Bill No. 32 of 2022

THE OCEAN THERMAL ENERGY UTILIZATION BILL, 2022

By

SHRI SHRIRANG APPA BARNE, M.P.

A

BILL

to provide for promotion of use of ocean thermal energy to produce clean environment friendly renewable energy at all times and substitute traditional electricity generation methods of fossil fuel burning and for matters connected therewith or incidental thereto.

BE it enacted by Parliament in the Seventy-third Year of the Republic of India as follows:–

Short title, extent and commencement.

1. *(1)* This Act may be called the Ocean Thermal Energy Utilization Act, 2022.

(2) It extends to the whole of India.

(3) It shall come into force at once.

Definitions.

2. In this Act, unless the context otherwise requires,—

(*a*) "appropriate Government" means in case of a State, the Government of that State and in all other cases, the Central Government;

(*b*) "Authority" means the National Ocean Thermal Energy Utilization Authority of India constituted under section 3;

(*c*) "Ocean Thermal Energy Utilisation (OTEU)" is a process used for production of electricity by using the temperature difference between deep ocean water and warm tropical surface water and utilization thereof of such electricity; and

(*d*) "prescribed" means prescribed by rules made under this Act.

Establishment of National Ocean Thermal Energy Authority of India.

3. (*1*) The Central Government shall, as soon as may be, by notification in the Official Gazette, establish an Authority to be called the National Ocean Thermal Energy Utilisation Authority of India for carrying out the purposes of this Act.

(*2*) The head office of the Authority shall be at New Delhi and the Authority may establish offices at other places in the country as it may deem necessary for carrying out the purposes of this Act.

(*3*) The Authority shall consist of the following members who shall be appointed by the Central Government, namely:—

(*a*) a Chairperson, who shall be an expert scientist having adequate knowledge and professional experience in the field of OTEU technology;

(*b*) one Deputy Chairperson with such qualifications as may be prescribed;

(*c*) five members of Parliament of whom three shall be from the House of the People and two from the Council of the States to be nominated by the respective Presiding Officers of the House concerned;

(*d*) five members to represent the Union Ministries of Environment, Forests and Climate Change, Science and Technology, New and Renewable Energy, Planning and Financial, respectively;

(*e*) four members to represent the non-Governmental Organisations working for the protection of environment and promotion of ocean thermal energy in the country; and

(*f*) four members to be nominated by the Governments of the States to be rotated amongst the States in alphabetical order.

(*4*) The salary and allowances payable to, and other terms and conditions of service of office of the Chairperson, Deputy Chairperson and members of the Authority and the procedure to be followed in the discharge of the functions of the Authority shall be such, as may be prescribed.

(*5*) The Authority shall have a secretariat with such officers and members of staff and with such terms and conditions of services as may be prescribed, from time to time.

Functions of the Authority.

4. (*1*) Subject to any guidelines issued by the Central Government under the provisions of this Act, the Authority shall perform and undertake such special steps in close coordination with concerned Ministries, Departments and Public Sector Enterprise of the Central and State Governments for the rapid and accelerated promotion and development of ocean thermal energy throughout the country as it may deem necessary and expedient to do so for the promotion of ocean thermal energy conversion.

(*2*) Without prejudice to the generality of the foregoing provisions, the Authority shall,—

(*a*) formulate ocean thermal energy conversion and utilisation policy, its goals and execution plan;

(*b*) develop indicative standards of ocean thermal energy conversion and utilization;

(*c*) support and encourage research and development through Government and private sector participation involving all major Research laboratories;

(*d*) facilitate infrastructure development of ocean thermal energy conversion in coastal areas;

(*e*) suggest educational and other policy initiatives for ocean thermal energy conversion and utilization;

(*f*) facilitate quick technology transfer and adoption of ocean thermal energy conversion and utilization; and

(*g*) such other steps as the appropriate Government may deem necessary.

Miscellaneous Provisions.

5. (*1*) Notwithstanding anything contained in any other law for the time being in force, the appropriate Government shall in consultation with the Authority make it compulsory for every coastal city or villages including Government establishments to,—

(*a*) use the OTEU technology to electrify in all coastal buildings, homes and villages;

(*b*) make it mandatory for electricity utilities purchase electricity from ocean thermal energy sources;

(*c*) reserve adequate resources for setting up of ocean thermal energy conversion projects; and

(*d*) such other steps as the appropriate Government may deem necessary.

(*2*) The appropriate Government shall, as soon as may be, identify the exploitable sources of ocean thermal energy in their respective

territorial jurisdictions and send project report, thereon to the Authority which shall depute a team of experts to verify and assess the possibility of exploiting ocean thermal energy sources.

(3) The Authority shall on the basis of the report submitted by the team of experts work out the estimated expenditure on the project and recommend the Central Government for implementation of the projects.

Central Government to provide funds.

6. The Central Government shall, after due appropriation made by Parliament by law in this behalf, pay to the Authority in each financial year such sums as may be considered necessary and adequate for the performance of the functions of the Authority under this Act.

Annual Report.

7. The Authority shall prepare once in every calendar year in such form and at such time as may be prescribed in an Annual Report giving a true and full account of its activities during the previous year and copies thereof shall be forwarded to the President of India who shall cause the same to be laid before both the Houses of Parliament.

Power to remove difficulties.

8. (*1*) If any difficulty arises in giving effect to the provisions of this Act, the Central Government may, by order published in the Official Gazette, make such provisions, not inconsistent with the provisions of this Act, as appear to it to be necessary or expedient for removing the difficulty:

Provided that no such order shall be made the expiry of the period of two years from the date of the commencement of this Act.

(*2*) Every order made under this section shall as soon as may be after it is made, be laid before both the Houses of Parliament.

Power to make rules.

9. (*1*) The Central Government may, by notification in the Official Gazette, make rules for carrying out the provisions of this Act.

(*2*) Every rule made under this section shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session for a total period of thirty days which may be comprised in one session or in two or more successive sessions and if, before the expiry of the sessions immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule of both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

STATEMENT OF OBJECTS AND REASONS

Our fossil fuel reserves are depleting with every passing day. Our country and government institutions are striving to find and use sustainable sources of renewal energy. Our country has promoted use of solar energy and wind energy. But both these sources have their own limitation. Solar energy cannot be converted into lights and electricity from wind energy can only be created in windy season. In other seasons, its creation is expensive.

In India's perspective, there is tremendous scope for harnessing the energy from the ocean as India has a long coastline of about 7500 km and have 9 coastal States Gujarat, Maharashtra, Kerala, Karnataka, Andhra Pradesh, Tamil Nadu, Goa, Odisha and West Bengal, two Union Territories Daman and Diu and Puducherry and two island territories *i.e.* Andaman and Nicobar Islands and Lakshadweep islands. Many of these States are facing clean drinking water and electricity crisis.

Ocean Thermal Energy Utilization (OTEU) is more than just a technology use that produces clean energy but also produce clean drinking water as by product. With OTEU, the goal is to create a sustainable future using the world's most abundant resource – our oceans.

Our oceans are abundant source of salty water and energy. By utilising ocean's thermal resource, this technology aims to produce clean energy 24 hours a day, 7 days a week. This provides a great advantage over intermittent (albeit important) renewable technologies such as solar and wind.

OTEU also can shrug off the storage problems that are often associated with clean energy. Due to its ability to produce a range of secondary services, the surplus energy generated by an OTEU plant can be diverted to power desalination plants (removing salt and other minerals to produce drinking water). This flexibility ensures that OTEU-produced energy never goes to waste. Another major competitive benefit of OTEU is its range of secondary services. Besides producing electricity and fresh drinking water, OTEU can support agriculture and aquaculture industries, reducing local demand on water supplies. It can also slash costs of air conditioning in tropical regions. By using the temperature differential between warm ocean surface water and cold deep water as a renewable energy source, OTEU can generate two of humanity's most fundamental needs—clean drinking water and renewable base load (24/7) energy. Each OTEU plant is capable of producing voluminous amounts of drinkable water (a 10-MW OTEU plant can produce as much as 75 million litres of fresh drinking water a day). Thus, the technology holds great potential for meeting global domestic and agricultural fresh water demands both now and in the future. More than 70% of the earth's surface is covered by water, and over 80% of the sun's energy is stored within surface waters— the equivalent of 4,000 times the energy used in the world per day. In just one 24-hour period, tropical ocean water absorb solar radiation equal to the energy produced by 250 billion barrels of oil.

OTEU's ability to help reduce our dependence on fossil fuels –one of the largest human induced contributors to climate change – is enormous. Just one 10-MW OTEU plant has been estimated to provide reliable clean energy for approximately 10,000 people and to replace the burning of 50,000 barrels of oil and release of 80,000 tonnes of carbon dioxide (CO_2) per year into the atmosphere. OTEU plants therefore may play a huge role in helping global communities fight pollution-related climate change.

OTEU can also use deep water as a cooling agent for environmentally friendly air conditioning, a system known as Seawater Air Conditioning (SWAC). To replace traditional electric chillers and chemicals for cooling buildings, OTEU plants use cold water from deep oceans and lakes. Their installation into airports, medical centres and holiday resorts can reduce electricity usage by up to 90% compared to conventional systems, offering enormous reductions in carbon emissions.

The combination addresses existing global factors that could precipitate a humanitarian crisis: the growing global need for potable water, the lack of available freshwater sources, the increased concentration of populations in coastal regions, and rising energy prices. Keeping all the benefits in view, China has recently installed world's largest floating OTEU plant in its southern Chinese high seas. Many countries are already in ways to install OTEU plants.

Hence this Bill.

NEW DELHI;
January 17, 2022.

SHRIRANG APPA BARNE

FINANCIAL MEMORANDUM

Clause 3 of the Bill provides for the establishment of the National Ocean Thermal Energy Utilisation Authority of India. Clause 5 makes it compulsory for every Central Government establishment to take measures for using ocean thermal energy by carrying out appropriate changes. Clause 6 of the Bill makes it obligatory for the Central Government to provide necessary funds for the purpose of the Act. The Bill, therefore, if enacted and brought into operation will involve expenditure from the Consolidated Fund of India. It is estimated that a sum of rupees One thousand crore may be involved as recurring expenditure per annum.

Non recurring expenditure to the tune of rupees three hundred crore may also involve from the Consolidated Fund of India.

MEMORANDUM REGARDING DELEGATED LEGISLATION

Clause 9 of the Bill empowers the Central Government to make rules for carrying out the purposes of this Bill. As the rules will relate to matters of detail only, the delegation of legislative power is of normal character.

LOK SABHA

A

BILL

to provide for promotion of use of ocean thermal energy to produce clean environment friendly renewable energy at all times and substitute traditional electricity generation methods of fossil fuel burning and for matters connected therewith or incidental thereto.

(*Shri Shrirang Appa Barne, M.P.*)