

Residential Lighting Breakout Session

June 11, 1:30 – 3:00 Eastern
Boston, MA



Working Together, Advancing Efficiency

Goals of Session

- Discuss market, technical, and regulatory changes and their implications to programs
- Identify what is known and unknown
- Discuss possible program responses

- *Premise:*
 - *Better information over the next few years will lead to better programs and greater savings impacts*

Market & Technical - What We Know

- CFL sales are increasing
 - 2007 CFL sales were nearly double 2006 sales
 - CFL sales ~20% of the US light bulb market
- SSL products are being introduced
 - DOE testing shows wide variations in performance
 - ENERGY STAR announcements

Market & Technical - What We Don't Know

- Where are all these CFLs going?
 - New purchasers vs. repeat purchasers
 - High-use locations vs. stockpiling
- Will CFL sales continue to increase?
 - At what rate?
- How fast will SSL be introduced and adopted?
 - For what applications?
- *What else don't we know?*

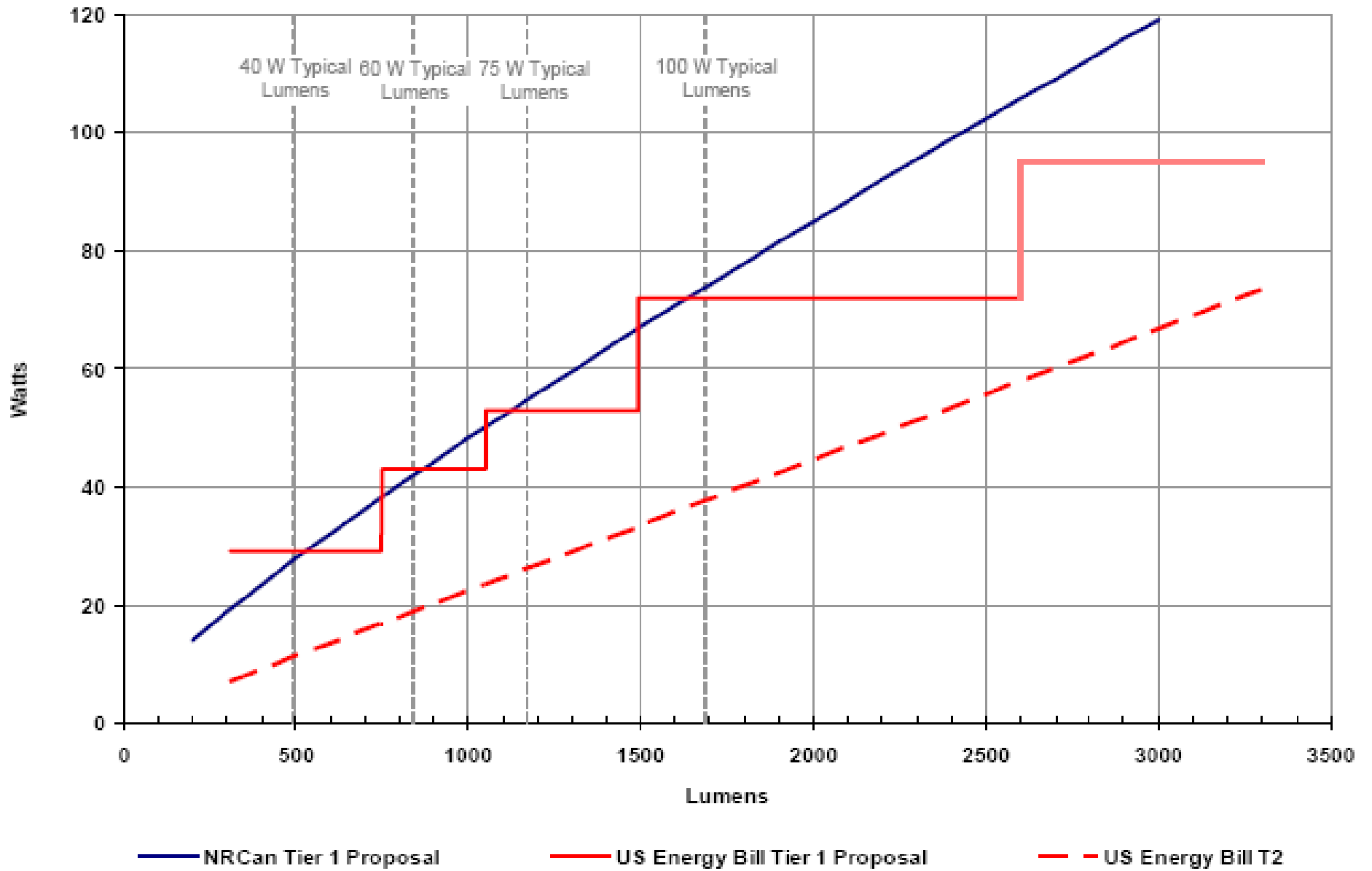
Regulations - What We Know

- EISA created standards in the US that take effect in 2012
 - Impact general service lamps only
- A Tier 2 rulemaking must deliver at least 45 LPW by 2020
- Another rulemaking to explore higher levels and exempt products by 2022

US Standards - General Service

Current Wattage	Rated Lumen Ranges	Max. Rate Wattage	Lumen per Watt (LPW) Range	Effective Date
100	1490-2600	72	20.7 – 36.1	1/1/2012
75	1050-1489	53	19.8 – 28.1	1/1/2013
60	750-1049	43	17.4 – 24.4	1/1/2014
40	310-749	29	10.7 – 25.8	1/1/2014

Also includes 1000 hr. lifetime requirement, and CRI of 80



Source: PG&E, Ecos

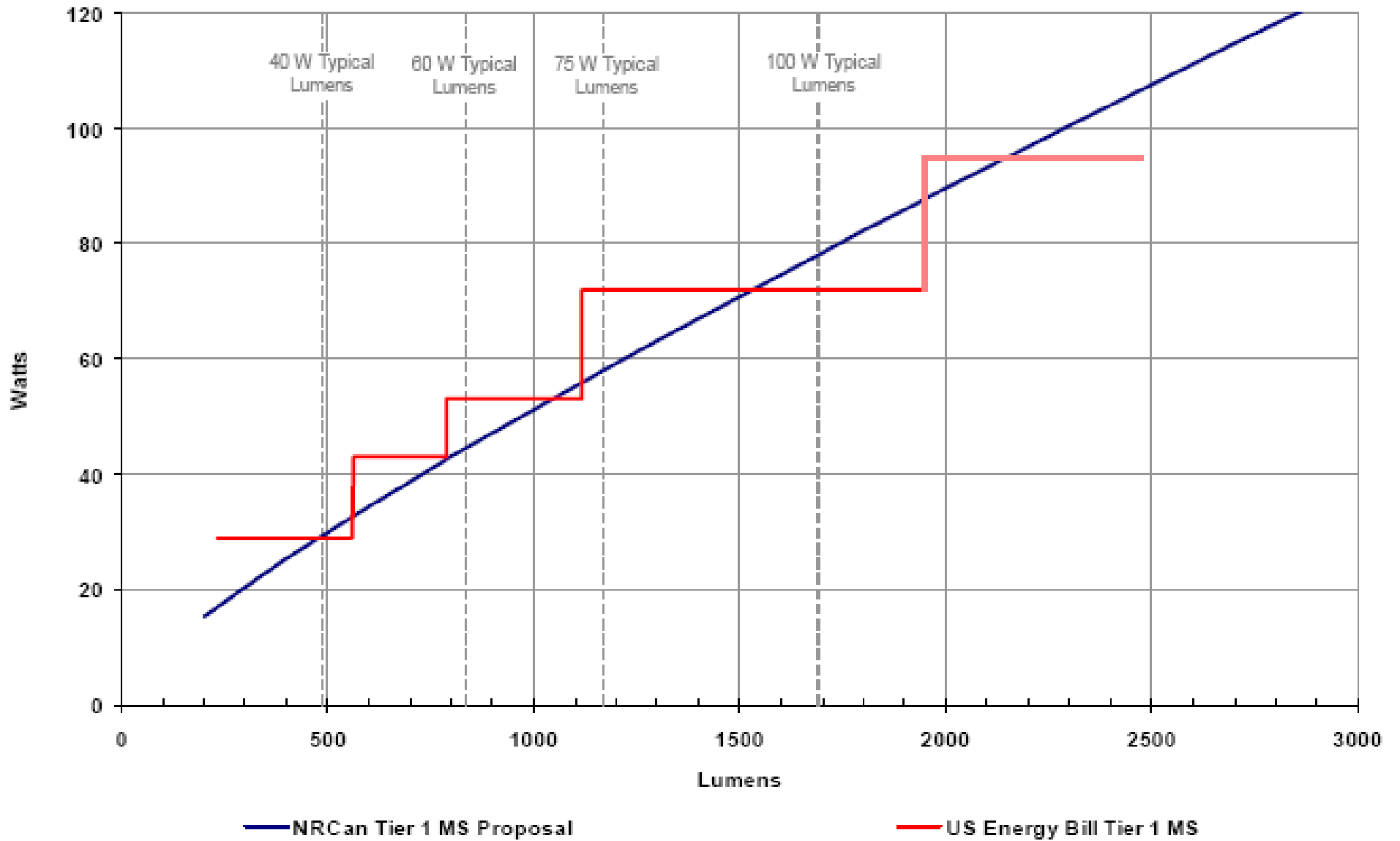
US Standards - Modified Spectrum

Current Wattage	Rated Lumen Ranges	Max. Rate Wattage	Lumen per Watt (LPW) Range	Effective Date
100	1118-1950	72	15.5 – 27.1	1/1/2012
75	788-1117	53	14.9 – 21.1	1/1/2013
60	563-787	43	13.1 – 18.3	1/1/2014
40	232-562	29	8.0 – 19.4	1/1/2014

Also includes 1000 hr. lifetime requirement, and CRI of 75



Working Together, Advancing Efficiency



Source: PG&E, Ecos

Regulations - What We Don't Know

- Will we see more modified spectrum lamps?
- Will we see more exempt lamps (3-way or lamps over 2,601 lumens)?
- Will lamps get dimmer?
- What technologies will we see?
 - CFLs?
 - High-efficiency incandescents?

Regulations - What We Don't Know

- Standards in Canada
 - Dec. 2007 proposal was a curve, not a series of plateaus
 - 40% more efficient than the “best fit” curve derived from an incandescent lamp database

- *What else don't we know?*

Discussion Questions

1. What information do we need to track during this transition to inform programs?
2. What is your definition of success for CFLs?
3. How can we continue to make efficiency gains in residential lighting?