2010
Department of Energy
Project Management Workshop
March 9 - 10, 2010, Alexandria, VA

U.S. DEPARTMENT OF
ENERGY

"Meeting The Challenge"

PROJECT SUCCESS
Get Off GAO High-Risk List (NNSA & EM):
Improve Project (Contract) Management

Paul Bosco, PE, PMP, LEED-AP
Director, OECM

RCA/CAP: http://management.doe.gov/

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Overview

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"Meeting
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Challenge"

- Why on GAO High-Risk List?

- What is Project Success?

  - How Are We Doing? What's the Forecast?

- RCA/CAP* Initiatives: An Update

- Dep Sec Project Management (PM) Policies

- DOE Order 413.3A: Some Proposed Changes

- Final Thoughts

* RCA: Root Cause Analysis;   CAP: Corrective Action Plan

Why on GAO High-Risk List?

- Since 1990, What's the Problem?
  - Inadequate (Federal) Management
  - Inadequate (Federal) Oversight
  - Lack of Accountability
  - Non-Compliance with Departmental Policies

GAO High Risk Series - 2009

"DOE…relies primarily on contractors to carry out its diverse missions and operate its laboratories and other facilities…Two of DOE's largest program elements, the NNSA and EM, account for 60% of the annual budget. DOE's record of inadequate management and oversight of its contractors has resulted in the high-risk designation for contract management."

Excerpt from January 2009 "High-Risk Series" An Update (GAO-09-271)

High-Risk List:
Department of Energy Contract Management

Criteria Agencies Must Meet Before High-Risk Designations Can Be Removed	DOE Has	
	Met Criteria	Not Yet Met Criteria
Demonstrate strong commitment and leadership	✔	
Demonstrate progress in implementing corrective measures	✔	
Develop a corrective action plan that identifies root causes, effective solutions, and a near-term plan for implementing the solutions	✔	
Have the capacity (people and resources) to resolve the problems		✔
Monitor and independently validate the effectiveness and sustainability of corrective measures		✔

- Project Success: (For Capital Asset Projects)
  - Project completed within the ORIGINAL approved scope baseline, and within 10% of the ORIGINAL approved cost baseline at project completion (Critical Decision-4), unless otherwise impacted by a directed change.

- Portfolio Success:
  - Ninety percent (90%) of all projects meet project success criteria.

How Are We Doing?
(Based on 3-Year Rolling Timeline)

FY	Goal	Actual Overall	SC	NNSA	EM	Other
08	75%	76% (37/49)	80% (12/15)	73% (22/30)	100% (1/1)	67% (2/3)
09	80%	76% (27/37)	80% (8/10)	71% (17/24)	-	67% (2/3)
10	85%	72%* (32/45)	92%* (11/12)	64%* (14/22)	63%* (5/8)	67%* (2/3)
11	90%	77%* (33/43)	100%* (14/14)	69%* (11/16)	56%* (5/9)**	75%* (3/4)

NOTE: Red font highlights missed goal

*Projected

** Awaiting ARRA Input

FY10/11 Forecasted Success
Pre-RCA vs. Post RCA
(Based on 3-Year Rolling Timeline)

	FY	Goal	Actual Overall	SC	NNSA	EM	Other
PRE-RCA	10	85%	**67%** (26/39)	91% (10/11)	**62%** (13/21)	**50%** (3/6)	**0%** (0/1)
	11	95%	**70%** (23/33)	100% (10/10)	**67%** (10/15)	**43%** (3/7)	**0%** (0/1)
POST-RCA	10	85%	100% (6/6)	100% (1/1)	100% (1/1)	100%* (2/2)*	100% (2/2)
	11	90%	100% (10/10)	100% (4/4)	100% (1/1)	100%* (2/2)*	100% (3/3)

NOTE: Red font highlights missed goal.
The RCA Demarcation Date is: Oct 1, 2007

* **Awaiting ARRA Input**

Challenges to Getting off the List

- Project Success:
  - Metric trending downward (Forecast: Drop, 76% to 72% in FY10)

- Have the Capacity:
  - Program staffing model methodologies in development, additional resources (if needed) still in question

- Monitor and Independently Validate:
  - Project Assessment and Reporting System (PARS) is deficient; (PARS-II) upgrade proceeding very slowly
  - Lack of critical decision (CD) documentation
  - Lack of cost estimating directive

What can be done?

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- Project Success: **(Some Potential Possibilities; No Guarantees)**
  - Move forecasted FY10 "failed" projects…to the right, into FY11
  - Accelerate FY11 "successful projects" to complete in FY10
  - **Preferred Option**: Start/complete small (chunked) projects within FY10…and beyond. EM Recovery Act projects will have immediate impact

- Have the Capacity:
  - Implement a staffing model; fill staffing gaps, site specific, ASAP
  - Expand use of project peer reviews…one method of project oversight
- Monitor and Independently Validate:
  - Endorse project data transparency; Expedite deployment of new Project Assessment & Reporting System (PARS II) – Complete this fiscal year
  - Establish central repository of key project documents (i.e., "CD" memos)
  - Publish cost estimating policies and directive
- Hold people accountable
- Comply w/ DOE policies and directives

RCA/CAP Initiatives: An Update

- **Issue #1: Project Front-End Planning**
  - Distinguished program from project management
    - Restructuring EM projects – "Chunking" of Work
      - Piloted on Environmental Management (EM) American Recovery and Reinvestment Act (ARRA) projects
    - "Complete and Usable" Facilities, for their intended purpose

  - Developed Project Definition Rating Index (PDRI) tool
    - Ensured consistent, sufficient level of project front-end planning
    - Draft PDRI Guide complete; under review
  - Published Technical Readiness Assessment (TRA) Guide
    - Ensured maturity of technology is ready for project design/execution

RCA/CAP Initiatives: An Update

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- **<u>Issue #2: Federal Contract/Project Management Workforce</u>**
  - Created Departmental staffing model
    - Model being revised to incorporate contractor input
      - Differentiate M&O vs. FAR contract
    - Potential Guide impending
  - Other Program-specific methodologies may be forthcoming
  - Programs considering staffing alternatives
    - Generated Contract Administration and Project Management (CAPM) model – a revolving fund concept

RCA/CAP Initiatives: An Update

- ## Issue #7: <u>Project Oversight and Management</u>
  - Procured and piloted Project Assessment and Reporting System (PARS-II) (desktop version)
    - Consistent, transparent, reliable data to all levels of management
    - Expanding pilot to full web-enabled version
  - Exporting Science best business practice "peer review" process across Department
  - Starting project management best practices benchmark study

- **<u>Issue #8: Project Management Requirements: Update Order 413.3</u>**
  - Fix Non-compliance with the Order
  - Incorporates RCA/CAP corrective measures
  - Draft A of Revised DOE Order 413.3B done
  - Developing Draft B
  - In REVCOM: APRIL 2010

DepSec
PM Policies

- **Design maturity**
  - Sufficient design prior to establishing performance baseline
  - Basic facilities versus complex nuclear processing facility

- **Project Size and Structure**
  - Fulfill mission need
  - Break larger projects into smaller, discrete, and usable projects
  - Each project stand on its own

DRAFT Minimum Design Maturity Guidelines

FACILITY TYPE *	CD-2	CD-3
Administrative (e.g., Office Space)	10-30%	40-60%
Research & Development (e.g., Applied Science Laboratory)	20-40%	50-70%
Storage (e.g., Nuclear Waste Storage Facility)	30-50%	60-80%
Industrial Buildings (e.g., Nuclear Chemical Process Facility)	60-80%	90-100%

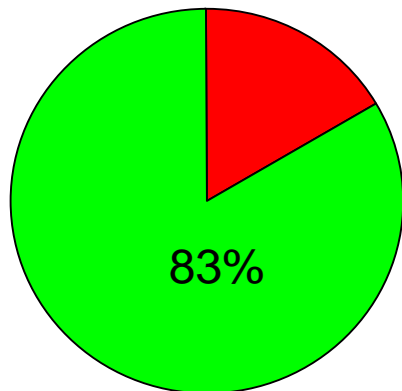# Active Line Item Portfolio Success Rate: Small Projects vs. Large Projects

(As of Spring 2009)

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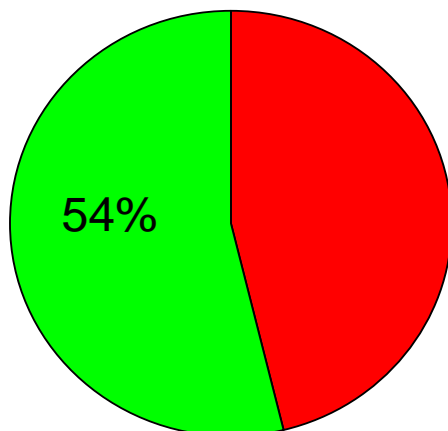March 9 - 10, 2010, Alexandria, VA

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83%

78%

<$50M

$50M - $100M

54%

40%
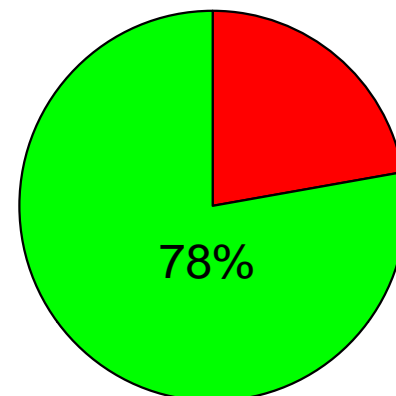
$100M - $750M
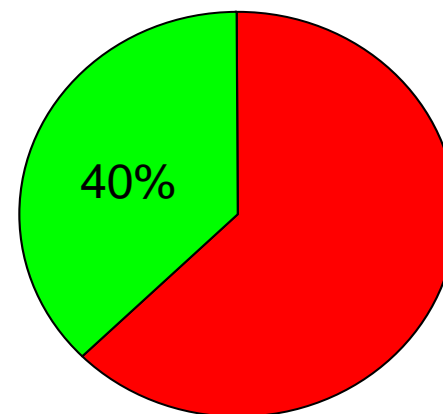
>$750M

DepSec PM Policies

- Project Staffing
  - Sufficient qualified staff (including contractors)
  - Departmental and/or Program-specific staffing validated methodology

- Funding Stability
  - Affordable and executable within program's budget
  - Changes to approved funding profile must be endorsed by acquisition executive
  - Fully funded capital asset projects (TPC < $50M)

DepSec PM Policies

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- Project Peer Reviews
  - Once a year for large or high visibility projects
  - More frequently for complex and challenging projects
- Project Management Information
  - PARS II central repository for key project information
  - Project data uploaded into PARS II each month
  - PARS II integrated into *i*-Manage (linkage of project and financial information)

DepSec PM Policies

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- **Improving Cost Estimates**
  - ICE prior to CD-1 and CD-2 for major projects
  - Parametric cost methods for CD-1 range
  - ICE at CD-3, if warranted (risk, performance, or as requested)
 - DOE Cost Database – historical and actual costs

DOE Order 413.3A Proposed Changes

- Exclusions – A Program Secretarial Office may be excluded from most Order requirements if:
  - Off the GAO High-Risk List;
  - Maintaining the project success metric; and
  - Others

- Performance Baseline Deviation – Deputy Secretary approval only if increase in "excess of the lesser of $100M or 50% (cumulative) of the original CD-2 cost baseline."
 - "No-Cost" Schedule Changes will not go to Dep Sec

DOE Order 413.3A Proposed Changes
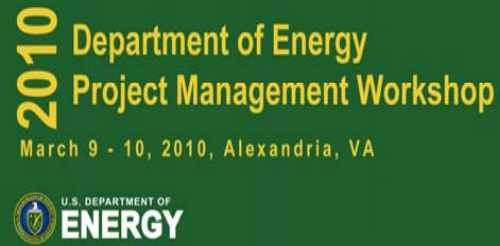
- Funding Request – Budget request for construction may be submitted prior to approval of CD-2 under certain conditions.

- Full Funding – Construction projects with TPC < $50M should request all construction funds within same appropriation year of start of construction.

DOE Order 413.3A Proposed Changes
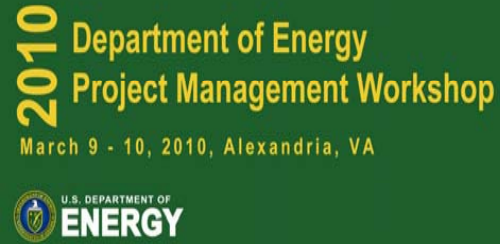
- Funding Profile – Funding profile will be part of approved baseline and should only be changed with Acquisition Executive endorsement.

- Multiple Projects on one PDS (Project Data Sheet)
  - All Focused on Meeting the Same Mission Need

Time-Phased Multiple-Project PDS in Support of Mission Need

	Construction Cost ($M)						
	CD-0 or CD-1 (TPC Cost Range)	TPC	FY11	FY12	FY13	FY14	FY15
Project A	-	40	-	-	40	-	-
Project B	-	80	-	-	10	50	20
Project C	100-200	200	-	-	-	100	100
Project D	75-150	150	-	-	-	25	125
TOTAL	-	470	0	0	50	175	245

Example shows an initial budget request for construction in which Projects A & B are with CD-2 approval and Projects C & D are absent of CD-2 approval.

How to Improve
Project Execution
Performance

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Getting Off GAO High-Risk List vs.

Improving Project Execution Performance

- **<u>Key Focus Areas: Improve Project Execution Performance – Meet Project Success Metric:</u>**
  - **<u>REQUIREMENTS DEFINITION:</u> Mature Designs** – Then Establish Performance Baseline; **challenge future changes via a disciplined change control process**
    - **"CHUNK" the work when possible – "Complete and usable" facilities**
  - **<u>FUNDING STABILITY:</u>** Lock-in Funding Profiles for the Project Duration; do NOT change during execution

QUESTIONS / COMMENTS

The hard part remains – execution!