



U N I V E R S I T Y O F  
**SOUTH CAROLINA**

**AMENDMENT NO. 2**

**TO: ALL VENDORS**

**FROM: Damon Hightower**

**SUBJECT: USC-IFB-1624-DH (Re-Bid)  
Furnish and Deliver New Light Emitting Diode (LED) Fluorescent Light Tubes**

**DATE: February 2, 2010**

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This Amendment No. 2 modifies the Invitation for Bid only in the manner and to the extent as stated herein.

**ITEM ONE: (CHANGE) SUBMIT OFFER DATE/TIME HAS BEEN EXTENDED FROM: February 9, 2010 at 2:00 PM  
TO: February 19, 2010 at 2:00PM**

**ITEM TWO: (REPLACE) VII. TERMS AND CONDITIONS – B.SPECIAL (CERTIFICATES OF INSURANCE) HAS BEEN MODIFIED AND NOW READS AS FOLLOWS:**

**Certificates of Insurance (IF APPLICABLE)**

Certificates of Insurance shall be delivered to the University as requested herein. Such certificates shall also indicate the requirement for advance notice of termination or cancellation of or change in coverage. The contractor must furnish a statement of Worker's Compensation as required by law, or a statement that the contractor is self-insured and will not file a claim against USC.

Minimum requirements are as follows:

Worker's compensation: in accordance with the statutory limits set by the State of South Carolina.

Commercial General Liability Insurance: \$1,000,000 per occurrence. Naming USC as an additional insured.

Comprehensive Automobile Liability/Bodily Injury/Property Damage Insurance: \$1,000,000 combined single limit per accident.

**Insurance Requirements: The successful bidder must provide a copy of its liability insurance certificate within ten (10) days upon the posting of the award statement.**

**ITEM THREE: (REPLACE) QUESTION # 1 FROM AMENDMENT NO.1**

The full text of **Question #1** in amendment 1 is the following:

I have read through the contract and did not see if once the order is awarded will the University of South Carolina be receiving the quantities all at one time or will they be ordered on a as needed situation?

**ITEM FOUR: (REPLACE) QUESTION # 3 FROM AMENDMENT NO.1**

The full text of **Question #3** in amendment 1 is the following:

In reviewing the specifications for the USC LED rebid the notes state that the lamps proposed:

1. *Must be a variable input voltage to allow for flexibility in use for buildings which have different voltages available. No fixed voltages (i.e.; 110v, 220v) will be considered.”*
2. *CE or ROHS certifications will not be accepted.*
3. *Certification: UL Approval, or CSA UL equivalent or MET or ETL*

My questions regarding these specifications are:

1. Why is it a requirement that the lamps support a variable source driver without specifying a maximum percentage for Total Harmonic Distortion (THD) of the device?

Harmonic currents cause overheating of electrical distribution system wiring, transformer overheating and shortened transformer service life. Electrical fires resulting from distribution system wiring and transformer overheating were rare occurrences until harmonic currents became a problem. The frequency of such fires is now becoming more common.

Voltage harmonics may cause havoc within the electrical distribution system. Motors are typically considered to be linear loads; however, when the source voltage supply is rich in harmonics, the motor will draw harmonic current. The result is typically a higher than normal operation temperature and shortened service life.

**ITEM FIVE: (REPLACE) QUESTION # 5 FROM AMENDMENT NO.1**

The full text of **Question #5** in amendment 1 is the following:

I am interested in bidding on this IFB but would like to make the following substitution, if permitted:

Instead of 8' tubes, we offer a retrofit kit that includes 2 4' LED tubes with a supporting tombstone between them that will allow for higher lumens, lower power consumption, and similar or lower overall cost than 8' tubes. The retrofit kit does not require any electrical modifications and is simple to install. The fixture maintains its UL listing after installing the retrofit kit and tubes. Additionally, our product is manufactured in the US.

I have attached the product specification sheet for this retrofit kit for your reference. I anticipate that the series on page 5 is what will most likely apply in this case. Will you accept this alternative?

**ITEM SIX: (REPLACE) QUESTION # 12 FROM AMENDMENT NO.1**

The full text of **Question #12** in amendment 1 is the following:

Do you have the basis of design: ie manufacturers name and part number these specs are coming from?  
Can you give that information?

**ITEM SEVEN: (REPLACE) QUESTION # 13 FROM AMENDMENT NO.1**

The full text of **Question #13** in amendment 1 is the following:

Without getting into the fray regarding UL vs. ETL vs. MET any products under consideration should at a minimum be tested to prove conformance to the following standards:

**ANSI C82.77-2002 - Harmonic Emission Limits, Related Power Quality Requirements for Lighting.** (Specifies the maximum allowable harmonic emission of SSL power supplies.)

**ANSI C82.SSL1 - Power Supply** (*under development*) Will specify operational characteristics and electrical safety of SSL power supplies and drivers.

**ANSI C78.377-2008 - Specifications for the Chromaticity of Solid State Lighting Products.** Specifies the recommended chromaticity (color) ranges for white light LED's with various correlated color temperatures (CCTs).

It is in the best interest of USC if the products also conform to:

**UL 8750** Specifies the minimum safety requirements for SSL components including LEDs LED arrays, power supplies and control circuitry.

**UL 2108** Specifies the minimum safety requirements for low-voltage lighting systems.

In order to be consistent with existing electrical distribution systems and the fluorescent lamps and ballasts they replace, the THD of the SSL LED replacement lamps should be **less than 20%**.

Regarding the requirement for variable input voltage to facilitate ease of installation based on existing system voltage, that is an inventory issue on the part of the vendor and should not be offered as a method of disqualification, especially when most multi-voltage drivers operate at 40% to 60% THD.

**ITEM EIGHT: (ADD) QUESTION THAT WAS INAVERTLY LEFT OUT TO AMENDMENT #1**

Be Off The Grid.com Inc. is the exclusive distributor for 2nd Generation LED Tube Lighting and we would like to submit a bid for USC-IFB-1624-DH with our product. The our second generation specification exceeds your bid specifications and we feel would be a better fit for the University. Our Tube Lighting utilizes SMD with a glazed cover to eliminate the wave and twink effect from first generation bulbs. We offer a Daylight White and Natural White 4' Bulbs. We do not offer a single pin 8' Tube light in our second generation configuration. Our frosted covers do not impact on the brilliance of the illumination and would like for you to consider the 2nd Generation product as an option. As indicated on our warrantee and comparison attachment, we offer a 3 Yr Manufacturer Warrantee.

Please visit our website [www.beoffthegrid.com](http://www.beoffthegrid.com) and let us know if your second generation LED Tube Lighting would be acceptable for USC-IFB-1624-DH.

I have attached our 2nd Generation 18W LED Tube Light specification and fixture modification instructions that you and your technical staff may find interesting.

If you prefer the 1st generation LED Tube Technology, we will bid with our older tubes. We are looking forward to presenting our bid on this project.

**Answer:** Note #4 On page 12 of our IFB under Section III. Scope of Work/Specifications it states that "Partial bids and/or retrofit kits for 8' fixtures using 4'tubes will not be accepted

**ITEM NINE: THE FOLLOWING ARE REQUESTS FOR CLARIFICATION TO ANSWERS TO**

## QUESTIONS SUPPLIED IN AMENDMENT 1:

**Question #3:** The original question was an attempt to point out that unchecked THD is an electrical fire hazard especially in buildings wired before the 1990s and that variable voltage power supplies and/or drivers in LED lamps are often a source of high THD percentages.

I find it unlikely that an electrician modifying light fixtures will be unaware of the source voltage. This is no more complicated than the process you go through now when making sure that you are installing the correct replacement lamps in your fluorescent fixtures so that they match up to the installed ballast. In addition, our lamps are clearly marked with color coded permanent labels that make it difficult for even apprentice electricians to confuse, but if they did, the lamps are of high quality and will not “fry” they just might not work properly until connected to the specified voltage. Additionally we can provide UL Classified labels for the fixtures which adhere to the same color code system as the lamps and are easily readable for all associated with facilities maintenance. Our lamps also maintain the UL classification for the fixture where others do not.

**Response:** While it may not be a problem in other organizations, the University of Salkehatchie-Walterboro has no fulltime certified electrician on its staff. Maintenance personnel may inadvertently mismatch tubes with improper voltage sources that will vary depending upon the particular building on campus. This is the reason for the requirements that the LED Fluorescent Light Tubes bid must be a variable input voltage and no fixed voltages will be considered. The University is not requiring a maximum percentage for Total Harmonic Distortion (THD) for the LED Fluorescent Light Tubes bid.

**Question #4:** What is the logic behind the disqualification of lamps that have a CE or RoHS label?

I would think that the additional qualifications would be an asset to USC especially when you look at what the terms represent.

UL - The UL Mark on a product means that UL has tested and evaluated representative samples of that product and determined that they meet UL requirements. Under a variety of programs products are periodically checked by UL at the manufacturing facility to make sure they continue to meet UL requirements. The UL Marks may be only used on or in connection with products certified by UL and under the terms of written agreement with UL. In addition to these marks, UL also provides access to the marks required in a number of other key world markets.

RoHS (Restriction of Use of Hazardous Substances) regulations limit or ban specific substances -- lead, cadmium, polybrominated biphenyl (PBB), mercury, hexavalent chromium, and polybrominated diphenyl ether (PBDE) flame retardants – in new electronic and electric equipment.

The CE marking is a mandatory European marking for certain product groups to indicate conformity with the essential requirements set out in European Directives. In order to use the CE mark on a product the manufacturer must draw up a Declaration of Conformity (DoC) in which the manufacturer attests conformity with all relevant NADs and takes sole legal responsibility. In some instances a NAD may require a Notified Body to issue a Certificate of Conformity in order to verify performance of the product or constancy of the production process (Factory Production Control) for example.

The DoC must include: manufacturer's details (name and address etc); essential characteristics the product complies; any European standards and performance data; if relevant the identification number of the Notified Body; and a legally binding signature on behalf of the organization.

**Response:** The University spent a good deal of time researching applicable standards for LED Fluorescent Light Tubes before issuing the solicitation. Based on its research, the University concluded that the UL Approval, the CSA UL equivalent, the MET or ETL certifications are the most applicable certifications for the LED Fluorescent Light Tubes that we are seeking. At the same time, the University realizes the merits of lamps that have a CE or RoHS label, it has determined that neither CE certification nor ROHS certification would meet the application needs of the LED Fluorescent Light Tubes it is seeking to procure.

**Question #9:** In your response you state “We did not request test information on the samples (although it may exist) since we were evaluating the concept in general (i.e.; LED tubular technology) and not the particular manufacturer or distributor’s brand of tube.” If this is the case why are you so adamant that products that exceed your specifications be eliminated from consideration? I would think that the university would want to be on the cutting edge of the technology rather than specifying the lowest common denominator.

**Response:** The University will consider products that meet or exceed the specifications set forth in Section III. Scope of Work/Specifications of this solicitation. The University developed specifications for the solicitation that will allow it to meet its application needs for LED fluorescent light tubes.

**Question #12:** Your answer states: “The intent of this solicitation is not to be brand specific as the university is seeking a product that can meet the minimum specifications for this solicitation.” As in the answer to question 9. Are we to conclude that you are only interested in products that adhere to the minimum specifications and do not improve on them in any way?

Regarding the answer to question 12.

Since I do not know the origin of the lamps currently being tested it is impossible to know how they may impact the university in the long run. But without knowledge bad things happen and ignoring the obvious safety margins currently built in to your wiring systems is to invite a very costly result. It doesn’t take much searching to find countless engineering articles reporting on the potential fire hazards associated with the introduction of excessive THD. Most current fluorescent fixtures operate with a THD in the range 20% to 30%. Unless you anticipate rewiring your fixtures with larger return conductors you will run the very real risk of an electrical fire due to overheating because the existing conductors are too small.

Additionally, this is a retrofit utilizing existing fixtures. When you replace the lamps with non certified/classified products the UL classification and/or certification is void and your insurance carrier can easily use this to deny a claim. The justification for specifying only variable voltage replacement lamps is based on limited input and should be abandoned. If the university is really interested in “evaluating the concept in general” it should be willing to explore the technology to the fullest.

**Response:** The University will consider products that meet or exceed the specifications set forth in Section III. Scope of Work/Specifications of this solicitation. The University developed the specifications for the solicitation that will allow it to meet its application needs for LED fluorescent light tubes.

**Modified Answer for Question #13 In Amendment 1: (Original Answer)** If the bidder can obtain variable input tubes, but currently does not have the item in inventory, then that by itself is not a disqualifier. However, USC - Salkehatchie has a timeline to expend the federal funds, or the funds will be lost. While the timeline to fill the order has not been brought up previously, a reasonable length of time to fill the order is important. The intent is for USC- Salkehatchie to have the tubes installed as quickly as possible.

**While the University has considered your suggestion that LED Fluorescent Light Tubes bid conform to ANSI C82.77-2002, ANSI C82.SSL1 and ANSI C78.377-2008 standards, the University has decided not**

**to modify the specifications in Section III, Scope of Work/Specifications of the solicitation at this time. The University is satisfied that the current technical specifications in the solicitation will result in procuring LED Fluorescent Light Tubes that best meet its application needs. While the University has considered your suggestion for products bid to conform to UL8750 and UL 2108, it has been decided not to modify the technical requirements for LED Fluorescent Light Tubes bid.**

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**BIDDER SHALL ACKNOWLEDGE RECEIPT OF AMENDMENT NO. 2 IN THE SPACE PROVIDED BELOW AND RETURN IT WITH THEIR BID RESPONSE. FAILURE TO DO SO MAY SUBJECT BID TO REJECTION.**

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Authorized Signature

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Firm

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Date