

for introduction within the next five years; and

(c) what percentage of the energy consumed in India in the form of non-commercial energy is expected to be replaced by solar and wind energies in the next ten years?

**THE MINISTER OF ENERGY (SHRI K. C. PANT):** (a) Application of solar and wind energy for various purposes is still in the stage of research and product development. A clear picture of their techno-economic feasibility would emerge only after successful completion of the R&D programmes in progress, preparation of production oriented designs and manufacture and field trials of prototypes of equipment/appliances based on technologies successfully developed.

(b) Technical feasibility of application of solar energy for space heating, water heating and for operating agricultural pumps has been established. At present the solar systems for these applications are being optimised and examination regarding their economic viability is in progress.

(c) It is not expected that the solar and wind energy systems presently being given priority would significantly substitute the use of non-commercial energy in rural areas within the next ten years.

#### Idukki Hydro-Electric Project

1421. **SHRIMATI BIHARGAVI THANKAPPAN:** Will the Minister of ENERGY be pleased to state:

(a) the original estimated cost of the Idukki Hydro-Electric Project in the State of Kerala;

(b) the total expenditure incurred thereon so far;

(c) the extent of expenditure likely to be incurred further;

(d) the total loss sustained by this plant so far; and

(e) the time by which this plant is expected to break even?

**THE DEPUTY MINISTER IN THE MINISTRY OF ENERGY (PROF. SIDDHESHWAR PRASAD):** (a) and (b). The Idukki Hydro-Electric Project was originally sanctioned in December, 1962 at an estimated cost of Rs. 49.22 crores. Subsequently, in the light of pre-construction investigations, the project proposals were revised to augment the scope of the scheme and provide for installation of three units of 130 MW each in the first stage. The Revised Stage I Project was sanctioned in June, 1968 at an estimated cost of Rs. 68.20 crores. The expenditure on the project up to the end of 1973-74 was reported to be Rs. 79.16 crores. The final figures of expenditure during 1974-75 and 1975-76 are awaited from the State authorities.

(c) The information is awaited from the State authorities.

(d) and (e). Profit or loss from a project can only be computed after the project goes into commercial operations, and yields benefits. As Idukki Project was commissioned after February, 1976, this question would arise only in the ensuing year thereafter.

#### जबलपुर स्थित आईनेम फौव्डी में दुर्घटना

1422. श्री हुकम चन्द कलुवाय : क्या रक्षा मन्त्री यह बताने की कृपा करेंगे कि :

(क) क्या खपरिया, जबलपुर स्थित आईनेम फौव्डी में जलाई, 1976 के मध्य में एक बड़ी दुर्घटना हो गई, जिसके फलस्वरूप कई कर्मचारियों की मृत्यु हो गई और अनेकों घायल हो गए ;

(ख) यदि हाँ, तो कोई जांच कराई गई है, यदि हाँ, तो उसके क्या परिणाम निकले ;