



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

Bringing you a prosperous future where energy
is clean, abundant, reliable, and affordable

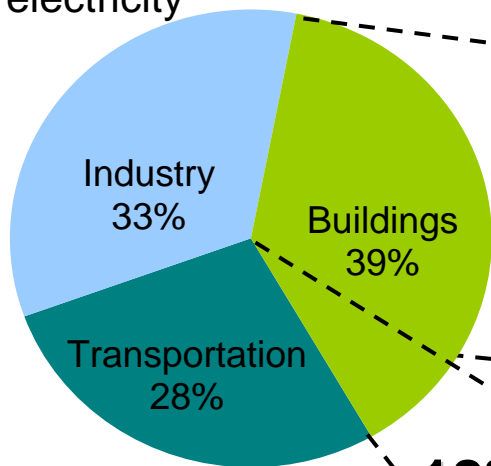
State of the Program Building Technologies Program

National Association of State Energy Officials
February 7, 2006 Remarks

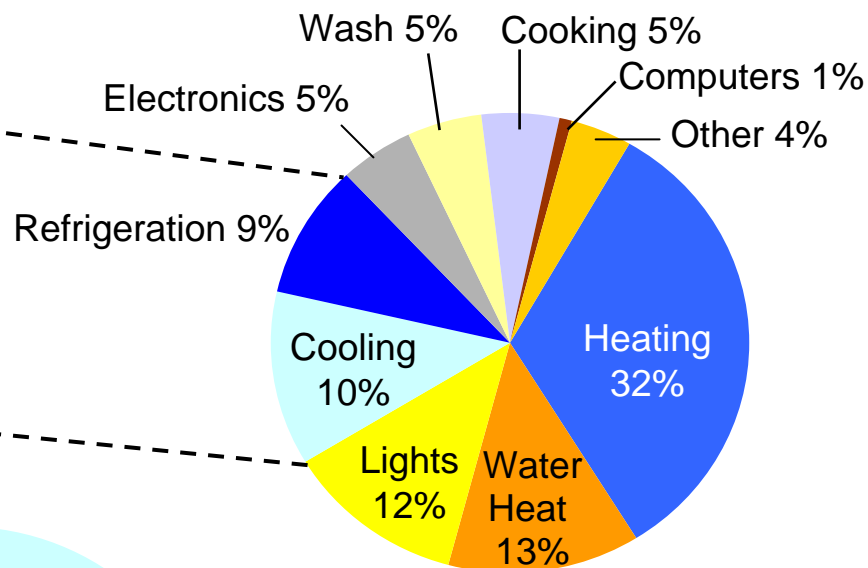
David E. Rodgers
Program Manager
Building Technologies Program



Buildings use **71%**
of electricity

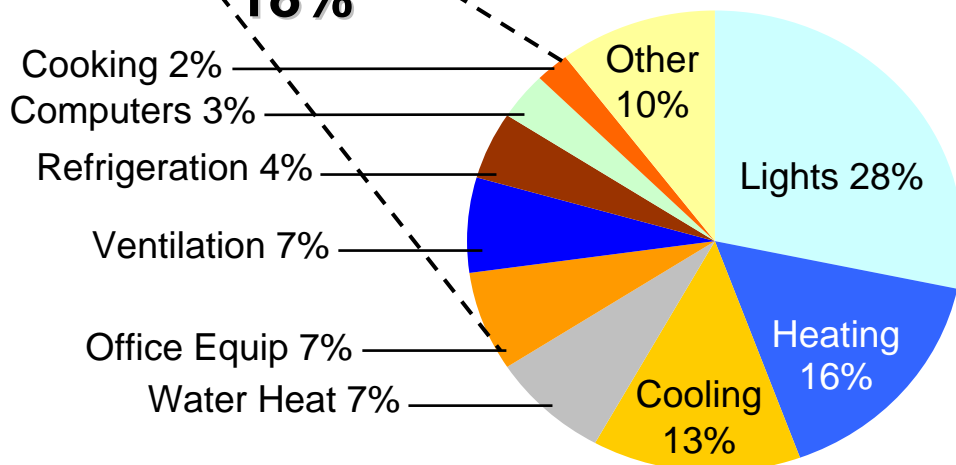


21%

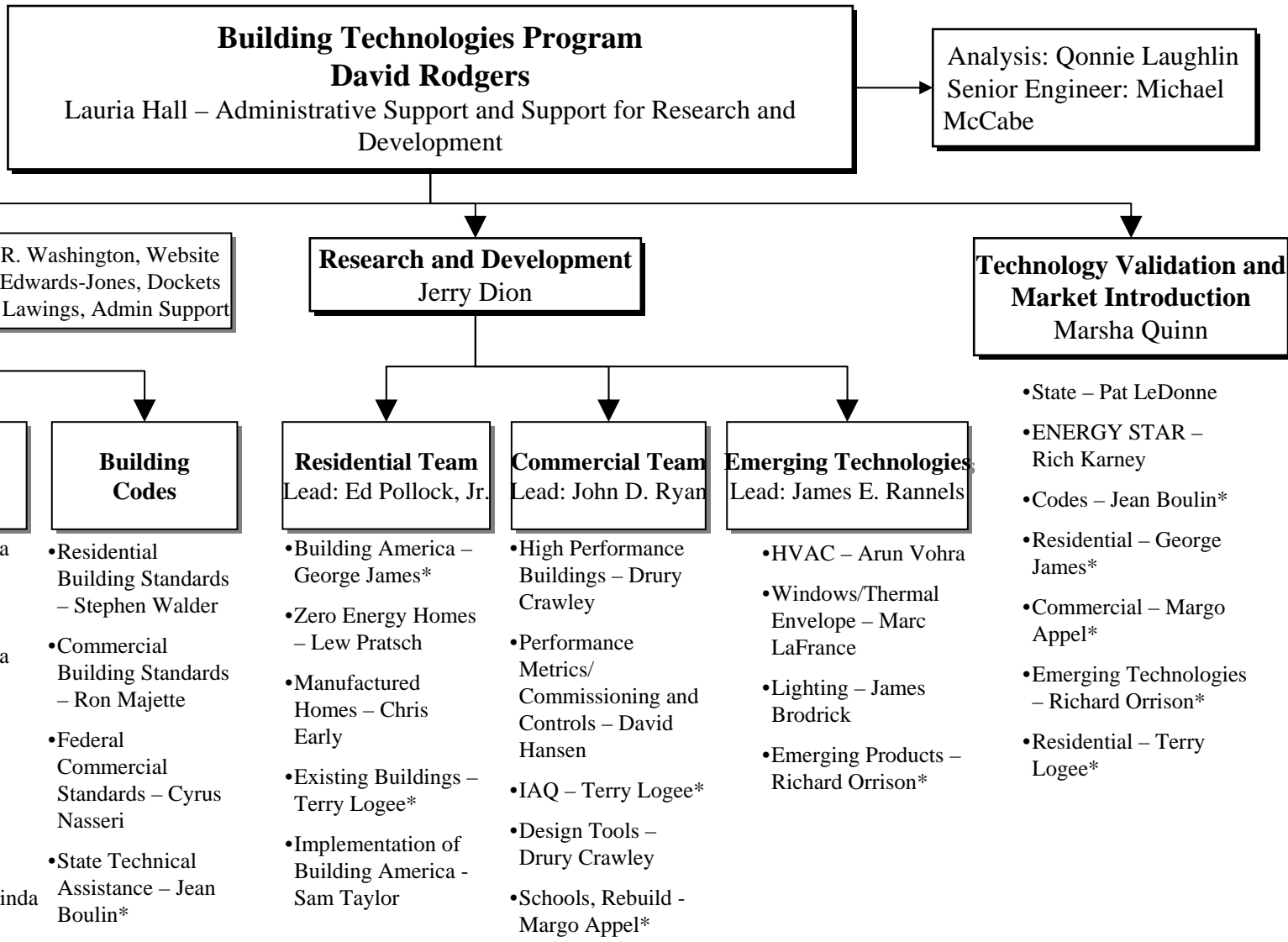


Residential

18%



Commercial



Regulatory
Ron Lewis

R. Washington, Website
Edwards-Jones, Dockets
Lawings, Admin Support

Analysis: Qonnie Laughlin
Senior Engineer: Michael McCabe

Appliance Standards and Analysis
Lead: Bryan Berringer

- Commercial AC – Jim Raba
- Residential Heating – Mohammed Khan
- Transformers – Tony Bouza
- Transformers TP – Cyrus Nasser
- Commercial Products – Maureen Murphy
- Refrigeration Products – Michael Raymond
- New Covered Products – Linda Graves
- Battery Chargers & Power Supplies - Dan Sze

Building Codes

- Residential Building Standards – Stephen Walder
- Commercial Building Standards – Ron Majette
- Federal Commercial Standards – Cyrus Nasser
- State Technical Assistance – Jean Boulin*

Research and Development
Jerry Dion

Residential Team
Lead: Ed Pollock, Jr.

- Building America – George James*
- Zero Energy Homes – Lew Pratsch
- Manufactured Homes – Chris Early
- Existing Buildings – Terry Logee*
- Implementation of Building America - Sam Taylor

Commercial Team
Lead: John D. Ryan

- High Performance Buildings – Drury Crawley
- Performance Metrics/ Commissioning and Controls – David Hansen
- IAQ – Terry Logee*
- Design Tools – Drury Crawley
- Schools, Rebuild - Margo Appel*

Emerging Technologies
Lead: James E. Rannels

- HVAC – Arun Vohra
- Windows/Thermal Envelope – Marc LaFrance
- Lighting – James Brodrick
- Emerging Products – Richard Orrison*

Technology Validation and Market Introduction
Marsha Quinn

- State – Pat LeDonne
- ENERGY STAR – Rich Karney
- Codes – Jean Boulin*
- Residential – George James*
- Commercial – Margo Appel*
- Emerging Technologies – Richard Orrison*
- Residential – Terry Logee*

Note: Assignments may vary



Mission: Develop technologies, tools, and standards for making residential and commercial buildings and appliances more energy-efficient, productive, and affordable.

Budget Request

Activity	Funding (\$ in thousands)		
	FY 2005	FY 2006	FY 2007
	Approp	Approp	Request
Residential Buildings Integration	16,787	15,168	19,700
Commercial Buildings Integration	5,125	3,069	4,699
Emerging Technologies	31,124	33,055	32,756
Equipment Standards and Analysis	10,147	10,153	11,925
Technology Validation and Market Intro.	0	0	8,249
Oil Heat Research for Residential Bldgs.	493	990	0
Technical/Program Mgt. Sup.	1,479	1,485	0
Congressionally Directed Activities	0	5,346	0
TOTAL	65,155	69,266	77,329



- Residential
 - Increase allows return to 2005 levels; continued progress towards ZEH goals
- Commercial
 - Small increase allows recovery from 2005 earmarks
- Emerging Technologies
 - SSL significantly increased; conventional lighting eliminated; other advanced technologies steady
- Equipment Standards and Analysis
 - Significant increase will support new 5-year plan to clear the backlog and meet EPACK 2005
- Technology Validation and Market Introduction
 - Integrate BTP, Rebuild, Schools, and ENERGY STAR efforts

Already started in FY 2006.....



- New name: Technology Validation and Market Introduction
- Integrate ENERGY STAR, Rebuild, Codes, Building America, and Energy Smart Schools
- Promote market acceptance of building technologies
- Create and use robust and sustainable partnerships for delivery of BTP programs and products
- State Energy Offices: Vital partners in technology delivery
 - Know State, local, and regional trends and needs
 - Well positioned to spark collaboration across a broad spectrum of partners, including local governments, schools, colleges and universities, business, extension services, utilities, builders, and consumers
 - Cross-program integration at state level
- Next step – strategic thinking and planning



- Numerous State and local requests for technical assistance
 - For example: Rebuild America; Codes; Building America
- Targeted tools and analysis can facilitate substantial energy efficiency or renewable energy improvements in schools, public facilities, commercial buildings, and multifamily housing units
- Technical assistance will be coordinated with SEOs; provided by three national laboratories:
 - Oak Ridge National Laboratory
 - National Renewable Energy Laboratory
 - Pacific Northwest National Laboratory
- At least \$500K of Rebuild technical assistance; other as well
- ***Qualifying Criteria and Request Process being posted on Building Technologies Program web site by Feb. 17***



We Propose

- FY 2006 – No less than \$4.4M
- Focus on speed, integration, quality
 - Some old Omnibus, some new Omnibus, some competitive
- Multi-year projects considered
 - Competitive solicitation may also allow additional projects in 2007

We Need

- State approaches for integrated BTP programmatic delivery aligned with regional needs and challenges
 - Residential, commercial, codes, ENERGY STAR
 - For example, utilizing our 5 key climate zones to guide regional approaches
- State partnerships with a diverse performers
 - For example, associations, academia, extension, utilities, manufacturers, business, local and regional government, school districts



Gulf Recovery Efforts



- Encouraging use of proven, disaster-resistant building methods in Gulf coast reconstruction efforts

Fast, responsive partnerships:

- State Energy Offices
- NASULGC (extension services, universities)
- Utilities
- Private sector partners

Rebuilding homes and communities for greater durability, comfort, and energy efficiency





- Louisiana House Initiative: Rebuild Safer, Stronger, Smarter Homes
 - Educational outreach and training on locally appropriate, hazard-resistant, energy-efficient building science
 - Partners: Louisiana State University, Louisiana Cooperative Extension Services
- Design Centers at University of Louisiana, Lafayette, Center for Energy Studies and Tulane School of Architecture
 - Introduction to available training, expertise, and services for building contractors
 - Green building guidelines, ENERGY 10 simulations, urban design, ASHRAE Commercial Building Energy Code (passed in Louisiana in 2005)
 - Partners: LA SEO, LA Department of Natural Resources



- Regional Conference on Rebuilding the South in the Aftermath of Hurricanes – January 2006
 - Partners: AL, MS, FL State Energy Offices, Tuskegee University, Oak Ridge National Laboratory
 - Utilize existing research and materials to develop additional training seminars for builders
- Four training workshops in Mobile and Baldwin Counties
 - Focus on home and commercial construction
 - Partners: AL SEO, AL Department of Economic and Community Affairs-Science, Technology, and Energy Division, and AL Cooperative Extension Services



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Mississippi Activities

- Four training workshops for builders, remodelers, architects, city and community planners, inspectors, and others
 - Three additional workshops conducted by MSU Extension Service for homeowners and residential customers
 - Partners: MI SEO, MI Development Authority-Energy Division, State University Extension Service, Development Authority Business Assistance Center, Alcorn State University Extension Service



- Free, two-day workshops that attracted almost 4,000 participants from utilities, State Energy Offices, and PATH
 - Kenner, Louisiana
 - Biloxi, Mississippi
 - Mobile, Alabama
- Expert advice on using the latest energy efficiency products and techniques to rebuild homes and communities
- Hosted by DOE with The Home Depot, the Partnership for Advancing Technology in Housing (PATH), Entergy, Mississippi Power, and Alabama Power





Appliance Standards



Making Great Progress

- 15 new EPCACT standards codified October 18, 2005
- New 5 year schedule posted January 31, 2005
- Report to Congress published January 31, 2005
- FY 2007 Budget increased by \$1.9M
- Output in next 5 years will be 6 times output of last 18 years
- Stakeholder support vital

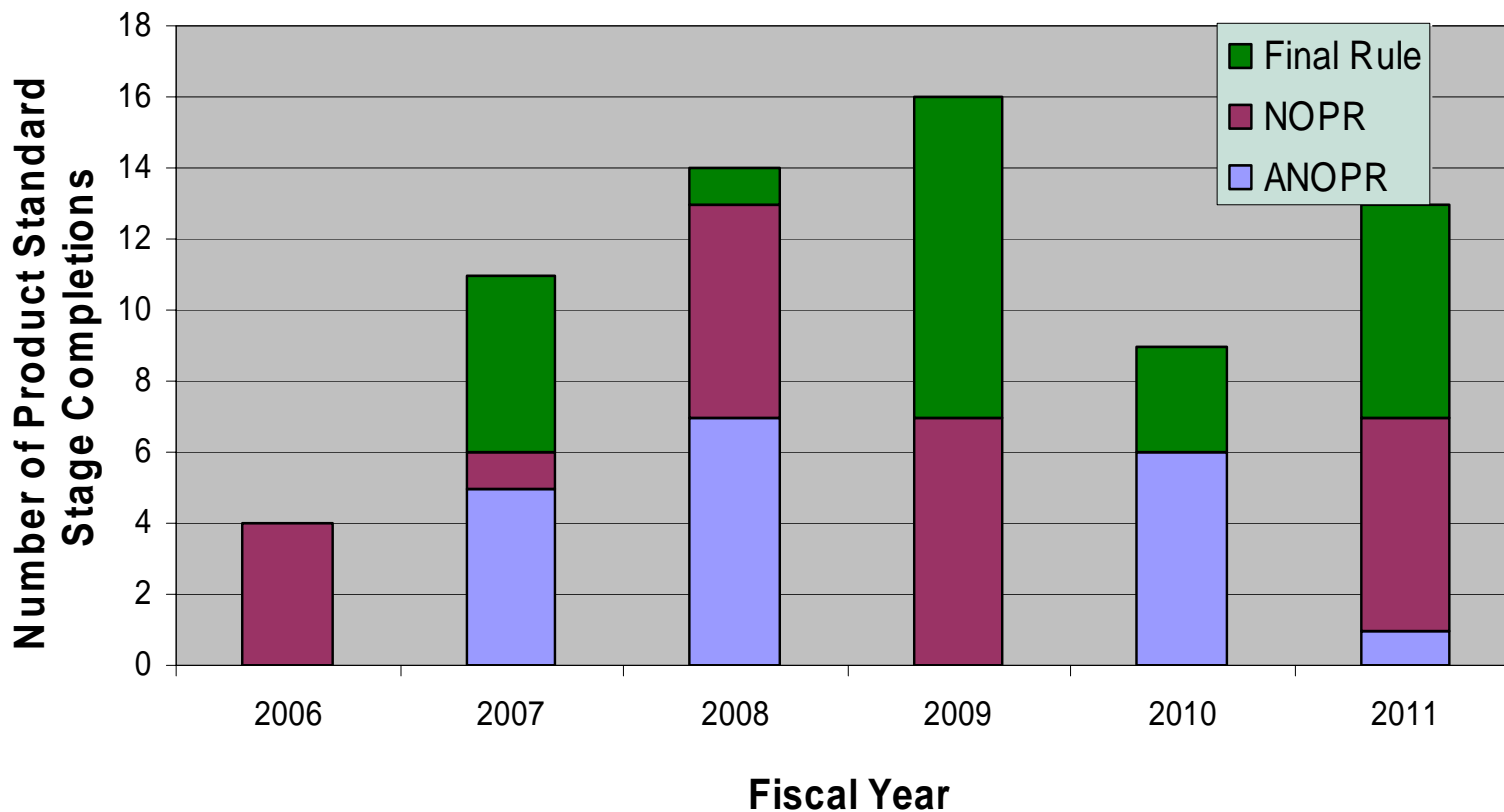


Five-Year Schedule for Issuance of Appliance Standards

Product Category	Rule Type	Product(s)	EPACT 2005, Backlog, Other	Final Action Date
Heating	S	• Furnaces and Boilers (Residential) including Mobile Home and Small Furnaces	Backlog	9/2007
		• Water Heaters (Residential) • Direct Heating Equipment • Pool Heaters	Backlog Backlog Backlog	3/2010
Transformers and Motors	DA	• Small Electric Motors	Backlog	6/2006
	S	• Distribution Transformers, MV Dry-Type and Liquid-Immersed	Backlog	9/2007
		• Electric Motors, 1-200 HP	Backlog	6/2011
TP	• Distribution Transformers	Backlog	4/2006	
Lighting	DA	• High-Intensity Discharge Lamps	Backlog	6/2010
	S	• Ceiling Fan Light Kits (other than those with prescribed standards)	EPACT 2005	1/2007
		• Incandescent Reflector Lamps • Fluorescent Lamps • Incandescent General Service Lamps	Backlog Backlog Backlog	6/2009
		• Fluorescent Lamp Ballasts	Backlog	6/2011
Home Appliances	S	• Dishwashers (Residential) • Ranges and Ovens (Electric and Gas) and Microwave Ovens • Dehumidifiers (Residential) • Clothes Washers (Commercial)	Backlog Backlog EPACT 2005 EPACT 2005	3/2009
		• Clothes Dryers (Residential) • Room Air Conditioners	Backlog Backlog	6/2011
Space Cooling	S	• Packaged Terminal Air Conditioners and Heat Pumps	Backlog	9/2008
		• Central Air Conditioners and Heat Pumps (Residential)	Backlog	6/2011
	TP	• Central Air Conditioners and Heat Pumps (Residential)	Other	9/2007
Commercial Refrigeration	S	• Refrigerated Bottle or Canned Beverage Vending Machines	EPACT 2005	8/2009
		• Ice-Cream Freezers, Self-Contained Commercial Refrigerators, Freezers, and Refrigerator-Freezers without Doors, and Remote-Condensing Commercial Refrigerators, Freezers and Refrigerator-Freezers (initial)	EPACT 2005	1/2009
	TP	• Ice-Cream Freezers, Self-Contained Commercial Refrigerators, Freezers, and Refrigerator-Freezers without Doors, and Remote-Condensing Commercial Refrigerators, Freezers and Refrigerator-Freezers	EPACT 2005	1/2008
Battery Chargers and External Power Supplies	DA	• Battery Chargers and External Power Supplies	EPACT 2005	8/2008
	S	• Battery Chargers and External Power Supplies (Contingent on Determination)	EPACT 2005	8/2011
	TP	• Battery Chargers and External Power Supplies	EPACT 2005	2/2007
Other EPACT 2005	TP	• 11 Test Procedures Prescribed by EPACT 2005	EPACT 2005	11/2006

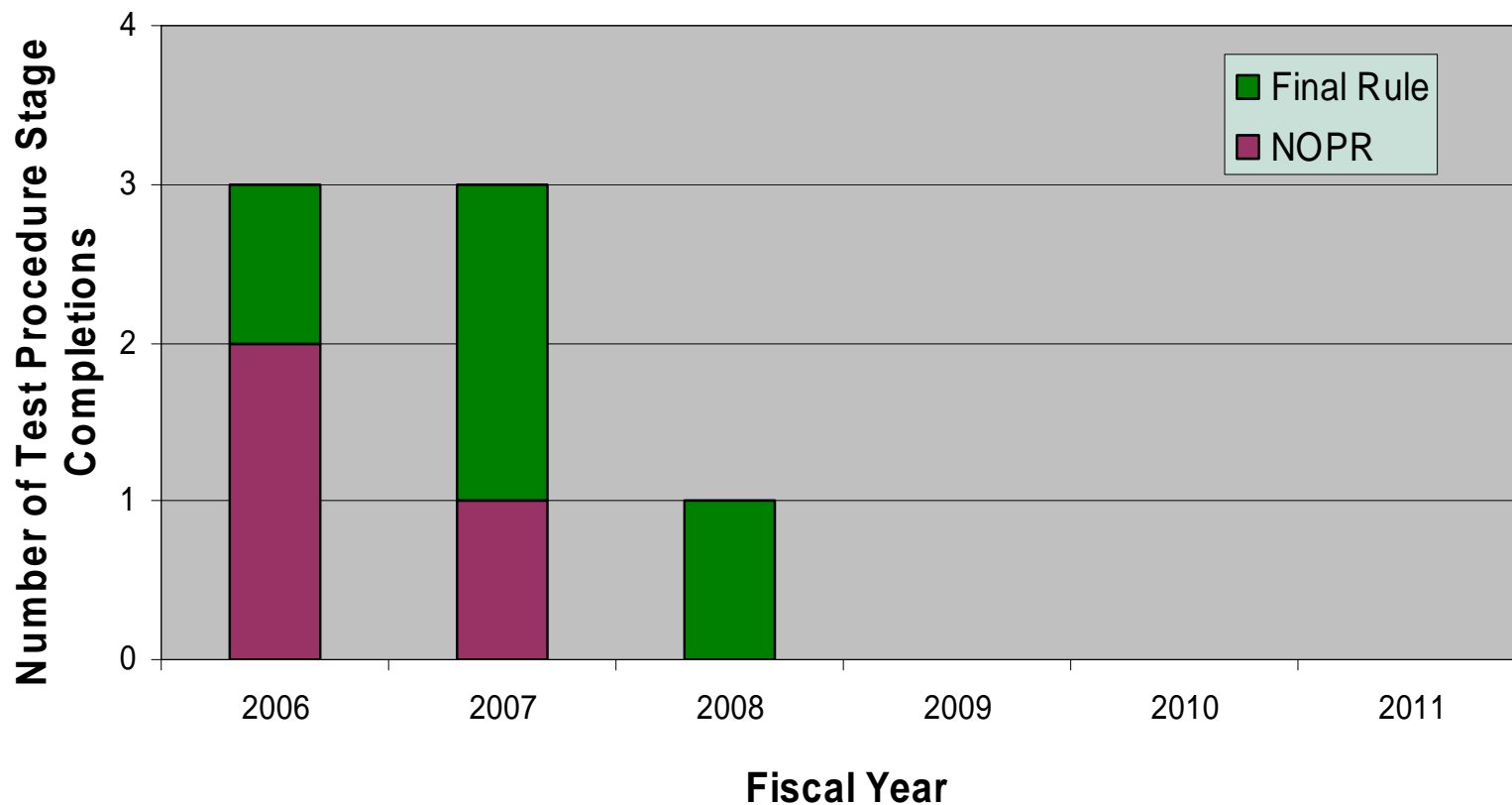


Product Standard Stage Completions for Fiscal Years 2006-2011



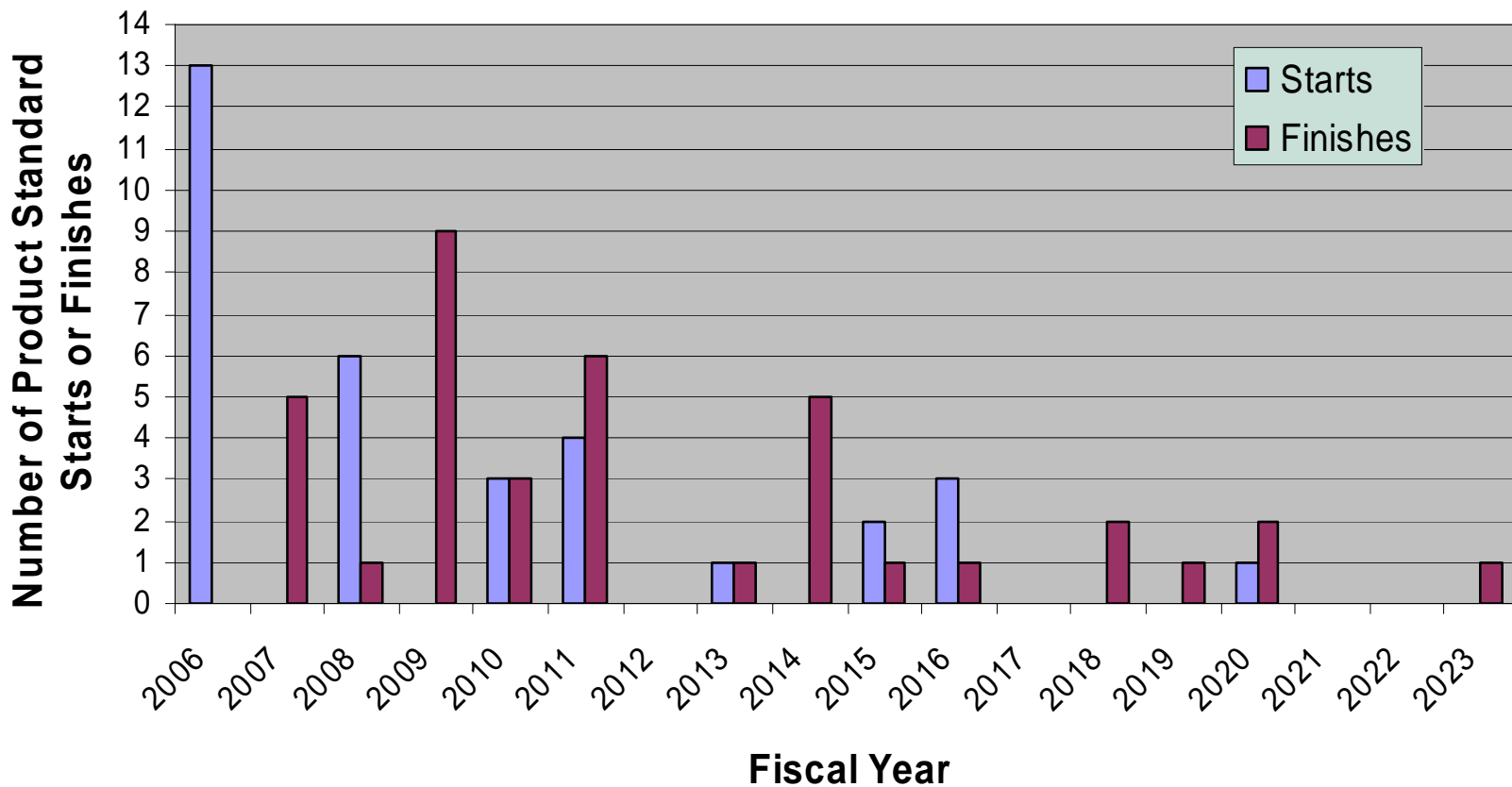


Test Procedure Stage Completions for Fiscal Years 2006-2011



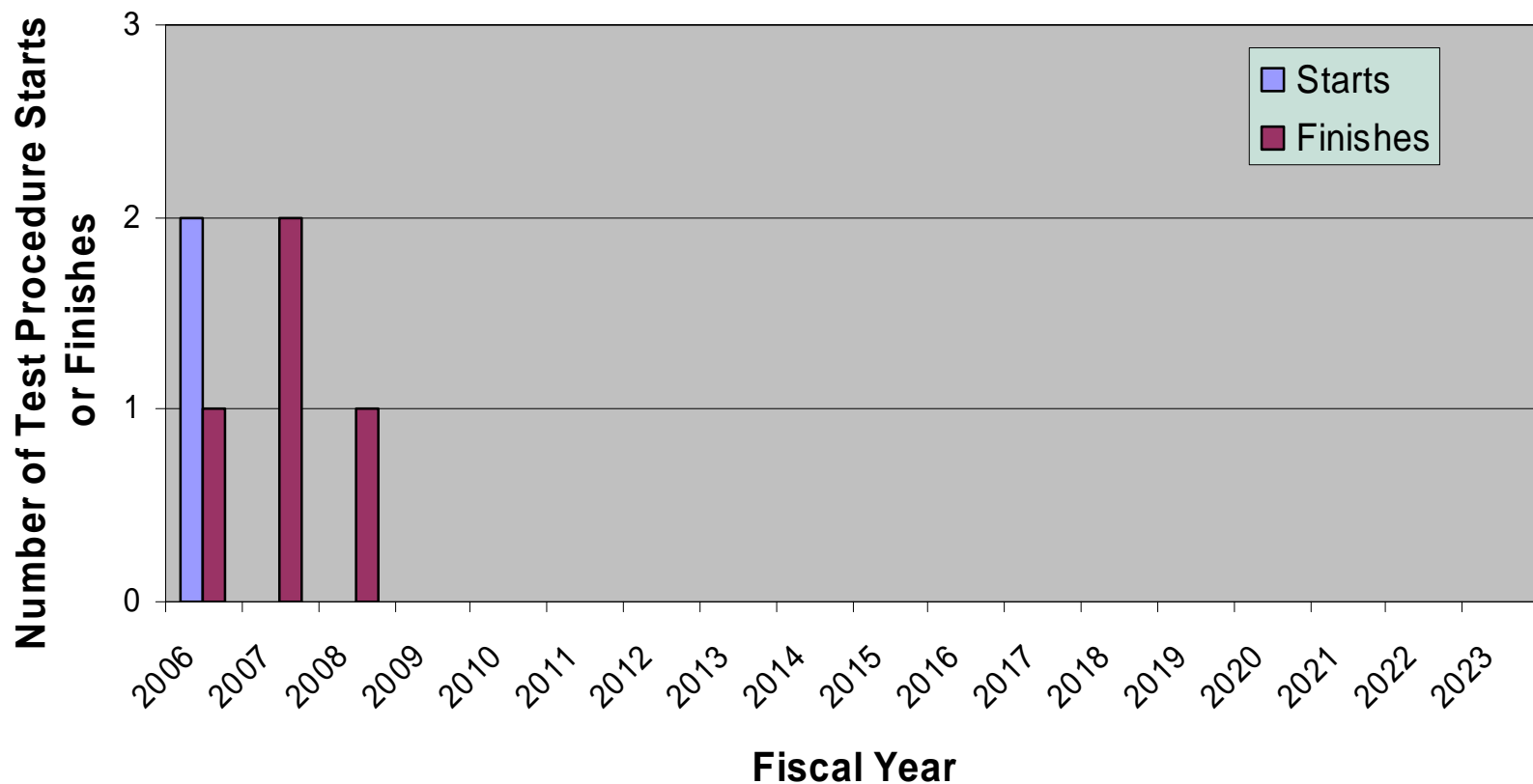


Product Standard Starts and Finishes for Fiscal Years 2006-2023





Test Procedure Starts and Finishes for Fiscal Years 2006-2023





- Thank you ...
 - Extraordinary response from Gulf region SEOs in spite of overwhelming demands
- We welcome NASEO inputs in reinventing BTP deployment
 - Upcoming “charrette” -- an opportunity to define creative approaches
- Stay tuned for our grants and technical assistance announcements!