DR. AMAR PATNAIK: Sir, there are a number of sites and monuments of historical significance but are not yet identified by the Archaeological Survey of India as protected sites. What is the protocol for identification of monuments that need to be protected and how is their work monitored? And are they doing a good job or not, considering particularly the recent lapses at the Jagannath Temple at Puri and the Sun Temple at Konark.

श्री प्रहलाद सिंह पटेल: उपसभाध्यक्ष जी, यह सूची राज्य की सहमतियों से ही बनती है। बहुत सारे राज्य ऐसे हैं, जिनके पास हजारों वर्ष पुराने किले और स्मारक हैं, लेकिन वे राज्य की सूची में रखे हुए हैं, वे उन्हें एएसआई को नहीं देते हैं। मैं इसका एक उदाहरण तमिलनाडु का दूंगा। मुझे लगता है कि एएसआई के पास जो सूची है, सरकार मानती है कि उसको बढ़ना चाहिए और नए सिरे से पंजीयन का काम सरकार प्रारंभ कर रही है। कल्चरल मैपिंग के इस काम में हम एएसआई के मॉन्युमेंट्स की संख्या बढ़ाने पर भी विचार कर रहे हैं।

श्री हुसैन दलवई: सर, श्री अनिल देसाई जी ने जो सवाल पूछा है, मैं उसके बारे में यह पूछना चाहता हूं कि यहां बड़े पैमाने पर किले हैं और इनका लोगों में बड़ा आकर्षण है, तो वहां हैरिटेज टूरिज़्म के लिए क्या गवर्नमेंट ऑफ इंडिया कुछ प्रयास करेगी?

श्री प्रहलाद सिंह पटेल: उपसभाध्यक्ष जी, जहां तक छत्रपति शिवाजी महाराज के किले हैं, वे वैसे भी बड़े फुटफॉल वाले स्थान हैं। वहां पर हैरिटेज टूरिज़्म की जो बात है, मैंने आपके सामने राज्य सरकार से एमओयू का जिक्र भी किया है। हमने राज्य सरकार से मिलकर भी दस स्मारकों पर एमओयू साइन किए हैं। उसमें जो भी और बेहतर जन सुविधाओं या कनेक्टिविटी की बातें आएंगी, उनको पूरा करेंगे।

THE VICE-CHAIRMAN (PROF. M.V. RAJEEV GOWDA): Question No. 244.

ताप और जल विद्युत संयंत्रों से विद्युत का उत्पादन

*244. **श्री लाल सिंह वड़ोदिया**: क्या **विद्युत** मंत्री यह बताने की कृपा करेंगे कि:

(क) आज की तारीख में जल विद्युत केन्द्रों द्वारा कितनी मेगावाट बिजली का उत्पादन किया जाता है;

(ख) ताप विद्युत केन्द्रों द्वारा कितनी मेगावाट बिजली का उत्पादन किया जाता है; और

(ग) जल विद्युत केन्द्रों द्वारा विद्युत उत्पादन की प्रति इकाई लागत और ताप विद्युत केन्द्रों द्वारा विद्युत उत्पादन की प्रति इकाई लागत कितनी आती है?

विद्युत मंत्रालय के राज्य मंत्री (श्री राज कुमार सिंह): (क) से (ग) विवरण सभा पटल पर रख दिया गया है।

विवरण

(क) और (ख) दिनांक 29.02.2020 की स्थिति के अनुसार, जल विद्युत तथा ताप विद्युत स्टेशनों की संस्थापित उत्पादन क्षमता क्रमश: 45,699 मेगावाट और 2,30,190 मेगावाट है। चालू वर्ष 2019-20 के दौरान (फरवरी, 2020 तक) जल विद्युत तथा ताप विद्युत संयंत्रों से उत्पादित विद्युत क्रमश: लगभग 146.7 बिलियन यूनिट और लगभग 960 बिलियन यूनिट है।

(ग) ताप तथा जल विद्युत परियोजनाओं से विद्युत के उत्पादन की लागत अनेक कारकों पर निर्भर करती है, जिनमें से कुछ अन्य बातों के साथ-साथ निम्नानुसार है:

1. ईंधन का प्रकार - कोयला, लिग्नाइट, गैस, नाप्था, डीजल आदि।
2. कोयले का स्रोत - कोयले की लागत आयातित कोयला और देशी कोयले के लिए अलग-अलग होती है। विभिन्न देशी खदानों से कोयले की लागत भी अलग-अलग होती है।
3. संयंत्र स्थान - खदानों के समीप स्थित संयंत्र कोयला खदानों से दूर स्थित संयंत्रों की तुलना में कम ढुलाई प्रभारों का भुगतान करते हैं।
4. संयंत्र की दक्षता और संयंत्र की प्रौद्योगिकी। सबक्रिटिकल विद्युत संयंत्रों की तुलना में सुपरक्रिटिकल विद्युत संयंत्र अधिक दक्ष होते हैं।
5. निर्माण का समय - नये संयंत्रों की तुलना में पुराने संयंत्रों की निर्धारित लागत कम होती है।
6. जल विद्युत संयंत्रों के मामले में, उत्पादन की लागत पानी की उपलब्धता, बांध के प्रकार, संयंत्र के स्थान आदि पर निर्भर करती है।

इस प्रकार, जल विद्युत स्टेशनों और ताप विद्युत स्टेशनों द्वारा उत्पादन की प्रति यूनिट लागत ऐसे प्रत्येक विद्युत संयंत्र के लिए भिन्न होती है। चालू वर्ष 2019-20 के दौरान कुछ केंद्रीय क्षेत्र की उत्पादन कम्पनियों की प्रति यूनिट विद्युत उत्पादन की औसत लागत ***अनुबंध*** में दी गई है।

अनुबंध

वर्तमान वर्ष 2019-20 के दौरान कुछ केंद्रीय उत्पादन कम्पनियों का विद्युत उत्पादन प्रति यूनिट औसतन लागत (रु./यूनिट)

विद्युत उत्पादन की प्रति यूनिट औसतन लागत (रु./यूनिट)

क्र.सं.	उत्पादन कम्पनी	जल	ताप
1	2	3	4
1.	डीवीसी	2.86	4.95

1	2	3	4
2.	एनटीपीसी	4.77	3.79
3.	एनएचपीसी	3.30	-
4.	एसजेवीएनएल	2.53	-
5.	टीएचडीसी	5.02	-
6.	नीपको	3.50	-

Power generation from thermal and hydro power plants

†*244. SHRI LAL SINH VADODIA: Will the Minister of POWER be pleased to state:

(a) the quantum of power generated in terms of megawatts by hydro-power stations as on date;

(b) the quantum of power generated in terms of megawatts by thermal power stations; and

(c) the cost of per unit power generation by hydro-power stations and per unit cost of power generation by thermal power stations?

THE MINISTER OF STATE OF THE MINISTRY OF POWER (SHRI RAJ KUMAR SINGH): (a) to (c) A Statement is laid on the Table of the House.

Statement

(a) and (b) As on 29.02.2020, the installed generation capacity of hydro and thermal power stations are 45,699 megawatts (MW) and 2,30,190 MW respectively. The electricity generated from the hydro and thermal power plants during the current year 2019-20 (upto February, 2020) are about 146.7 Billion Units (BU) and about 960 BU respectively.

(c) The cost of power generation from thermal and hydro to power projects depends upon various factors, which *inter alia* are:

†Original notice of the question was received in Hindi.

1. Type of fuel - Coal, lignite, gas, naptha, diesel etc.
2. Source of Coal - Cost of coal is different for imported coal and domestic coal. Cost of coal from various domestic mines are also different.
3. Plant location - Plants located near mines pay less freight charges as compared to plants which are located away from the coal mines.
4. Efficiency of the plant and Technology of the plant. Supercritical power plants are more efficient as compared to sub critical power plants.
5. Time of construction - Old plants are having less fixed cost as compared to the new plants.
6. In case of hydro power plants, the cost of generation depends upon availability of water, type of dam, location of the plant etc.

Thus, the cost per unit generation by hydro power stations and thermal power stations varies for each such power plant. The average cost per unit of power generation of some of the Central Generating Companies during the current year 2019-20 is given in Annexure.

Annexure

Average cost of per unit (₹/unit) power generation of some of the Central Generating Companies during the current year 2019-20

Average Cost of per unit power generation (₹/unit)

Sl. No.	Generation Company	Hydro	Thermal
1.	DVC	2.86	4.95
2.	NTPC	4.77	3.79
3.	NHPC	3.30	-
4.	SJVNL	2.53	-
5.	THDC	5.02	-
6.	NEEPCO	3.50	-

श्री लाल सिंह वड़ोदिया: माननीय उपसभाध्यक्ष जी, माननीय मंत्री जी ने जवाब में बताया है कि जल विद्युत स्टेशनों द्वारा 45,699 मेगावॉट बिजली उत्पन्न की जाती है। मैं आपके माध्यम से मंत्री जी से पूछना चाहता हूं कि आज की तारीख में सरकार कितने नए जल विद्युत स्टेशन बना रही है और प्रोजेक्ट पूर्ण होने के बाद देश में और कितनी मेगावॉट बिजली उत्पन्न होगी?

श्री राज कुमार सिंह: सर, आज के दिन में 38 जल विद्युत परियोजनाएं निर्माणाधीन हैं और उनकी टोटल पावर जेनरेशन कैपेसिटी 2,973 मेगावॉट होगी।

श्री लाल सिंह वड़ोदिया: सर, ताप बिजली घर से 2,30,190 मेगावॉट बिजली उत्पन्न होती है। मैं माननीय मंत्री जी से जानना चाहता हूं कि आज की तारीख में सरकार कितने नए ताप विद्युत स्टेशन बनाने जा रही है और इनके पूर्ण हो जाने के बाद देश में कितनी मेगावाट बिजली उत्पन्न होगी?

श्री राज कुमार सिह: सर, आज के दिन में जो ताप विद्युत घर निर्माणाधीन हैं, उनकी कुल क्षमता 63,500 मेगावॉट है।

DR. T. SUBBARAMI REDDY: Sir, I would like to know this from the hon. Minister. Today, hydropower is very economical once the project is completed. What is the Government's policy to encourage hydropower? Thermal power is very costly compared to hydropower. The construction of hydropower project may be costly, but afterwards there is no fuel cost. I want to know how you are going to encourage it in future. In the last few years, I could see that no new hydropower project is coming up. When are you planning to come out with your new policy regarding that and how are you going to encourage it?

SHRI RAJ KUMAR SINGH: Through the hon. Chair, I would like to inform the hon. Member that actually in the last couple of years, we have taken a number of steps to encourage hydropower. We believe that hydropower is absolutely essential for our country. It is essential for two reasons. One, it is very clean. Two, it is required for balancing. We are adding huge capacity to renewables - solar and wind. For balancing that, we need hydropower. As I mentioned a while ago, we have 38 hydropower units under construction. The capacity, which we are adding and which is under construction, is 12,970-odd MW. In fact, we have come out with a policy for encouraging hydropower. We have declared that a renewable energy which it is. We have provided for hydropower purchase obligations. So, different distribution companies are required to purchase hydro power. We have also flexibilised the way hydro tariff is calculated. We have increased their depreciation period and we have provided for additional costs for

communications, etc. which are attendant to construction of hydro projects. All that will be met separately. So, for us, hydro is absolutely essential and we are encouraging it. In fact, in the past couple of years, we have started construction in the Subansiri plant, which was shut for 7-8 years, with a capacity of about 2,000 megawatt. We have cleared the Dibang plant with 2,880 megawatts. We have started construction in that. So, for us, hydro is important and we are taking steps to make it successful.

SHRI MANISH GUPTA: Sir, recently, there has been a growing interest to build pumped storage hydro electric power plants in order to make them effective in system regulation, as you have mentioned earlier. The high penetration of intermittent generation of renewable energy makes this control more difficult. We find that pumped storage plants have a low ramp up rate. So, they are very effective. As you have seen, one or two pumped storage plants are already operating in some States. Is there any policy decision, etc. for more pumped storage plants? Are there any State-wise details available? How many sites are selected? Is there any work in progress?

SHRI RAJ KUMAR SINGH: Sir, this does not actually flow from the present question but, nonetheless, actually pumped hydro is something which is also necessary for us. We already have some pumped hydro projects under construction and there is one which is already ready. In order to encourage pumped hydro, we have come out with renewable bids with storage, thereby creating demand for pumped hydro. In fact, recently, we had a renewable energy bid, which was successful. It was probably the first bid in the world. We have again come out with a bid for round-the-clock power using renewable energy. That also will create demand for pumped hydro. We have one pumped hydro which is under construction by THDC. We also have some other pumped hydro projects which are under construction. Pumped hydro is also very relevant.

SHRI G.V.L. NARASIMHA RAO: Sir, I would like to ask the hon. Minister: What is the average cost of per unit power generated in the renewable sector and how does that compare? How has the cost been behaving over the past few years?

SHRI RAJ KUMAR SINGH: Sir, in the last bid which was finalized for solar, the rate of power was ₹2.50 which was finalized. So, renewable energy is less expensive than thermal energy from fossil fuels. There is no doubt about it. By and large, we expect tariff of renewable energy to go down slightly more. The only problem with renewable energy, of course, is that it will become round-the-clock power issue and adding storage. So, we need to add storage. Actually, in order to supplement the

[Shri Raj Kumar Singh]

answer which I was giving, we have currently six pumped storage projects under construction. One is nearing completion and we are also encouraging storage through batteries.

THE VICE-CHAIRMAN (PROF. M.V. RAJEEV GOWDA): Question No. 245.

Recovery of the artifacts and idols stolen from various temples, museums and archaeological sites

*245. SHRI SUKHENDU SEKHAR RAY: Will the Minister of CULTURE be pleased to state:

(a) the number of idols and other artifacts which have so far reportedly been stolen from various temples, museums, ancient monuments, archaeological sites and remains in India and found to be smuggled out to foreign countries like USA, UK, Switzerland, Australia, etc., the details thereof;

(b) the action taken by Government so far for return of such cultural properties which have been stolen from and smuggled out of India, the details thereof; and

(c) the number of such idols and artifacts which have so far been recovered and brought back to India, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF CULTURE (SHRI PRAHLAD SINGH PATEL): (a) to (c) A Statement is laid on the Table of the House.

Statement

(a) Twelve idols and other artifacts have been reportedly stolen from various Centrally Protected temples, museums, ancient monuments, archaeological sites and remains under the Archaeological Survey of India, during the last five years (2015 - 2020). Detail is given in Annexure-I (*See* below).

No information regarding idols and other artifacts smuggled out to foreign countries like USA, UK, Switzerland, Australia, etc. is received.

(b) and (c) The FIR has been lodged in respective police stations and "look-out-notice" has been issued to all enforcing agencies like Police, CBI, DRI and all Custom Exit channels.

48 nos. of idols and artifacts have been retrieved so far and brought back to India. Out of 48 nos., 35 nos. of idols and other artifacts have been retrieved to India in the last 5 years. The details are given in Annexure-II.