

Comments on CEC 45-Day Language for General Service Incandescent Lamps and NEMA Counter-Proposals

February 14, 2006

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Ecos Consulting

On behalf of Pacific Gas & Electric Company



Outline of General Comments

- PG&E would like to suggest slight modifications to 45-day language to preserve savings in Soft White and Frosted/Clear product categories, preserve consistency in Tier II approach, and help discourage sale of dimmer lamps
- PG&E is opposed to NEMA proposal to strip 40-57 and 101-150 watt lamps from Tier II standard
- PG&E encourages Commission to retain modified spectrum standard to preserve savings in this rapidly growing product area

Estimating Savings Per Lamp

- 60 watts (std lamp) – 55 watts (krypton lamp) = 5 watts saved
- Multiply by 1000 hour lifetime
- Average CA residential electricity price used was 11.5 cents/kwh
- Multiplying by 1,000 for hours cancels with dividing by 1,000 to convert from watt-hours to kwh. Savings can be estimated by simply multiplying watts saved by the electricity price:

$$5 * \$0.115 = \$0.575 \text{ for a 60 watt lamp}$$

$$4 * \$0.115 = \$0.46 \text{ for a 40 watt lamp}$$

$$8 * 750 * \$0.115 / 1,000 = \$0.69 \text{ for a 100 watt lamp}$$

Original cost effectiveness numbers estimated residential electricity prices at \$0.115/kwh.

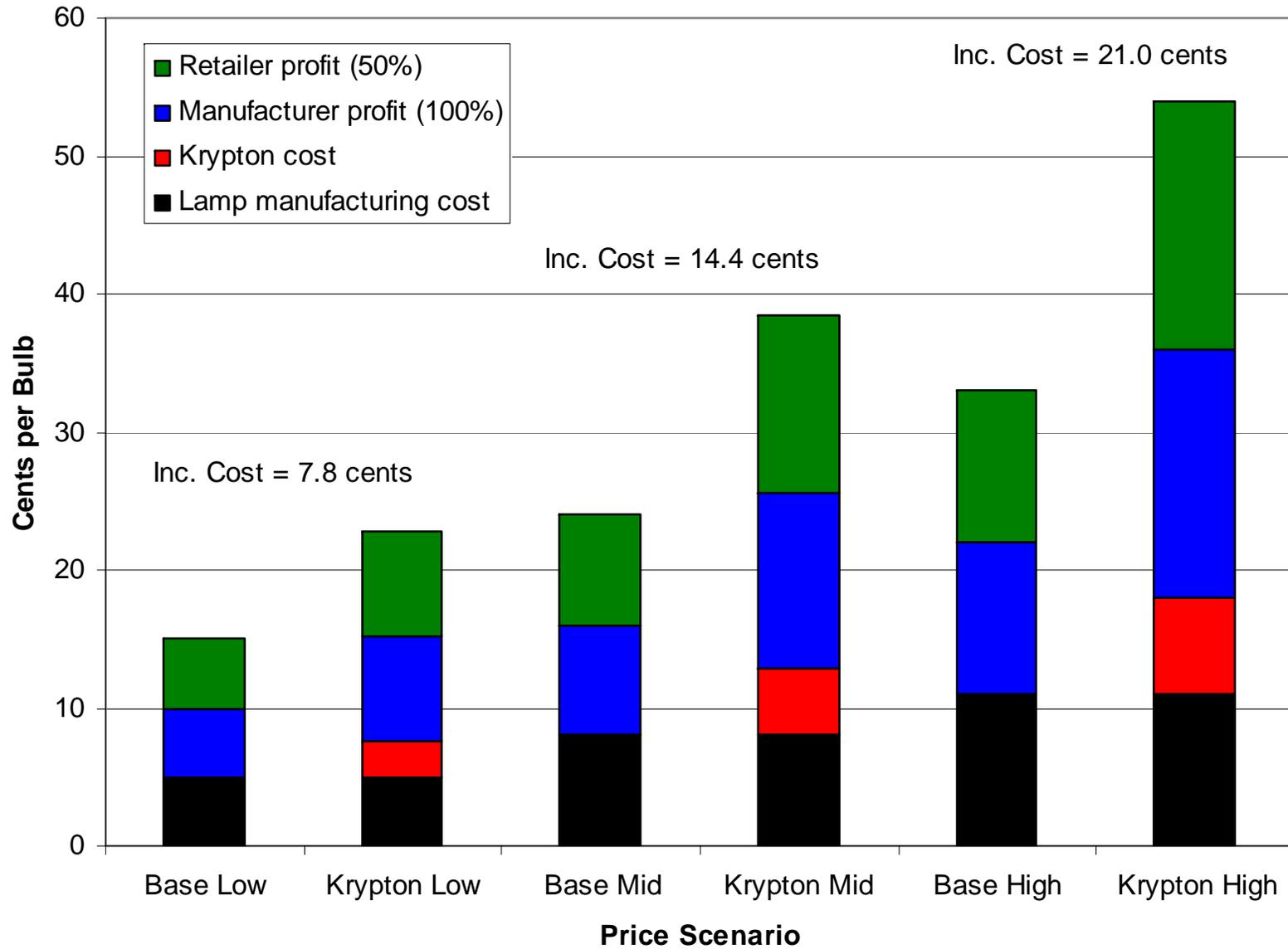
PG&E rates are now significantly higher.

Energy Charge ^{1/, 2/} (\$/kWh)					"Average" Total Rate ^{3/} (per kWh)
Tier 1 (Baseline) ^{4/}	Tier 2 (101-130% of baseline)	Tier 3 (131-200% of baseline)	Tier 4 (201-300% of baseline)	Tier 5 (Over 300% of baseline)	
\$0.11430	\$0.12989	\$0.21314	\$0.29007	\$0.33039	\$0.15439

Current rates increase value of energy savings by about 30%:

- 5 watts saved * \$0.154/kwh = \$0.77
- 4 watts saved * \$0.154/kwh = \$0.62

Impact of Krypton Fill on Estimated Lamp Prices and Profits



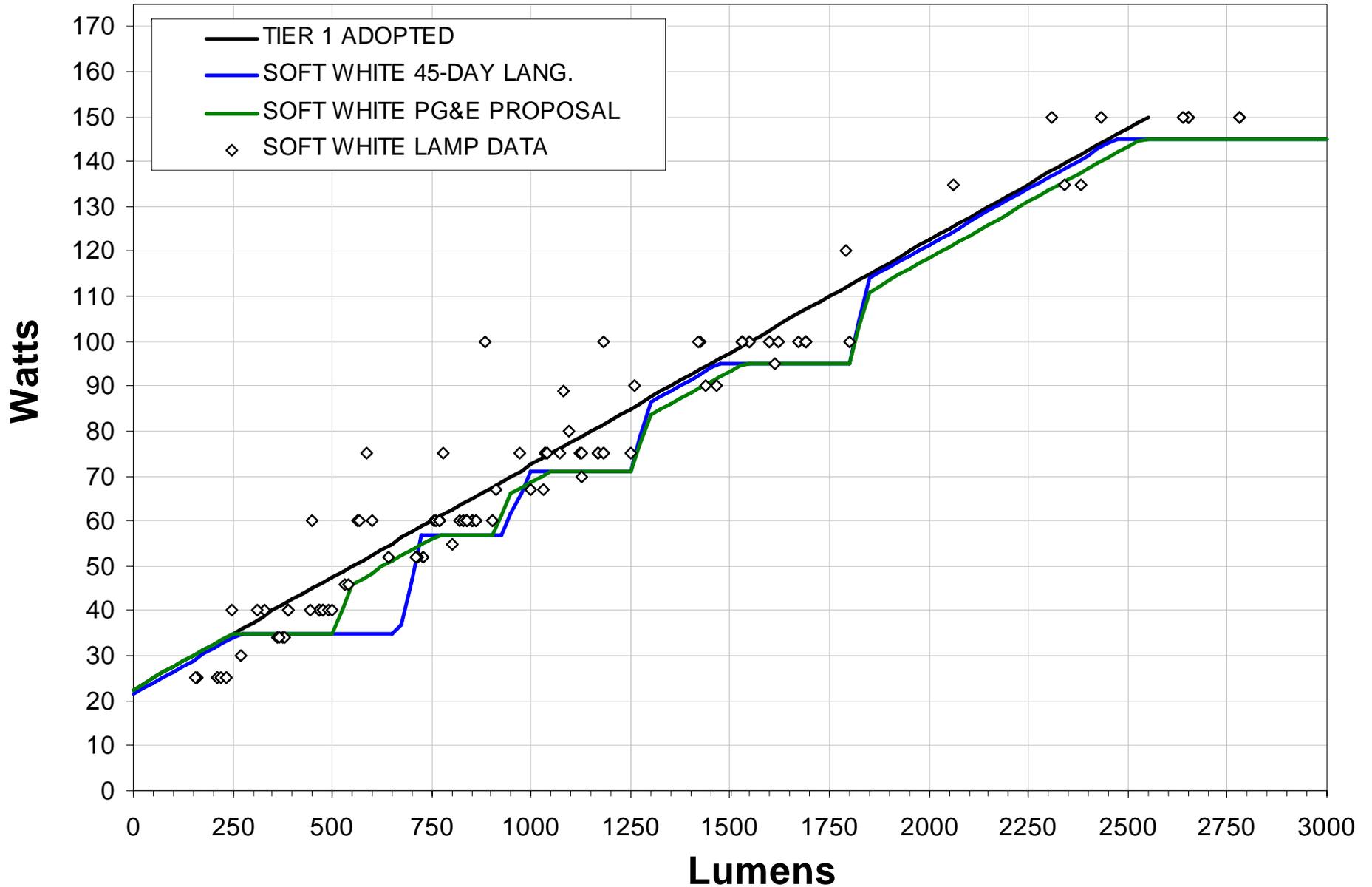
What Is 1 Watt Worth to California in an Incandescent Lamp Efficiency Standard?

Every watt reduction means:

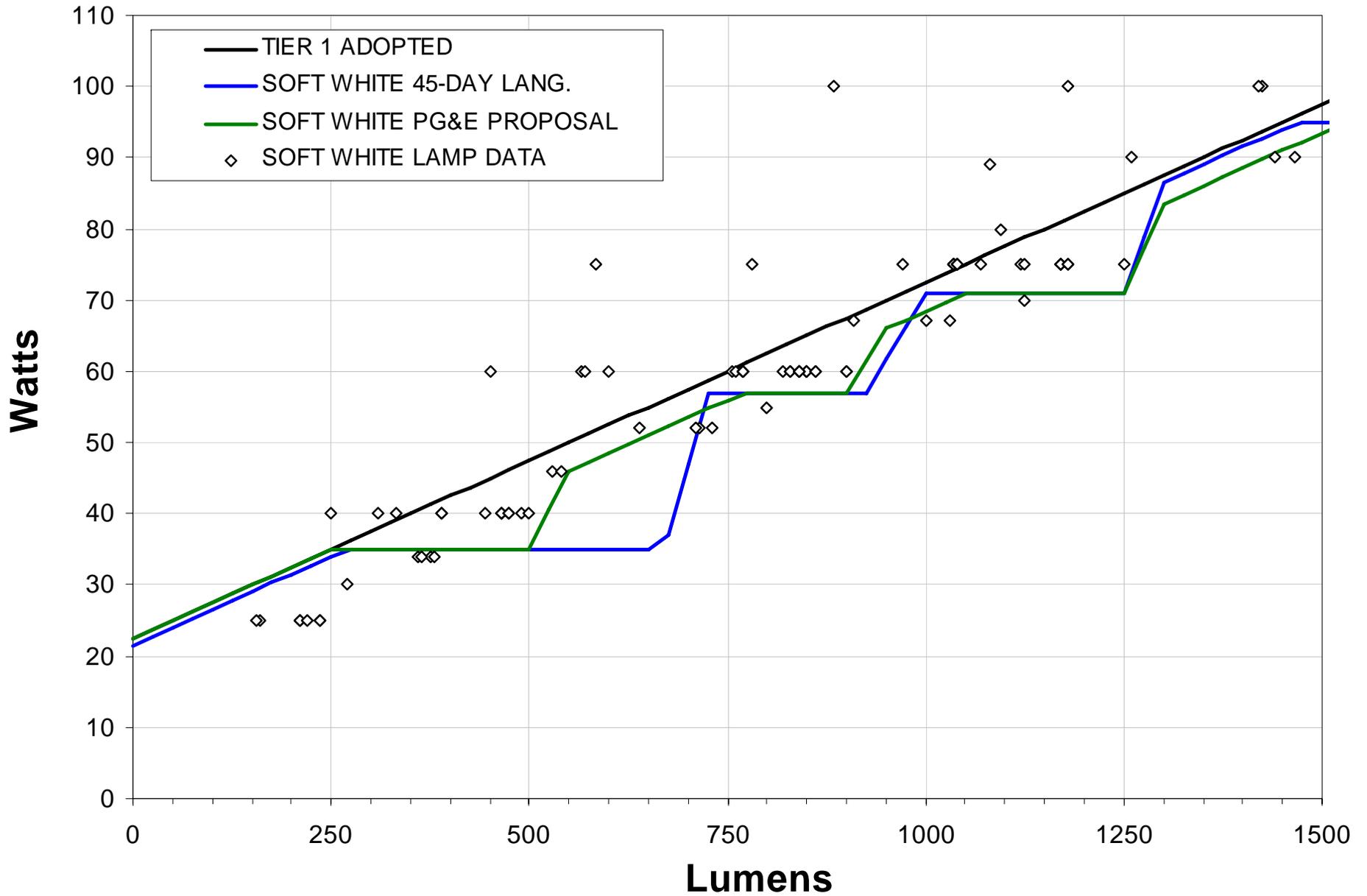
70 million lamps sold per year * 1 watt = a 70 MW power plant, delivering savings whenever power is being demanded to illuminate homes, without power plant conversion losses or line losses.

If the savings are technically achievable and economically justified, they should be included in the standards, whether they come from products that represent 30% of the available savings, 10%, or 2%.

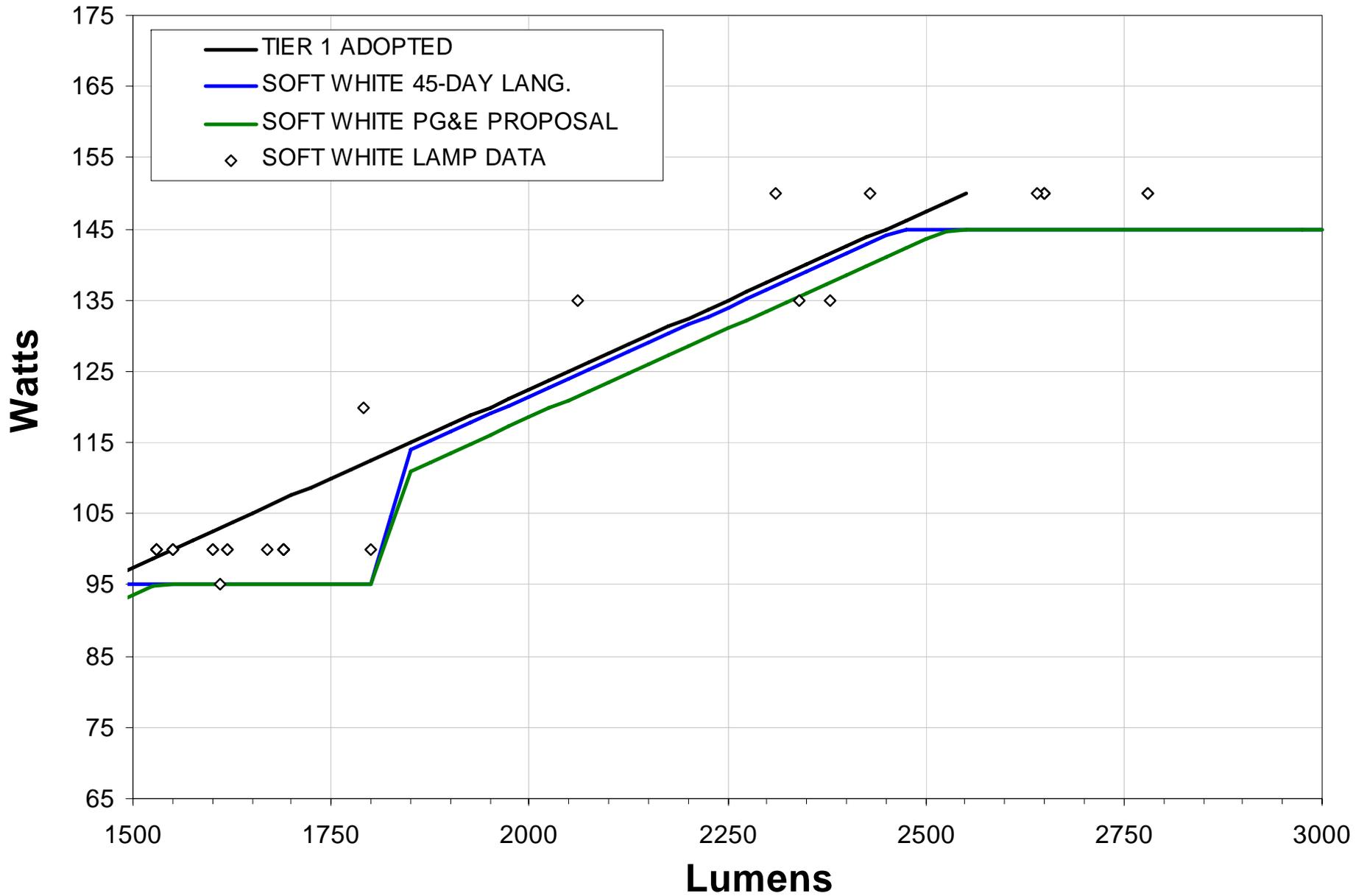
COMPARISON OF SOFT WHITE STANDARD PROPOSALS



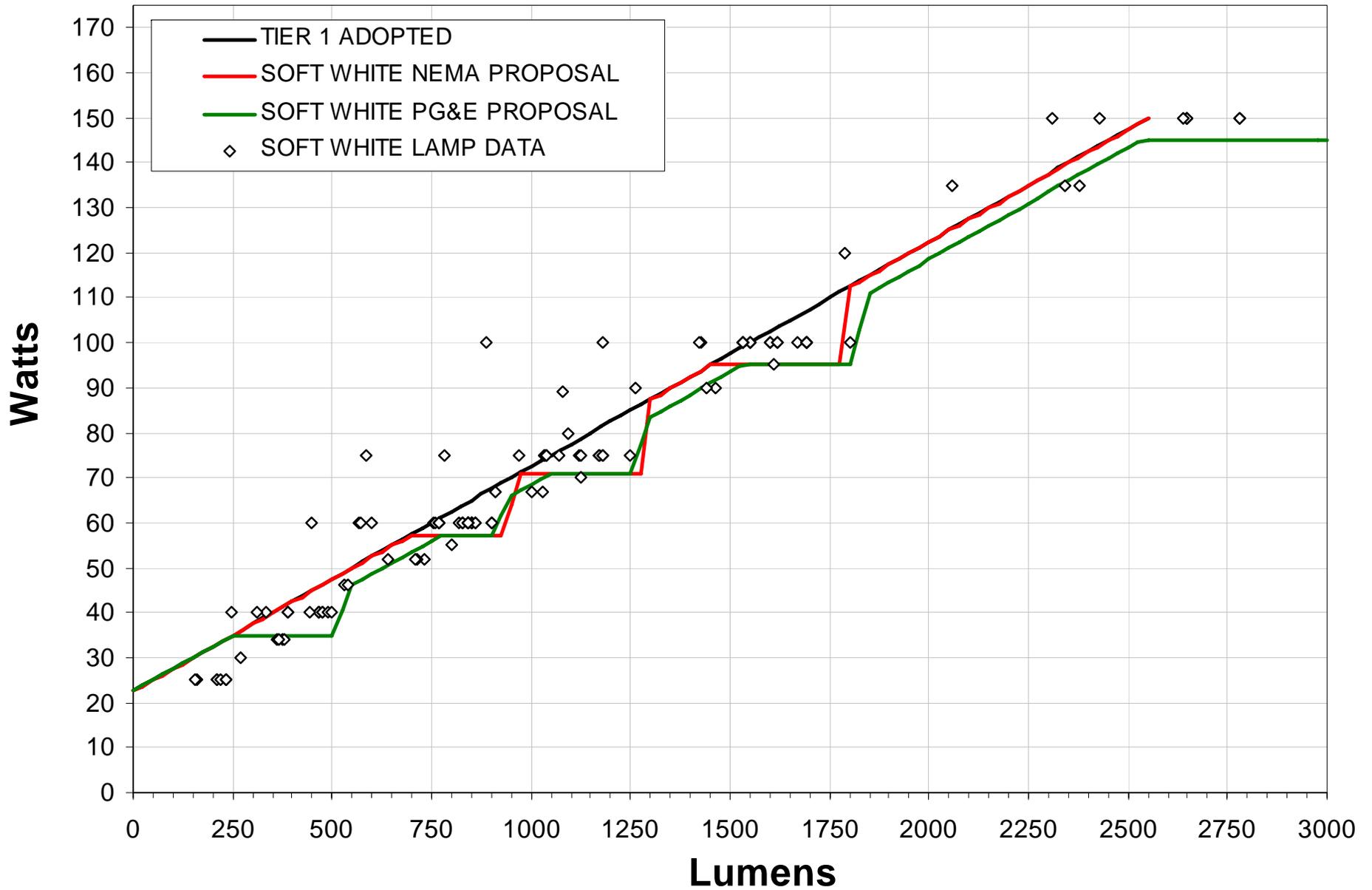
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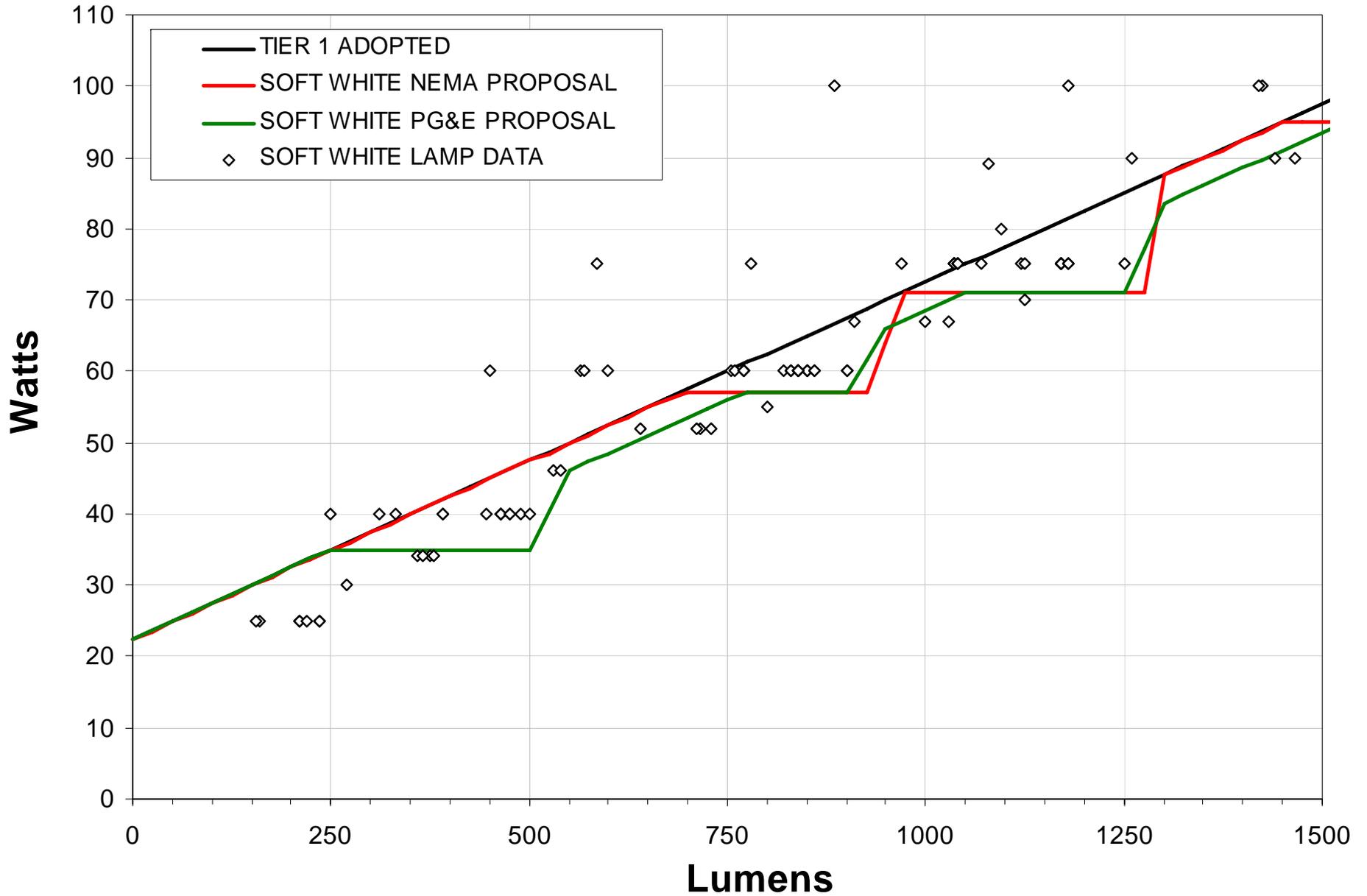
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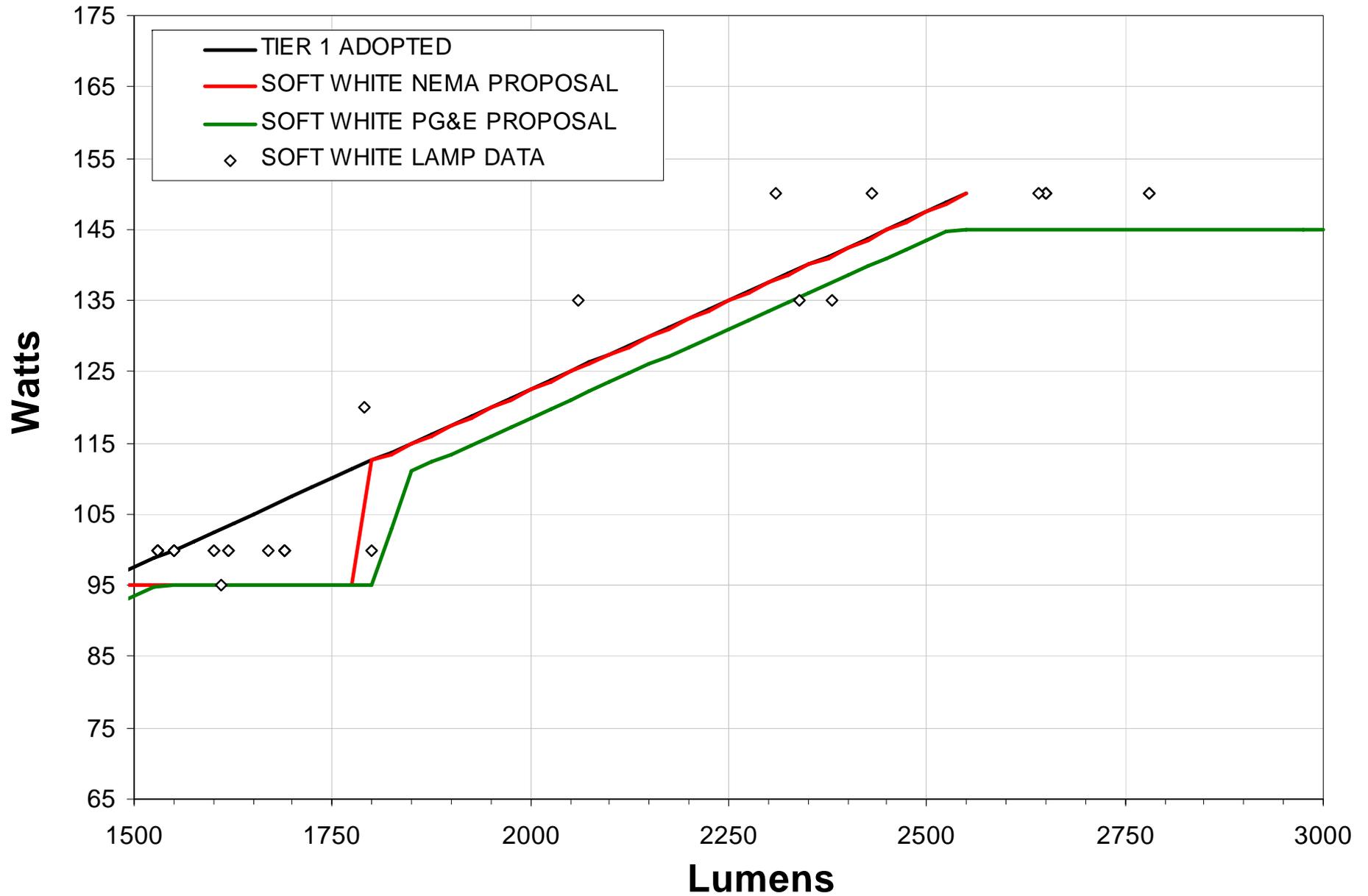
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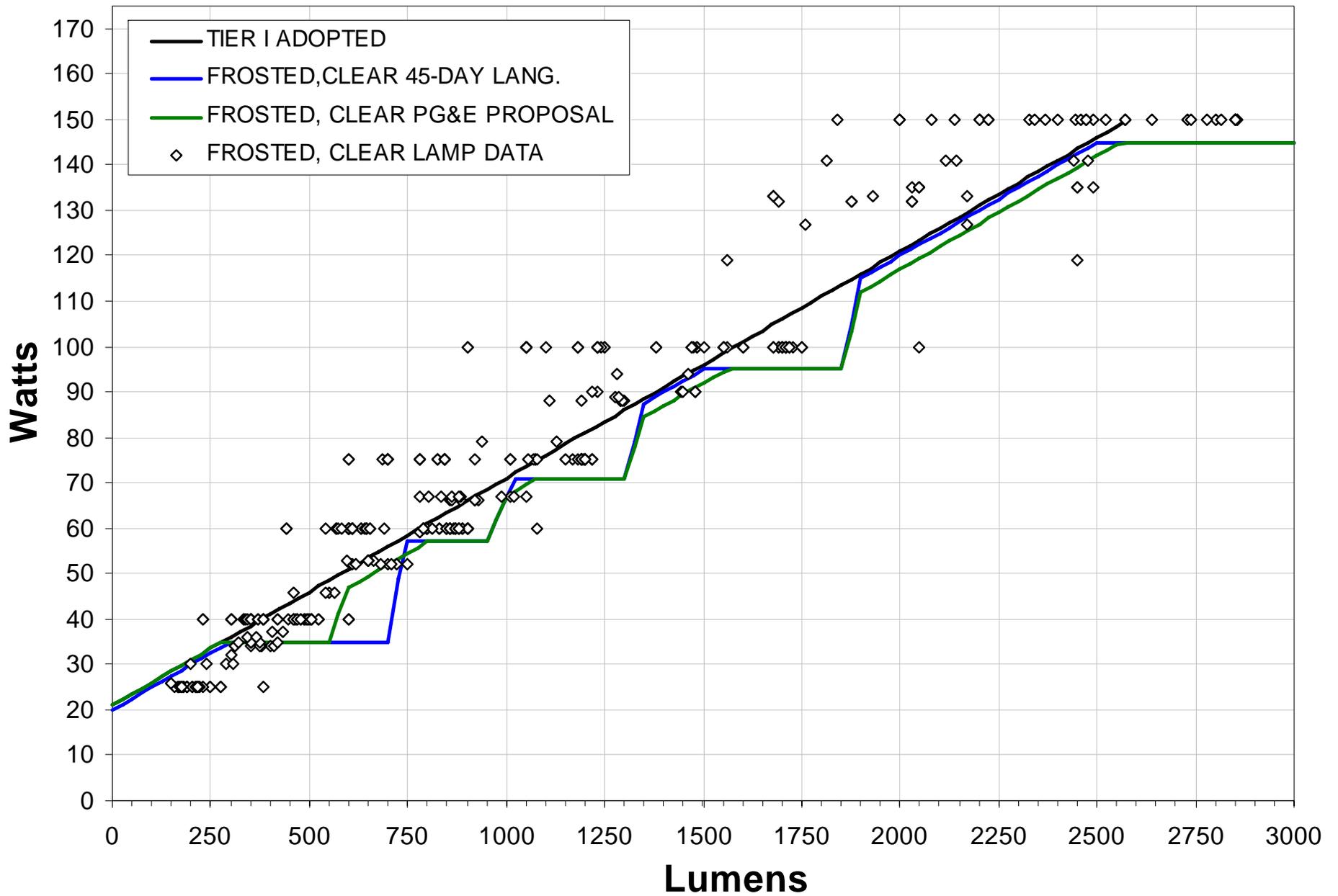
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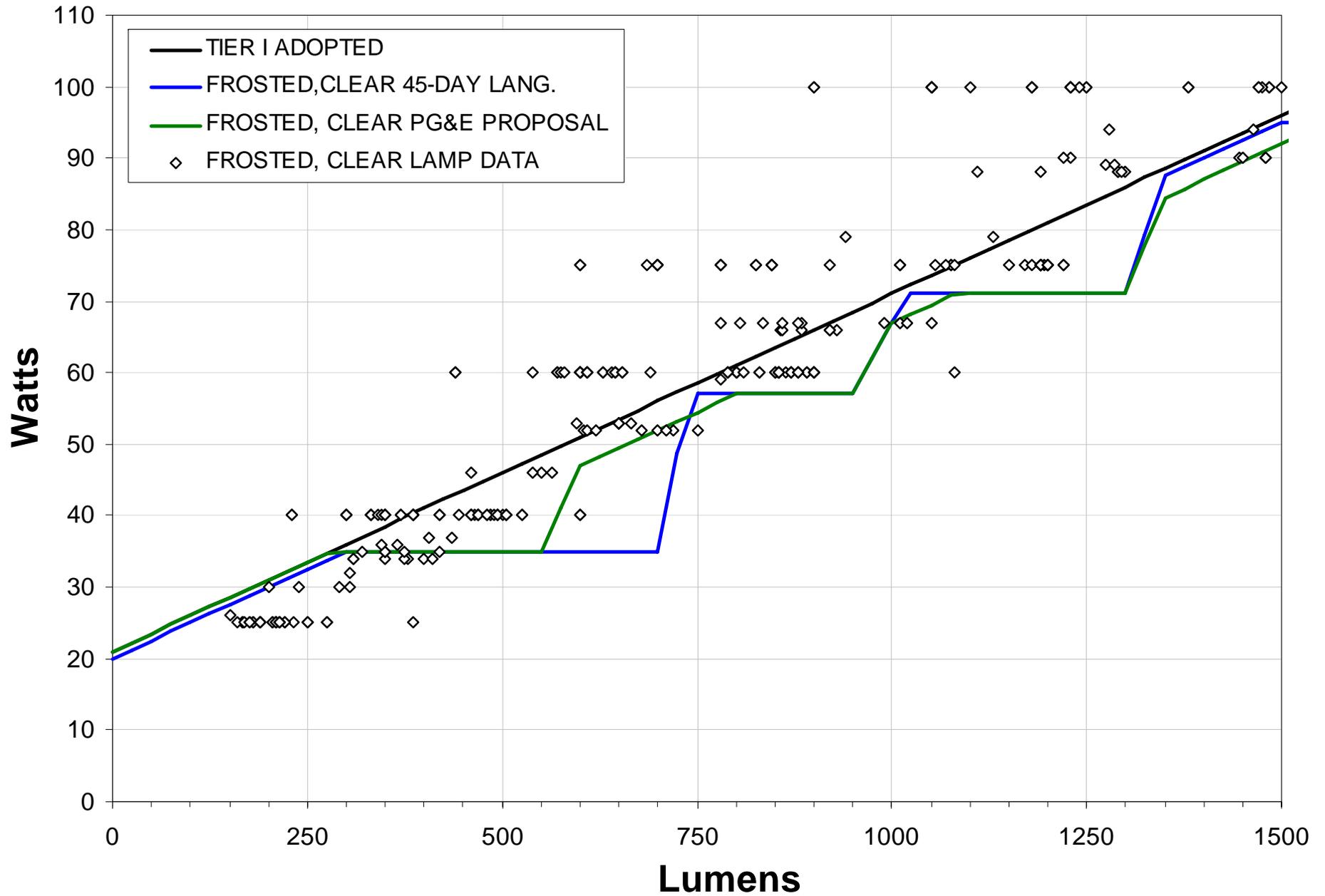
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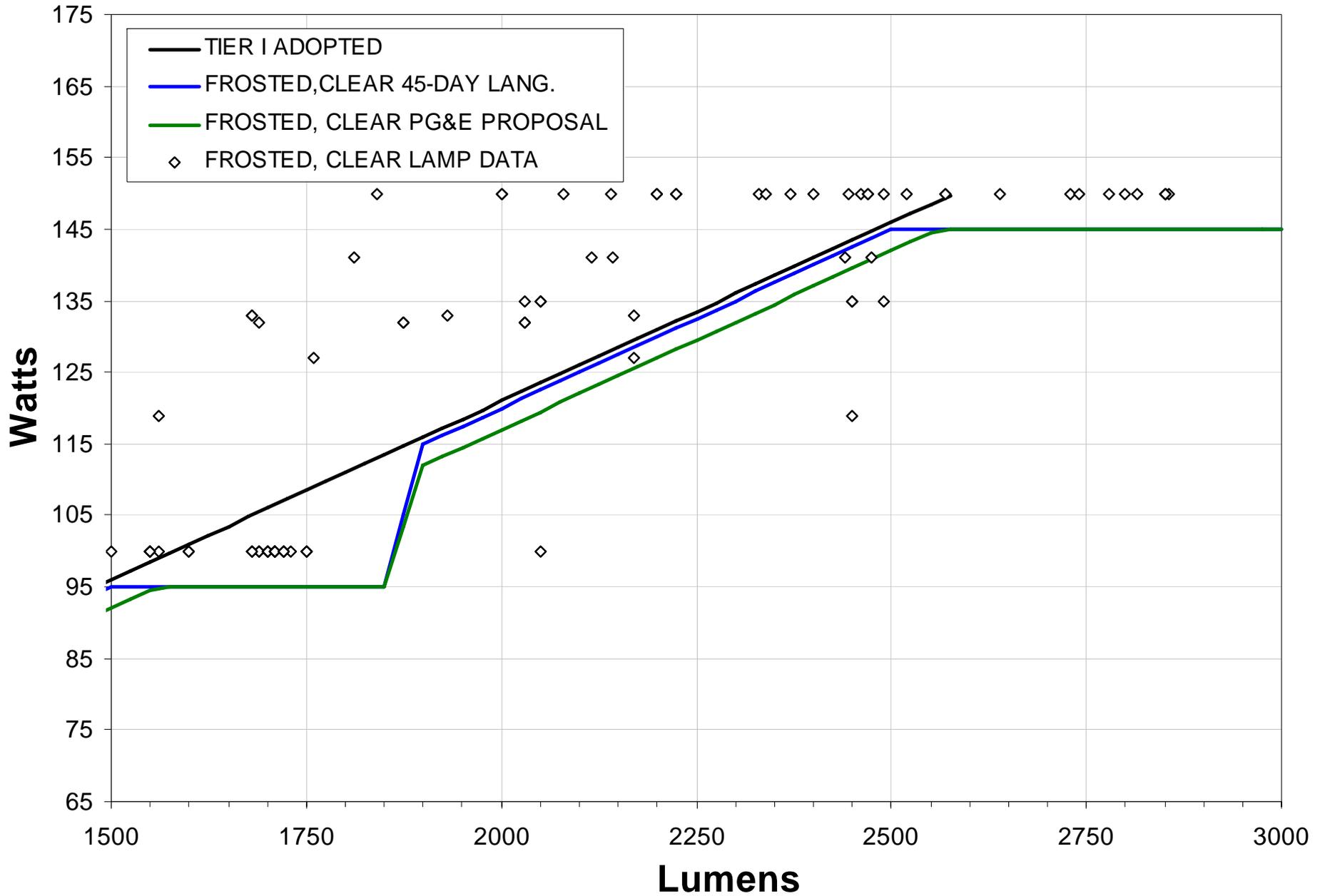
COMPARISON OF FROST/CLEAR STANDARD PROPOSALS



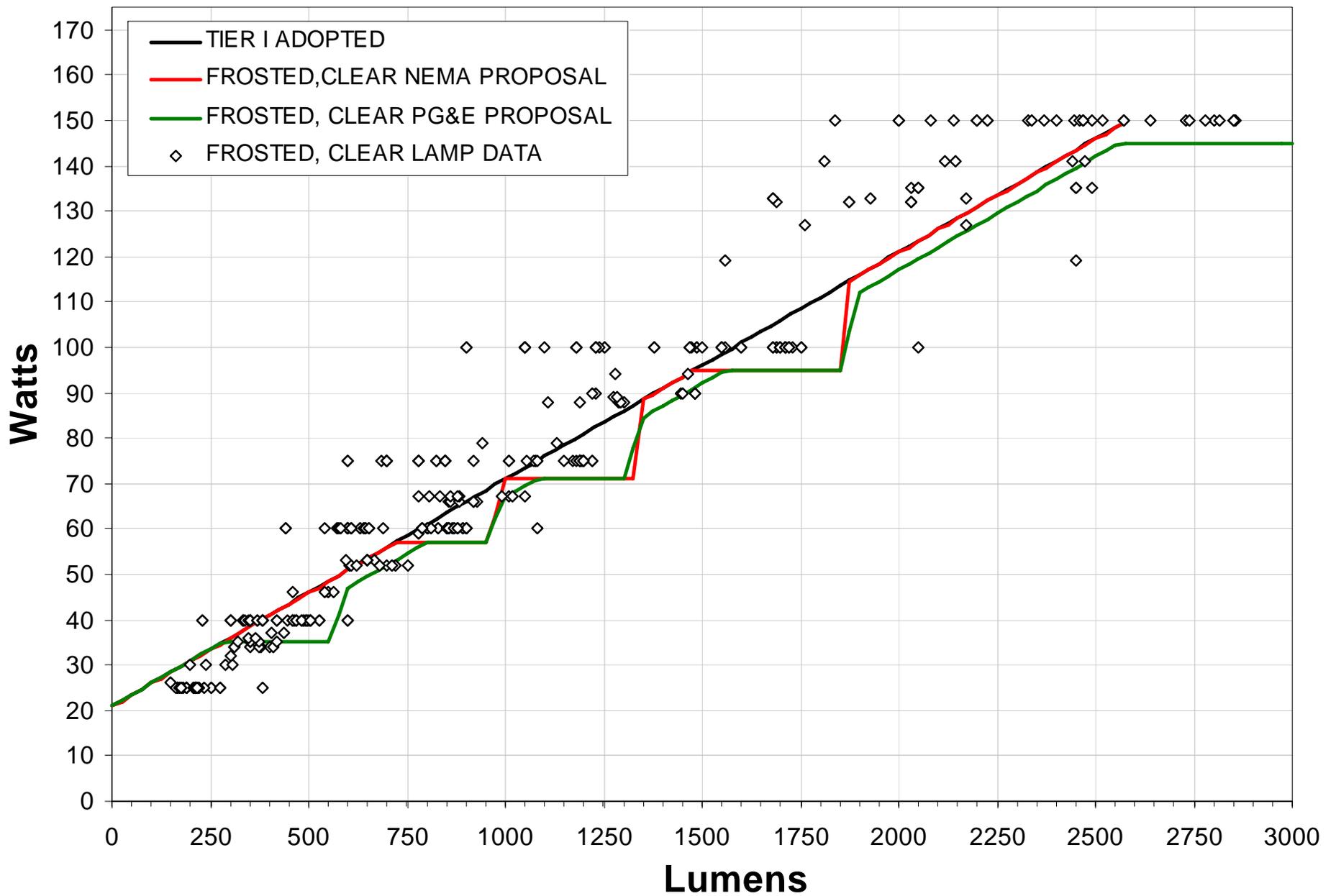
COMPARISON OF FROST/CLEAR STANDARD PROPOSALS



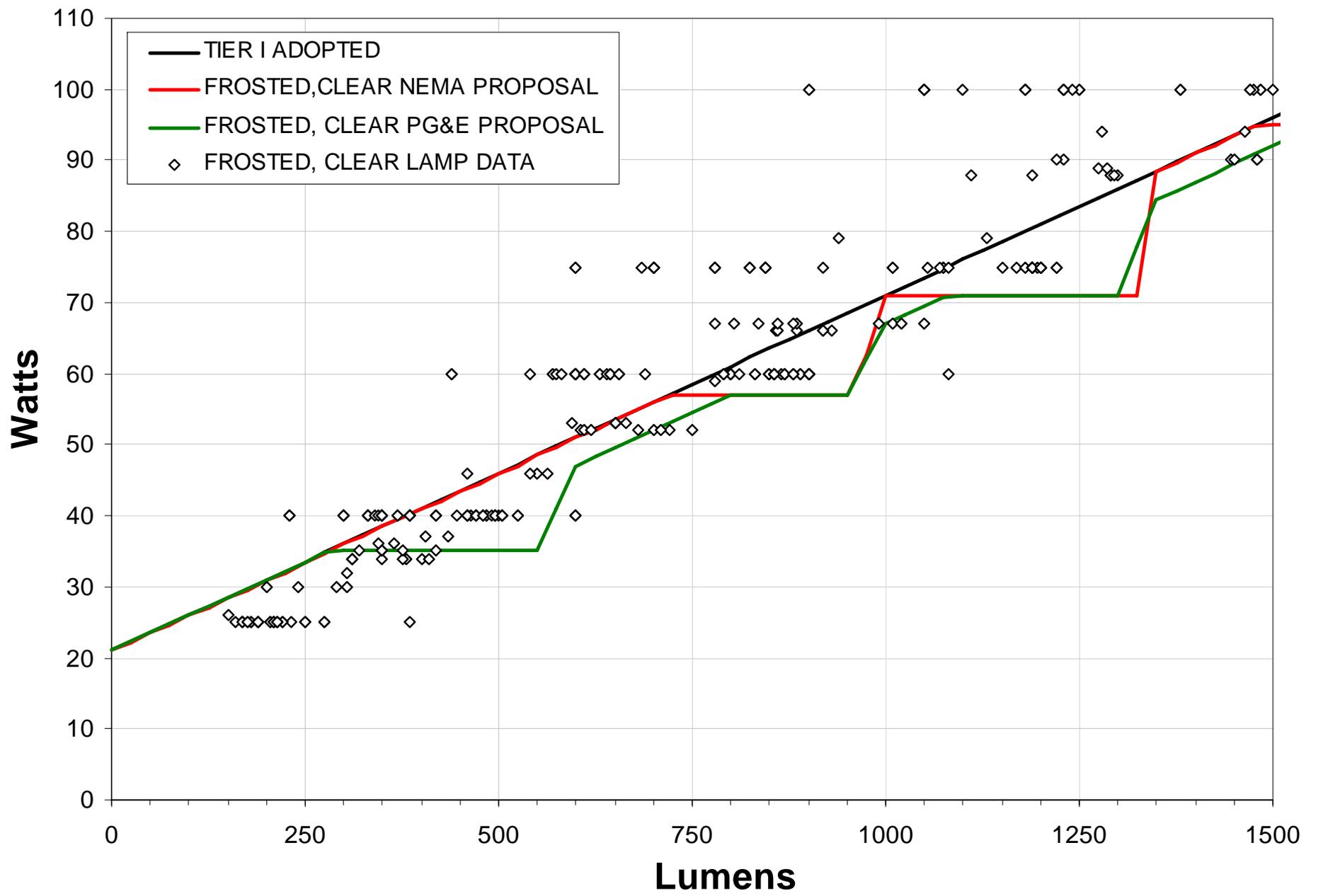
COMPARISON OF FROST/CLEAR STANDARD PROPOSALS



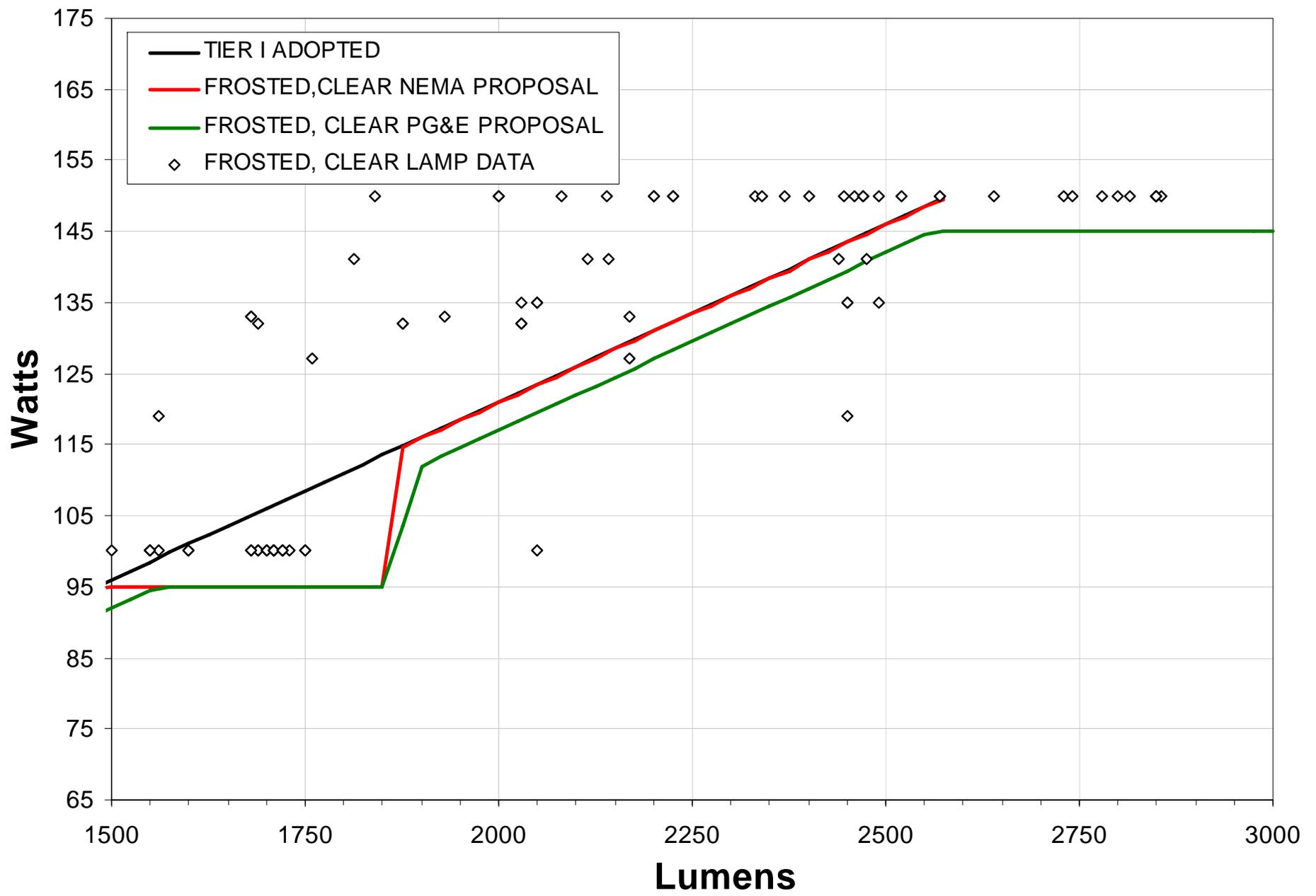
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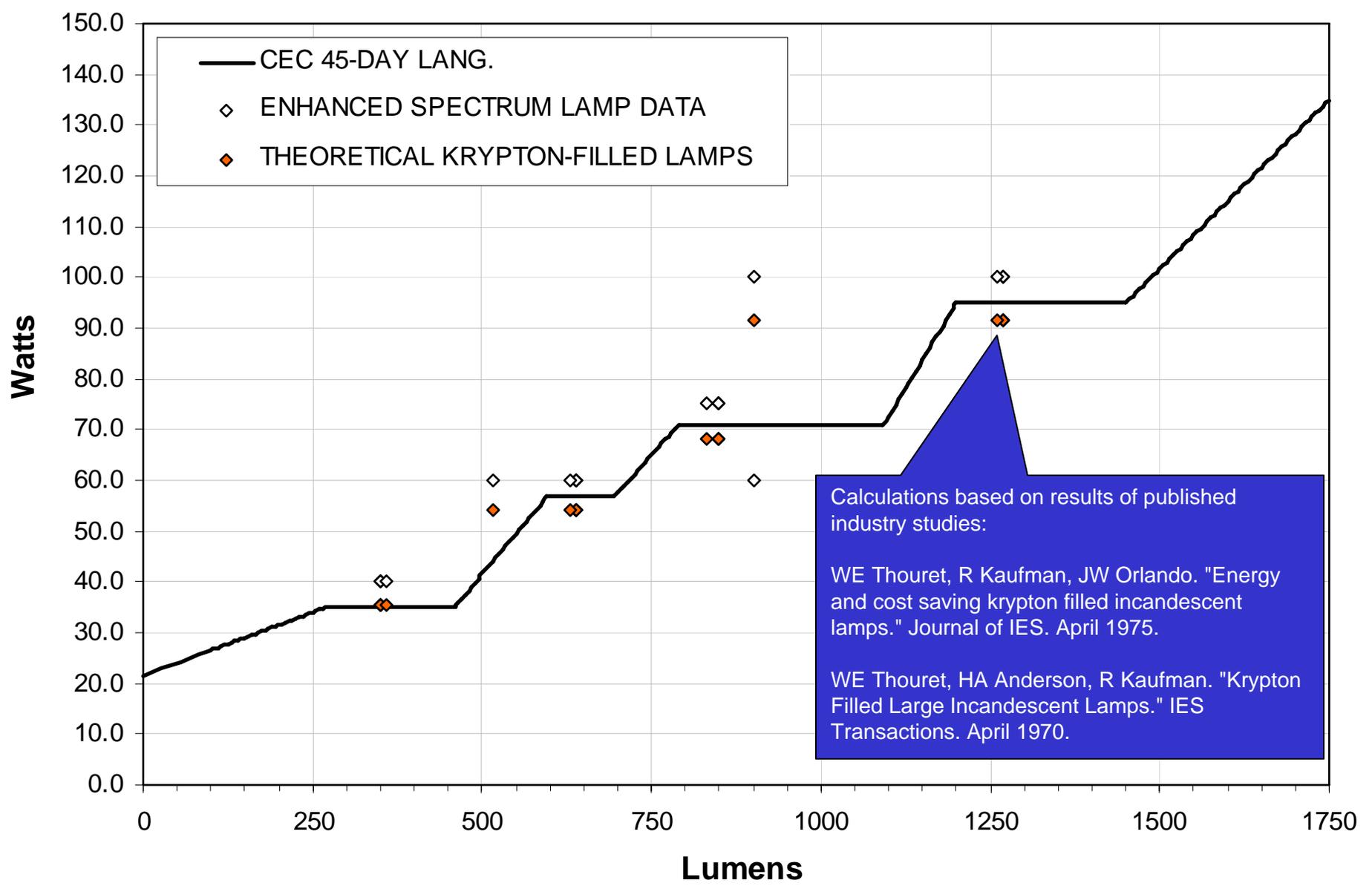
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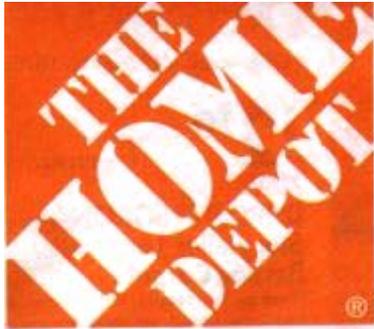
ENHANCED SPECTRUM TIER II



Summary of Differences

- Maintain gap of a few watts between Tier 1 and Tier 2 line to keep advancing technology and secure additional cost effective savings.
- Maintain parallel slope lines at parts of the curve other than plateaus
- Retain lamps from 101-150 watts and 40 to 57 watts.

Modified Spectrum Bulbs No Longer Just Niche Products



You can do it. We can help.

**NO PAYMENTS,
NO INTEREST
UNTIL JANUARY
2007**

ON ANY PURCHASE OF \$299 OR MORE
MADE ON THE HOME DEPOT CONSUMER
CREDIT CARD FROM 1/12/06 - 1/16/06.



5 DAYS ONLY
\$20 OFF
5-GALLON CANS

By manufacturer's
mail-in rebate**

\$5 OFF
**1-GALLON
CANS**

By manufacturer's
mail-in rebate**



\$139 was \$169

RYOBI® Super Comba II 18-Volt, 5-Piece Combo Kit
Includes 2 rechargeable battery packs, 1-hr. diagnostic charger and
carrying case. HP518MK2 (200706)

\$8.93 EA.
140 Oz.
SIMPLE GREEN
Concentrated
Cleaner
Makes up
to 5 gallons.
(431429)



NEW
\$4.97
GE 60W
Reveal Pantry
10-Pack
Stock up
and save!
(512089)



“Pantry
Pack” of 10
GE Reveal
60 watt
bulbs for
less than
\$0.50 each
on front
cover of
Home Depot
advertising
insert, Jan.
2006.

GENERAL PURPOSE



reveal 60

clean, beautiful light™



Photos enhanced to dramatize difference in color

ENHANCED COLOR SPECTRUM



light output:
630 lumens

energy used:
60 watts

life:
1000 hours

contains:
4 bulbs(A19)

To save energy costs, find the bulbs with the light output you need, then choose the one with the lowest watts.

Product Marketing Messages on Modified Spectrum Lamps Clearly State their Intent to Replace Every Lamp in the House:

- “General Purpose”
- Higher ranking than soft white on “Quality of Light Scale”
- “Transform every room in your home from ordinary to extraordinary with Reveal bulbs”
- “Try Reveal bulbs wherever you want clean, beautiful light”

What about the Niche Product Assertion?

- Modified spectrum products have less than 10% market share today, but are heavily advertised, highly profitable to sell, and sales are rising.
- Will be a larger share of *future* sales.
- “Niche product” doesn’t mean “intended for limited application” in the lighting industry. It means “multi-million dollar marketing campaign hasn’t yet persuaded everyone to pay extra for less light, but we’re working on it.”

November 10, 1992

COMPANY NEWS; G.E. SETTLES CLAIM THAT LIGHT BULB LABELS ARE MISLEADING

The General Electric Company has agreed to revise advertising for its Energy Choice light bulb, following accusations by the Federal Trade Commission and attorneys general in 32 states that it has misled consumers. In a settlement announced yesterday by the F.T.C., the company also agreed to pay \$165,000 to the 11 states that led the investigation.

On the package, G.E. indicated that the bulbs were replacements for higher-wattage bulbs and said that the Energy Choice bulbs would lower customers' energy bills and reduce the use of coal and other fuels used to produce electric power. For example, G.E. pitched its 90-watt Energy Choice bulb as a replacement for a conventional 100-watt bulb. "There wasn't anything special about the light bulbs," said Craig Jordan, an Texas assistant attorney general in Dallas who worked on the case. "It wasn't producing the same amount of lumens as a 100-watt bulb." The company did not return a phone call seeking comment.

“G.E. pitched its 90-watt Energy Choice bulb as a replacement for a conventional 100-watt bulb. ‘There wasn’t anything special about the light bulbs,’ said Craig Jordan, a Texas assistant attorney general in Dallas who worked on the case. ‘It wasn’t producing the same amount of lumens as a 100-watt bulb.’”

Taking on a Goliath

Petaluma mom sues over bulb 'gimmick,' wins

by Ted Appel - Staff Writer

Susan O'Connor had no idea she was about to pick a fight with one of the world's biggest companies when she reached for the package of light bulbs inside a Petaluma drugstore last year.

"My eyes went to the green box. I thought I would try some of these," the 32-year-old mother of four recalled.

Three weeks ago, General Electric Co. agreed to pay \$3.25 million to settle a class-action lawsuit brought by O'Connor and other consumers who charged that GE used misleading packaging to make them believe the light bulbs were environmentally friendly.

O'Connor's legal odyssey began in August 1992 when her fiancé teased her about buying several GE "Energy Choice" light bulbs to replace the bulbs that were going dark in her Petaluma home.

The light bulbs were more expensive than conventional bulbs - \$4.79 for a package of four "100-watt replacement" bulbs vs. \$3.49 for a package of regular 100-watt GE bulbs. But O'Connor said she decided to purchase them because the green-and-yellow box proclaimed the light bulbs would save \$2.40 in electricity costs, conserve natural resources and reduce air pollution. "My fiancé said, 'Why did you go buy this? This is a gimmick,'" O'Connor said. "I told him, 'It says we're going to save money.' He said, 'No, it's just the packaging you paid more for.'"

Indeed after closely reading the package and examining the light bulb, O'Connor discovered the "100-watt replacement" was simply a 90-watt light bulb that produced less light and used less energy.

"I was upset," O'Connor said. "My first thought was, 'How can they get away with this?' They were charging more and actually giving the consumer less



Petaluma homemaker Susan O'Connor

Three other class-action lawsuits against GE were consolidated with O'Connor's suit in U.S. District Court in San Francisco. After several months of negotiations, GE agreed to pay a \$3.25 million settlement to end the case - although it denied violating any law and insisted it had disclosed enough information for consumers to make an informed decision.

"We vigorously dispute any kind of wrongdoing at all," Fraser said. "They (the Energy Choice bulbs) have a lot of energy-efficiency value and conservation value. It provides nearly the same comparable light. Consumers could not tell a difference in the amount of light just by sitting under the light."

O'Connor disagrees.

\$4.79 vs. \$3.49 for a four-pack

"My first thought was, 'How can they get away with this?' They were charging more and actually giving the consumer less."

A co-worker at her escrow office heard O'Connor complaining about the light bulbs and urged her to contact Robert Mills, a San Rafael attorney who specializes in class-action lawsuits in investment fraud cases. O'Connor hesitated at first but then decided to call Mills when she heard similar complaints about the light bulbs at work.

"Somebody has to stand up for the consumer," she said.

Mills researched O'Connor's complaint and filed a class-action lawsuit against GE last January. The suit accused the company of carefully designing the packaging for its Energy Choice bulbs to mislead consumers into thinking the light bulbs were more energy efficient than conventional bulbs.

"In fact, Energy Choice bulbs, due to their low light output, do not 'replace' corresponding regular bulbs any more than a pint of mild 'replaces' a quart," Mills charged in the lawsuit.

The lawsuit hit General Electric two months after it reached agreement with the Federal Trade Commission and a group of state attorneys general over similar complaints about its packaging of Energy Choice and Miser light bulbs. Under the FTC agreement, General Electric agreed to alter its packaging to display the actual wattage and light output - measured in lumens - more prominently. Previously, the actual wattage and lumens were described in small print while the packaging featured the higher-wattage bulb it is intended to replace.

"We had already begun the process of modifying our packaging prior to this class-action suit," said Janice Fraser, spokeswoman for GE Lighting in Cleveland.

"You can definitely see that it puts out less light," she said.

Under settlement GE will pay \$1 million to 12 law firms involved on four suits. Most of the remainder of the money will be distributed to consumers through coupons and rebates ranging from 50 cents to \$2 for each bulb. GE can spend up to \$250,000 publicizing the rebates.

O'Connor, who does not get any money from the settlement, says she is happy with the agreement.

"This will set a precedent for companies. They will think twice about their advertising gimmicks," she said.

O'Connor said she does not view herself as a consumer warrior or an environmental activist. "I'm just your average homemaker," she said, adding with a chuckle. "I don't like being teased. That's basically how it happened."

She urges other consumers to be vigilant - and to take action.

"Instead of complaining, try to do something about it," she said. "People get scared sometimes to take the initiative. But we are not going to make things better unless we try to do something about it."

Home Energy Magazine Online March/April 1993

TRENDS IN ENERGY

False Advertising Ceases, Bum Deal Continues

Following charges by the Federal Trade Commission (FTC) and 32 states that General Electric Co. falsely represented its "Energy Choice" incandescent light bulbs to consumers, the lighting product giant has agreed to make specific modifications in the packaging and advertising of the bulbs in order to settle the charges, without conceding violations of any laws or regulations.

GE's Energy Choice line of bulbs, introduced in April 1991 to coincide with Earth Day, includes four incandescent bulbs, nine compact fluorescent lamps, three fluorescent tubes, and one halogen infrared lamp. At issue are the Energy Choice incandescent bulbs which are touted as replacements for standard bulbs of typically higher wattages. For example, a 90W incandescent bulb is designed to replace a 100W bulb. However, it provides only 1,540 lumens compared with 1,710 lumens for the 100W bulb. The package for this bulb prominently displayed in large print the number "100," and below in smaller print the phrase, "watt replacement for only 90 watts."

In explaining the charges, FTC Boston Region Director Phoebe Morse, whose office handled the investigation, stated, "We alleged that the packaging on the incandescent bulbs mislead customers to believe they would save energy and save money with the same wattage as a 100W bulb, for example, and that consumers were not adequately told that the bulb produced less light than a 100W bulb." Morse noted that the charges applied only to GE's Energy Choice incandescent bulbs and the Energy Choice halogen bulb, and involved the packaging and a GE television commercial. The FTC settlement permits GE to use leftover existing packaging for 120 days after the commission's acceptance of the agreement as a final order.

A separate agreement between GE and 32 states was announced at the same time as the FTC agreement last November. The states charged that GE's advertising implied the bulbs were a new type of technology, which was not the case with incandescents. Advertising also falsely claimed that switching to the bulbs would save significant amounts of energy and fossil fuel resources, when such savings are relatively small, the state's alleged. The states made specific requests for printing changes on the incandescent bulb packaging. GE also agreed to pay a total of \$165,000 in legal costs to the states.

John Betchkal of GE Lighting said the company has implemented the package change, and he said the new incandescent packages would probably replace existing inventories of the former packages by about March 1993. "The products remain unchanged, but we have revised the package to show in large type the wattage of the bulb being sold, and indicating that the bulb produces nearly the same amount of light as traditional bulbs while saving the consumer money and saving energy," stated Betchkal.

The Energy Choice bulbs have been criticized since their 1991 introduction. Chris Calwell of the Natural Resources Defense Council and chairman of The California Compact Florescent Consortium remarked that members of the Compact met with representatives of GE in 1991. They told GE their Energy Choice incandescents did not fit the Compact's definition of an energy efficient product: The bulb has to deliver the same or better lighting efficiency as the product it replaces, with less energy consumption. *Consumer Reports* has also called GE's energy conservation claims misleading in connection with the Energy Choice bulbs.

-- Ted Rieger

Ted Rieger is a freelance writer for trade publications and specializes in energy topics. He lives in Sacramento, Calif.

Packaging from General Electric's "Energy Choice" incandescent bulb has been criticized for listing the actual wattage, in this case 67W, in much smaller type than the "watt replacement," 75W. This representation implies that bulb performance is equivalent to the higher wattage.

Key Outcomes of Litigation over Energy Choice Bulbs:

- GE modified packaging to remove claims of equivalence from dimmer bulbs. Now says "nearly the same amount of light."
- Settlement between GE, the Federal Trade Commission, and 32 states – GE paid \$165,000 in legal costs.
- GE settled four class action lawsuits filed by consumers for a total of \$4.25 million, covering legal costs and giving rebates and coupons to consumers of \$0.50 to \$2.00 each to offset the extra money they were charged for dimmer bulbs.

Conclusions

- Energy efficiency standards should deliver comparable light output, lifetime, and product performance for less power use.
- Standards should not encourage the sale of dimmer lamps. Californians expect to get an equivalent or superior product if they pay more for it.
- There is a potential for consumer and press backlash unless krypton, halogen, and other efficiency technologies are used to deliver comparable service for lower power use.