IN THE HIGH COURT OF SINDH, KARACHI

C.P. No.D-5614 of 2014

Muhammad Athar Hafeez Khan

v/s.

Islamic Republic of Pakistan and others

Before: **Mr. Justice Sajjad Ali Shah, Chief Justice &**
Mr. Justice Zulfiqar Ahmad Khan

Date of Hearing	:	18.05.2016.
Date of Order	:	___.06.2016
Petitioner	:	Through Mr. Mansoor-ul-Arfin, Advocate
Respondents	:	Through Mr. Salahuddin Ahmed, Advocate

J U D G M E N T

Zulfiqar Ahmad Khan, J.:- Petitioner's case is that he imported a consignment of air conditioners, comprising of typical indoor and outdoor units which, as per his claim, mainly run on solar power, however, making a fractional use of the conventional electricity (220v). Like his past practice, where he and other entities imported one or two similar air conditioners which were cleared by the respondents giving the benefit of SRO 575(I)/2006, which at Serial No.35(4) specifies 'Solar Air Conditioning Systems' under the heading of "Following items, with dedicated use of a renewable source of energy like solar, wind, geo-thermal etc.", subject to the certification of the Alternate Energy Development Board (AEDB) were exempted from the customs duty, as well as, the sales tax.

The counsel for the petitioner contended that the instant Solar Air Conditioning Systems were provisionally released by the

respondents under section 81 of the Customs Act, 1969 on furnishing of an undertaken and a Pay Order in the sum of Rs.2,043,407/- . Since to the petitioner, such a demand from the respondents was contrary to the exemption provided for under the above referred SRO, he made representation before AEDB, which vide its letter dated 05.11.2013 acknowledged request of the petitioner for the issuance of an exemption certificate under the said SRO, as under:

> "*Keeping in view the above AEDB, issued the same under S.No. 35(4) of the SRO 575(I)/2006, these items are exempted from the customs duty and sales tax*"

The grief of the Petitioner is that though AEDB, pursuant to the above referred letter, issued the necessary certification, however, instead of complying with such exemption, the respondents wrote another letter to AEDB, seeking further clarification as per the following text:

> *"I am directed to enclose copy of a representation received from M/s. Progressive Engineers, Karachi bearing No.PE/AEDB/SOLAR/03/13, dated 4.11.2013, on the subject alongwith enclosures.*
>
> *2. The aforesaid company recently imported two DC inverter split type air conditioners and sought clearance therefore vide Sr. No. 35(4) of SRO 575(I)/2006, dated 5.6.2006, which allows exemption from whole of customs duty and sales tax on items having "dedicated use of renewable source of energy like solar, wind, geo-thermal, etc." As per the literature provided by the importer (enclosed as above), the instant air conditioners do not operate on dedicated source of renewable energy (which normally is between 45-80v), but can also operate on conventional (or 220V) electrical power. The importer contends that the word "dedicated" in the SRO does not mean "exclusive". The F.B.R. is of the view that allowing exemption of duty/taxes on dual use items may not necessarily provide the desired result of reducing reliance on conventional sources of energy while at the same time providing major revenue relief to an unintended sector. Besides, the proposition is also capable of being severely misused by unscrupulous importers.*

Engineering Development Board is, hereby, requested to examine the issue and offered its valuable comments as to whether air conditioners imported by M/s. Progressive Engineers, Karachi qualify for the benefit under Sr.No.35(4) of SRO ibid or otherwise."

As it could be noted from the contents of the above letter that the respondent were not convinced that the instant import fulfills the "dedicated" use criteria of alternate energy sources required in order to seek benefit of the said SRO. The said letter clearly suggests that since the instant air conditioning system, beside solar power also use conventional electricity, therefore, it does not fulfill the criterion prescribed by the said SRO. The contents of the above letter also depict respondent's fear that since these air conditioners could also primarily be used with electricity, some unscrupulous importers may import them in the disguise of solar air conditioners and sell them in the market in a fashion that the solar panels could be removed (or left unfunctional) and the air conditioners become typical conventional electricity based units. These concerns of the respondents were answered by AEDB in its letter dated 26.11.2013. The relevant portion of the said letter is reproduced hereunder:

"As far as the qualification of aforesaid Solar Air Conditioners (ACs) under S.No.35(4) of SRO 575(I)/2006 is concerned, we are of the view that if the heading thereof i.e. "Solar Air-Conditioning System" is considered independently then these ACs shall fall there-under and if otherwise, said hearing means only six parts/equipment which are mentioned from (a) to (f), then subject ACs are not covered this S.No..i.e. 35(4)."

The counsel for the petitioner further contended that since "Solar Air Conditioning System" at S.No.35(4) of the said SRO has specific PCT Heading of 8415.1090, thus it ought to be considered

independent from the items specified in sub-headings (a) to (f), which carry independent PCT Headings. While the petitioner was expecting that after issuance of the above referred explanation, the respondents would provide the requisite exemptions promised by the said SRO, to his surprise, he received another letter from the respondents, where the respondent sought additional clarification from AEDB on their previous concerns about dual energy needs of these air conditioners. To this, per counsel, AEDB issued a further clarification to the following effect:

> *"2. The literature of the Air-Conditioners under discussion as provided by M/s. Progressive Engineers, Karachi has been studied and following can safely be concluded that these air conditioners:*
>
> *a. operate on 220VAC;*
> *b. employ Solar Thermal technology for compression purpose;*
> *c. consumes 20%-33% of electricity as required for conventional 220 VAC air conditioners;*
> *d. the Solar Thermal Collector unit is an integral part of this air conditioning system, without which the device cannot function this classifying it exclusively for dedicated use of renewable energy.*
>
> *3. Thus, exempting this air conditioner under SRO 575 will on one hand benefit the Renewable Energy Sector in Pakistan as well as on the other hand it will save the National Grid from excessive load observed during summers due to use of air conditioners.*
>
> *4. Furthermore, price of this kind of air conditioner is at least four times the price of any conventional air conditioner due to which misuse of such exemption by any unscrupulous importer is also not probable.*
>
> *5. Aforesaid in view of, it may be concluded that this hybrid air conditioner and any other air conditioner (based on Solar Thermal Compression), qualifies for the benefit of Sr.No.35(4) of SRO 575(I)/2006 irrespective of the fact that it uses conventional electric power for the reason that it is an energy efficient equipment, which saves energy upto 80% and 'Energy saved in Energy produced'.*

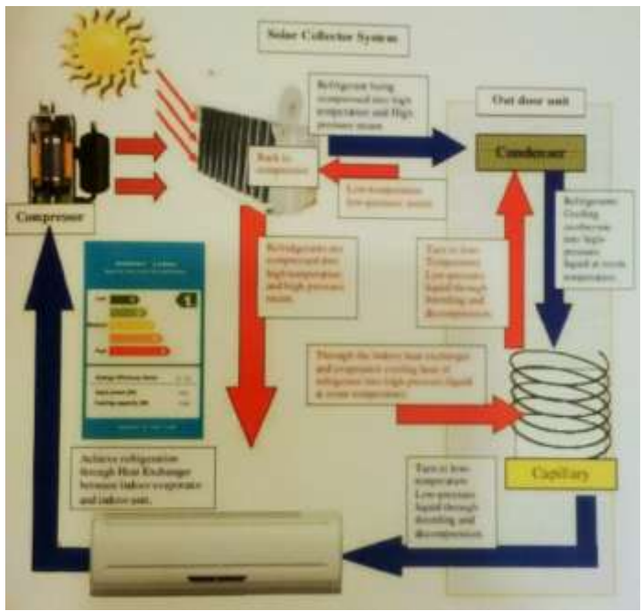
The learned counsel for the petitioner contended that as it could be noted, vide the said letter dated 09.01.2014, AEDB in very clear terms has certified that notwithstanding the fact that these air conditioners use electricity, since solar thermal energy is also used for compression purposes, thus these air conditioners are extremely energy efficient and provide 80% savings on the electricity bills as compared to a typical electricity powered air conditioner. Per contents of the petition, it is also contended that Photovoltaic (PV) Solar Power Supply System cannot function in a sustainable way without the use of grid power means (electricity mains provided through cables), therefore such a solar air conditioning system will always have an element of electricity. Thus, the very intention of the inclusion of Solar Air Conditioning System and giving them a unique PCT Heading is for the reason that it will always be an element using electricity.

The above battle concluded in terms of respondent's letter dated 19.10.2014, wherein FBR finally wrote to the Petitioner that the subject air conditioners since do not operate on a dedicated source of (renewable energy) rather they also consume the conventional 220V electricity thus the exemption promised at S.No.35(4) of the said SRO cannot be extended in the present case. Being dissatisfied with such conclusion, the petitioner has filed the instant petition, praying inter alia that the interpretation of the term "dedicated" in the PCT heading of item 35(4) of the said SRO is not rightly made by FBR. In support of this contentions, the learned counsel took us to PCT Heading 8702.9020, where in respect of CNG Buses a mention of "Full Dedicated CNG Busses" is made. The learned counsel argued that there is a distinction between the

"dedicated" and "full dedicated" under PCT headings and wherever the word "dedicated" is used, it may be construed to mean not fully dedicated, giving leeway to the possible use of a secondary source of energy to be used. To the contrary the learned counsel appearing for the respondents made rival arguments to the effect that the instant air conditioners are not "dedicated" as per the requirements of SRO 575(I)/2006; therefore, the denial of exemption is lawful.

Heard the counsel for the parties and perused the record. To us, it does not appear to be a simple case of interpretation of the word "dedicated" either to mean one or more source(s) of energy, we are of the view that one has to consider technical details and operation-flow of the instant air condition systems to see whether the system has dedicate reliance on (alternate) solar power or not?

Fortunately technical detail of the instant air conditioner are provided by the petitioner in the form of brochures attached to the petition. Page 12 of the said brochure deals with these air conditioners. The said page start with the heading "Hybrid Solar Air-Conditioners". Refrigeration (heat flow cycle) of the instant air conditioner is also provided in the said brochure which we reproduce in the following.



As it is obvious from the above diagram, two heat cycles are in operation. The outer cycle (colored in Blue) is the electrical powered cycle where the compressor is energized by the mains electricity which compresses the refrigerant. Once compressed, the refrigerant is passed on to a (outdoor) condenser unit (place in series to solar collectors) to radiate heat in the first instant. Once slightly cold, the refrigerant is forced to pass through a tube (called capillary) of a relatively small diameter which opens up in the (indoor) Evaporator (which cools the room) and having given away coolness to the room, the refrigerant reaches the compressor again to re-start the cycle. As it could be seen, Blue is the typical (traditional) air-conditioning cycle used by the commonly used (indoor-outdoor) air-conditioning units. In the instant case, the system initially uses electricity to kick-start the Blue cycle. After a considerable lapse of time in which the indoor room temperature reaches to the desired level, compressor is shut-down and the solar energy is used to heat the refrigerant via the specified Solar Collectors which then pass on the hot (and slightly compressed) refrigerant to condenser, capillary and evaporator before it reaches back to the solar collector panels. In this Red colored cycle, the refrigerant is heated (and compressed) by solar power (instant of the compressor using

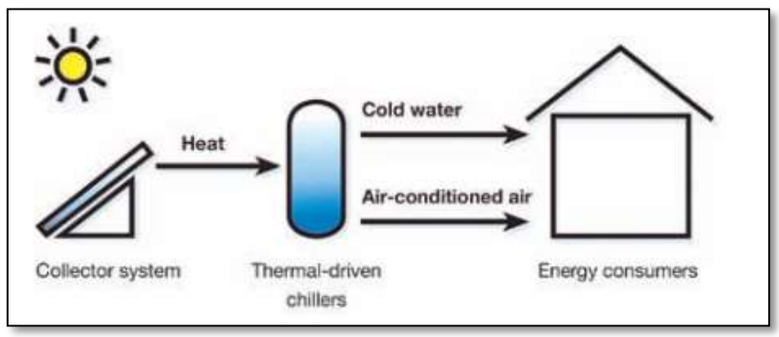
electricity from the mains), therefore the solar power is only used when the desired temperature has been reached in the room to maintain the temperature, which is technically a less challenging job as compared to cooling the room initially (say from 36 degrees to 18 degrees of comfort).

The above description clearly shows that primary source of energy for these air conditioners is the mains electricity (220v) and solar power is only used as a secondary source to keep the system run, once it has achieved the desired indoor temperature (no comments are made on the heat efficiency of that cycle either). It is thus rightly so that the brochure refers to these air conditioners as *Hybrid Solar Air-Conditioners*. The term 'hybrid' in such situations mean "a thing made by combination of different elements". The common example of hybrid equipment are the recent hybrid cars, which run on electricity as well as on petrol. The principle behind such cars is that when car needs prime and maximum start-off energy at the initial stage to oust torque and to overcome the friction present in the system, high energy needs are fulfilled by making a supply through the conventional means (i.e. from the burning of petrol) and when car attains a reasonable speed and engines are operating at relatively lesser friction and the initial inertia has been overcome, the secondary source of energy is turned on, meaning thereby the car then runs on electricity taken from the batteries (which it charges when operating on petrol). Similarly in the instant case, a typical hybrid air conditioner uses electricity at the time of start when energy needs are high

and when room reaches the desirable temperature (for example 26 degrees, as mentioned by the learned counsel of the petitioners), relatively lesser energy is needed by the system to maintain that temperature, which is supplied by solar power. Unlike hybrid cars which use highly efficient lithium-ion batteries the instant air conditioners do not have any batteries to save electrical power, which interestingly means that at nights (or on days when sun is not so brightly shining) entire energy needs of the air conditioners would be fulfilled by electrical mains, which means in total, use of solar power in a 24-hour working cycle is no more than 20%. Thus by no stretch of imagination these air conditions fall anywhere closed to the dedicated use of alternate (solar) power to qualify exemptions provided by the said SRO.

Additionally, in our view, the instant system also fails to qualify as a solar powered system from the stand point that a typical solar air-conditioning system of 100,000 BTU requires around 7 KW of electric power for cooling on a hot day, which typically requires over 20KW solar photovoltaic electricity generation capacity spread over an area of 30 SqM of photovoltaic cells, which means that to run a typical solar air conditioner, one would require on its rooftop an array of solar panels spread over an area of 30 square meters, which as it can be seen from the diagram provided on page 125, is not provided for in the instant hybrid solar air conditioner system.

Before we conclude, we find it relevant to discuss a typical solar air conditioning system, which is probably the one that is desired by the entry 35(4) of the said SRO. Such a system is usually made up of solar collectors, a storage tank, a control unit, pipes and pumps and a thermally driven cooling machine. Solar energy, in the form of solar radiation flux, is utilised by a solar panel, in order to produce a high temperature fluid (generally water) that is accumulated in a storage tank. The chiller, the real heart of the process, uses the hot fluid of the storage tank to produce a cold fluid; the cold fluid can then be used in a normal cooling plant. On a typical day, the thermal storage tank acts as a buffer and enables the optimisation of the asynchronous heat absorption during the hours of solar radiation and the cooling that may be needed during a different time period making this component indispensable. Such a system is typically represented by the following heat cycle:



From the foregoing discussion it emerges that the present air conditioners allegedly claimed by the petitioner to be dedicatedly used with solar power are a farce, these are in fact of *hybrid type* and that too, which don't have any mechanism to save solar power in the form of batteries, heated

water, methanol, lithium bromide/chloride or alternatively by using desiccants, thus making fractional use of the solar energy only when the sun is shining, leaving no possibility of running the air conditioners on such alternate mode of energy at night-time or on cloudy days, making us to reach to the conclusion that the instant hybrid solar air conditioning systems imported by the petitioner do not pass the criteria posed at Sr.No. 35(4) of the Solar Air Conditioning System envisaged by the SRO 575(I)/2006 which aims dedicated (even if not *fully dedicated*) use of alternate energy for air conditioning systems wherein main reliance is not placed on the use of the conventional electricity rather on the alternate modes like solar, while consenting to the view that there is no intention that such air conditioning systems may not at all use electricity, but not to the extent that electricity is so used by the present air conditioners where actual cooling is done by powering the compressor by electrical means and mere fractional power is provided by solar means and that too only when the sun is shining to its fullest. We, therefore, do not think that the petitioner has made any case that the hybrid solar air conditioners imported by him could be given the exemptions provided for in the above referred SRO. The petition is accordingly dismissed.

Judge

Chief Justice