990 the information is not available now. But details of investment State-wise in the form of Gross Block as on 31.3.1988 upto which date only the information is available is at page-12 of Volume-1 of the Public Enterprises Survey placed on the Table of the House on 27.2.1989.

Construction Work on Sawalkote, Bagliar and Uri Projects, J & K

772. SHRI MOHD. AYUB KHAN: Will the Minister of ENERGY be pleased to state:

(a) whether construction work on Sawalkote, Bagliar and Uri projects in Jammu and Kashmir has started;