

# Invitation to Participate: Lighting

2013 Appliance Efficiency Rulemaking  
California Energy Commission

April 3, 2013

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# The California Energy Commission

- ❑ The state's primary energy policy and planning agency, created by the Legislature in 1974
- ❑ Responsibilities include promoting energy efficiency and conservation by setting minimum appliance and building efficiency standards, and other cost-effective measures
- ❑ The Commission's appliance and building energy efficiency standards have saved Californians more than \$74 billion in reduced electricity bills since 1975



# Appliance Efficiency – A Statutory Mandate

## Warren-Alquist State Energy Resources Conservation and Development Act

Public Resources Code Section 25402(c)

*Requires the Commission to adopt minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy and water efficient appliances whose use requires a significant amount of energy or water on a statewide basis.*



# Scoping Workshop

August 31, 2011

- ❑ The Commission held a Public Workshop to seek comments about the proposed scope of potential new appliance efficiency measures.
  
- ❑ Interested parties
  - gave technical presentations
  - provided comments
  - submitted proposals for various appliances



# Order Instituting Rulemaking

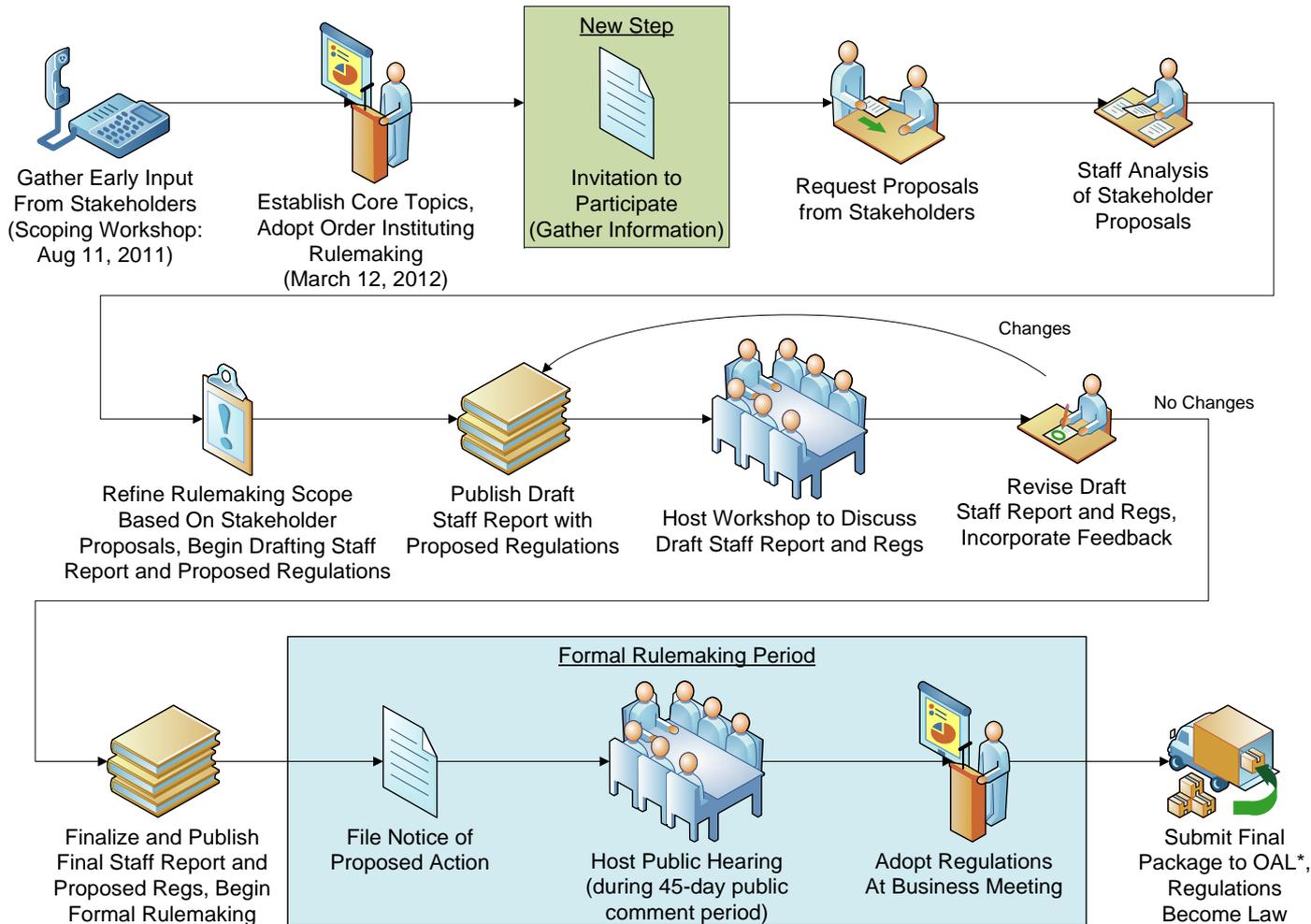
March 14, 2012

- ❑ The Commission issued an Order Instituting Rulemaking (OIR) to begin the process of considering standards, test procedures, labeling requirements, and other efficiency measures for a number of appliances.
- ❑ The rulemaking was divided into three phases based on the information provided by the stakeholders and staff analysis.
- ❑ More information related to this proceeding is available online: <http://www.energy.ca.gov/appliances/2013rulemaking/>



# Invitation to Participate (ITP)

## Appliance Energy Efficiency Rulemaking Process



\*Office of Administrative Law



# Purpose of Invitation to Participate

- ❑ The Commission is gathering information to determine how to proceed with products listed in Phase 1 of the OIR.
- ❑ The ITP is an opportunity for stakeholders to inform the Commission's policy, direction, and process.
- ❑ *All interested parties are encouraged to take advantage of this important opportunity to shape the development of draft efficiency standards and measures.*



# Phase 1 Products

- ❑ **Consumer Electronics**

computers, displays, game consoles, and set-top boxes

- ❑ **Lighting**

fluorescent dimming ballasts, light-emitting diode (LED) lamps, and multi-faceted reflector (MR) lamps

- ❑ **Water Appliances**

faucets, toilets, urinals, and water meters

- ❑ **Other Appliances**

commercial clothes dryers, air filter labeling, residential pool pumps & motors, and portable electric spa labeling



# Lighting Products Data Requests

Please provide information and data for the following:

- ❑ All Lighting Product Categories
- ❑ Fluorescent Dimming Ballasts Category
- ❑ Light-Emitting Diode (LED) Lamps Category
- ❑ Small Diameter Directional (MR) Lamps Category



# Data Requests: All Lighting Categories

*For all lighting product categories (fluorescent dimming ballasts, LED lamps, and MR lamps), please provide data and discussion regarding:*

1. Category definition and scope
2. Standards (existing or under development)
3. Test procedures (existing or under development)
4. Sources of test data (confidential or public)
5. Energy use metrics (e.g., lumens vs. beam lumens per watt)
6. Relevant performance indicators
7. Range of typical performance for each indicator
8. Incremental costs of energy efficiency features



# Data Requests: All Lighting Categories

*(Continued)*

9. Product development trends
10. Market barriers to energy efficiency
11. Number of California small businesses associated with manufacture, sale, distribution, or installation
12. Commercial vs. residential vs. governmental sector sales
13. How do consumers identify efficient products on the market?
- 14. Any other information relevant to this proceeding**



# Data Requests: Fluorescent Dimming Ballasts

1. Logical product categorization for analysis
  - Market share by category
2. Features that impact efficiency across the dimming range and in standby mode, and options to improve efficiency
3. Cost vs. ballast luminous efficiency (BLE)
4. BLE and lamp arc power across the dimming range
5. Typical range of color shift / flicker at dimmed levels
6. Controller impact on energy consumption



# Data Requests: Light Emitting Diode (LED) Lamps

1. Logical product categorization for analysis  
-- Market share by category
2. LM-79 and TM-21 reports
3. Types of dimming circuitry & minimum dimming levels
4. Patent or proprietary technology issues
5. Cost of improved color consistency & quality



# Data Requests:

## Small Diameter Directional (MR) Lamps

1. Logical product categorization for analysis
2. Test data for halogen, halogen-IR, and LED lamps
  - Lumen output, beam lumens, center beam candle power (CBCP), beam angle, and lifetime
3. Market share estimates for wattage categories (e.g., 50W, 35W, 20W), voltage (e.g. 12V vs. 120 V), transformer types (e.g., electronic vs. magnetic and associated performance considerations), technology type (e.g., halogen, halogen-IR, LEDs, and others), and use-case (residential vs. commercial)
4. Cost of halogen, halogen-IR, and LED lamps
5. Comment on energy-use metrics (e.g. efficacy in lumens per watt vs. beam lumens per watt)



# How to Submit Data & Information

- ❑ Responses to the Invitation should be submitted in writing to the Dockets Unit by

**4:00 p.m. PST on May 9, 2013**  
**Docket 12-AAER-2B**

- ❑ The Commission encourages interested parties to send information **up to 5 MB** by e-mail at [docket@energy.ca.gov](mailto:docket@energy.ca.gov)
- ❑ To comment on any of these Lighting topics, please include the docket number **12-AAER-2B** in the subject line



# How to Submit Data & Information

(Continued)

- If the file size is more than 5 MB, if the information includes an application for confidential designation, or if you prefer, paper copies of responses with electronic information provided on a CD or DVD may be sent to:

California Energy Commission

Dockets Office, MS-4

**Re: Docket No. 12-AAER-2B**

1516 Ninth Street

Sacramento, CA 95814-5512



# Confidentiality of Data

If interested parties need to maintain the confidentiality of specific data or information, they should contact Jared Babula in the Commission's Chief Counsel's Office *before* submitting a response to this Invitation. Otherwise, all responses received will become publicly available.

## Jared Babula

California Energy Commission,  
Office of the Chief Counsel

1516 Ninth Street, MS 14, Sacramento, CA 95814-5512

Telephone: (916) 651-1462

Email: [jared.babula@energy.ca.gov](mailto:jared.babula@energy.ca.gov)



# Next Steps

- ❑ **Public workshop** after the close of the ITP comment period to consider the merits of information and data received
- ❑ Following the workshop, the Commission will **request proposals** for updated efficiency standards or measures
- ❑ Commission staff are available to discuss questions and concerns at anytime during the proceeding



# Contact Information

**Gabriel D. Taylor, P.E. / Lighting Appliances**

[gabriel.taylor@energy.ca.gov](mailto:gabriel.taylor@energy.ca.gov) / 916-654-4482

**Please submit data and information to**

**[docket@energy.ca.gov](mailto:docket@energy.ca.gov)**

Docket #12-AAER-2B

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