No. EXN-JCSTE/ARA-PLP/2018-19-
O/o Jt. Commissioner State Taxes & Excise,
NEZ, Palampur(H.P.)

July, 2018

Himachal Pradesh Authority for Advance Ruling

(constituted under section 96 of Himachal Pradesh Goods & Services Tax Act, 2017)

Before the bench of

1) Sh. Hitesh Sharma, Jt. Commissioner of State Taxes & Excise, NEZ Palampur
2) Sh. Ravindra Kumar, Jt. Commissioner of CGST

GSTIN No.		02AABCJ7197H1Z1
Legal Name of Applicant		M/s Jupiter Polar Power Ltd.
Registered Address/Address provided while obtaining user id		Village Katha, PO & Tehsil Baddi, Distt. Solan(H.P.)
Details of application		GST-ARA, Application No 1 Dated 26.04.2018
Concerned Officer		
Nature of activity(s) (proposed/present) in respect of which advance ruling sought		Use of Silicon Wafers in the manufacture of photovoltaic & its taxability
A	Category	Manufacturing/factory
B	Description(in brief)	The Applicant is engaged in manufacturing of solar photovoltaic cells
Issue/s on which advance ruling required		(II)Applicability of notification issued under the provisions of the Act.
Question(s) on which advance ruling is required		As specified in the proceedings below

PROCEEDINGS

(under section 98 of the CGST Act, 2017 & HPGST Act, 2017)

Present application has been filed u/s 97 of the Central Goods & Services Act, 2017 & similar provisions under Himachal Pradesh Goods & Services Act, 2017 (herein after referred to as CGST Act, 2017 & HPGST Act, 2017). The Applicant M/s Jupiter Solar Power Ltd. Baddi is a registered tax payer & is engaged in manufacture of solar photovoltaic cells in its factory located at Baddi, Distt. Solan (H.P.).

For admission & hearing u/s 98 of the CGST Act, 2017/HPGST Act, 2017, notice was issued to the applicant on dated 10.07.2017 directing him to appear on 16.07.2017. However, on 16.07.2017, Mr. Daman Thakur, representative of the applicant appeared & requested for adjournment on the grounds that the counsel was unable to appear on that date due to prior engagements. Plea was accepted & hearing was adjourned for 19.07.2017. On 19.07.2018, Sh. Pramod Kumar Rai, Advocate for the Applicant along with Sh. Sandeep, Associate Vice-President of the applicant firm M/s Jupiter Solar Power

Ltd. appeared. On scrutiny of the application, it was observed that the Applicant has deposited an amount of Rs. 10,000/-(i.e. Rs. 5000/- against fee under CGST & Rs. 5000/- as fee against HPGST) vide CPIN No. 18040200044723 dated 21.04.2018. Further, the Applicant in his application in Form GST ARA-01 has specified in Para 17 that the question raised in his application is neither pending in any proceedings nor decided in any proceedings in the Applicant's case under any of the provision of the Act. Also, as per Para 13 of the application, the question on which the Advance Ruling is sought is in respect of 'Applicability of Notification issued under the provisions of the Act', which is specified under Sec. 97(2)b of the Act. So, in view of the above, the application of the Applicant was admitted. Thereafter, the arguments of the Applicant were heard & ruling was reserved which is released today i.e. on dated 25.07.2018.

Statements of facts

a) As per the Annexure-I appended to the application, the Applicant is engaged in manufacturing of Solar Photovoltaic cells. For the manufacture of solar photovoltaic cells, the Applicant procures (imported as well as indigenous) following items/parts/materials which are essential components of Solar Photovoltaic Cells. Out of these items Silicon Wafers is the most important item which absorbs the photons & in turn generates electricity.

Table A-List of inputs for manufacture of Solar Photovoltaic Cells:

Sr. No.	DESCRIPTION	CLASSIFICATION
1	Undiffused polycrystalline silicon wafers	38080010
2	Aluminum paste	32129030
3	Hydro fluoric Acid (HF)	28111100
4	High purity salane (SIH4)	28046900
5	Phosphorus oxychloride(POCL3)	28121200
6	High Purity Nitrogen(N2)	28043000
7	High purity Ammonia	28141000
8	Nitric Acid (HNO3)	28080010
9	Printing screens for solar cells	84439990
10	High purity oxygen	28044090
11	Hydrochloric Acid(HCL)	28061000
12	Potassium Hydroxide(KOH)	28152000
13	Polycrystalline silicon Texturing Additive	34021900

b) All the above stated items when procured for their independent use, attract different rates of IGST.

c) Most important item is Silicon Wafers on which as per Entry No. 79 of Schedule II of the Notification no. 01/2017-Integrated (Rate) dated 28.06.2017 the rate of IGST is 12%.

d) However, when these items can be treated as parts for the manufacture of photovoltaic cells/solar cells, then under 234 of Schedule I of the notification No. 01/2017-Integrated Tax (Rate) attracts IGST @5%.

Question on which Advance Ruling is required:-

The Applicant wants the Advance Ruling on the issue that whether the items used for manufacture of Solar Cells as listed in table above procured by Applicant can qualify as parts for manufacture of Photovoltaic Cells/Solar Cells to be covered under Entry 234 of schedule I of Notification No. 01/2017-Integrated Tax(Rate) dated 28.06.2017 or not.

Interpretation of the Applicant:

a) As per the Applicant, Silicon wafer is the most important part for the manufacture of solar cells. Silicon wafer combines with the product & makes up whole of the solar /photovoltaic cells. It is contained in the solar cell & visible in it. However, when it is taken out, major damage shall be caused because it is fitted in somewhat permanent way. Without wafer the functional value of the photovoltaic cell becomes NIL because the wafers help in creating electricity by absorbing photons from the sunlight.

b) The expression used in Entry 234 of schedule I of Notification above is not "Part of Photovoltaic cell" rather it is "Part for manufacture of Photovoltaic cell". There is nothing contained in the solar cell which can be taken out without damage & put into another cell. More than 70% of the value of materials of the solar/photovoltaic cell is coming from Silicon wafers. If wafers cannot be treated as part for the manufacture of solar/photovoltaic cells then on that logic no other item will qualify as part of solar/photovoltaic cells.

c) Therefore, the only interpretation which is given in the context is that every item which goes into the manufacture of solar cells which is contained in the final product & thus, which becomes part of the final product will qualify as part of the manufacture of solar cells. This understanding is also supported by dictionary definition of parts which is mentioned below:-

The definition of parts as per Cambridge online dictionary is *"some but not all of a thing"*

As per google dictionary parts means *"an amount or section which, when combined with others, makes up whole of something"*

So, the items mentioned in Table A complete the product i.e. Photovoltaic cells & are to be treated as parts in terms of Entry 234 of schedule I of the said notification.

d) Further, accepting these items as parts is revenue neutral exercise because 100% credit is admissible to solar cell manufacturers on account of inverted tax

structure. The manufacturers are eligible for refund of excess credit. Charging higher IGST on parts leads to blockage of working capital.

e) Therefore, the applicant is of the view that the products mentioned in table A should be ruled as part for the manufacture of Photovoltaic cells & therefore shall be charged 5% of IGST on procurement.

Observation:-

1) Table-A specifies various items which are procured for the manufacturing of Photovoltaic/Solar cells. These items are used in the manufacturing process as under:-

a) During the process of manufacturing of solar cells, the Silicon wafers are cleaned with various chemicals (like Hydrofluoric Acid(HF)), Nitric Acid(HNO_3), Hydrochloric Acid(HCL), Potassium Hydroxide(KOH) & Polycrystalline(Silicon Texturing Additive) through the process of texturization.

b) In the second step, the cleaned Silicon Wafers are treated through diffusion process for creating p/n-junctions(positive & negative) by use of Phosphorous Oxychloride($POCL_3$), High Purity Oxygen(O_2) & High Purity Nitrogen(N_2).

c) Thereafter, the Silicon wafers are further processed for junction edge isolation &phosphorous silicate glass removal with the help of Hydro Fluoric Acid(HF), Nitric Acid(HNO_3) & Potassium Hydroxide(KOH).

d) In the next step, the Silicon Wafers are coated through Plasma Enhanced Chemical Vapour Deposition(PECVD) process for anti-reflection coating on the N side of the Silicon Wafers with the help of High Purity Silane (SiH_4), High Purity Ammonia(NH_3), High Purity Oxygen(O_2), & High Purity Nitrogen(N_2).

e) Thereafter, the Wafers are painted with the help of silver paste, Aluminium paste & Printing Screens for electrical contacts & these contacts are further dried through high temperature furnaces for penetrating the anti-reflective coating(ARC) & contact the emitter near the highly doped surface in order to get low contact resistance.

f) In the last stage, the silicon wafers which have been converted along with some other apparatus/items/parts into solar cells are tested for electrical parameters of the solar cells like efficiency, short circuit current, open circuit voltage, fill factor, shunt resistance etc.

2 It is clear from the whole manufacturing process mentioned above that silicon wafer is the most important input for the manufacture of solar cells which is treated with the various chemicals during the different steps of texturization, diffusion, junction edge isolation, anti-reflection coating etc. The various chemicals used during the manufacturing process have been specified in Table-A from Sr. No. 2-13. These chemicals, though used in the process, yet get consumed & lose their independent identity. To qualify

as being part of the product for the purpose of aforesaid notification, the item should maintain substantial independent physical identity as when it is used in the final product. All these items mentioned in Table-A from Sr. No. 2-13, instead of being treated as parts for the purpose of Entry 234 of the Notification No. 01/2017-IGST (Rate), can only be treated as inputs and do not qualify as parts for the manufacture of Photovoltaic/solar cells.

2.1 In the Customs Tariff Act, 1975, the Wafer has been shown as under:-

3818: CHEMICAL ELEMENTS DOPED FOR USE IN ELECTRONICS, IN THE FORM OF DISCS, **WAFERS** OR SIMILAR FORMS; CHEMICAL COMPOUNDS DOPED FOR USE IN ELECTRONICS

3818 00 - Chemical elements doped for use in electronics, in the form of discs, **wafer**s or similar forms; chemical compounds doped for use in electronics:

3818 00 10 --- Undiffused silicon wafers

2.2 Further, Rule 3(a) of the general rules of interpretation (The Customs Tariff Act, 1975) states that heading which provides the most specific description shall be preferred to a heading providing a more general description. Here, silicon wafer falls 'specifically' in chapter heading 3818, which is most specific entry whereas solar photovoltaic cell falls in chapter heading 8541; moreover, machines and apparatus for the manufacture of wafers falls under chapter heading 8486. In this case silicon wafer falls specifically in chapter heading 3818 that is why duty rate thereof will be applicable.

2.3 Furthermore, along with some other inputs/items, silicon wafers, as specified at Sr. No. 1 of Table A, is the most important input for the manufacturing of Photovoltaic cells & makes up almost the whole of Photovoltaic cells. It is contained in the solar cell & visible in the solar cell. It is also clear that without the Silicon wafer, the functional value of the Photovoltaic cell is NIL as Silicon wafers help in creating electricity by absorbing photons from the sunlight. The close physical examination of the photovoltaic cell reveals that along with some other inputs/items it is made up of silicon wafer only which is treated with various chemicals in order to make it usable as photovoltaic/solar cell. In other words, the photovoltaic cell can be called as chemical treated 'Silicon wafer' along with other inputs/items. This is similar to a glass sheet which is coated/ treated with various chemicals & the final product comes out as 'Mirror'. So, if we take out glass from the mirror, nothing remains as glass is the only component of mirror which has substantial & independent physical identity. Similarly, if we take out Silicon wafer from the photovoltaic cell, nothing remains as such. Any manufactured product implies the use of raw materials, assemblies, components & parts in required quantity. So, in order to qualify as 'Part of the whole', something should remain after the part is taken out of the whole. So in the present case, though the Silicon wafer has substantial physical &

independent identity, yet when it is taken out of the solar cell, nothing remains & secondly, it can not be used in another cell as it gets totally damaged. This fact has been admitted by the Applicant also. A photovoltaic cell can at best be termed as chemical treated 'Silicon wafer' along with other items so as to infuse it with the properties of a solar cell'. That is why it can not be termed as the 'Part of the Photovoltaic Cell' for the purpose of Entry-234 of Schedule 1 of the aforesaid notification.

Advance Ruling u/s 98 of the Act

In view of the above observations, it is ruled that

(1) The items used for manufacture of solar cells as listed in Table-A , procured by the applicant do not qualify to be termed as 'Parts for the manufacture of Photovoltaic/Solar cells' for the purpose of Entry 234 of Schedule 1 of Notification No. 01/2017-Integrated Tax(Rate) dated 28.6.2017.

AUTHORITY FOR ADVANCE RULING HIMACHAL PRADESH

Pronounced
25.07.2018

-sd-

Dr. Ravindra Kumar
Member, CGST

-sd-

Sh. Hitesh Sharma
Member, SGST

No. EXN-JCSTE/ARA-PLP/2018-19-03 **Dated 25th July, 2018**

Copy forwarded to:

1) The Concerned Central/State Officer
2) The Commissioner of State Taxes & Excise, Himachal Pradesh, Shimla-9
3) The Jurisdictional Commissioner of Central Tax.

Sh. Hitesh Sharma
Member, SGST