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NATURAL RESOURCES DEFENSE COUNCIL

Additional Written Testimony from NRDC on the External Power Supply Standard

April 10, 2006

On behalf of the Natural Resources Defense Council and its more than 500,000 members, we are submitting additional written testimony in support of the current external power supply (EPS) standard that was formally adopted by the California Energy Commission in December, 2004. We are sending in these additional comments in response to the wave of industry requests to delay and/or decrease the scope of the EPS standard that were made during the last two hearings.

Background

The Consumer Electronics Association (CEA) and several of its member companies have provided testimony claiming hardship in terms of meeting the pending July 1, 2006 effective date and the incremental cost of the complying EPS. Over the past two weeks we have collected extensive information on the current state of the external power supply market and are submitting our findings in this submission to the docket. We urge the CEC to review this information carefully in its process of evaluating the requests being made by the various stakeholders.

In summary, we believe the industrial stakeholders are largely unsubstantiated and in a few cases have been proven to be incomplete and/or incorrect. **As such, we see no evidence or justification for the CEC to provide any further extension beyond the 6 month extension (moves effective date back to 1/1/07) it is considering, or to consider reducing the scope of its standard.** Below we provide the results of our research and respond to the claims that were made at the last two hearings.

Despite OEM claims, Title 20 compliant EPS are available by a wide range of EPS manufacturers in large quantities.

Numerous power supply manufacturers already manufacture energy efficient EPS that already meet the CEC requirements while also complying with UL safety and FCC interference requirements.

Much to our surprise we have heard several OEMs (original equipment manufacturers) testify that they are unable to find samples or sufficient quantities of qualifying EPS for purchase. We do not understand how these companies are able to make such claims as part of their testimony.

Attached for the record are signed letters from large EPS manufacturers stating their ability to produce Title 20 complying power supplies in large quantities. These include:

| Power Supply Manufacturer | Annual Production Capability |
|---------------------------|------------------------------|
| Shenzen Dokocom | 7 – 13 million/yr |
| Kuantech | 25 million/yr |
| Ten Pao | 80 million/yr |
| Tech Power | 10 million/yr |

These four suppliers alone, which represent a subset of the overall efficient EPS market, have committed to being able to supply in a timely fashion more than 100 million EPS to interested customers. This far exceeds the estimated CA market for new EPS sales of 25 to 30 million/yr.

We believe the burden of proof for any time extensions rests squarely on the OEMs. To date, their claims are simply conjecture and do not include any formal correspondence from potential EPS providers showing either a) capacity limitations, b) inability to meet the current July 1, 2006 deadline, or c) inability to meet the CEC's performance requirements. Without such documentation, we don't see the justification for the CEC to further delay its standards, which provided the industry with 18 months to comply with its standards.

The incremental cost from inefficient linear EPS to efficient switching EPS is far less than the unsubstantiated claims being made by the OEMs.

In the various hearings and testimony, we have repeatedly heard the OEMs complain about the large incremental costs they will face by moving to the more efficient EPS. We frequently have heard incremental costs of \$2 to \$5 mentioned by the OEMs, without any supporting documentation.

To put the pricing issue into better perspective, we were able to obtain a general price quote from Ten Pao International (see attached). In their Feb 8, 2006 letter they provide price quotes (not incremental costs, but actual costs) of \$1.20 to \$2.10 for 2W and 5W CEC compliant EPS. As would be expected, the larger the order, the lower the price. One should also note, that as this document is intended for a public audience it does not reflect the lower prices that individual customers would likely negotiate with Ten Pao.

Given this pricing information, it is hard to understand where the multi-dollar incremental cost projections are coming from. We understand the incremental costs from moving from inefficient linear EPS to more efficient switching EPS technologies to be on the order of 25 to 50 cents.

As the market continues to move to switching technologies due to their greater efficiency, smaller size and reduced weight, we anticipate the price differential on a delivered basis to go away. In fact for some products the switchers are already less

expensive in volume quantities than the incumbent inefficient linear power supply being purchased by an OEM, as their shipping costs are greatly reduced.

Due to the above, we believe the OEMs claims about the high prices of CEC compliant EPS to be greatly overstated and again devoid of any supporting documentation.

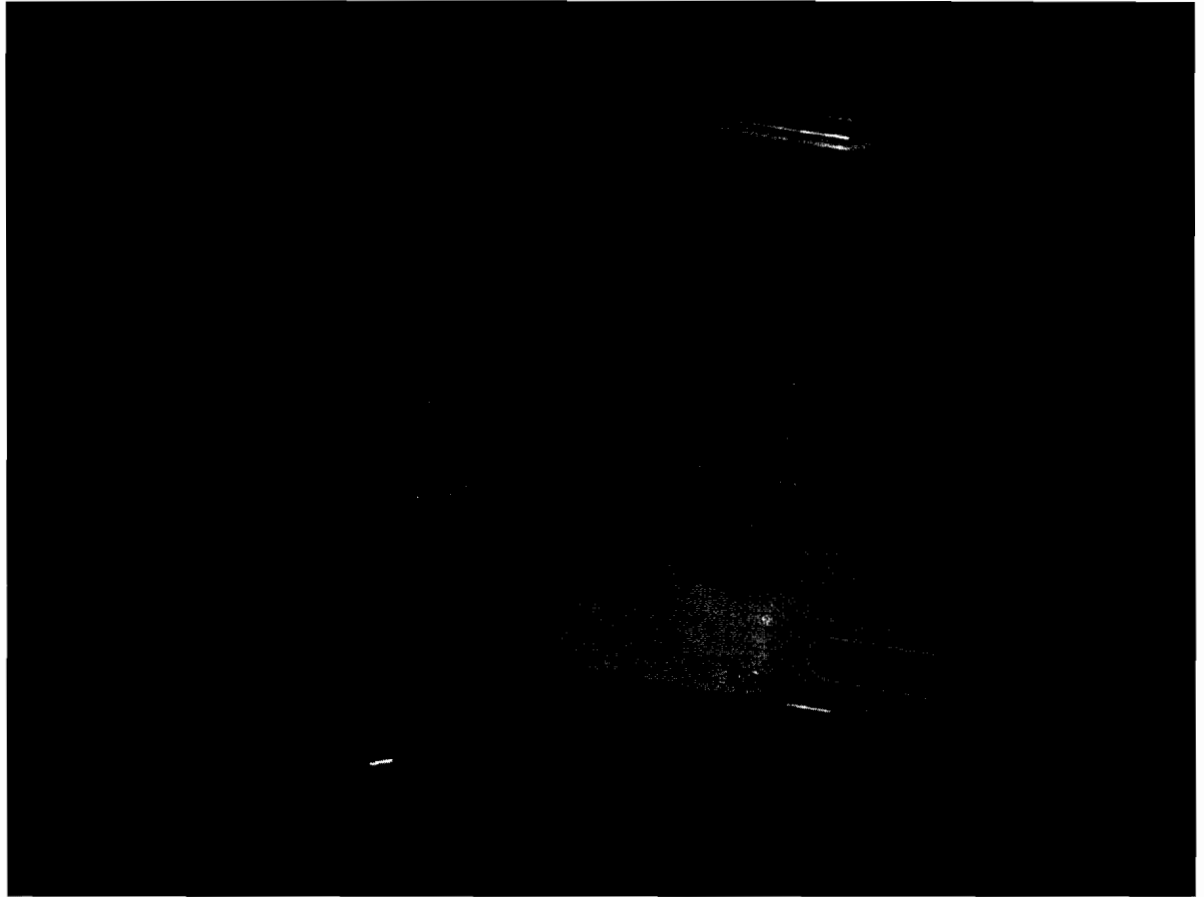
We also want to take a moment to respond to claims made by Conair that the retail cost of their finished product could go up as much as \$30 in order to comply with the CEC standard. We worked with researchers who purchased the Conair SC3AG massaging back rest. While the EPS that came with this product did not meet the CEC standard, an off the shelf complying EPS is readily available at a cost of \$2 to \$3 in quantities likely to be purchased by Conair. Even if this increase resulted in a mark up of 3 to 5 times at retail, this is still way under the \$30 reference made at the hearing.

At the risk of being repetitious, we believe the OEMs have the burden of showing actual quotes and pricing information in order for their claims to impact the CEC rulemaking.

The challenges made by the cordless and corded telephone manufacturers are unfounded.

Uniden, the cordless telephone manufacturer has stated that they have had no success at buying, let alone finding a sample of a complying EPS. Below we provide an example of a Sharp product that is already on the market in Japan that contains a CEC complying EPS and also meets stringent safety and surge protection requirements. A digital photo is provided below. We also understand that samples of the Sharp phone as well as the CEC complying EPS from a Panasonic model sold in Europe have been provided to the CEC for inclusion in the docket. We also want to point out that Sagem sells cordless phones in Australia with a CEC complying switching EPS and that large ODM is using switchers with cordless phones sold under Philips, GE, and Alcatel brands.





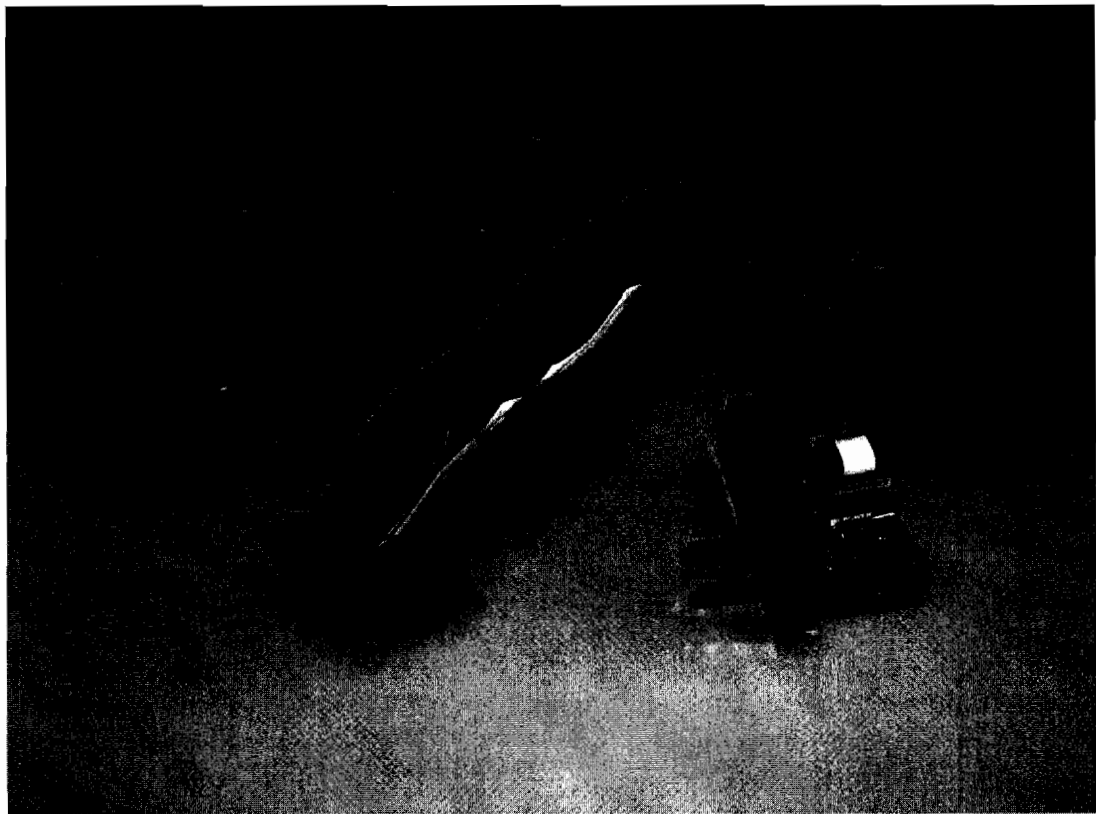
Some additional information we have obtained concerning this market includes:

- Many other OEMs are in the late stages of approval on CEC compliant adapter solutions
 - One of the largest cordless phone manufacturers is in the final stages of approving a switcher solution from multiple power supply vendors
 - Units have passed all tests including 10 kV surge test and are CEC compliant
 - High volume prices have been discussed and are cost-effective (2W, 1M pcs @\$1.35)
 - Activity appears to have slowed down due to expected pushout of CEC spec
 - Two other large cordless phone manufacturers are in the process of converting to CEC switchers
- CEC compliant linears are also available from multiple high volume sources
- Many Voice over IP (VoIP) phones come with AC-DC switchers

The hardships being claimed by manufacturers of products containing low voltage EPS, in particular the hair trimming sector, do not appear to be accurate.

We have seen test data for the G380 model corded/cordless Norelco shaver/trimmer made by Philips and found it to comply with both the efficiency and no load CEC requirements. It already contains a CEC compliant switching EPS.

We also looked further into the challenges stated by the hair clipper industry representative. We checked two models and found that although both shipped with non-compliant external adapters, compliant switching power supplies were constructed using readily available technology within 36 hours. The photo of the complying model is shown on the right.



Switching EPS can easily be designed to prevent interference with AM/FM radios and other household products.

In the most recent hearings there were claims made about the difficulty of: a) designing an AM/FM radio that would include a CEC compliant EPS and not interfere with sound quality, and b) using CEC compliant EPS due to the interference they cause in various audio products in the home.

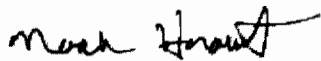
In response to these claims, we provide the following:

- **AM/FM radios already use switching EPS**
 - Noise issues are easily solvable with standard filtering techniques
- **Many other products already use internal switching power supplies in close proximity to tuners, even in the same box**
 - Conventional TVs, LCD TVs, Plasma TVs, Set-top boxes
 - Security cameras are far less sensitive than TV tuners
- **Homes already have many switching EPS close to AM/FM receivers that do not interfere**
 - FCC specs prevent interference between products through the power line and through radiation
- **The noise conducted through the low voltage cable to the product can be filtered in the same way**
 - Additional components are likely to cost only \$0.05 to \$0.10 extra

In closing, we want to take this opportunity to thank the CEC for providing this opportunity for us to add our submission to the public docket and for your consideration of this information in your decision making process.

Should you wish to discuss any of this information further, please do not hesitate to contact me at 415-875-6100 or nhorowitz@nrdc.org.

Sincerely,



Noah Horowitz
Sr. Scientist



天寶國際興業有限公司
TEN PAO INTERNATIONAL LTD.



To whom it may concern:

In reference to the California Energy Commission (CEC) efficiency regulations for external power supplies, TEN PAO INTERNATIONAL LTD. has CEC compliant external power supply products available for mass production already. The products have full safety application marking already on sale; it's our honor to serve you by our high quality CEC compliant power supply and charger products.

By comply with CEC regulation; we have first developed 2W and 5W series especially for cordless phones, cell phone chargers, electric tools, toys and similar applications. We concern the efficiency revolution may increasing some end product manufacturer cost of power supply. We are here to confirm the new series unit price as below:

| <u>Quantity/year</u> | <u>2W Linear</u> <u>Replacement</u> | <u>5W Linear</u> <u>Replacement</u> |
|----------------------|--|--|
| 50K | USD1.65/pcs | USD2.10/pcs |
| 100K | USD1.50/pcs | USD1.89/pcs |
| 1 mil | USD1.35/pcs | USD1.60/pcs |
| 10 mil | USD1.20/pcs | USD1.50/pcs |

Furthermore linear adaptor facing a cost fluctuation since 2005 such as copper price raised 50%. It caused linear adaptor price turned up at least 10% in past year and the rise will continue at 2006. We have developed these two new series to avoid any price fluctuation in coming future. Products made by Ten Pao already comply with Europe (2002/95/EC) RoHS regulations together with production capability up to 80 million units per year for external power supply and chargers. We welcome any company needs efficient, environmental friendly and low cost power supply to achieve the CEC standards.

Any enquiry please don't hesitate to contact us by following information or visit our web-site www.tenpao.com for more information

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China Factory: Huiyang Sky Fortune Electronics Co., Ltd.



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TEN PAO INTERNATIONAL LTD.



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Signature
Mr. Joe Chan
Marketing Manager
Ten Pao International Ltd.

Date: 8th February, 2006



天寶國際興業有限公司
TEN PAO INTERNATIONAL LTD.



To:

In reference to the California Energy Commission (CEC) efficiency regulations for external power supplies, TEN PAO INTERNATIONAL LTD. have CEC compliant external power supply products available for mass production already. The products have full safety application marking already on sale, it's our honor to serve you by our high quality CEC compliant power supply and charger products. These products are designed to cost-effectively address a broad range of applications including cordless phones, cell phones, electric tools, toys and other similar applications.

Except CEC compliant, the products made in Ten Pao comply with Europe RoHS regulation too. We have the capability to produce up to 80 million units per year of external power supply adapters and chargers. Our company welcomes the opportunity to work with customers to achieve the CEC standards.

Any enquiry please don't hesitate to contact us by following information, we can lead you to right person of Ten Pao internally to follow it. You can also visit our web-site www.tenpao.com for more information

Sincerely,

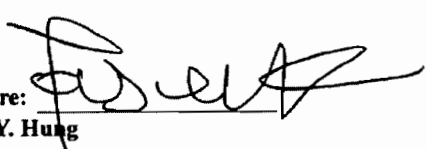
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Signature: 
Mr. K. Y. Hung
President

Date: 19th January 2006

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Date: 2006-1-17

To whom it may concern

In reference to the California Energy Commission (CEC) efficiency regulations for external power supplies, TECH-POWER ELECTRONICS (SHENZHEN) CO., LTD. has CEC compliant external power supply products available for mass production. Product is available now.

These products are designed to cost-effectively address a broad range of applications including cordless phones, cell phones, electric tools, toys and other similar applications.

We have the capability to produce up to 10 million units per year of external power supply adapters and chargers. Our company welcomes the opportunity to work with customers to achieve the CEC standards.

Sincerely yours,

Company representative name: SJ and NICK

Company name: TECH-POWER ELECTRONICS (SHENZHEN) CO., LTD.

Company representative contact information or other person's contact information:

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Ktec®

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Date : Jan 17, 2006

To whom it may concern:

In referenee to the California Energy Commission (CEC) efficiency regulations for external power supplies, Kuabtech (Shenzhen) Co., Ltd has CEC compliant external power supply products available for mass production. Product is available now.

These products are designed to cost-effectively address a broad range of applications including cordless phones, cell phones, electric tools, toys and other similar applications.

We have the capability to produce up to 25 million units per year of external power supply adapters and chargers. Our company welcomes the opportunity to work with customers to achieve the CEC standards.

Sincerely,

KTEC

KUANTECH (SHENZHEN) CO., LTD.

Address : 6th Honghua Road, Gongming Town, Bao'an District, Shenzhen City, P. R. China 518106

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For now and the future

From: Jim Holland
To: docket@energy.state.ca.us
Date: 4/11/2006 9:16:09 AM
Subject: Docket 06-AAER-1

Dear Dockets Office;

Please docket and distribute the attached item in Docket 06-AAER-1.

Thank you

Jim