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## **MEMORANDUM FOR OIRA**

February 8, 2012

Schumacher Electric (Schumacher), incorporated July 7, 1947, is based in Mount Prospect, IL and the leading manufacturer and supplier of automotive battery chargers sold in the United States. We make battery chargers and maintainers for agricultural, automotive, marine, recreational, and specialty applications.

In setting federal minimum energy use levels for battery chargers under the Energy Policy and Conservation Act (as amended), Schumacher continues to hope that the Department of Energy (DOE) will take a measured and balanced approach to automotive battery chargers. In our view, such an approach must take into account the following:

1. **Because of a Past Patent Dispute Resolution, DOE's Rule could have the Effect of Eliminating Competition in an Important Segment of the Battery Charger Market.** In considering whether the rule is economically justified, the Secretary (and if necessary, in consultation with the Attorney General) must consider its impact on competition (42 USC 6295 (o)(2)(B)(v)). We are very concerned that the DOE might unintentionally eliminate competition in the large and important market segment for automotive battery chargers with the "engine start" capability (chargers that can also provide adequate, immediate current to jump start a dead battery).

Industry analysts agree that the only viable, cost-effective compliance option for these types of units with previously-proposed standards (such as California) is through the use of "switch-mode" battery charger technology. Patent number 6,822,425 (issued Nov 23, 2004) provides a competitor with the exclusive ability to control the manufacturing and sale of switch-mode battery chargers with "engine start" capability. Schumacher can – and does – use switch-mode technology in other types of units. The exclusive 20-year term (not expiring until 2022) of patent number 6,822,425, however, means that only one company would be able to sell compliant units; that company effectively would be granted a monopoly in this market segment, and consumers would lose choice.

In 2011, roughly 40 percent of Schumacher's total sales revenue came from the sale of battery chargers with "engine start". If new energy conservation standards exist for such products during the term of the patent, our inability to offer cost-effective battery chargers with "engine start"

would eliminate 40 percent of our sales revenue and most likely affect the rest of our sales, due to common purchasing practice by retailers. Most of our key customers purchase all of their automotive battery chargers (including those with and without “engine start”) and related products from only one supplier in order to minimize administrative and transactional costs. Schumacher’s viability would be at risk.

2. **It Appears that the Energy Savings Estimates from New Battery Charger Standards may be Significantly Overstated.** Accurate, real world usage rates and sales volumes estimates must be used when promulgating standards in order to avoid misrepresenting the true energy savings offered by possible standards for battery chargers. We believe that the usage profiles and sales volumes included in DOE’s September 2010 Preliminary Technical Support Document are inaccurate for our products, and the result is that the potential energy savings from possible standards on our products are likely vastly overestimated.

In the Preliminary Technical Support Document, DOE grouped battery chargers into ten product classes based on battery size, battery energy and power supply. Separately, DOE determined usage profiles for 58 different battery charger applications (e.g. MP3 players, beard trimmers, marine/auto/RV chargers, etc.) by determining the hours per day each application was in each of four modes (active/maintenance, no battery, unplugged, and off) and the charges/day that each application received. DOE then created candidate standard levels by providing a weighted (based on sales shipments) average of all the different applications analyzed in a given product class.

- For example, for Product Class Five (medium energy, low voltage) DOE analyzed marine/auto/RV chargers, toy ride-on vehicles and two types of portable oxygen concentrators to develop the candidate standard levels. These products have significantly different usage profiles; DOE estimated that toy ride-on vehicles are charged 0.7 times/day, while auto/marine/RV chargers charge batteries 0.05 times/day. DOE developed a product-class wide charge/day figure of 0.55 by taking the weighted average of all representative products included in Product Class Five. DOE is assuming, therefore, that marine/auto/RV chargers are being used more than ten times more often than they actually are.
- We estimate that the average usage rate of all marine/auto/RV chargers is 24 hours/month (0.0325 times/day), which is lower than DOE’s estimate of 0.05 times/day. If the 0.0325 usage profile were used instead of the 0.55 usage profile that DOE applies across Product Class Five in the Preliminary Technical Support Document, energy savings would decrease by a factor of 16.
- The actual use of our different products varies widely. Most of our maintainers, products that are used to keep batteries at optimal power levels to increase their useful life, are used seasonally, but constantly during that season. Over the course of a year, end-users might use maintainers constantly for four months and then not at all for the subsequent eight months, and so a usage profile of 0.33 times/day would be accurate. But most of our automotive battery chargers, including those with engine start referenced above, are used much more sporadically in consumer applications. Most households use our automotive chargers one or two times/year, so a reasonable usage profile for these products would be 0.004 times/day.

In determining the cost-effectiveness of these standards, DOE must use accurate sales shipment numbers for individual products.

- For example, in the Preliminary Technical Support Document, DOE estimates annual sales shipments of 500,000 units for auto/marine/RV chargers. In 2011, Schumacher alone shipped more than 3.1 million units. The dramatically inaccurate shipment estimates for auto/marine/RV chargers results in a skewed weighted average, which in part accounts for the inappropriateness of a 0.55 times/day usage factor applied across Product Class Five.

3. **Only a Single, Workable National Standard is Appropriate for this Industry.** Consistent with President Obama's regulatory improvement goals, in many cases a single, workable federal regulatory standard is far preferable to multiple standards. DOE should set national efficiency standards for battery chargers that preempt the recent standard enacted by the California Energy Commission (CEC).
4. **The National Standard Should Include Reasonable Compliance Deadlines.** The February 1, 2013 deadlines for compliance with the CEC standards adopted last month are not reasonable for our business. A national standard should include compliance deadlines that offer industry aggressive but realistic timelines to design, engineer, and certify solutions to meet the new standards. We could support the July 1, 2017 compliance deadlines suggested by DOE during the July 16, 2009 public meeting about battery charger efficiency standards for all of our products except for those with "engine start" affected by the patent issue identified above. For automotive battery chargers with the "engine start" function, we could not support a compliance deadline set any time before October 2022, when the term of the patent ends.

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Schumacher supports efforts to increase the efficiency of battery chargers. We stand ready, able and eager to compete within our industry to meet sensible new standards, provided we have sufficient time to design and manufacture new products and if no intellectual property restrictions interfere with our ability to compete on a level playing field to offer cost-effective, efficient solutions. We hope that DOE uses the best available usage profiles for specific products to ensure an accurate accounting of the costs and benefits of this regulation.