

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION No.3880
TO BE ANSWERED ON 09.08.2017

AVAILABILITY OF URANIUM

3880. SHRI KONDA VISHWESHWAR REDDY:
DR. NARAMALLI SIVA PRASAD:

Will the PRIME MINISTER be pleased to state:

- (a) whether the current annual production of Uranium in the country is enough to meet the annual fuel requirement of all the operational uranium-based Nuclear Power Plants and if so, the details thereof;
- (b) if not, the steps taken/being taken by the Government to explore alternative fuel/technologies/imported fuel for the said purpose;
- (c) the details of estimated uranium reserves and extraction potential in the country, uranium mine-wise and State/UT-wise and the details of the uranium extracted during each of the last three years, uranium mine-wise and State/UT-wise along with the fund allocated and utilised thereon in the said period;
- (d) the steps taken by the Government to undertake more uranium exploration activities in various States including Andhra Pradesh; and
- (e) whether the country is importing uranium from other countries and if so, the details thereof during the said period including the quantity of imported uranium along with the fund spend thereon, country-wise?

ANSWER

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PRIME MINISTER'S OFFICE (DR. JITENDRA SINGH):

- (a) Yes Sir. Out of 22 Nuclear reactors, presently in operation 8 reactors with aggregate capacity of 2400 MW are fuelled by indigenous uranium. These reactors are now being operated close to their rated capacity. 14 reactors with an aggregate capacity of 4380 MW are under IAEA Safeguards and use imported uranium.
- (b) Does not arise.

- (c) Atomic Minerals Directorate for Exploration and Research (AMD), a constituent unit of Department of Atomic Energy (DAE), which has a mandate to identify and evaluate mineral resources of uranium, has so far established 2,70,636 tonne (t) *in situ* uranium oxide (U₃O₈) [2,29,499 t U] as on July, 2017.

The uranium deposits established by AMD are mined by Uranium Corporation of India Limited (UCIL), a Public Sector Undertaking (PSU) of DAE. The deposits at Jaduguda, Narwapahar, Bagjata, Bhatin, Banduhurang, Turamdih and Mohuldih in Jharkhand and Tummalapalle in Andhra Pradesh are currently under exploitation by UCIL. It is not in the public interest to disclose the indigenous uranium extraction details.

State-wise details of the uranium resources, including Karnataka, are given below:

State	District	Name of the deposit	Uranium reserve	
			U ₃ O ₈ (t)	U (t)
Andhra Pradesh	Kadapa	Tummalapalle Group	1,41,780	1,20,229
	Guntur	Koppunuru	2,761	2,341
	Sub-total		1,44,541	1,22,570
Telangana	Nalgonda	Lambapur	1,450	1,230
		Peddagattu	7,585	6,432
		Chitrial	9,515	8,069
	Sub-total		18,550	15,731
Jharkhand	East Singhbhum	Jaduguda	8,038	6,816
		Bhatin	1,700	1,442
		Narwapahar (NWP) + NWP Extn.	11,780	9,990
		Narwapahar (Deeper + Khundungri)	2,503	2,122
		Turamdih Group	11,510	9,761
		Banduhurang	6,489	5,502
		Bagjata	1,860	1,577
		Mohuldih	3,330	2,824
		Garadih	1,270	1,077
		Kanyaluka	1,970	1,670
		Nimdih	815	691
		Rajgaon	1,200	1,018
		Singridungri-Banadungri	10,315	8,747
	Saraikela-Kharswan	Bangurdih	1,612	1,367
Sub-total		64,392	54,604	

Meghalaya	West Khasi Hills	KPM (Domiasiat)	9,500	8,056
		Wahkyn	5,381	4,563
		Gomaghat-Phlangdiloin	1,000	848
		Tyrnai	600	509
		Lostoin	869	737
		Wahkut	4,155	3,523
		Umthongkut	1,535	1,302
Sub-total		23,040	19,538	
Rajasthan	Sikar	Rohil	8,261	7,005
	Udaipur	Umra	1,160	984
	Sub-total		9,421	7,989
Karnataka	Yadgir	Gogi	4,267	3,618
	South Kanara	Walkunji-Yellakki	415	352
	Sub-total		4,682	3,970
Chhattisgarh	Rajanandgaon	Bodal	1,530	1,298
		Bhandaritola	518	439
	Surguja	Jajawal	1,438	1,219
		Dhumath-Dhabi	500	424
Sub-total		3,986	3,380	
Uttar Pradesh	Sonbhadra	Naktu	785	666
	Sub-total		785	666
Uttarakhand	Rudraprayag	Pokhri-Tunji	100	85
Sub-total		100	85	
Himachal Pradesh	Una	Rajpura	364	309
	Shimla	Kasha-Kaladi	200	170
	Mandi	Tileli	220	186
	Sub-total		784	665
Maharashtra	Gondia	Mogarra	355	301
	Sub-total		355	301
Grand total			2,70,636	2,29,499

[1t U₃O₈ = 0.848 t uranium metal (U)]

Funds allocated and utilized by Uranium Corporation of India Limited (UCIL), a Public Sector Undertaking (PSU) of Department of Atomic energy (DAE), in last three years is as follows:

₹ in Crore

Year	Fund allocated, i.e., Budgetary Support (BS)	Fund Utilized, i.e., Budgetary Support (BS) and fund from Internal and Extra Budgetary Resources (IEBR)
2014-15	79	14.78
2015-16	32	249.18
2016-17	25	45.84
Total	136	309.80

Excess fund of ₹173.8 Crore utilised on account of cost overrun of ₹566 Crore for Tummalapalle project which is yet to be approved by the Government.

(d) Atomic Minerals Directorate for Exploration and Research (AMD), a constituent unit of Department of Atomic Energy (DAE), which has a mandate to identify and evaluate mineral resources of uranium, is presently carrying out integrated, multi-disciplinary exploration for uranium in several potential thrust areas of the country, including Andhra Pradesh, by utilising state-of-the-art technology in remote-sensing, geological, radiometric, geochemical, heliborne / ground geophysical surveys and drilling. Besides, various laboratories equipped with modern and high-tech instruments are providing timely and accurate analytical support to the on-going exploration programme.

Important areas which are currently under survey and/or prospecting to augment uranium resources include:

1. Tummalapalle – Motunutulapalle – Kanampalle - Gidankivaripalle, Kamagutapalle - Kammappalle, Kadapa district, Veldurthi - Ramallakota, Kurnool district, Subbareddipalem, Guntur district, Andhra Pradesh and Mathampalli-Mellacheruvu, Nalgonda district, Telangana
2. Gogi-Kanchankayi, Darshanapur, Yadgir district, Suldhali – Gujanal, Belgaum district, Karnataka and Pudur, Krishnagiri district, Tamil Nadu
3. Singridungri-Banadungri, Hitku, Rajdah, East Singhbhum district and Bangurdih, Gurulpada-Nayadih, Galudih-Sankadih, Mahalimurup-Dugridih, Seraikela-Kharsawan district, Jharkhand

4. Wahkut-Kulang, Southwest Khasi Hills district, Waiting-Umla, West Khasi Hills district, Anek-Rongmalgiri, West Garo Hills district, Meghalaya and Hanspani-Chilimkhola; Mikir Hills, KarbiAnglong, Nagaon districts, Assam
5. Rohil, Narsinghpuri, Sikar district, Jahaz-Maota, Jamalpur, Jhunjhunu district, Umra, Udaipur district, Loha-Padihara, Churu district, Rajasthan and Than–Muli, Surendranagar district, Gujarat
6. Rambas-Gorir, Mahendragarh district, Haryana, Rajpura – Polian, Una district, Himachal Pradesh and Naktu-Anjangira, Sonbhadra district, Uttar Pradesh

Dharangmau – Kachhar, Betul district, Barhi-Sleemnabad; Jabalpur, Katni, Shahdol districts, Madhya Pradesh, Bhandaritola, Rajnandgaon district and Pakni, Surajpur district, Chhattisgarh

- (e) Yes, Sir. The country-wise details of imports of uranium with funds spend thereon are tabulated below:

Year	Source	Item	Quantity(MT)	Expenditure (₹ in crore)
2014-15	M/s. TVEL, Russia	UO ₂ Pellets	296.54	401.49
	M/s.Kazatomprom, Kazakhstan	UOC	283.42	216.93
2015-16	M/s.Cameco, Canada	UOC	250.74	158.28
	M/s. TVEL, Russia	EUO ₂ Pellets	42.15	303.65
		UO ₂ Pellets	303.78	565.17
2016-17	M/s.Kazatomprom, Kazakhstan	UOC	923.85	304.21
		UOC	999.80	590.12
	M/s.Cameco, Canada	UOC	1233.68	538.34
	M/s. TVEL, Russia	UO ₂ Pellets	187.33	395.29
