

National Energy Technology Laboratory



Solid-State Lighting Program - “Organization”

C. Edward Christy

~~November 13, 2003~~

~~February 3, 2005~~

February 2, 2006



The History of this Presentation (It's not changed much over the years)

- Year 1 – Washington, DC - November 13, 2003
 - The SSL Program Kickoff
 - Program structure was basically a plan
- Year 2 – San Diego - February 3, 2005
 - NGLIA selected
 - Exceptional Circumstances Determination was in the DOE approval process
- Year 3 – Orlando - February 2, 2006
 - NGLIA and ECD operational



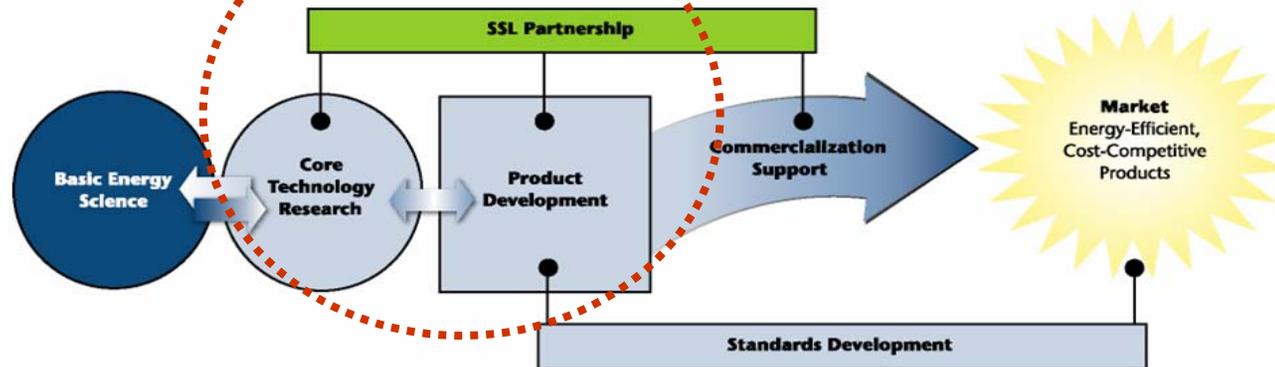
5 Thrusts....

We're Talking Primarily About 3 of Them



U.S. Department of Energy
Energy Efficiency and Renewable Energy

DOE Solid-State Lighting 5 Thrust – Total Program



Guiding technology advances from
laboratory to marketplace

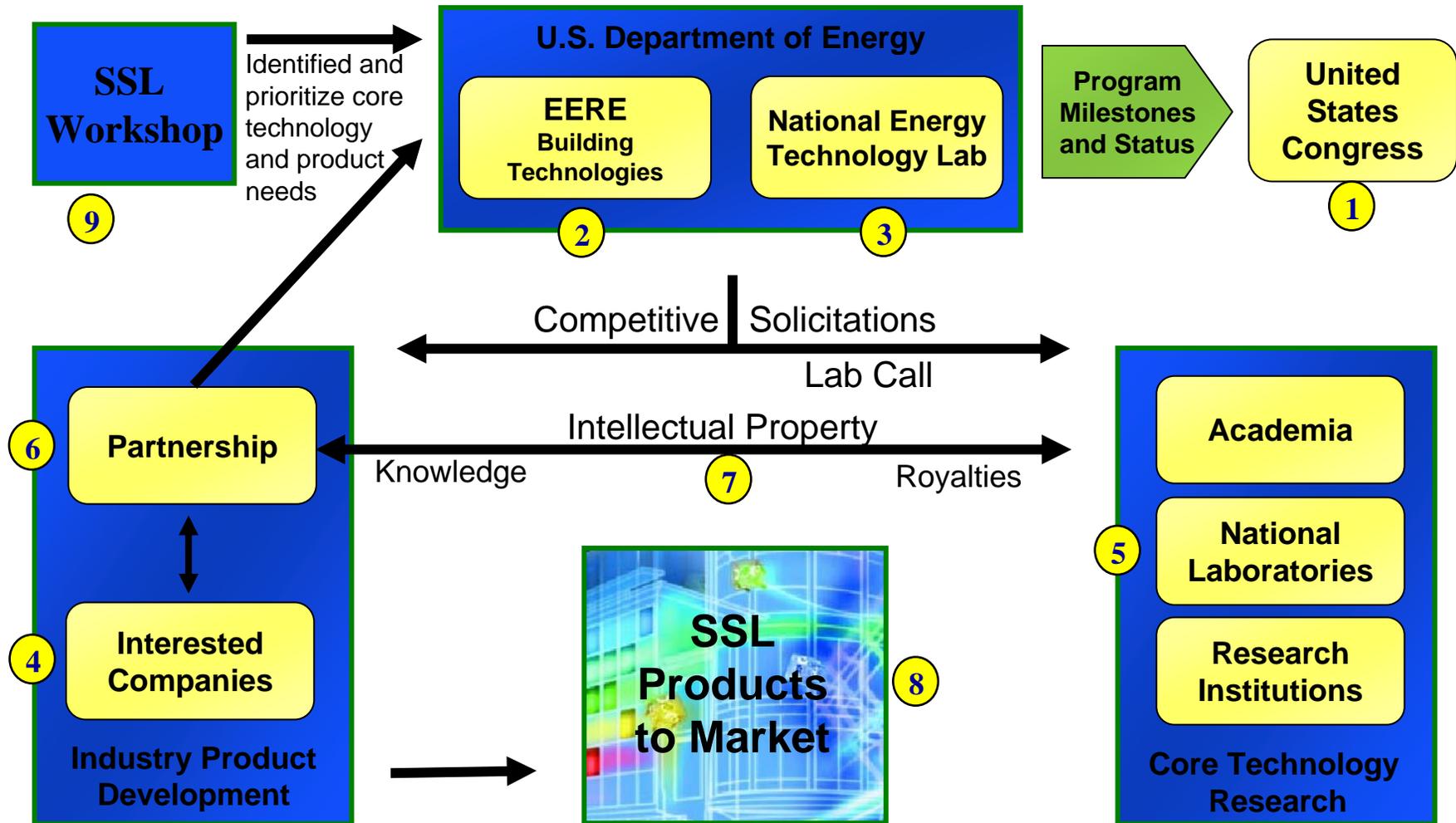


Cooperative R&D Program for SSL ...A Review

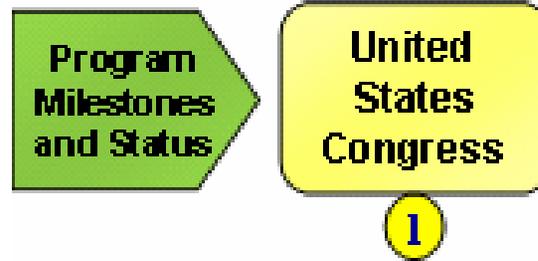
- Emphasize Competition
- Cost (and Risk) Sharing
- Partners Involved in Planning and Funding
- Targeted Research for Focused Need
- Innovative IP Provisions
- Open Information and Process
- Success determined by milestones met and ultimately energy efficient, long-life and cost-competitive products developed



Structure of SSL Operational Plan



United States Congress



The Legislative Authority Domenici-Barton Energy Policy Act 2005

Section 912

"The Secretary shall carry out a Next Generation Lighting Initiative in accordance with this section to support research, development, demonstration, and commercial application activities related to advanced solid-state lighting technologies based on white light emitting diodes."

- **Issues Appropriations and Language that “authorizes” the DOE to perform research and development in programs**
 - May issue appropriations
 - May issue language
 - Language may provide detailed guidelines on how to implement the program
- **Requires reporting on program success**
 - Milestones
 - Status

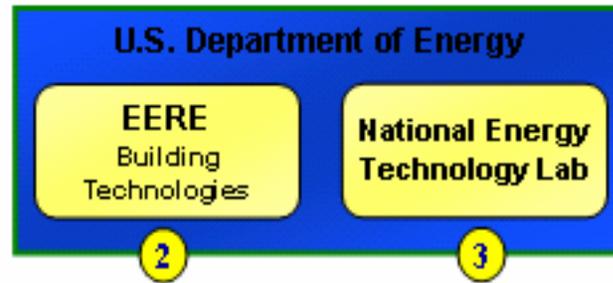
Next Generation Lighting Initiative Key Points

- Authorizes \$50 million for FY2007 through FY 2013
- Competitively select Industry Alliance
- Award competitive R&D projects
- Directs for intellectual property guidance - an Exceptional Circumstance Determination
- Make roadmaps and general information available to public

- www.netl.doe.gov/ssl



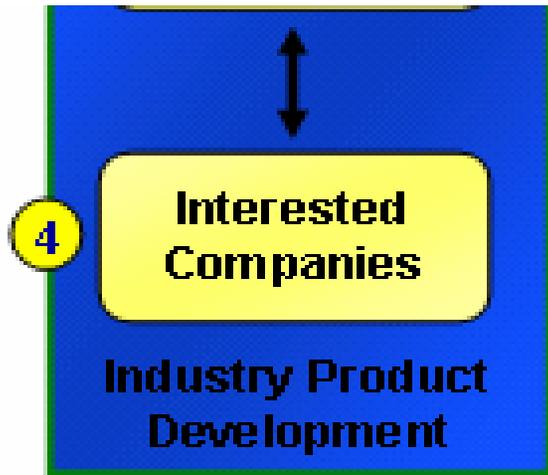
Building Technologies and NETL



- **EERE Building Technologies**
 - Serve as Program Lead for activities
 - Performs strategic planning
 - Performs program definition
 - Interfaces with Congress
- **National Energy Technology Laboratory**
 - Develops and issues solicitations
 - Performs project management of selected projects
 - Reports on project status to HQ



Interested Companies



- Competitive solicitation (aka Product Development) to industry
- Needs developed by DOE from SSL Workshop results
- Applications will require cost sharing
- Applications will require plan/SOW through development of a marketable SSL product

Note: Any EPC Act compliant organization may apply to the Product Development financial assistance solicitation. All organizations will be evaluated against all evaluation criteria

Core Technology Program

- **Solicitations**
 - to National Laboratories (“lab call”)
 - to academia and research institutions
- **Earlier stages of development**
- **May or may not require cost sharing**
- **Needs developed by DOE from Workshop results and input from Partnership group**
- **Applications will be for barrier issues that may apply to multiple technical areas, i.e. product development not required**

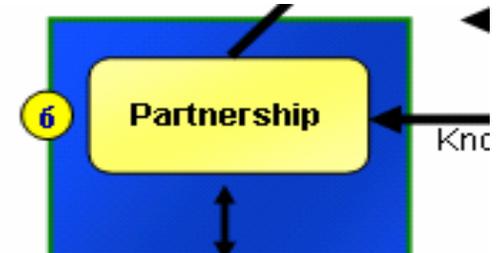


Note: Any EPAct compliant organization may apply to the Core Technology Program financial assistance solicitation. All organizations must abide by the provisions in the exceptional circumstances determination.



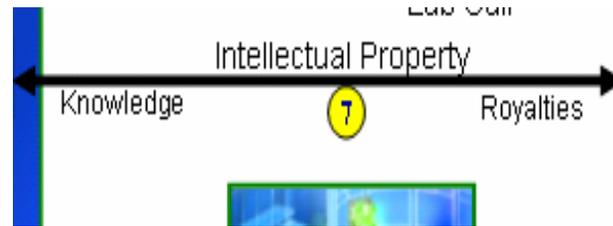
SSL Partnership

- Provide input to and prioritization of the Core Technology Needs
- Provide administrative expertise and staffing to organize and conduct technical meetings and workshops
- Support demonstrations of SSL
- Provide, at DOE's discretion, technical reviews of Core Technology projects
- Encourage efforts to develop SSL metrics and standards



Intellectual Property

“Exceptional Circumstance Determination”



- For a new patented invention made under the Government award Core Technology Program awardees must offer
 - Only to members of Alliance
 - For a one year period after patent issues
 - at least a nonexclusive license
 - in the field of solid-state lighting
 - On reasonable terms
 - royalty bearing
 - business plan

*** Taken from 2005 Workshop Presentation by Paul Gottlieb, Assistant General Counsel for Technology Transfer & Intellectual Property**



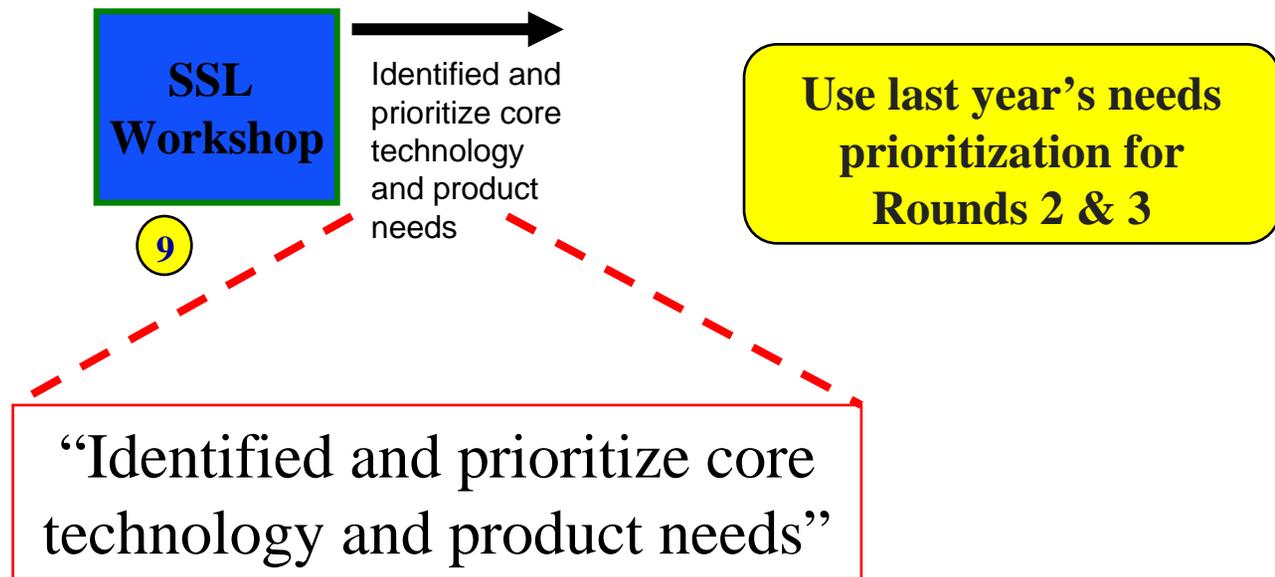
SSL Products to Market

SSL Program Target...

“By 2025, develop advanced solid state lighting technologies that compared to conventional lighting technologies, are much more energy efficient, longer lasting, and cost-competitive by targeting a product system efficiency of 50 percent with lighting of a high quality spectrum”



This Workshop....



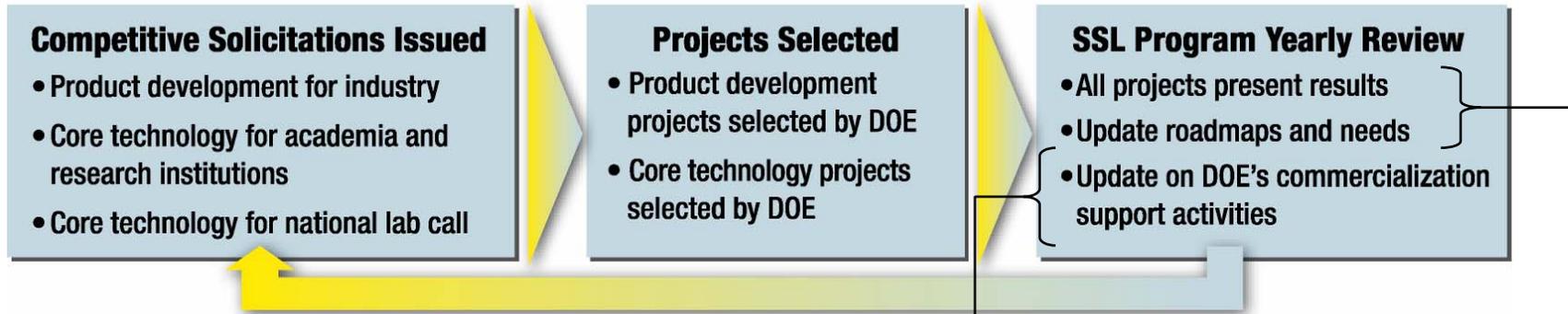
Purpose of This SSL Workshop:

- Better understand the SSL Program
- Brief project presentations
- Update on DOE's Commercialization Support Activities



SSL Operational Plan Process Status

SSL OPERATIONAL PLAN process (Figure 2)



	Issued	Selected *
Product:	5/20/04 & 11/22/05	5
Core Ind.:	2/26/04 & 8/12/05	7
Core Lab:	3/5/04 & 8/16/05	4

As in Previous Workshops

New Topic at Workshop

* All Round 2 solicitations expect to result in 2 -5 selections



Solicitation Status and Plan

- **Lab and Industry Core Solicitations- Round 2**
 - Selections Winter 2006
 - Awards Spring/Summer 2006
- **Product Solicitation- Round 2**
 - Applications Received 1/17/06
 - Selections Early Spring 2006
 - Awards Summer 2006
- **Lab and Industry Core Solicitations - Round 3**
 - Issue Spring 2006; Awards in FY07
- **Product Solicitation- Round 3**
 - Issue Spring/Summer 2006; Awards in FY07
- **SSL Nanoscience Technology**
 - Issue Winter 2006

