

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
UNSTARRED QUESTION NO. 3494
ANSWERED ON 10.08.2023

GREEN ENERGY TRANSITION

3494. DR. SHASHI THAROOR

Will the Minister of New & Renewable Energy be pleased to state:

- (a) whether the Government is aware that "Technology and Innovation Report 2023" brought out by the United Nations Conference on Trade and development , ranked India 23rd in its "Frontier Technologies Readiness Index" which being needed for a low-carbon footprint and if so, the details thereof;
- (b) whether the Government has conducted research/survey on R&D investment during the last year towards green energy transition;
- (c) if so, the details thereof;
- (d) whether the Government proposes to promote R&D investment for green energy transition; and
- (e) if so, the details thereof?

ANSWER

THE MINISTER OF NEW & RENEWABLE ENERGY AND POWER

(SHRI R.K. SINGH)

(a) The "Technology and Innovation Report 2023" brought out by the United Nations Conference on Trade and Development, has ranked India at 46th position in its "Frontier Technologies Readiness Index". The concerned Table of the report is reproduced at **Annexure-I**.

(b) & (c) No such research/survey on R&D investment has been conducted during the last year towards green energy transition. However, a committee was constituted earlier with external panel of experts under the Chairmanship of Dr. Anil Kakodkar, (Former Chairman, Atomic Energy Commission). The Committee reviewed the overall R&D programme, funding mechanism and identified the present thrust areas with the ultimate aim of increasing share of renewables in the energy mix in the country. On the basis of recommendations of Committee, the Renewable Energy Research and Technology Development Programme (RE-RTD) has been continued during the period 2021-22 to 2025-26 with a budget outlay of Rs. 228.00 crore.

(d) & (e) The Ministry is implementing Renewable Energy Research and Technology Development Programme through various research institutions and industry to develop indigenous technologies and manufacturing for widespread applications of new and renewable energy in efficient and cost-effective manner.

It provides up to 100% financial support to government/non-profit research organizations and up to 70% to industry, startups, private institutes, entrepreneurs, and manufacturing units.

**ANNEXURE-I REFERRED TO IN REPLY TO PART (a) OF LOK SABHA
UNSTARRED QUESTION NO. 3494 FOR 10.08.2023**

FRONTIER TECHNOLOGIES READINESS INDEX

(As per Technology and Innovation Report 2023 by United Nations Conference on
Trade and Development)

Index score ranking

Country name	Total score	2022 rank	2021 rank	Change in rank	Score group	ICT rank	Skills rank	R&D rank	Industry rank	Finance rank
United States of America	1.00	1	1	–	High	11	18	2	16	2
Sweden	0.99	2	4	▲	High	6	2	16	11	18
Singapore	0.96	3	5	▲	High	7	8	17	4	17
Switzerland, Liechtenstein	0.94	4	2	▼	High	21	13	12	5	5
Netherlands	0.94	5	6	▲	High	4	9	15	10	31
Republic of Korea	0.94	6	7	▲	High	15	26	3	9	7
Germany	0.92	7	9	▲	High	24	17	5	12	40
Finland	0.92	8	17	▲	High	22	5	21	20	30
China, Hong Kong SAR	0.91	9	15	▲	High	9	23	29	2	1
Belgium	0.91	10	11	▲	High	13	4	23	19	48
Canada	0.90	11	14	▲	High	5	21	9	29	20
Australia	0.90	12	12	–	High	33	1	11	57	13
Norway	0.90	13	19	▲	High	3	6	27	50	6
Ireland	0.90	14	8	▼	High	26	11	22	1	105
France	0.89	15	13	▼	High	18	24	8	17	21
Denmark	0.89	16	10	▼	High	19	7	24	24	8
United Kingdom	0.89	17	3	▼	High	20	12	6	44	12

Country name	Total score	2022 rank	2021 rank	Change in rank	Score group	ICT rank	Skills rank	R&D rank	Industry rank	Finance rank
Luxembourg	0.88	18	16	▼	High	2	16	38	37	28
Japan	0.88	19	18	▼	High	10	51	7	13	3
Israel	0.88	20	20	–	High	37	14	19	6	60
Spain	0.86	21	21	–	High	8	28	14	34	24
Iceland	0.84	22	30	▲	High	1	3	74	80	32
New Zealand	0.83	23	23	–	High	12	10	42	58	9
Austria	0.80	24	22	▼	High	39	29	25	28	36
Italy	0.79	25	24	▼	High	58	34	10	25	42
Malta	0.78	26	35	▲	High	17	25	64	18	41
Poland	0.77	27	28	▲	High	28	30	30	33	84
Slovenia	0.77	28	33	▲	High	25	15	57	21	92
Estonia	0.77	29	29	–	High	16	19	63	26	64
Czechia	0.77	30	26	▼	High	47	27	32	15	78
Russian Federation	0.76	31	27	▼	High	43	32	13	54	69
Malaysia	0.76	32	31	▼	High	30	64	28	7	16
Portugal	0.75	33	32	▼	High	35	33	31	49	29
Cyprus	0.75	34	34	–	High	42	40	39	35	23
China	0.74	35	25	▼	High	117	92	1	8	4
Hungary	0.74	36	37	▲	High	14	43	48	14	99
United Arab Emirates	0.74	37	42	▲	High	29	50	34	32	38
Latvia	0.72	38	40	▲	High	23	22	73	30	102
Slovakia	0.72	39	36	▼	High	27	49	37	27	61
Brazil	0.71	40	41	▲	High	50	55	18	51	57

Country name	Total score	2022 rank	2021 rank	Change in rank	Score group	ICT rank	Skills rank	R&D rank	Industry rank	Finance rank
Lithuania	0.70	41	39	▼	Upper middle	31	20	59	46	100
Croatia	0.68	42	52	▲	Upper middle	41	37	60	45	70
Bulgaria	0.67	43	51	▲	Upper middle	45	52	54	36	81
Greece	0.66	44	38	▼	Upper middle	56	31	71	48	44
Romania	0.66	45	45	–	Upper middle	32	69	33	38	122
India	0.66	46	43	▼	Upper middle	95	109	4	22	75
Saudi Arabia	0.65	47	50	▲	Upper middle	46	44	20	119	77
Chile	0.65	48	49	▲	Upper middle	62	46	40	103	19
Thailand	0.64	49	46	▼	Upper middle	40	90	46	41	10
Serbia	0.64	50	47	▼	Upper middle	51	54	58	43	89
Kuwait	0.64	51	58	▲	Upper middle	44	75	70	52	37
Barbados	0.62	52	48	▼	Upper middle	34	45	86	73	47
Türkiye	0.62	53	55	▲	Upper middle	75	48	26	77	49
Philippines	0.62	54	44	▼	Upper middle	94	79	52	3	80
Belarus	0.61	55	59	▲	Upper middle	57	35	78	53	103
South Africa	0.61	56	54	▼	Upper middle	71	77	36	67	25
Costa Rica	0.61	57	61	▲	Upper middle	63	53	88	39	67
Ukraine	0.59	58	53	▼	Upper middle	61	42	49	85	114
Montenegro	0.58	59	70	▲	Upper middle	49	39	113	81	68
Bahrain	0.58	60	56	▼	Upper middle	48	58	87	94	50