(b) if so, on what basis Government has arrived at this rate; and

(c) the reasons for having 25 years' contract?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI PIYUSH GOYAL): (a) Yes, Sir. The Solar Energy Corporation of India has entered into a contract for 25 years with the private solar power producers at a fixed levelised tariff of ₹5.45 per unit.

(b) Government has arrived at a fixed levelised tariff of ₹ 5.45 per unit based on the willingness of distribution companies to buy solar power price of conventional power. CERC determined tariff has been taken as the upper limit and Viability Gap Fund is being given after open competitive bidding.

(c) The normal life of solar PV modules is 25 years. Therefore PPA period has been kept as 25 years.

Viability of small scale power units

1619. DR. T. N. SEEMA: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether small scale power units with a capacity upto 25 megawatts are viable and economically feasible;

(b) if so, the details thereof and if not, the reasons therefor;

(c) whether the Central Government has received any proposals from Kerala regarding setting up of such small scale power units;

(d) if so, the details thereof and the status of the proposals;

(e) whether Government proposes to promote the small scale power units generating upto 25 megawatts and grant them certain concessions; and

(f) if so, the details thereof and if not, the reasons therefor?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI PIYUSH GOYAL): (a) and (b) The viability and economic feasibility of small scale power units depends on the site of installation of the power unit and subject to sustainable supply of fuel. However, small power units based on small hydro power, biomass gasifiers, solar and wind energy are presently viable and economic in remote areas. Small scale power units are easy to install in limited areas without much damage

to the environment. Power transmission losses are minimal since usage of power can be done at the generation site itself in the case of small scale power plants.

(c) and (d) Agency for Non-conventional Energy and Rural Technology (ANERT), Kerala had submitted a proposal for 14MW on grid solar scheme of which the Ministry has sanctioned proposals of 5 MW. Under the project, individual solar power plants of capacities 2 KW- 50 KW are to be installed in the shade-free area available on the roof-top of buildings. The other proposals are under the consideration of the Ministry of New and Renewable Energy (MNRE) as per terms and conditions.

(e) and (f) MNRE is already promoting small scale power units for generation of 25 MW under small hydro power, biomass gasifiers and solar programmes. The details of Central Financial Assistance being provided under various programmes including small scale power plants for promotion of renewable energy programmes/projects are given in Statement.

Statement

Incentives/Subsidy being provided under various renewable energy programmes.

A. Grid-Interactive Renewable Power Programmes:

1. **Wind Power Projects:**

Generation Based Incentive (GBI)	₹0.50 per unit subject to max of ₹1.00 crore/MW
Demonstration Projects in:	
Special Category States (NE Region, Sikkim, J&K, HP and Uttarakhand)	₹3.00 crore X C^0.646
Other States	₹2.50 crore X C^0.646
C: Capacity of the project in MW	^: raised to the power

2. **Solar Power Projects:**

Solar PV Power projects under Jawaharlal Nehru National Solar Mission (JNNSM) Phase-II, Batch-I of total 750 MW with Viability Gap Funding (VGF) support from National Clean Energy Fund (NCEF).	Minimum Project Capacity 10MW Maximum Project Capacity 50MW	VGF support upto 30% of Project Cost limited to ₹2.50 Cr/MW based on reverse bidding process.

3. **Small Hydro Power Projects:**

Support to new SHP projects in State sector:

Category	Above 100 KW and up to 1000 KW	Above 1 MW - 25 MW
Special category and NE States	75,000 per KW.	7.5 crores / MW limited to ₹20 crore per project.
Other States	35,000 per KW.	3.5 crores / MW limited to ₹20 crore per project.

Support to new SHP project in private / co-operative / joint sector:

Areas	Upto 25 MW
NE Region, J&K, H.P. & Uttarakhand (Special Category States)	1.5 crore/ MW limited to ₹5.00 crore per project
Other States	1.0 crore/ MW limited to ₹5.00 crore

4. **Biomass Power and Bagasse Cogeneration Projects:**

Private / Joint / Cooperative / Public Sector Sugar Mills:

	Special Category and NE States	Other States
Biomass Power projects	₹25 lakh per MW*	₹20 lakh per MW*
Bagasse Co-generation	₹18 lakh per MW*	₹15 lakh per MW*
Co-generation projects by cooperative/public sector sugar mills 40 bar & above 60 bar & above 80 bar & above	₹40 lakh ₹50 lakh ₹60 lakh Per MW of surplus power (maximum support ₹ 6.0 cr/ project)	₹40 lakh ₹50 lakh ₹60 lakh Per MW of surplus power (maximum support of ₹ 6.0 crore per project)

*Maximum support of ₹ 1.50 crore per project.

5. **Waste to Energy Projects:**

Type of Waste	Central Financial Assistance
Municipal Solid Waste	₹2.00cr./MW, Max. Support 10 Cr. /project.
Urban Waste	₹2.00cr./MW, Max. Support 5 Cr. /project.
Industrial waste	₹ 0.20cr to ₹ 1.00 cr/MW, Max. Support ₹5.00cr/ project.

B. Off-grid/ decentralized renewable energy programmes:

Sl. No.	Programme	Subsidy
6.	Family type biogas plants	
	NE region States including sikkim (except plain areas of assam)	₹15,000 to ₹17,000 per plant
	Plain areas of Assam	₹10,000 to ₹11,000 per plant
	J&K, Himachal Pradesh, Uttarakhand (excluding Terai region), Nilgiris of Tamil nadu, Sadar, Kurseong and Kalimpong sub-divisions of Darjeeling, Sunderbans, Andaman & Nicobar Islands and SC & ST (not included in above areas)	₹7,000 to ₹11,000 per plant
	All Others	₹5,500 to ₹9,000 per plant
7.	Solar Photovoltaic Systems	• Subsidy of 30% of project cost • For solar light through NABARD, Regional Rural Banks (RRB) and other commercial bank 40% subsidy is available.
8.	Solar Water Heater	60% and 30% of the benchmark cost in Special Category States and other States respectively. Benchmark cost in the range of ₹ 11,000/sq.m. and 8,000/sq.m for different configuration of systems.
9.	Concentrating Solar Thermal Technology	30% of the project cost.
10.	Small Aero-Generators and Hybrid Systems	₹1.00 lakh per KW
11.	Micro-hydel plants/Water mills	• ₹ 1.25 lakh/kw for Micro-hydelupto 100 kw. • ₹0.50 lakh per watermill for mechanical application • ₹1.50 lakh per watermill for electrical application

Sl. No.	Programme	Subsidy
12.	Biomass Gasifier	• ₹ 15,000/kW (with 100% producer gas engine) • ₹ 2,500/kw for duel fuel engine • ₹ 2.0 lakh per 300 kw for Thermal Applications • 20% higher CFA for Special Category States
13.	Improved Cookstoves Family sized/domestic cook-stoves/ earthen cookstoves Community Cook-stoves for MDM Kitchens, Anganwadis, Tribal/SC/ Backward hostels, government and forest rest houses etc.	50% of cost of cook-stoves with maximum ceiling of ₹ 400 for natural draft (including earthen chulhas with metal combustion chambers) and ₹800 for forced draft - average support taken at ₹ 600/- per cookstove. 50% of cost of cook-stoves with maximum ceiling of ₹ 2500 for natural draft and ₹ 5000 for forced draft type cook-stoves - average support taken at ₹ 3750 per cook-stove

Micro grid under green energy system

1620. SHRI BAISHNAB PARIDA: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether it is a fact that 45 per cent of rural houses still lack access to electricity;

(b) whether to address this issue, it is proposed to set up micro-grids under green energy system;

(c) if so, the details thereof;